North Dakota
Epidemiological Profile

Alcohol, tobacco, illicit drug and nonmedical use of prescription drug prevalence, consequences and modifiable risk factors in North Dakota

Compiled and Developed by:
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SEPTEMBER 2020

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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, 2018). 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; 79.1% perceived alcohol use as a moderate or serious problem in society among youth. 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, 2018).

Data Source(s)

Youth

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

Adults

Substance Abuse and Mental Health Services Administration (SAMHSA). Facing Addition in America: The Surgeon General's Report on Alcohol, Drugs, and Health

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

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

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

Section Summary

Youth

- In 2019, 22.5% of North Dakota middle school students used alcohol, a percentage that had been in decline since 2011, 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, female students consumed more alcohol when compared to males; males consumed more alcohol in 2019. (YRBS, 2019; see Figure 1.1).
- 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).

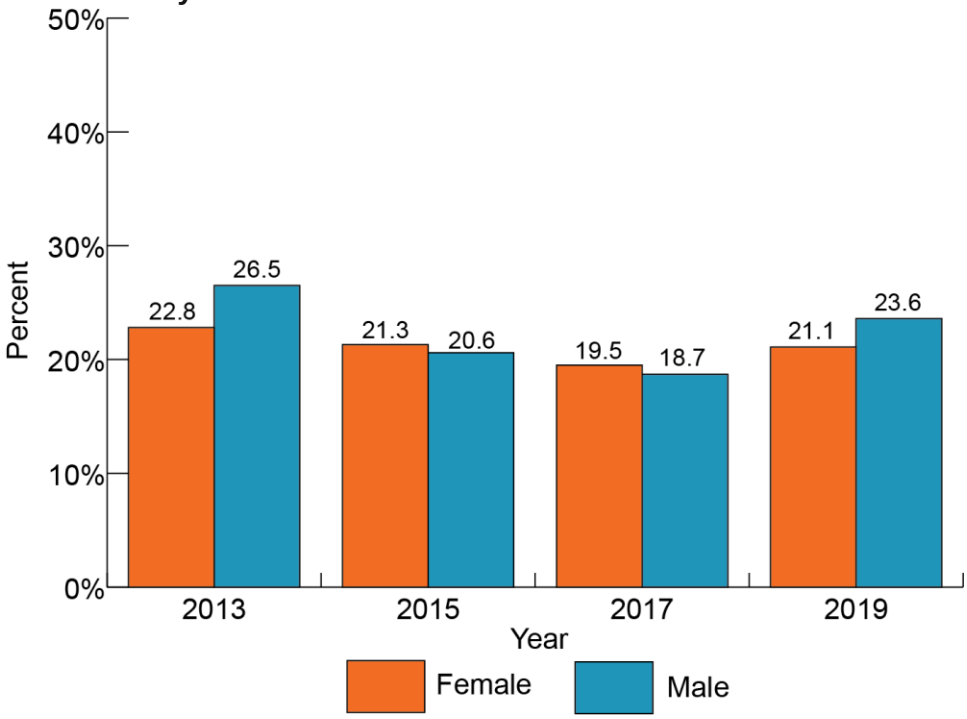
- Compared to 2013, the number of high school students who reported having their first drink of alcohol before age 13 decreased in 2019. Rates of alcohol consumption before age 13 remained consistently higher among male compared to female students over the same time period (YRBS, 2019; see Figure 1.5).
- 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 and 2017 (YRBS 2019; see Figure 1.6).
- 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).

Adults

- 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 in 2017. However, North Dakota consumption for wine was reported slightly below the national average (NIAAA, 2017; see Table 1.1).
- Between the years 2015 and 2018, more adult males reported consuming alcohol in the past month than females (BRFSS, 2018; see Figure 1.10).
- Between 2015 and 2018, North Dakota current alcohol consumption rates (having at least one drink in the past month) have remained relatively unchanged among both adult males (67.3%, 64.6%) and females (54.5%, 54.1%) (BRFSS, 2018; see Figure 1.10).
- In 2018, 68.9% of North Dakota adults aged 18-25 consumed alcohol at least once in the last month (NSDUH, 2018; see Figure 1.11) and was higher than the national rates of 55.7% for the same age group (NSDUH, 2018; 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, 2018; see Figure 1.9).

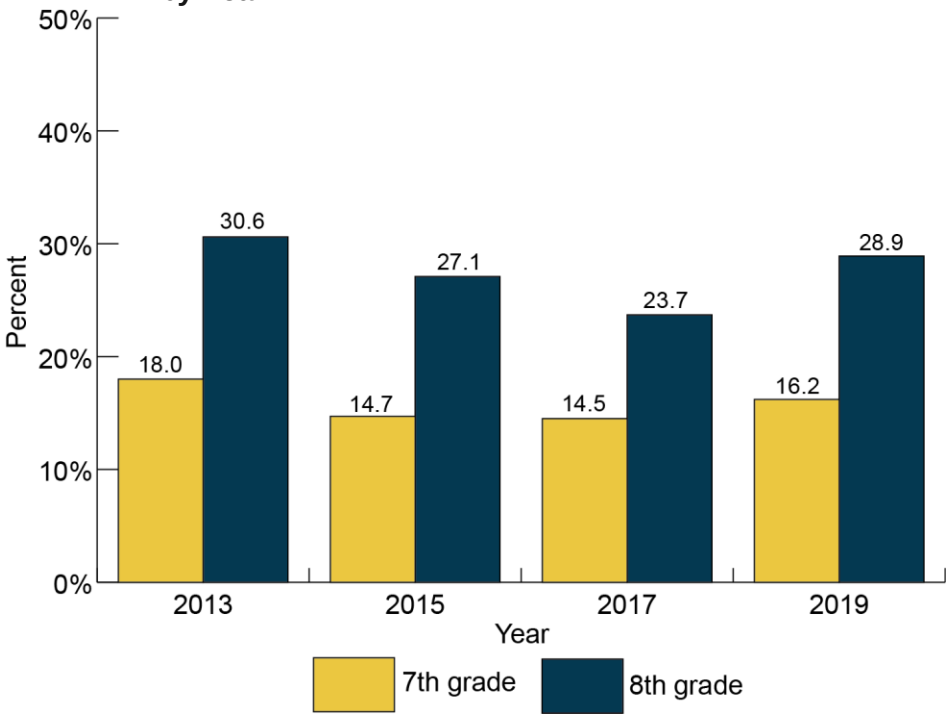
Youth

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



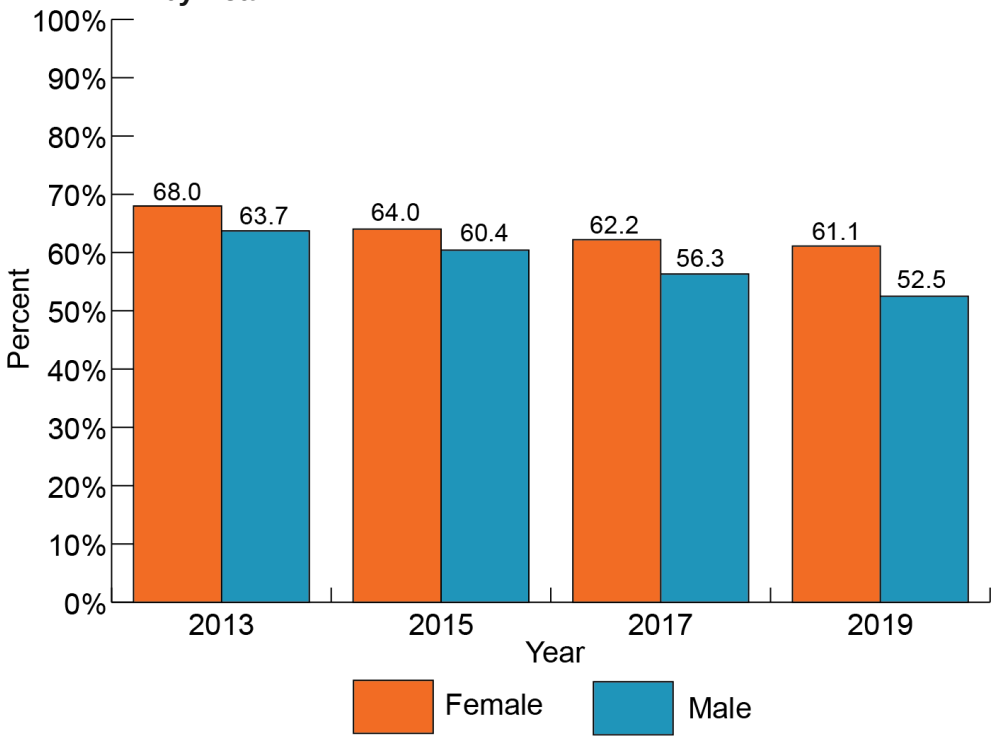
Data Source: YRBS

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



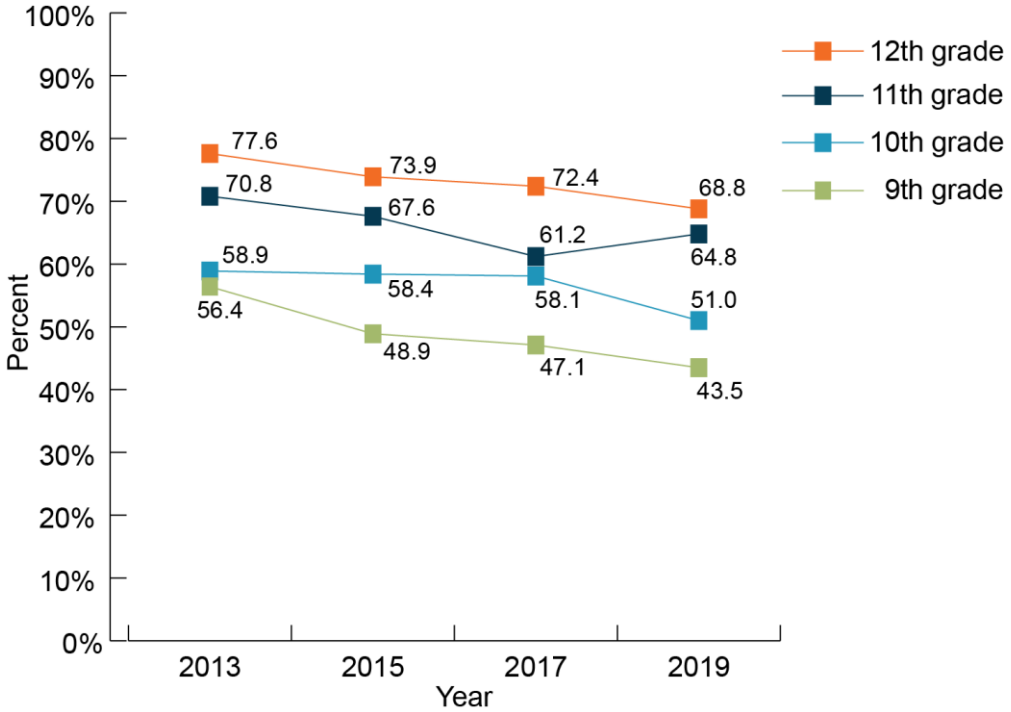
Data Source: YRBS

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



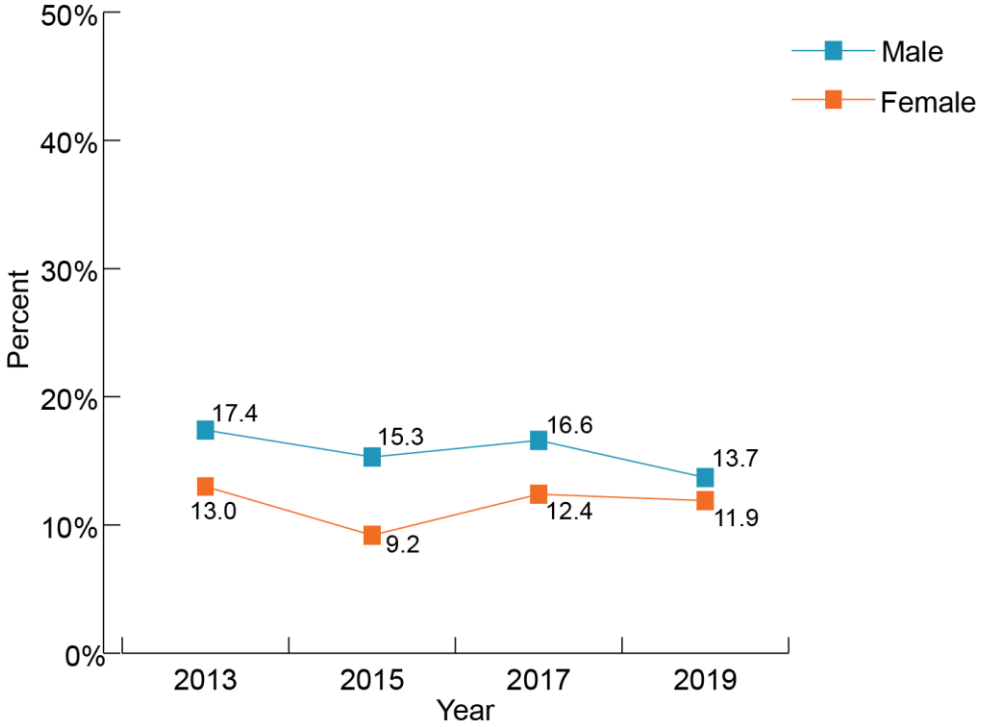
Data Source: YRBS

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



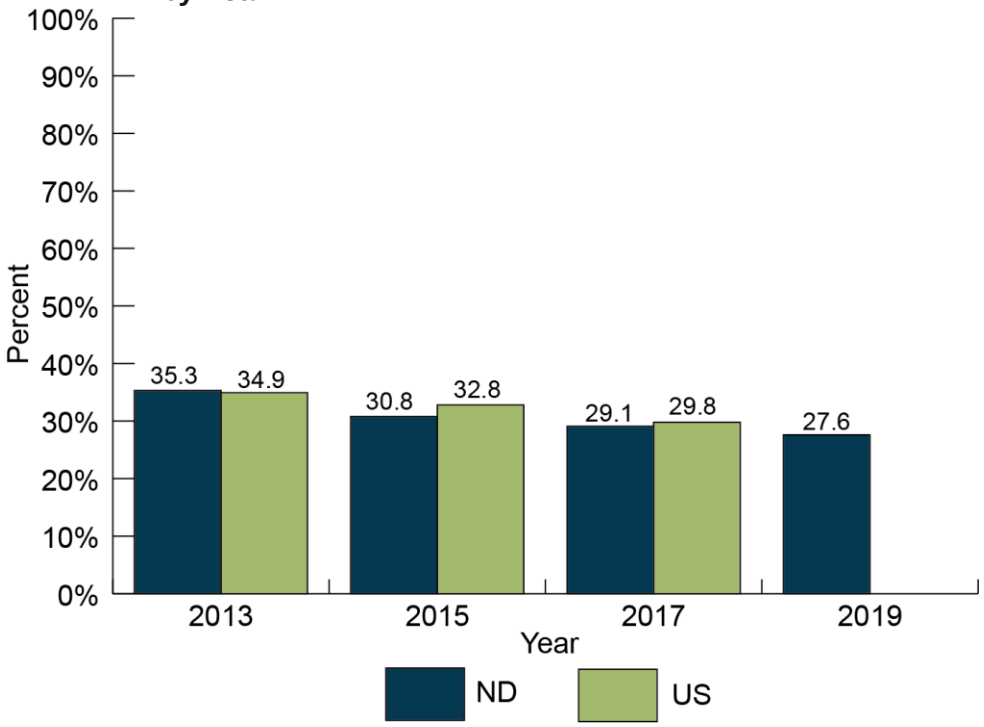
Data Source: YRBS

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



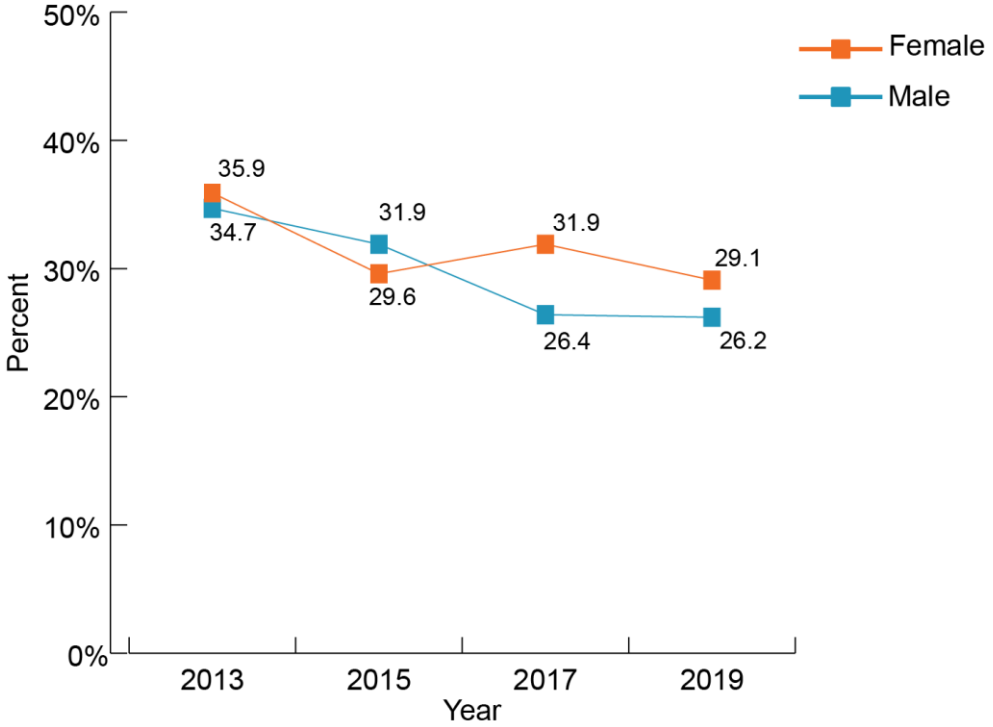
Data Source: YRBS

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



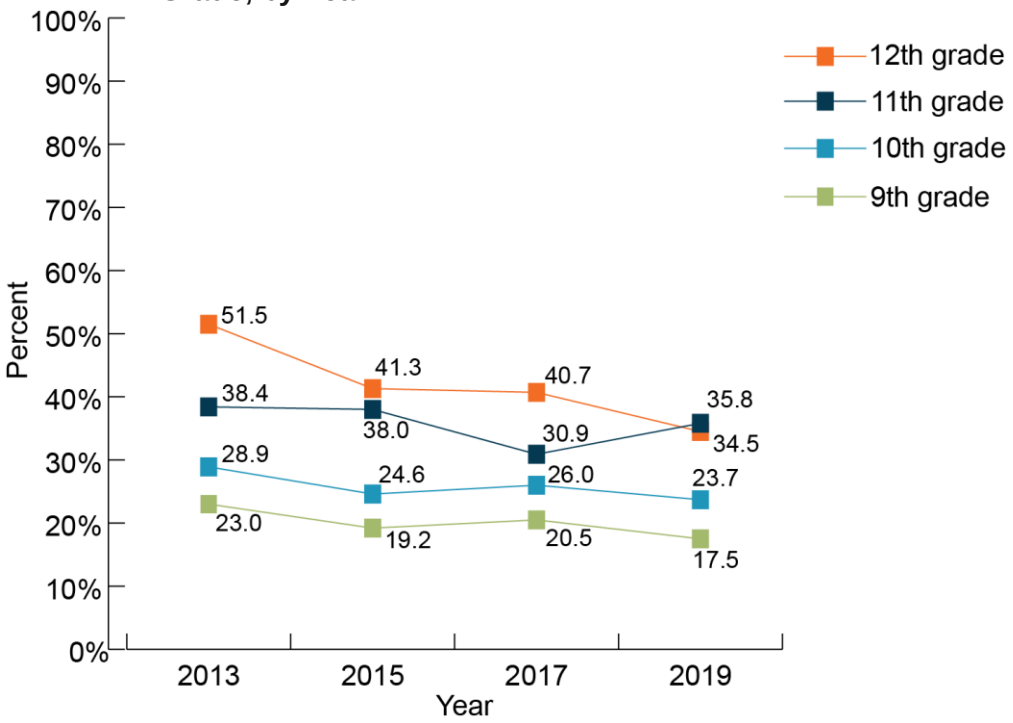
Source: YRBS
Data Note: *U.S. data not available for 2019.

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

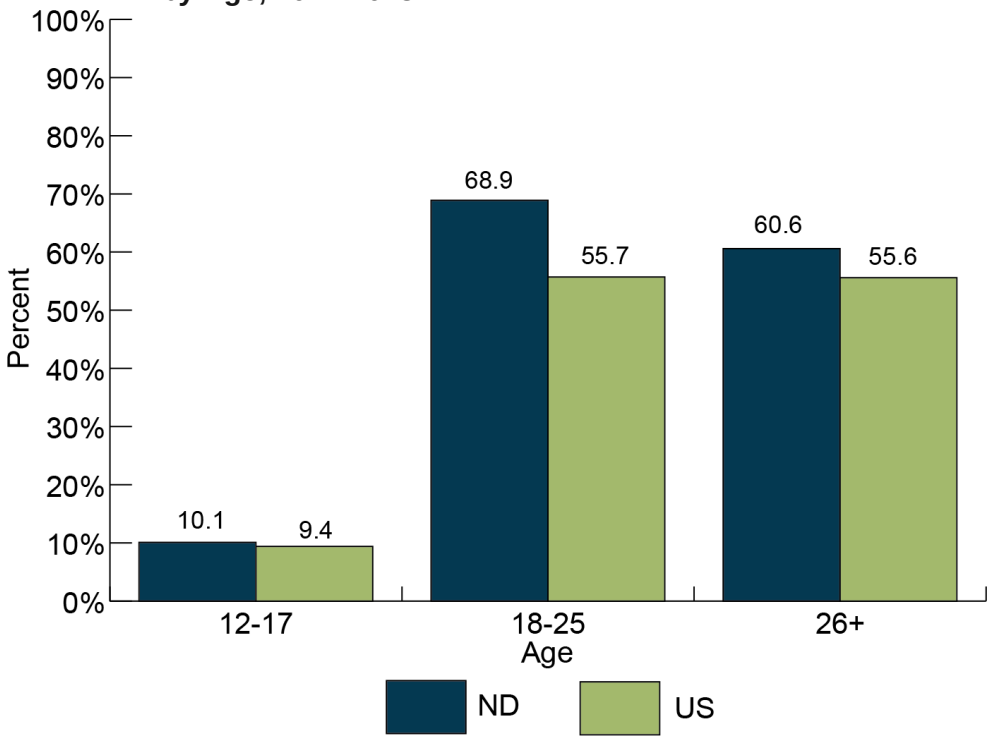
Adults

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	2013	2014	2015	2016	2017
ND	1.56	1.57	1.49	1.45	1.46
U.S.	0.89	0.90	0.91	0.94	0.95
Wine	**2013**	**2014**	**2015**	**2016**	**2017**
ND	0.37	0.39	0.40	0.38	0.38
U.S.	0.48	0.48	0.47	0.49	0.49
Beer	**2013**	**2014**	**2015**	**2016**	**2017**
ND	1.91	1.89	1.78	1.70	1.70
U.S.	1.26	1.24	1.23	1.22	1.19
All Beverages	**2013**	**2014**	**2015**	**2016**	**2017**
ND	3.84	3.86	3.67	3.53	3.54
U.S.	2.63	2.62	2.62	2.64	2.63

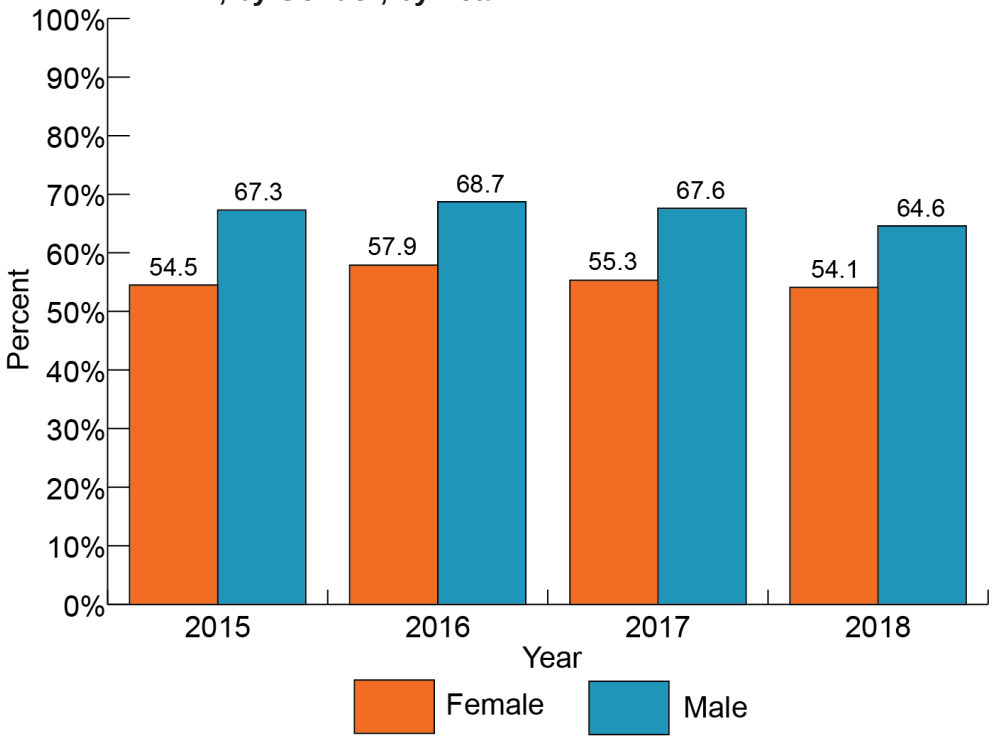
Data Source: NIAAA

Figure 1.9: Percentage who Used Alcohol at Least Once in the Past Month, ND vs. U.S., by Age, 2017-2018



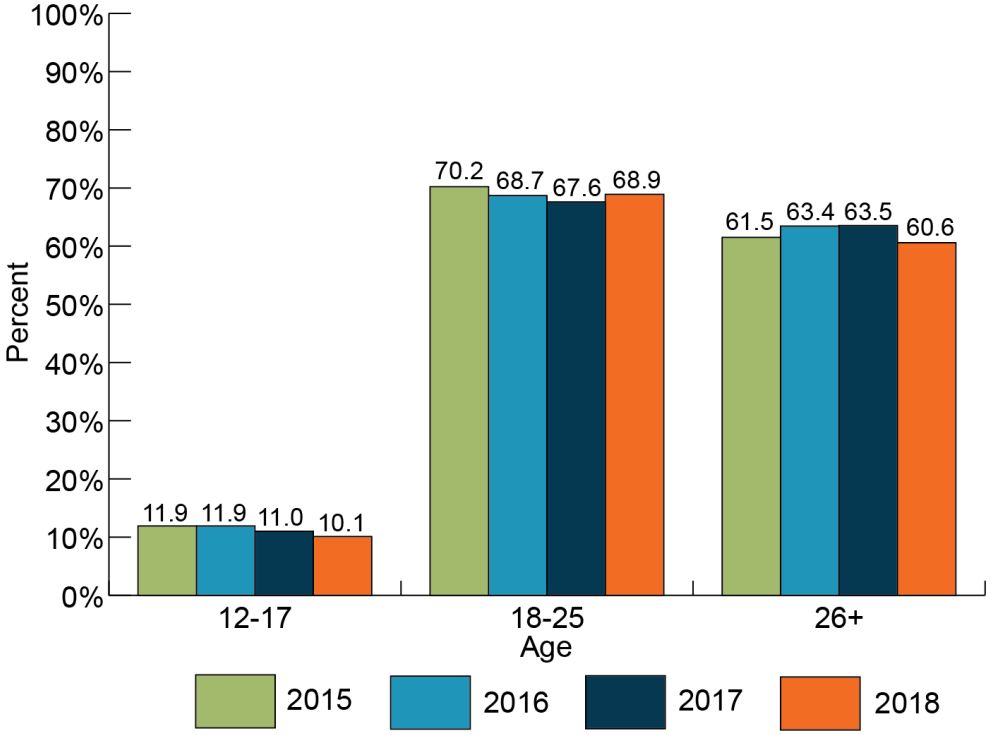
Data Source: NSDUH

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



Data Source: BRFSS

Figure 1.11: Percentage who Used Alcohol in the Past Month, ND, by Age, by Year



Data Source: NSDUH

Binge Drinking

About the Indicator

The Behavioral Risk Factor Surveillance System (BRFSS, 2018) 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).

Data Source(s)

Youth

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

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

Adults

Preventing Chronic Disease (Prev. Chronic Dis.). Prevalence of Alcohol Dependence among U.S. Adult Drinkers 2009-2011

American Journal of Preventive Medicine (AJPM). Nation and State Costs of Excessive Alcohol Consumption

Preventing Chronic Disease (Prev. Chronic Dis.). Contribution of Excessive Alcohol Consumption to Deaths and Years of Potential Life Lost in the United States

American Journal of Preventive Medicine (AJPM). Efficacy and the Strength of Evidence of U.S. Alcohol Control Policies

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

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

Section Summary

Youth

- 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 33.6% since 2013 (YRBS, 2019; see Figure 1.12).
- Although 2019 U.S. data is not available, generally, 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 1.12).
- Between the years 2013 through 2015, more male high school students engaged in binge drinking compared to their female peers. However, from 2017 to 2019, females reported higher rates of binge drinking than males (YRBS, 2019; see Figure 1.13).
- 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 (16.1% to 19.5%) (YRBS, 2019; see Figure 1.14).

Adults

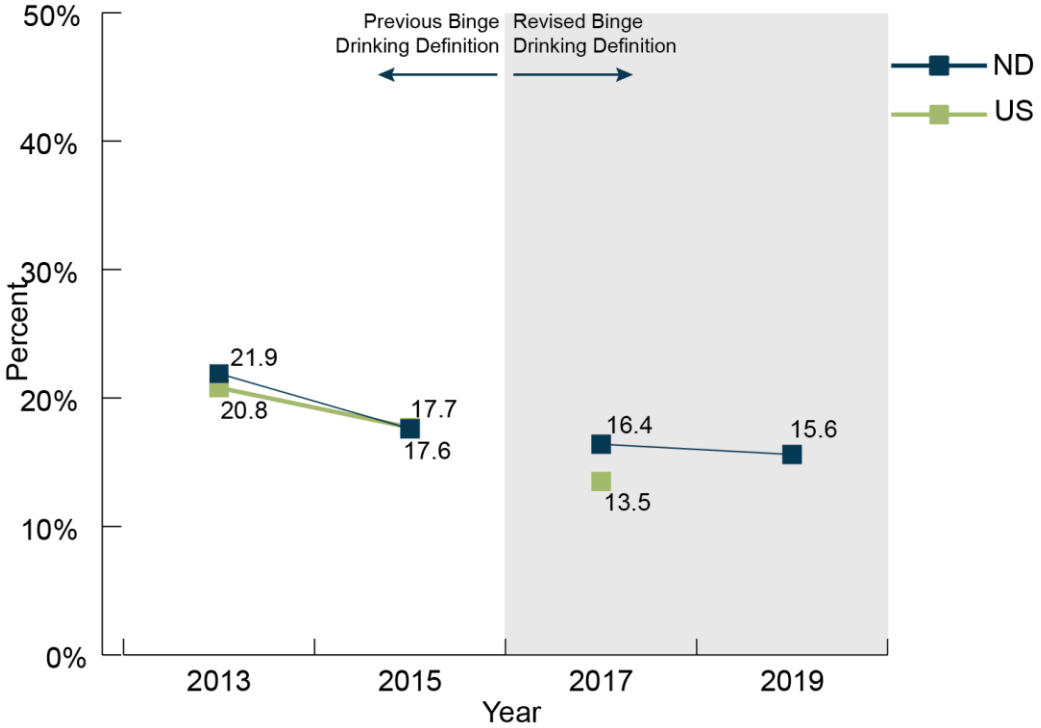
- Adult binge drinking rates in North Dakota have been higher than the national rates from 2015 to 2018. In 2018, the rate of adult binge drinking in North Dakota was 22.0% compared to 16.2% at the national level (BRFSS, 2018, see Figure 1.15).
- North Dakotans of all ages reported higher levels of binge drinking at least once in the past month compared to national rates. Among those between the ages of 18-25, North Dakota

rates were approximately 30% higher than the national average (BRFSS, 2018; see Figure 1.16).

- North Dakota binge drinking rates have remained relatively stable since 2016 across all age groups. Compared to 2016, rates have decreased slightly among those ages 12-17 and 18-25, whereas rates for those over 26 years old have increased marginally (NSDUH, 2018; see Figure 1.17).
- 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, 2018; see Figure 1.18).
- North Dakota adult males (age 18+) have consistently reported higher rates of binge drinking than females between the years 2015 and 2018. Adult binge drinking rates for both genders have remained relatively stable over that period (BRFSS, 2018; see Figure 1.19).
- From 2015 to 2018, North Dakota adults with an income above $50,000 generally reported a higher average binge drinking rate than any other income bracket (BRFSS, 2018; see Figure 1.20).

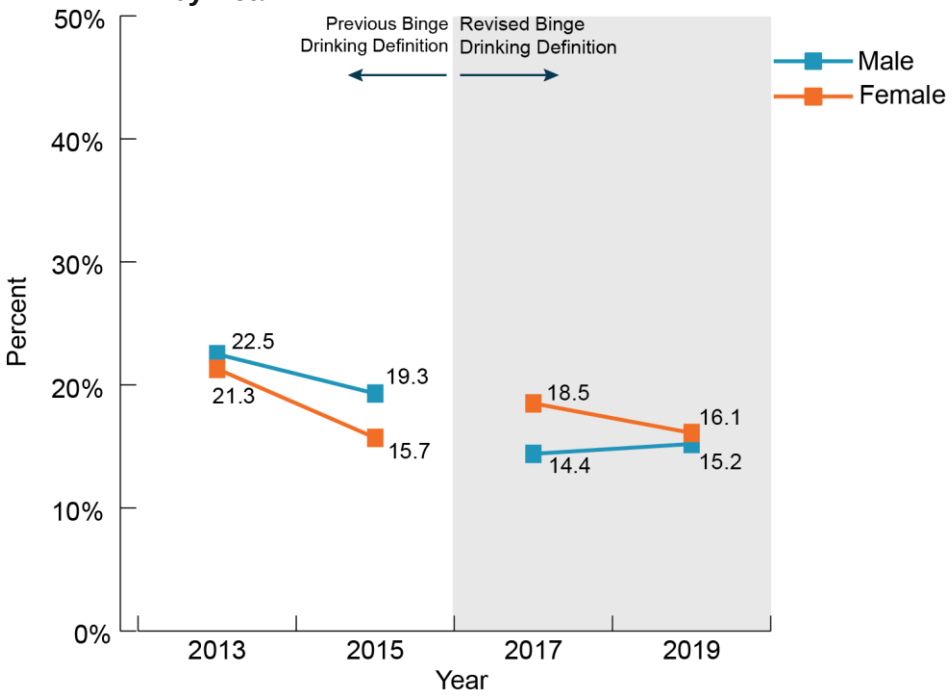
Youth

Figure 1.12: Percentage of Current Binge Drinking, High School Students, ND vs. U.S., by Year



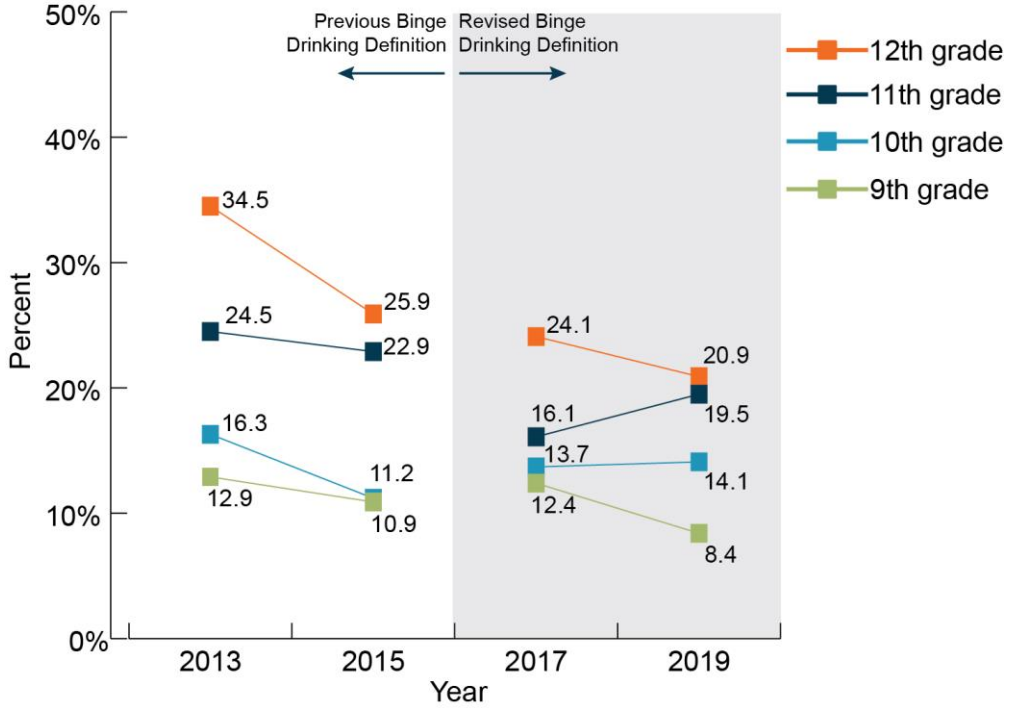
Data Sources: YRBS
Data Note: *U.S. data not available for 2019.

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



Data Sources: YRBS

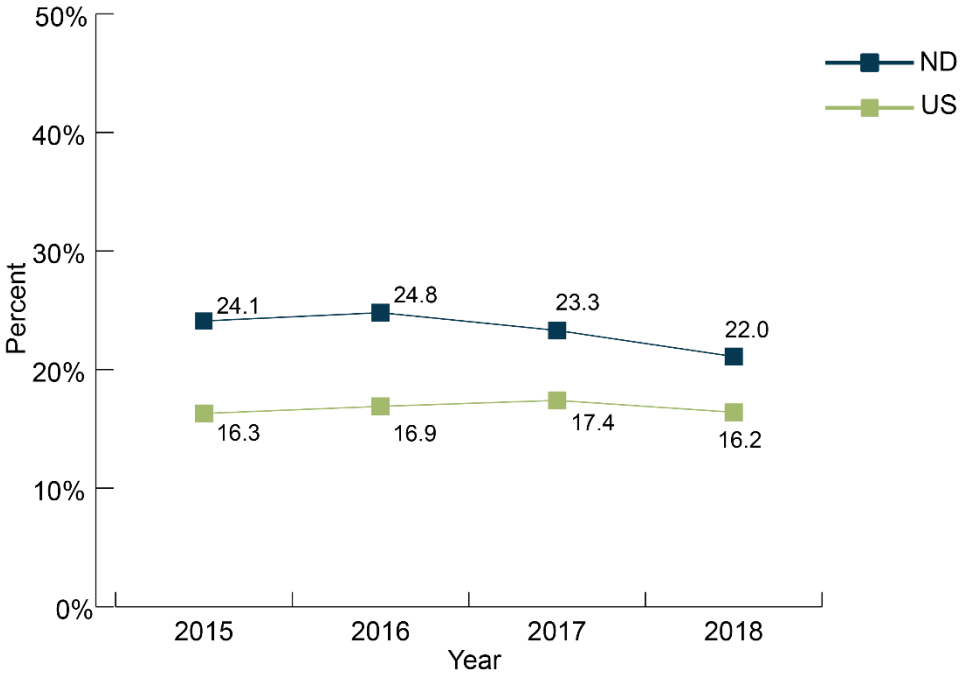
Figure 1.14: Percentage of Current Binge Drinking, High School Students, ND, by Grade, by Year



Data Sources: YRBS

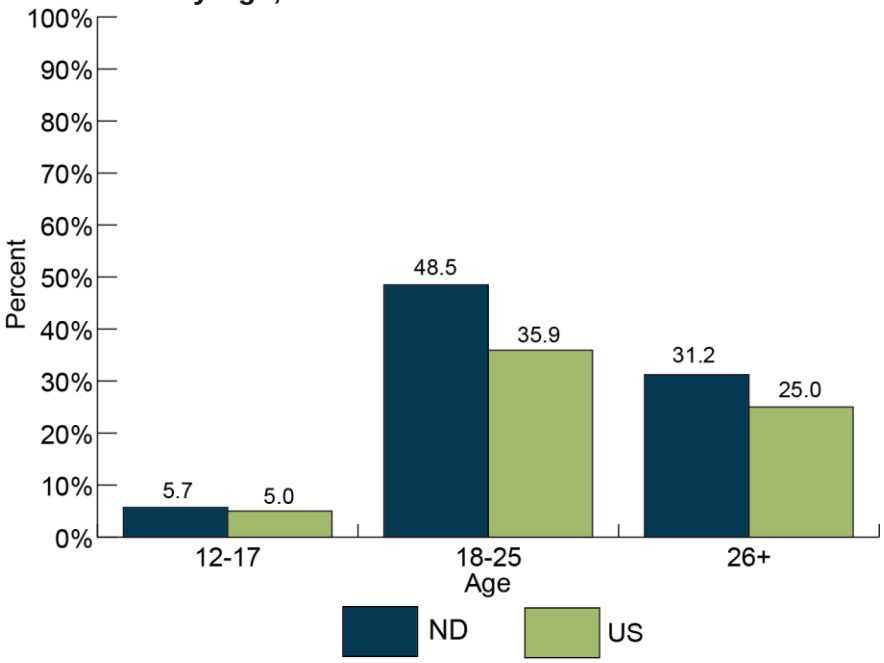
Adults

Figure 1.15: 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.

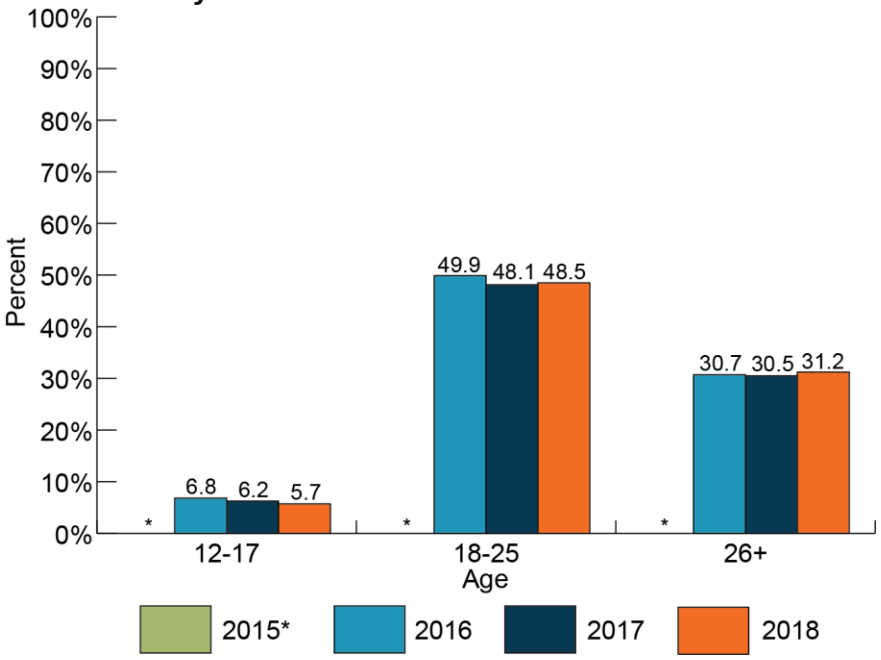
Figure 1.16: Percentage of Binge Drinking at Least Once in the Past Month, ND vs. U.S., by Age, 2018



Data Source: NSDUH

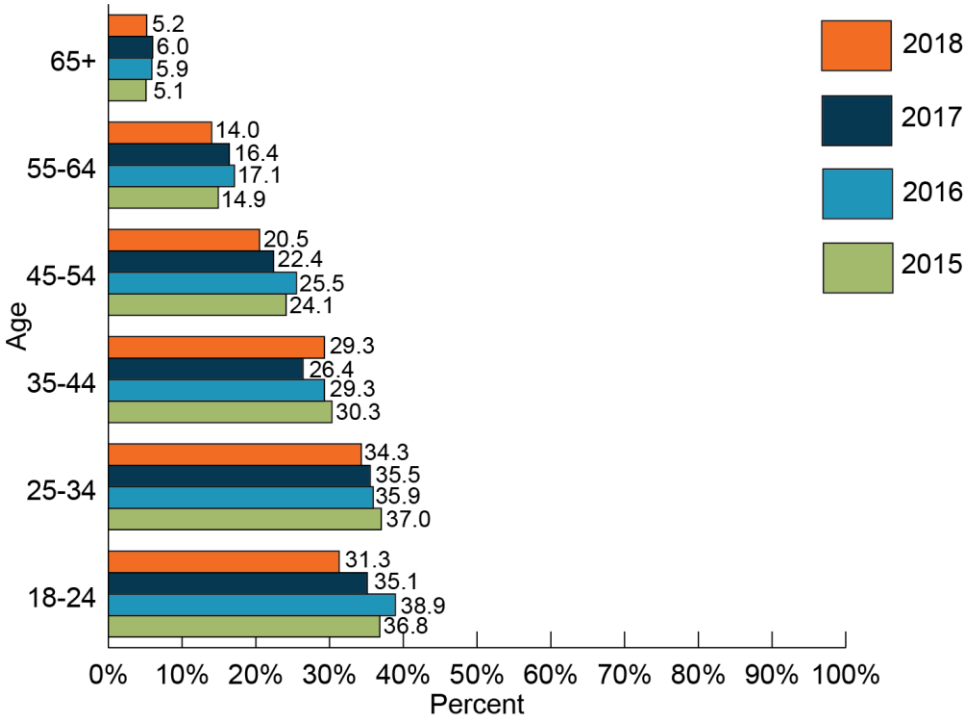
Data Note: Binge drinking is currently defined as consuming five or more drinks for males or four or more drinks for females on the same occasion.

Figure 1.17: Percentage who Binge Drank at Least Once in the Past Month, ND, by Age, by Year



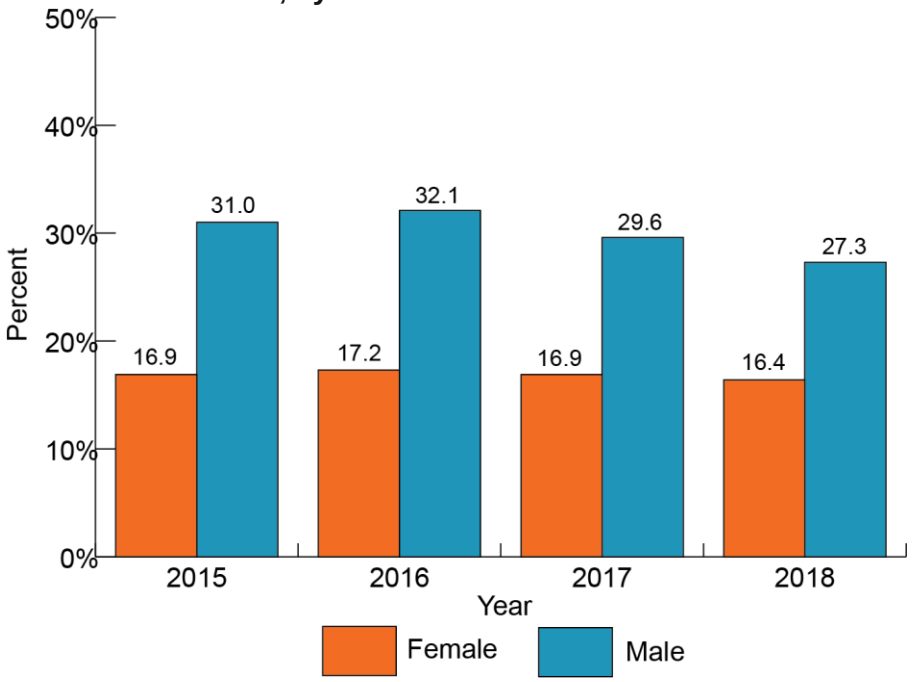
Data Source: NSDUH
Data Note: (*) state binge drinking data not available. Binge drinking prior to 2015 was defined as males or females consuming five or more drinks on the same occasion. Binge drinking is currently defined as consuming five or more drinks for males or four or more drinks for females on the same occasion.

Figure 1.18: Percentage of Binge Drinking in the Past 30 Days, Adults, ND, by Age, by Year



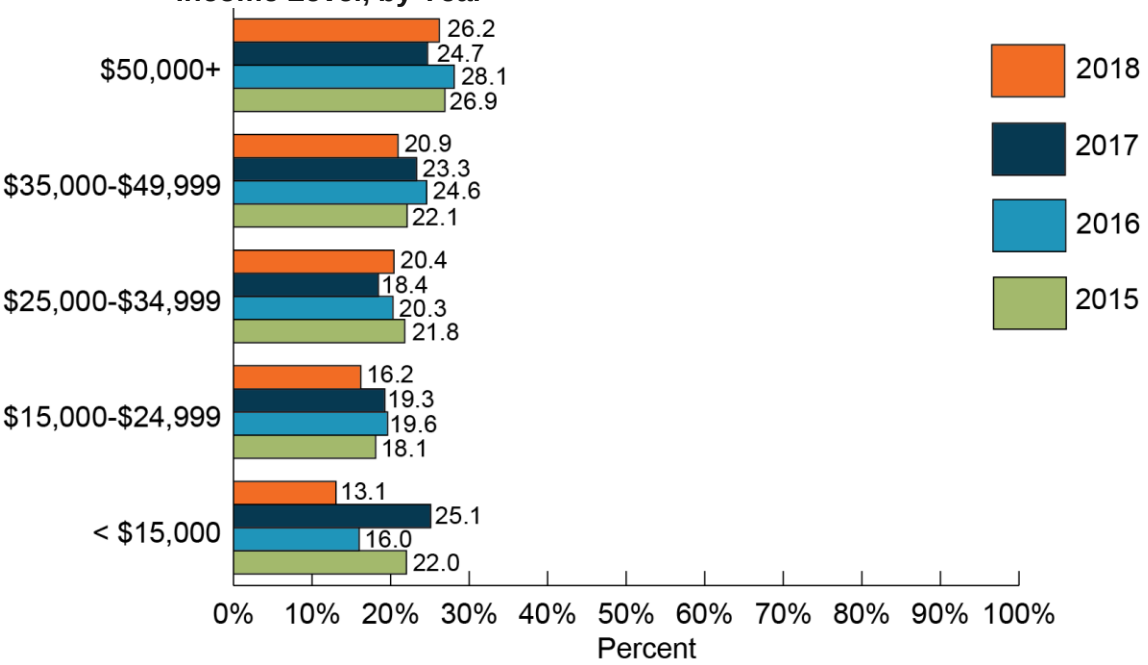
Data Source: BRFSS
Data Note: Binge drinking refers to males consuming five or more drinks on one occasion, females having four or more drinks on one occasion in the past 30 days.

Figure 1.19: 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.

Figure 1.20: 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 significant 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).

Data Source(s)

American Journal of Preventive Medicine (AJPM). National and State Costs of Excessive Alcohol Consumption

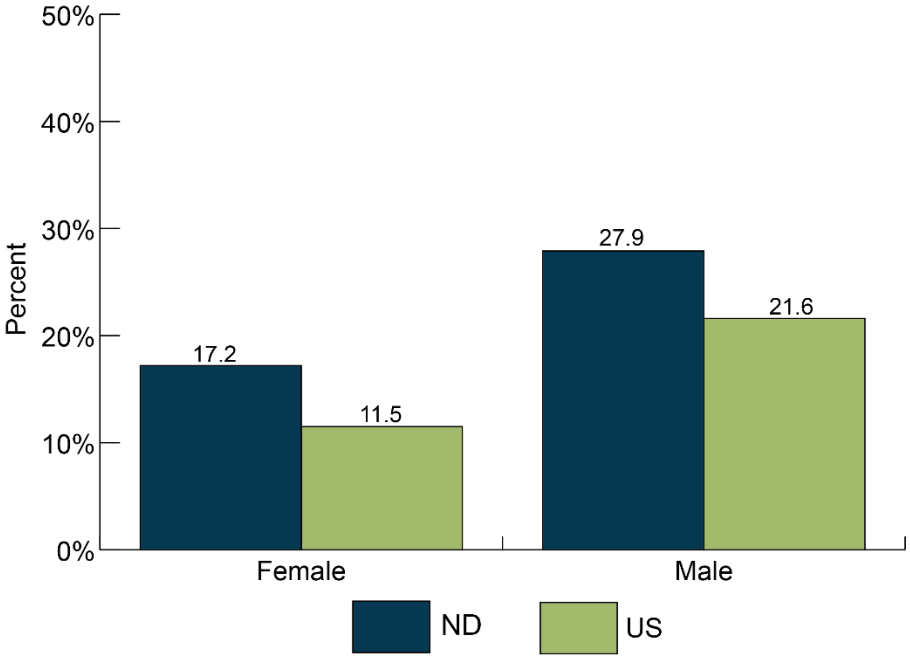
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System (BRFSS)

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

Section Summary

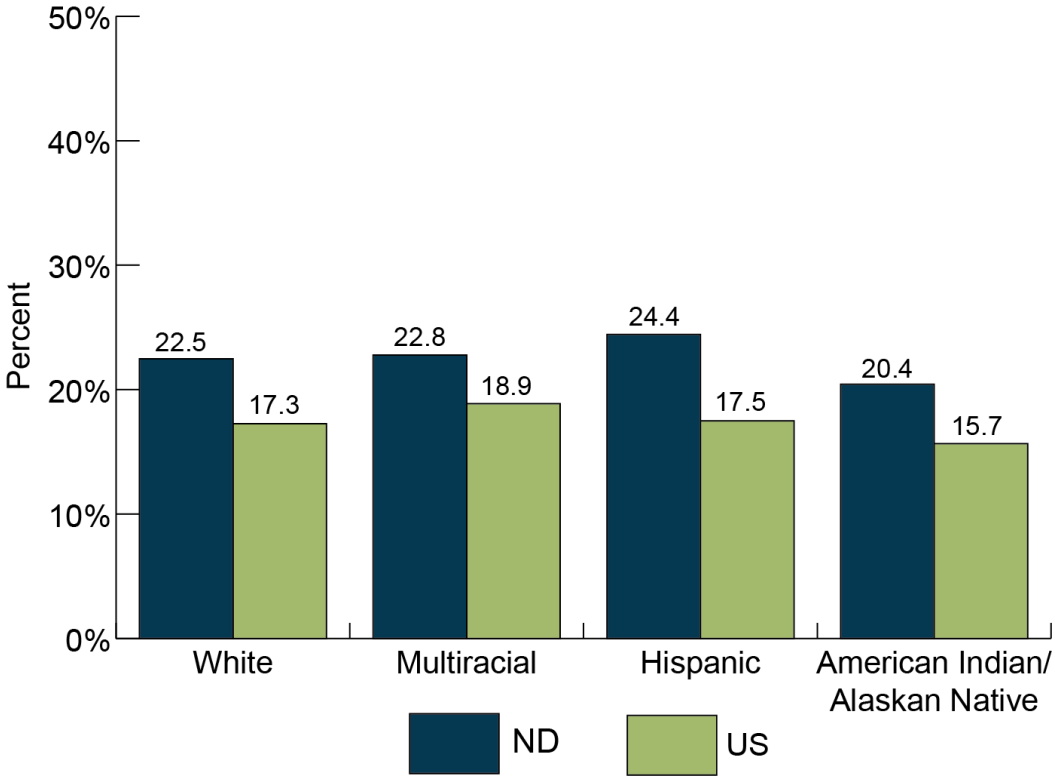
- The percentage of North Dakota adults, age 18 and older, who had reported drinking in excess was higher than the U.S. averaged national percentage of adults who reported excess drinking in 2018 (BRFSS, 2018; see Figure 1.21).
- In 2018, the percentage of North Dakotan males who reported drinking in excess (more than two drinks per day for males and one drink per day for females) was higher than females (BRFSS, 2018; see Figure 1.21).
- 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 were reported among those with an annual income at $50,000+ (BRFSS, 2018; see Figure 1.24).

Figure 1.21: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Gender, 2018



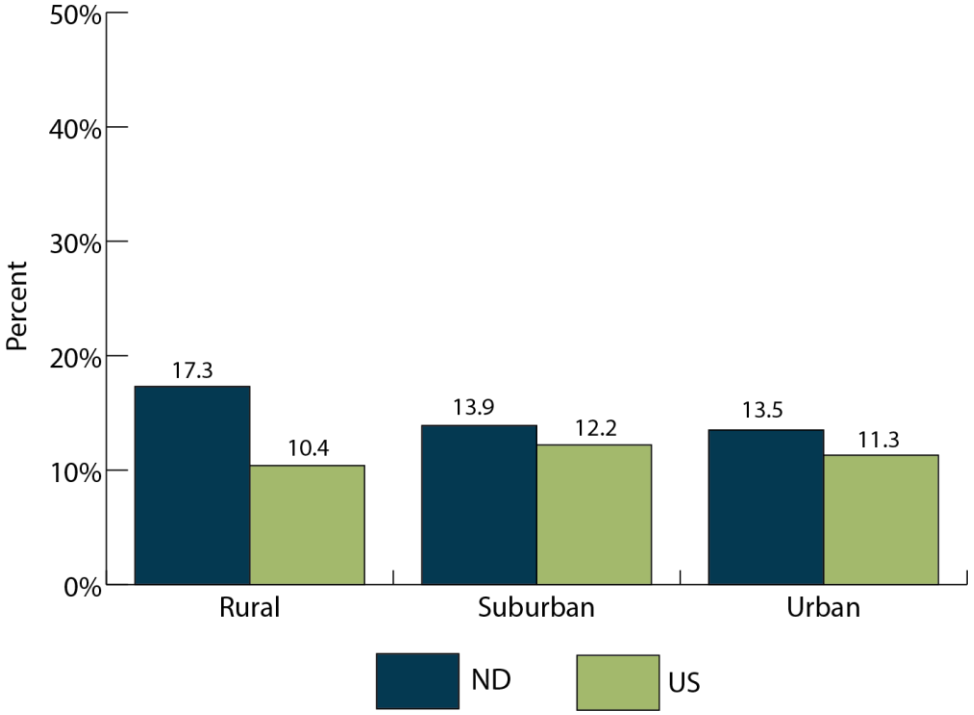
Data Sources: BRFSS

Figure 1.22: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Race/Ethnicity, 2018



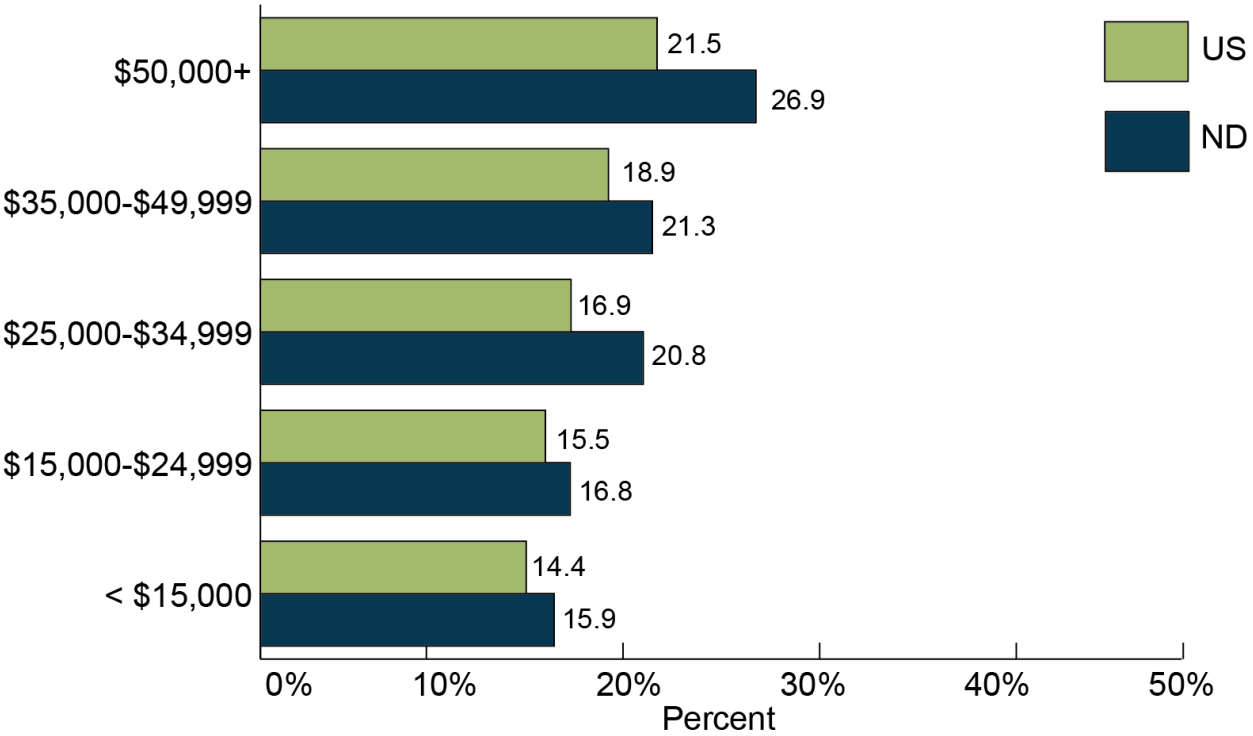
Data Sources: BRFSS
Data Note: Data is suppressed if underweighted sample is less than 50 respondents per subgroup.

Figure 1.23: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Location*, 2018



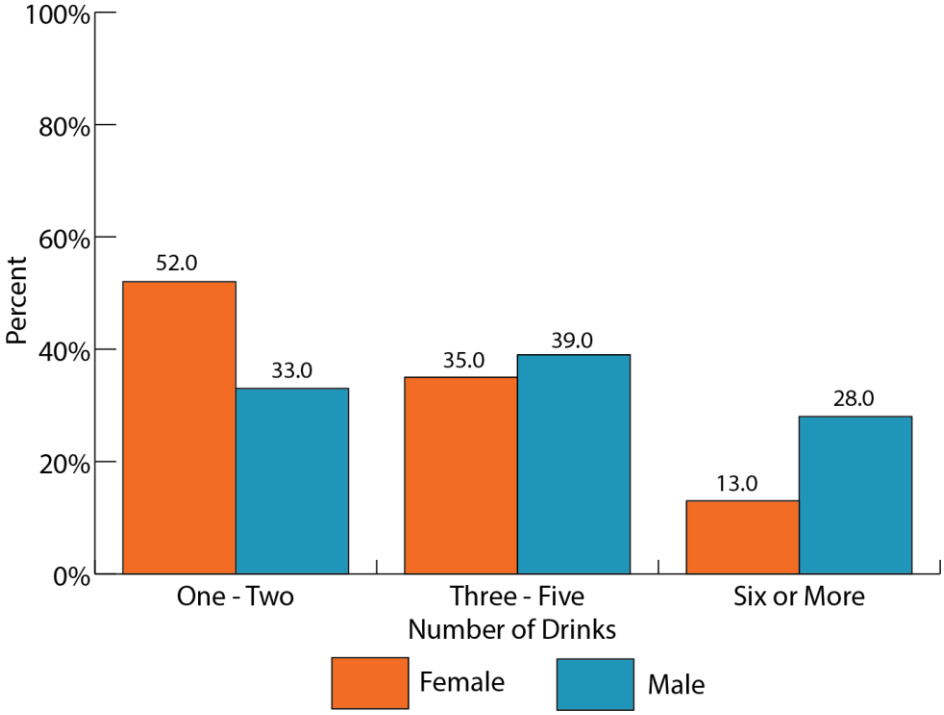
Data Sources: BRFSS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 1.24: Percentage of Excess Drinking, Adults (18+), ND vs. U.S., by Income Level, 2018



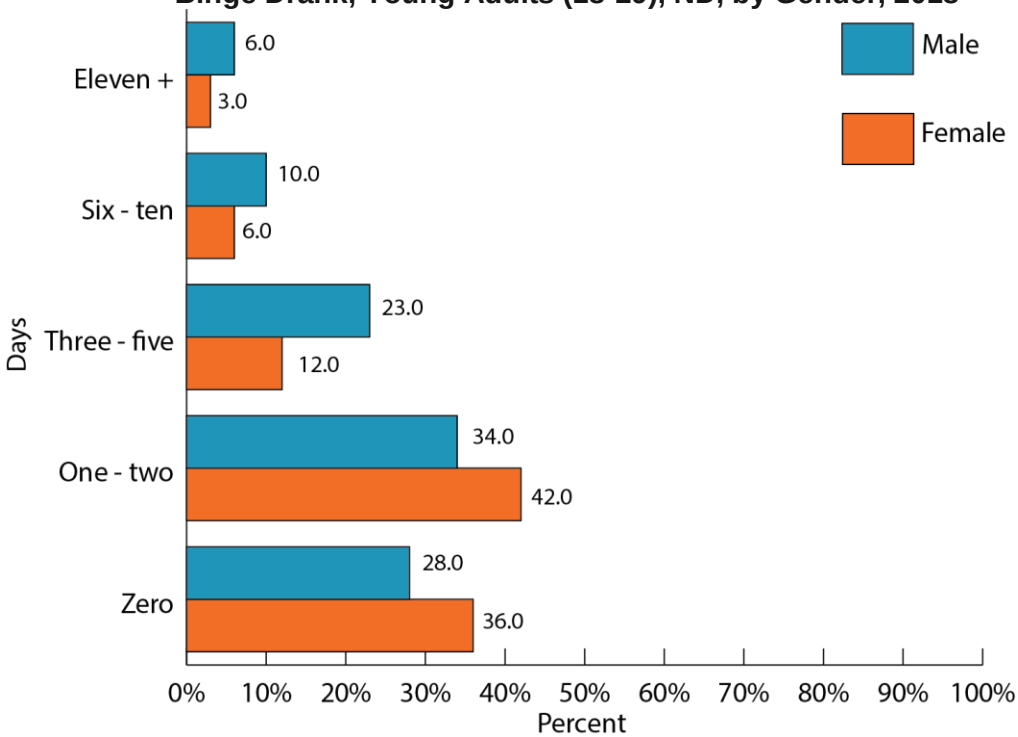
Data Source: BRFSS

Figure 1.25: Percentage of the Average Number of Alcoholic Beverages Consumed on Days When Current Drinkers Drank, Young Adults (18-29), ND, by Gender, 2018



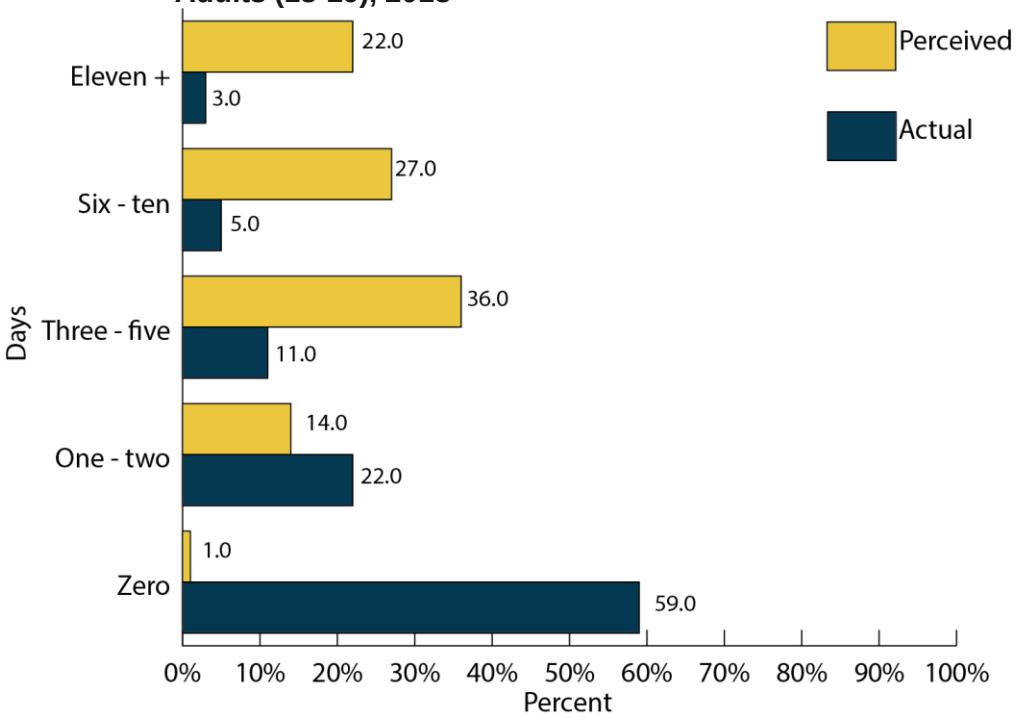
Data Source: NDSOYA

Figure 1.26: Percentage of the Number of Days during the Past 30 Days Current Drinkers Binge Drank, Young Adults (18-29), ND, by Gender, 2018



Data Source: NDSOYA

Figure 1.27: Percentage of Actual vs Perceived Binge Drinking among Peers, Young Adults (18-29), 2018



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 88,000 people die from alcohol related causes each year (ARDI, 2013). 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).

Data Source(s)

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

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

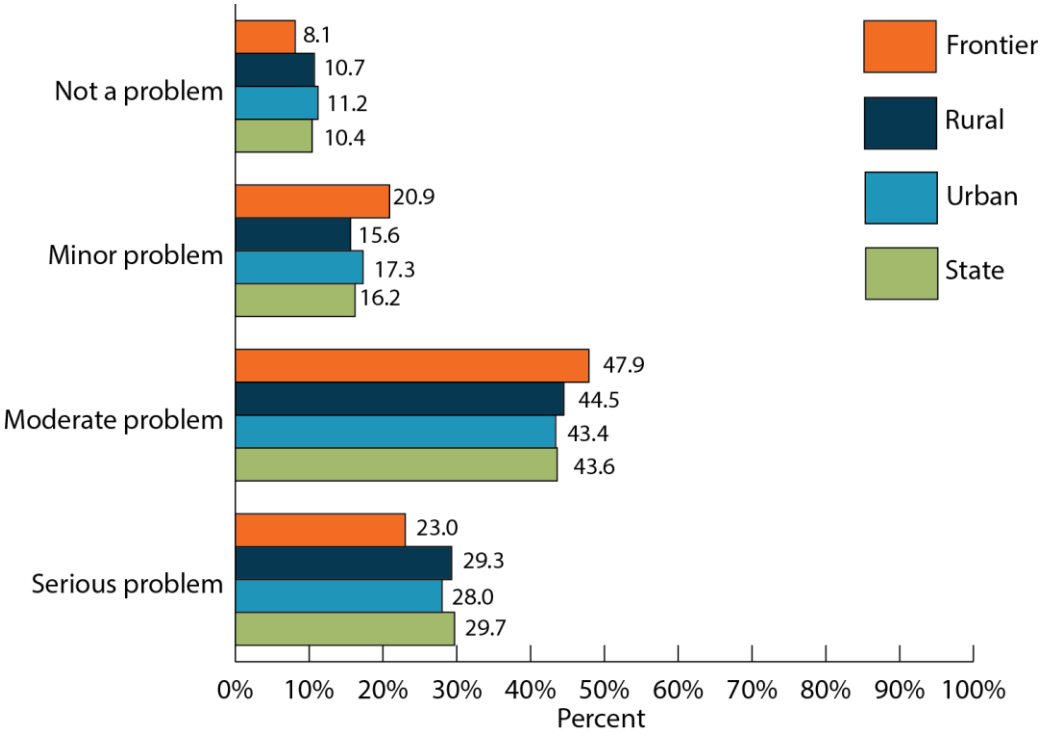
Centers for Disease Control and Prevention (CDC). Alcohol-Related Disease Impact (ARDI)

National Highway Traffic Safety Administration (NHTSA). Fatal Motor Vehicle Crashes

Section Summary

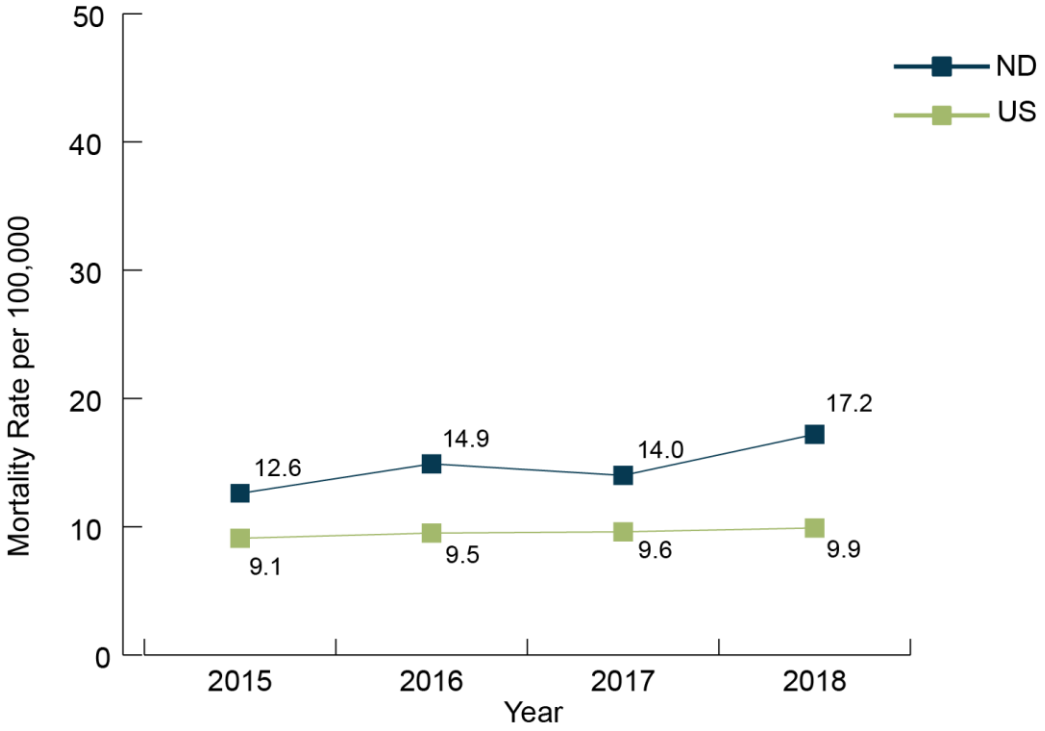
- North Dakota reported higher rates of drug/alcohol-induced causes of mortality when compared to the United States from 2015 to 2018 (NCHS, 2018; see Figure 1.29).
- In North Dakota, liver disease and alcohol dependence syndrome were the leading chronic conditions among those who died from excessive alcohol use (ARDI, 2013; see Table 1.2).
- In North Dakota, motor-vehicle traffic crashes and fall injuries were the leading acute causes of death among those who consumed alcohol excessively (ARDI, 2013; see Table 1.2).
- Excessive alcohol use was a contributing factor to more years of potential life lost for males compared to females (ARDI, 2013; see Table 1.3).
- Statewide, 73.3% of North Dakotans believed that alcohol use was a moderate or serious problem in their community. Rural areas were most likely to report that alcohol use was a serious problem (ND CRS 2017; see Figure 1.28).

Figure 1.28: Perception of Alcohol Use in Community as a Problem among Adults, ND, 2017



Data Source: ND CRS

Figure 1.29: Percentage of Age-Adjusted Alcohol-Induced Causes of Mortality, ND vs. U.S., by Year



Data Source: NCHS

Table 1.2: Alcohol-Attributable Deaths Due to Excessive Alcohol Use, Average for ND, 2006-2010

Chronic Causes	Overall	0-19	20-34	35-49	50-64	65+
Acute pancreatitis	1	0	0	< 1	0	< 1
Alcohol abuse	2	0	0	1	0	1
Alcohol dependence syndrome	10	0	0	3	5	2
Alcoholic liver disease	39	0	1	15	15	8
Breast cancer (females only)	1	0	0	< 1	< 1	1
Epilepsy	< 1	0	0	0	< 1	0
Esophageal cancer	1	0	0	< 1	< 1	1
Hypertension	3	0	0	< 1	< 1	3
Ischemic heart disease	2	0	< 1	< 1	< 1	2
Laryngeal cancer	< 1	0	0	0	< 1	< 1
Liver cancer	2	0	0	< 1	< 1	1
Liver cirrhosis unspecified	8	0	0	1	2	4
Low birth weight prematurity IUGR death	< 1	< 1	0	0	0	0
Oropharyngeal cancer	1	0	0	0	< 1	< 1
Prostate cancer (males only)	1	0	0	0	< 1	1
Stroke hemorrhagic	3	0	< 1	< 1	1	3
Stroke ischemic	1	0	0	< 1	< 1	1
Supraventricular cardiac dysrhythmia	1	0	0	0	0	1
Subtotal	75	< 1	1	21	25	28
Acute Causes	**Overall**	**0-19**	**20-34**	**35-49**	**50-64**	**65+**
Alcohol poisoning	4	0	0	3	1	0
Aspiration	< 1	0	0	0	0	< 1
Child maltreatment	< 1	< 1	0	0	0	0
Drowning	2	0	1	1	1	0
Fall injuries	26	0	1	2	2	22
Fire injuries	1	0	0	0	0	1
Firearm injuries	< 1	< 1	0	0	0	0
Homicide	4	1	1	2	< 1	0
Hypothermia	2	0	0	1	< 1	< 1
Motor-vehicle non-traffic crashes	< 1	0	< 1	0	< 1	0
Motor-vehicle traffic crashes	35	4	14	10	5	2
Occupational and machine injuries	1	0	0	< 1	< 1	< 1
Poisoning (not alcohol)	7	< 1	2	2	1	1
Suicide	21	2	7	6	4	2
Subtotal	104	8	26	26	16	29

Data Source: ARDI

Table 1.3: Years of Potential Life Lost Due to Excessive Alcohol Use, ND vs. U.S., by Gender, 2006-2010

	North Dakota	United States
Female	1,307	717,082
Male	3,825	1,853,788
Total	5,132	2,570,870

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 2017, about 5.8 percent or 14.4 million U.S. adults, aged 18 and older, met the criteria for AUD (NSDUH, 2018). Adolescents can be diagnosed with AUD, and in 2018, an estimated 401,000 adolescents, aged 12–17, were diagnosed with AUD (NSDUH, 2018). In the United States, 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).

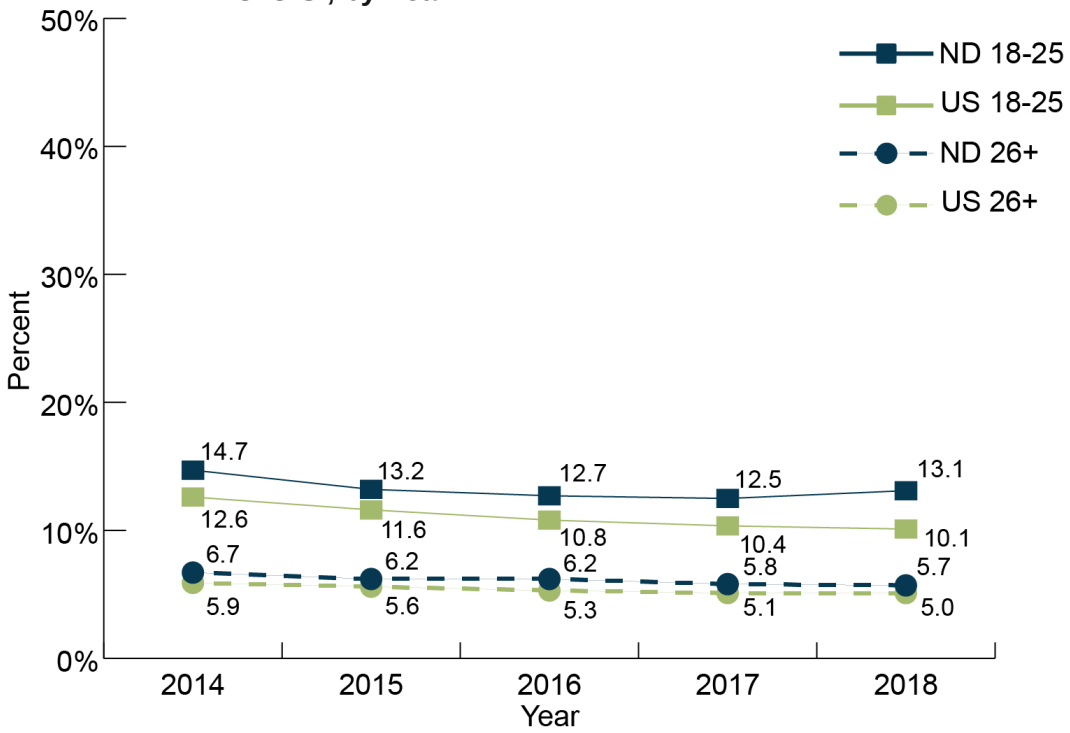
Data Source(s)

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

Section Summary

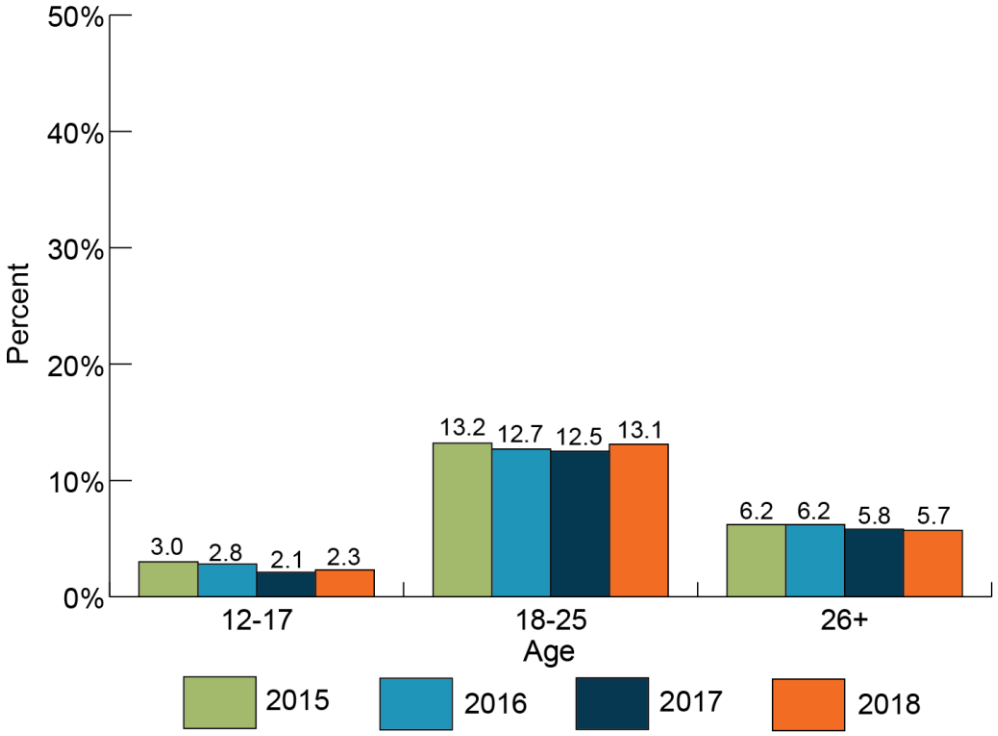
- North Dakota rates of alcohol use disorder, across all age groups from 2015 to 2017, had decreased, although there was a slight increase in 2018 for those 25 years and younger (NSDUH, 2018; see Figure 1.31). However, the percentage of alcohol use disorder among North Dakota individuals aged 18 to 25 remained higher than national rates of the same age group (NSDUH, 2018; see Figure 1.30).

Figure 1.30: Percentage of Alcohol Use Disorder in the Past Year among Adults, By Ages, ND vs. U.S., by Year



Data Source: NSDUH

Figure 1.31: Percentage of Alcohol Use Disorder in the Past Year, By Age, ND, by Year



Data Source: NSDUH

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.

Data Source(s)

Youth

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

Adult

Journal of Studies on Alcohol and Drugs (J Stud Alcohol Drugs.). Alcohol-related Risk of Driver Fatalities: An Update Using 2007 Data

National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts 2018

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

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

Section Summary

Youth

- 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 1.32).
- From 2013 to 2019, there was a 48.6% 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 1.34).
- From 2013 to 2019, there was roughly a 35% decrease in the number of North Dakota high school students who rode with a driver who had been drinking alcohol (YRBS, 2019; see Figure 1.34).

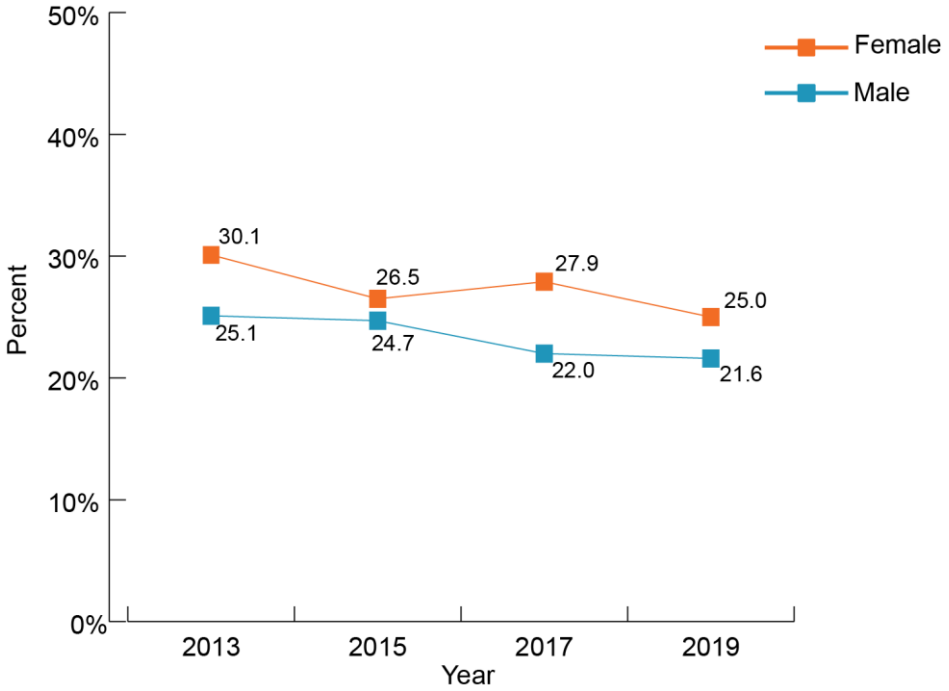
- Between the years 2015 and 2019, the percentage of both male (9.9% to 6.1%) and female (5.5% to 4.9%) high school students who reported driving a vehicle after drinking alcohol in the past month decreased (YRBS, 2019; see Figure 1.37).
- The percentage of North Dakota high school students who reported riding with a driver who had been drinking alcohol decreased from 2013 to 2015. In 2017, while females' percentages continued to decrease, males reported a slight increase in percentage of reported rides with a driver who had been drinking alcohol; this finding is reversed in 2019 (YRBS, 2019; see Figure 1.35).

Adults

- North Dakota adults in frontier communities were least likely to agree that drinking and driving laws are enforced when compared to adults in rural and urban communities (ND CRS, 2017; see Figure 1.39).
- The majority of North Dakota adults held the perception that drinking and driving laws were enforced in their communities (ND CRS, 2017; see Figure 1.39).
- The percentage of North Dakota adult males who reported driving after consuming too much alcohol is greater than females in both 2016 and 2018 (BRFSS, 2018; see Figure 1.40).
- North Dakota females who reported driving after consuming too much alcohol decreased by half from 2016 (4.6%) to 2018 (2.4%) (BRFSS, 2018; see Figure 1.40).

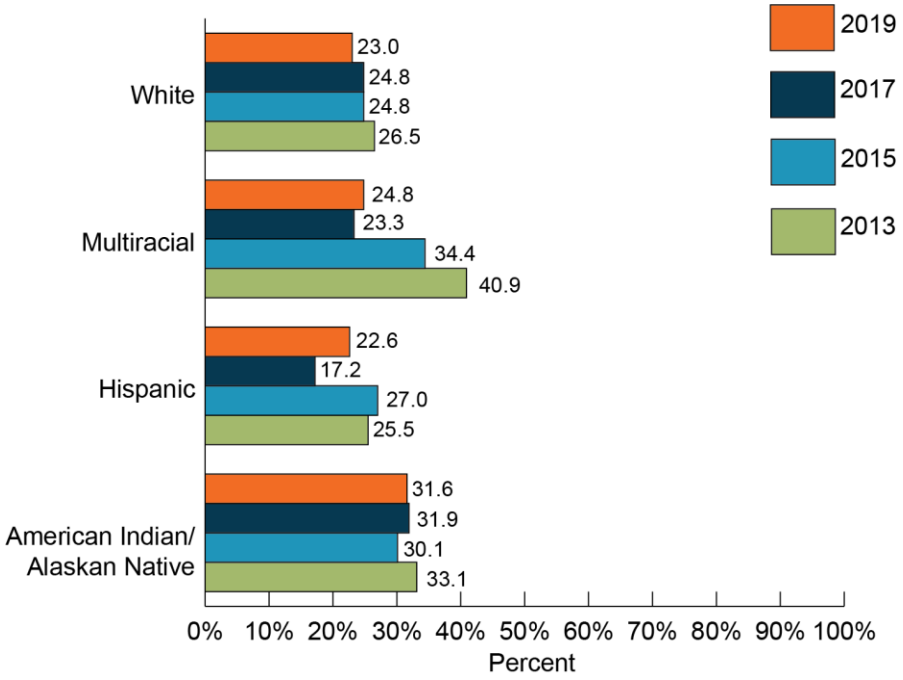
Youth

Figure 1.32: Percentage of Middle School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Gender, by Year



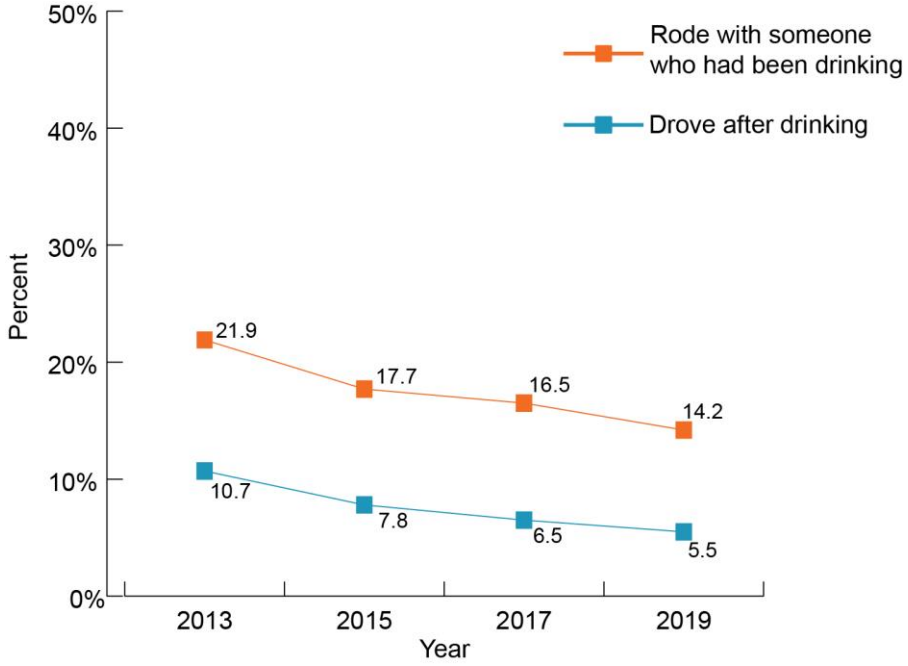
Data Source: YRBS

Figure 1.33: Percentage of Middle School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Race/Ethnicity, by Year



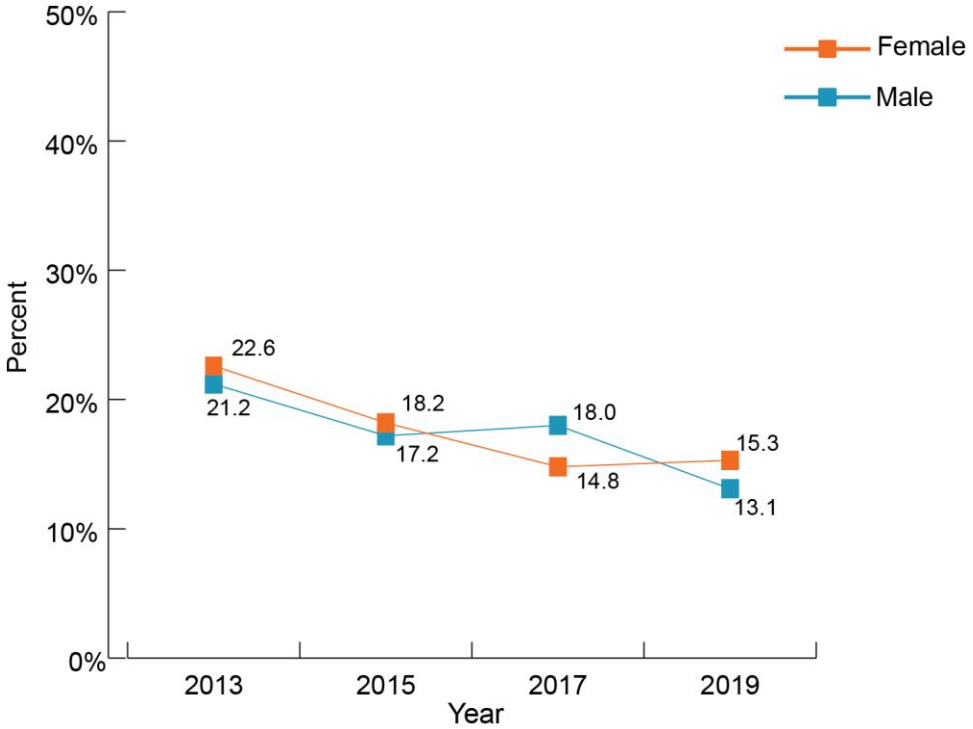
Data Source: YRBS

Figure 1.34: 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



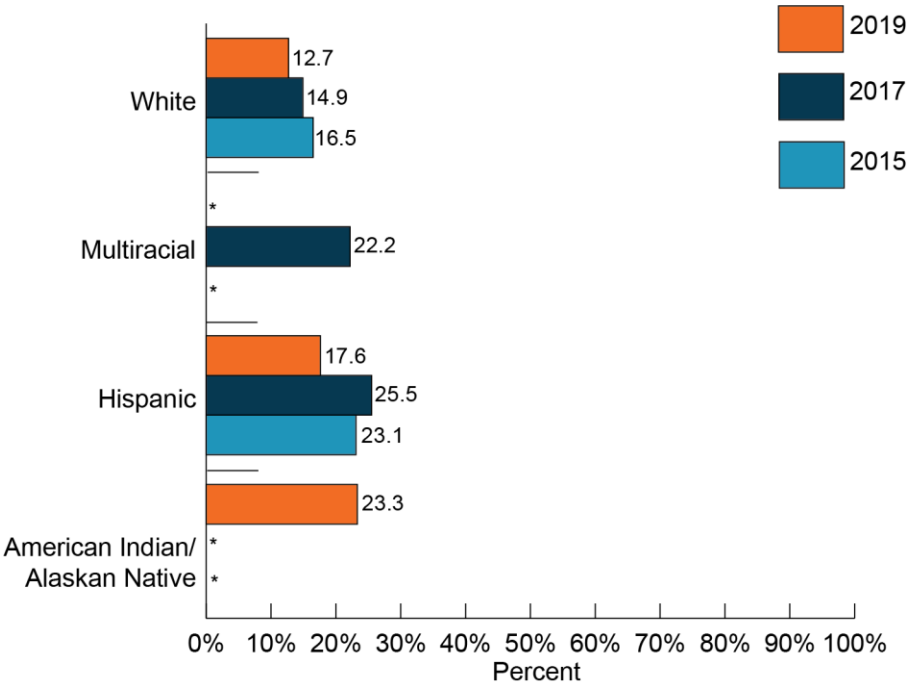
Data Source: YRBS

Figure 1.35: Percentage of High School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Gender, by Year



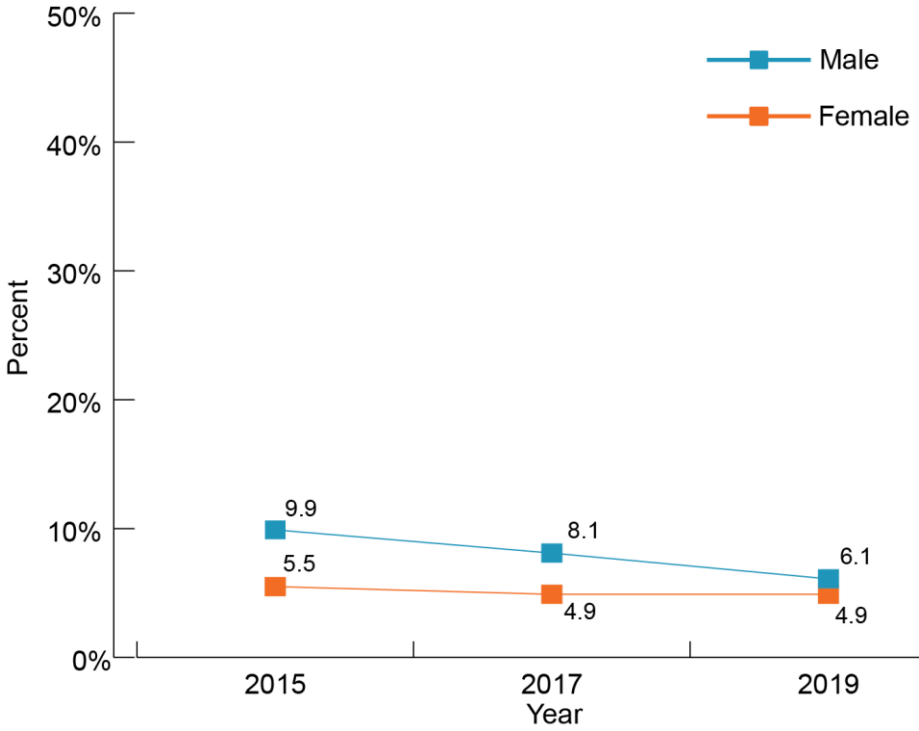
Data Source: YRBS

Figure 1.36: Percentage of High School Students who rode with a Driver Who had been Drinking Alcohol, ND, by Race/Ethnicity, by Year



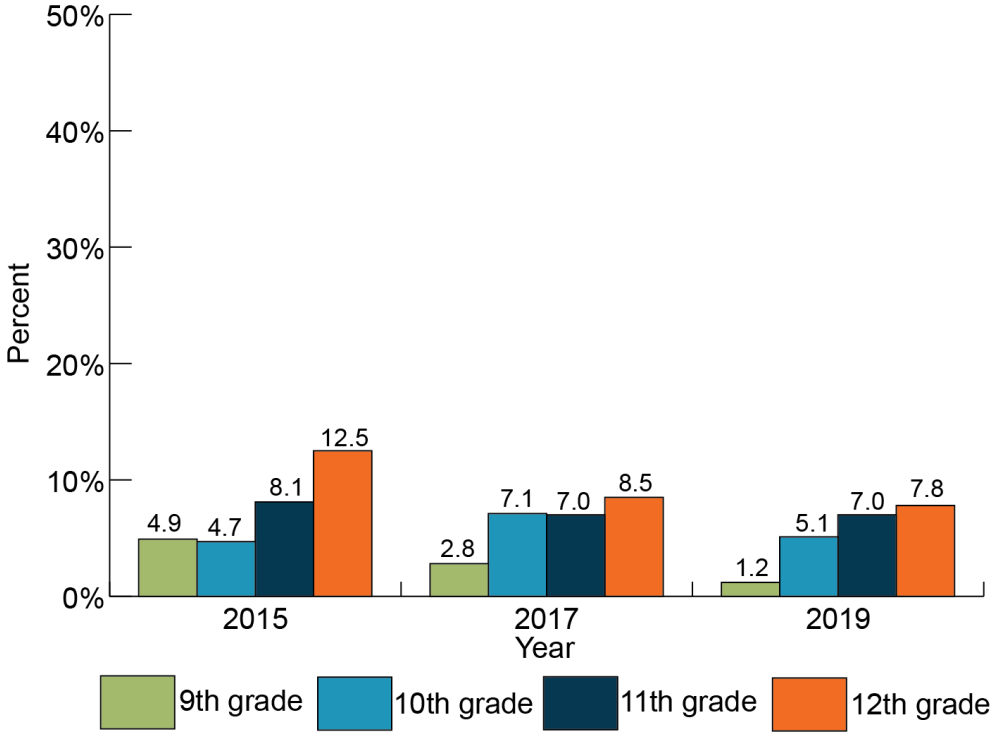
Data Source: YRBS
Data Note: Data for Hispanic/Latino population was not available prior to 2013.
Data Note: (*) Data is suppressed if underweighted sample is less than 100 respondents per subgroup.

Figure 1.37: Percentage of High School Students Who Drove a Vehicle after Drinking Alcohol, Past 30 Days, ND, by Gender, by Year



Data Source: ND YRBS

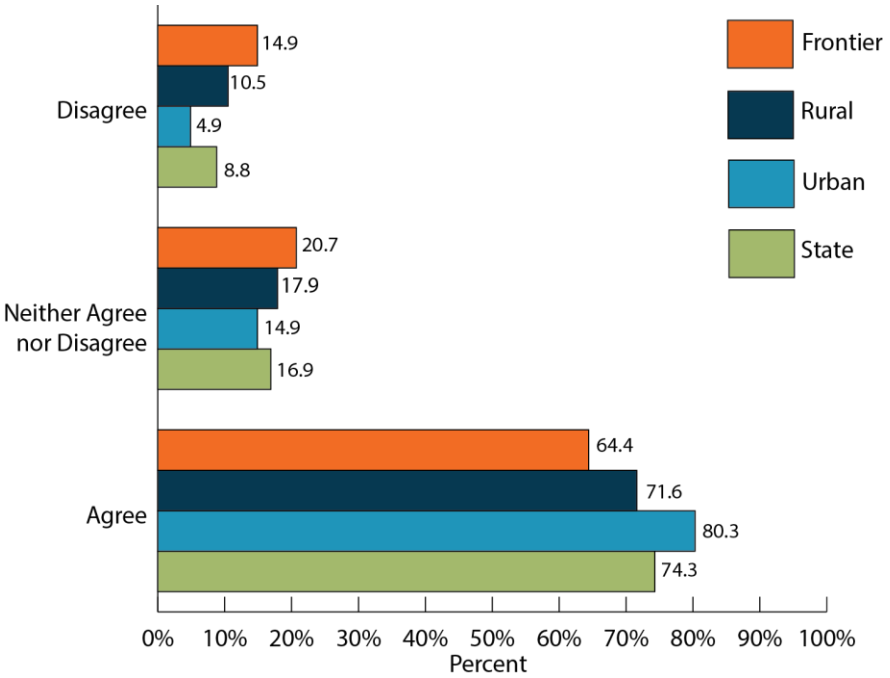
Figure 1.38: Percentage of High School Students Who Drove a Vehicle after Drinking Alcohol, Past 30 Days, ND, by Grade, by Year



Data Source: ND YRBS

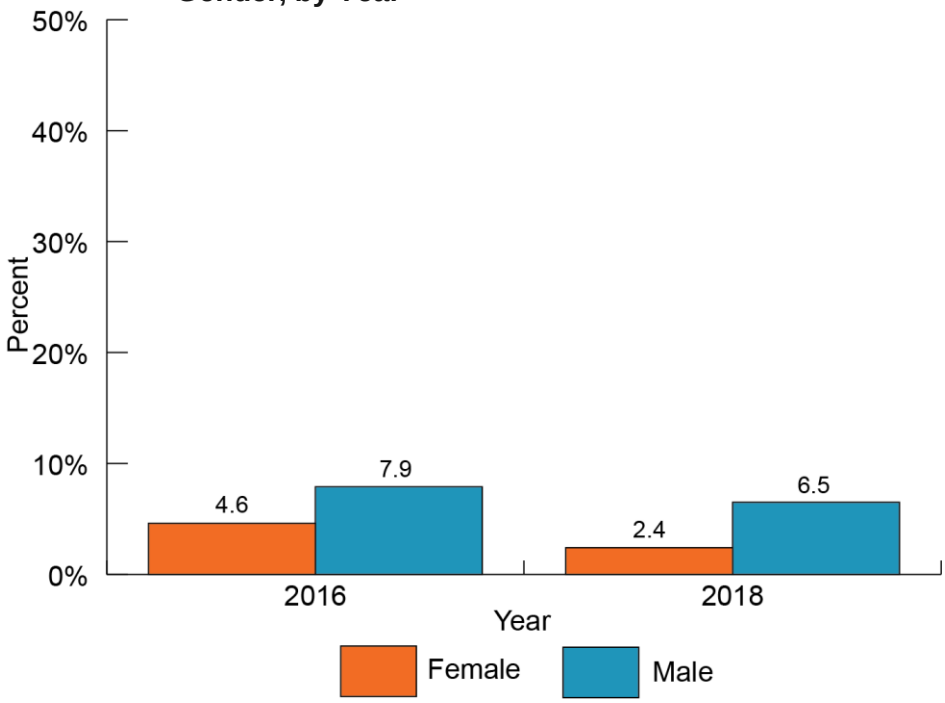
Adults

Figure 1.39: Perception of Drinking and Driving Laws Being Enforced within One's Community, ND, 2017



Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 1.40: Percentage of Adults Driving After Consuming Too Much Alcohol, ND, by Gender, by Year



Data Source: BRFSS

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 2018, 10,511 people died because of alcohol-impaired crashes (NHTSA, 2018). In North Dakota, one alcohol-related crash occurred every 11 hours and one alcohol-related crash fatality occurred every 11 days (NDCS, 2018). In 2018, approximately one out of every six adult arrests in North Dakota were due to driving under the influence.

Data Source(s)

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

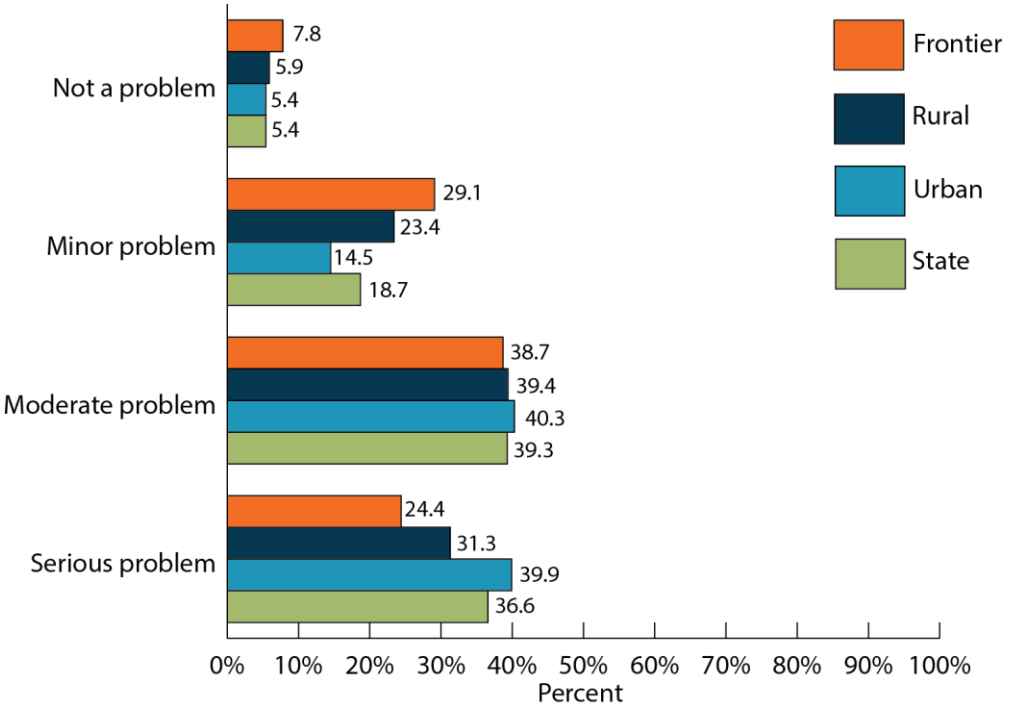
National Highway Traffic Safety Administration (NHTSA). Fatality Analysis Reporting System (FARS)

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

Section Summary

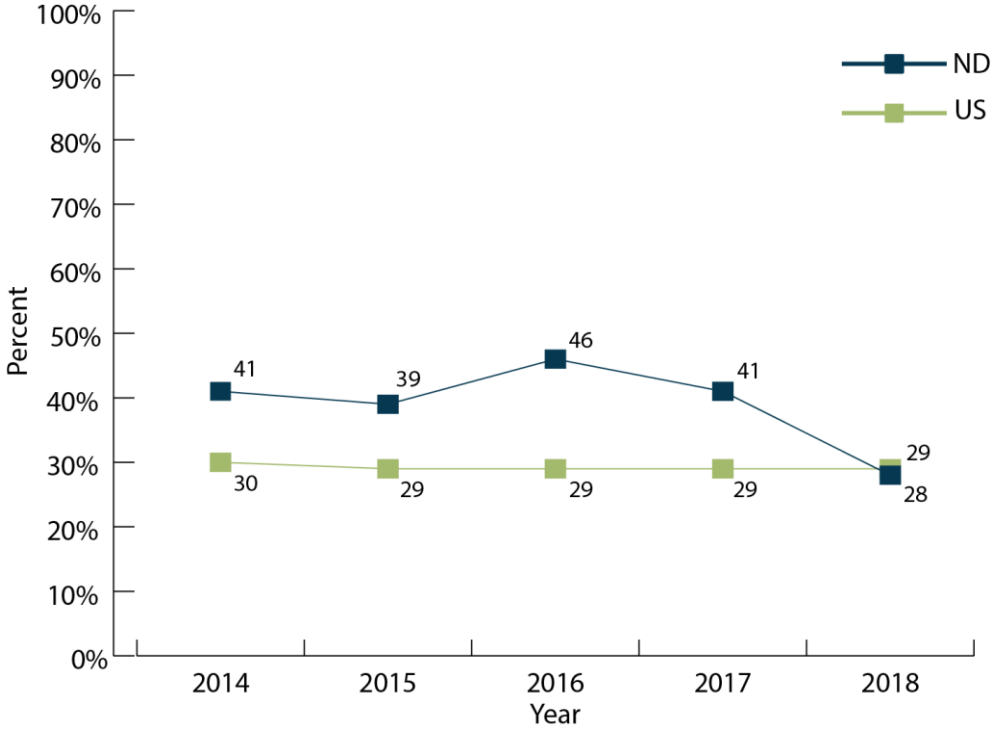
- North Dakota adults in frontier communities were more likely to perceive drugs/alcohol as either minimally contributing or in no way contributing to injuries or crashes (36.9%) than North Dakota adults residing in rural (29.3%) and urban (19.9%) communities (ND CRS, 2017; see Figure 1.41).
- The percentage of alcohol-related driving fatalities in North Dakota and the United States remained relatively unchanged between 2014 and 2017. One exception to this finding was a six percentage point increase for North Dakota in 2016. In 2018, North Dakota saw a 13 percentage point drop (FARS, 2018; see Figure 1.42).
- The percentage of alcohol-related driving fatalities in North Dakota remained greater than the United States between 2014 and 2017 (FARS, 2018; see Figure 1.42).
- Alcohol-related driving fatalities per 100 million Vehicle Miles Traveled (VMT) in North Dakota and nationally have decreased between 2016 to 2017. North Dakota rates were higher than the U.S. average between 2014 and 2017 (FARS, 2018; see Figure 1.43).
- The percentage of alcohol-related driving injuries in North Dakota has remained relatively stable since 2015. There was a marginal decrease from 2015 to 2016, with an observed increase in 2017 (NDCS, 2018; see Figure 1.44).
- The percentage of alcohol-related driving crashes in North Dakota resulting in fatalities decreased by almost 17 percentage points between 2017 and 2018 (NDCS, 2018; see Figure 1.44).

Figure 1.41: Perception of Alcohol/Drug Use and the Contribution towards Injuries or Crashes, by Location*, ND, 2017



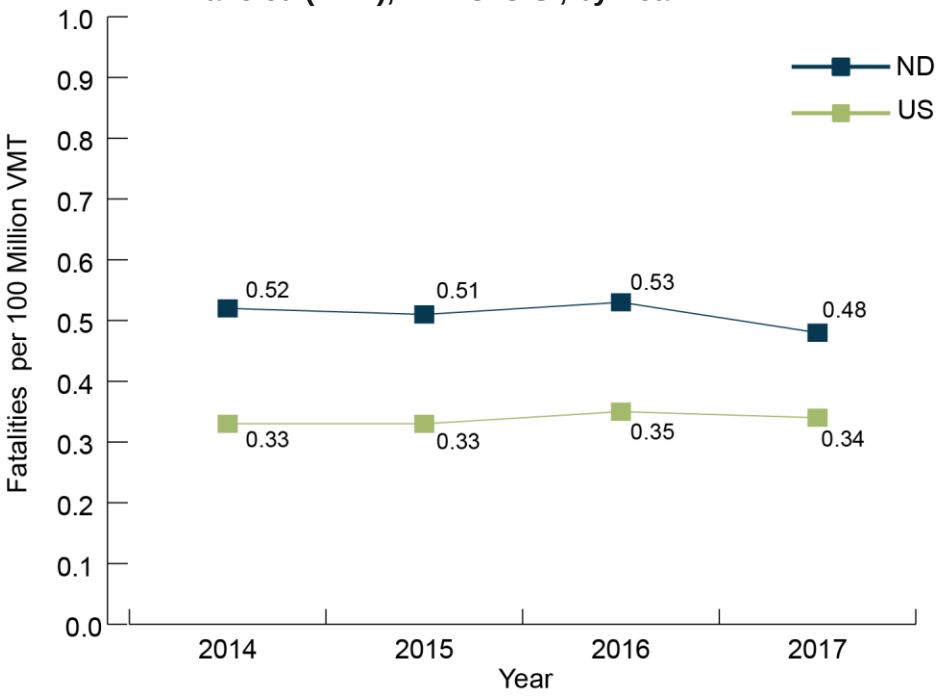
Data Source: ND CRS
Data Note: State totals are not indicative of cumulative percentages of responses (e.g. missing)
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 1.42: Percentage of Alcohol-Related Crashes which were Fatal, (BAC = 0.08+) ND vs. U.S., by Year



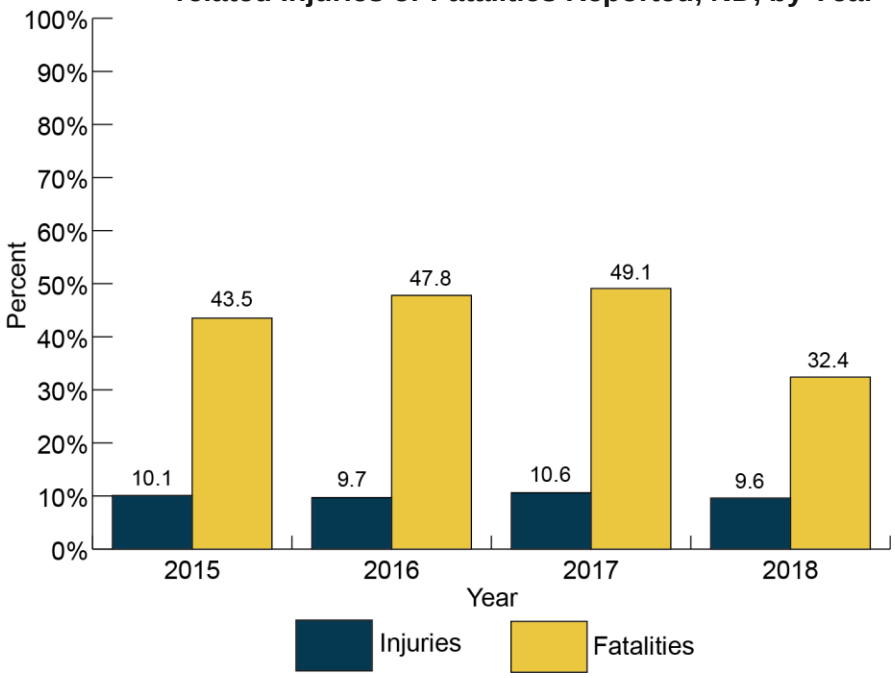
Data Source: FARS

Figure 1.43: Rate of Alcohol-Related Driving Fatalities per 100 Million Vehicle Miles Traveled (VMT), ND vs. U.S., by Year



Data Source: FARS

Figure 1.44: 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 office 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 (ND-DMV, 2017). From 2017 to 2018, North Dakota reported an 8.4% decrease in the number of DUI arrests (State of North Dakota Office of Attorney General: CSO, 2018).

Data Source(s)

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)

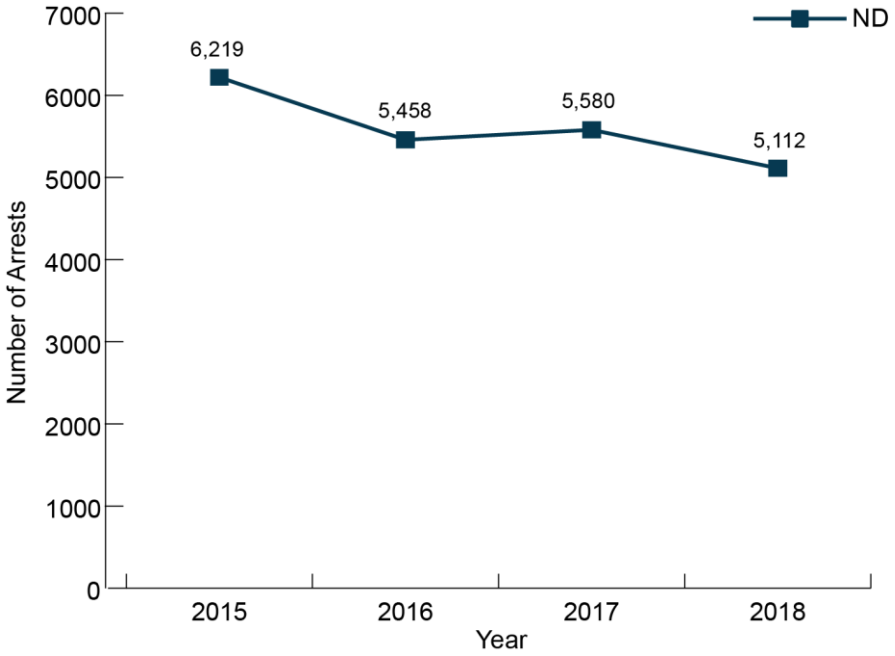
Section Summary

- In general, the number of DUI arrests in North Dakota has remained unchanged for all age groups between 2017 and 2018 with a few exceptions. Those in the 18-24 age group showed a 1.2% point decrease, while those in the 55-64 age group had a 0.9% point increase. Additionally, those over 65 years of age had a slight increase of 0.5% point (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.46).
- The percentage of adults arrested for DUI has been consistently higher among males than females in North Dakota from 2015 through 2018 (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.47).
- North Dakota adults aged 25-34 reported the greatest percentage of DUI arrests between the years 2015 to 2018 when compared to all other age groups (State of North Dakota Office of Attorney General: CSO Program, 2018; see Figure 1.46).
- The percentage of North Dakota adult DUI arrests among whites was higher than other races; however, that percentage declined between the years 2014 through 2017. The percentage of North Dakota adult male DUI arrests among American Indian/Alaska Natives increased over the same four-year period (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.48).
- In 2018, the percentage of North Dakota DUI and Actual Physical Control (APC) offenders imprisoned among all drug and alcohol offenders decreased for both males (-2.2 percentage points) and females (-1.3 percentage points). However, in 2019, these values increased

again (0.9 percentage points for males, and 1.1 for females) (DOCR, 2019; see Figure 1.50).

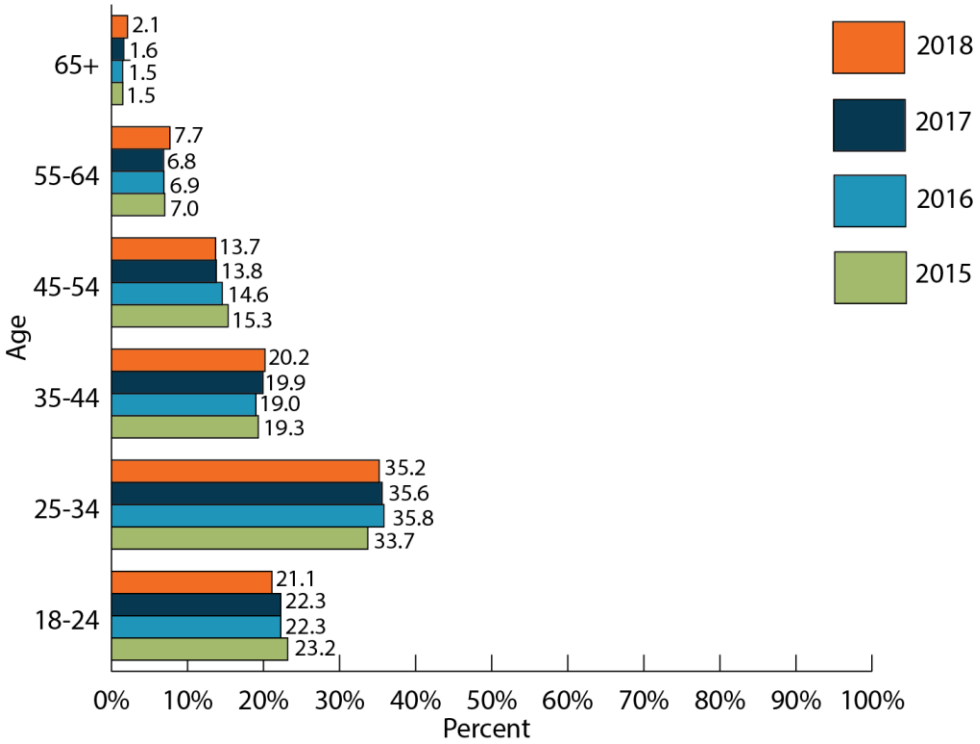
- When adult DUI arrests by race were assessed by the number of arrests per 1,000 population, the highest rates of arrest were among the Black/African American, Hispanic/Latino and American Indian/Alaska Native racial/ethnic groups (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.49).
- The percentage of adult male DUI and APC offenders was consistently greater than females in North Dakota from 2016 to 2019 (DOCR, 2019; see Figure 1.50).

Figure 1.45: Adults DUI Arrests, Totals, ND, by Year



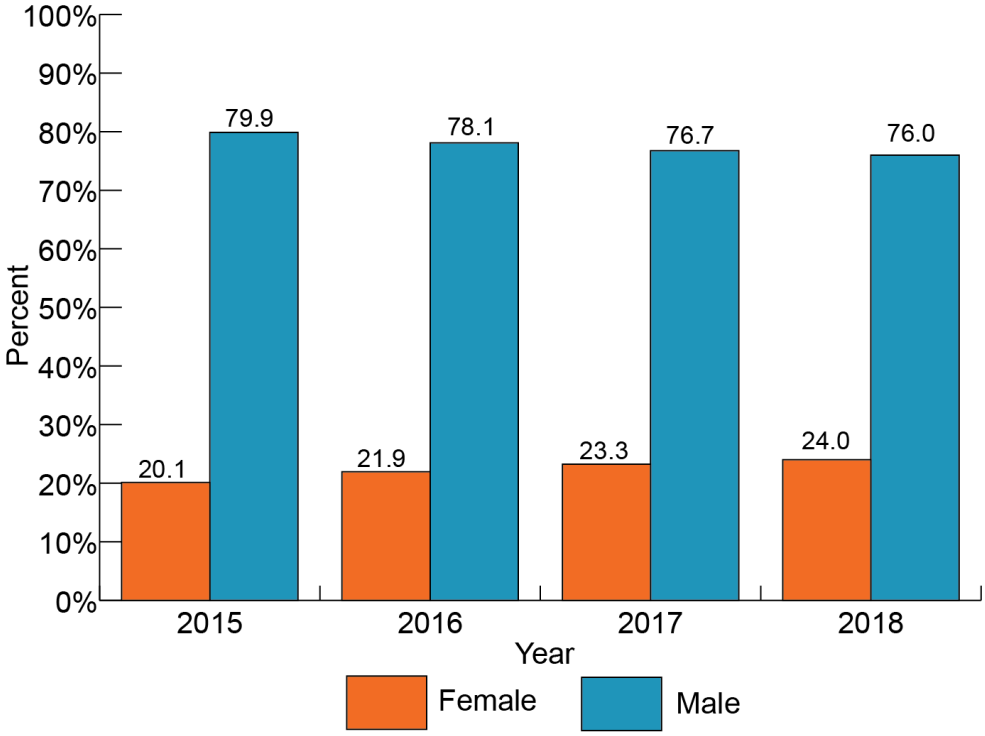
Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO)

Figure 1.46: Percentage of Adult DUI Arrests, ND, by Age, by Year



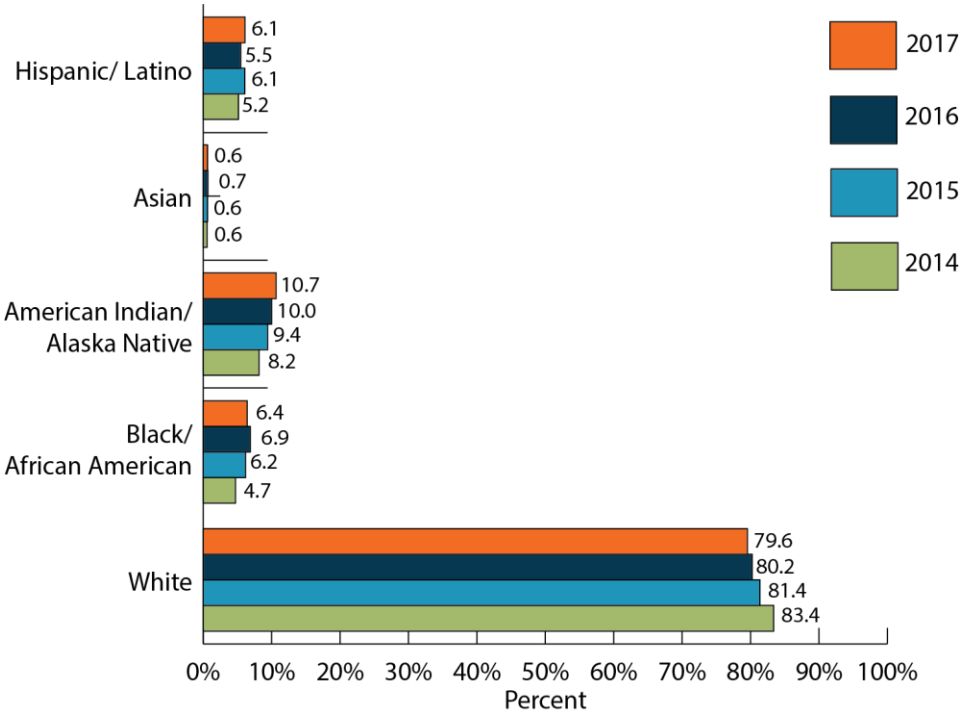
Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO)
Data Note: State totals are not indicative of cumulative percentages of responses (e.g. missing, unknown).

Figure 1.47: Percentage of Adult DUI Arrests, ND, by Gender, by Year



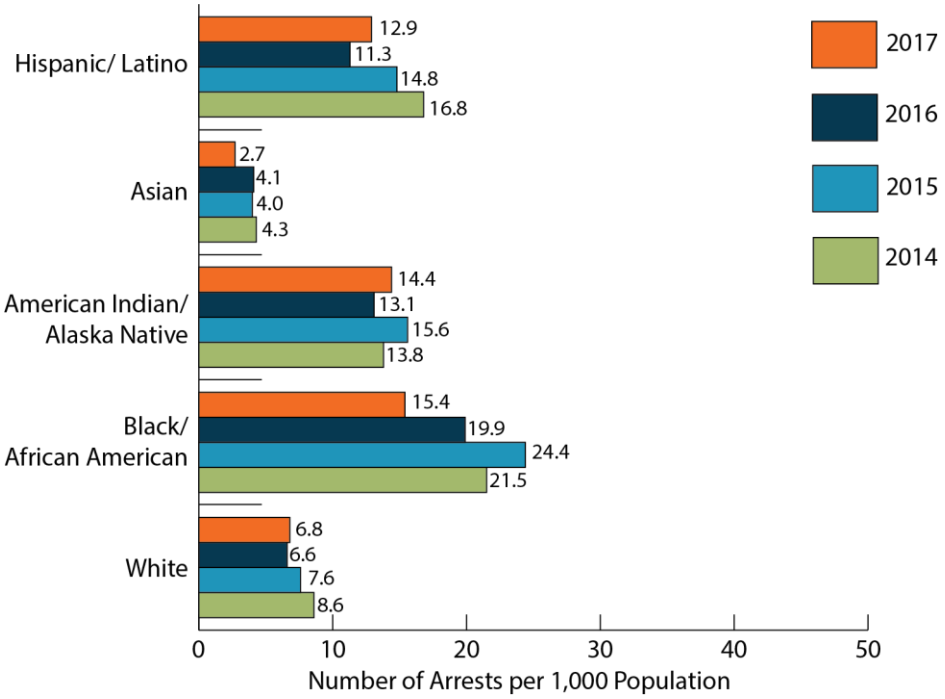
Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO)

Figure 1.48: Percentage of Adult DUI Arrests, ND, by Race, by Year



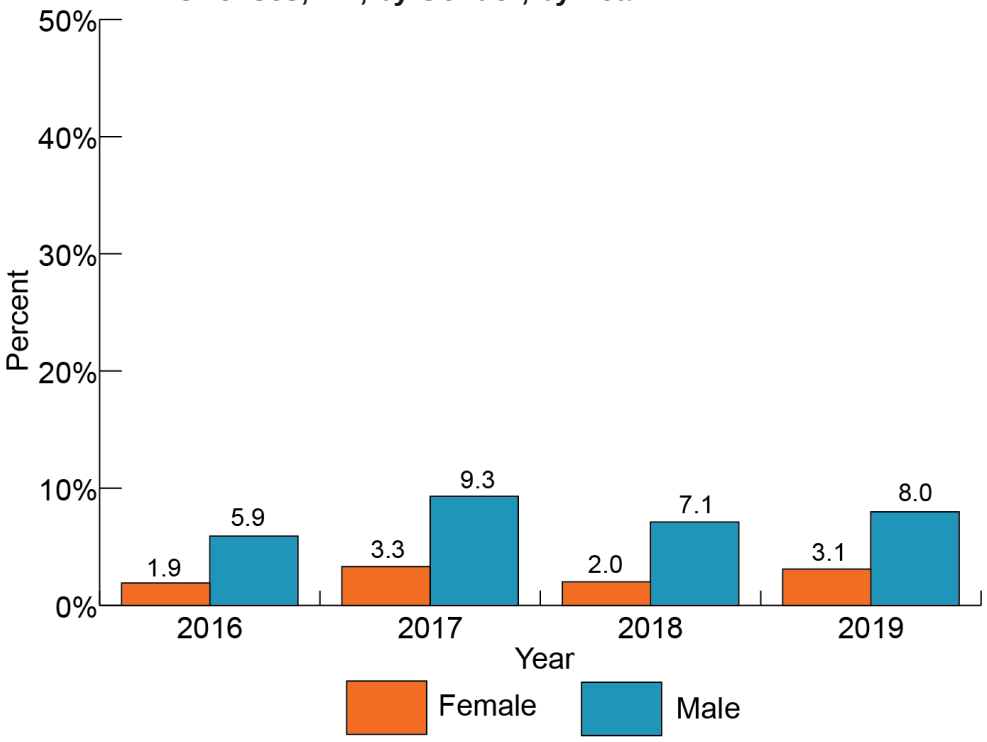
Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO) Program. The data used is based on a "snapshot" from CSO database as of March 19th, 2019.

Figure 1.49: Rate of Adult DUI Arrests per ND Racial Demographic Population, by Year



Data Source: State of North Dakota Office of Attorney General: Crime Statistics Online (CSO) Program, U.S. Census Bureau
Data Note: The data used is based on a "snapshot" from CSO database as of March 19th, 2019.

Figure 1.50: 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 2,899 liquor law violations in 2017; this is a slight decrease from 2,942 violations in 2016 (State of North Dakota Office of Attorney General: CSO, 2018).

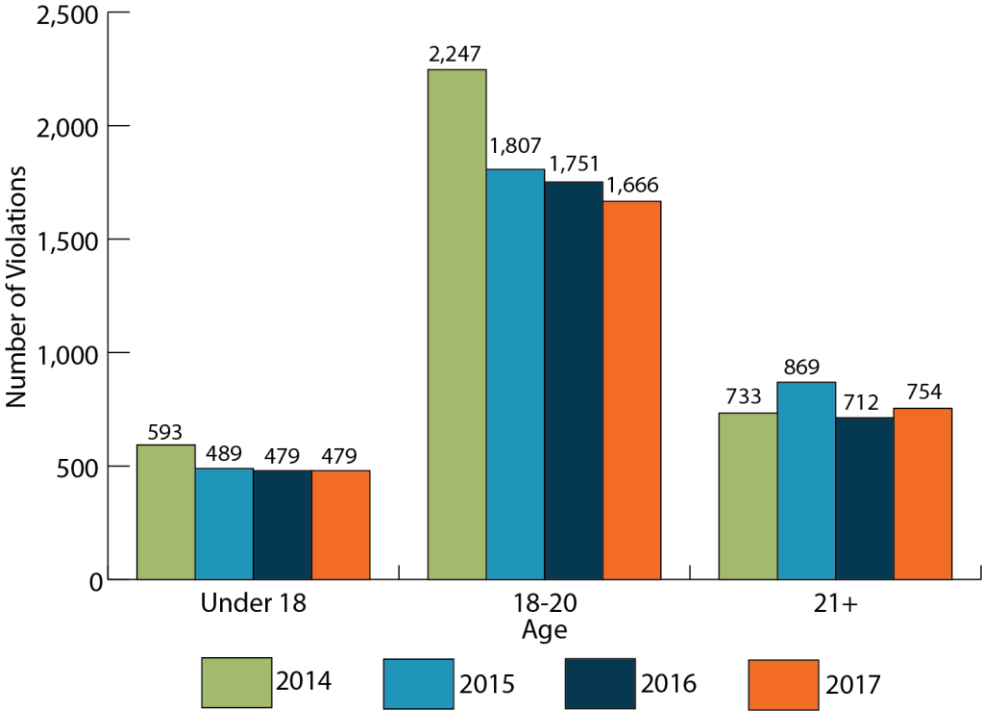
Data Source(s)

State of North Dakota Office of Attorney General. Crime Statistics Online (CSO) Program

Section Summary

- The number of liquor law violations reported in North Dakota is higher (more than three times greater) among those ages 18 to 20 compared to those younger than 18 years old between the years 2014 and 2017 (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.51).
- From 2014 to 2017, the number of liquor law violations decreased among those 18 to 20 years old. Among those aged 17 and younger, the number of violations remained the same between 2016 and 2017. For those 21 and older, an increase over the same time period was observed (State of North Dakota Office of Attorney General: CSO, 2018; see Figure 1.51).

Figure 1.51: 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 March 19th, 2019.

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 which includes learning, memory, verbal skills, and visual-spatial cognition but also school-related achievement and behavior (Ensuring Solutions to Alcohol Problems, 2017).

Data Source(s)

National Institute of Health (NIH). Economics of Education Review

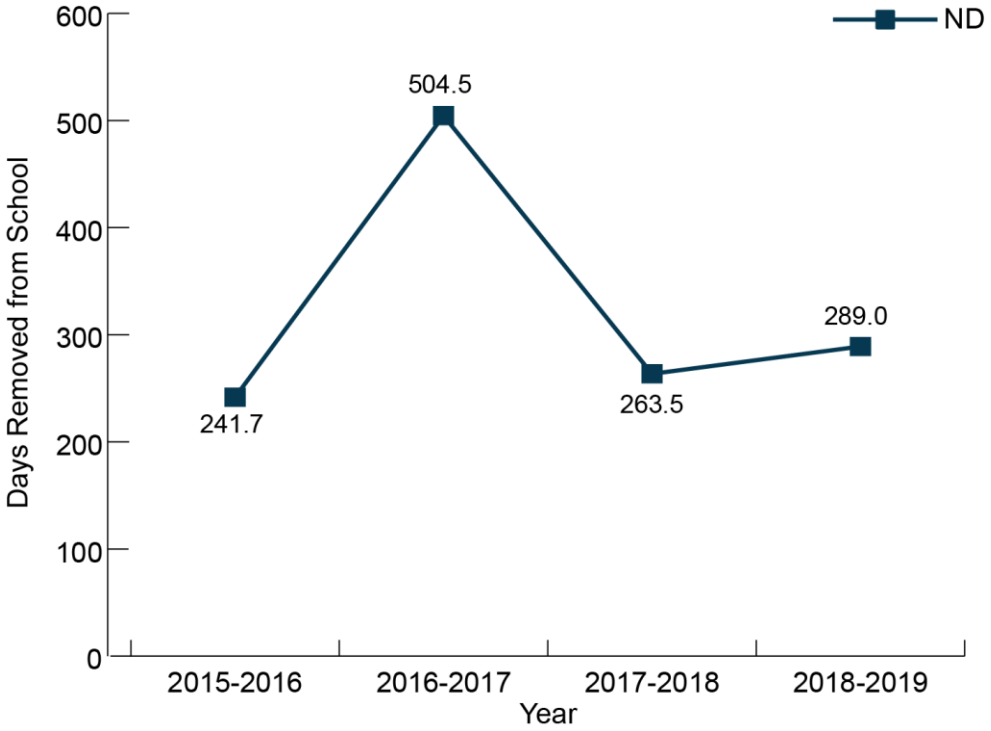
North Dakota Department of Public Instruction (NDDPI)

North Dakota Department of Public Instruction. North Dakota Youth Risk Behavior Survey (YRBS)

Section Summary

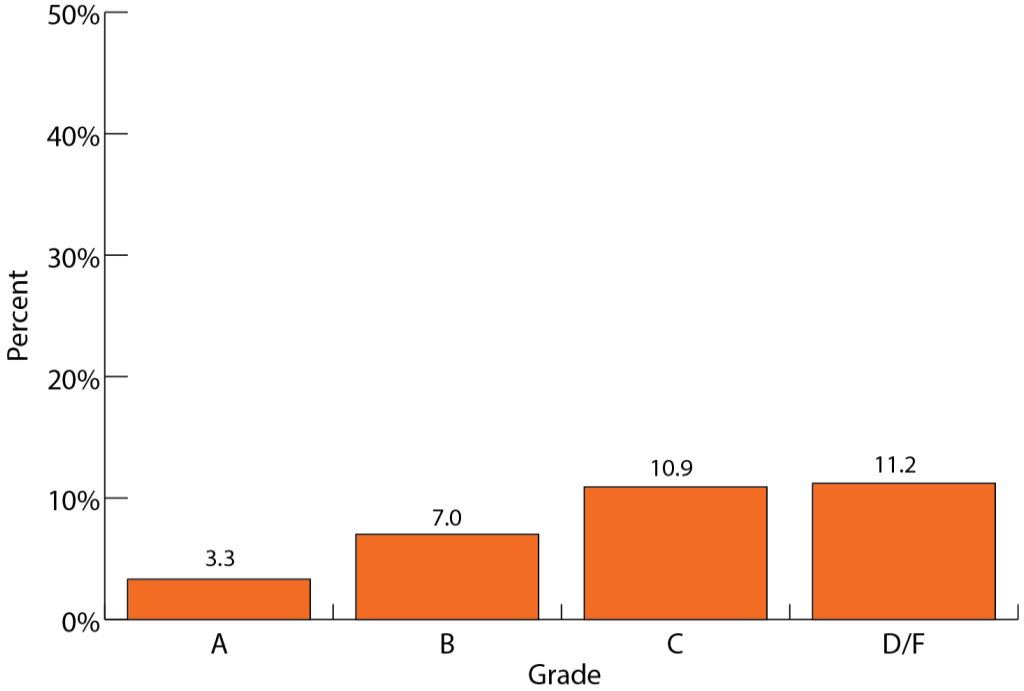
- The number of school days missed by North Dakota students, grades kindergarten through 12th, due to alcohol related suspensions or expulsions decreased by nearly 50% from the 2016-2017 to the 2017-2018 school year, although it rose slightly during the 2018-2019 school year (NDDPI, 2017; see Figure 1.52).
- Middle school students, who reported drinking alcohol for the first time before age 11, comprised a larger percentage of students with C (10.9%) and D/F (11.2%) grade point averages (GPA) than A (3.3%) and B (7.0%) GPAs in 2017 (YRBS, 2017; see Figure 1.53).
- 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, 2017) (YRBS, 2017; see Figure 1.54). Similar trends are found among students who reported ever consuming alcohol in their life (YRBS, 2017; see Figure 1.55).
- When comparing grade point average among high school students who reported binge drinking, a greater percentage reported C and D/F grade point averages (GPA) than A and B GPAs (YRBS, 2017; see Figure 1.56).

Figure 1.52: Days of School Missed due to Alcohol Related Suspensions or Expulsions, Students K-12, ND



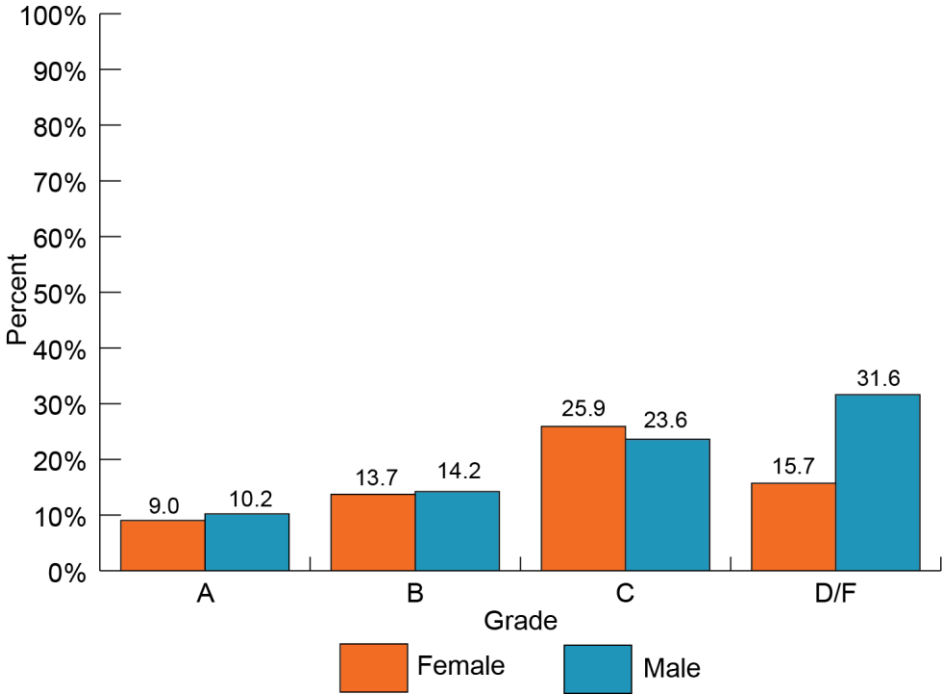
Data Source: NDDPI

Figure 1.53: Percentage of Students within each GPA Category who Reported Drinking Alcohol before Age 11, Middle School, ND, 2017



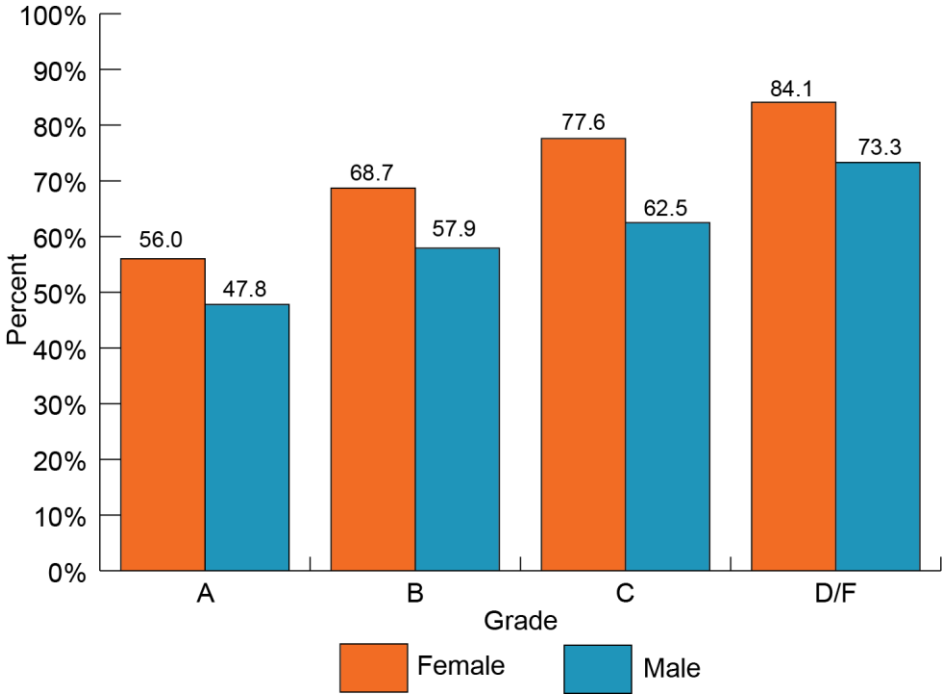
Data Source: YRBS

Figure 1.54: Percentage of those reporting each GPA who reported Drinking Alcohol before Age 13, High School, by Gender, ND, 2017



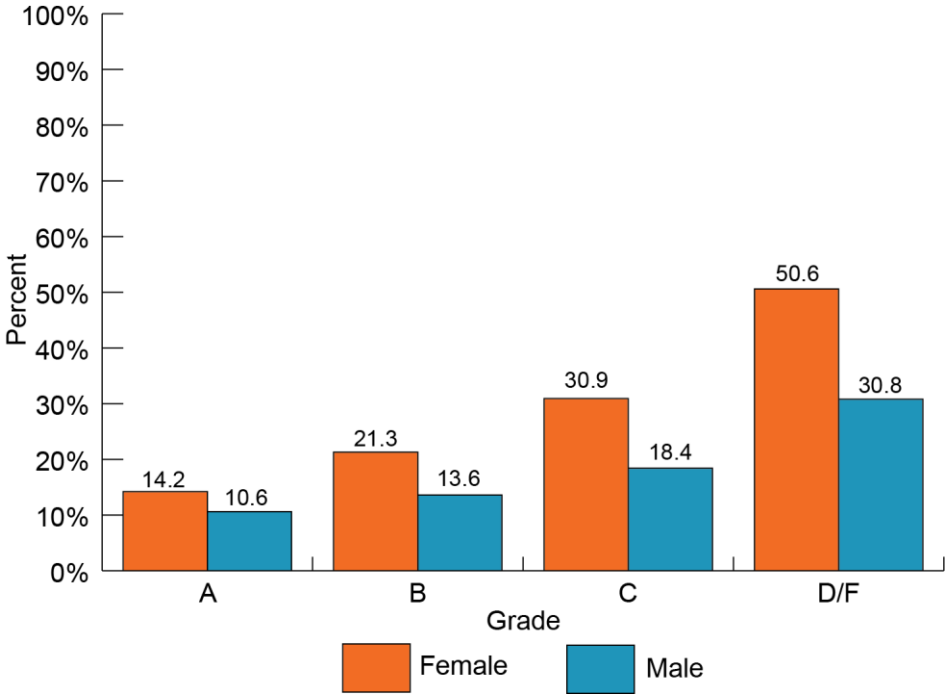
Data Source: YRBS

Figure 1.55: Percentage of those reporting each GPA who reported Ever Drinking Alcohol in Their Life, High School, by Gender, ND, 2017



Data Source: YRBS

Figure 1.56: Percentage of those reporting each GPA who reported Binge Drinking, High School, by Gender, ND, 2017



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 and/or drug use. 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).

Data Source(s)

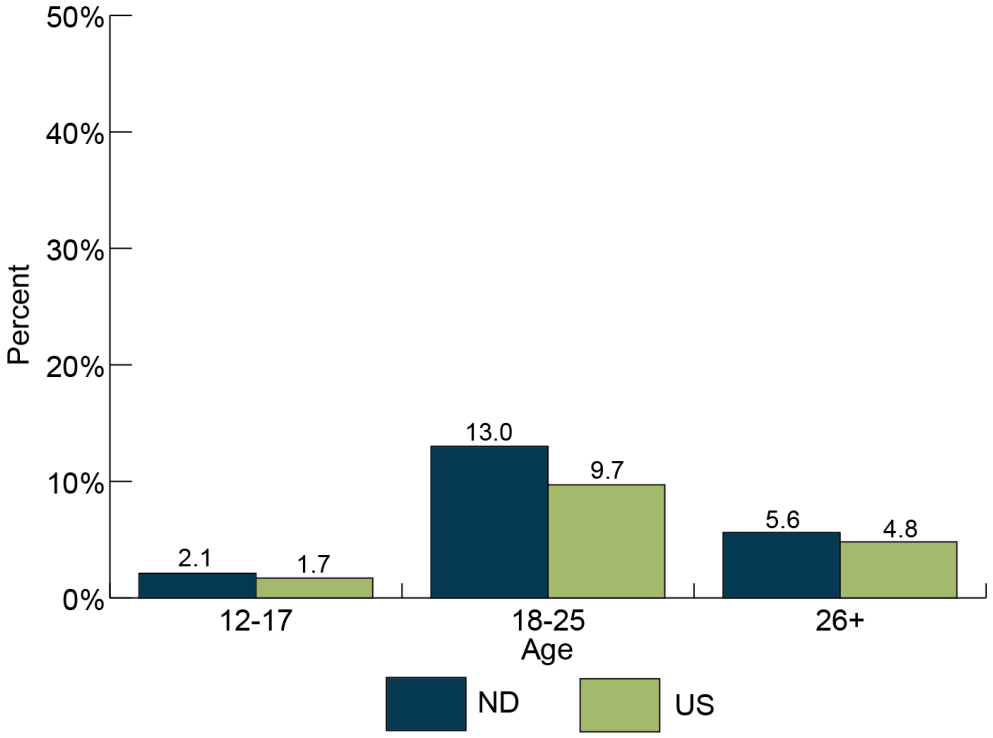
Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health (NSDUH)

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

Section Summary

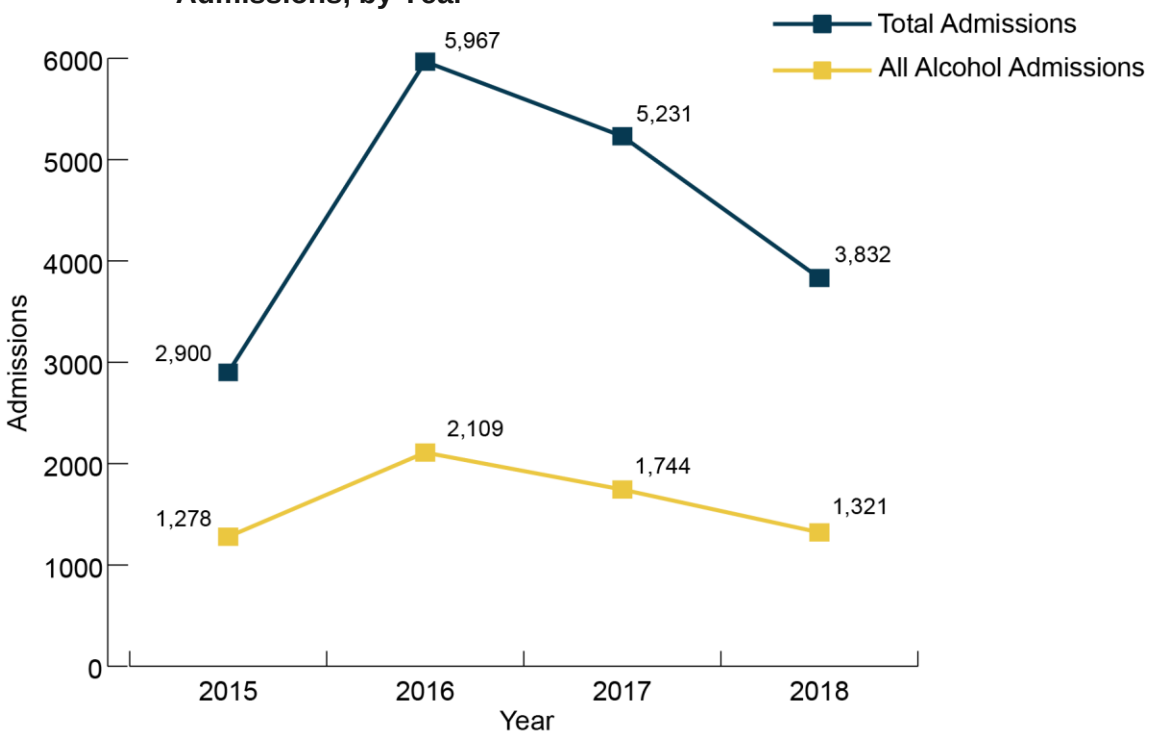
- In 2017, a higher percentage of North Dakotans were in need of alcohol abuse treatment but were not able to receive the treatment, regardless of age group, in comparison to national percentages. Overall, however, the 18-25 year old age group indicated the greatest need, percentage-wise. This was true nationally, as well (NSDUH, 2018; see Figure 1.57).
- The number of admissions to publicly funded substance abuse treatment facilities in North Dakota rose between 2015 (2,900) to 2016 (5,967) and fell between 2017 (5,231) and 2018 (3,832) (TEDS, 2019; see Figure 1.58).
- 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 1.60).
- In 2018, amphetamine use admissions made up over one-third of all primary substance treatment admissions in North Dakota (TEDS, 2019; see Figure 1.60).
- In 2018, males reported a substantially higher percentage of alcohol only treatment facility admissions than females, 66.0% to 32.5% respectively (TEDS, 2019; see Figure 1.61).
- 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).
- When compared to treatment admissions for alcohol with a secondary drug treatment, individuals admitted for alcohol treatment only represented a slightly older age demographic (TEDS, 2019; see Table 1.4).

Figure 1.57: Percentage Needing but Not Receiving Alcohol Abuse Treatment at a Specialty Facility in the Past Year, by Age, ND vs. U.S., 2018



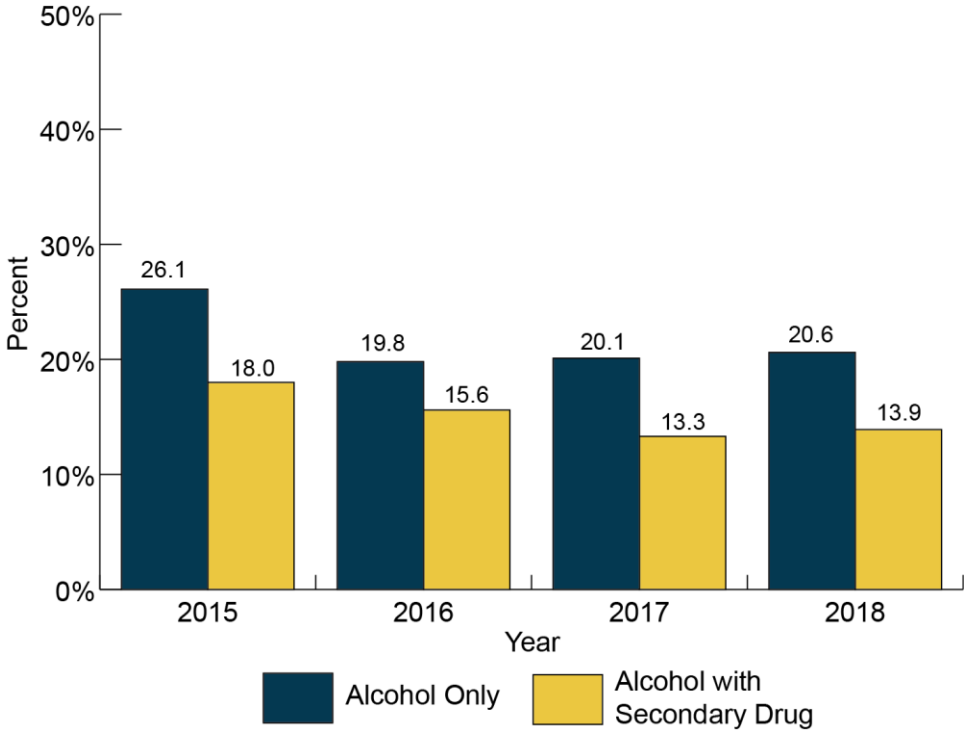
Data Source: NSDUH

Figure 1.58: Substance Abuse Treatment Admissions, Ages 12+, ND, Total vs. Alcohol Admissions, by Year



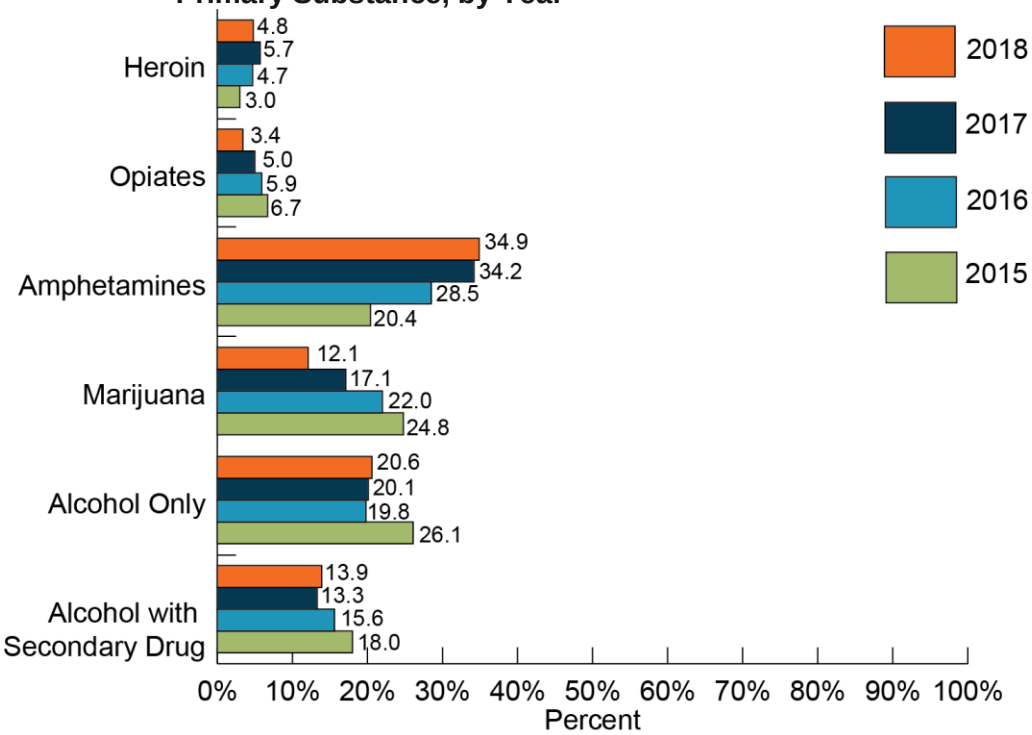
Data Source: TEDS

Figure 1.59: Percentage of Substance Abuse Treatment Admissions, Ages 12+, ND, Primary Alcohol vs. Alcohol with Secondary Drug, by Year



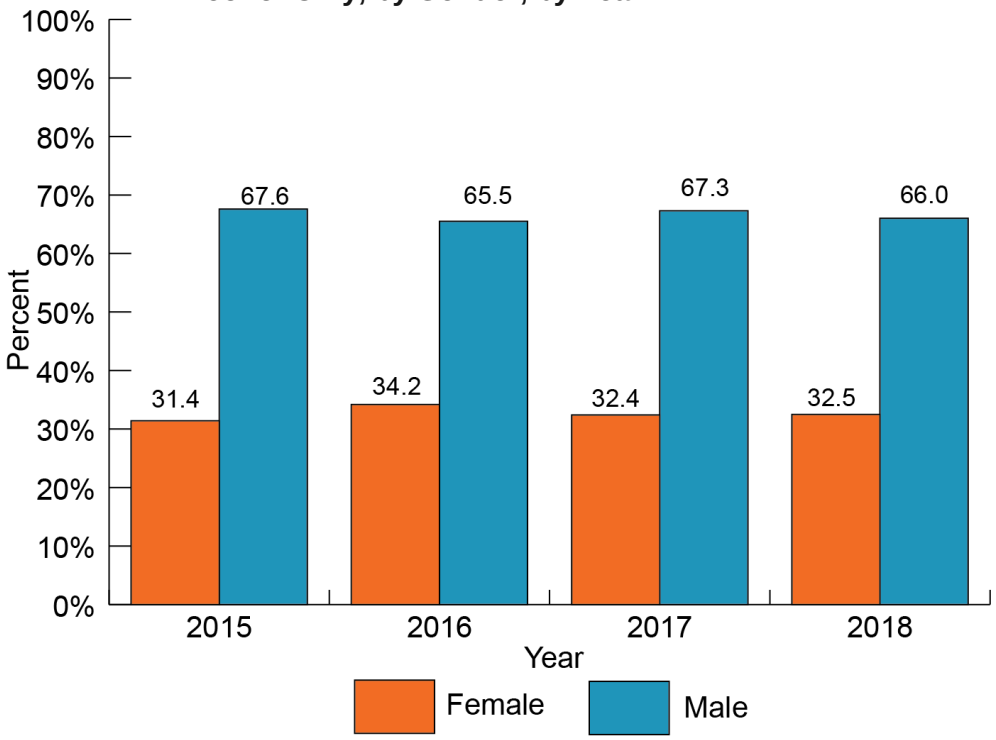
Data Source: TEDS

Figure 1.60: Percentage of Substance Abuse Treatment Admissions, Age 12+, ND, by Primary Substance, by Year



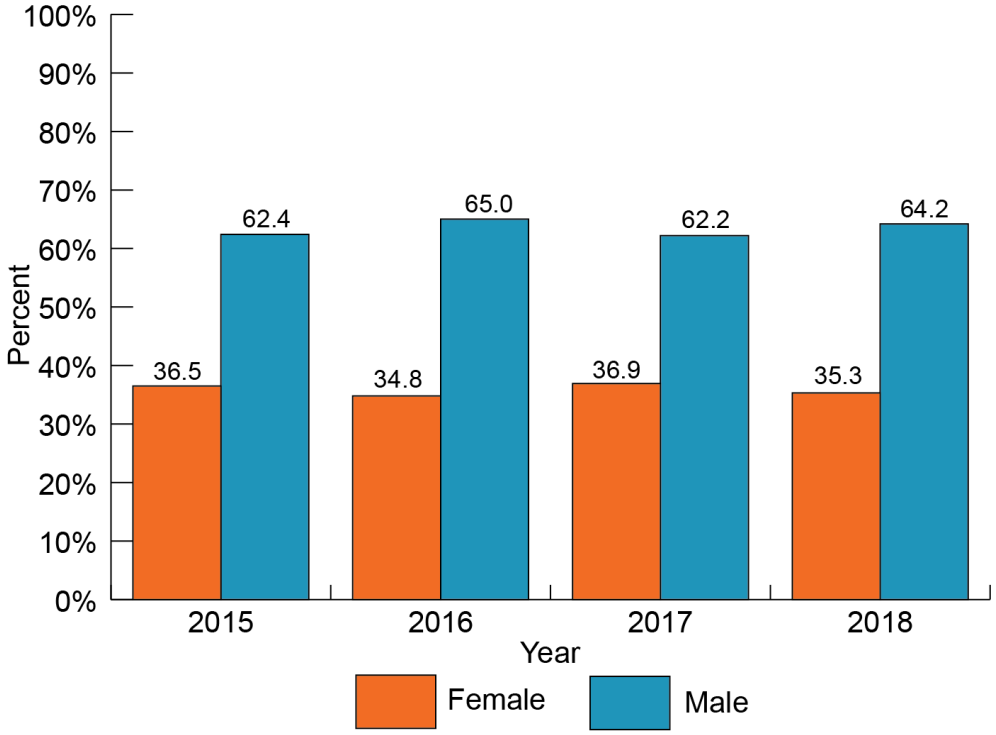
Data Source: TEDS

Figure 1.61: Percentage of Substance Abuse Treatment Admissions, Age 12+, ND, Alcohol-Only, by Gender, by Year



Data Source: TEDS

Figure 1.62: Percentage of Substance Abuse Treatment Admission, Age 12+, ND, Alcohol with Secondary Drug, by Gender, by Year



Data Source: TEDS

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%

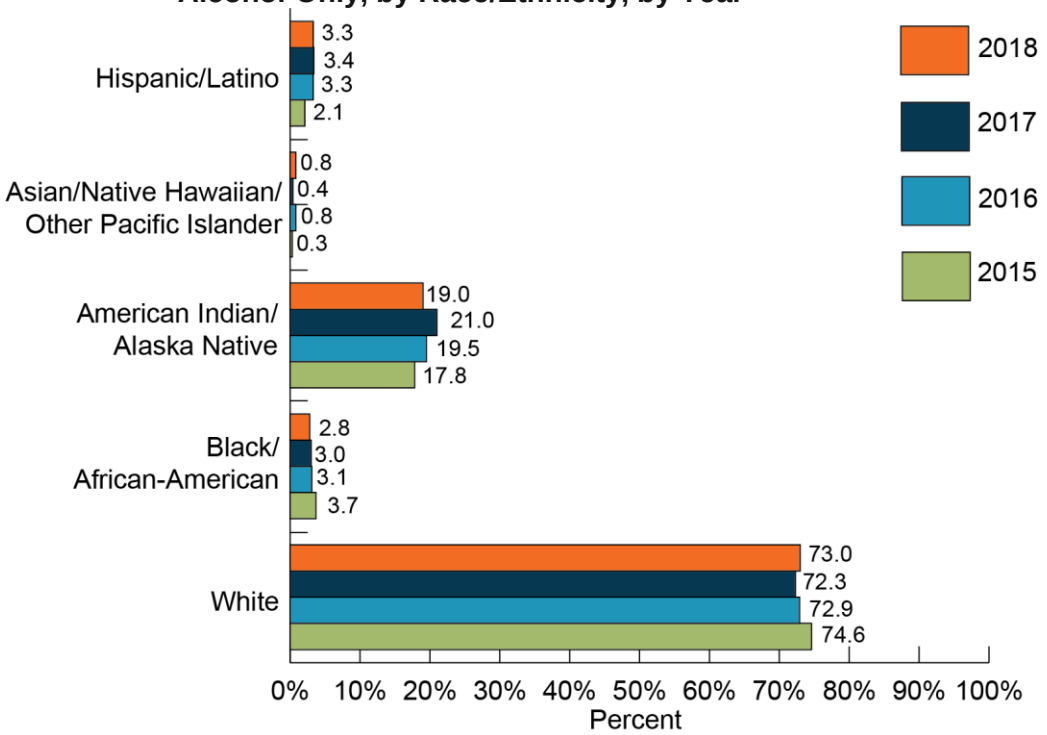
Data Source: TEDS

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%

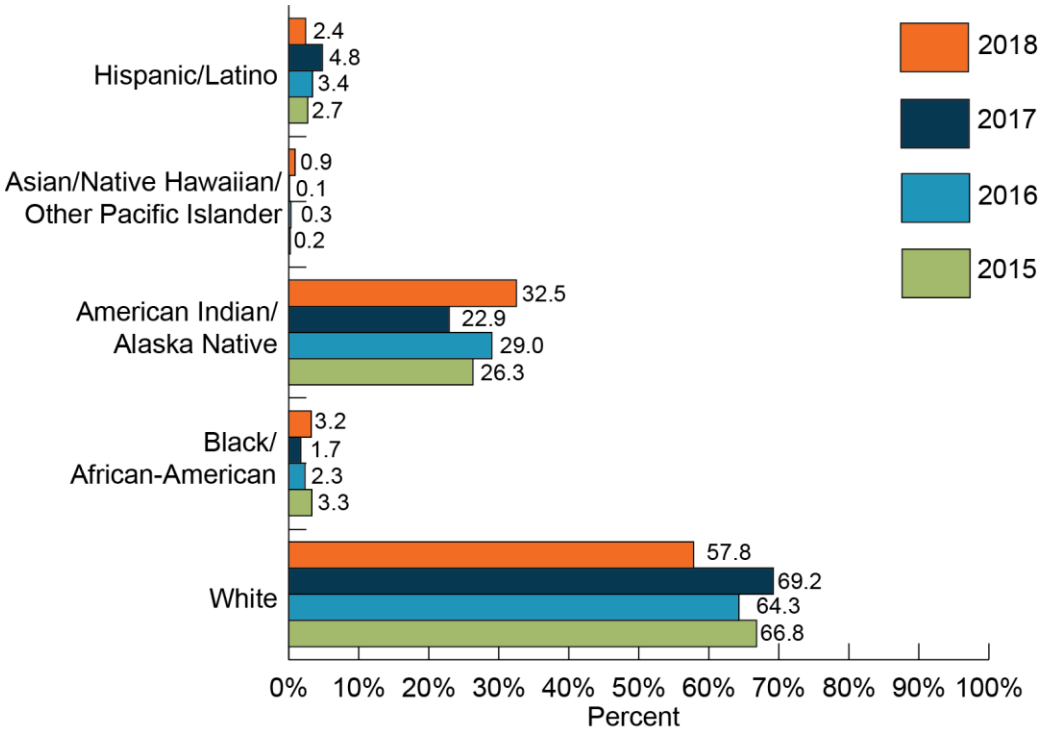
Data Source: TEDS

Figure 1.63: Percentage of Substance Abuse Treatment Admissions, Age 12+, ND, Alcohol-Only, by Race/Ethnicity, by Year



Data Source: TEDS

Figure 1.64: Percentage of Substance Abuse Treatment Admissions, Age 12+, ND, Alcohol with Secondary Drug, by Race/Ethnicity, by Year



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.

Data Source(s)

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

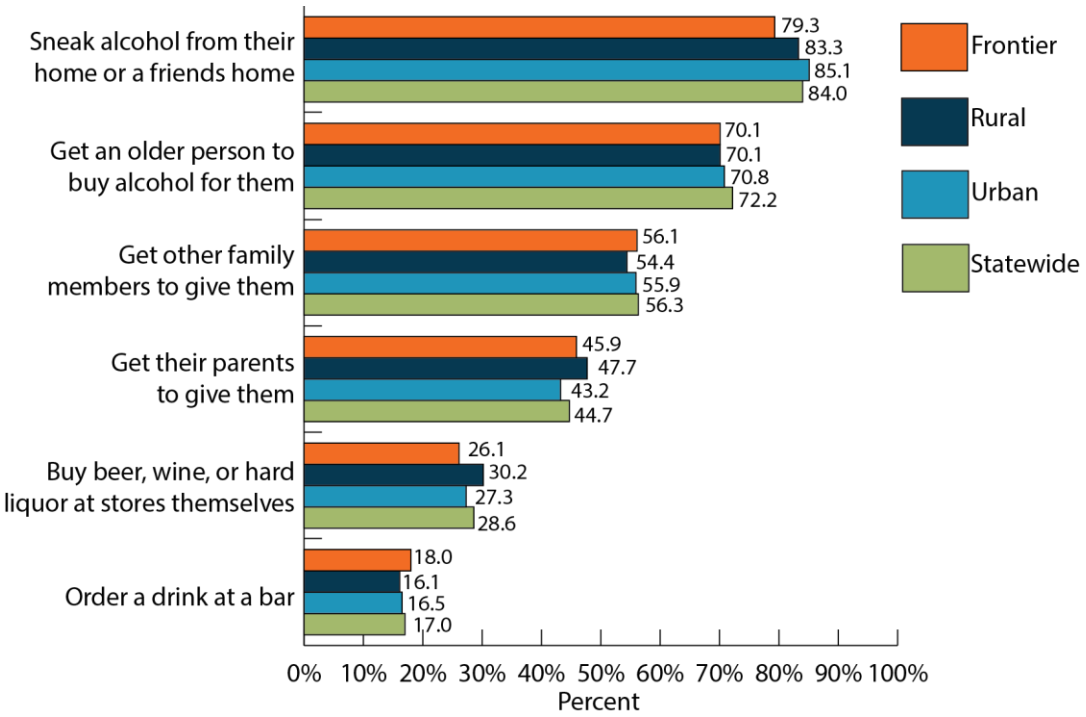
Centers for Disease Control and Prevention (CDC).

Section Summary

- The majority (84.0%) of North Dakota adults held the perception that it was not at all difficult or slightly difficult for youth in their community to sneak alcohol from their home or a friend's home (ND CRS, 2017; see Figure 1.65).
- Over 50% of North Dakotans believed it was not very difficult for youths to get other family members to give them alcohol (ND CRS, 2017; see Figure 1.65).
- In 2017, female high school students (43.3%) were more likely than male high school students (30.9%) to obtain alcohol by someone giving it to them (YRBS, 2017; see Figure 1.66).

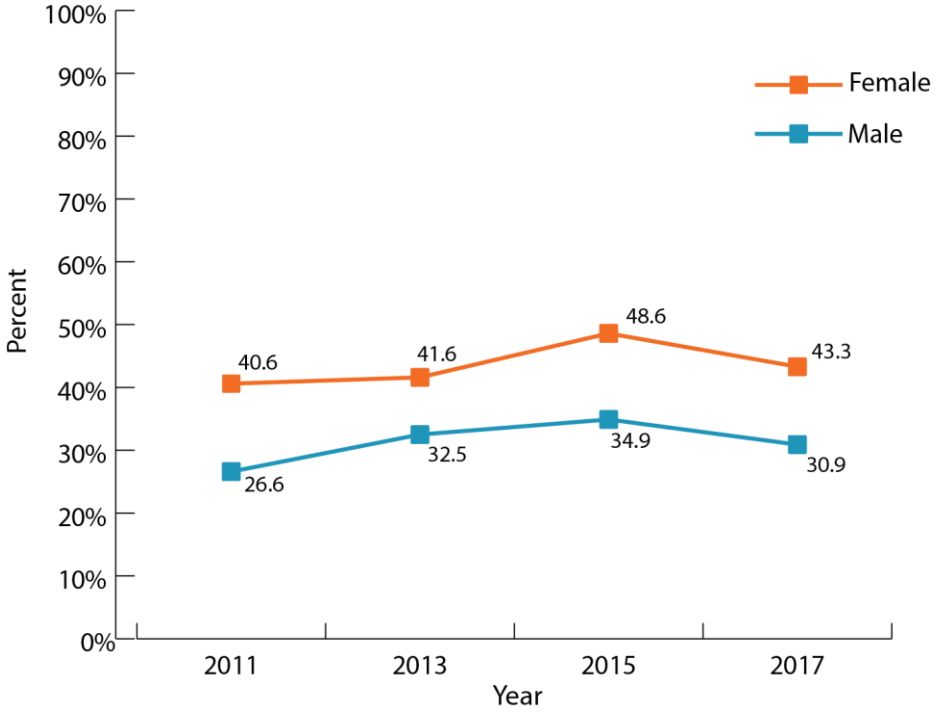
Figure 1.65: Perception of Youth Access to Alcohol, ND, 2017

How difficult is it for youth in your community to: (Percentage of responses which were: “not at all difficult” or “slightly difficult” rather than “somewhat difficult,” “quite difficult,” or “extremely difficult”)



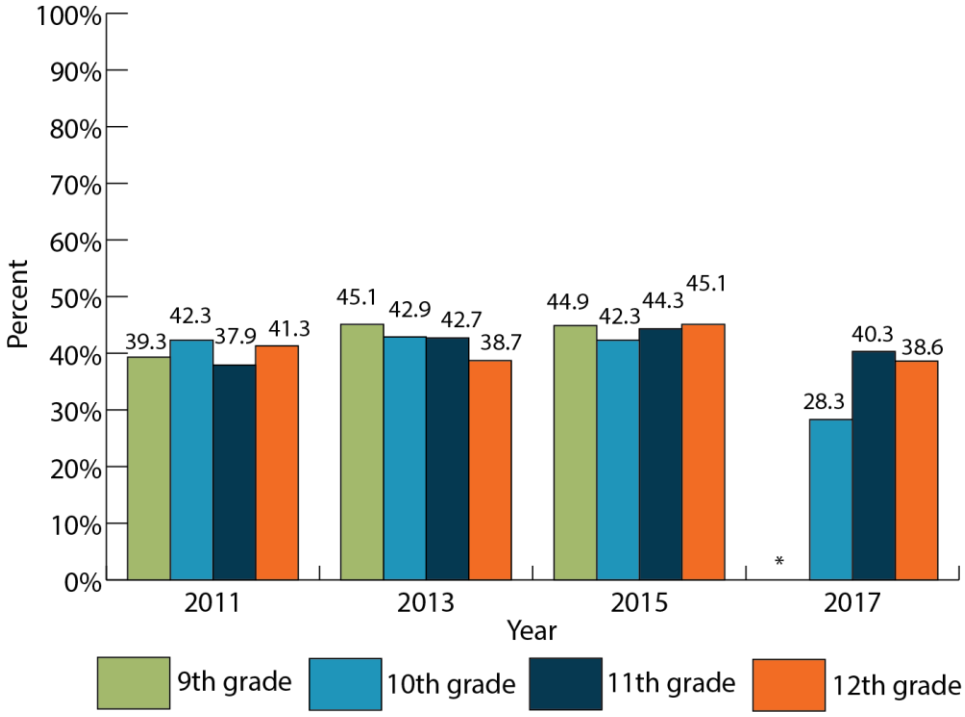
Data Source: ND CRS

Figure 1.66: Percentage of High School Students who Obtained Alcohol by Someone Giving it to Them, ND, by Gender, by Year



Data Source: YRBS

Figure 1.67: Percentage of High School Students who Obtained Alcohol by Someone Giving it to Them, ND, by Grade Level, by Year



Data Sources: YRBS
Note: (*) Data for 9th grade population was not available in 2017.

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.

Data Source(s)

Alcohol Research (Alcohol Res.). Social and Cultural Context of Alcohol Use: Influences in a Social-Ecological Framework

Cancer Epidemiology, Biomarkers and Prevention (Cancer Epidemiol Biomarkers Prev.). The Changing Public Image of Smoking in the United States: 1964-2014

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

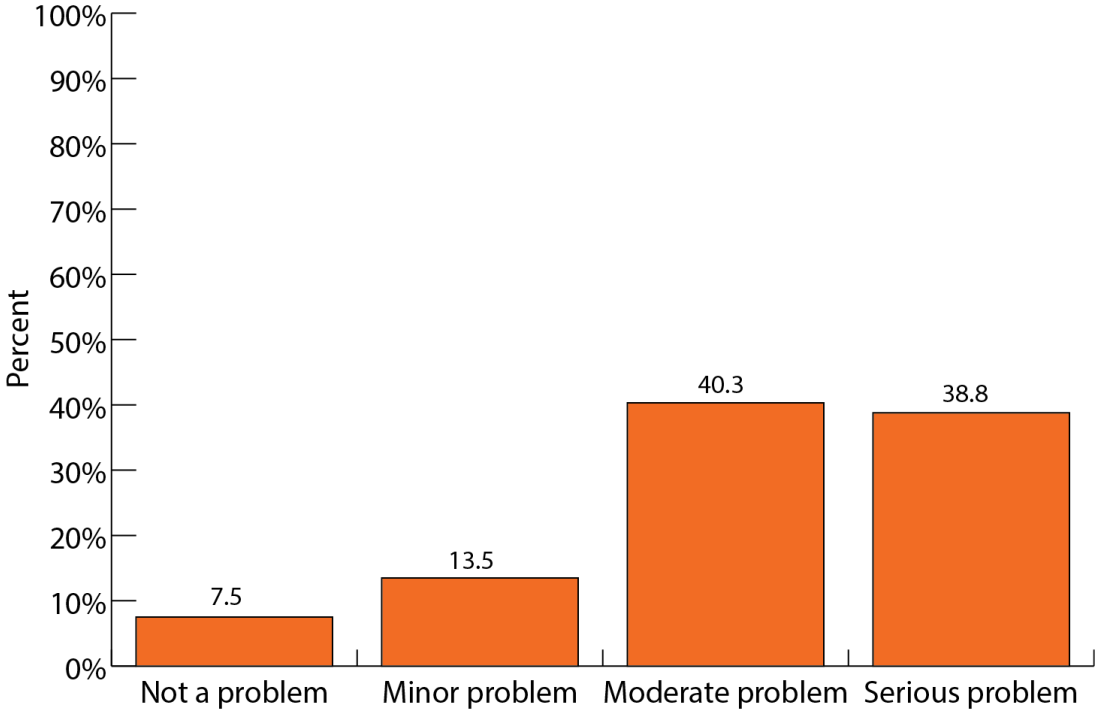
Wyoming Survey & Analysis Center (WYSAC). North Dakota Survey of Young Adults (NDSOYA)

Centers for Disease Control and Prevention (CDC).

Section Summary

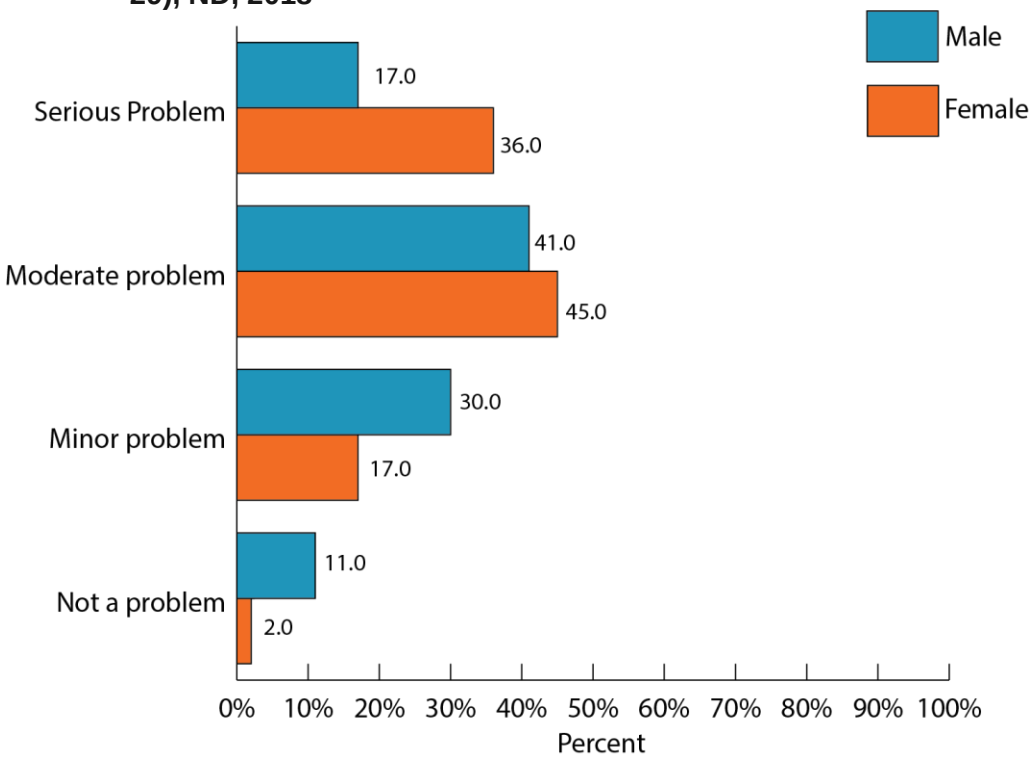
- The majority of ND adults (79.1%) held the belief that alcohol use in the community was a moderate or serious problem among youth (ND CRS, 2017; see Figure 1.68).
- The majority of North Dakota adults disagreed (81.2% disagree or strongly disagree) that youth should be able to drink as long as they do not drive afterward (ND CRS, 2017; see Figure 1.70).
- North Dakota adults in rural communities reported higher rates of concern regarding alcohol use as a serious problem when compared to both urban and frontier communities. This is a shift from previous years. In 2015, more adults in urban areas reported higher rates of serious concern regarding alcohol use than rural and frontier communities (ND CRS, 2017; see Figure 1.71).

Figure 1.68: Statewide Perception of Alcohol Use in Community as a Problem among Youth, ND, 2017



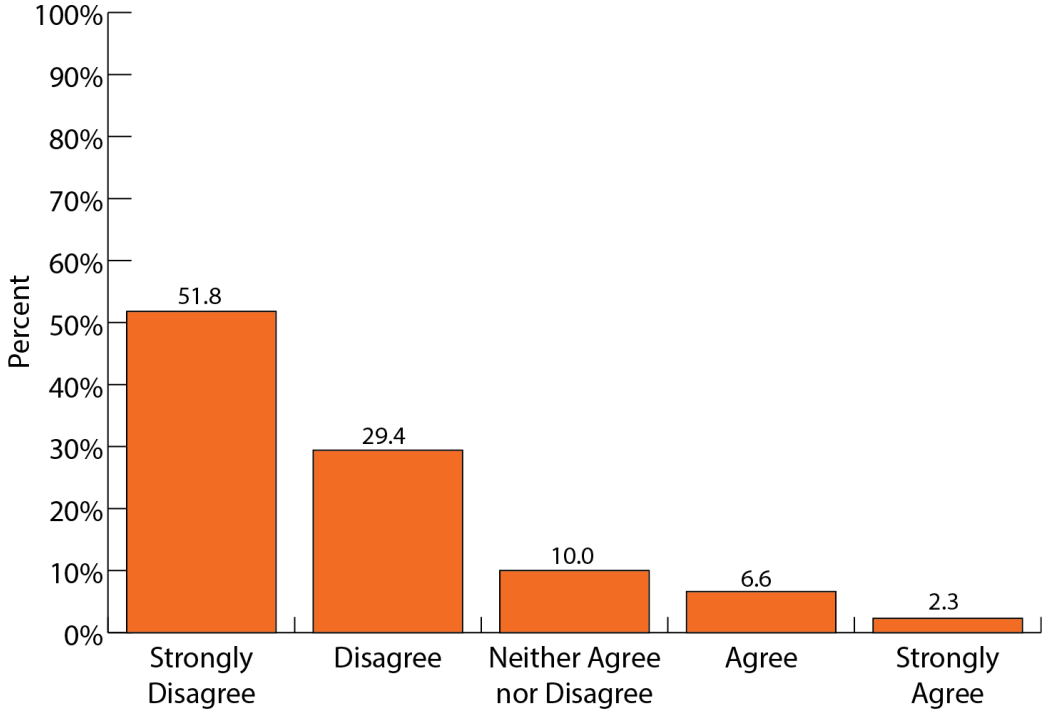
Data Source: ND CRS

Figure 1.69: Statewide Perception of Underage Drinking as a Problem, Young Adults (18-29), ND, 2018



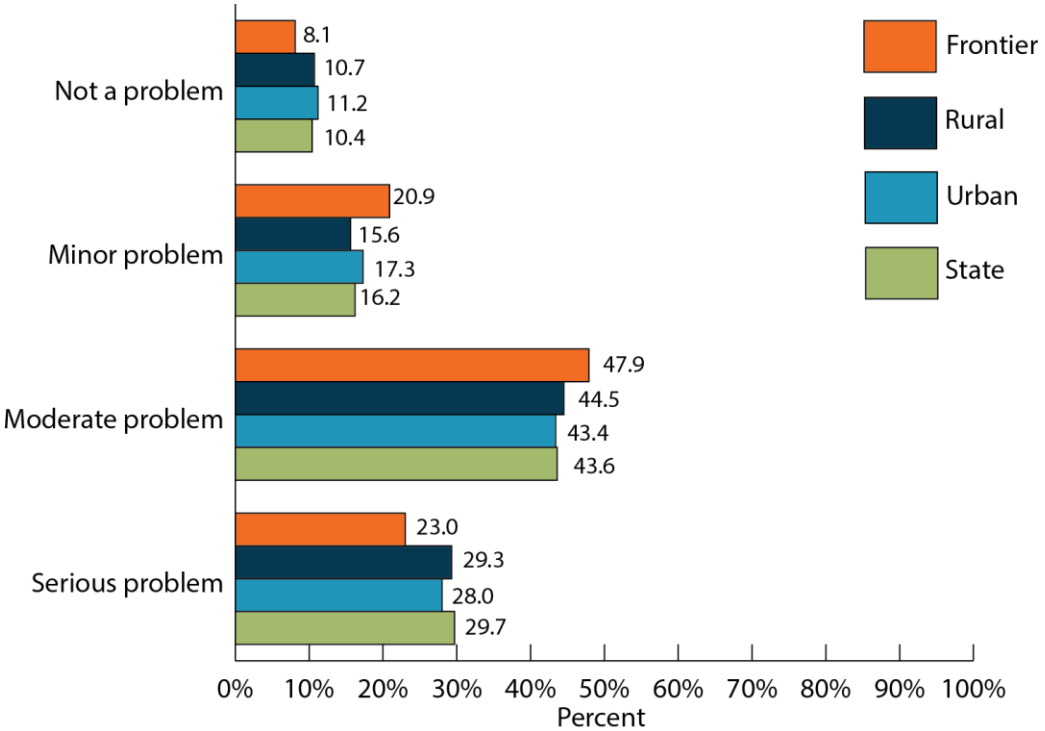
Data Source: NDSOYA

Figure 1.70: Statewide Perception on Accepting Youth Alcohol Consumption as Long as They Do Not Drive, ND, 2017



Data Source: ND CRS

Figure 1.71: Perception of Alcohol Use in Community as a Problem among Adults, ND, 2017



Data Source: ND CRS

Substance Abuse and Mental Health in North Dakota

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 2018, 672,000 youth aged 12-17 across the country smoked cigarettes in the past month, and about 99,000 reported smoking daily. Over 571,000 youth reported smoking all or part of a cigarette for the first time within the last year (NSDUH, 2018). 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).

Data Source(s)

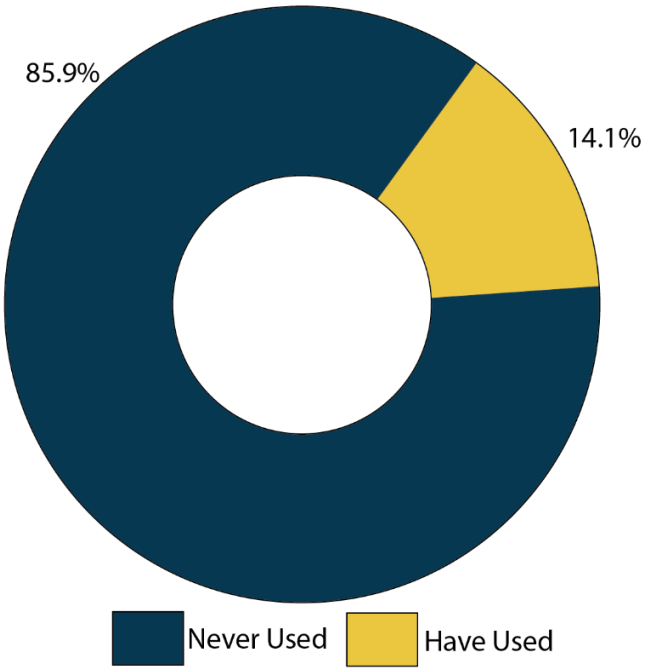
Centers for Disease Control and Prevention (CDC). Tobacco Product Use and Associated Factors Among Middle and High School Students- United States, 2019

North Dakota Youth Tobacco Survey (YTS)

Section Summary

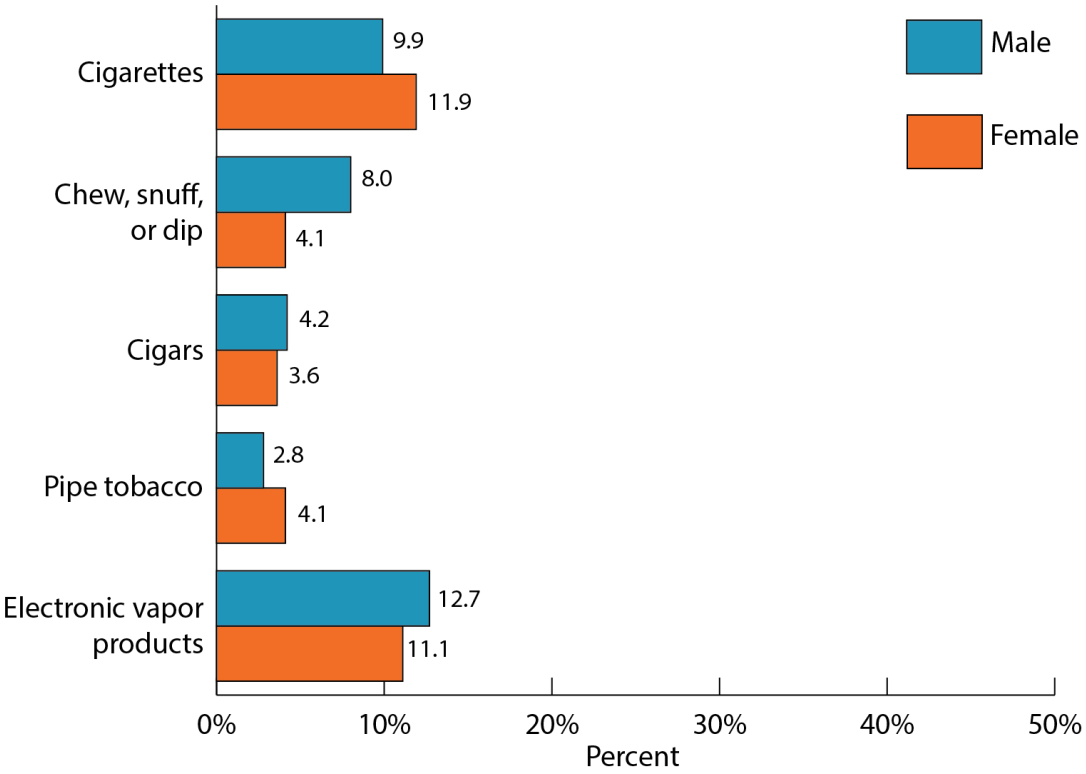
- In 2017, roughly 86% of middle school students in North Dakota reported having never used tobacco in their lifetime (YTS, 2017; see Figure 2.1).
- Among North Dakota middle school students, females reported higher rates of ever using cigarettes (11.9%) and pipe tobacco (4.1%) than their male (9.9% and 2.8%) counterparts (YTS, 2017; see Figure 2.2).
- More than one third (38.2%) of North Dakota high school students reported using tobacco at least once in their lifetime (YTS, 2017; see Figure 2.3).
- North Dakota high school male students were more likely than their female counterparts to have ever used cigarettes, chew, snuff, dip, cigars, and pipe tobacco (YTS, 2017; see Figure 2.4).
- In 2017, female high school students reported slightly higher rates of ever using electronic vapor products than their male counterparts (YTS, 2017; see Figure 2.4).

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



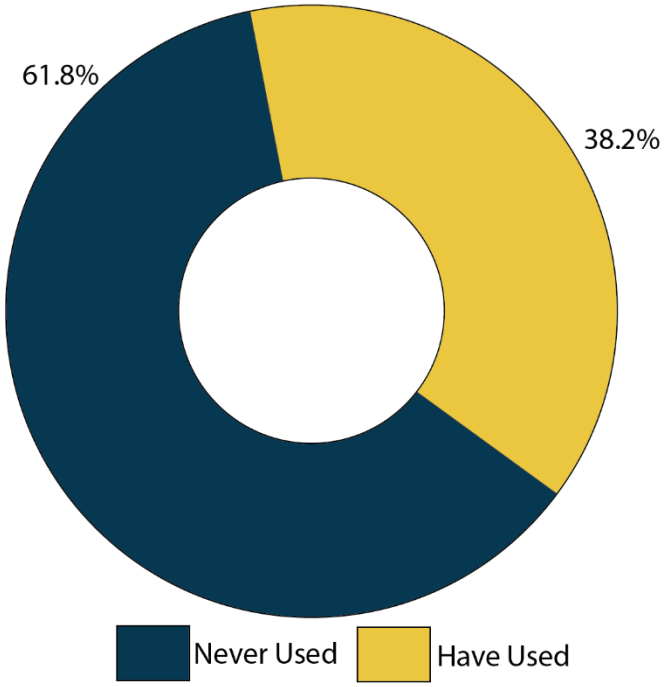
Data Source: YTS

Figure 2.2: Percentage of Tobacco Products Ever Tried, Middle School Students, ND, by Gender, 2017



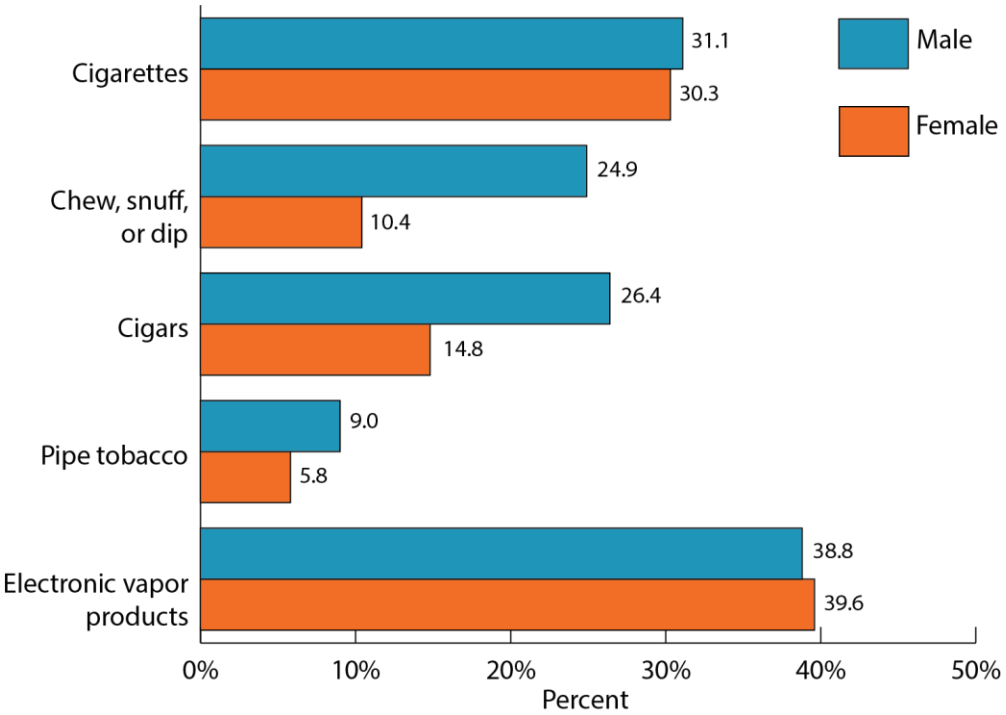
Data Source: YTS

Figure 2.3: Percentage of Tobacco Use in Lifetime, High School Students, ND, 2017



Data Source: YTS

Figure 2.4: Percentage of Tobacco Products Ever Tried, High School Students, ND, by Gender, 2017



Data Source: YTS

Adult Tobacco Use

About the Indicator

In 2018, the National Survey on Drug Use and Health (NSDUH, 2018) estimated that 58.8 million people aged 12 or older 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).

Data Source(s)

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

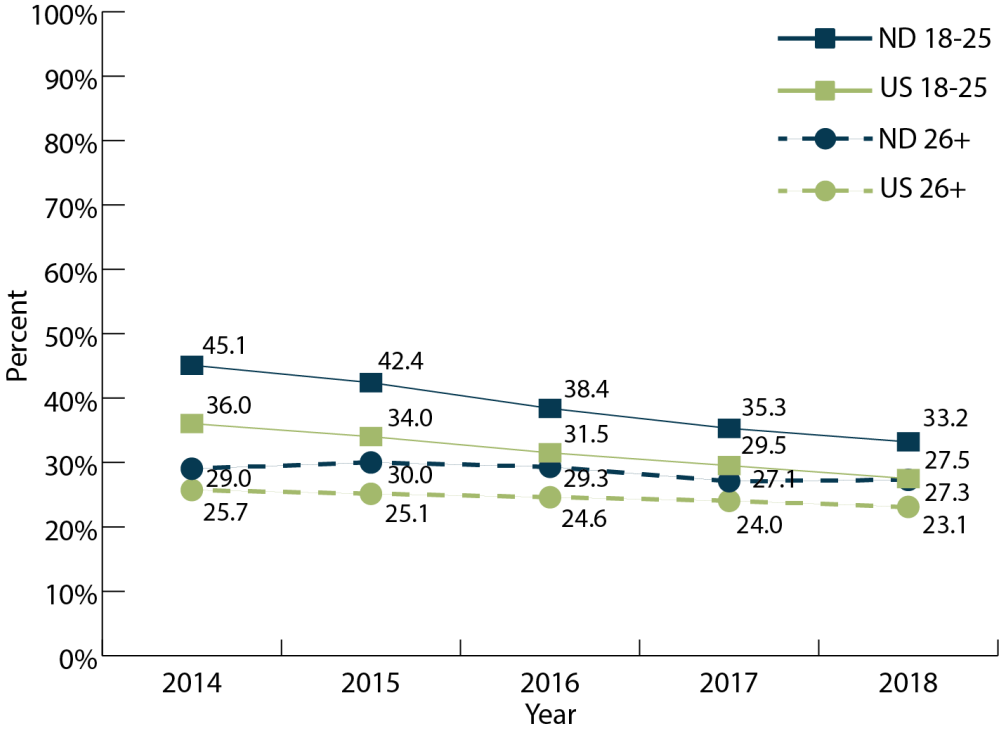
U.S. Department of Health and Human Services (HHS). The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General

North Dakota Department of Health (NDDOH). Adult Tobacco Survey (ATS)

Section Summary

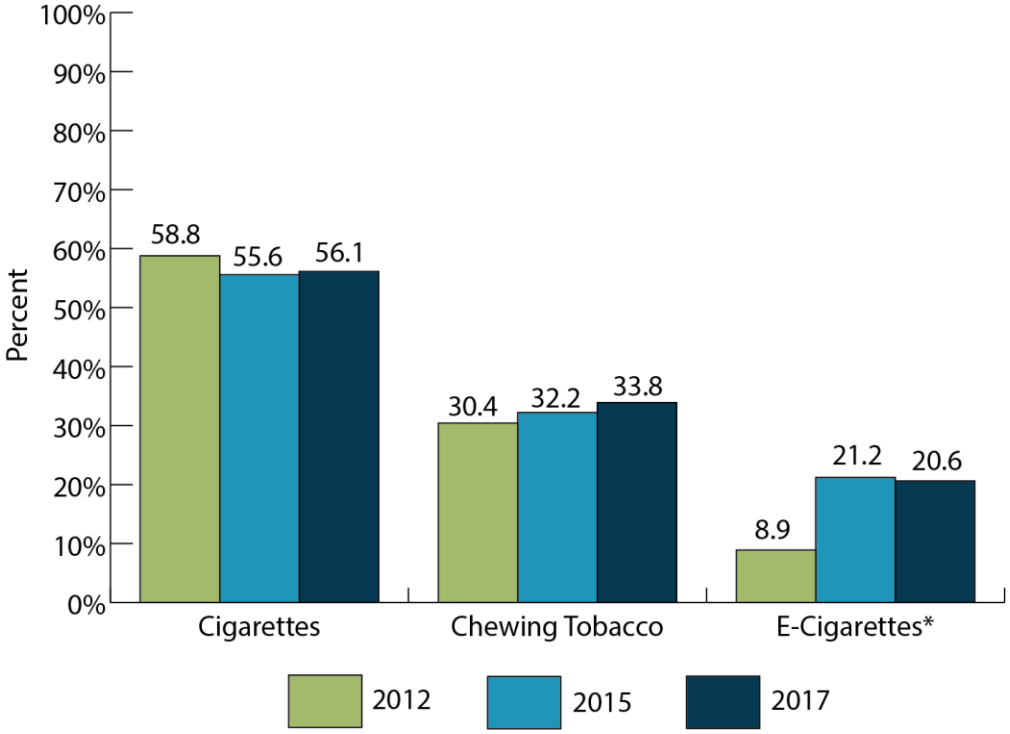
- There was a decline in the number of adults who reported tobacco use in the past month, both in North Dakota and the United States, between 2014 and 2018 (NSDUH, 2018; see Figure 2.5). Notably, the largest percentage point decrease observed was among North Dakota adults aged 18-25 (45.1% to 33.2%) 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).
- The percentage of North Dakota adults who had reported using cigarettes at least once in their lifetime rose marginally from 2015 to 2017 (ATS, 2017; see Figure 2.6).
- From 2012 to 2017, North Dakota reported a consistent increase in the percentage of adults who had ever used chewing tobacco in their lifetime (ATS, 2017; see Figure 2.6).
- The percentage of North Dakota adults who reported trying e-cigarettes has more than doubled between the years 2012 (8.9%) and 2015 (21.2%). From 2015 to 2017, that number dropped marginally; roughly, 1 in 5 adults have tried e-cigarettes (ATS, 2017; see Figure 2.6).

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



Data Source: NSDUH

Figure 2.6: Percentage who Ever Tried Tobacco Products in Lifetime, Adults (18+), ND, by Year (2012, 2015, 2017)



Data Source: ATS

Data Note: Adult electronic cigarette data collected by BRFSS.

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 1,600 youth (aged 12-17 years old) smoke a cigarette for the first time in the United States (NSDUH, 2018). Approximately 2,100 youth and young adults who are 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 2018 (571,000) (NSDUH, 2018).

Data Source(s)

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

North Dakota Youth Tobacco Survey (YTS)

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

Section Summary

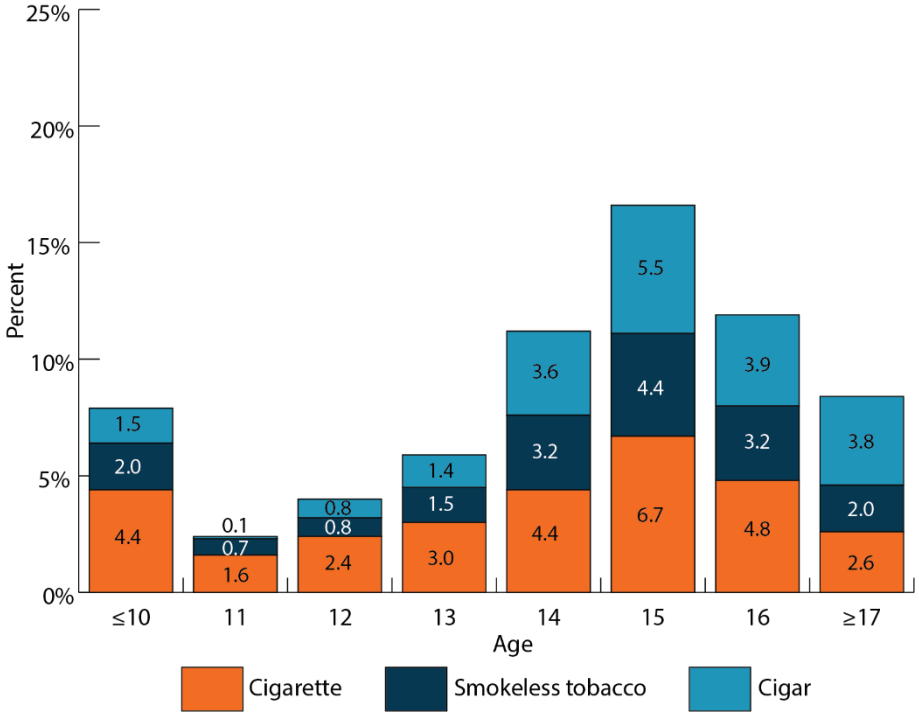
- Since 2009, fewer North Dakota high school females used cigarettes before age 13 compared to their male counterparts (YRBS, 2017; see Table 2.1).
- The percentages of high school students who used cigarettes before age 13 for the first time were higher in North Dakota (11.2%) than the United States (9.5%) (YRBS, 2017; see Table 2.1).
- In 2017, 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, 2017; see Figure 2.7).
- 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).

Table 2.1: Percentage who Consumed First Cigarette before Age 13, ND vs. U.S., by Gender, 2017

First Tried Cigarette Smoking Before Age 13, 2017			
	Total	**Female**	**Male**
North Dakota	11.2%	9.7%	12.4%
United States	9.5%	8.0%	8.0%

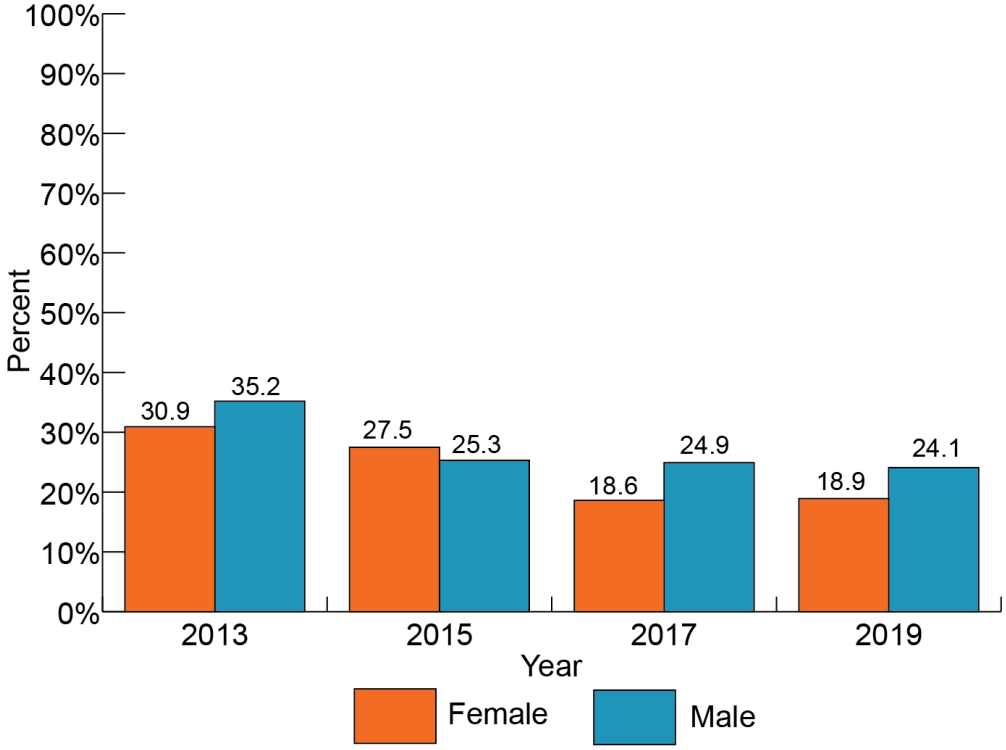
Data Source: YRBS
Data Note: Trend data not available for question, question change from 2015 to 2017.

Figure 2.7: Percentage of Students who Reported their Age When First Used Tobacco Product, High School Students, ND, 2017



Data Source: YTS

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 percent 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).

Data Source(s)

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)

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

North Dakota Youth Tobacco Survey (YTS)

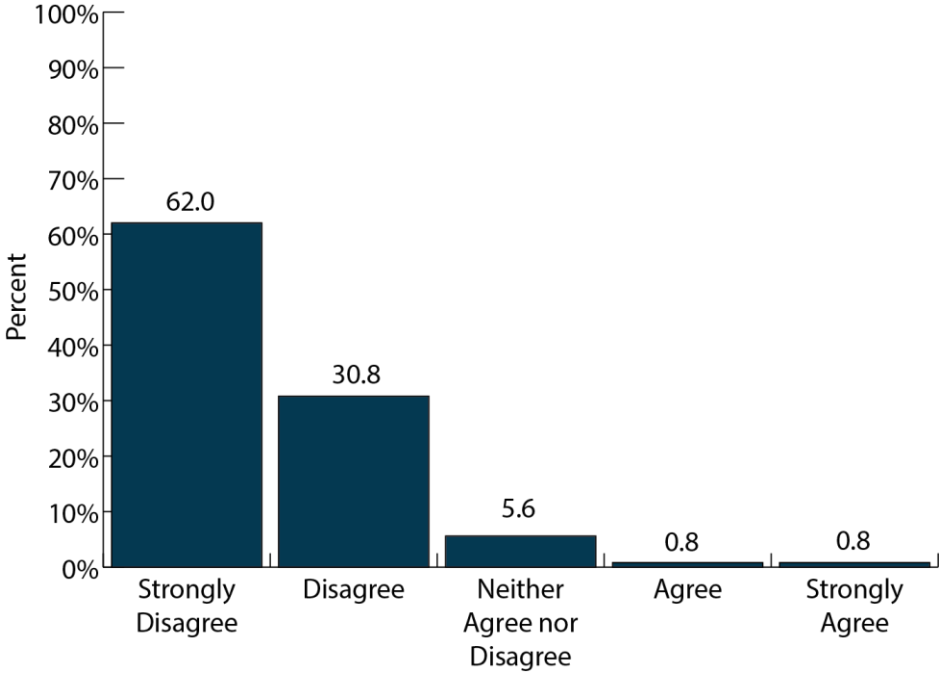
Centers for Disease Control and Prevention (CDC). Youth Risk Behavior Surveillance System (YRBS)

Section Summary

- In 2017, 92.8% of adults in North Dakota either disagreed or strongly disagreed with the notion that youth cigarette smoking was okay (ND CRS, 2017; see Figure 2.9).
- Between 2017 and 2018, youth aged 12-17 in North Dakota and the United States reported believing there was considerable risk in smoking one or more packs of cigarettes daily, 61.4% and 66.3%, respectively. These percentages have increased and then decreased marginally between 2014-15 and 2017-18 (NSDUH, 2018; see Figure 2.10).
- The percentage of North Dakota middle school students who reported ever trying cigarette smoking decreased between 2013 and 2019. Notably, from 2015 to 2017, students reported a 5.3 percentage point decrease; a more substantial percentage point decrease than between 2013 to 2015 (-0.8%) (YRBS, 2019; see Figure 2.12).
- 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 2.13).
- 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 2.16).

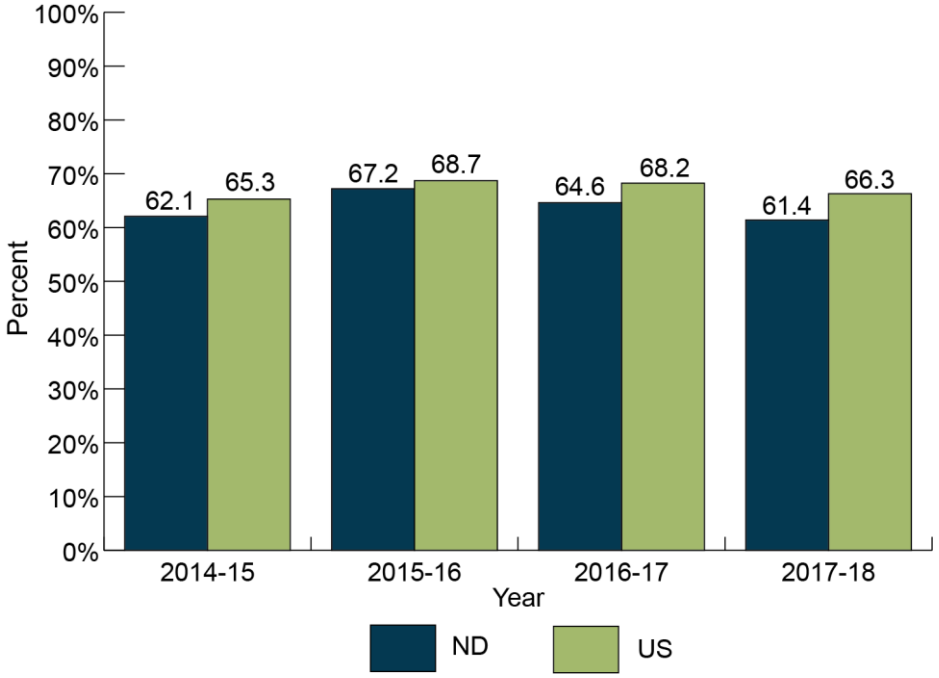
- In 2017, more North Dakota high school students (3.0%) reported engaging in daily cigarette use within a month compared to high school students nationally (2.0%) (YRBS, 2017; see Figure 2.17).

Figure 2.9: Perception that it is Okay for Youth to Smoke Cigarettes, ND, 2017



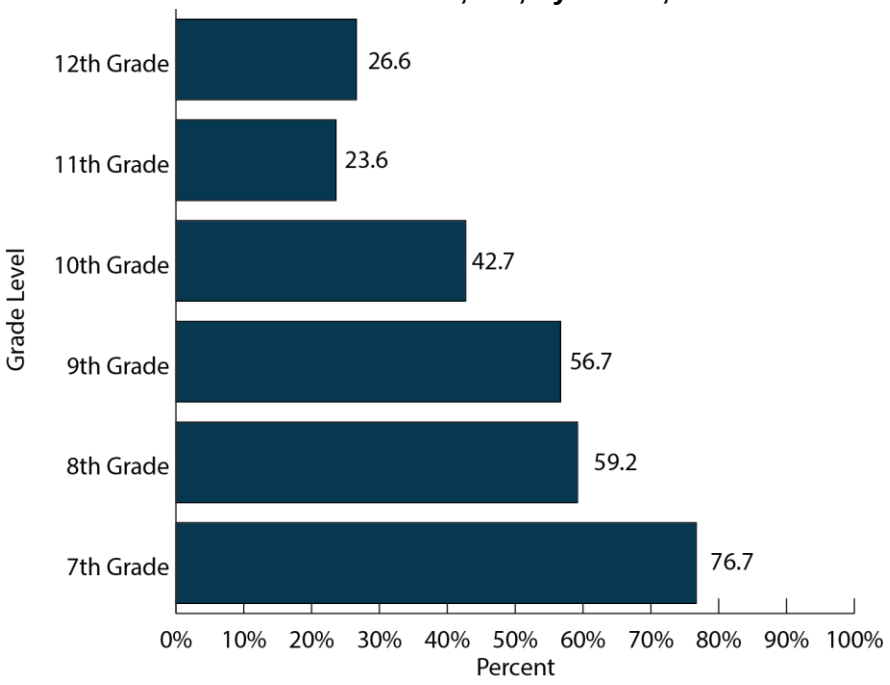
Data Source: ND CRS

Figure 2.10: Percentage of Youth (aged 12-17) Perception of Great Risk from Smoking One or More Packs of Cigarettes Daily, ND vs. U.S., by Year



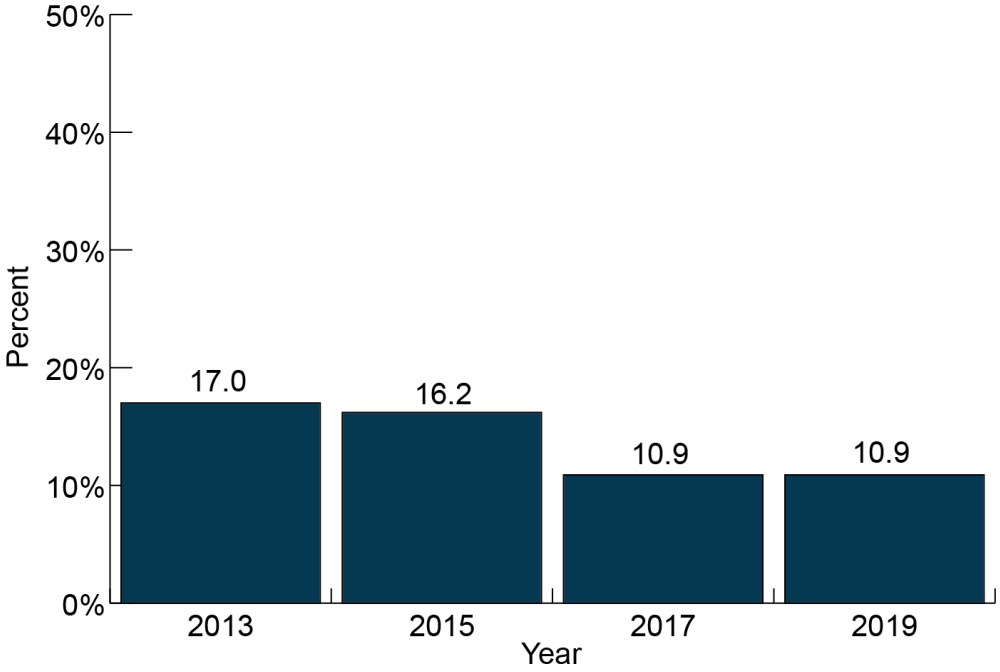
Data Source: NSDUH

Figure 2.11: Percentage of Youth who were Taught about Dangers of Tobacco Use during Current School Year, ND, by Grade, 2015



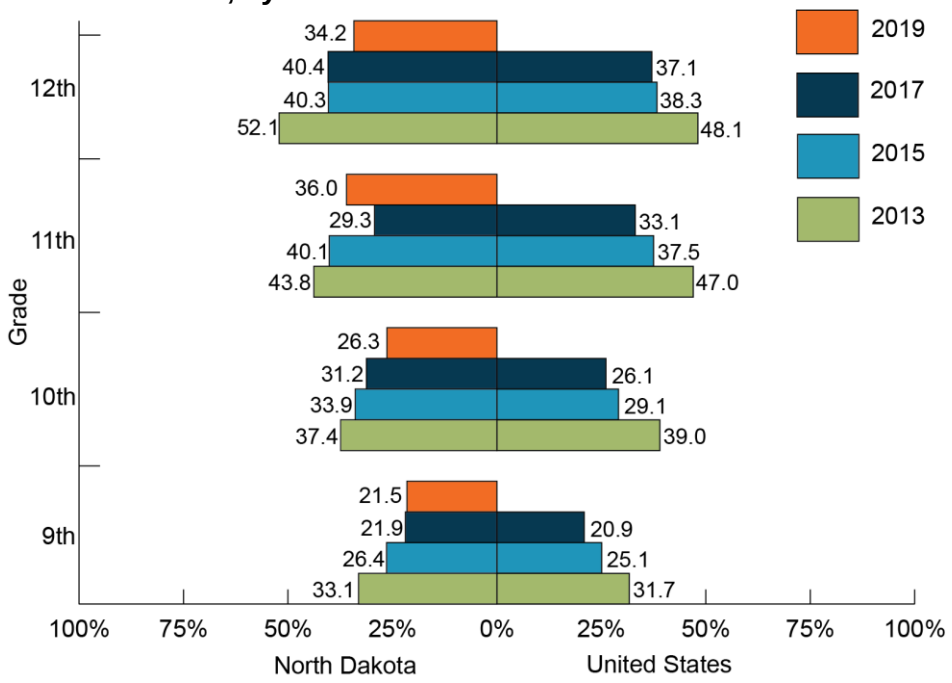
Data Source: YTS

Figure 2.12: Percentage who Ever Tried Cigarette Smoking, Middle School Youth, ND, by Year



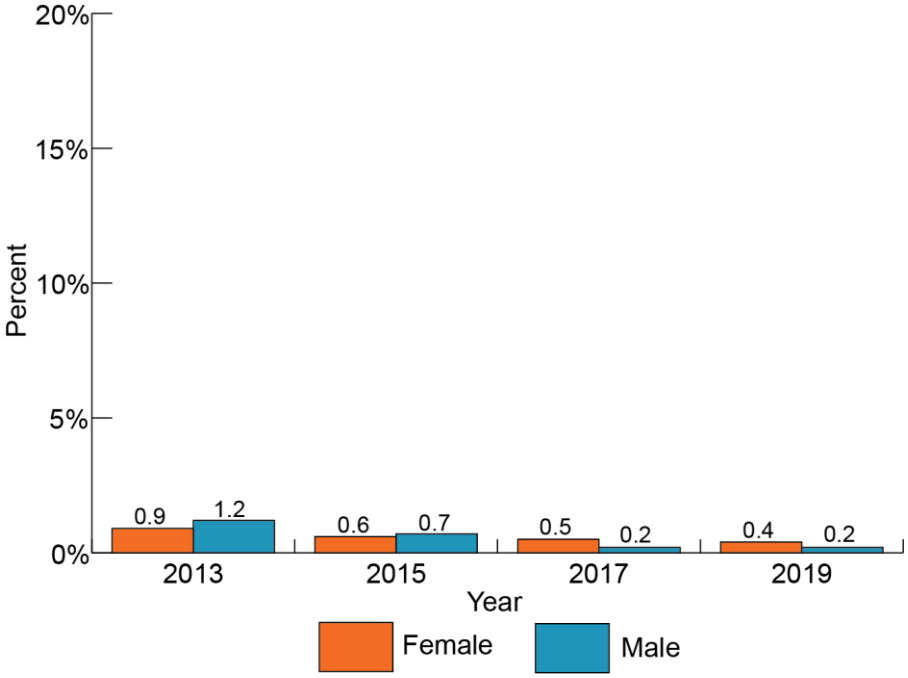
Data Source: YRBS

Figure 2.13: Percentage who Ever Tried Cigarette Smoking, High School Students, ND vs. U.S., by Year



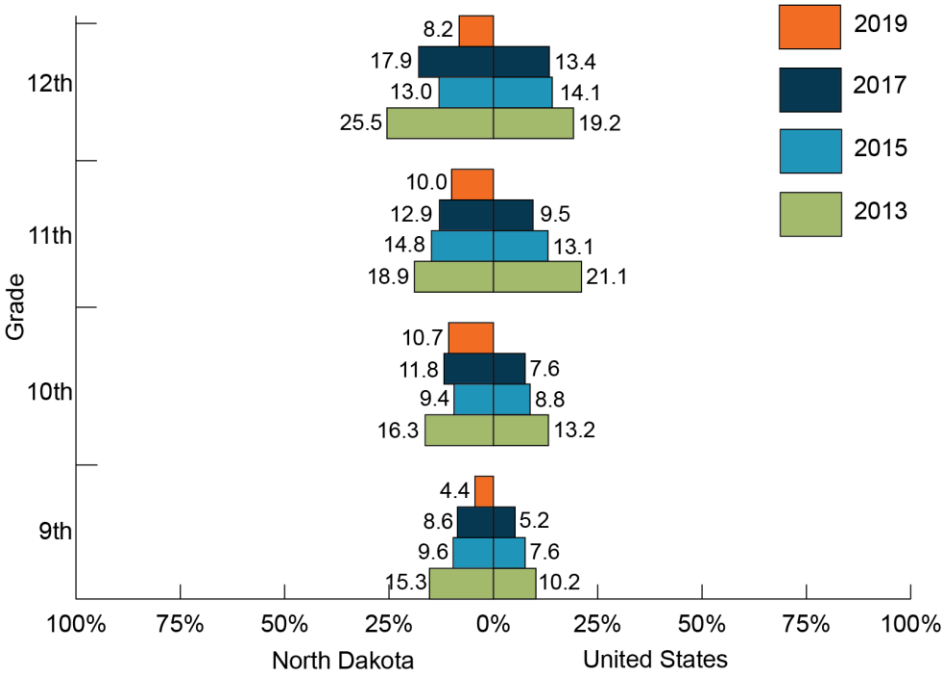
Data Source: YRBS
Data Note: U.S. data not available for 2019

Figure 2.14: Percentage who Currently Smoke Cigarettes on at Least 20 Days a Month, Middle School Students, ND, by Gender, by Year



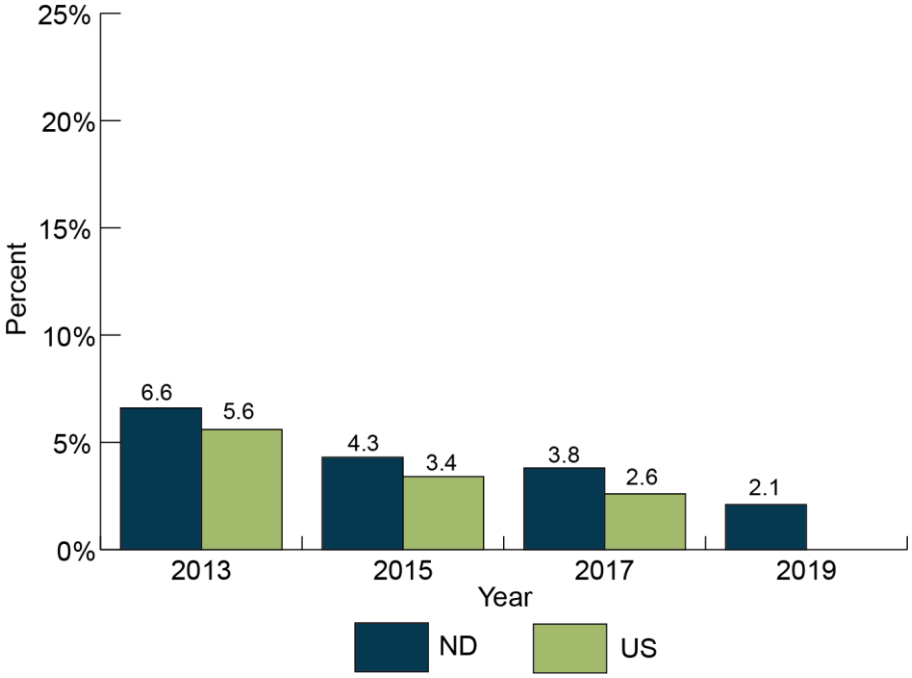
Data Source: YRBS

Figure 2.15: Percentage who Currently Smoke Cigarettes (at Least One Day a Month), High School Students, ND vs U.S., by Year



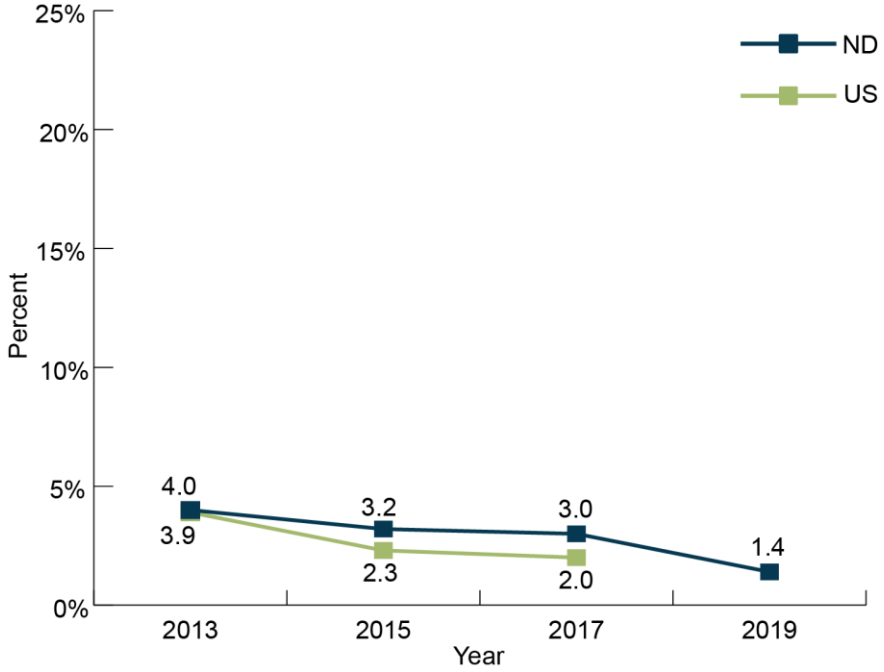
Data Source: YRBS
Data Note: U.S. data not available for 2019

Figure 2.16: Frequently Smoke Cigarettes (at Least 20 Days a Month), High School Students, ND, by Year



Data Source: YRBS
Data Note: U.S. data not available for 2019

Figure 2.17: Percentage who Currently Smoke Cigarettes on All Days of the Month, High School Students, ND vs. U.S.



Data Source: YRBS
Data Note: U.S. data not available for 2019

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 46.3 million, roughly 19%, of U.S. adults aged 18 and older have smoked at least one cigarette in the past month; North Dakota reports a similar percentage, 22% or 127,000 (NSDUH, 2018). 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 2018 (21.75%).

Data Source(s)

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

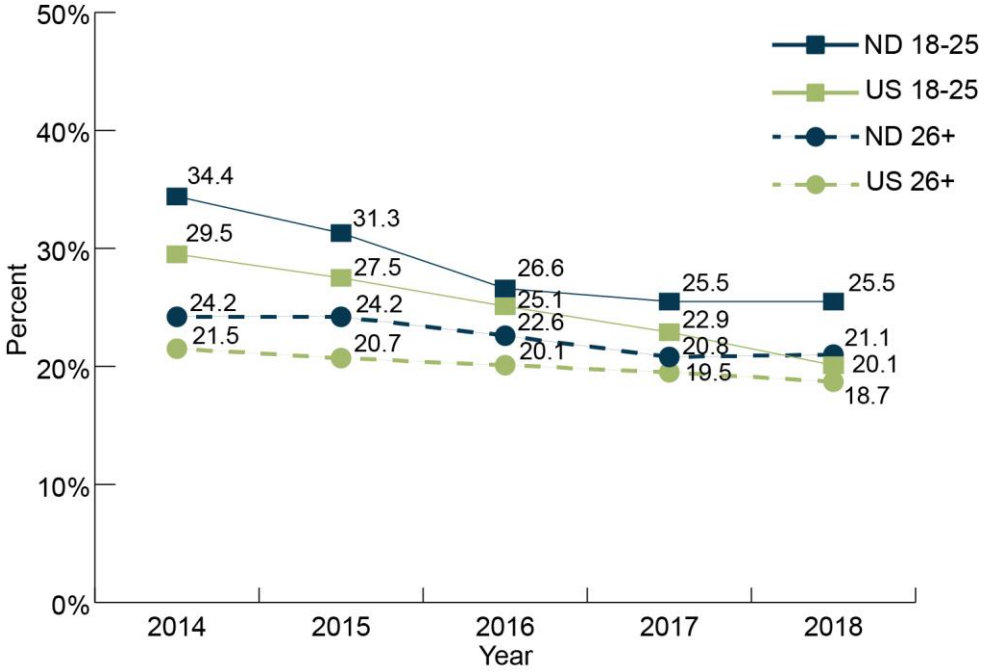
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System (BRFSS)

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

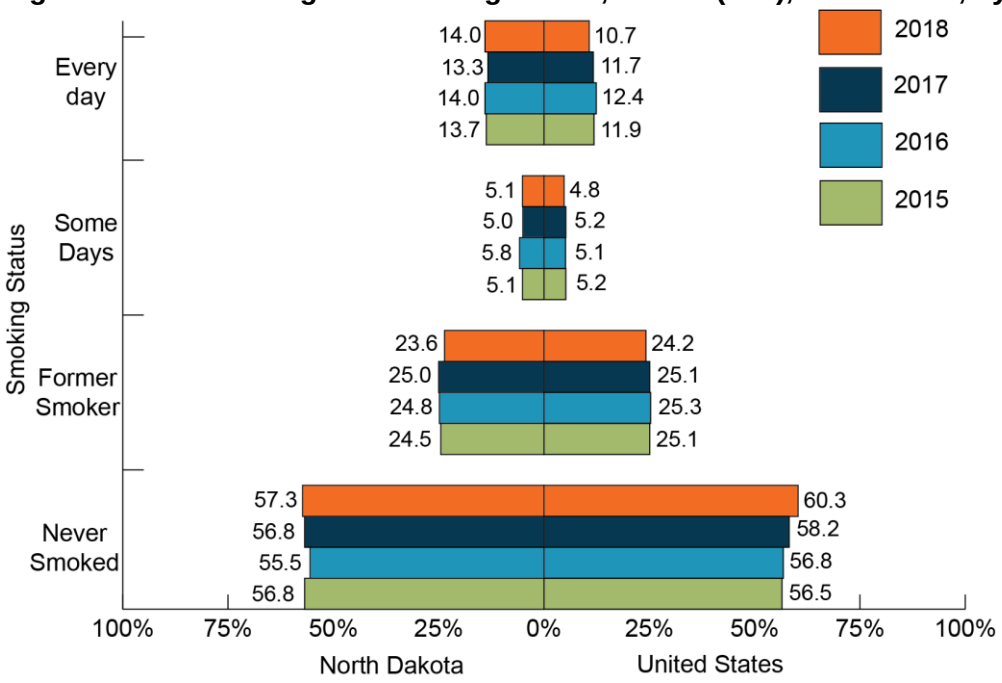
- The percentage of adults who had reported any cigarette use in the past month in both North Dakota and the United States declined between the years 2014 and 2018 (NSDUH, 2018; see Figure 2.18).
- From 2015 to 2018, the percentage of U.S. adults who have never smoked consistently increased. No trend, either increase or decrease, was observed among North Dakota nonsmoking adults over the same period of time (BRFSS, 2018; see Figure 2.19).
- The percentage of North Dakota adult males reporting current cigarette use in the past month was higher than females between the years 2015 and 2018. However, there was an observed marginally increasing trend among females (BRFSS, 2018; see Figure 2.23).
- The percentage of North Dakota adults age 45-65+ whom reported smoking daily has decreased from 2017 to 2018. Conversely, those aged 18-44 reported an increased rate of daily smoking over the same period of time (BRFSS, 2018; see Figure 2.21).
- North Dakota current smoking rates among American Indian and Alaskan Native and Multiracial, non-Hispanic adults are higher than the national rates (BRFSS, 2018; see Figure 2.24).

Figure 2.18: Percentage of Any Cigarette Use in the Past Month among Adults, ND vs. U.S., by Age, by Year



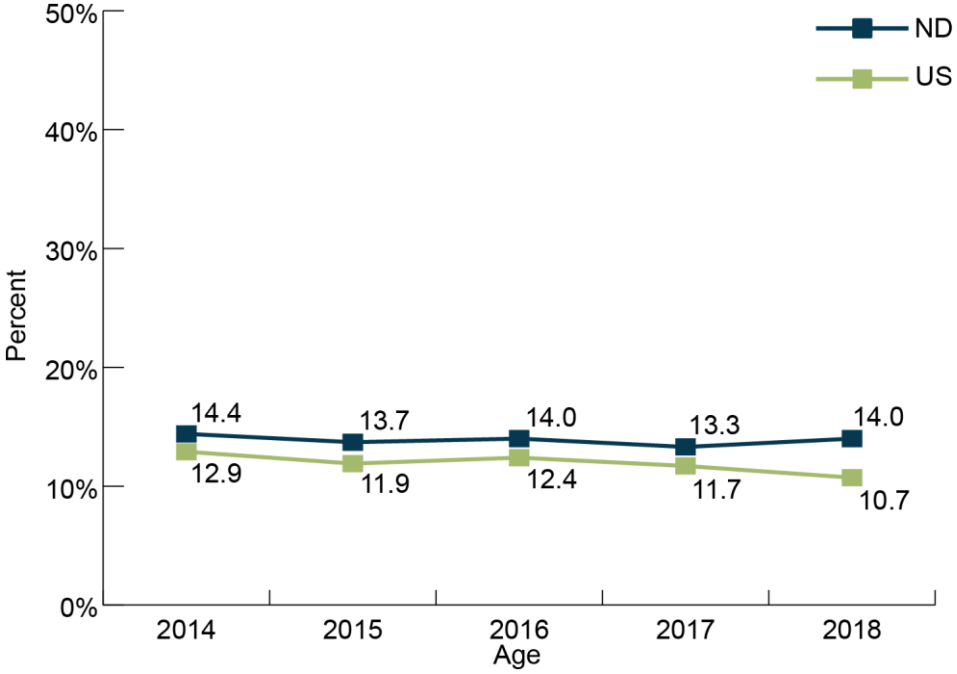
Data Source: NSDUH

Figure 2.19: Percentage of Smoking Status, Adults (18+), ND vs. U.S., by Year



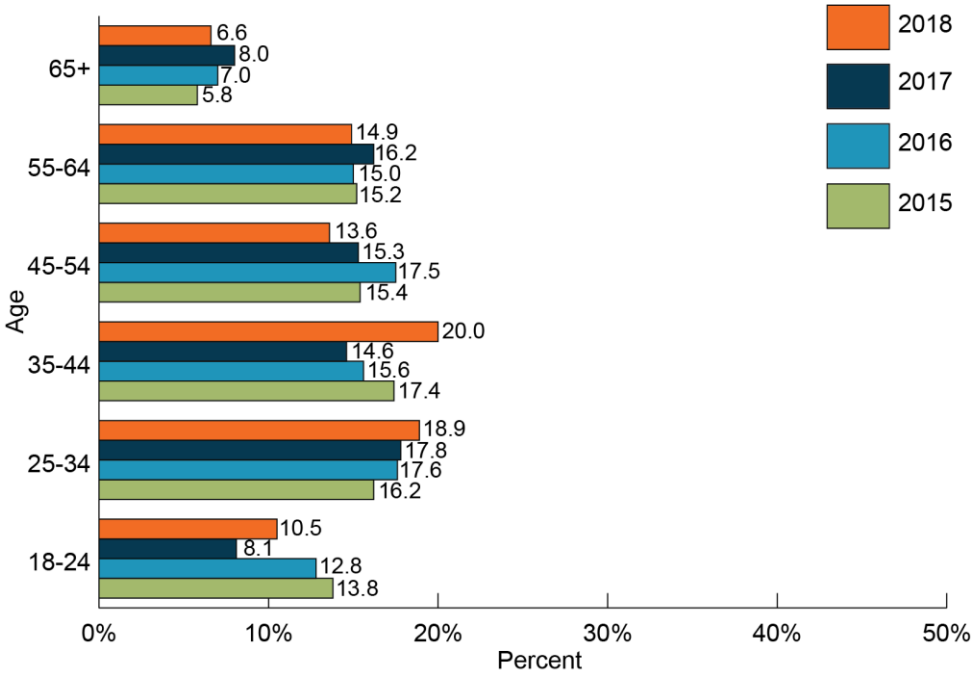
Data Source: BRFSS

Figure 2.20: Percentage of Daily Smoking, Adults (18+), ND vs. U.S., by Year



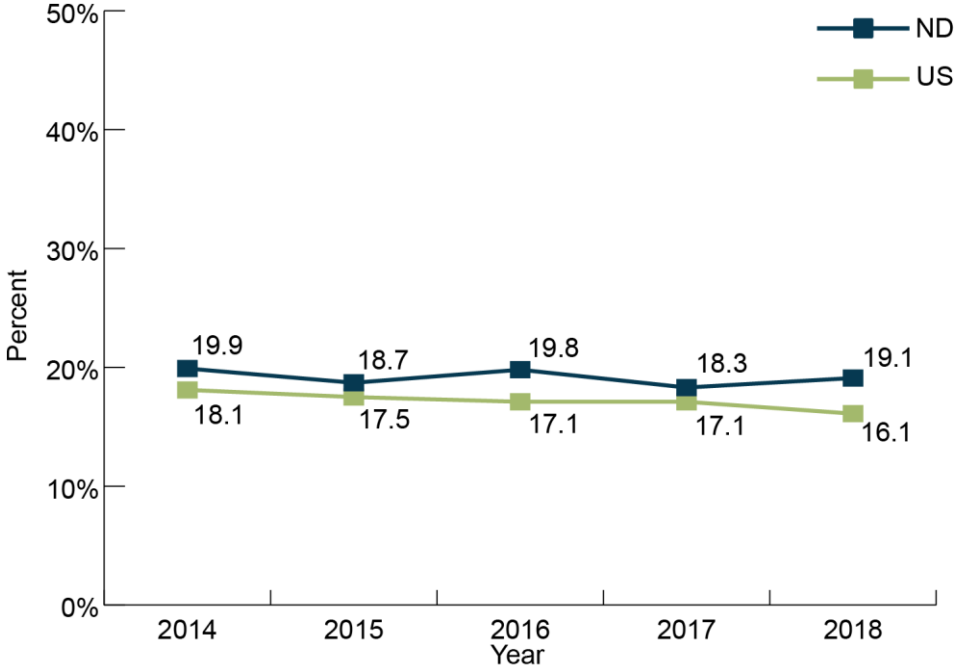
Data Source: BRFSS

Figure 2.21: Percentage of Daily Smoking, Adults, ND, by Age, by Year



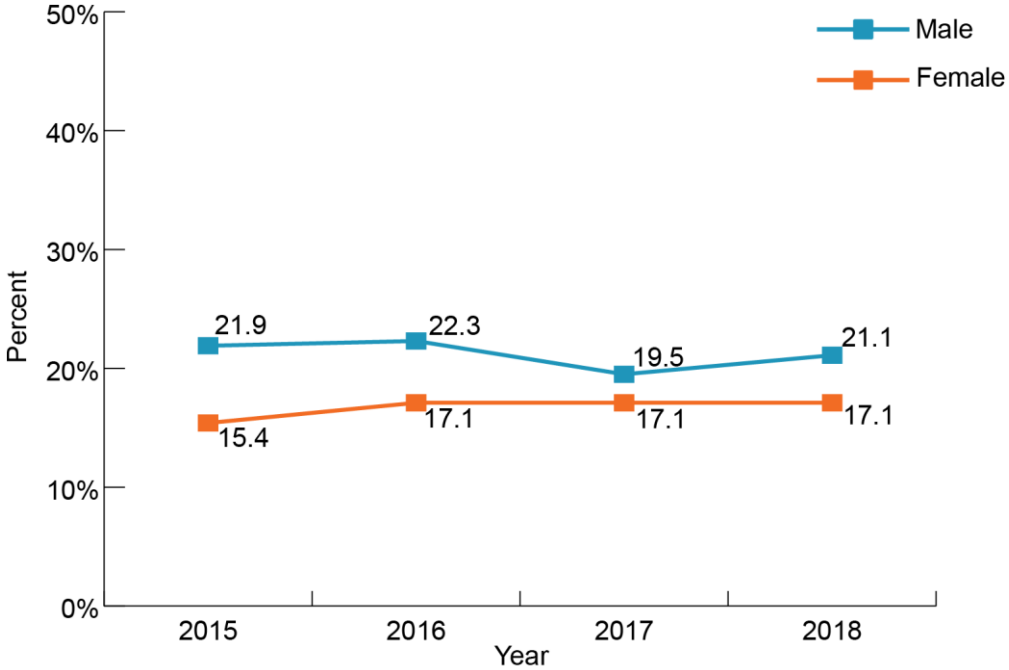
Data Source: BRFSS

Figure 2.22: Percentage of Current Smokers, Adults (18+), ND vs. U.S., by Year



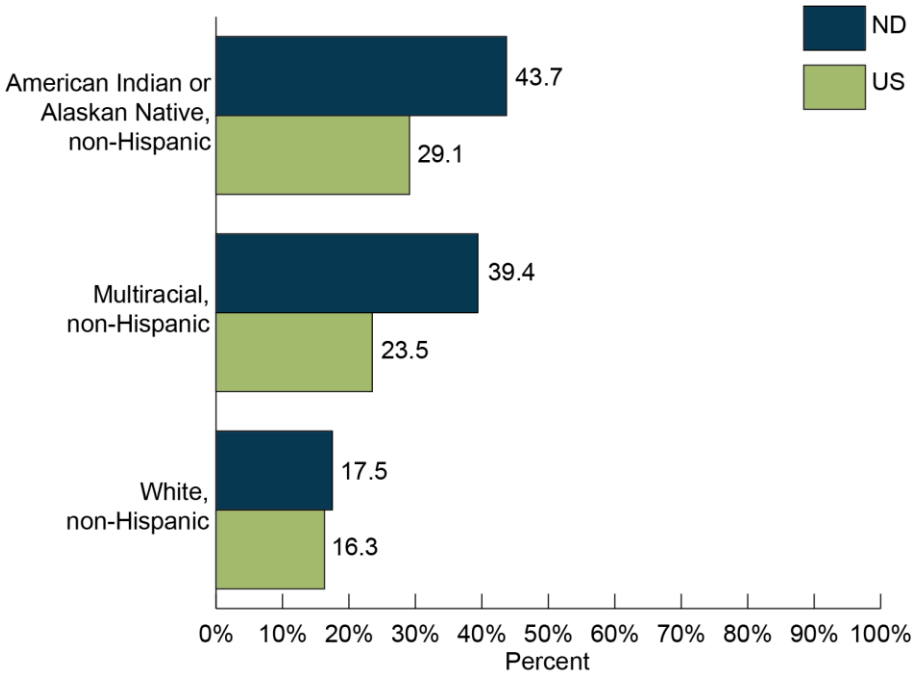
Data Source: BRFSS

Figure 2.23: Percentage of Current Smokers, Adults (18+), ND, by Gender, by Year



Data Source: BRFSS

Figure 2.24: Percentage of Current Smokers, Adults (18+), ND vs. U.S., by Race/Ethnicity, 2018



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

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 also can 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).

Data Source(s)

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

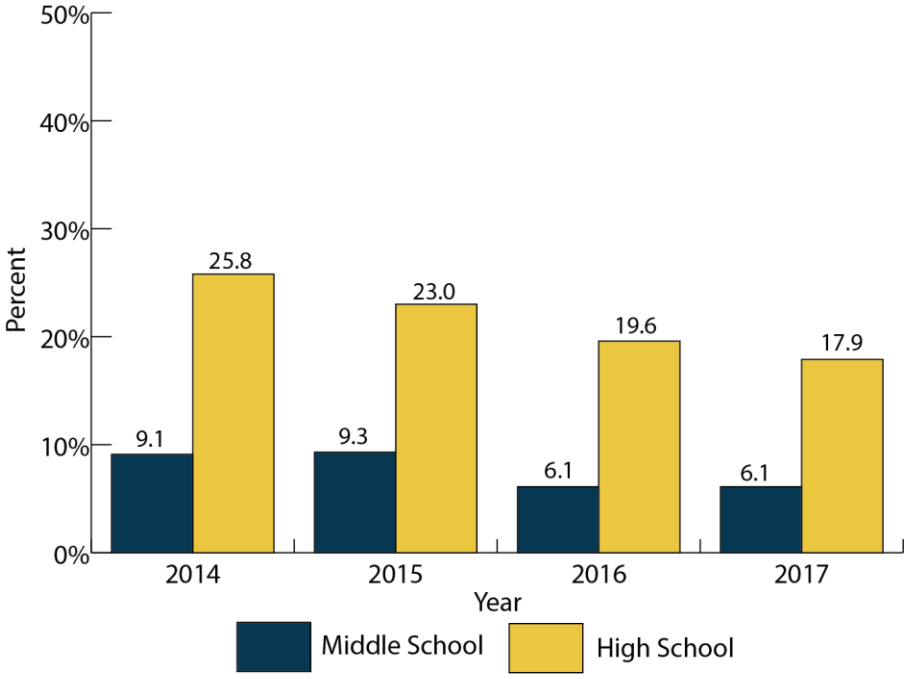
North Dakota Youth Tobacco Survey (YTS)

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

Section Summary

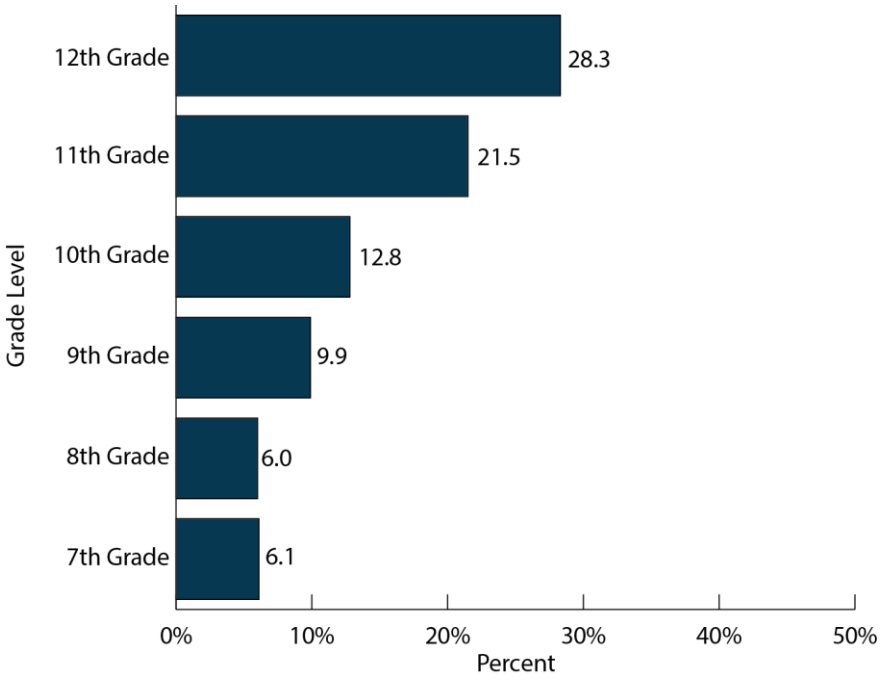
- North Dakota high school students were nearly 3 times more likely to use smokeless tobacco than North Dakota middle school students between the years 2014 and 2017 (YTS, 2017). However, both middle school and high school student smokeless tobacco rates have declined over the same period of time (YTS, 2017; see Figure 2.25).
- 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 2017 (YRBS, 2017; see Figure 2.29).
- 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 2.29).
- As North Dakota students advanced to higher grades, they were more likely to engage in frequent smokeless tobacco use (YTS, 2017; see Figure 2.31).

Figure 2.25: Percentage who Ever Used Smokeless Tobacco, ND, Middle vs. High School Students, by Year



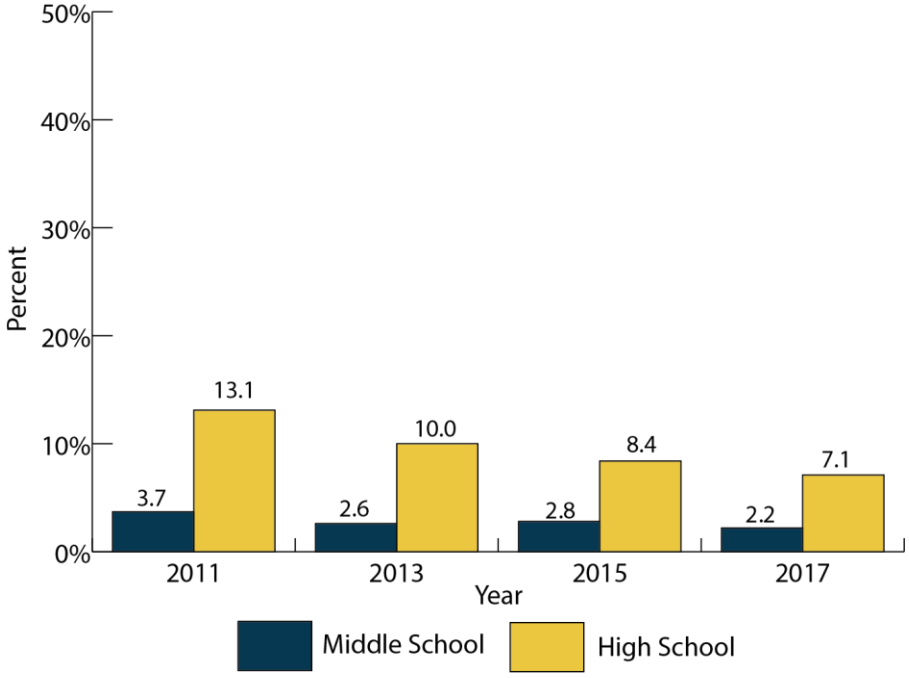
Data Source: YTS

Figure 2.26: Percentage of Students who Ever Used Smokeless Tobacco, ND, by Grade, 2017



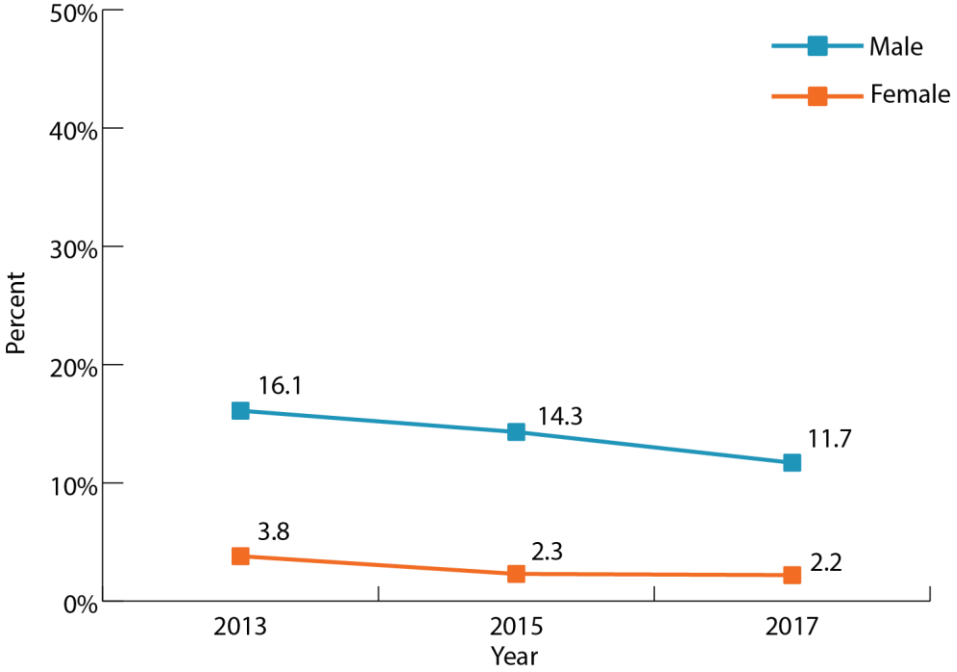
Data Source: YTS

Figure 2.27: Percentage of Current Smokeless Tobacco Use, ND, Middle vs. High School Students, by Year



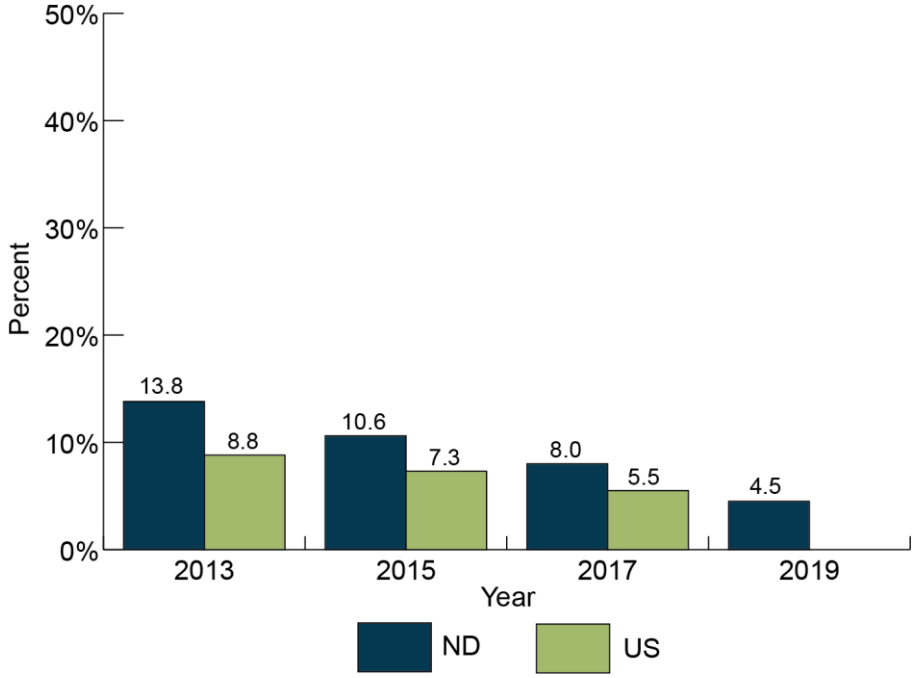
Data Source: YTS

Figure 2.28: Percentage of Current Smokeless Tobacco Use (at least one day during the month), High School Students, by Gender, by Year



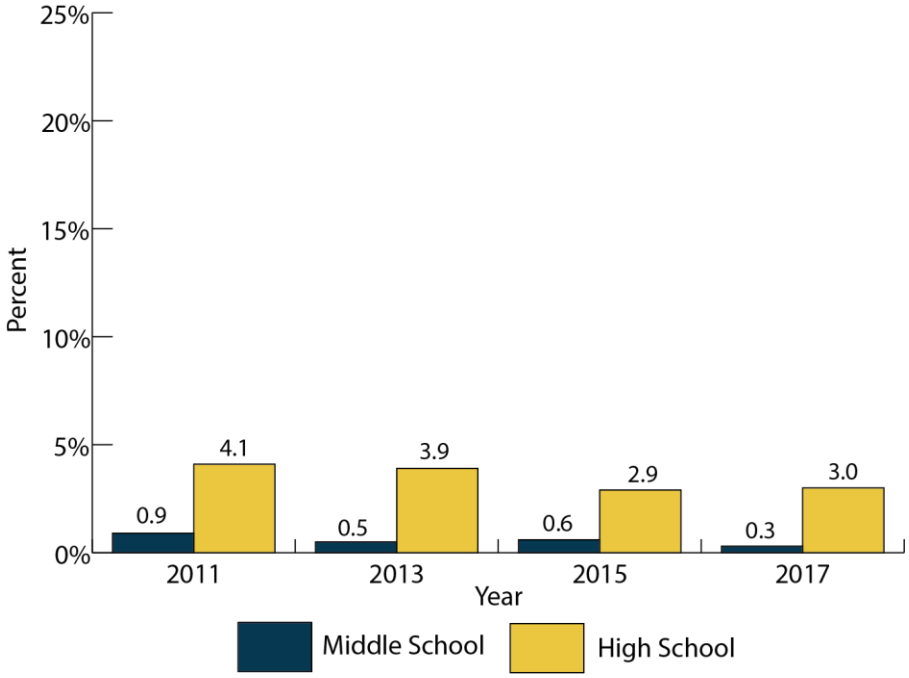
Data Source: YTS

Figure 2.29: Percentage of Current Smokeless Tobacco Use (at least one day during the Month), High School Students, ND vs. U.S., by Year



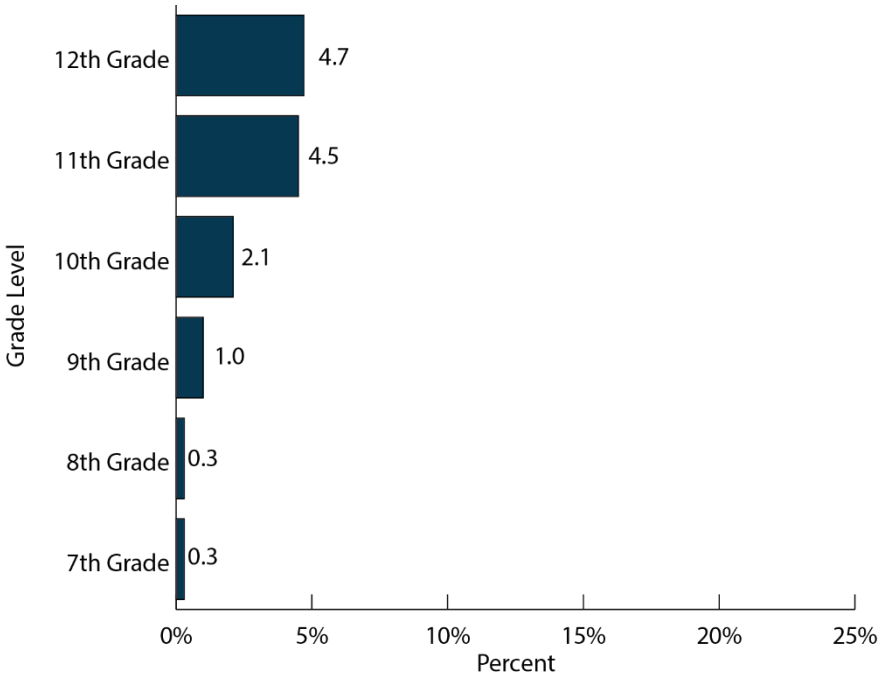
Data Source: YRBS
Data Note: U.S. data not available for 2019

Figure 2.30: Percentage of Frequent Smokeless Tobacco Use, Middle vs. High School Students, ND, by Year



Data Source: YTS

Figure 2.31: Percentage of Frequent Smokeless Tobacco Use among Students, ND, by Grade Level, 2017



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). Between 2015 and 2016, e-cigarette use (in the past 30 days) rates among youths decreased for the first time. However, 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).

Data Source(s)

Centers for Disease Control and Prevention (CDC). Vital Signs: Tobacco Product Use among Middle and High School Students- United States, 2011-2018

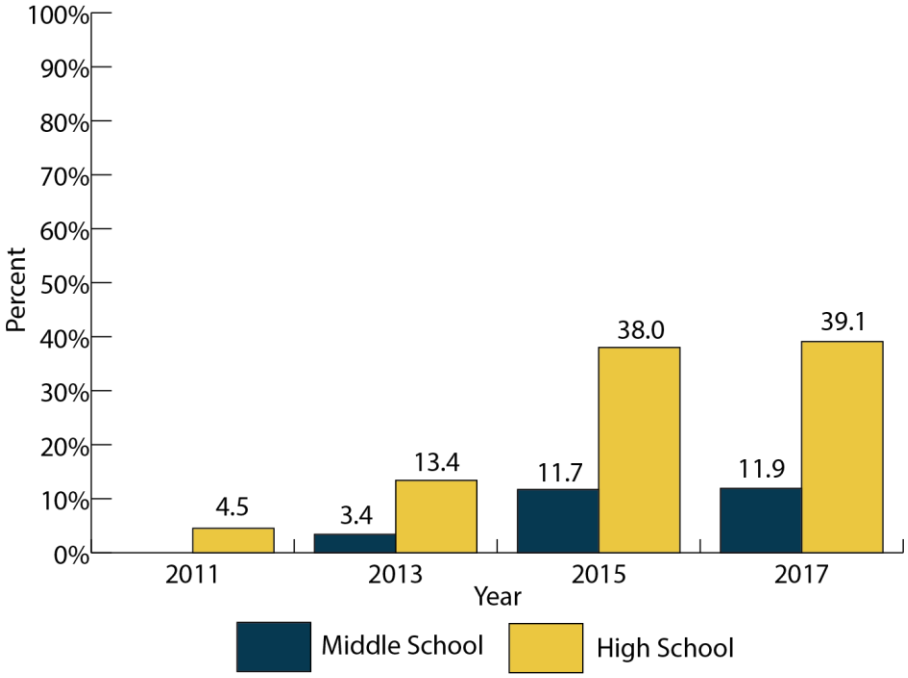
North Dakota Youth Tobacco Survey (YTS)

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

Section Summary

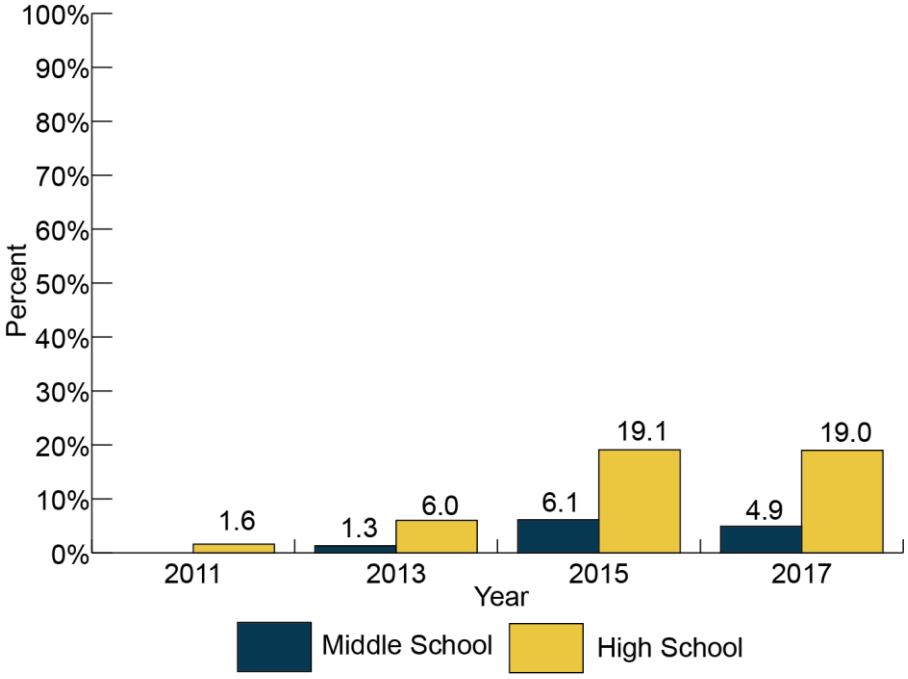
- North Dakota high school students were more likely to have ever used electronic vapor products compared to North Dakota middle school students between the years 2011 and 2017 (YTS, 2017; see Figure 2.32).
- Roughly 1 in 4 North Dakota high school students reported currently using electronic vapor products by the time they are in 11th grade (YTS, 2017; see Figure 2.34).
- By 12th grade, over 50% of North Dakota high school students have used an electronic vapor product (YTS, 2017; see Figure 2.34).
- In 2017, electronic vapor products were the most commonly tried and currently used tobacco product among North Dakota high school students (YTS, 2017; see Figure 2.35).
- North Dakota high school females reported increased electronic vapor use from 2015 to 2017 (16.8% to 18.7%), while males reported decreased rates over the same period of time (21.3% to 19.4%) (YTS, 2017; see Figure 2.36).
- In 2017, electric vapor products were more commonly used among Hispanic or Latino (23.7%) and white (19.7%), than black or African American (15.9%) or other (15.4%) (YTS, 2017; see Figure 2.37).

Figure 2.32: Percentage who Ever Used Electronic Vapor Product Middle School vs. High School, ND, by Year



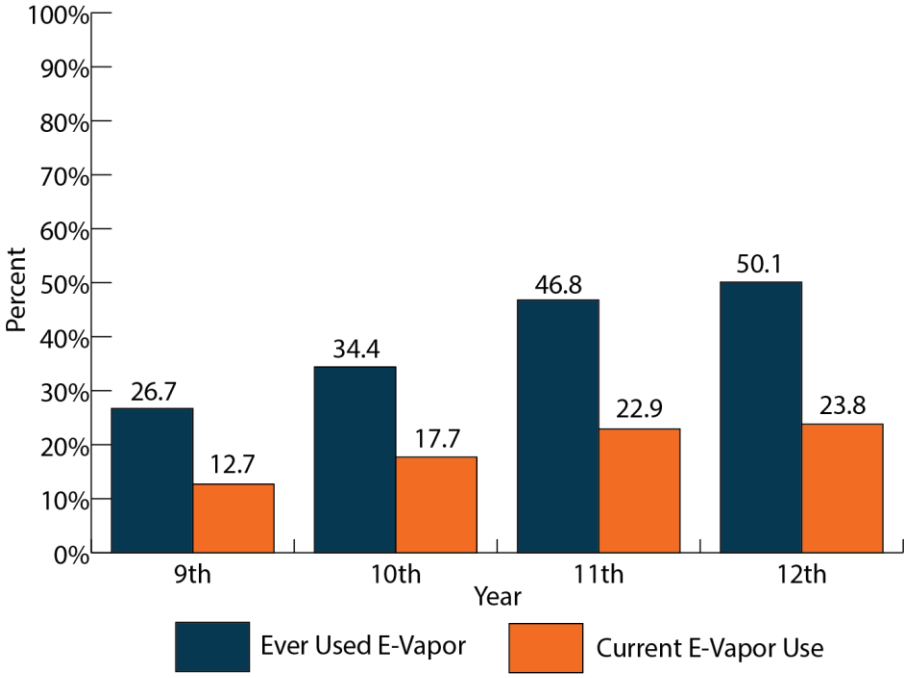
Data Source: YTS
Data Note: MS YTS did not ask about electric vapor product use in 2011 survey.

Figure 2.33: Percentage of Current Electronic Vapor Product Use, Middle School vs. High School, ND, by Year



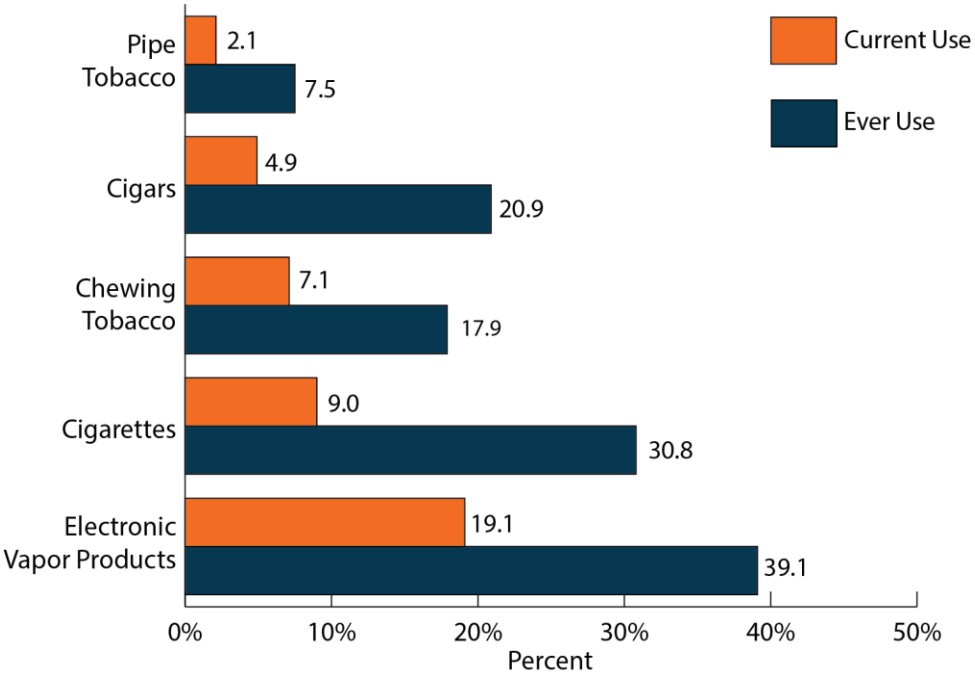
Data Source: YTS
Data Note: MS YTS did not ask about electric vapor product use in 2011 survey.

Figure 2.34: Percentage of Electronic Vapor Product Use, High School Students, ND by Grade, 2017



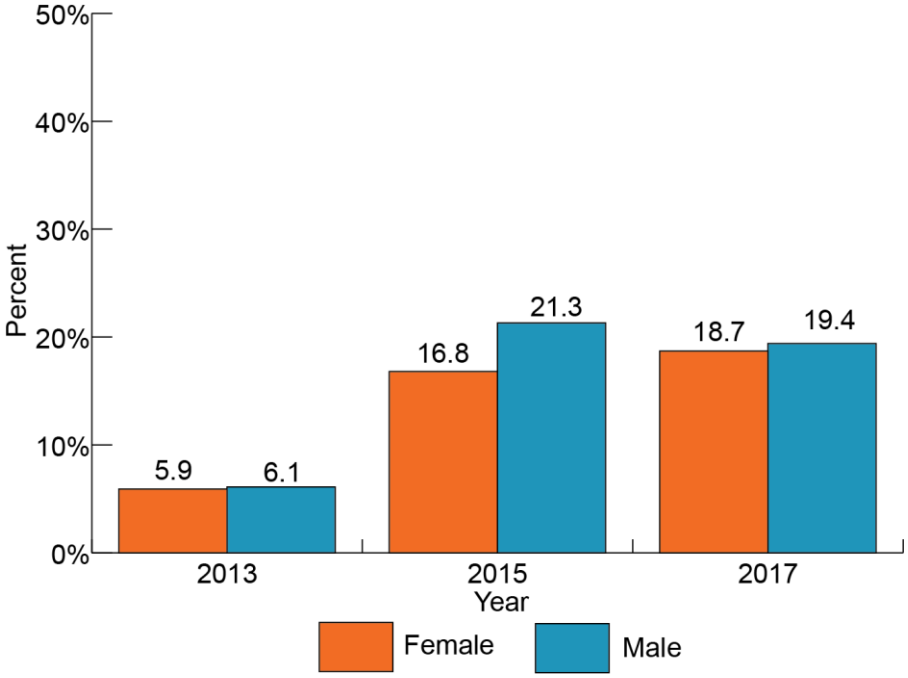
Data Source: YTS

Figure 2.35: Percentage of Tobacco Product Use, High School Students, ND, 2017



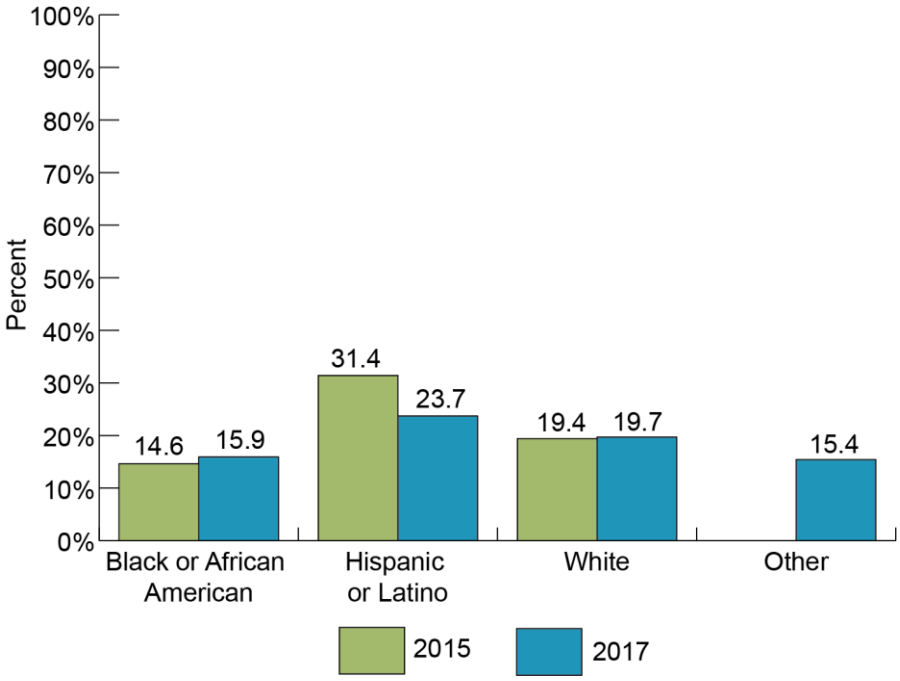
Data Source: YTS

Figure 2.36: 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.

Figure 2.37: Percentage of Current Electronic Vapor Product Use, High School Students, ND, by Race and Ethnicity, by Year



Data Source: YTS
Data Note: “Other” category not collected in 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).

Data Source(s)

Centers for Disease Control and Prevention (CDC). Tobacco Product Use among Adults – United States 2017

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

Current Opinion in Pulmonary Medicine (Curr Opin. Pulm Med.). Electronic Cigarettes as Smoking Cessation Tool: Are we there?

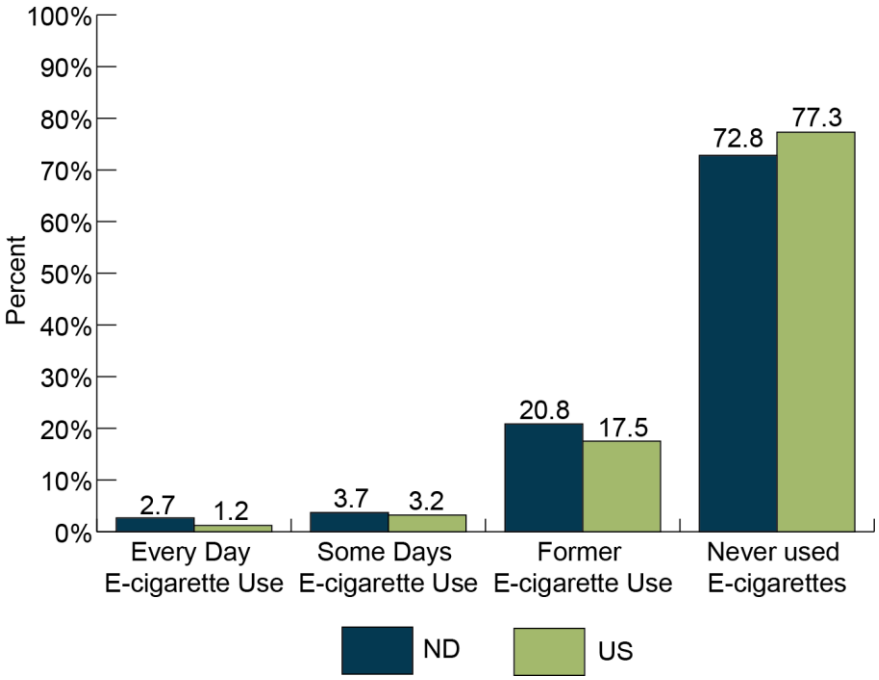
Johns Hopkins Ciccarone Center for the Prevention of Hearth Disease. 5 Vaping Facts You Need to Know

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

Section Summary

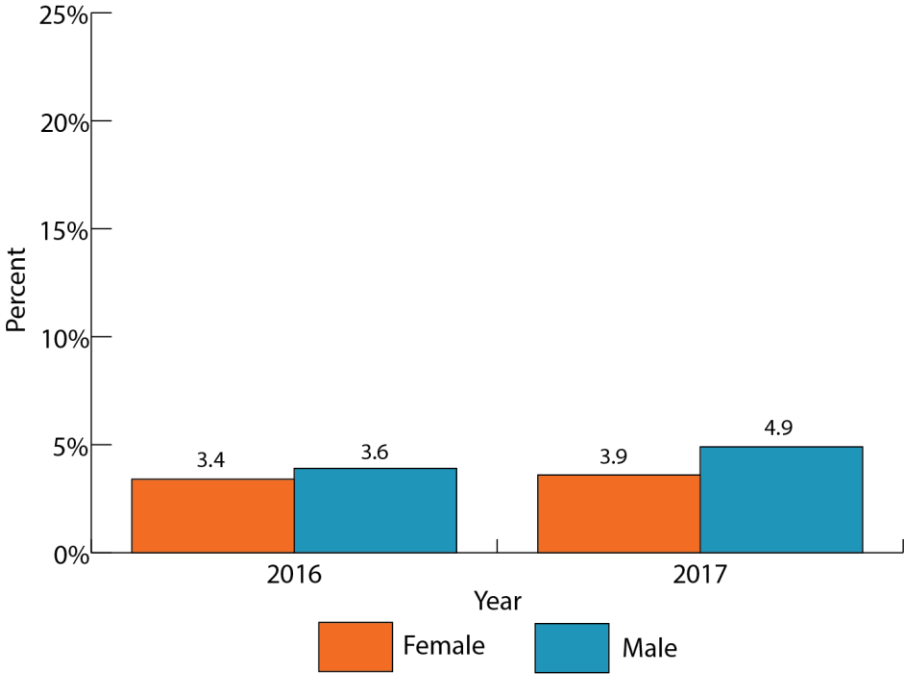
- In 2018, rates for e-cigarette use among adults in North Dakota were similar to national rates (BRFSS, 2018; see Figure 2.38).
- The percentage of North Dakota adults using e-cigarettes, both male and female, has increased from 2016 to 2017 (BRFSS, 2017; see Figure 2.39).
- Current electronic vapor product rates among adults aged 18-24 increased by 40.2% (from 8.7% to 12.2%) from 2016 to 2017 (BRFSS, 2017; see Figure 2.40).

Figure 2.38: Percentage of Electronic Cigarette Use among Adults, ND, 2018



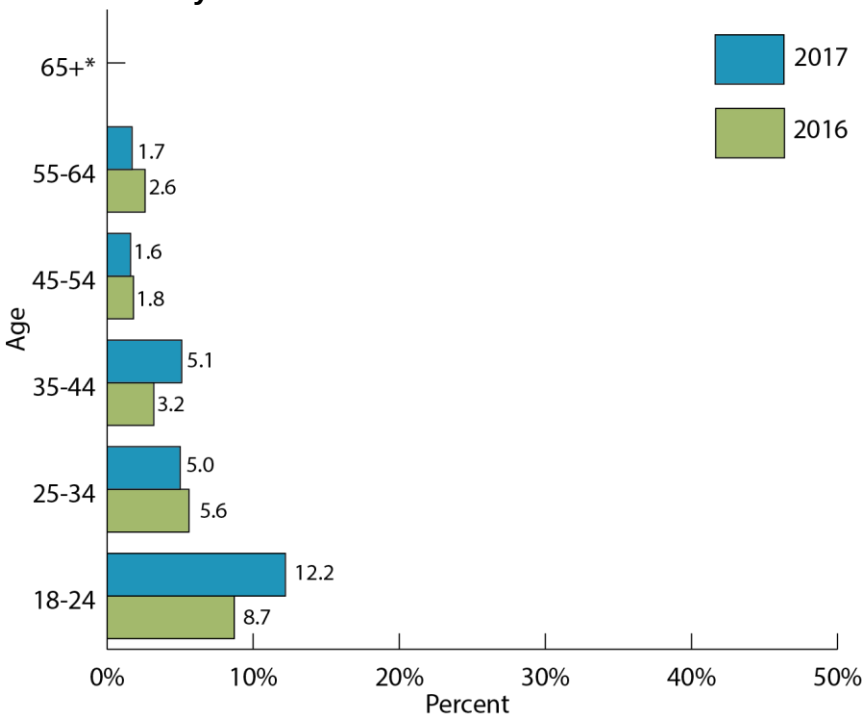
Data Source: BRFSS

Figure 2.39: Percentage of Current Electronic Cigarette Use among Adults, by Gender, ND, by Year



Data Source: BRFSS

Figure 2.40: Percentage of Current Electronic Cigarette Use among Adults, by Age, ND, by Year



Data Source: BRFSS
Data Note: (*) 2016-2017 rates for those aged 65 and older not include due to unreliable cell size.

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 and Obstet Gynecol., 2017).

Data Source(s)

Centers for Disease Control and Prevention (CDC). E-cigarettes and Pregnancy

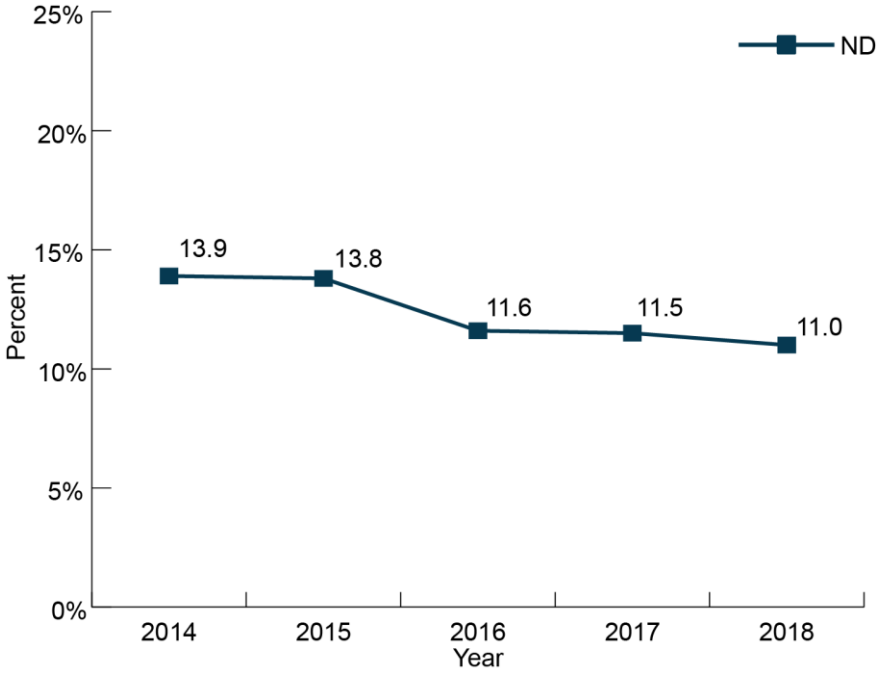
Obstetrics & Gynecology (Obstet Gynecol.). Smoking Cessation during Pregnancy

North Dakota Department of Health. Tobacco Prevention and Control: Tobacco Surveillance Data

Section Summary

- In North Dakota, the percentage of women who reported tobacco use during pregnancy decreased from 2014 to 2018 (North Dakota Department of Health, Tobacco Prevention and Control, 2018; see Figure 2.41).

Figure 2.41: Percentage of Women Using Tobacco Products during Pregnancy (First Trimester), Adults, ND



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).

Data Source(s)

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

Journal of American Medical Association Internal Medicine (JAMA). Estimation of Cigarette Smoking–Attributable Morbidity in the United States

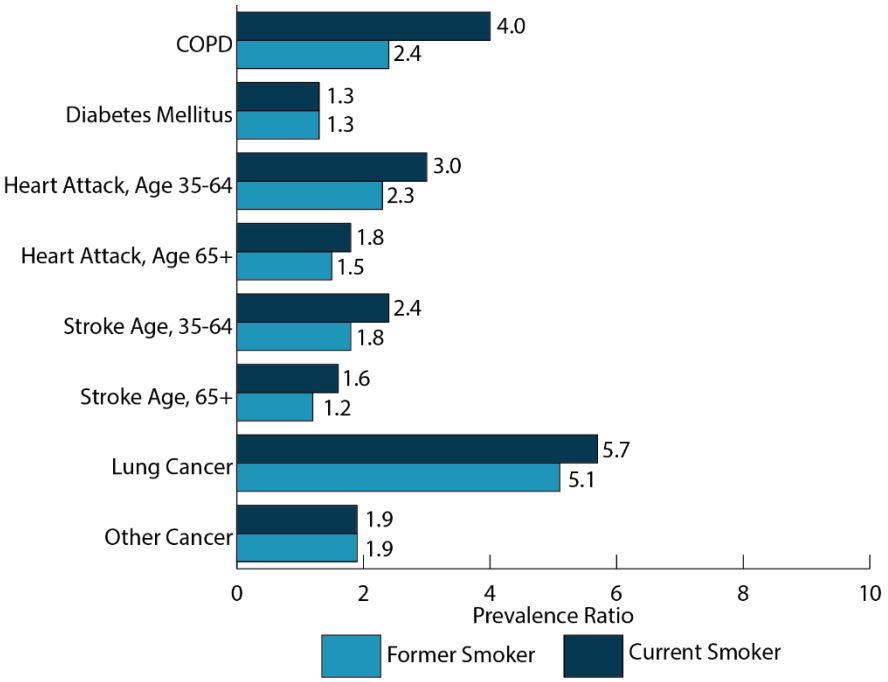
North Dakota Department of Health. Tobacco Prevention and Control

Center for Disease Control and Prevention (CDC), Division of Cancer Prevention and Control

Section Summary

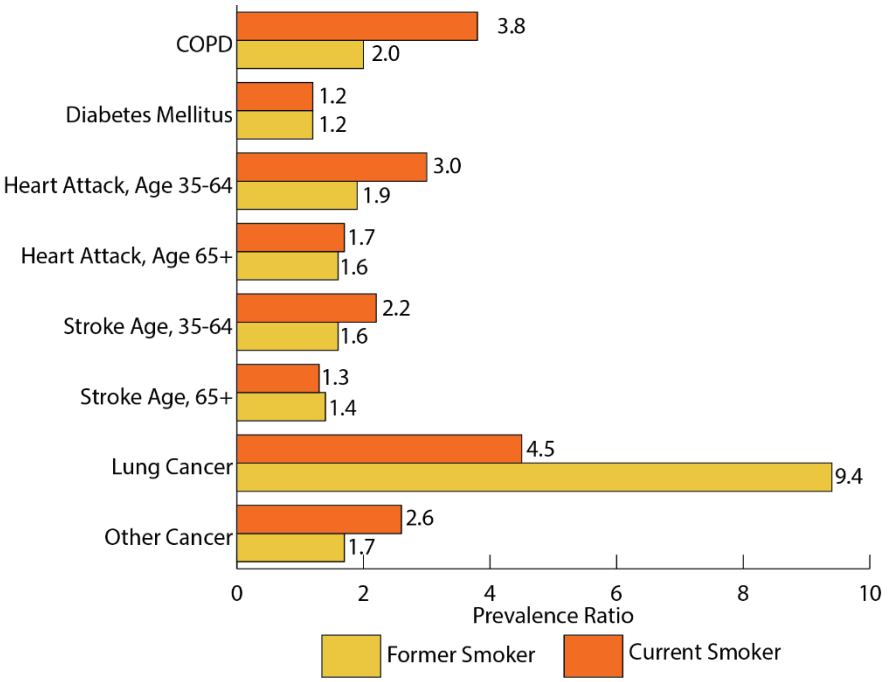
- Prevalence ratios (prevalence of disease among nonsmokers compared to former and current smokers, where nonsmokers are the control) for both current and former smokers in the United States were higher than those who had never smoked for all those surveyed between 2006 and 2012 (JAMA, 2014; see Figures 2.42, 2.43).
- 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 2.42, 2.43).
- 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 2.2).

Figure 2.42: 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 2.43: 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.

Table 2.2: 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).

Data Source(s)

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

North Dakota Department of Health (NDDOH). ND Vital Records

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

American Journal of Preventive Medicine (Am J Prev Med.). Smoking-attributable Mortality by State in 2014, U.S.

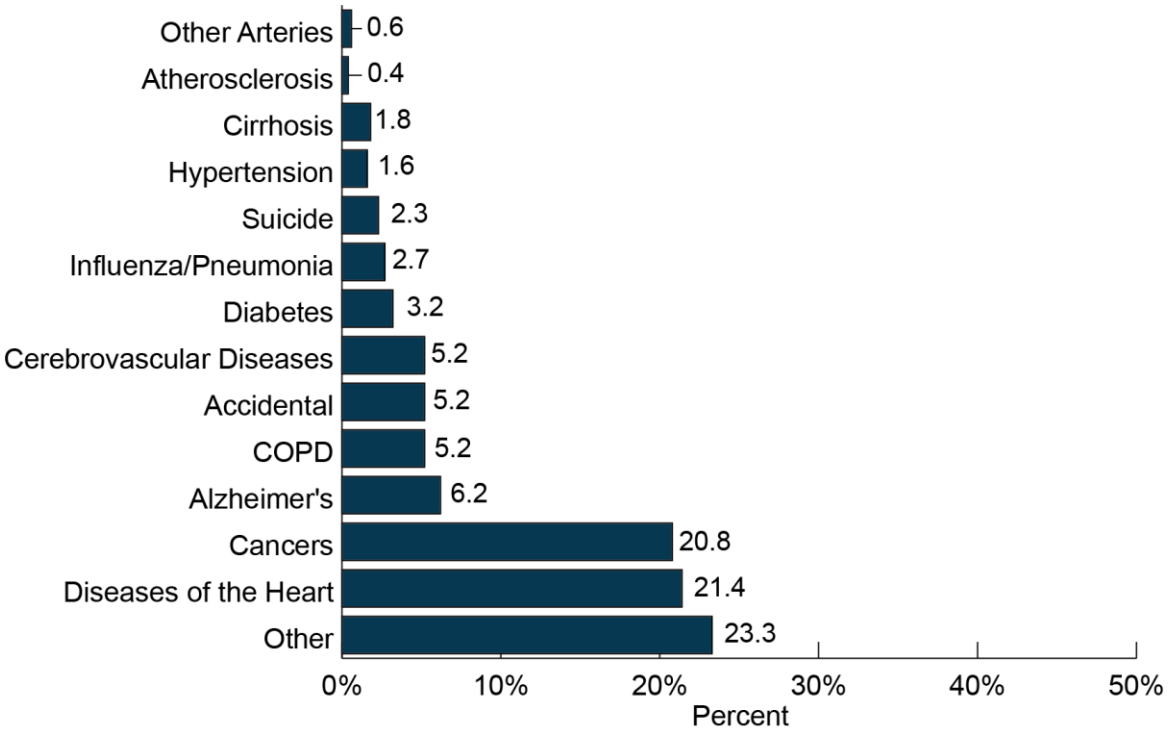
Section Summary

- Over 40% of deaths in North Dakota in 2018 were due to cancer or a disease of the heart (ND Vital Records, 2018; see Figure 2.44)
- The average Smoking-Attributable Mortality (SAM) in North Dakota for 2014 was higher among men (588) than women (401) 35 years of age and older (Am J Prev Med., 2018; see Table 2.3).
- In 2018, North Dakota reported lower COPD, lung and bronchus cancer, cerebrovascular diseases, and heart disease mortality rates than the national averages (CDC Wonder, 2018; see Figure 2.45).
- COPD- attributed death rates in North Dakota have decreased (38.3 to 34.9 per 100,000) from 2017 to 2018 (CDC Wonder, 2018; see Figure 2.45). However, when looking across a four-year period of time (2015-2018), no consistent trend emerged.
- Age-adjusted heart disease mortality rates for North Dakota have declined from 2015 to 2018 (142.2 to 140.0 per 100,000) (CDC Wonder, 2018; see Figure 2.45).
- From 2017-2018, age-adjusted lung and bronchus cancer mortality rates for North Dakota decreased marginally (34.7 to 32.7 per 100,000). However, when looking at rates across a four-year period of time, (2015-2018), no consistent trend emerges (CDC Wonder, 2018; see Figure 2.45).
- The rate of deaths related to cerebrovascular diseases in North Dakota increased slightly from 2016 to 2017 (32.7 to 35.4 per 100,000). Over time (2015-2018), it has been

demonstrated that the rates decreased and then increased to show no consistent trend (CDC Wonder, 2018; see Figure 2.45).

- In 2018, North Dakota males reported greater COPD, lung and bronchus cancer, cerebrovascular diseases, and heart disease mortality rates than females (CDC Wonder, 2018; see Figure 2.46).

Figure 2.44: Percentage Cause of Death, All Deaths, ND, 2018



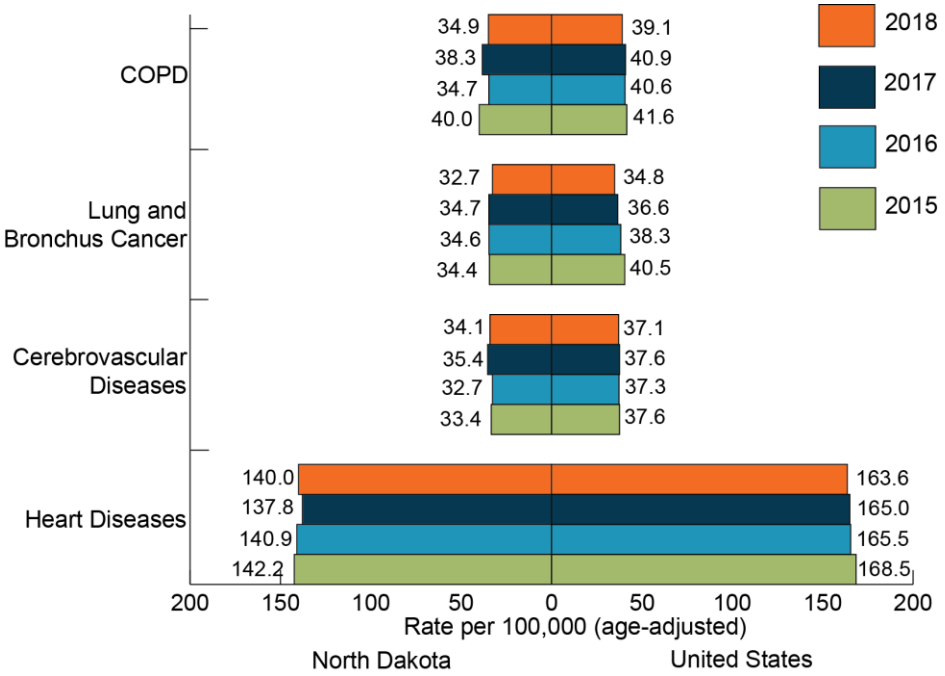
Data Source: ND Vital Records

Table 2.3: Average Annual Smoking-Attributable Mortality, Adults (>35), ND vs. U.S., 2014

Average Smoking-Attributable Mortality in North Dakota		
	North Dakota	**United States**
Total	989 (955; 1,018)	448,865 (446,144; 450,624)
Male	588 (561; 611)	258,456 (256,512; 259,808)
Female	401 (380; 420)	190,409 (188,704; 191,712)

Data Source: Am J Prev Med.

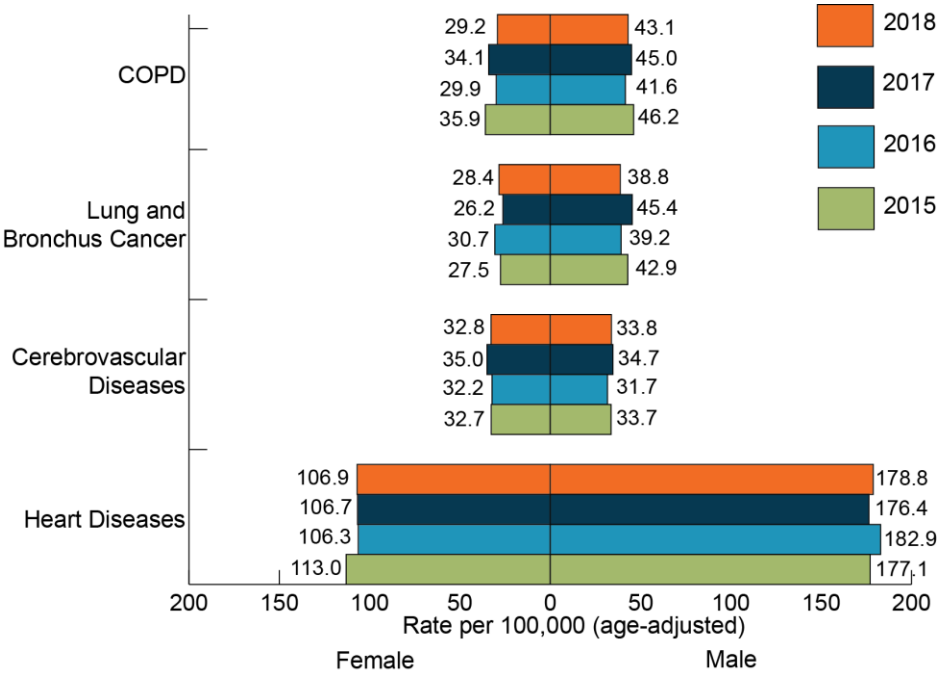
Figure 2.45: COPD, Heart Disease, Cerebrovascular Disease, Lung and Bronchus Cancer Mortality Rates per 100,000, ND vs. U.S., by Year



Data Source: CDC Wonder

Data Note: 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.

Figure 2.46: COPD, Heart Disease, Cerebrovascular Disease, Lung and Bronchus Cancer Mortality Rates per 100,000, ND vs. U.S., by Gender, by Year



Data Source: CDC Wonder

Data Note: 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.

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 is, “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).

Data Source(s)

American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders (5th Ed.)

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

Centers for Disease Control and Prevention (CDC). Burden of Tobacco Use in the U.S.

North Dakota Youth Tobacco Survey (YTS)

North Dakota Department of Public Instruction. North Dakota Youth Risk Behavior Survey (YRBS)

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

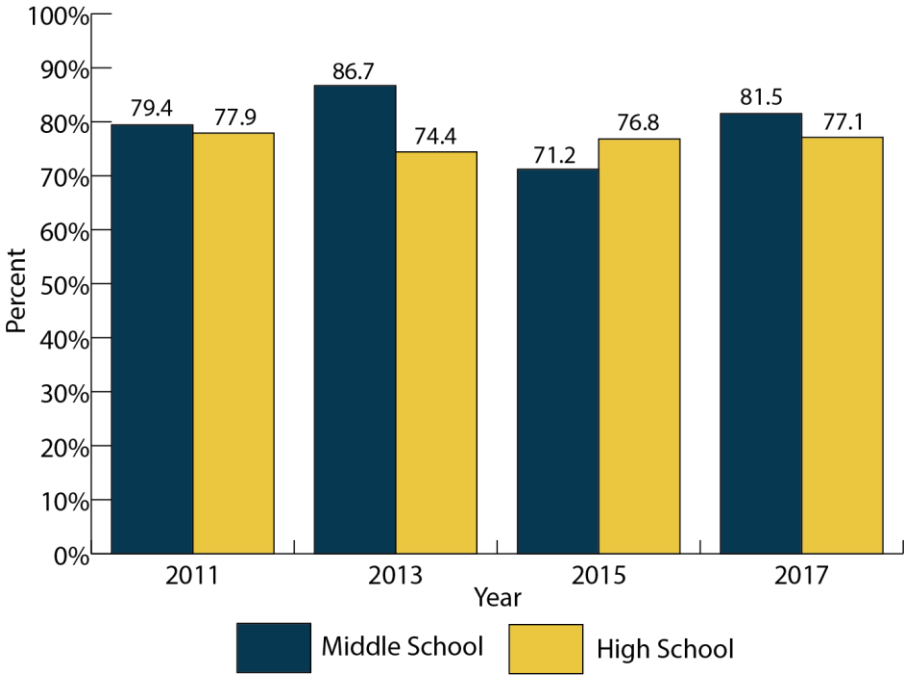
Current smoker: Those who smoked tobacco on at least one of the thirty days preceding the survey.

Frequent smoker: Those who smoked tobacco on twenty or more of the thirty days preceding the survey.

Section Summary

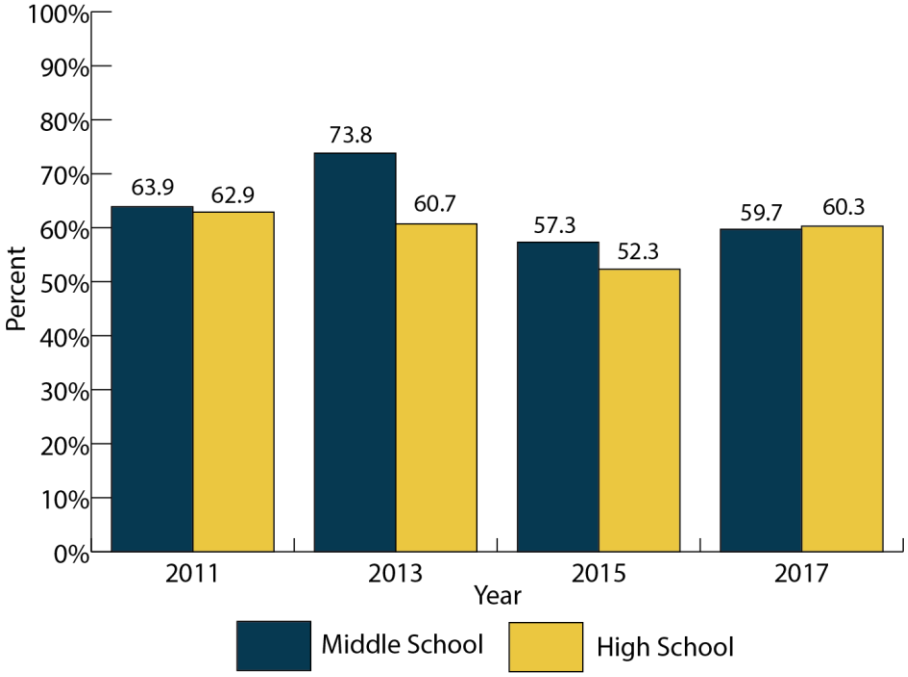
- In 2017, over 75% of current high school smokers believed that they would be able to quit smoking (YTS, 2017; see Figure 2.47).
- From 2011 to 2017, North Dakota reported higher rates of high school students who tried to quit smoking cigarettes than the U.S. high school average (YTS, 2017; see Figure 2.49).
- 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 2.50).
- The percentage of current smoking North Dakota high school students who wanted to quit smoking spiked in 2015 (56.4%). However, that percentage decreased by roughly 19% from 2015 to 2017 (56.4% to 45.7%) (YTS, 2017; see Figure 2.52).

Figure 2.47: Perception held by Current Smokers that they Would be Able to Quit, Middle vs. High School Students, ND, by Year



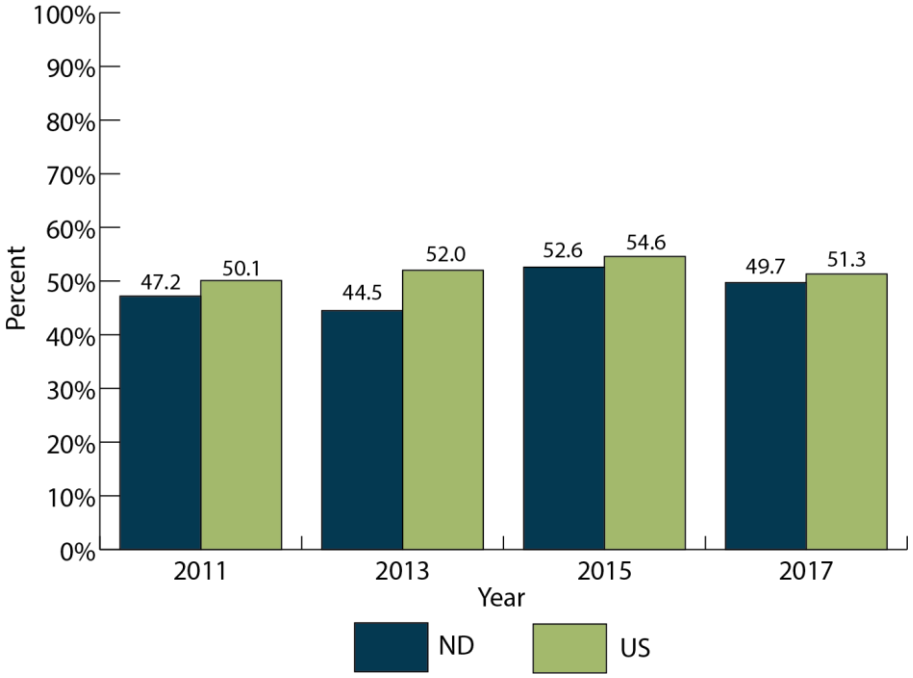
Data Source: YTS

Figure 2.48: Perception that Frequent Smokers Would be Able to Quit, Middle vs. High School Students, ND, by Year



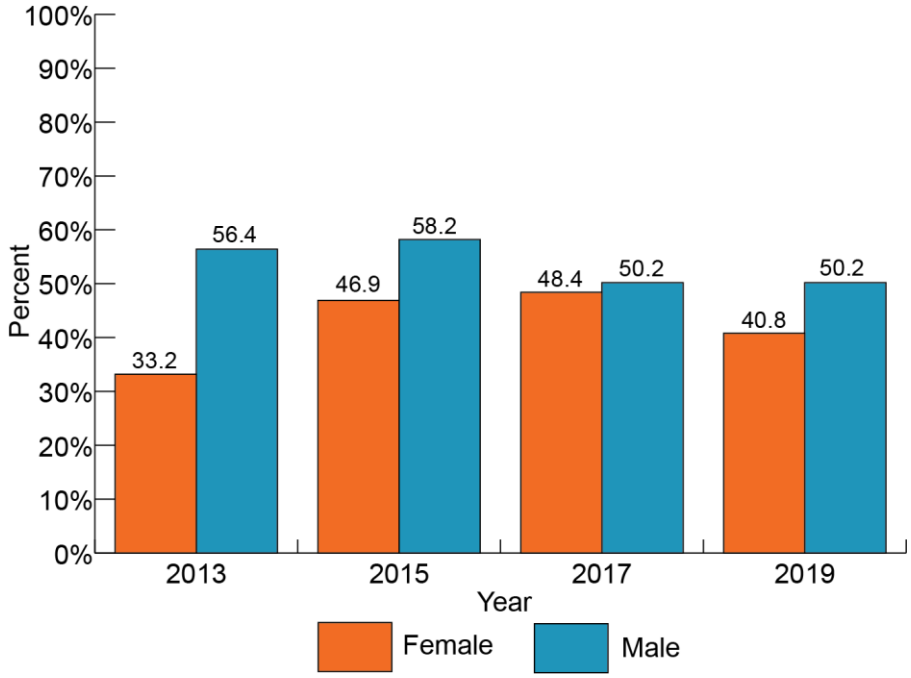
Data Source: YTS

Figure 2.49: Percentage of Current Smokers Who Did Not Try to Quit Smoking Cigarettes in the Past Year, High School Students, ND vs. U.S., by Year



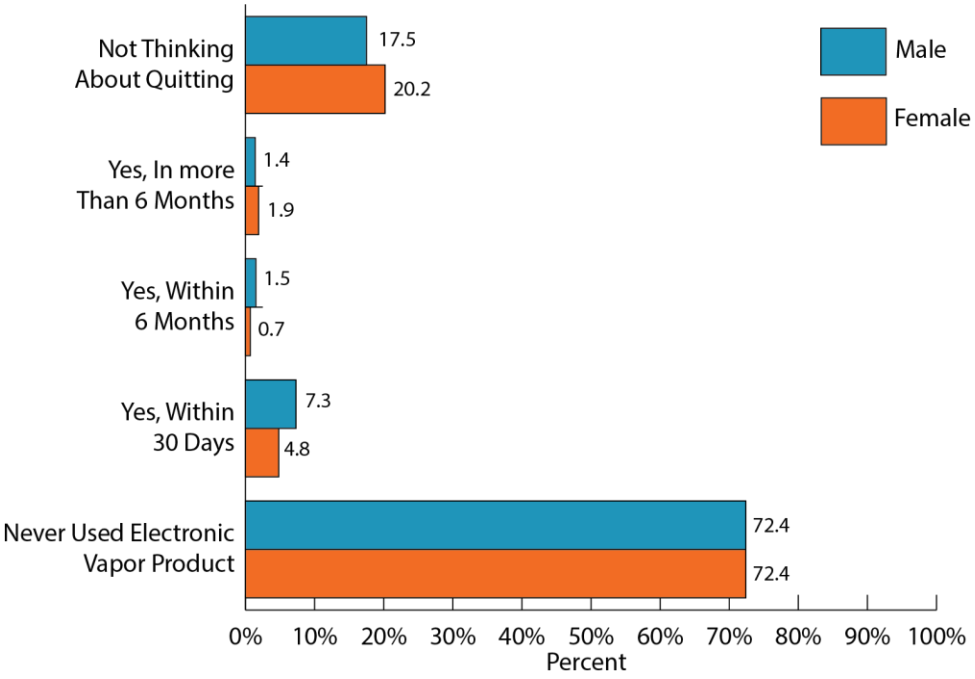
Data Source: YTS

Figure 2.50: Percentage of Current Smokers Who Did Not Try to Quit Smoking Cigarettes in the Past Year, High School Students, ND, by Gender



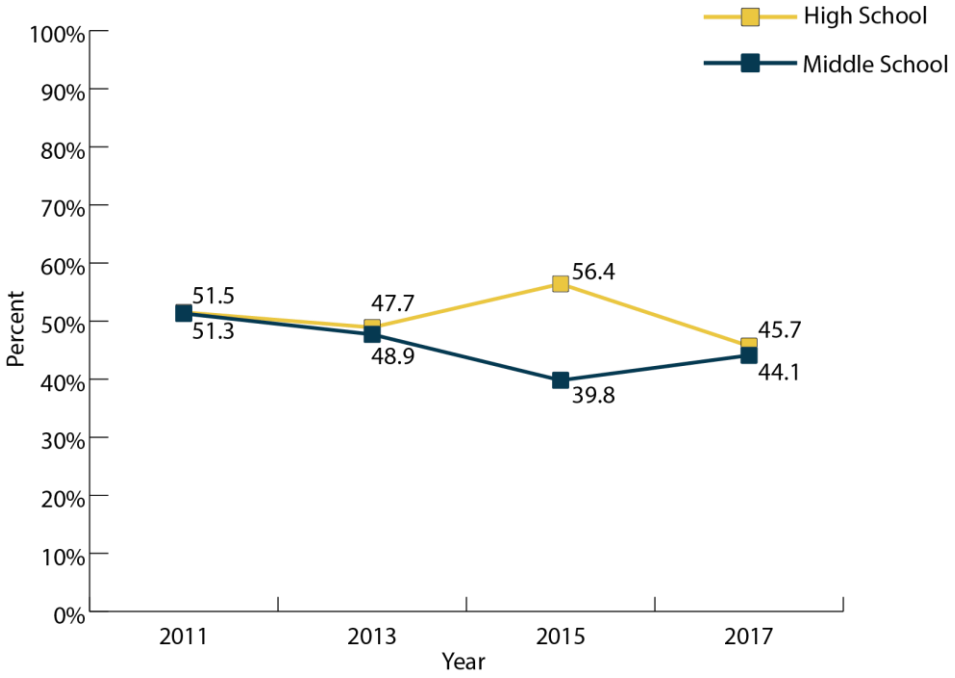
Data Source: YRBS

Figure 2.51: Timeframe for Quitting Electronic Vapor Products, High School Students, ND, by Gender, 2017



Data Source: YTS

Figure 2.52: Percentage of Current Smokers Who Want to Quit, Middle vs. High School Students, ND, by Year



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 (HHS, 2014). Most current U.S. adult cigarette smokers (68.0%) reported in 2015 that they wanted to quit altogether (CDC, 2017).

Data Source(s)

Centers for Disease Control and Prevention (CDC). Quitting Smoking

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

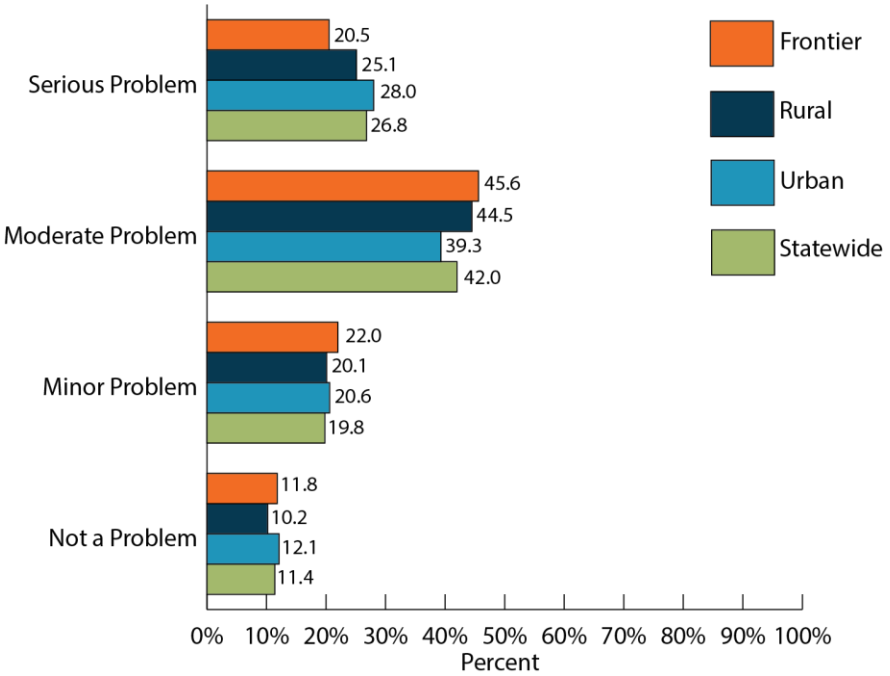
Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System (BRFSS)

North Dakota Department of Health (NDDOH). Tobacco Prevention and Control

Section Summary

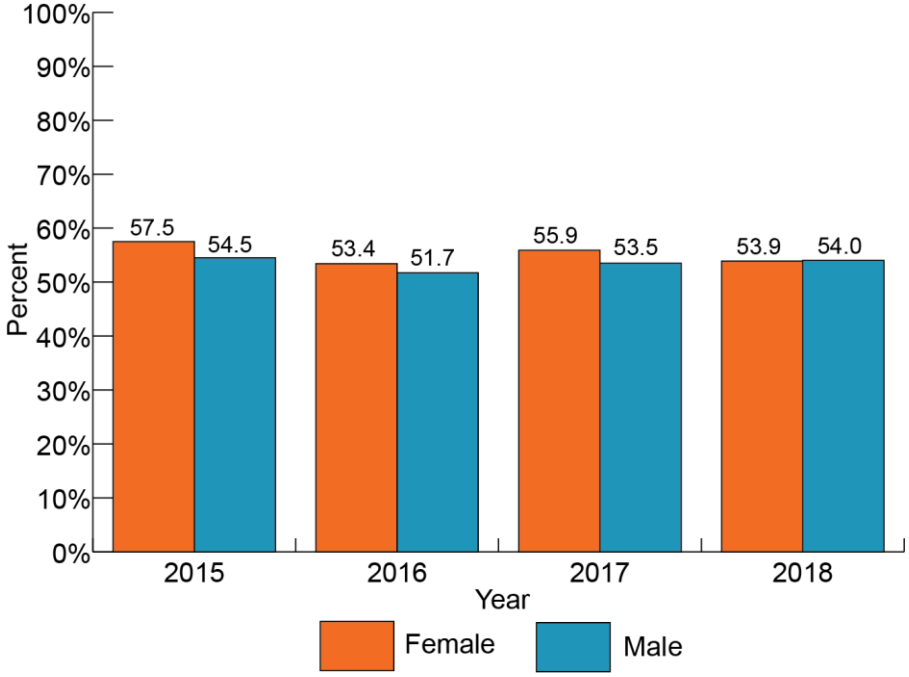
- The majority of North Dakota adults held the perception that peer tobacco use was a moderate or serious problem within their community. A slightly greater percentage of adults from urban areas of the state perceived adult tobacco use as not being a problem, compared to those in rural areas (ND CRS, 2017; see Figure 2.53).
- Among various age groups, current smokers aged 25-34 reported the highest percentage of individuals who attempted to quit smoking in the past year (64%; BRFSS, 2018; see Figure 2.55).
- North Dakota Department of Health, Tobacco Prevention and Control (2018) reported no consistent trend in the number of enrollees in the tobacco cessation program, NDQuits, from 2014 to 2018 (NDDOH Tobacco Prev., 2018; see Figure 2.56).
- Between the years 2015 and 2018, NDQuits reported program reach metrics (the percentage of potential smokers reached in North Dakota) that fell below the CDC benchmark. However, this benchmark is stable and similar to rates reported by other states (NDDOH Tobacco Prev., 2018; see Figure 2.58).

Figure 2.53: Perception of Adult Tobacco Use as a Problem, ND, 2017, by Location*



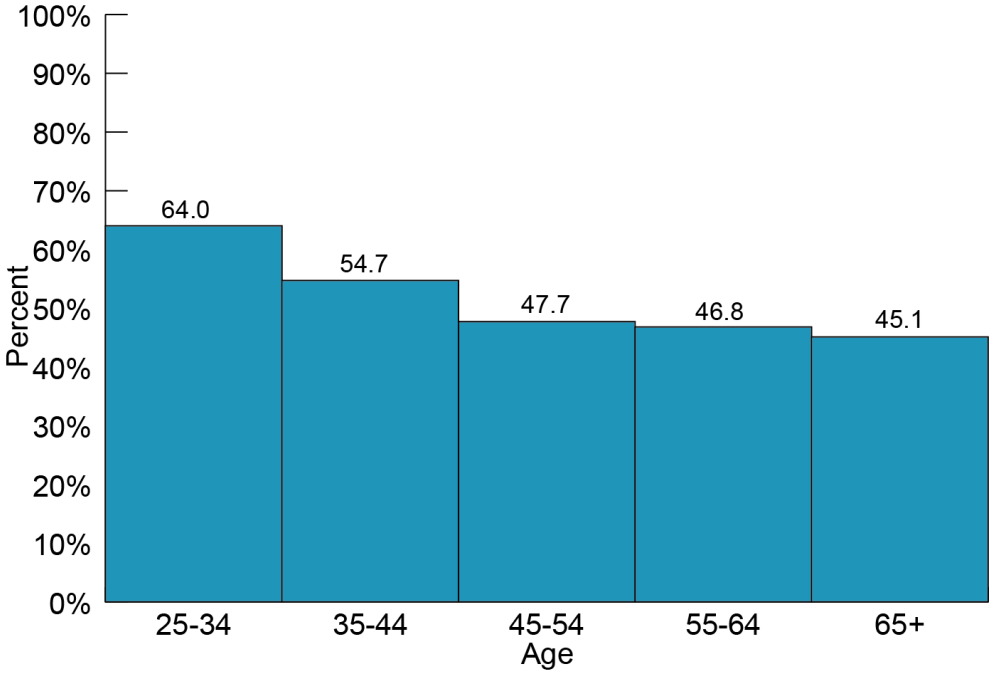
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 2.54: Percentage of Current Smokers Who Have Tried to Quit, Adults (18+), ND, by Gender, by Year



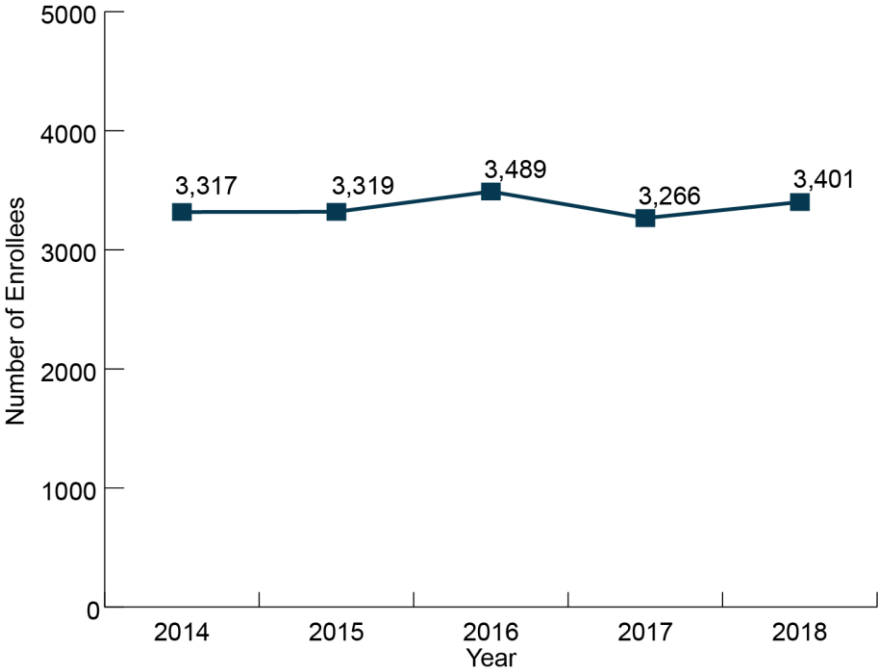
Data Source: BRFSS

Figure 2.55: Percentage of Currently Smoking Adults Who Attempted to Quit, ND, by Age, 2018



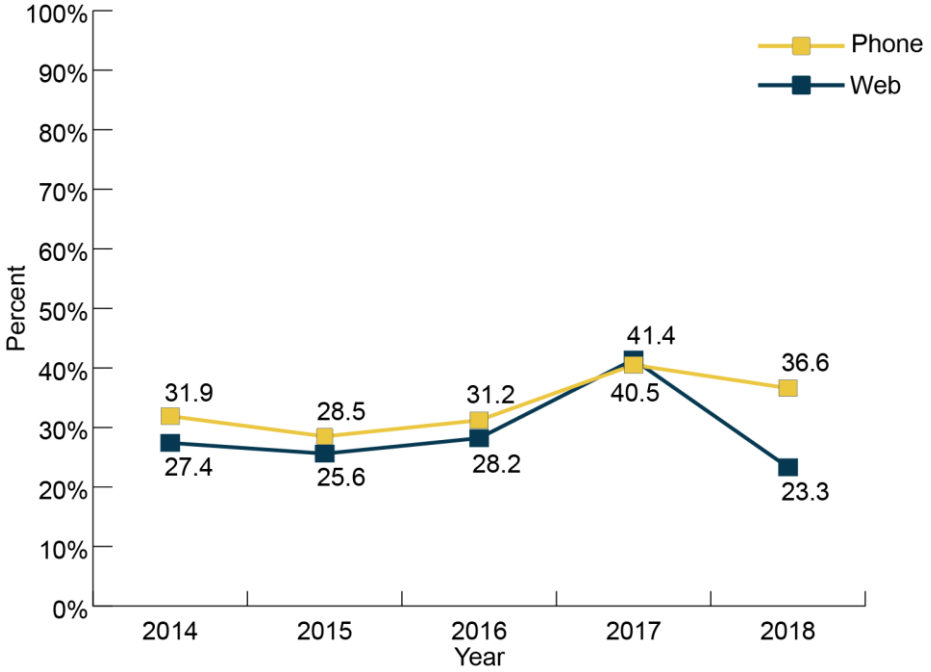
Data Source: BRFSS

Figure 2.56: NDQuits Total Enrollees, ND



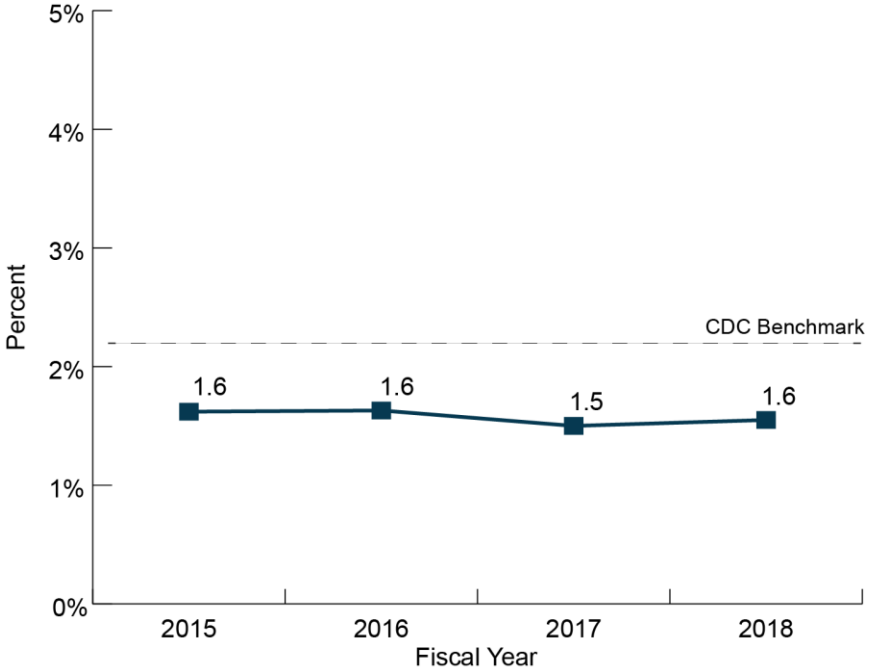
Data Source: North Dakota Department of Health, Tobacco Prevention and Control

Figure 2.57: Percentage Who Successfully Quit Using Tobacco, ND, Web vs. Phone Program



Data Source: North Dakota Department of Health, Tobacco Prevention and Control
Data Note: Quit rate criteria: report no use of cigarettes after seven months after program or no reported use of other forms of tobacco in the past 30 days.
Data Note: 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.

Figure 2.58: Percent of NDQuits Reach, ND



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

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).

Data Source(s)

Centers for Disease Control and Prevention (CDC): A Practical Guide to Working with Health-Care Systems on Tobacco-Use Treatment

American Family Physician (Am. Fam. Physician): Promoting Smoking Cessation

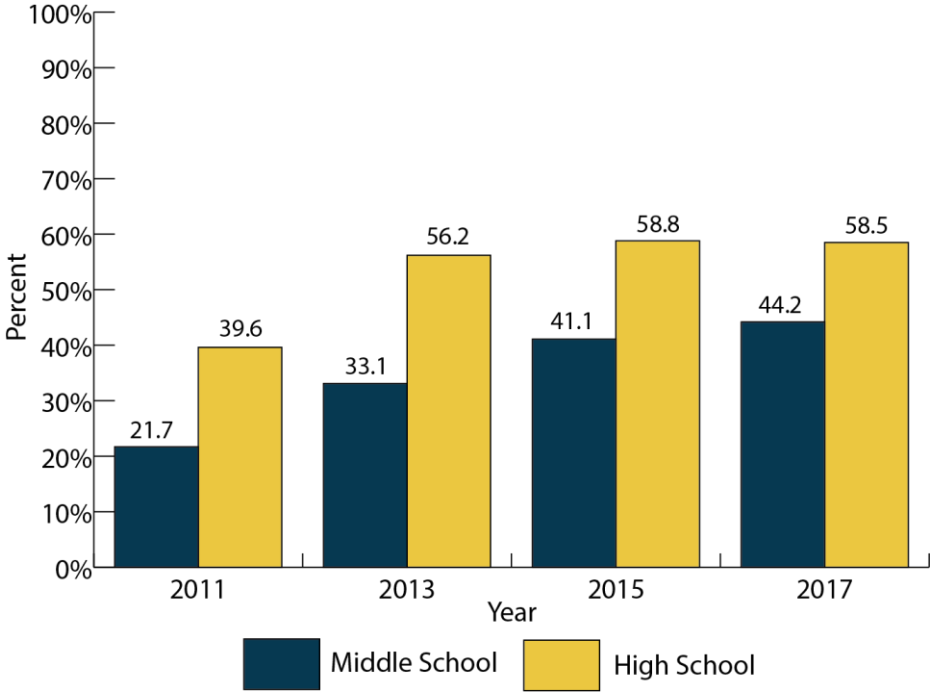
North Dakota Youth Tobacco Survey (YTS)

North Dakota Adult Tobacco Survey (ATS)

Section Summary

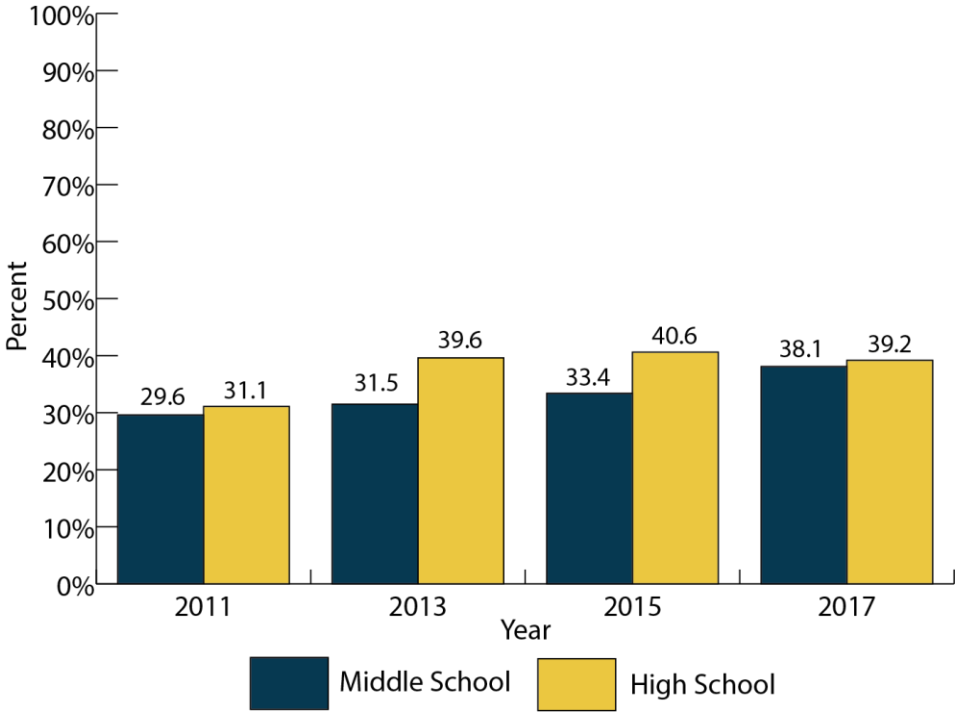
- From 2011 to 2017, the percentage of North Dakota middle school students who reported that a health care provider inquired about personal tobacco use in the past year doubled (103.7% increase; 21.7% to 44.2%). Among high school students, that number increased by 47.7% (39.6% to 58.5%) (YTS, 2017; see Figure 2.59).
- The percentage of North Dakota middle and high school students who reported that a doctor, dentist, or nurse had advised them not to use tobacco increased from 2011 to 2017. Roughly, 2 out of every 5 healthcare providers in North Dakota are advising their school-aged patients not to use tobacco (YTS, 2017; see Figure 2.60).
- From 2012 to 2017, an increasing percentage (11.8% increase; 69.1% to 77.3%) of North Dakota adults reported that a doctor, dentist, or other health profession inquired about their use of cigarettes or tobacco products (ATS, 2017; see Figure 2.61).

Figure 2.59: Percentage of Students who Reported a Healthcare Provider Asked About Tobacco Use, Middle vs. High School Students, ND, by Year



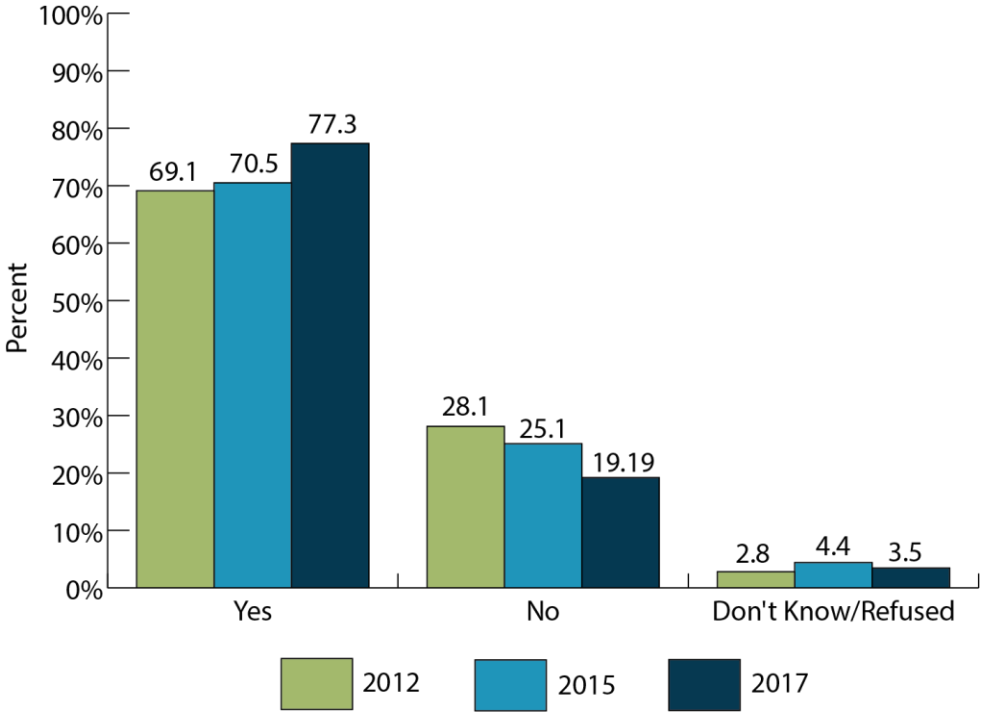
Data Source: YTS

Figure 2.60: Percentage of Students who Reported a Healthcare Provider Advised Not to Use Tobacco in the Past Year, Middle vs. High School Students, ND, by Year



Data Source: YTS

Figure 2.61: 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, 2017). Strictly enforcing laws that prohibit tobacco sales to minors could be a focus of intervention.

Data Source(s)

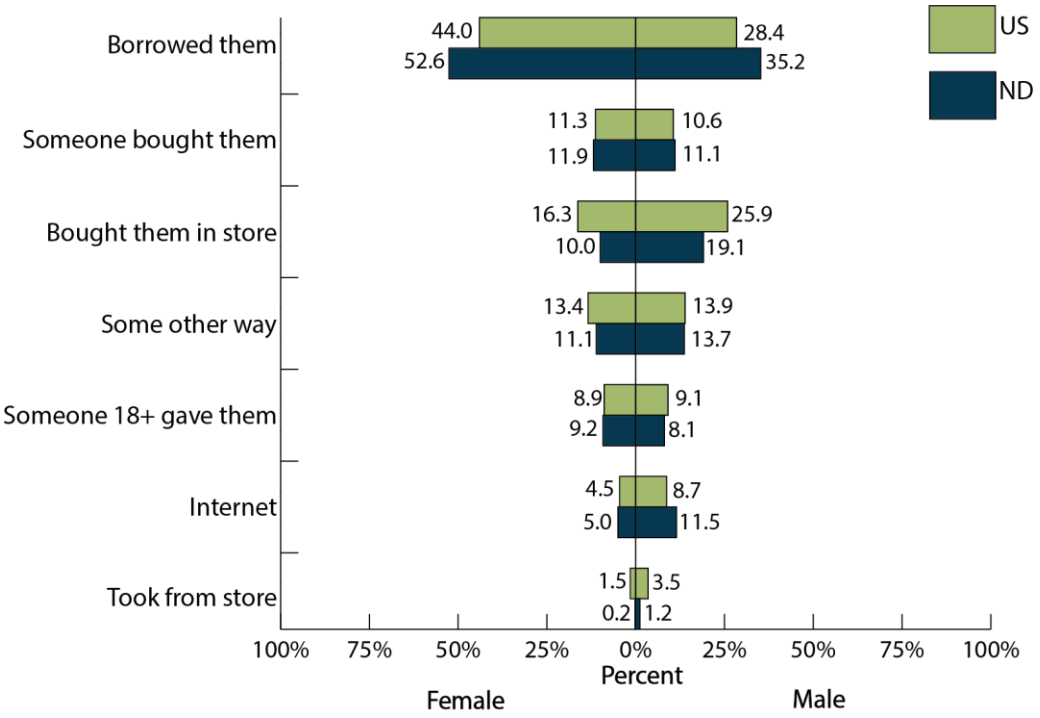
National Institute of Drug Abuse (NIH): Monitoring the Future (MTF): National Survey Results on Drug Use

Centers for Disease Control and Prevention (CDC): Youth Risk Behavior Surveillance System (YRBS)

Section Summary

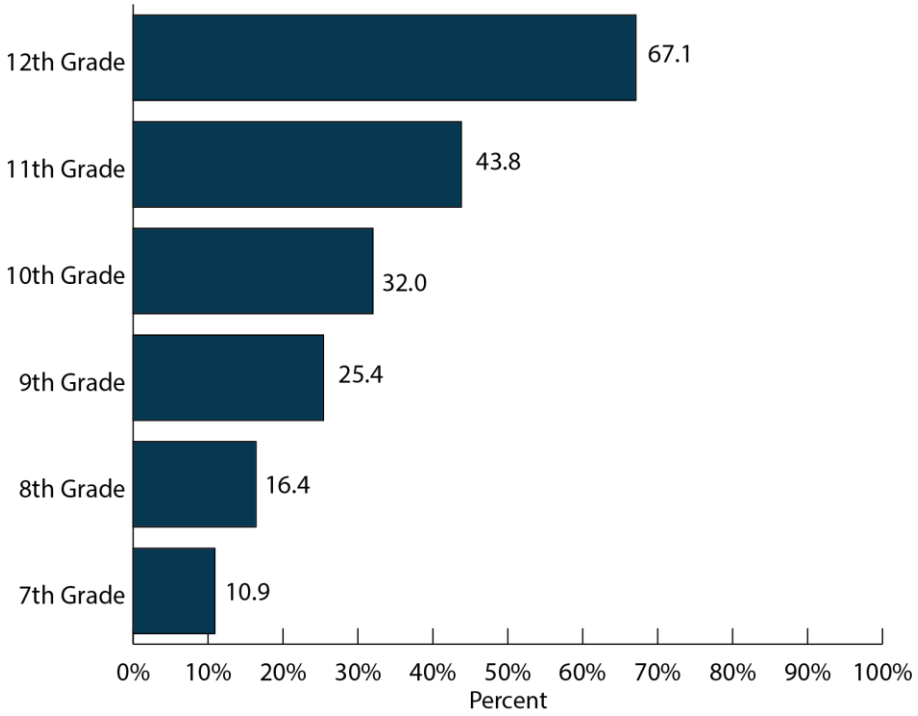
- In 2017, the source from where most high school students in North Dakota and nationally, obtained their electronic vapor products was from someone who borrowed or, “bummed” it to them (YTS, 2017; see Figure 2.62).
- A larger percentage of U.S. high school students, under age 18, reported buying electronic vapor products in a store or gas station compared to those in North Dakota. North Dakota students were more likely to obtain electronic vapor products by borrowing or, “bumming” electronic vapor products than students nationally (YTS, 2017; see Figure 2.62).
- In 2017, the percentage of North Dakota students who thought it was very easy to obtain tobacco products increased with grade level (YTS, 2017; see Figure 2.63).

Figure 2.62: Percentage of Students’ Usual Source for Electronic Vapor Products, High School Students, ND vs. U.S., by Gender, 2017



Data Source: YTS

Figure 2.63: Percentage of Students who Thought it was Very Easy to Obtain Tobacco Products, ND, by Grade Level, 2017



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).

Data Source(s)

Centers for Disease Control and Prevention (CDC): Economic Trends in Tobacco

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

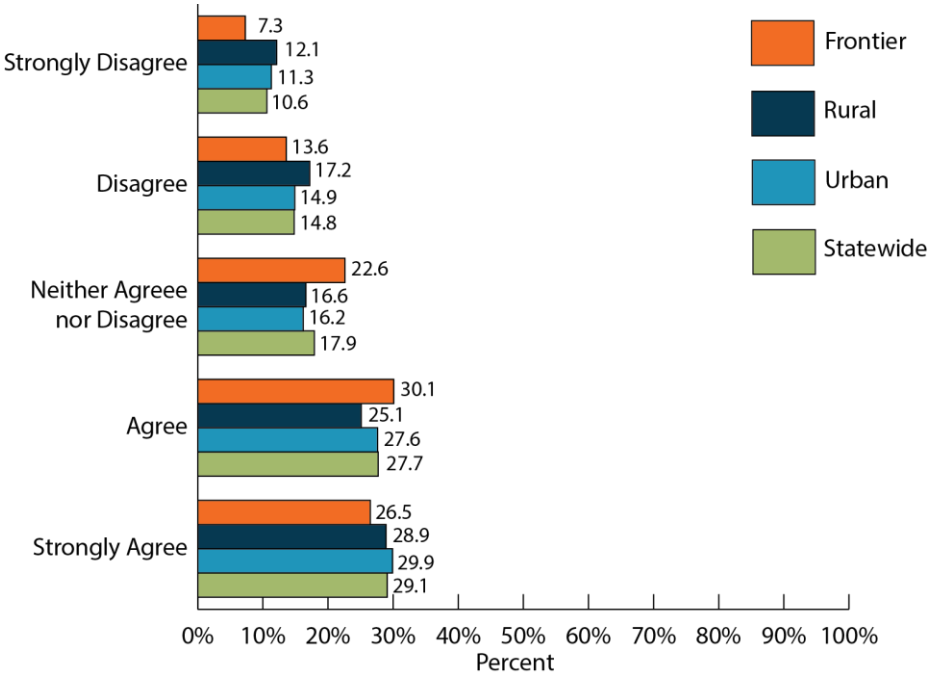
State of North Dakota Office of State Tax Commissioner, Cigarette and Tobacco Tax Collections Federation of Tax Administrators (FTA)

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

Section Summary

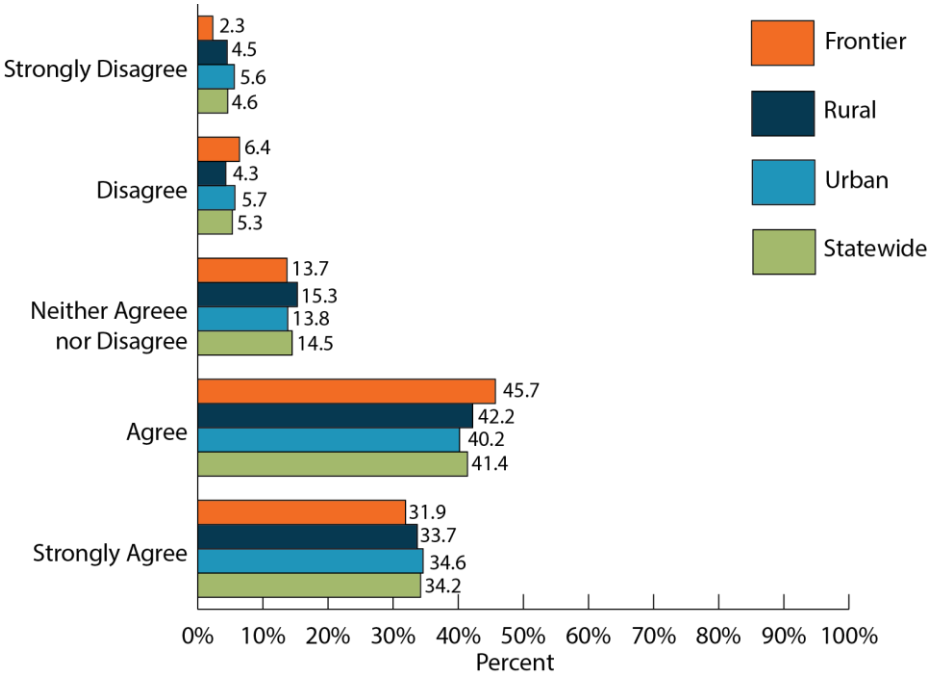
- Over 50% of adults in North Dakota were in favor of tobacco tax increases in 2017 regardless of urban/rural designation (ND CRS, 2017; see Figure 2.64).
- In 2017, over 75% of adults in North Dakota agreed (agree or strongly agree) that e-cigarettes should be taxed the same as other tobacco products (ND CRS, 2017; see Figure 2.65).
- The number of cigarettes sold in North Dakota decreased 14.5% (1.1 billion to 9.4 million) from 2015 to 2018 (North Dakota Office of State Tax Commissioner, 2018; see Figure 2.66).
- 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 2.68).
- In 2020, North Dakota had the lowest excise tax rates on cigarettes ($0.44 per pack) when compared to surrounding states and was one-third that of the national average (ND $0.44, US $1.70; FTA, 2020; see Table 2.4).

Figure 2.64: Perceptions on Tobacco Tax Increases, ND, by Location*, 2017



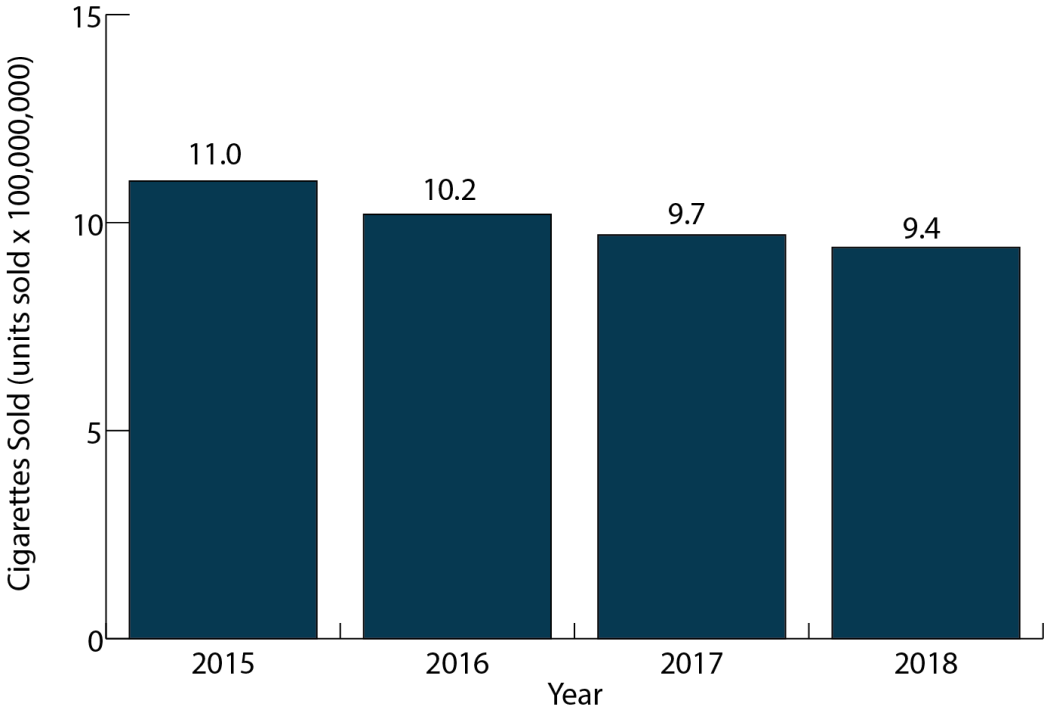
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 2.65: Perception that E-Cigarettes Should be Taxed the Same as Other Tobacco Products, ND, by Location*, 2017



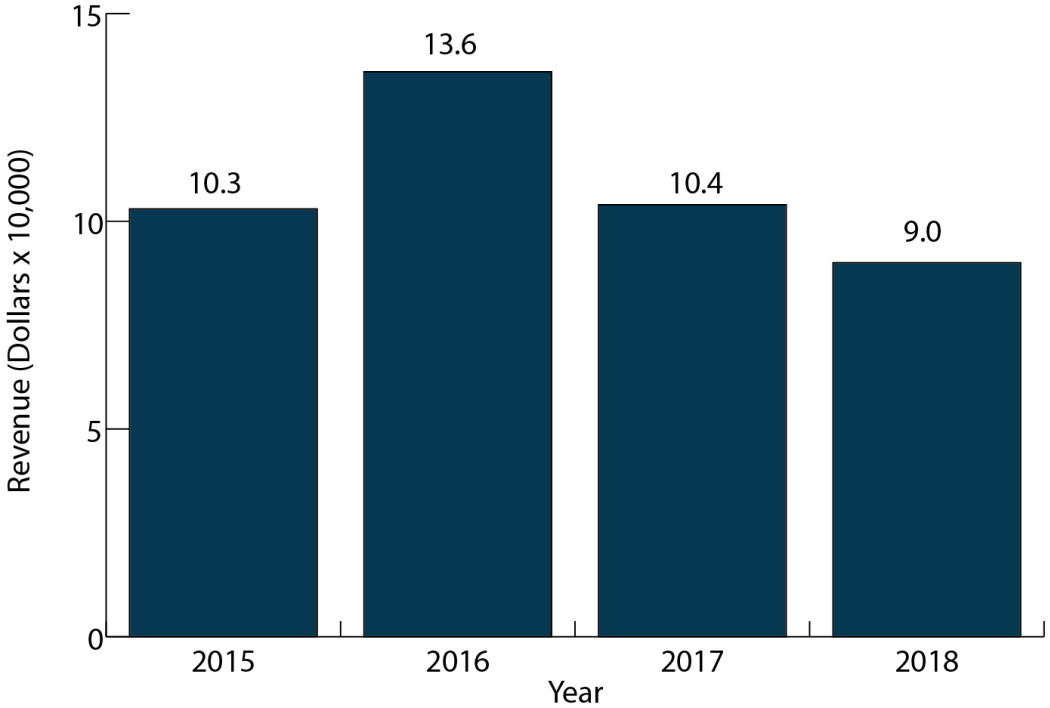
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 2.66: Number of Cigarettes Sold, ND, by Year



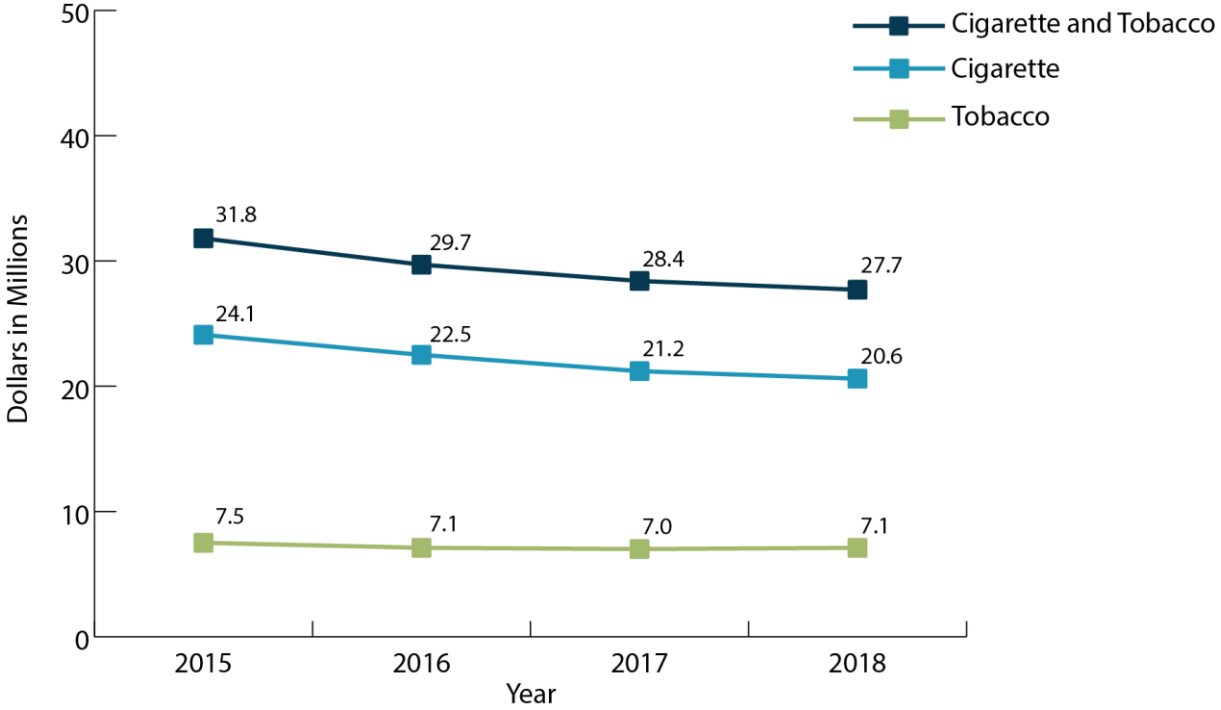
Data Source: North Dakota Office of State Tax Commissioner

Figure 2.67: Tribal Tobacco Tax Revenue, ND, by Year



Data Source: North Dakota Office of State Tax Commissioner

Figure 2.68: Cigarette and Other Tobacco Product Revenue, ND, by Year



Data Source: North Dakota Office of State Tax Commissioner

Table 2.4: State Excise Tax Rates on Cigarettes, ND, 2020

State	Tax Rate (cents per pack)
North Dakota	44
South Dakota	153
Montana	170
Minnesota	304
U.S. Median	170

Data Source: FTA

Table 2.5: States Average Retail Price per Pack (with all taxes), ND, 2018

State	States Average Retail Price Per Pack
North Dakota	$5.24
South Dakota	$6.53
Montana	$6.69
Minnesota	$8.93
U.S. Median	$6.61

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

Substance Abuse and Mental Health in North Dakota

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 22.2 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, 2017).

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).

Data Source(s)

Youth

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

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

Adults

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

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

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

Section Summary

Youth

- Nearly two-thirds (64.3%) of the adults in North Dakota held the perception that youth marijuana use was a moderate or serious problem in their community (ND CRS, 2017; see Figure 3.1).
- 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 decreased rate was observed from 2013 to 2017 (YRBS, 2019; see Figure 3.2).

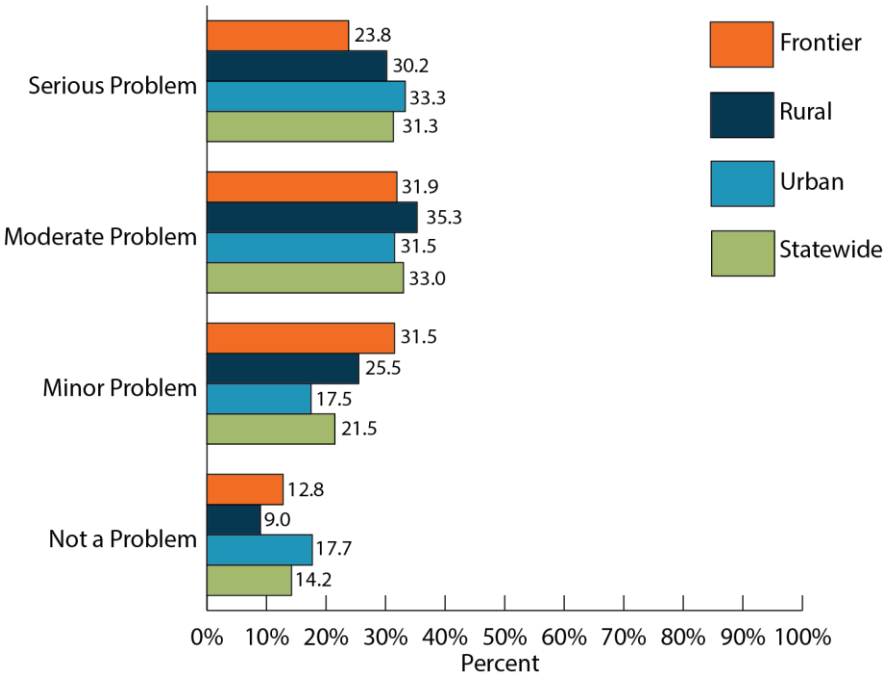
- The percentage of male North Dakota high school students who used marijuana for the first time before age 13 remained higher than their female peers between the years 2013 and 2019 (YRBS, 2019; see Figure 3.3).
- The percentage of North Dakota high school students who reported current marijuana use (at least once in the past month) was lower than U.S. rates between 2013 and 2017. North Dakota rates remained relatively stable until 2019 when they decreased. National rates of current marijuana use have decreased from 2013 to 2017 (YRBS, 2019; see Figure 3.4).
- Current marijuana use among North Dakota high school students was higher among males than females every year except 2017, when female use was higher than male use (YRBS, 2019; see Figure 3.6).

Adults

- Nearly half (48.2%) of the adults in North Dakota perceived adult marijuana use as a moderate or serious problem in their community (ND CRS, 2017; see Figure 3.7).
- From 2015 to 2018, national rates of marijuana use in the past year were greater than North Dakota rates. In 2018, just over a quarter (27.5%) of North Dakota adults 18 to 25 years old reported marijuana use in the past year. In comparison, over one-third (34.8%) of U.S. adults, among the same age group, reported marijuana in the past year (NSDUH, 2018; see Figure 3.9).
- 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 (age 12-17, 7.2 percentage point decrease; age 18-25, 5.1 percentage point decrease; age 26+, 7.6 percentage point decrease) (NSDUH, 2017; see Figure 3.10).
- The percentage of adults using marijuana at least once in the past month has increased for both U.S. and North Dakota. However, North Dakota adults' monthly marijuana use rates for all age groups fell below the national rates between 2015 and 2018 (NSDUH, 2018; see Figure 3.11).

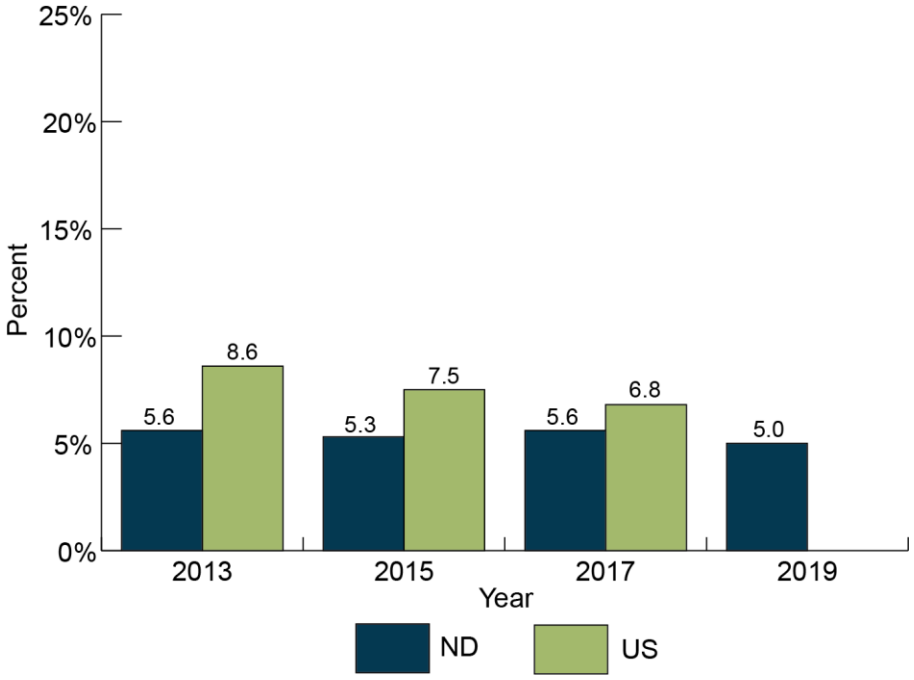
Youth

Figure 3.1: Perception of Youth Marijuana Use in Community as a Problem, ND, by Location*, 2017



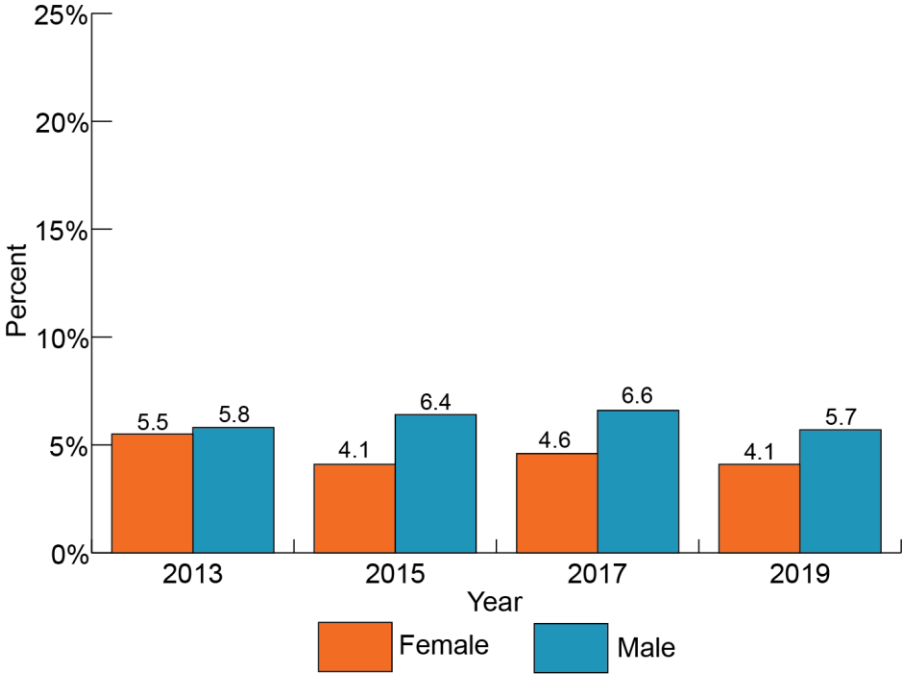
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

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



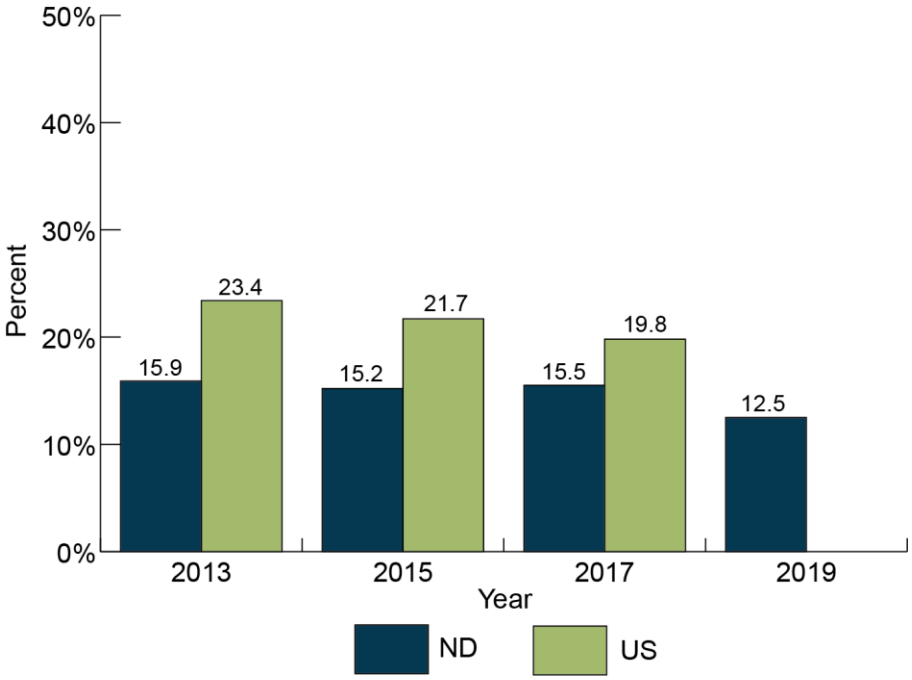
Data Source: YRBS
Data Note: National data not available for 2019.

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



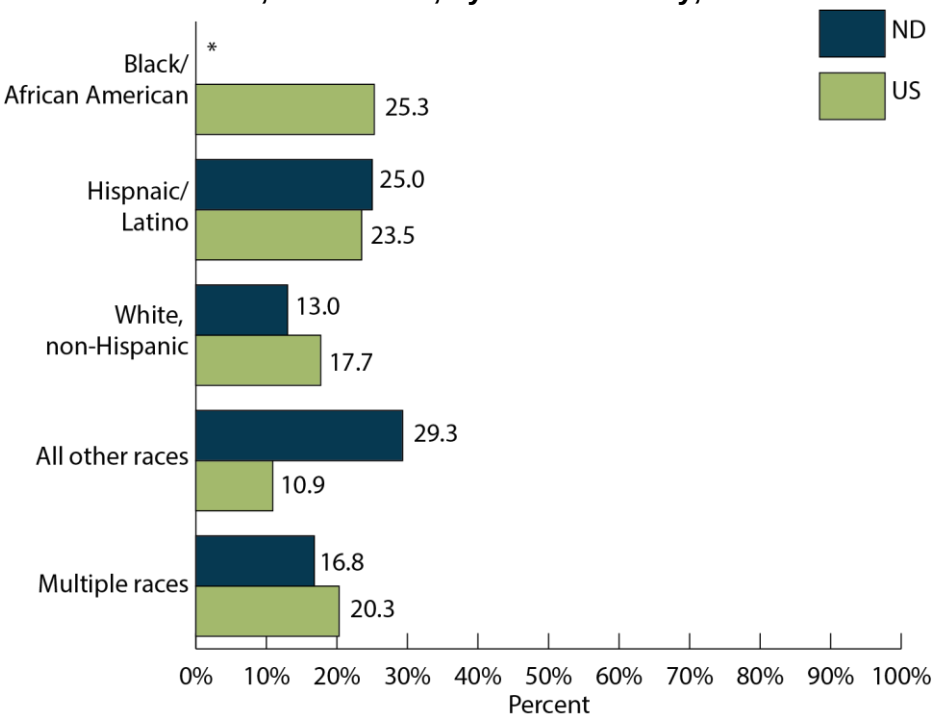
Data Source: YRBS

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



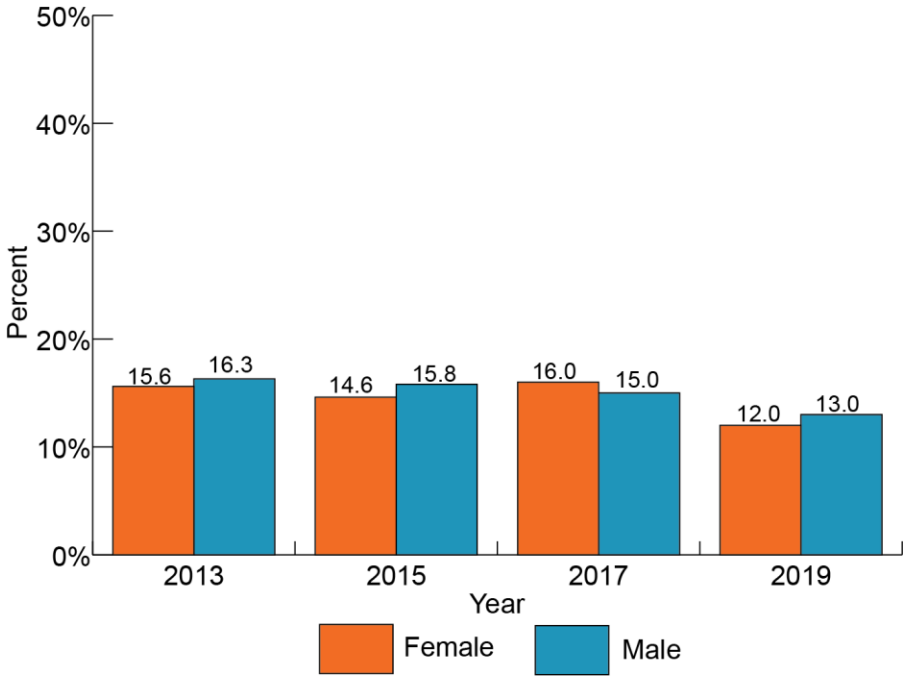
Data Source: YRBS
Data Note: National data not available for 2019.

Figure 3.5: Percentage of Current Marijuana Use (at Least Once in Past Month), High School, ND vs. U.S., by Race/Ethnicity, 2017



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

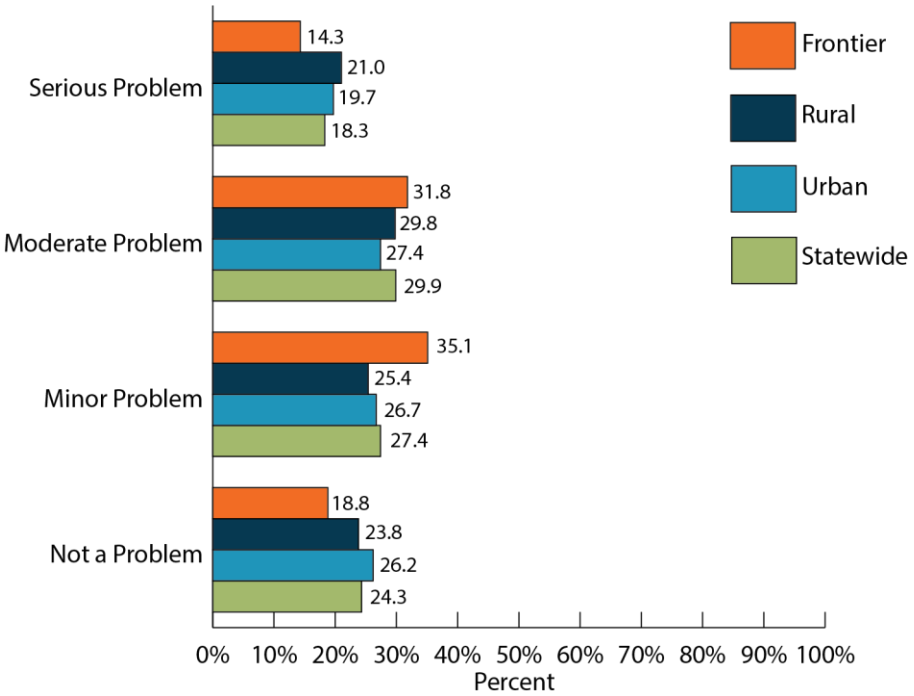
Figure 3.6: Percentage of Current Marijuana Use (at Least Once in Past Month), High School, ND, by Gender, by Year



Data Source: YRBS

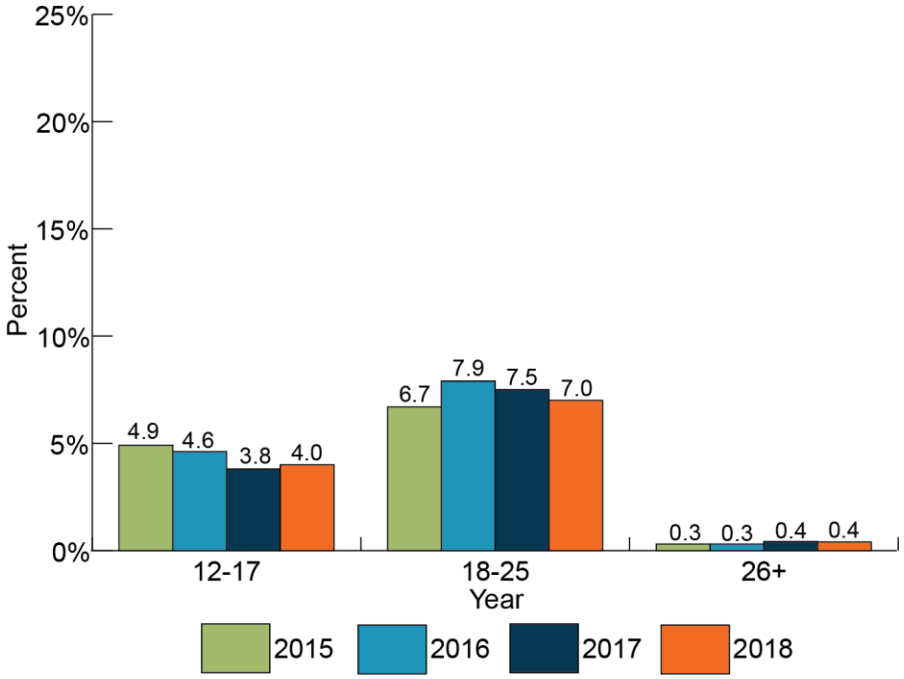
Adult

Figure 3.7: Perception of Adult Marijuana Use as a Problem in Community, ND, by Location*, 2017



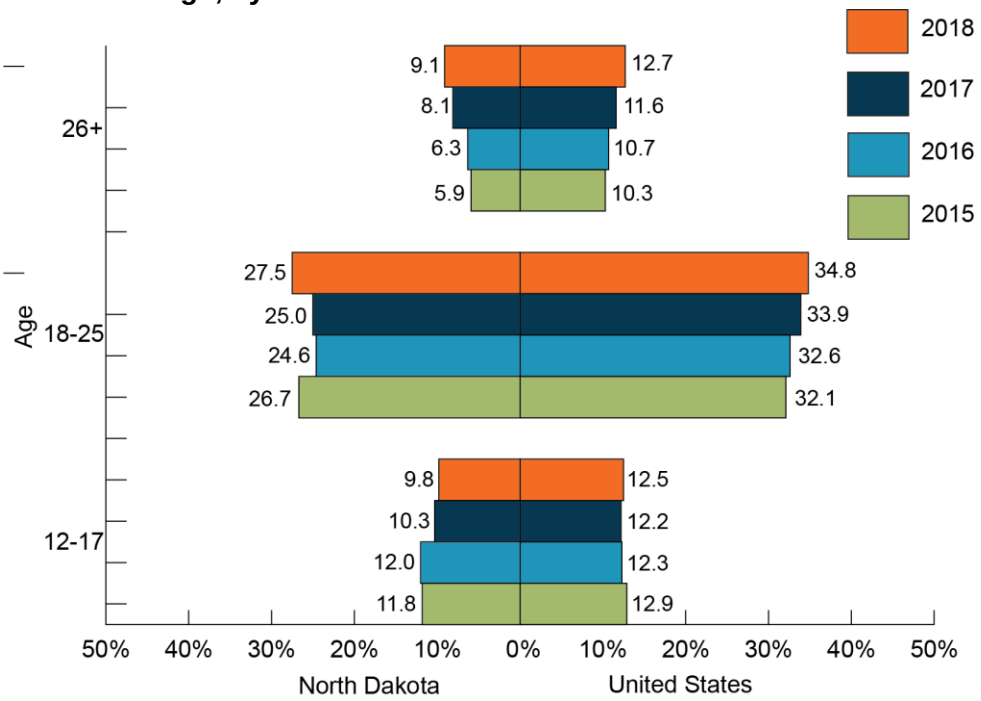
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in Appendix (p.185).

Figure 3.8: Percentage of Initial Marijuana Use Occurring Within the Past Year, ND, by Age, by Year



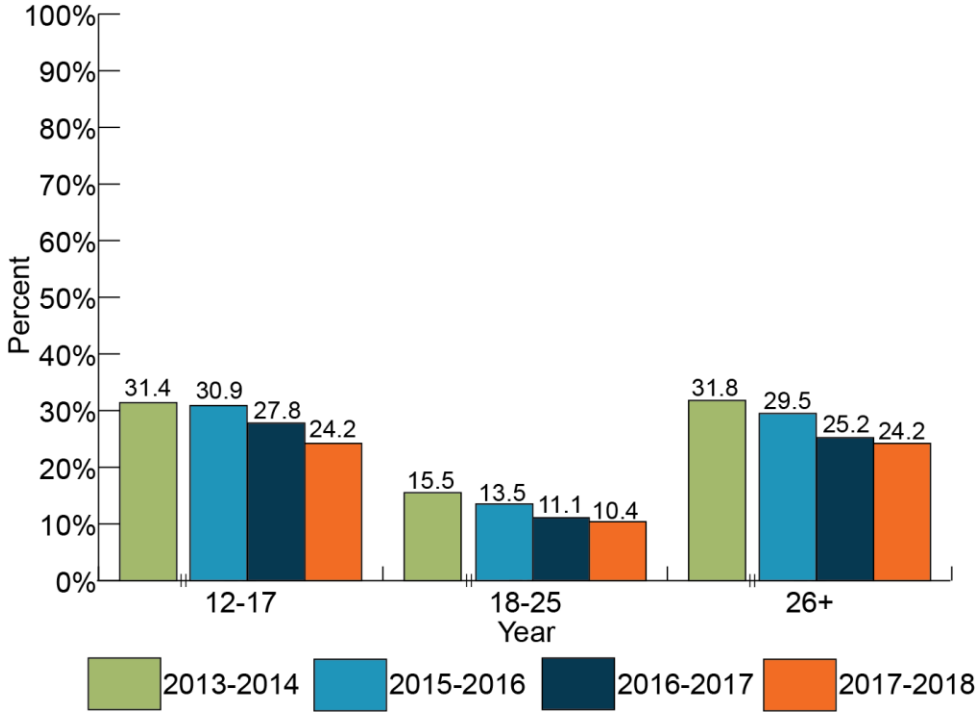
Data Source: NSDUH

Figure 3.9: Percentage of Marijuana Use at Least Once in the Past Year, ND vs. U.S., by Age, by Year



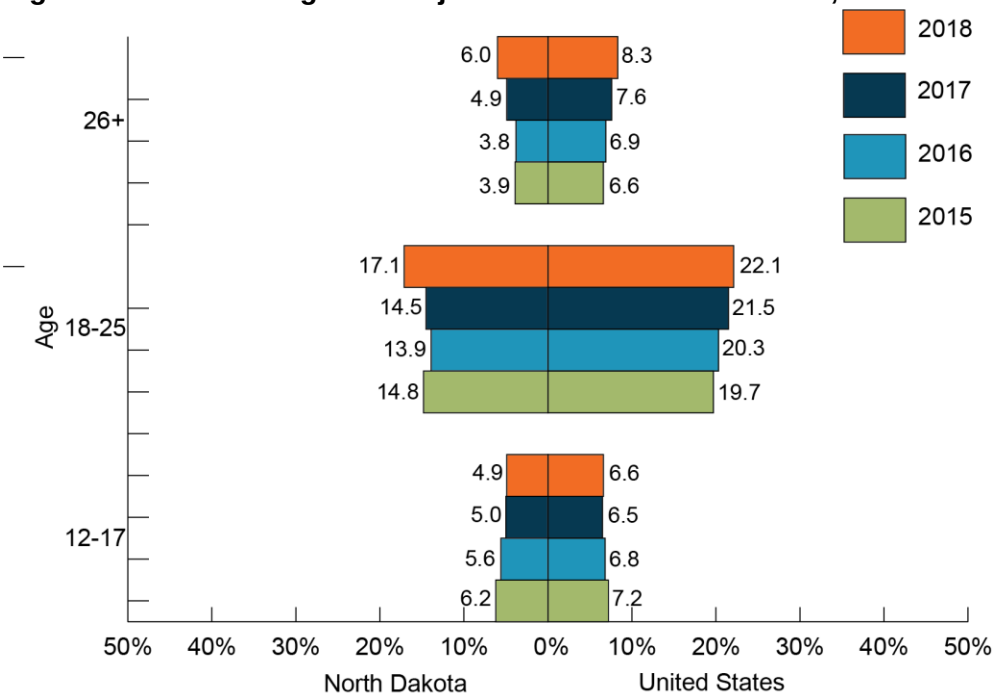
Data Source: NSDUH

Figure 3.10: 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.

Figure 3.11: 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 2018, an estimated 53.2 million Americans, aged 12 and older, reported illicit drug use in the past year (NSDUH, 2018). Roughly, 2 in 5 adults (38.7% or 13.2 million) aged 18 to 25 reported illicit drug use in the past year; the highest rate compared to other age groups (NSDUH, 2018).

Data Source(s)

Youth

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

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

Adults

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

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

Section Summary

Youth

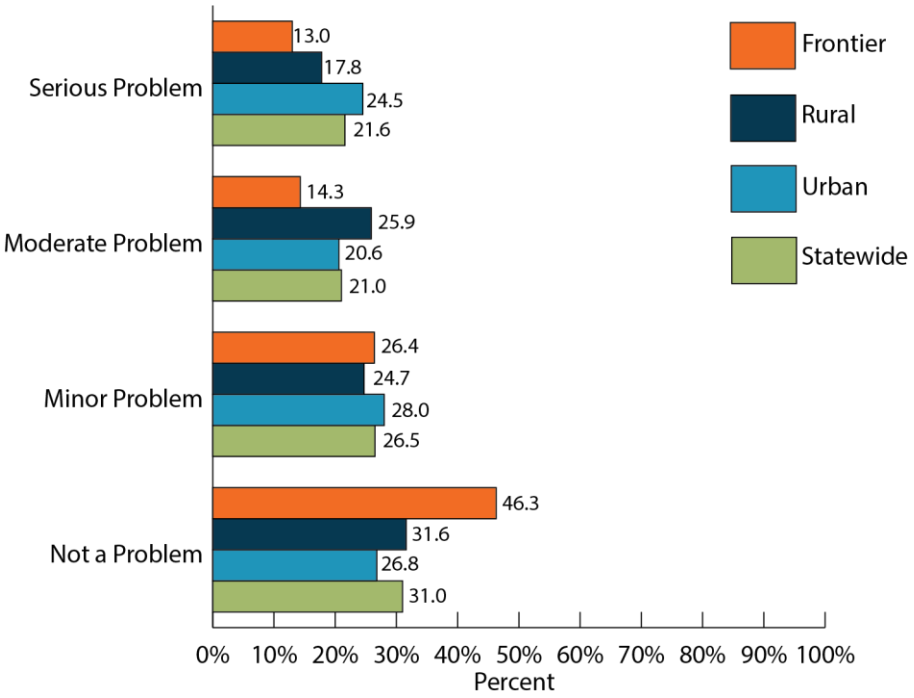
- The percentage of North Dakota high school students who reported illicit drug use (e.g. methamphetamine, inhalants, or heroin) ever in their lifetime was comparable to youth nationally in 2017 (YRBS, 2017; see Figure 3.13).
- In 2017, North Dakota high school male students reported higher rates of methamphetamine, inhalants, and heroin use than their female counterparts did (YRBS, 2017; see Table 3.1).

Adults

- In 2017, the majority of North Dakota adults (55.3%) perceived adult cocaine use within their community as either not a problem or a minor problem regardless of urban or rural location (ND CRS, 2017; see Figure 3.14).
- Between the years 2015 and 2018, the percentage of United States adults using cocaine in the past year remained slightly higher than the percentage of North Dakota adults aged 18-25, as well as adults 26 and older (NSDUH, 2018; see Figure 3.15).

Youth

Figure 3.12: Perception of Cocaine Use in Community a Problem among Youth by Location*, ND, 2017



Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

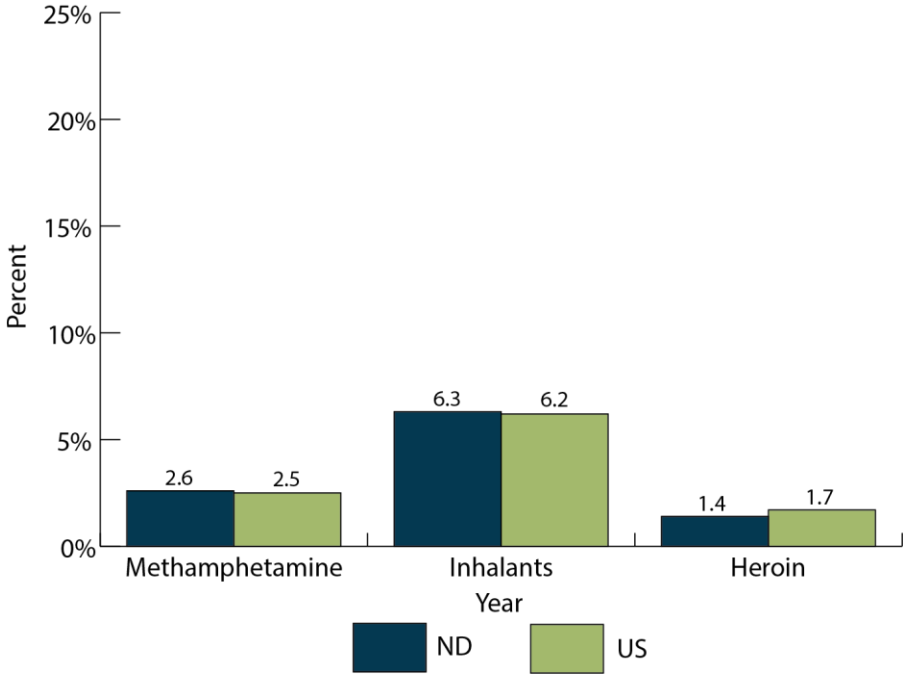
Table 3.1: Percentage of High School Students Who Ever Used Methamphetamine, Inhalants, or Heroin by Gender, Race/Ethnicity, Grade, ND vs. U.S., 2017

Percentage by Gender						
	Methamphetamine		Inhalants		Heroin	
	ND	U.S.	ND	U.S.	ND	U.S.
Female	1.7%	1.4%	5.6%	6.4%	0.4%	0.9%
Male	3.3%	3.4%	6.8%	6.0%	2.2%	1.7%
Percentage by Race/Ethnicity						
	Methamphetamine		Inhalants		Heroin	
	ND	U.S.	ND	U.S.	ND	U.S.
American Indian or Alaska Native	--	9.7%	--	4.7%	--	7.8%
Asian	--	1.8%	--	3.2%	--	1.5%
Black or African American	--	2.6%	--	6.9%	--	2.2%
Hispanic/ Latino	4.0%	2.9%	9.2%	7.1%	2.4%	1.8%
Native Hawaiian/Other Pacific Islander	--	4.8%	--	9.3%	--	5.3%
White, non-Hispanic	1.8%	1.9%	5.1%	5.7%	1.0%	1.1%
Multiple Races	5.7%	2.7%	5.8%	5.4%	2.6%	3.1%
Percentage by Grade						
	Methamphetamine		Inhalants		Heroin	
	ND	U.S.	ND	U.S.	ND	U.S.
9th	2.4%	1.9%	4.7%	7.2%	0.3%	1.3%
10th	2.9%	2.3%	7.9%	5.7%	2.5%	1.4%
11th	3.2%	2.4%	7.3%	6.4%	1.4%	1.6%
12th	1.9%	3.2%	5.6%	4.9%	1.1%	2.2%

Data Source: YRBS

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

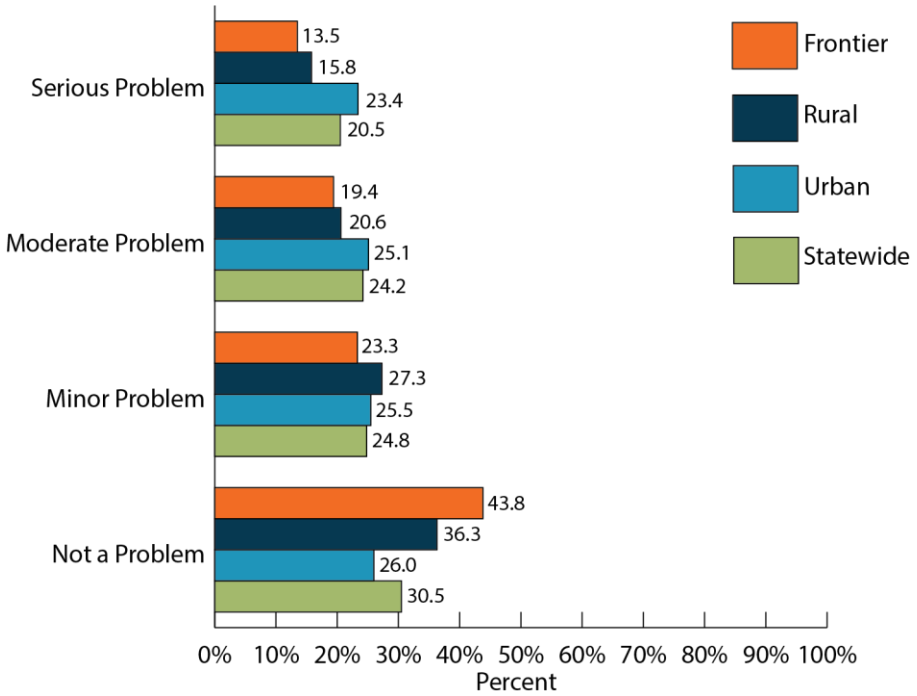
Figure 3.13: Percentage who Ever Used Methamphetamine, Inhalants, or Heroin, High School Students, ND vs. U.S., 2017



Data Source: YRBS

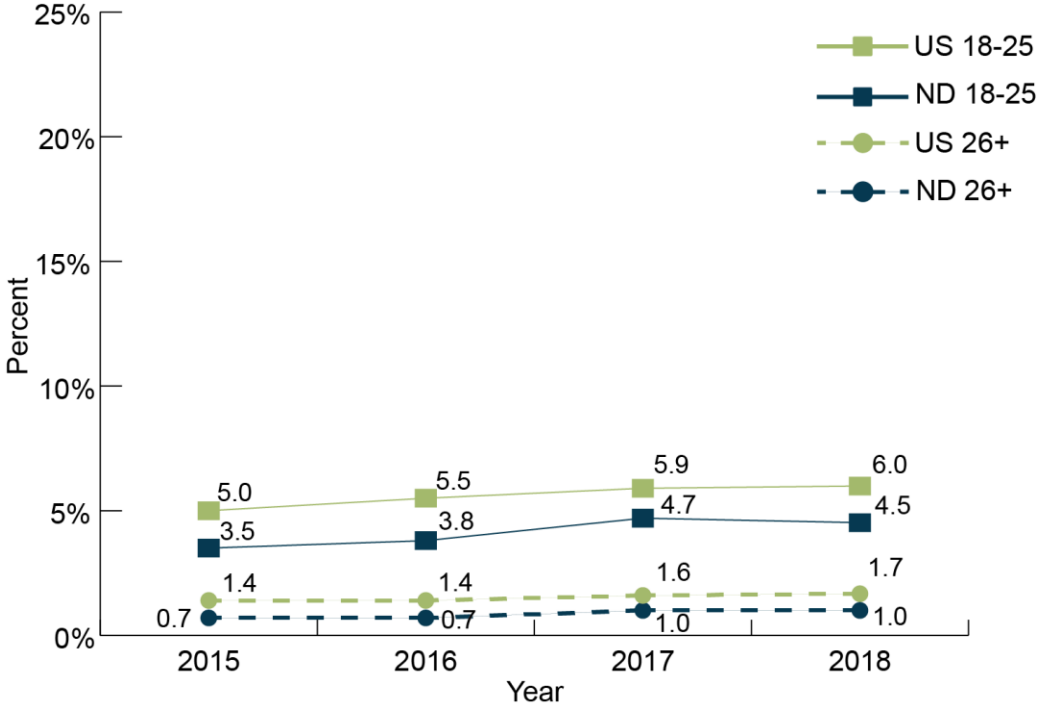
Adults

Figure 3.14: Perception of Cocaine Use in Community as a Problem among Adults, by Location*, ND, 2017



Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 3.15: Percentage of Cocaine Use in the Past Year, by Age, ND vs. U.S., by Year



Data Source: NSDUH

Illicit Drugs in North Dakota: Consequences

Drug-Related Violations

About the Indicator

The North Dakota Attorney General reported in 2018 that the total number of crimes against society increased by 5.1 percent from 2017. Included in the crimes against society category are drug/narcotic violation offenses, which increased by 6.7 percent from 2017. When comparing Group A crime categories, crimes against persons, crimes against property, and crimes against society, crimes against persons reported the largest percent increase from 2017 to 2018 (Crime in North Dakota, 2018).

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.

Data Source(s)

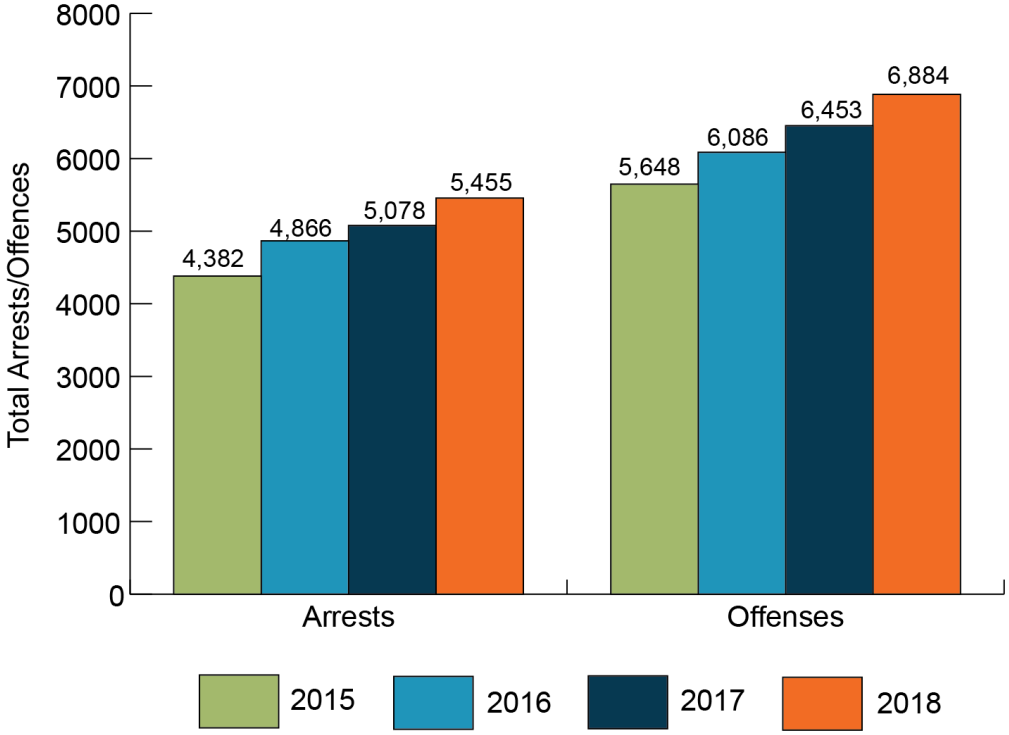
Office of Attorney General Bureau of Criminal Investigation. Crime in North Dakota, 2018

North Dakota Department of Corrections and Rehabilitation (DOCR)

Section Summary

- From 2015 to 2018, North Dakota drug/narcotic arrests and offenses have increased, 24.5% and 21.9% respectively (Crime in North Dakota, 2018; see Figure 3.16)
- From 2015 to 2018, the majority of drug/narcotic violation-related arrests involved males (Crime in North Dakota, 2018; see Table 3.2).
- The majority of drug/narcotic violation-related arrests involved individuals between the ages of 18 and 34. However, between 2015 and 2018, the average age of those arrested has shifted from 18-24 to 25-34 (Crime in North Dakota, 2018; see Table 3.2).
- From 2015 to 2018, marijuana/hashish made up the largest percentage of drugs seized from drug and narcotic violations. Importantly, stimulants, which include amphetamines, were the second most common type of drug seized; a percentage that increased each year (Crime in North Dakota, 2018; see Figure 3.17)
- The percentage of adult inmates convicted of drug possession and incarcerated in North Dakota remained relatively unchanged between years 2016 to 2019 (DOCR, 2019; see Figure 3.18).

Figure 3.16: Number of Drug and Narcotic Arrests and Offenses, Total, ND, by Year



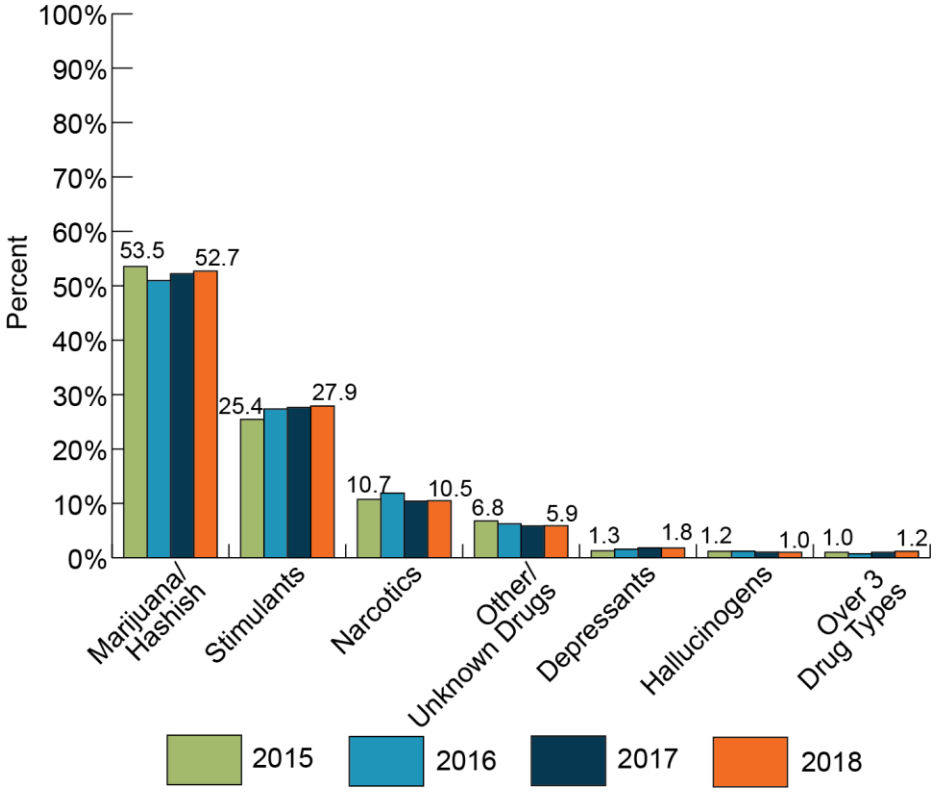
Data Source: Crime in North Dakota

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

Total Arrests in ND	**2015**	**2016**	**2017**	**2018**
Drug/Narcotic Arrests	4,382	4,866	5,078	5,455
% Change (from previous year)	9.6%	11.0%	4.4%	7.4%
Gender	**2015**	**2016**	**2017**	**2018**
Female	27.0%	26.9%	29.9%	30.8%
Male	73.0%	73.1%	70.1%	69.2%
Age Groups	**2015**	**2016**	**2017**	**2018**
10-17	8.5%	8.7%	8.6%	7.9%
18-24	36.8%	33.0%	30.3%	31.5%
25-34	31.0%	32.4%	34.9%	32.7%
35-44	13.9%	15.3%	15.1%	17.0%
45-54	7.1%	7.3%	7.3%	7.8%
55-64	2.4%	3.1%	3.4%	2.9%
65+	0.3%	0.2%	0.3%	0.2%

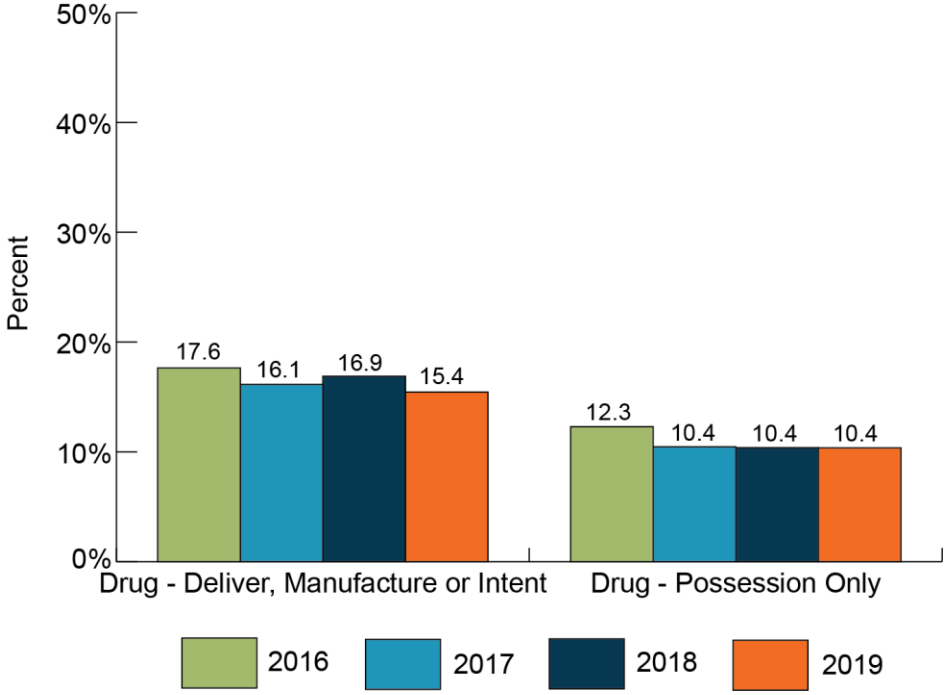
Data Source: Crime in North Dakota

Figure 3.17: Percentage of Drug Types Seized in Drug and Narcotic Violations (for up to Three Drugs), ND, by Year



Data Source: Crime in North Dakota

Figure 3.18: Percentage of Adult Inmate Population Incarcerated for Drug-related Crimes, ND, by Year



Data Source: DOCR

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).

Data Source(s)

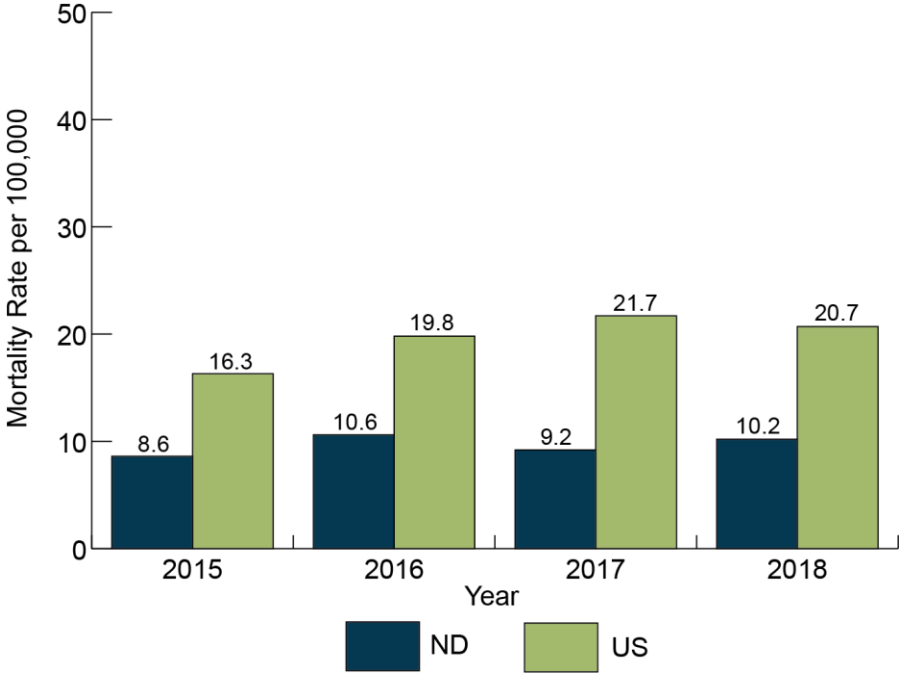
Centers for Disease Control (CDC). National Center for Health Statistics (NCHS), Data Brief: Drug Overdose Deaths in the United States, 1999-2017

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

Section Summary

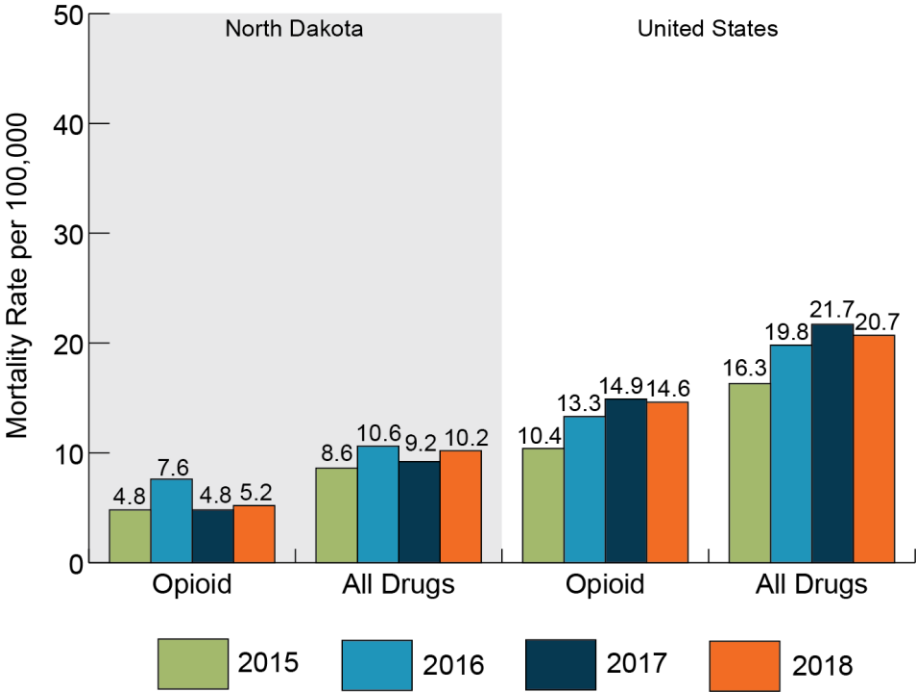
- The rate of overdose deaths per 100,000 persons in North Dakota remained below the rate of overdose deaths in the U.S. from 2015 to 2018 (NCHS, 2018; see Figure 3.19).
- While national opioid and all drug overdose death rates decreased from 2017 to 2018, North Dakota observed increased rates for both categories during that time (NCHS, 2018; see Figure 3.20).

Figure 3.19: 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.

Figure 3.20: 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).

Data Source(s)

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

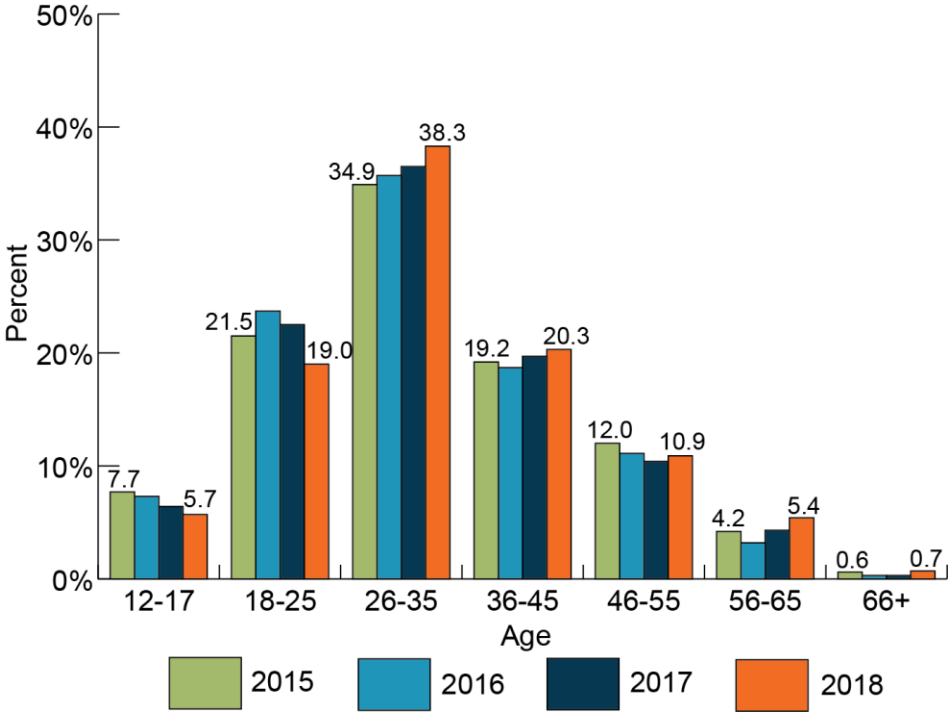
Substance Abuse and Mental Health Services Administration (SAMHSA). Treatment Episode Data Set (TEDS)

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, 2019; see Figure 3.21).

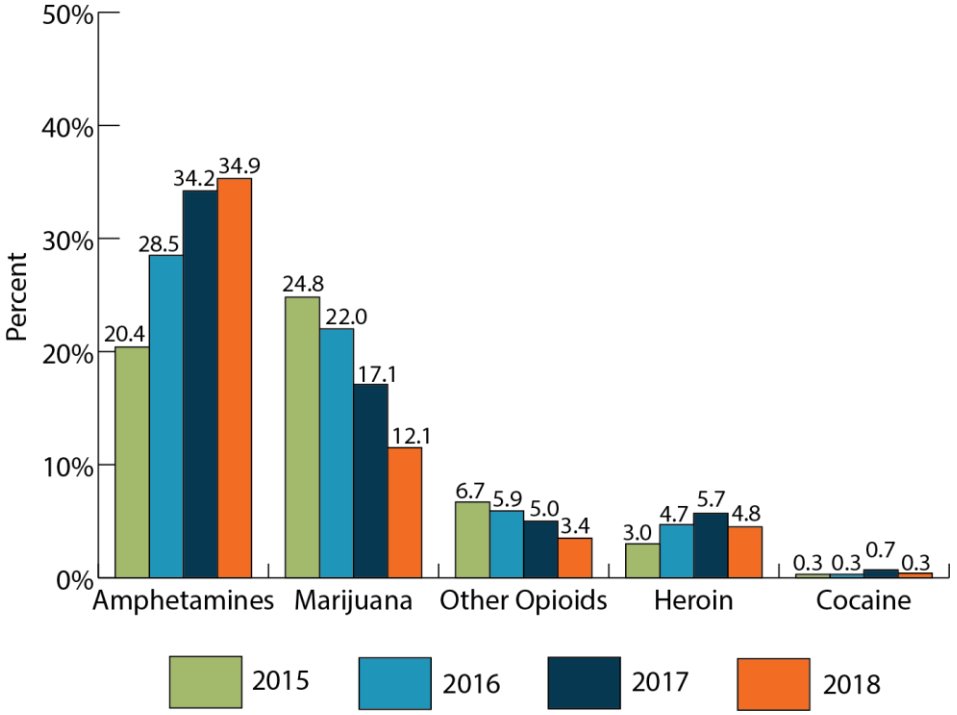
- The percentage of substance abuse treatment admissions among the age group 12 and older in North Dakota for amphetamines increased from 20.4% to 34.9% (a 71.1% increase) between 2015 and 2018 (TEDS, 2019; see Figure 3.22).
- The percentage of substance abuse treatment admissions among the age group 12 and older in North Dakota for marijuana and opioids (not including heroin) decreased between 2015 and 2018 (TEDS, 2019; see Figure 3.22).

Figure 3.21: Percentage of Substance Abuse Treatment Admissions, ND, by Age, by Year



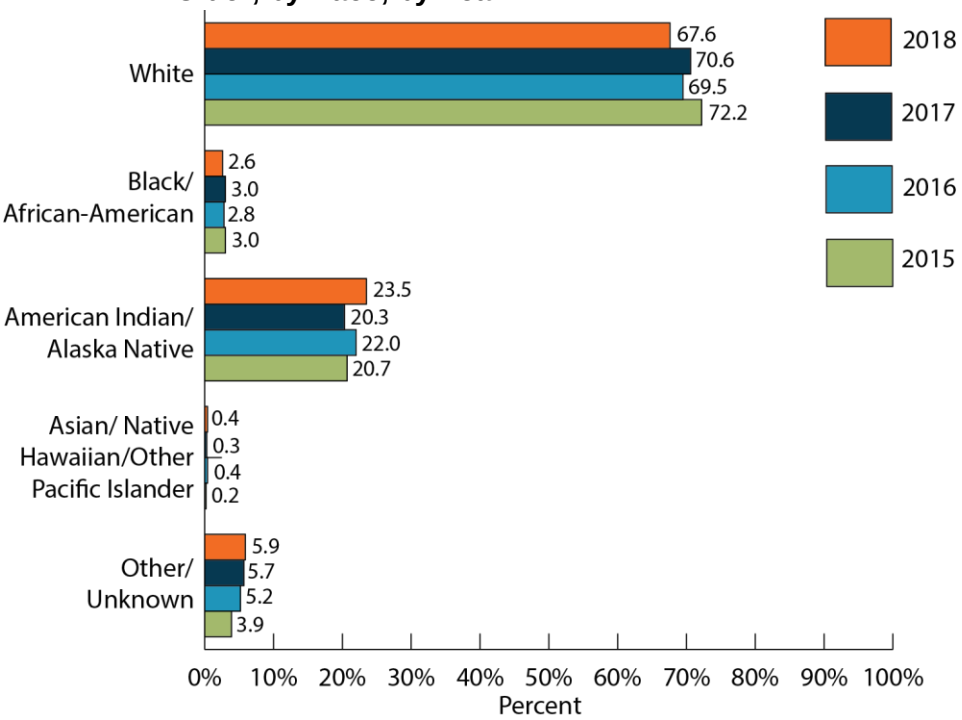
Data Source: TEDS

Figure 3.22: Percentage of Substance Abuse Treatment Admissions, ND, Age 12 and Older, by Substance, by Year



Data Source: TEDS

Figure 3.23: Percentage of All Substance Abuse Treatment Admissions, ND, Age 12 and Older, by Race, by Year



Data Source: TEDS

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).

Data Source(s)

Youth

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

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

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

Adult

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

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

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

Section Summary

Youth

- The percentage of North Dakota high school students who were offered, sold, or given an illegal drug on school property has sporadically decreased over the past four years. However, rates were lower in 2017 (12.1%) than 2011 (20.8%) (YRBS, 2017; see Figure 3.24).

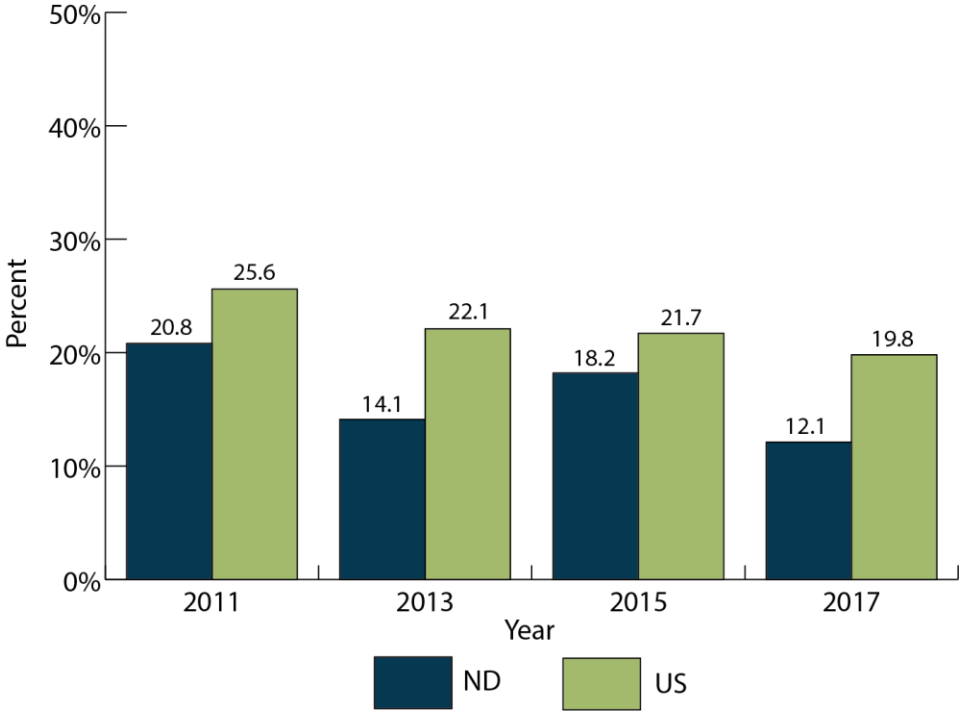
- A higher percentage of male high school students (in both North Dakota and the United States) reported that they were offered, sold, or given an illegal drug on school property when compared to females (YRBS, 2017; see Table 3.3).
- From 2011 to 2017, the percentage of high school students in both 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 (YRBS, 2017; see Table 3.5).

Adult

- Over half (54.6%) of North Dakota adults perceived much difficulty (either extremely difficult or quite difficult) accessing marijuana for a medical purpose (ND CRS, 2017). However, over two-thirds of North Dakota adults (68.6%) perceived little difficulty (slightly difficult or not at all difficult) obtaining marijuana for personal use within their community (ND CRS, 2017; see Figures 3.25 and 3.26).
- Between January and June of 2019, Syringe Services in North Dakota more than doubled the number of individuals served, distributed more than eleven times as many syringes, and collected more than twenty-four times as many syringes when compared to the same time period one year prior (January-June, 2018; NDDOH, Division of Disease Control, see Table 3.6).

Youth

Figure 3.24: 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

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	2011	2013	2015	2017
Females	20.2%	12.2%	16.3%	9.9%
Males	21.5%	15.5%	20.0%	14.1%
U.S.	**2011**	**2013**	**2015**	**2017**
Females	21.7%	19.7%	19.1%	18.7%
Males	29.2%	24.5%	24.2%	20.9%

Data Source: YRBS

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	2011	2013	2015	2017
9th	20.4%	13.1%	16.6%	11.2%
10th	20.2%	15.1%	20.7%	11.5%
11th	23.0%	12.4%	15.7%	15.4%
12th	19.8%	15.3%	19.5%	10.2%
U.S.	**2011**	**2013**	**2015**	**2017**
9th	23.7%	22.4%	21.6%	18.9
10th	27.8%	23.2%	21.9%	20.3
11th	27%	23.2%	22.7%	20.0
12th	23.8%	18.8%	20.3%	19.6

Data Source: YRBS

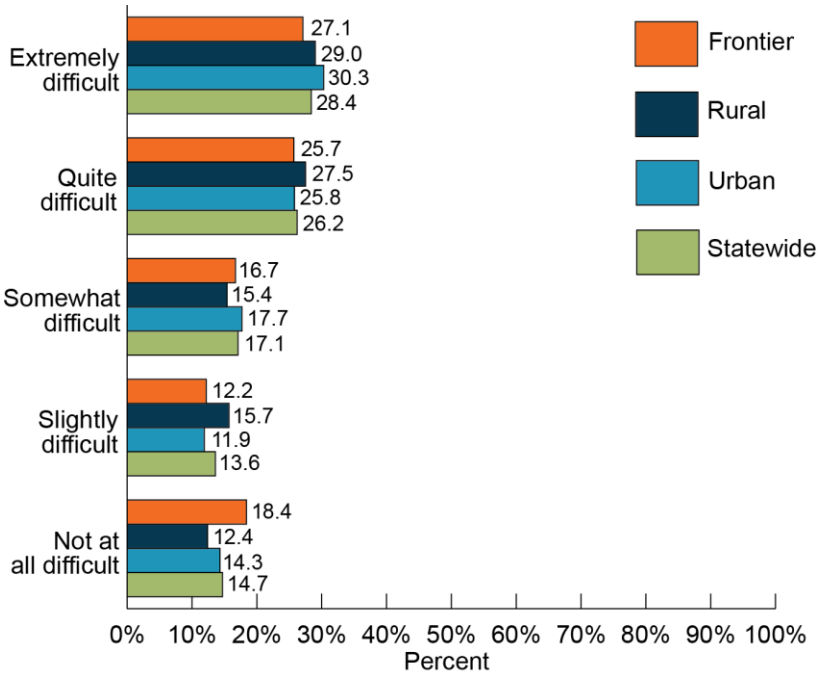
Table 3.5: Percentage of Students who Were Offered, Sold, or Given an Illegal Drug on School Premises during the Last Year, High School Students, ND vs. U.S. by Race, by Year

ND	2011	2013	2015	2017
American Indian or Alaska Native	--	16.2%	--	--
Hispanic or Latino	--	27.5%	27.3%	20.6%
White, non-Hispanic	19.9%	13%	16.8%	11.4%
U.S.	**2011**	**2013**	**2015**	**2017**
American Indian or Alaska Native	40.5%	25.5%	19.8%	18.9%
Hispanic or Latino	33.2%	27.4%	27.2%	20.3%
White, non-Hispanic	22.7%	20.4%	19.8%	20.0%

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

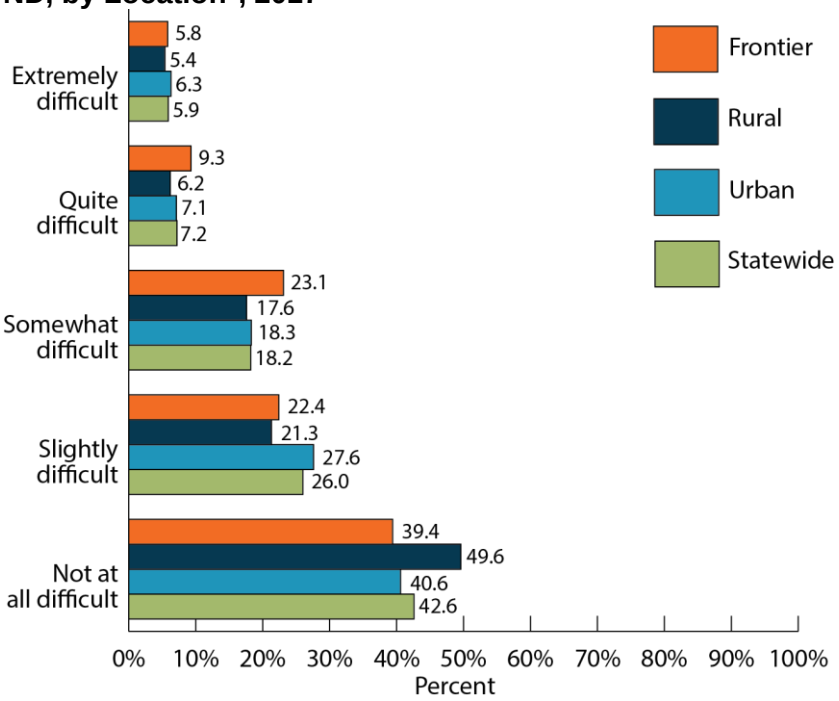
Adults

Figure 3.25: Perceived Difficulty of Accessing Marijuana for Medical Purpose in Community, ND, by Location*, 2017



Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Figure 3.26: Perceived Difficulty of Accessing Marijuana for Illicit Purpose in Community, ND, by Location*, 2017



Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

Table 3.6: Syringe Services, ND

ND	Jan-June 2018	Jul-Dec 2018	Jan-June 2019
Number of Syringe Service Programs	2	3	3
Number Served	118	350	418
Syringes distributed	7,609	48,612	84,413
Syringes collected	2,986	21,417	72,266
Primary Substance Used	Methamphetamine (92%)	Methamphetamine (74%)	Methamphetamine (61%)

Data Source: NDDOH, Division of Disease Control

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).

Data Source(s)

Youth

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

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

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

Adults

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

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

Section Summary

Youth

- 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, 2017; see Figure 4.1).
- In North Dakota, there was a slight reduction in the percentage of high school students who used prescription drugs without a doctor's prescription, from 2013 (17.6%) to 2019 (14.5%) (YRBS, 2019; see Figure 4.5).

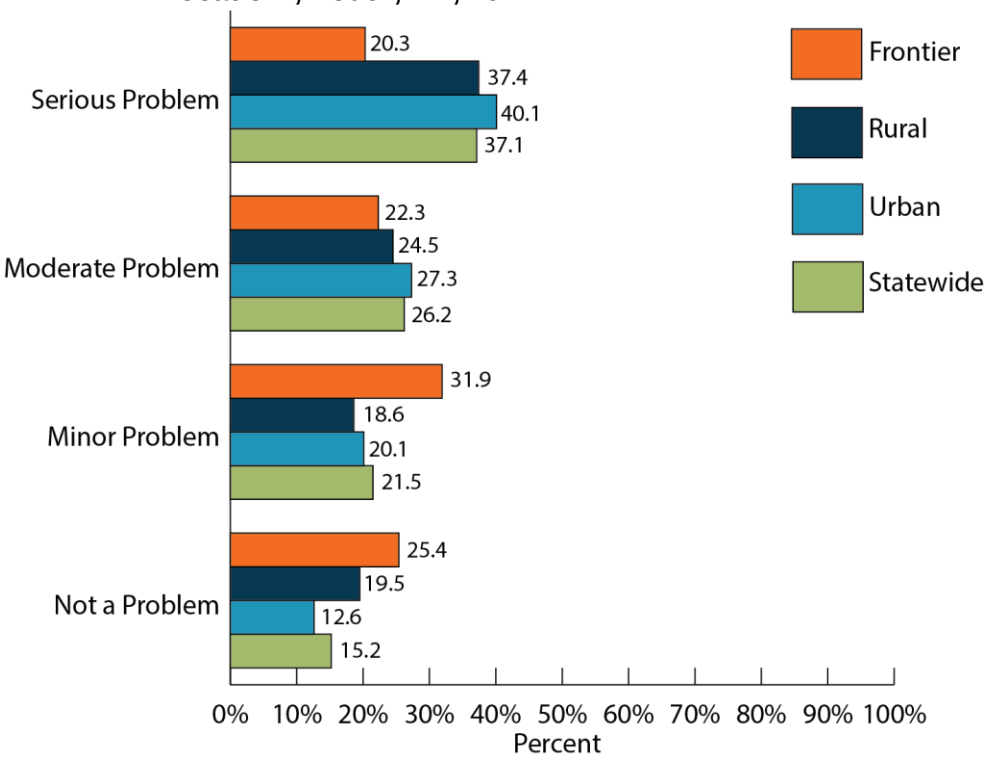
- In 2017, the percentage of North Dakota high school students who reported ever taking prescription drugs was greater than the national average (YRBS, 2017; see Figure 4.4).

Adults

- In 2017, North Dakotans who resided in urban or rural areas were more likely to perceive adult prescription drug use as a serious problem when compared to those located in the frontier areas (ND CRS, 2017; see Figure 4.6).
- Perceived prescription drug misuse (88% of peers used at least one day per month) was much greater than actual reported misuse (1.4% of peers used at least one day per month) among young adults, aged 18-29, in North Dakota in 2018 (NDSOYA, 2018; see Figure 4.7).
- When North Dakota young adults were asked about prescription drug misuse, 99.0% responded with zero days of prescription misuse in the past 30 days (NDSOYA, 2018; see Figure 4.7).

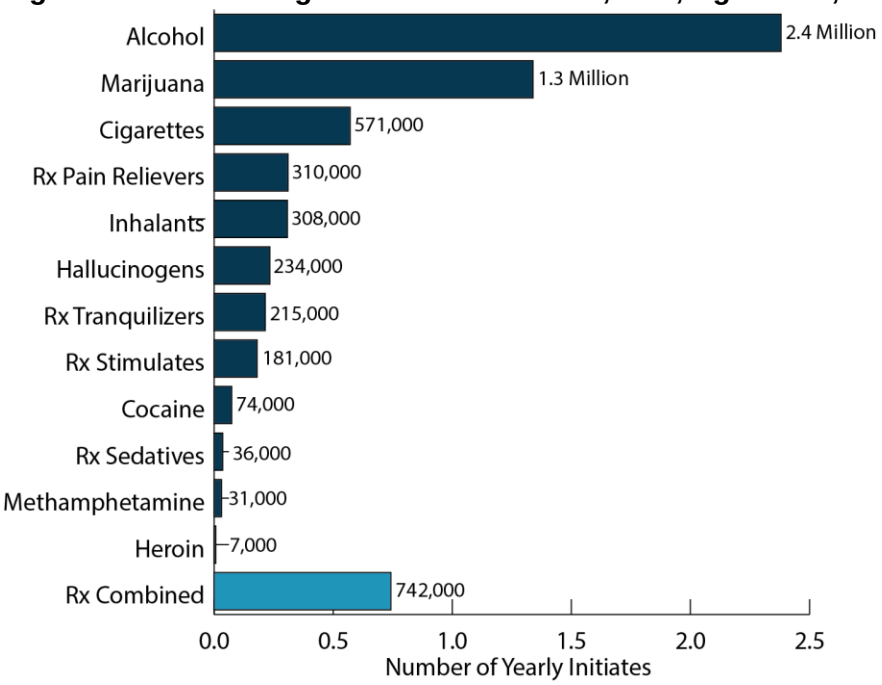
Youth

Figure 4.1: Perception of Youth Prescription Drug Use in the Community as a Problem by Location*, Youth, ND, 2017



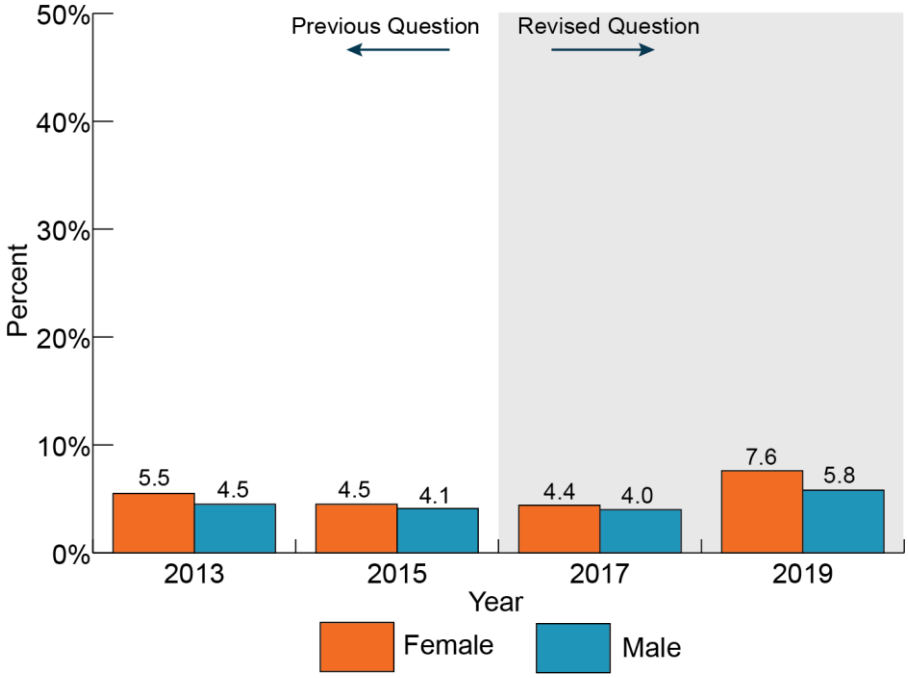
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185).

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 Any Nonmedical Use of Prescription Drugs in Lifetime, Middle School Students, ND, by Gender, by Year



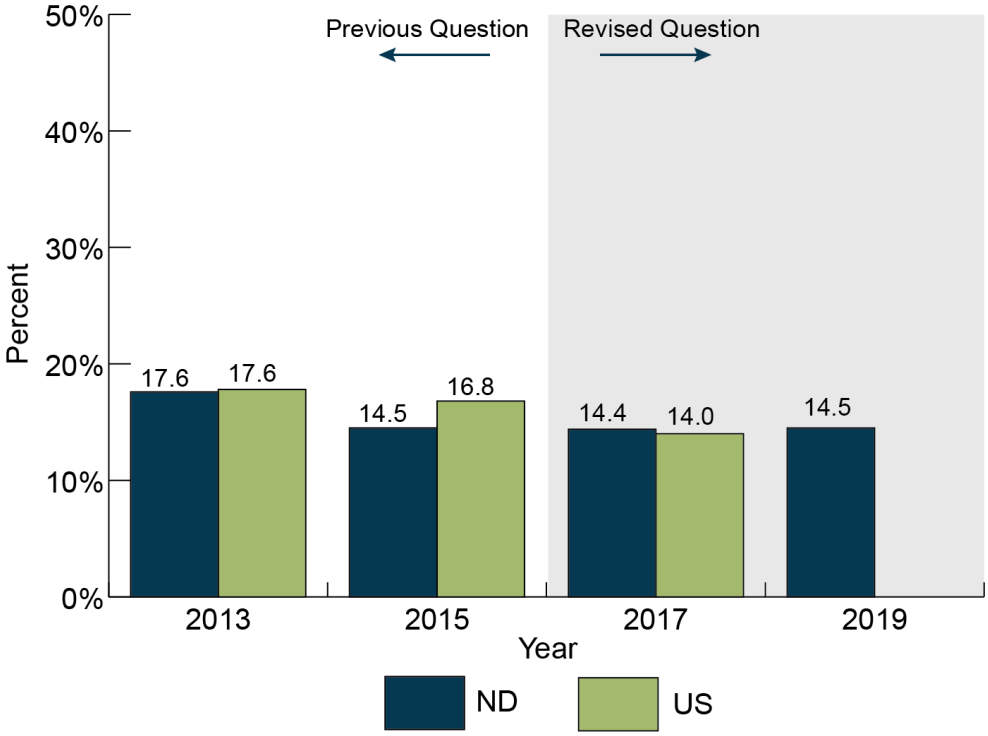
Data Source: YRBS
Data Note: 2017 and 2019 data may not be directly comparable to the previous years because the question wording changed.

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%

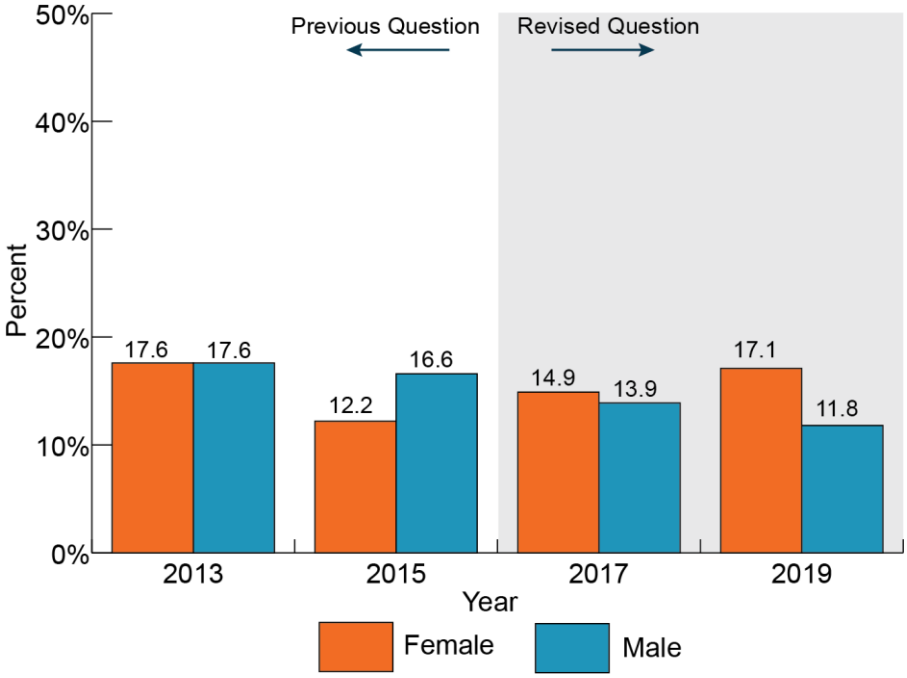
Data Source: YRBS
Data Note: 2017 and 2019 data may not be directly comparable to the previous years because the question wording changed.

Figure 4.4: Percentage of Any Nonmedical Use Prescription Drugs in Lifetime, High School Students, ND vs. U.S., 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.
Data Note: U.S. 2019 data not available.

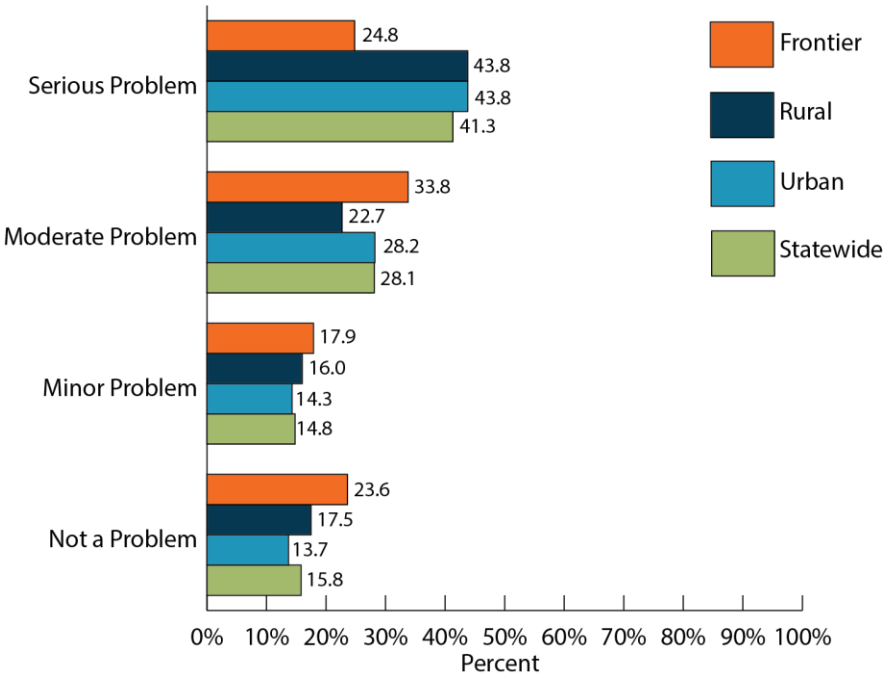
Figure 4.5: Percentage of Any Nonmedical Use of Prescription Drugs in Lifetime, High School Students, ND, by Gender, by Year



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

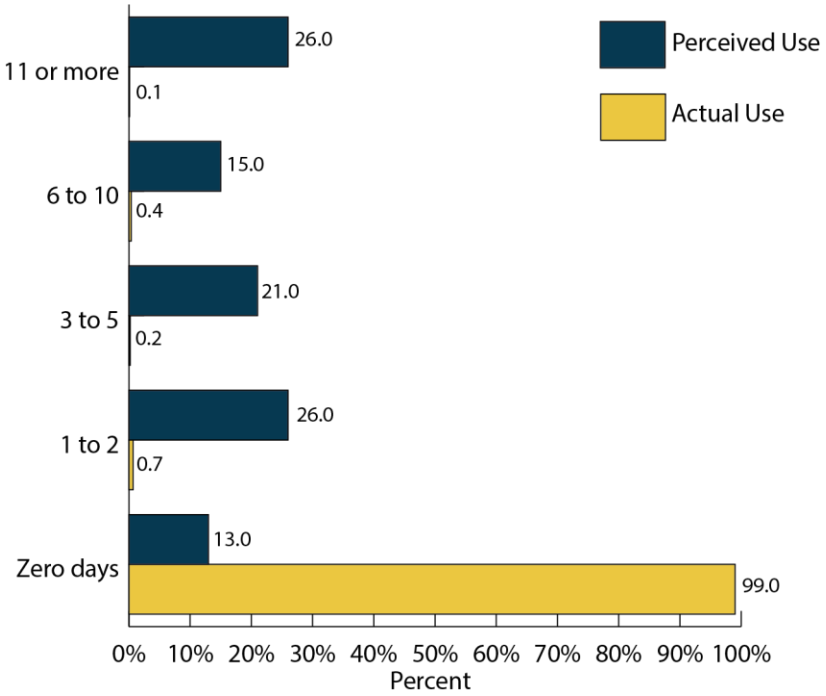
Adults

Figure 4.6: Prescription Drug Use in the Community as a Problem by Location*, Adults, ND, 2017



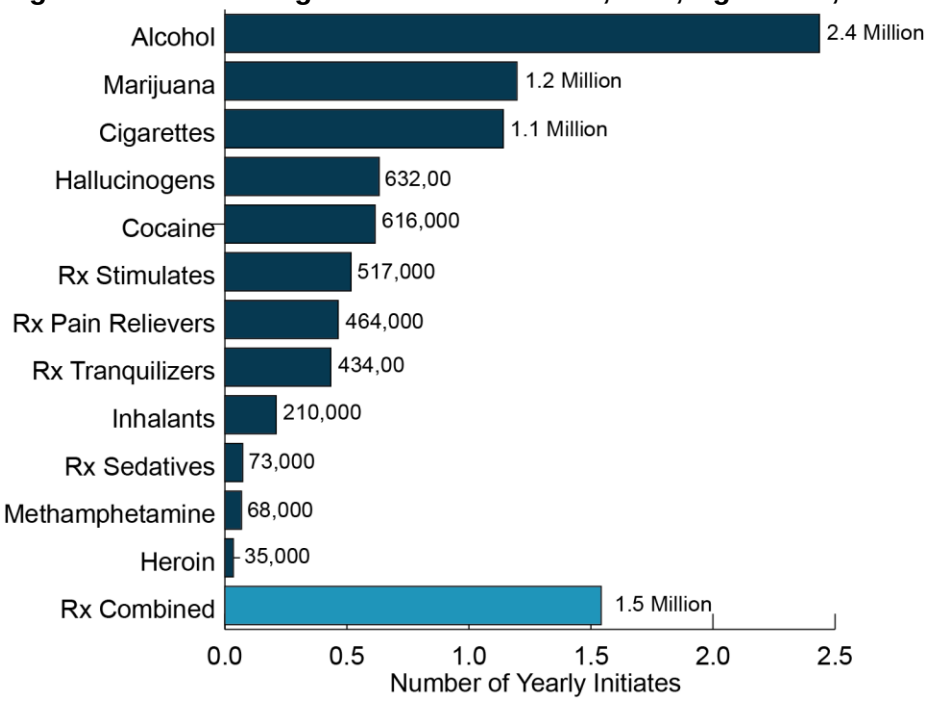
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix A (p.185).

Figure 4.7: Percentage of Actual Versus Perceived Prescription Drug Misuse among Young Adults (Age 18-29) in the Past 30 Days, ND, 2018



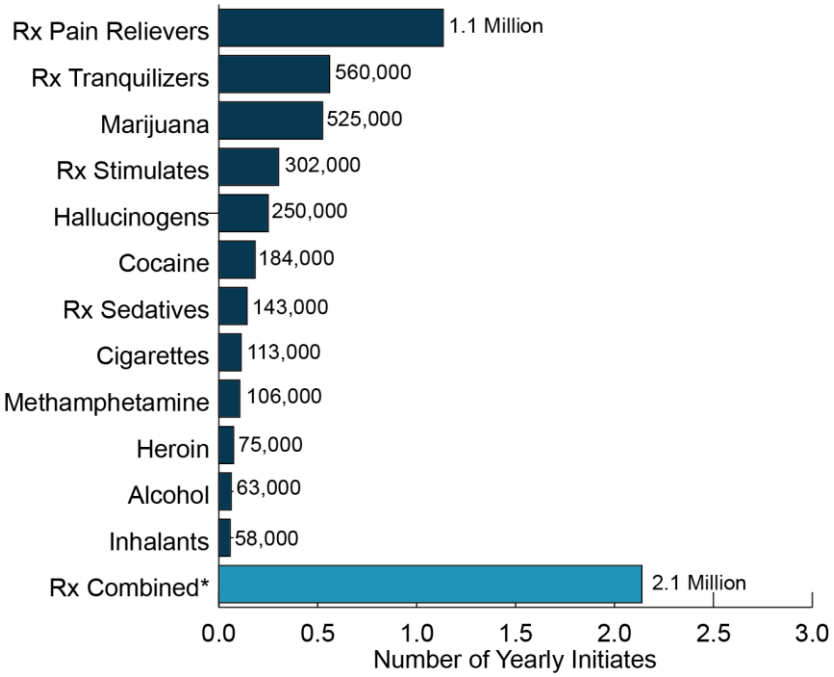
Data Source: NDSOYA

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.

Figure 4.9: Initial Drug Use in the Past Year, U.S., Age 26+, 2018



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

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.

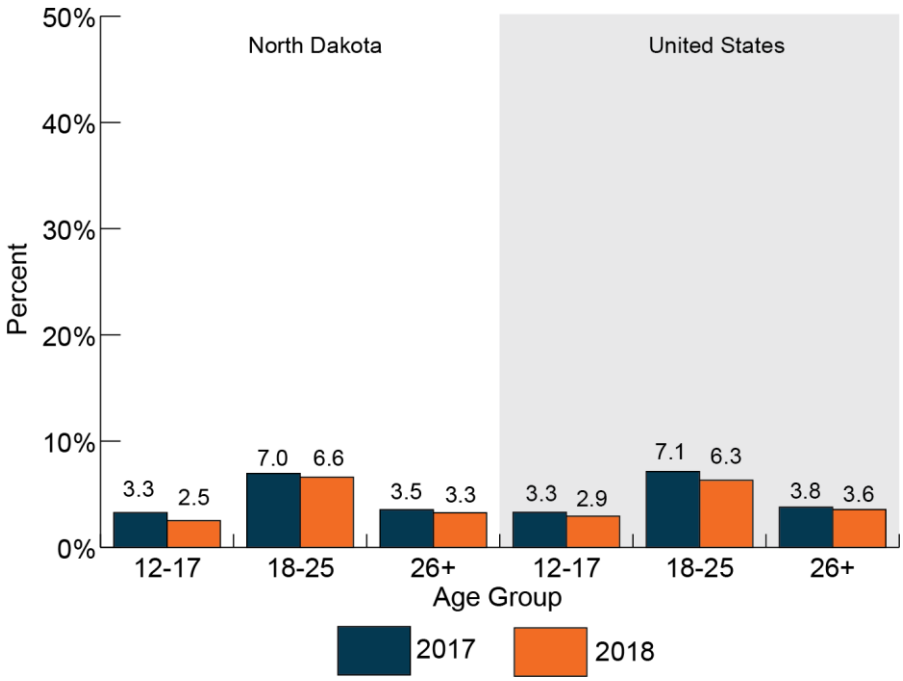
Data Source(s)

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

Section Summary

- Between 2017 and 2018, nonmedical use of pain relievers among all ages in North Dakota and nationally have decreased (NSDUH, 2018; see Figure 4.10).
- Past year nonmedical use of pain relievers is highest among North Dakotans age 18-25 (NSDUH, 2018; see Figure 4.10).

Figure 4.10: 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.

Data Source(s)

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

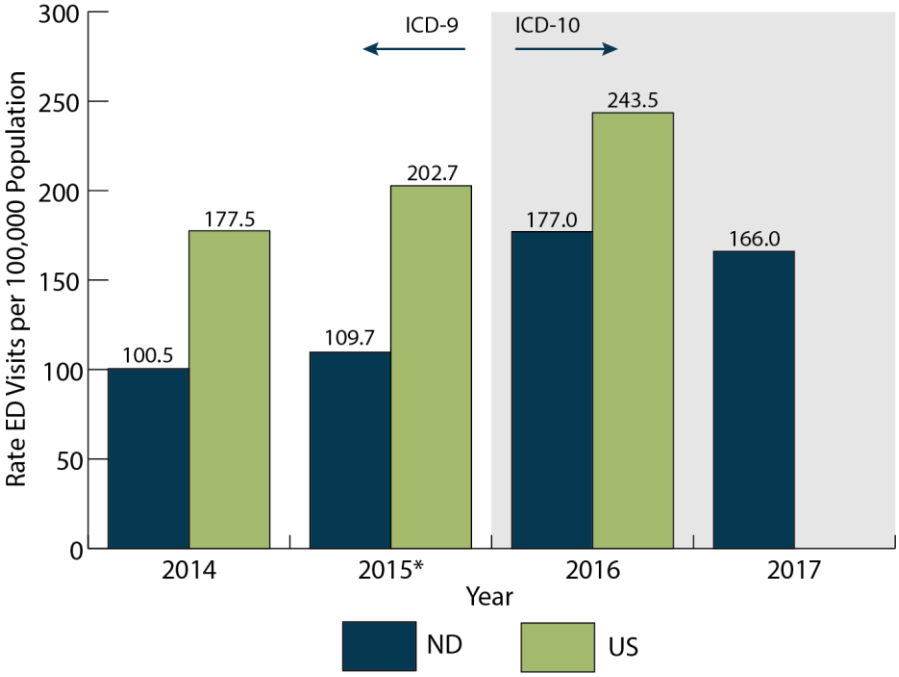
Agency for Healthcare Research and Quality (AHRQ). Healthcare Cost and Utilization Project (HCUP)

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

Section Summary

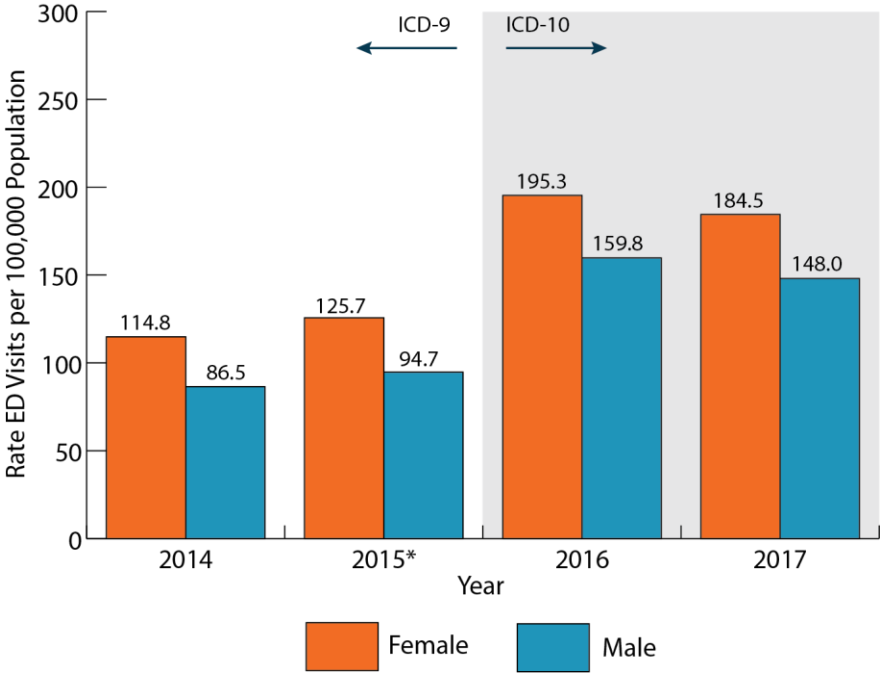
- Between 2014 and 2016, both North Dakota and the U.S. observed an increase in the rate of opioid-related ED visits per 100,000 (HCUP, 2019). From 2016 to 2017, North Dakota reported a 6.2% decrease in the rate of opioid-related ED visits (HCUP, 2019; see Figure 4.11).
- In North Dakota, both men and women reported increased rates of opioid-related ED visits from 2014 to 2016. From 2016 to 2017, both groups reported decreased rates. North Dakota women reported higher rates of opioid-related ED visits than men between 2014 and 2017 (HCUP, 2019; see Figure 4.12).
- 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 4.13).
- In North Dakota, both men and women reported increased rates of opioid-related inpatient hospital stays from 2014 to 2016. From 2016 to 2017, both groups reported decreased rates. North Dakota women reported higher rates of opioid-related hospital stays compared to men between the years of 2014 - 2017 (HCUP, 2019; see Figure 4.14).

Figure 4.11: Rate of Opioid-Related Emergency Department Visits per 100,000 Population, Totals, ND vs. U.S., by Year



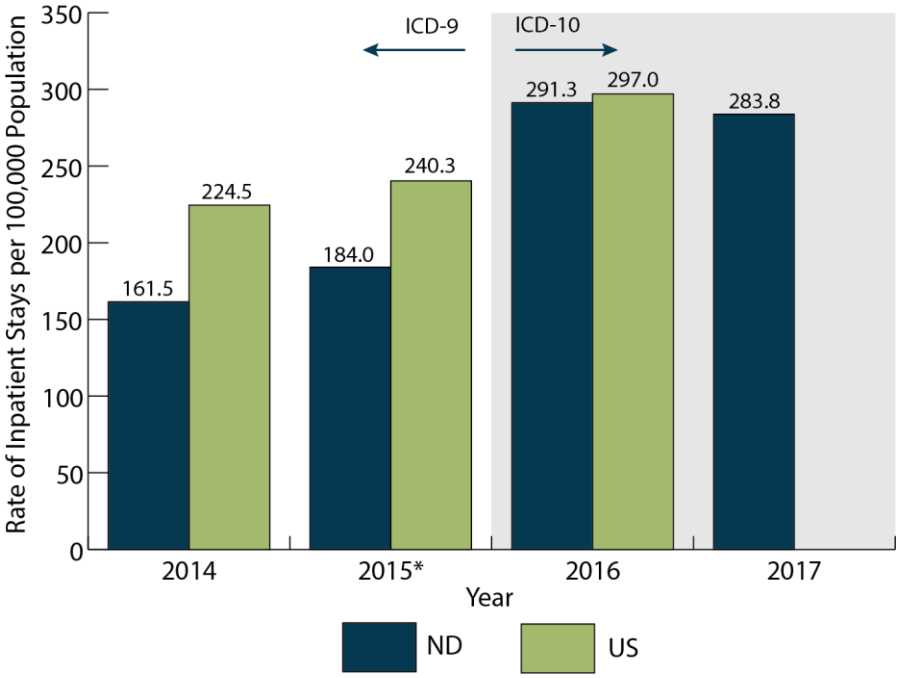
Data Source: AHRQ, HCUP
Data Note: (*) Transition from ICD-9-CM to ICD-10-CM definitions occurred on October 1, 2015.
Data Note: ICD10 codes used: F11 series, T40 series.
Data Note: 2017 US data was not available at the time when data was collected.

Figure 4.12: Rate of Opioid-Related Emergency Department Visits per 100,000 Population, ND, by Gender, by Year



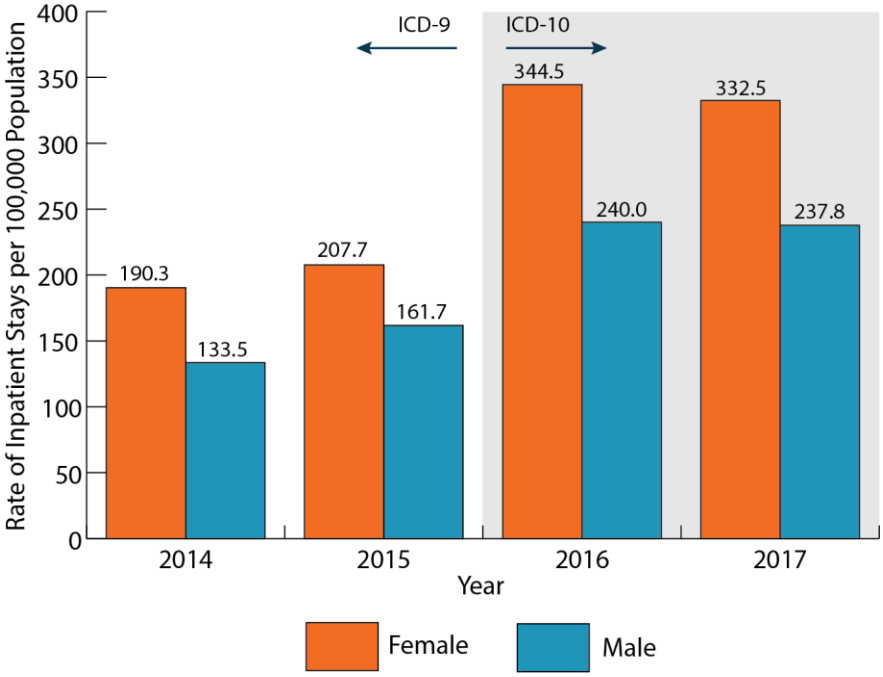
Data Source: AHRQ, HCUP
Data Note: *Transition from ICD-9-CM to ICD-10-CM definitions occurred on October 1, 2015.
Data Note: ICD10 codes used: F11 series, T40 series.

Figure 4.13: 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.
Data Note: 2017 national data was not available at the time when data was collected.

Figure 4.14: Rate of Opioid-Related Hospital Inpatient Stays per 100,000 Population, ND, by Gender, 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.

Prescription 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 a high risk of 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).

Data Source(s)

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

Section Summary

- From 2015 through 2018, North Dakota reported a lower mortality rate caused by either natural, semi-synthetic, or synthetic (including methadone) opioid overdose when compared to the United States (CDC Wonder, 2018; see Table 4.2).
- Between 2016 and 2017, the mortality rate in North Dakota caused by natural, semi-synthetic, and synthetic opioid overdose decreased while the national rates continued to increase (CDC Wonder, 2018; see Table 4.2).
- National age-adjusted natural, semi-synthetic, and synthetic opioid overdose mortality rates have increased from 2015 through 2018. North Dakota reported variable rates from 2015 through 2018 (CDC Wonder, 2018; see Table 4.2).
- Pharmaceutical overdose death rates in North Dakota increased by almost one percentage point between 2015 and 2018; unlike the national rate that increased by 5.7% over the same time period (CDC Wonder, 2018; see Figure 4.16).

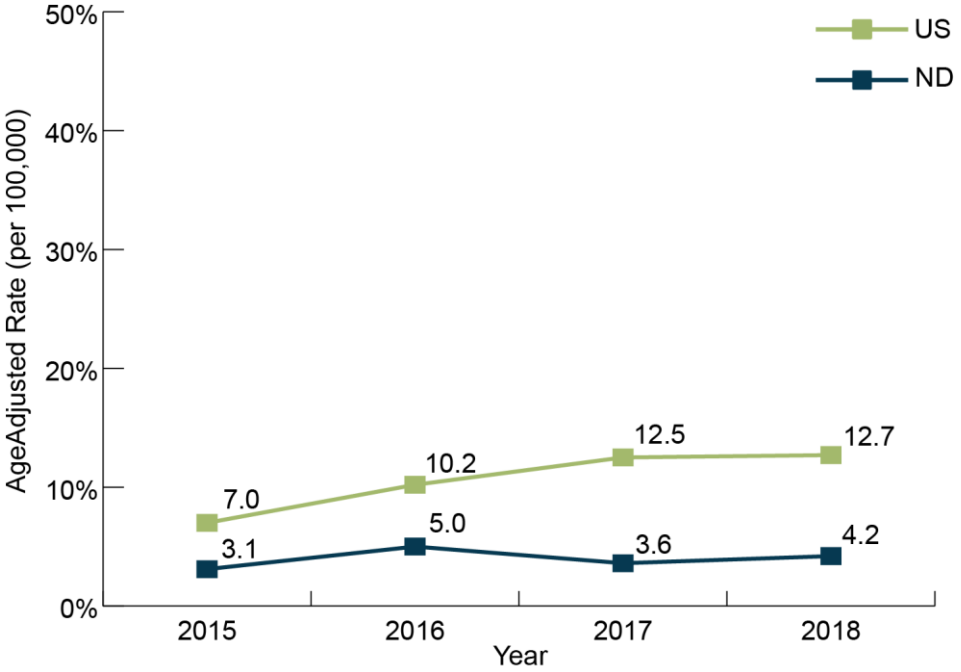
Table 4.2: Mortality Rate Related to Natural, Semi-synthetic, and Synthetic Opioids, Including Methadone per 100,000 Population, ND vs. U.S., by Year

Mortality rate per 100,000, 2015 - 2018				
ND	**2015**	**2016**	**2017**	**2018**
Crude rate per 100,000	2.9	4.7	3.4	3.8
Age Adjusted Rate per 100,000	3.1	5.0	3.6	4.2
U.S.	**2015**	**2016**	**2017**	**2018**
Crude rate per 100,000	7.0	10.0	12.3	12.5
Age Adjusted Rate per 100,000	7.0	10.2	12.5	12.7

Data Source : CDC Wonder

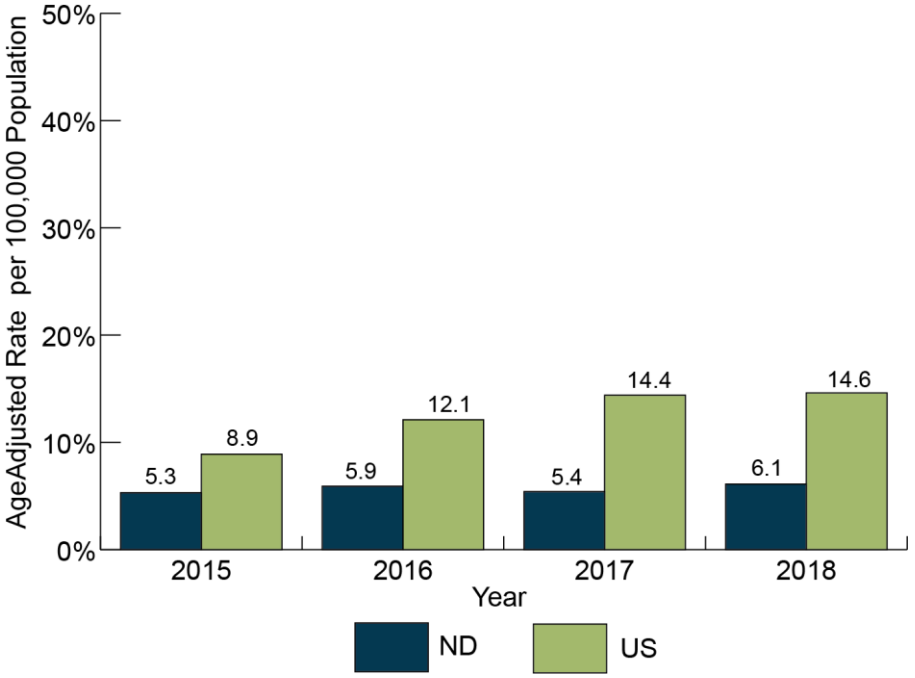
ICD 10 Codes Used: Underlying cause X40 – X44, X60-X64, X85, Y10-Y14; contributing cause T40.2-T40.4.

Figure 4.15: Mortality Rate Related to Natural, Semi-synthetic, and Synthetic Opioids, Including Methadone, ND vs. U.S., by Year



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

Figure 4.16: 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 9.9 million Americans aged 12+ reported misusing prescription pain relievers in the past year (NSDUH Report, 2019). As opioid prescribing rates decrease, it is the hope that prescription drug abuse and related consequences will also decrease.

Data Source(s)

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

Centers for Medicare and Medicaid Services (CMS)

North Dakota Board of Pharmacy

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

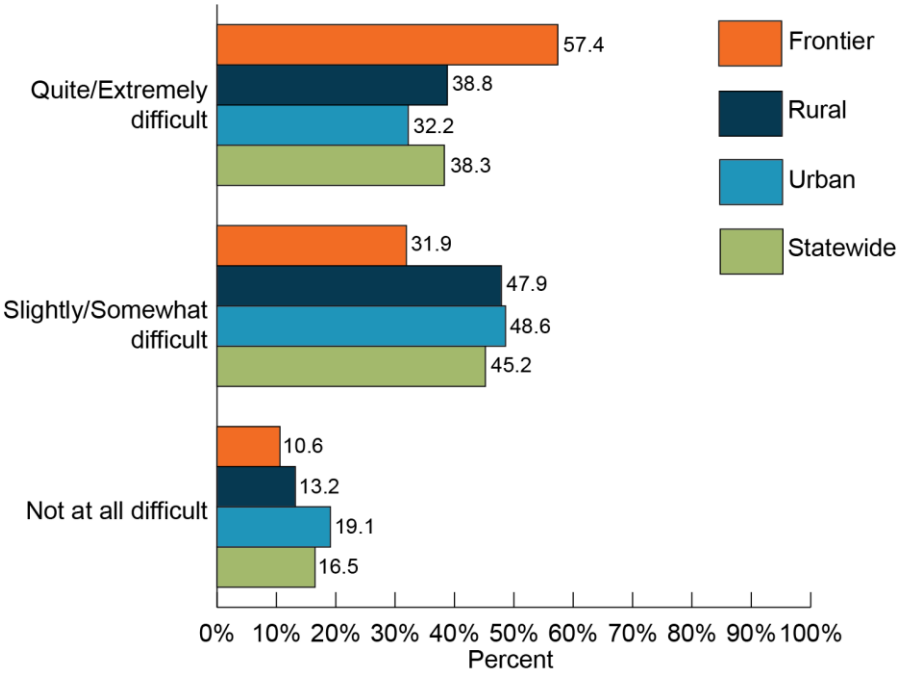
CDC National Center for Injury Prevention and Control (CDC). Annual Surveillance Report of Drug-Related Risks and Outcomes

Section Summary

- In 2017, over half (57.4%) of adults living in a frontier community in North Dakota felt that it was quite/extremely difficult for them to access prescription drugs compared to one third (32.2%) of adults in urban communities (ND CRS, 2017; see Figure 4.17).
- From 2014 through 2017, North Dakota and United States opioid prescription rates among Medicare part D enrollees decreased (CMS, 2018; see Table 4.3).
- The number of controlled substance prescriptions dispensed in North Dakota increased between 2017 and 2018. “Other” drug prescriptions have increased from 2016 to2018. However, since 2016, North Dakota reported decreasing numbers of narcotic/opioid prescriptions dispensed (North Dakota Board of Pharmacy; see Figure 4.18).
- In 2017, health care providers in North Dakota prescribed 41.5 painkiller prescriptions per 100 people, a 29.3 percent decrease from 2014 (58.1). North Dakota placed in the bottom third of states for painkiller prescriptions per person ratios (NPA, 2018; see Figure 4.19).
- 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, 2018; see Table 4.4).

- 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 (Annual Surveillance Report of Drug-Related Risks and Outcomes, 2018; see Figure 4.20).

Figure 4.17: Perceived Difficulty of Accessing Prescription Drugs in Community, ND, 2017, by Location



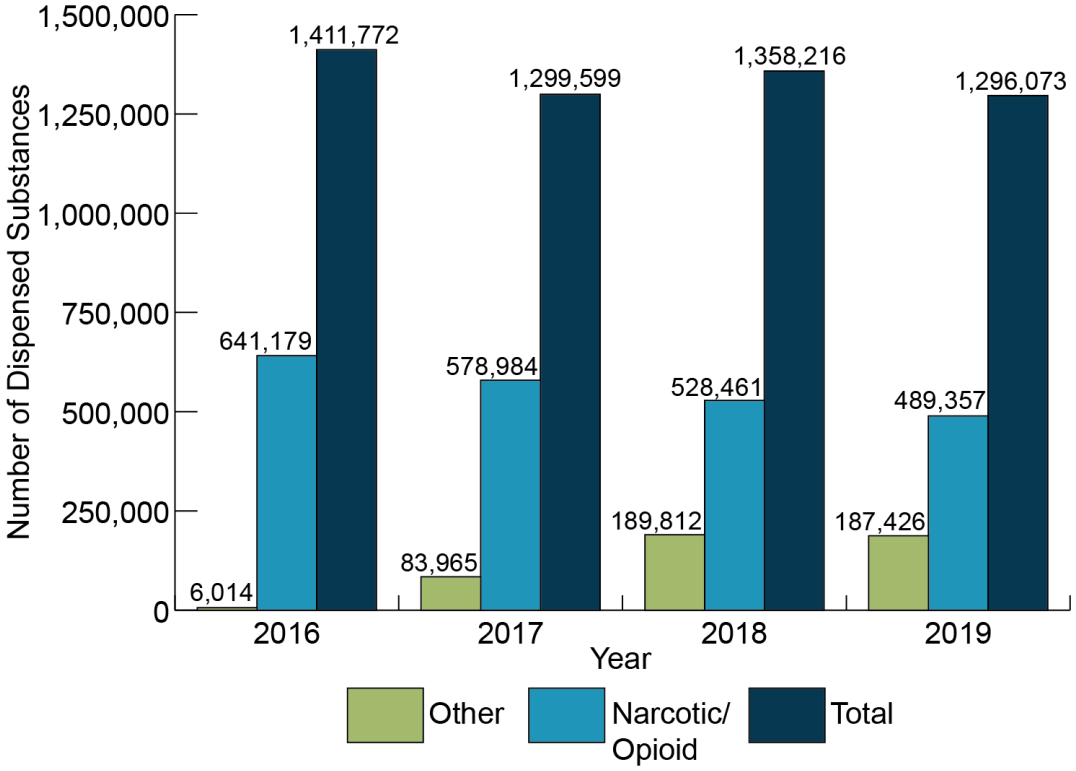
Data Source: ND CRS
Data Note: (*) Geographic definitions can be found in the Appendix (p.185)

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

ND	2014	2015	2016	2017
Opioid Claims	166,071	162,573	158,378	145,289
Overall Claims	3,560,066	3,568,506	3,808,769	3,786,087
Opioid Prescribing Rate	4.66	4.56	4.16	3.84
Opioid Prescribing % Change from 2013	0.06	-0.03	-0.43	-0.75
U.S.	**2014**	**2015**	**2016**	**2017**
Opioid Claims	79,645,620	78,051,171	77,363,124	74,104,230
Overall Claims	1,386,374,879	1,418,536,258	1,452,978,228	1,466,300,795
Opioid Prescribing Rate	5.74	5.50	5.32	5.05
Opioid Prescribing % Change from 2013	-0.08	-0.3	-0.48	-0.75

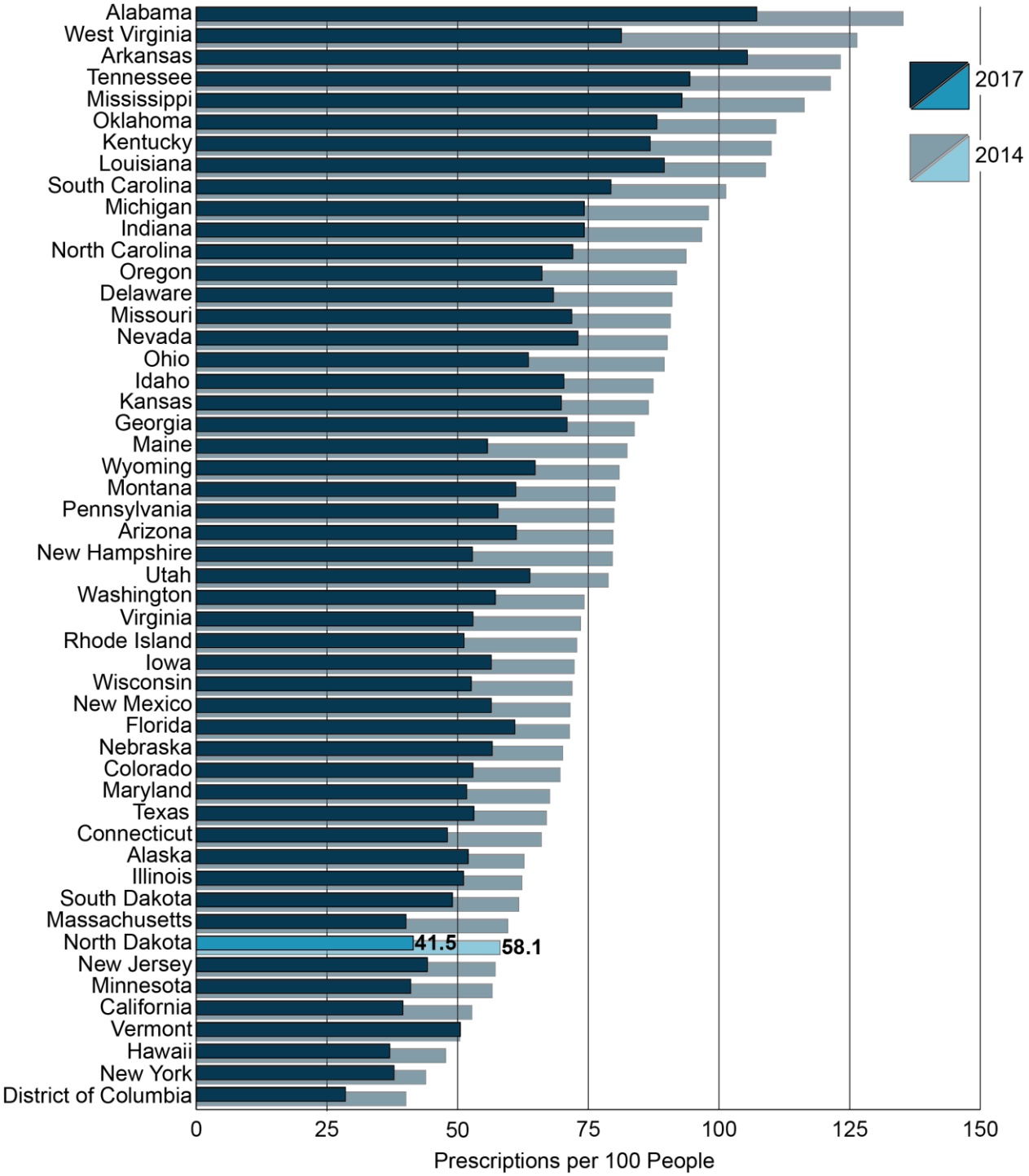
Data Source: CMS

Figure 4.18: Number of Controlled Substance Prescriptions Dispensed, Narcotics/Opioids vs Other, ND, by Year



Data Source: ND PDMP
Data Note: “Other” included gabapentin reporting staring in August 2017.

Figure 4.19: Number of Prescription Painkillers per 100 People, U.S., by State, 2014-2017



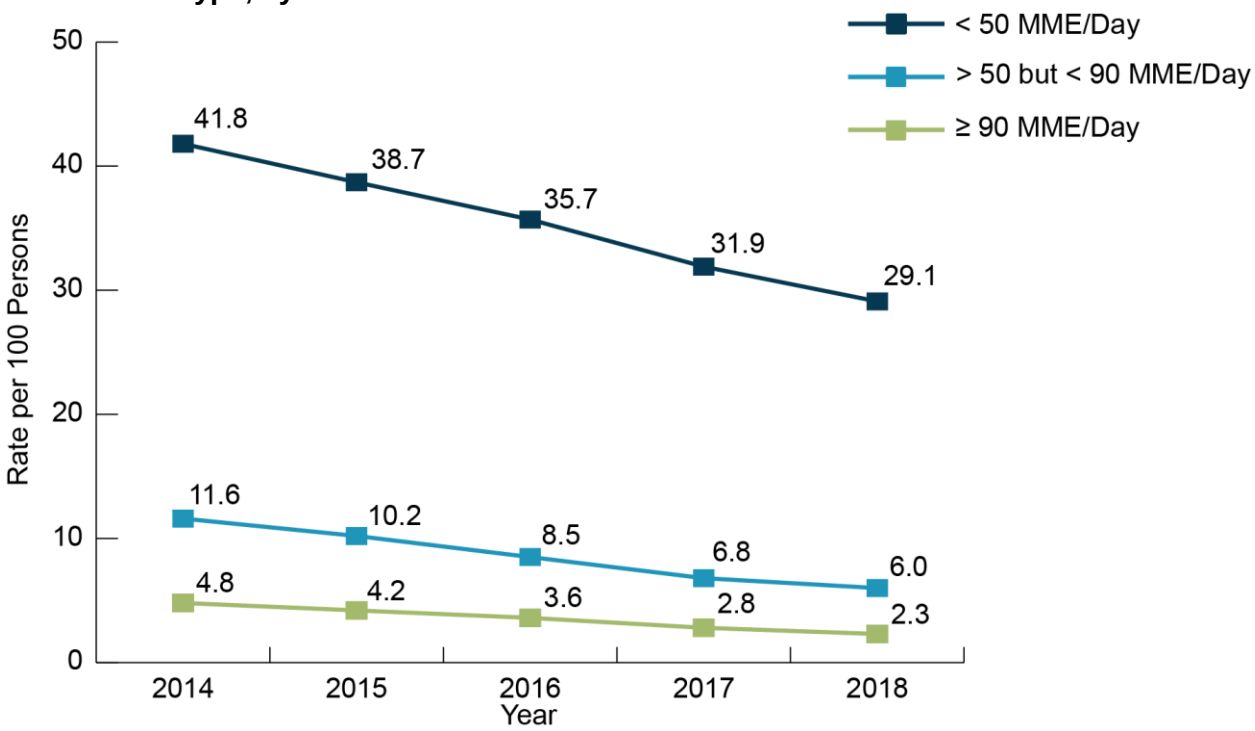
Data Source: NPA

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
Daily Dosage Per Prescription: (MME/Day)					
<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
Daily Dosage Per Prescription: (MME/Day)					
<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).

Figure 4.20: 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 2018 National Survey of Substance Abuse Treatment Services (N-SSATS) asserts that at least one type of pharmacotherapy was provided by 60% 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 45% of all facilities. In 2018, 31.7% and 29.0% of treatment facilities nationally offered Buprenorphine with naloxone (e.g., Suboxone) and/or Naltrexone, respectively (N-SSATS).

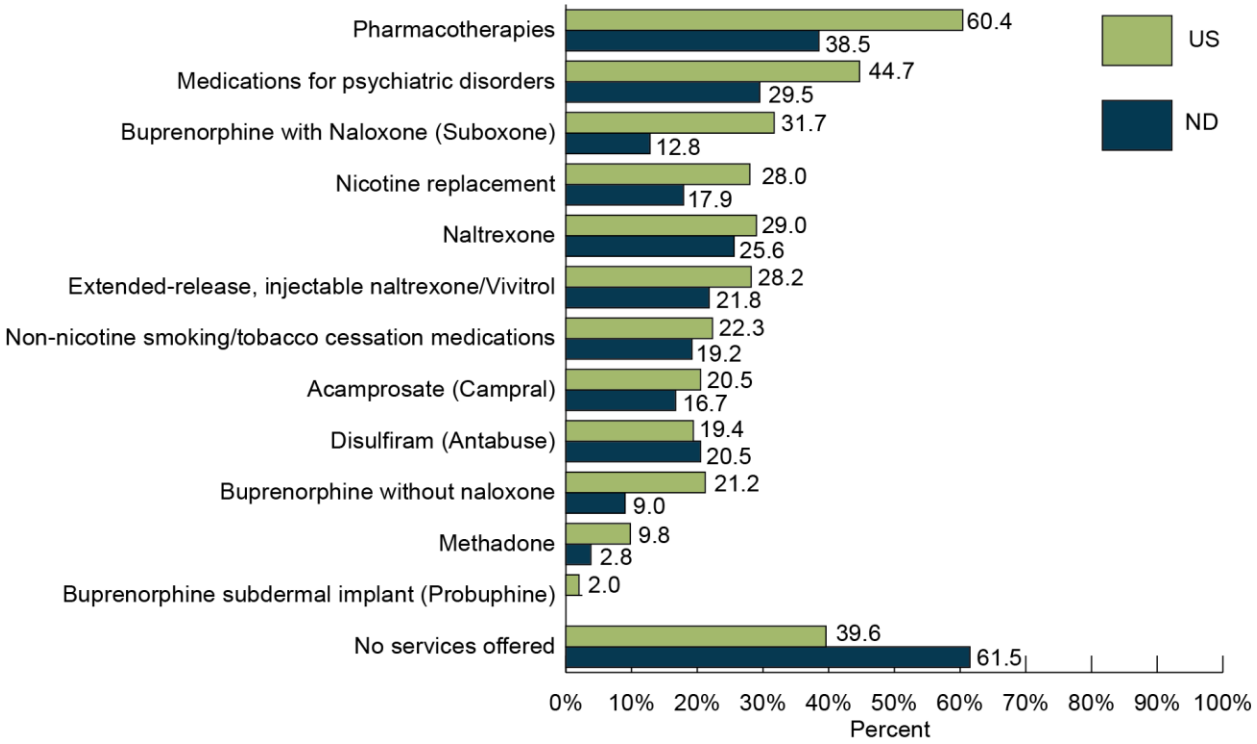
Data Source(s)

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

Section Summary

- A smaller percentage (38.5%) of substance abuse treatment facilities in North Dakota offered any type of pharmacotherapy when compared to the United States (60.4%) in 2018 (N-SSATS, 2018; see Figure 4.21)

Figure 4.21 Percentage of Pharmacotherapies Offered by Substance Abuse Treatment Facilities, ND vs. U.S., by Type, 2018



Data Source: N-SSATS

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.

Data Source(s)

Youth

American Psychologist. Four Decades of Research on School Bulling

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

Section Summary

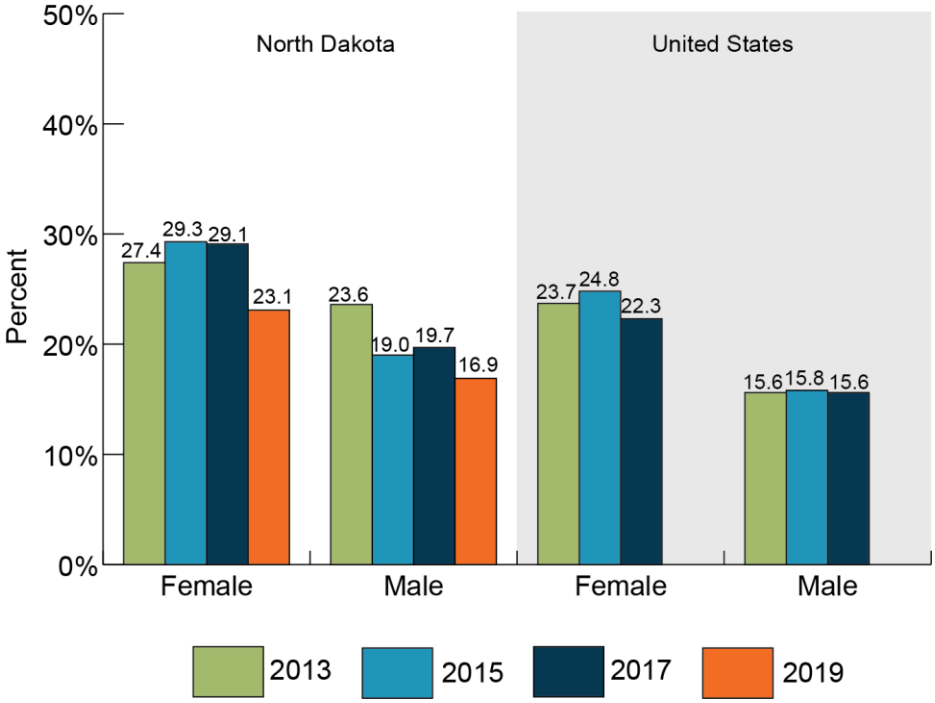
Youth

- The percentage of North Dakota high school students who reported being bullied on school property in the last year remained greater than national rates among both males and females between 2013 and 2017 (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).
- Between 2013 and 2017, the percentage of North Dakota high school students who reported being electronically bullied in the last year remained greater than national rates among both males and females (YRBS, 2017; see Figure 5.2).
- The percentage of female North Dakota high school students who reported being electronically bullied in the last year decreased between 2017 and 2019. However, female North Dakota high school students reported being electronically bullied more than male North Dakota high school students (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 an increase (22.9% to 27.4%) in electronic bullying rate from 2015 to 2017. However, there was a decrease in reported electronic bullying rates for North Dakota high school females in 2019 (YRBS, 2019; see Figure 5.2).

- The prevalence of sadness, thoughts of suicide, creation of a suicide plan, and attempting suicide was greater among North Dakota high school students who reported being electronically bullied compared to those who were not bullied (YRBS, 2017; see Figure 5.3).

Youth

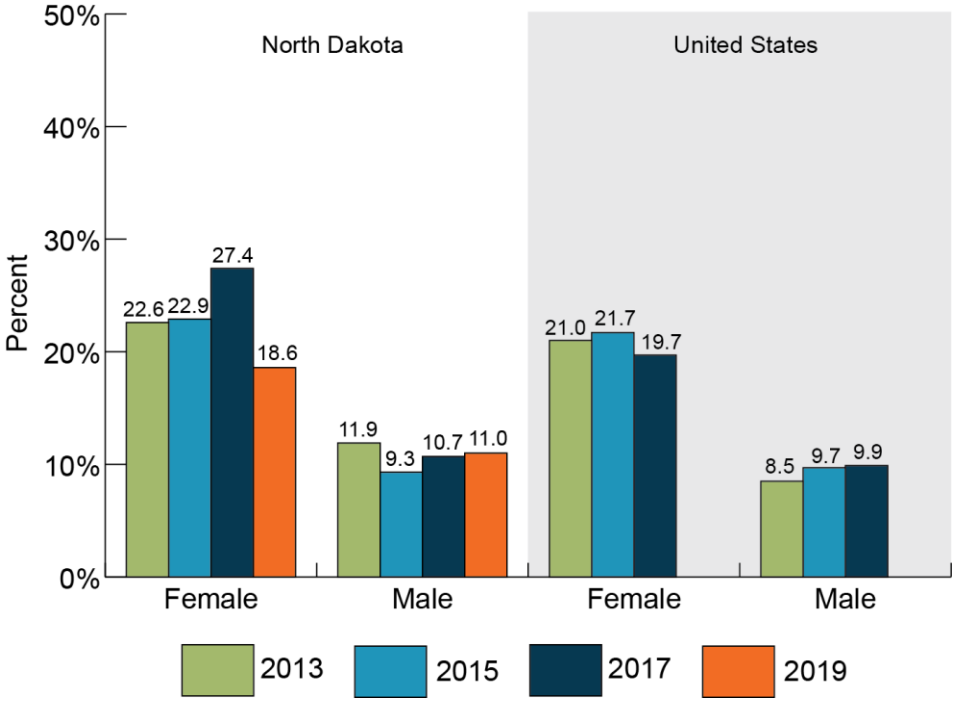
Figure 5.1: Percentage of Students Bullied in the Last Year, High School, by Gender, ND vs U.S., by Year



Data Source: YRBS

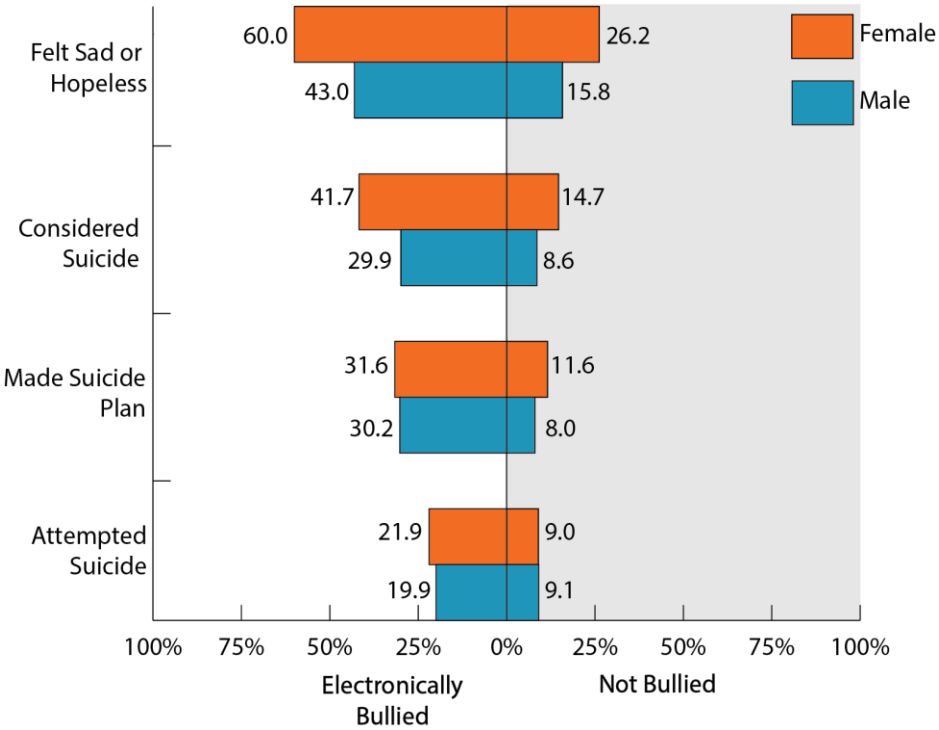
Data Note: 2019 YRBS data for the US was not available at publication time.

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
Data Note: 2019 YRBS data for the US was not available at publication time.

Figure 5.3: Percentage of Depressive or Suicidal thoughts and Actions among Electronically Bullied, High School, ND, by Gender, 2017



Data Source: YRBS

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).

Data Source(s)

Youth

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

Adults

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

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

Section Summary

Youth

- Both male and female North Dakota high school students reported increased rates (females 31.2% to 40.8%, males 16.6% to 20.3%) of sadness or hopelessness for two weeks or more in the past year between 2013 to 2019 (YRBS, 2019; see Figure 5.4).
- 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 all grades in 2019 (YRBS, 2019; see Figure 5.5).

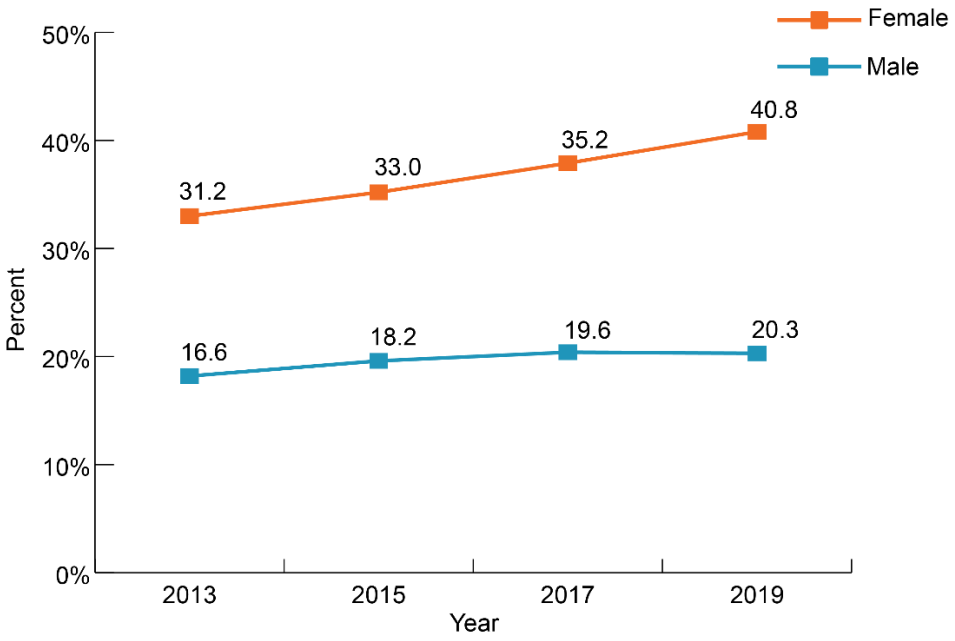
Adults

- The mean number of poor days North Dakota and U.S. adults reported per month increased between 2015 and 2017 (BRFSS, 2017; see Figure 5.6).
- Females in North Dakota and nationally reported a greater percentage of 14 or more poor mental health days per month than males between 2014 and 2017 (BRFSS, 2018; 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 2014 to 2017 (BRFSS, 2018; see Figure 5.7).

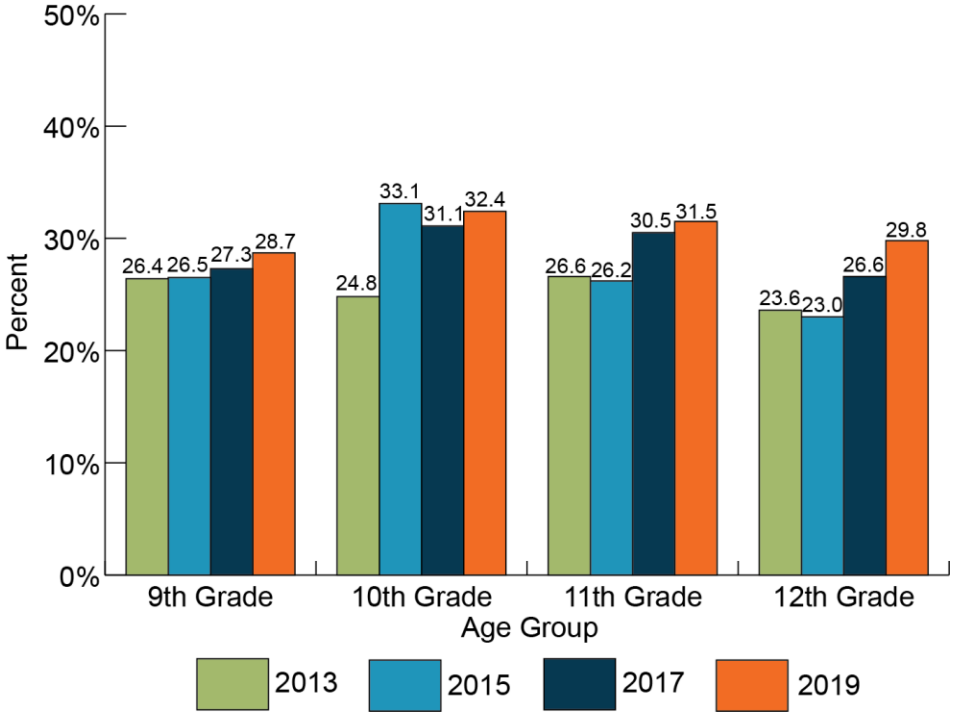
Youth

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

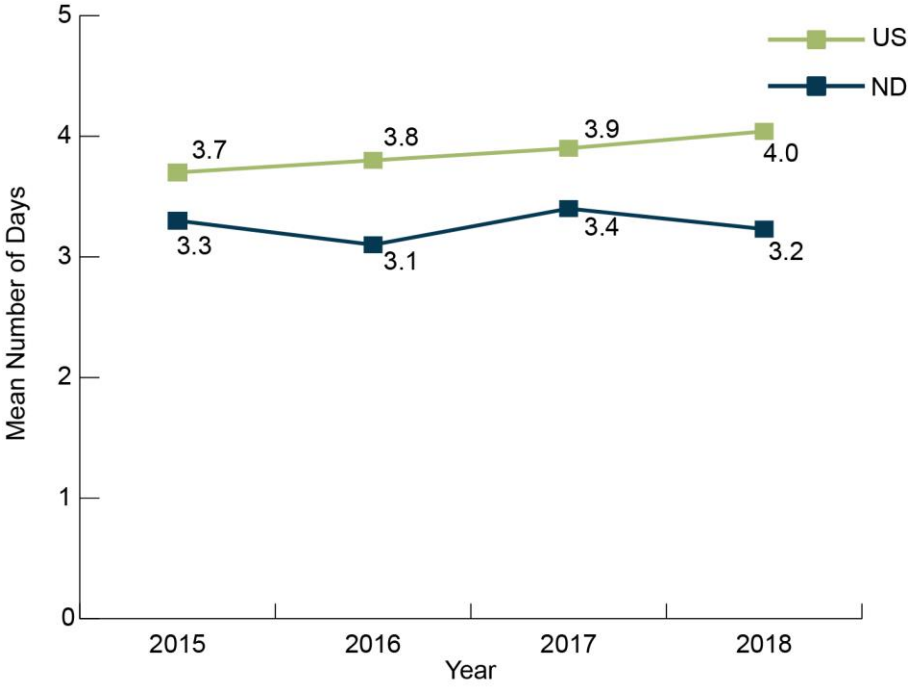
Figure 5.5: Percentage Who Felt Sad or Hopeless Consecutively for Two Weeks in Past Year by Grade, High School, ND, by Year



Data Source: YRBS

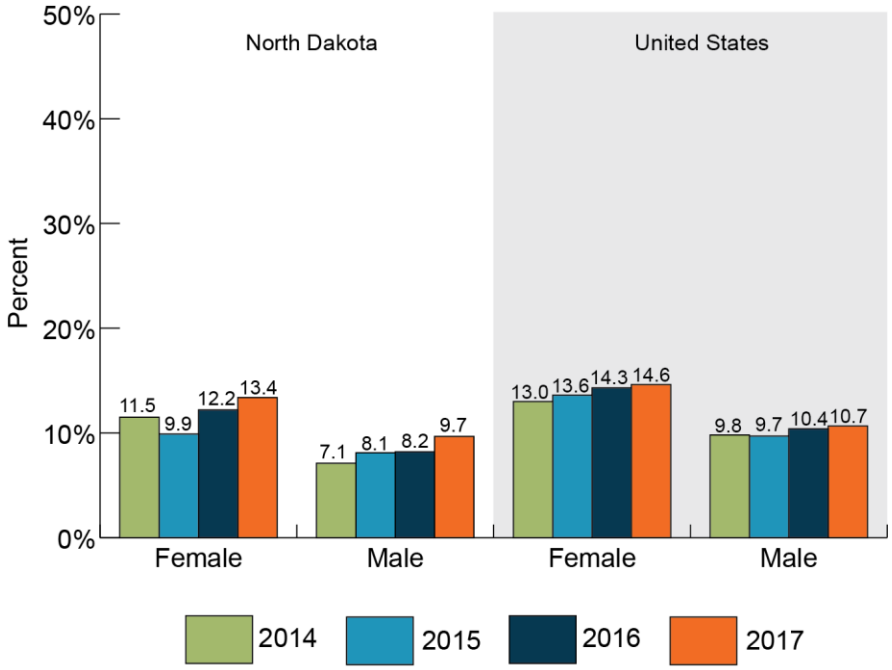
Adults

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



Data Source: BRFSS

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 characteristic. 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).

Data Source(s)

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

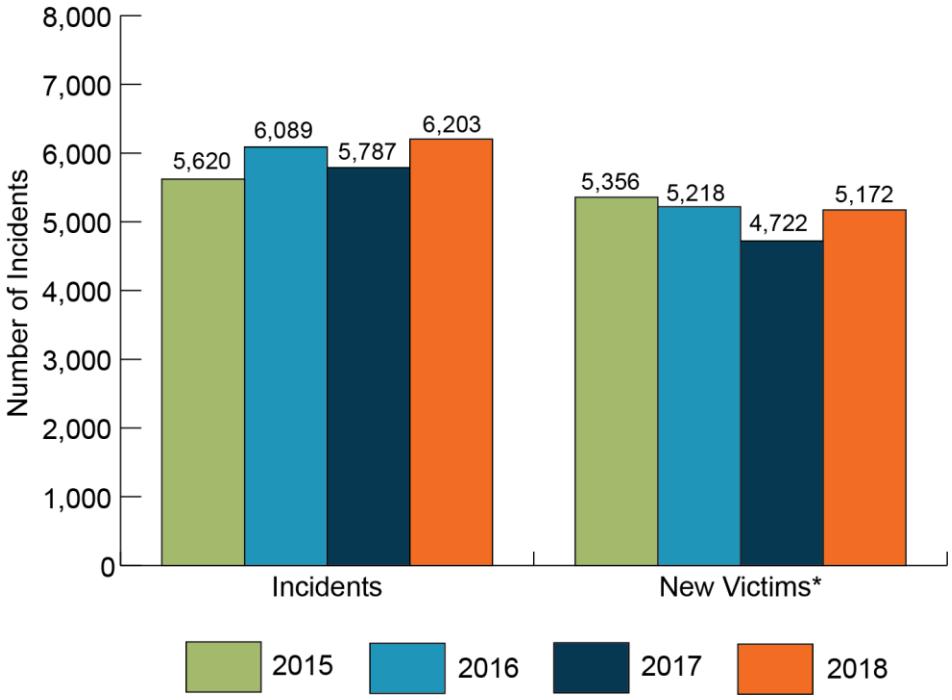
British Medical Journal of Psychology (BMJPsych). Female Survivors of Intimate Partner Violence and Risk of Depression, Anxiety and Serious Mental Illness

North Dakota CAWS (ND CAWS). Domestic Violence Facts

Section Summary

- The number of domestic violence incidents reported in North Dakota increased by 10.4% (5,620 to 6,203) from 2015 to 2018 (ND CAWS; see Figure 5.8).
- The percentage of both self-reported and law enforcement reported domestic violence incidents decreased between 2015 and 2018 (ND CAWS; see Figure 5.9).

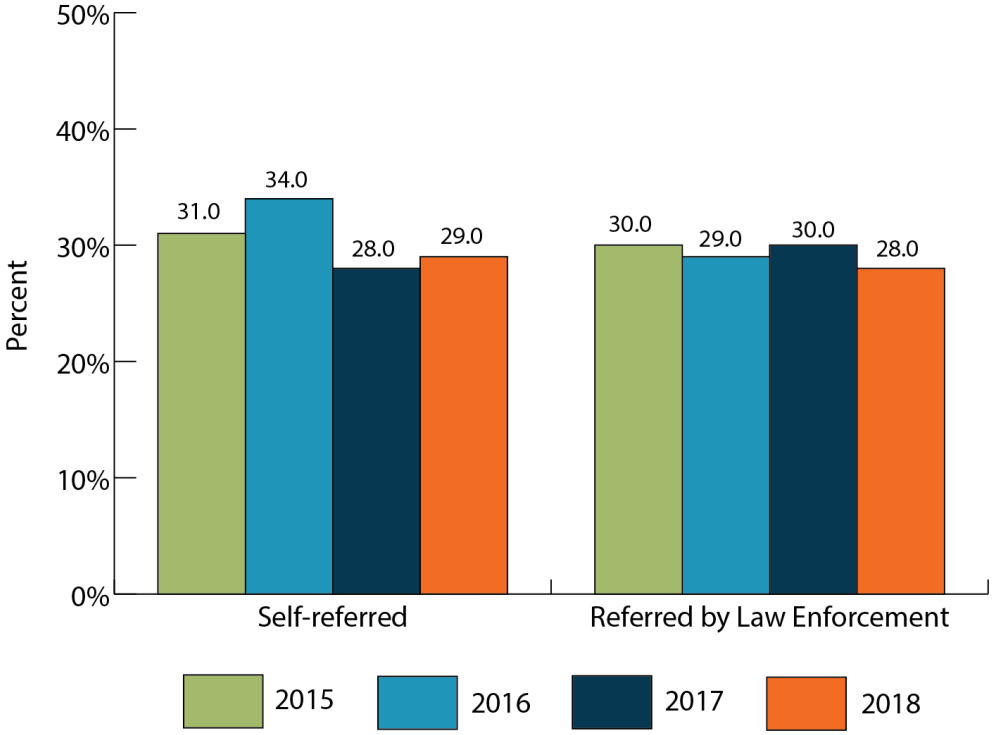
Figure 5.8: Number of Domestic Violence Incidents, Total Incidents and New Victims, ND, by Year



Data Source: ND CAWS

Data Note: (*) unduplicated for calendar year

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, 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 2014 to 2018.

Data Source(s)

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

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

Section summary

Youth

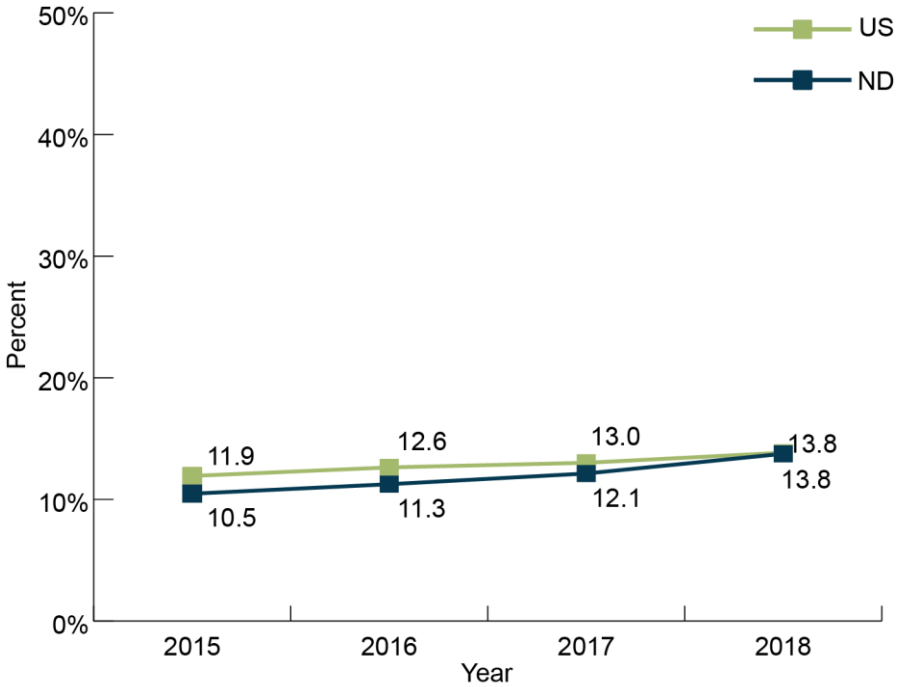
- Both North Dakota and U.S. high school students reported increased rates of having a major depressive episode in the past year between 2015 to 2018 (NSDUH, 2018; see Figure 5.10).

Adult

- Both North Dakota and U.S. adults aged 18-25 reported increased rates (ND = 9.5% - 14.1%, U.S. = 9.8% - 13.4%) of having a major depressive episode in the past year between 2015 and 2018 (NSDUH, 2018; see Figure 5.11).
- The percentage of North Dakota adults who reported any mental illness in the past year increased from 2015 to 2018 (NSDUH, 2018; see Figure 5.12).
- The percentage of North Dakota and U.S. adults aged 18-25 who reported serious mental illness in the past year increased (ND = 5.2% - 8.2%, U.S. = 4.9% - 7.6%) from 2015 to 2018 (NSDUH, 2018; see Figure 5.14).
- From 2015 to 2018, North Dakota adults aged 26 and older reported increased rates of a major mental episode, any mental illness, and serious mental illness. U.S. rates have also increased over the same time period (NSDUH, 2018; see Figure 5.14).

Youth

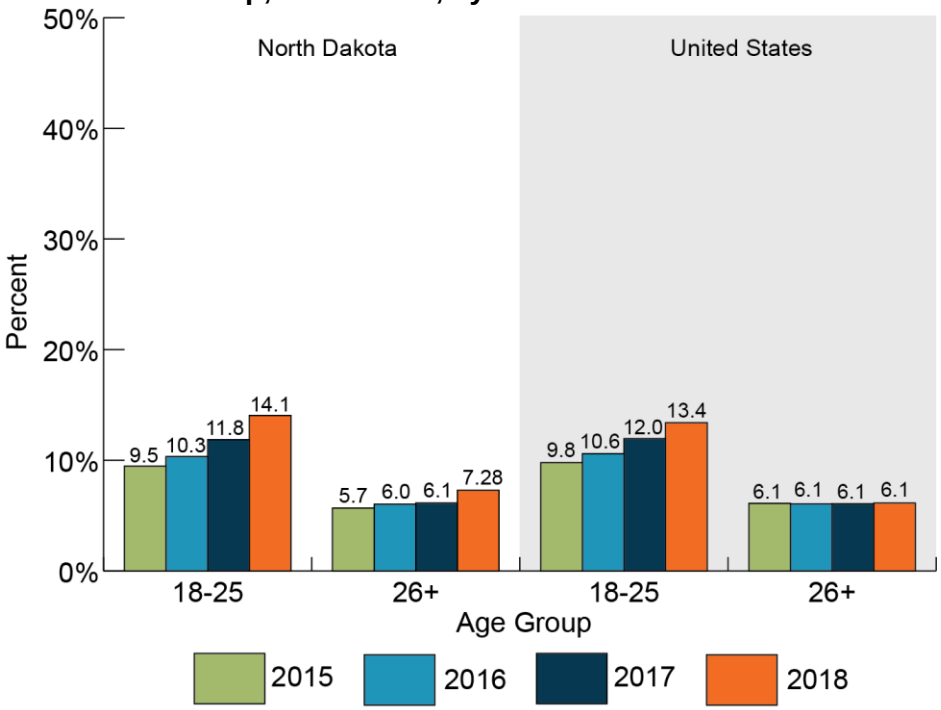
Figure 5.10: Percentage Who Had a Major Depressive Episode in Past 12 Months, Aged 12-17, ND vs. U.S., by Year



Data Source: NSDUH

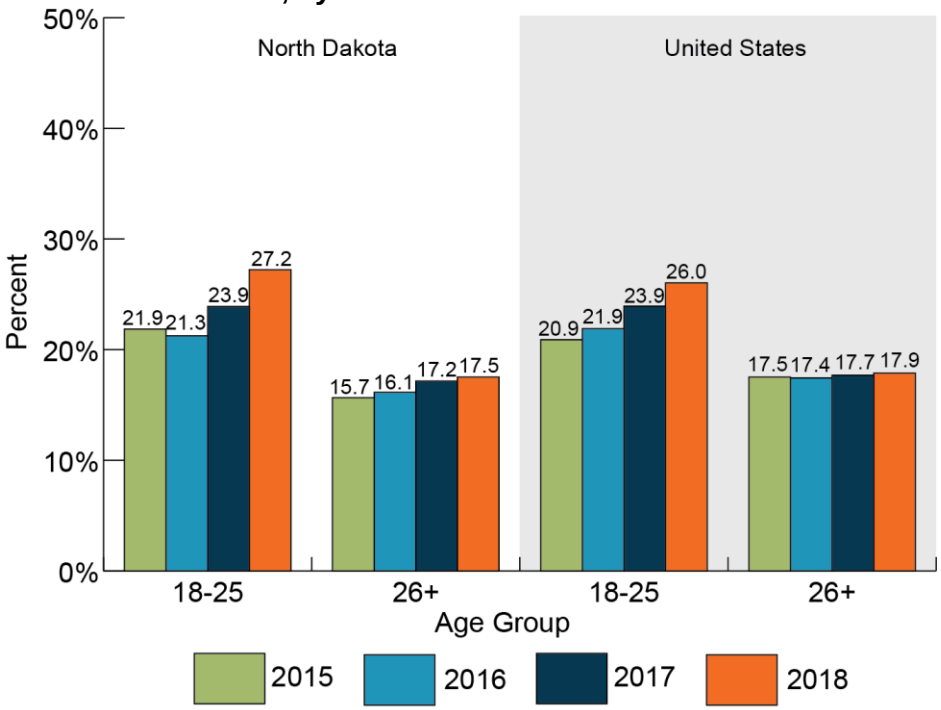
Adults

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



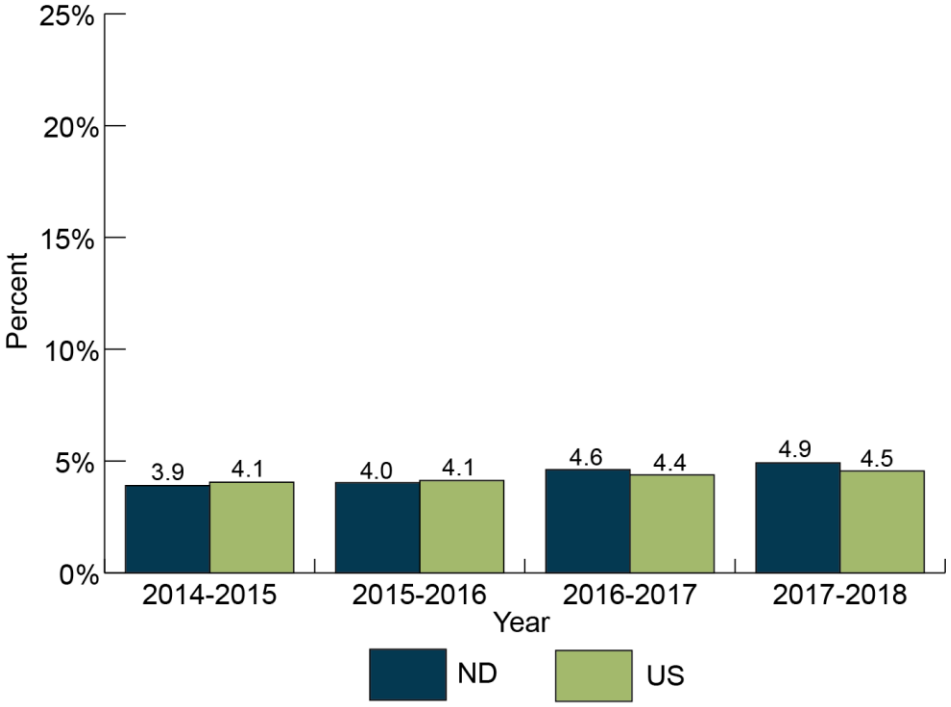
Data Source: NSDUH

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



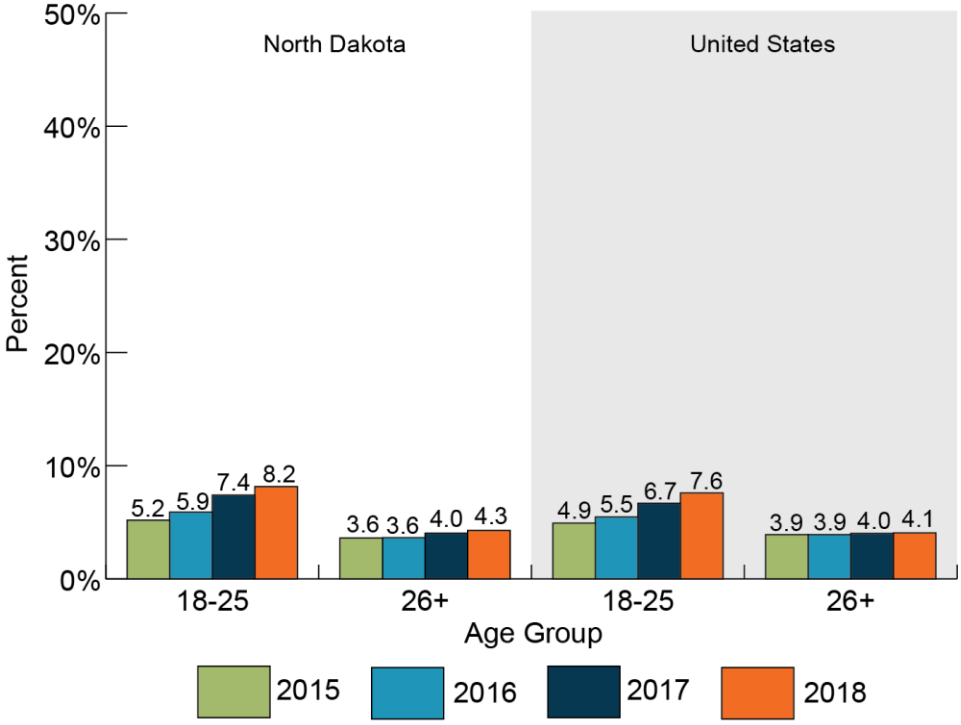
Data Source: NSDUH

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



Data Source: NSDUH

Figure 5.14: 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 Psychology 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 647,000 (1.9%) of U.S. young adults aged 18-25 attempted suicide in 2018. In the same year, roughly 521,000 (0.5%) adults aged 26 to 49, and 274,000 (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.

Data Source(s)

Youth

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

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

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

Adults

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

Wyoming Survey and Analysis Center (WYSAC). Survey of North Dakota Young Adults, 2018

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

Section Summary

Youth

- 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 5.15).
- 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 5.17).
- 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 5.17).

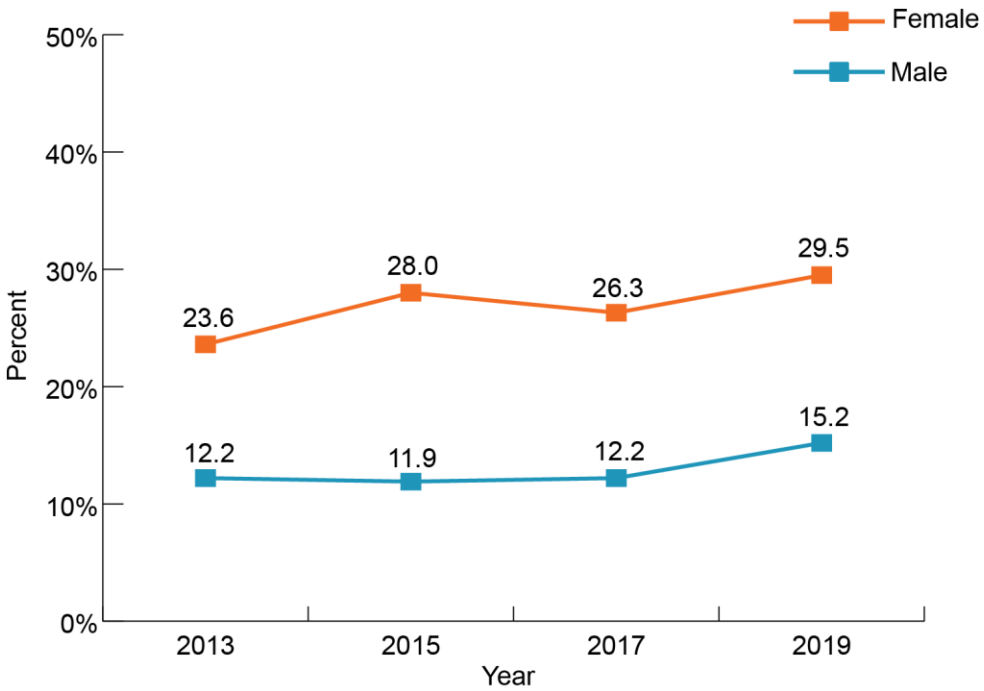
- The percentage of North Dakota high school students who reported attempting suicide one or more times in the past 12 months (13.5%) was nearly double the national rates (7.4%) in 2017. The rate for North Dakota high school students slightly decreased from 2017 to 2019 by 0.5% (YRBS, 2019; see Figure 5.18).
- 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 5.19).
- 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 5.20).

Adults

- The percentage of North Dakota and U.S. adults aged 18-25 who reported serious thoughts of suicide in the past year increased from 2015 to 2018 (NSDUH, 2018; see Figure 5.21).
- From 2015 to 2018, the percentage of North Dakota adults aged 26 and older who reported serious thoughts of suicide in the past year increased, while U.S. rates remained constant over the same time period (NSDUH, 2018; see Figure 5.21).
- 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 5.22).
- Both North Dakota female and male adults reported higher rates of suicide than U.S. adults between 2014 and 2017 (CDC Wonder, 2019; see Figure 5.23).
- Rates of suicide among North Dakota and U.S. male adults (ND 27.5%, U.S. 22.8%) was roughly three times greater than their female counterparts (ND 10.3%, U.S. 6.2%) in 2017 (CDC Wonder, 2019; see Figure 5.23).
- Rates of suicide among white adults in North Dakota have remained higher than the U.S. average for the same group between 2015 and 2018 (CDC Wonder, 2019; see Figure 5.24).

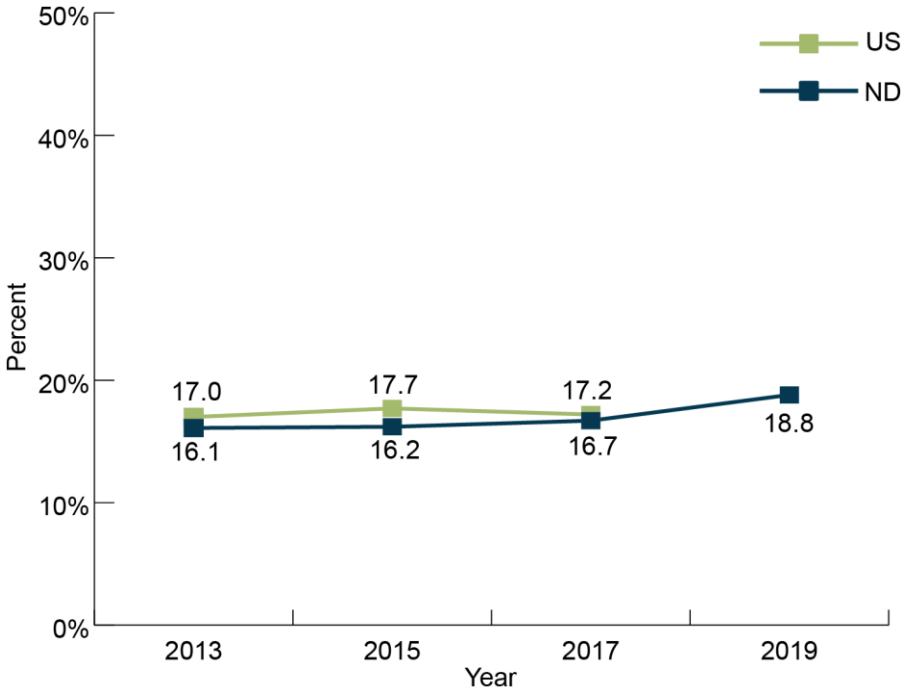
Youth

Figure 5.15: Percentage Who Seriously Considered Suicide, Middle School, by Gender, ND, by Year



Data Source: YRBS

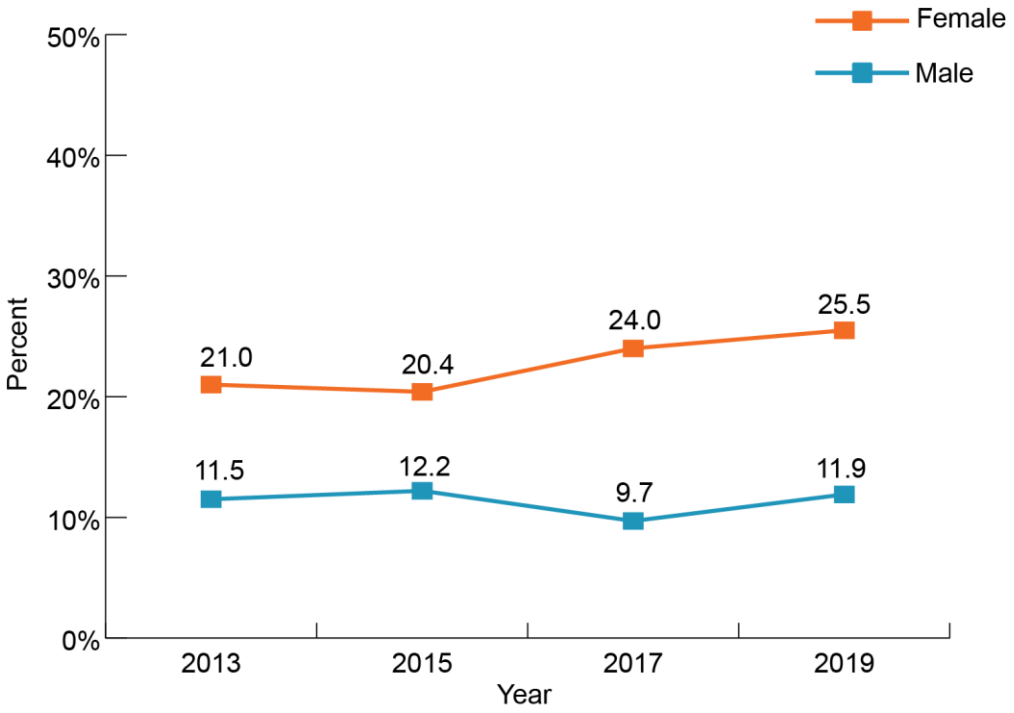
Figure 5.16: Percentage Who Seriously Considered Suicide, High School, ND vs. U.S., by Year



Data Source: YRBS

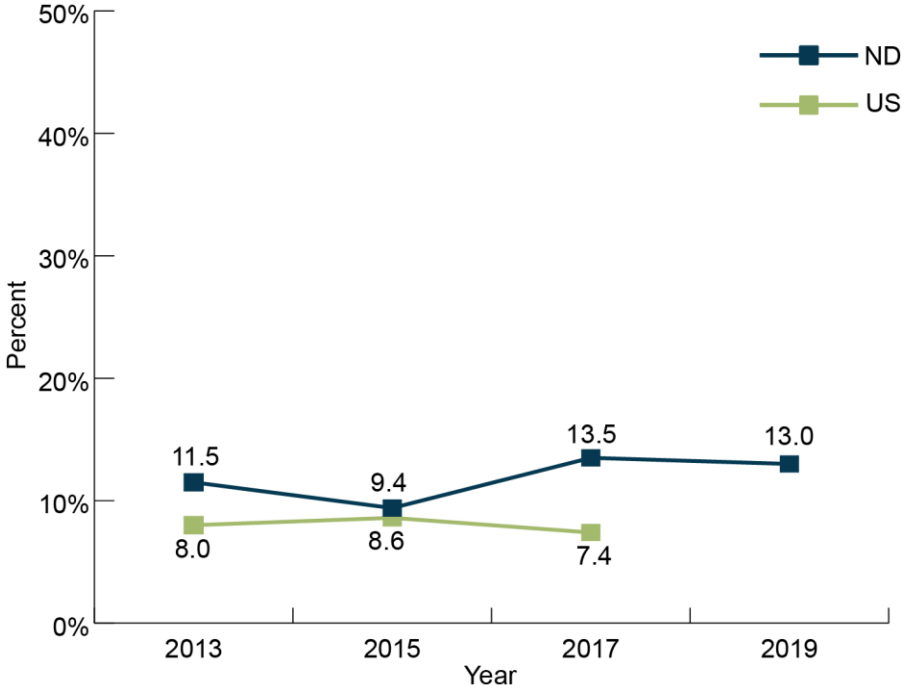
Data Note: 2019 YRBS data for the US was not available at publication time.

Figure 5.17: Percentage Who Seriously Considered Suicide, High School, by Gender, ND, by Year



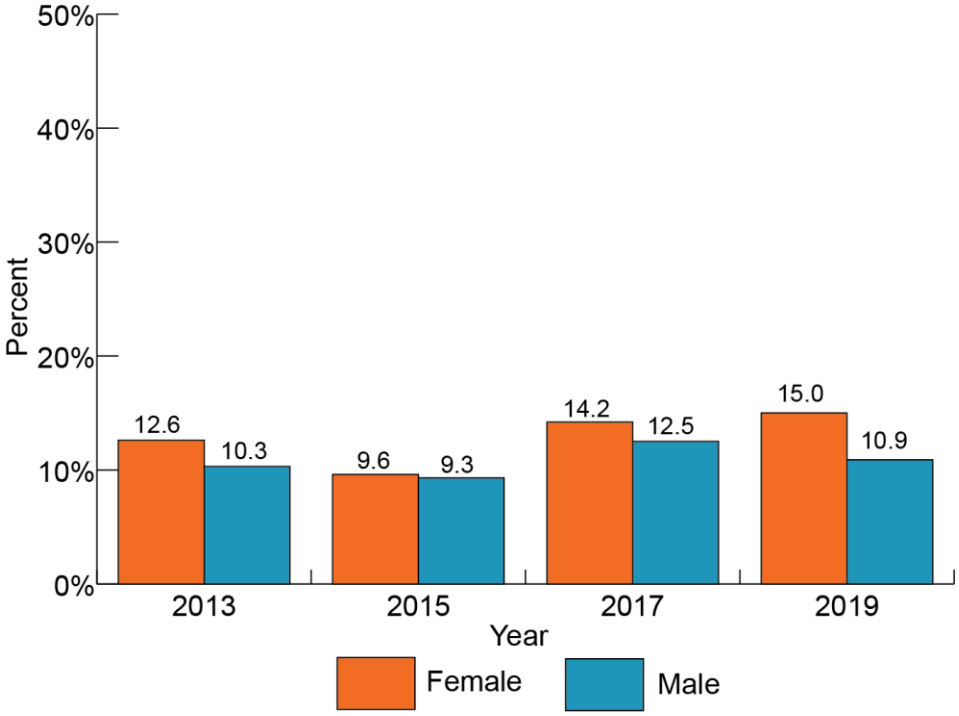
Data Source: YRBS

Figure 5.18: Percentage Who Reported Attempting Suicide One or More Times during Past 12 Months, High School, ND vs. U.S., by Year



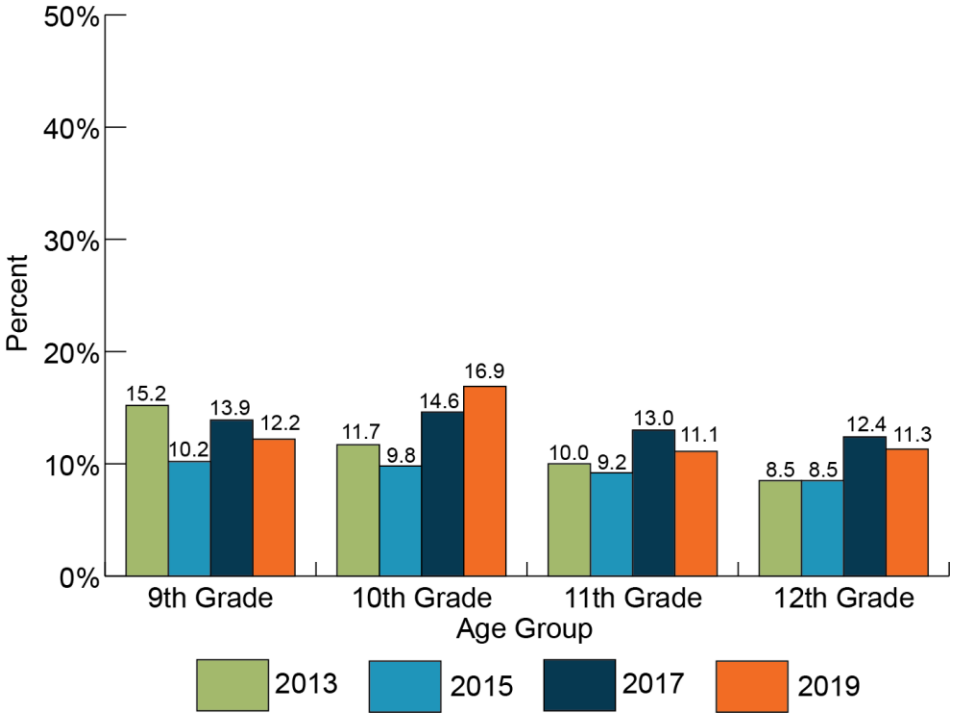
Data Source: YRBS

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



Data Source: YRBS

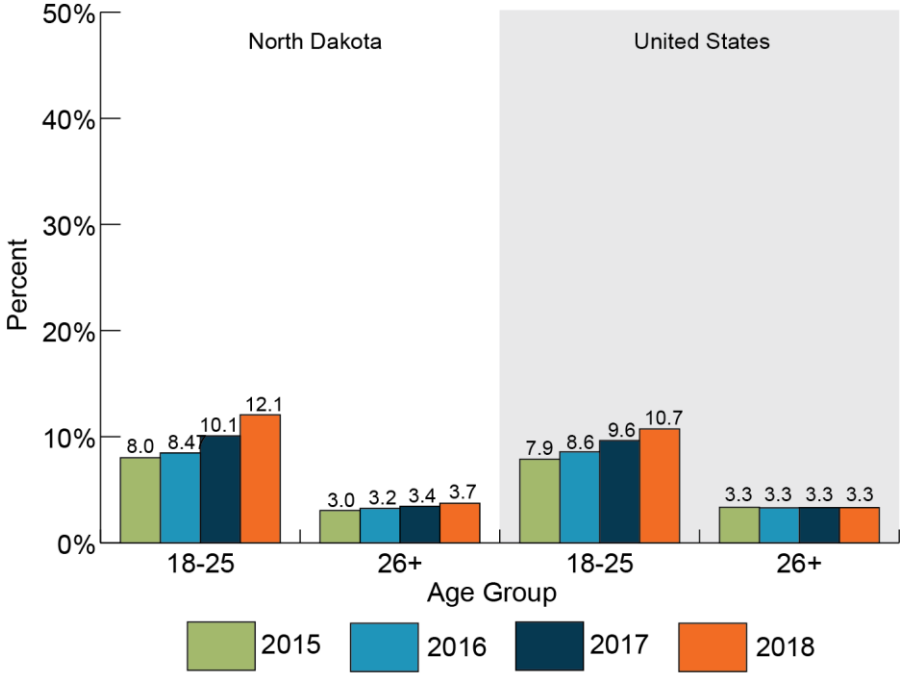
Figure 5.20: Percentage Who Reported Attempting Suicide One or More Times during Past 12 Months, High School, by Grade, by Year



Data Source: YRBS

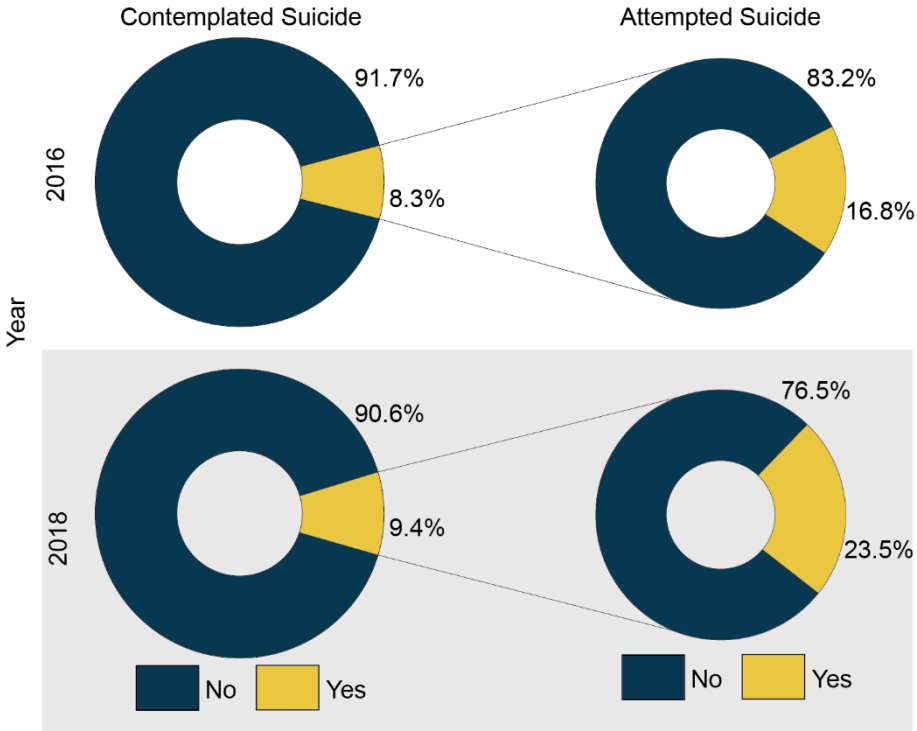
Adult

Figure 5.21: Percentage Who Had Serious Thoughts of Suicide in the Past Year, by Age, ND vs. U.S., by Year



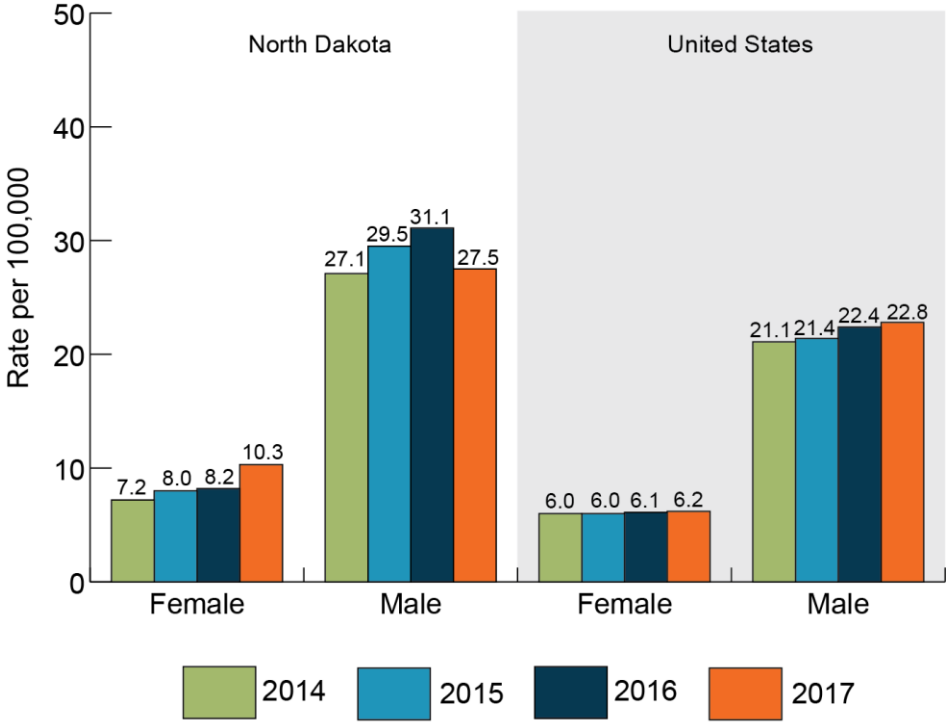
Data Source: NSDUH

Figure 5.22: Percentage of North Dakotans, Ages 18 to 29, Who Had Serious Thoughts of Suicide in the Past Year, by Year



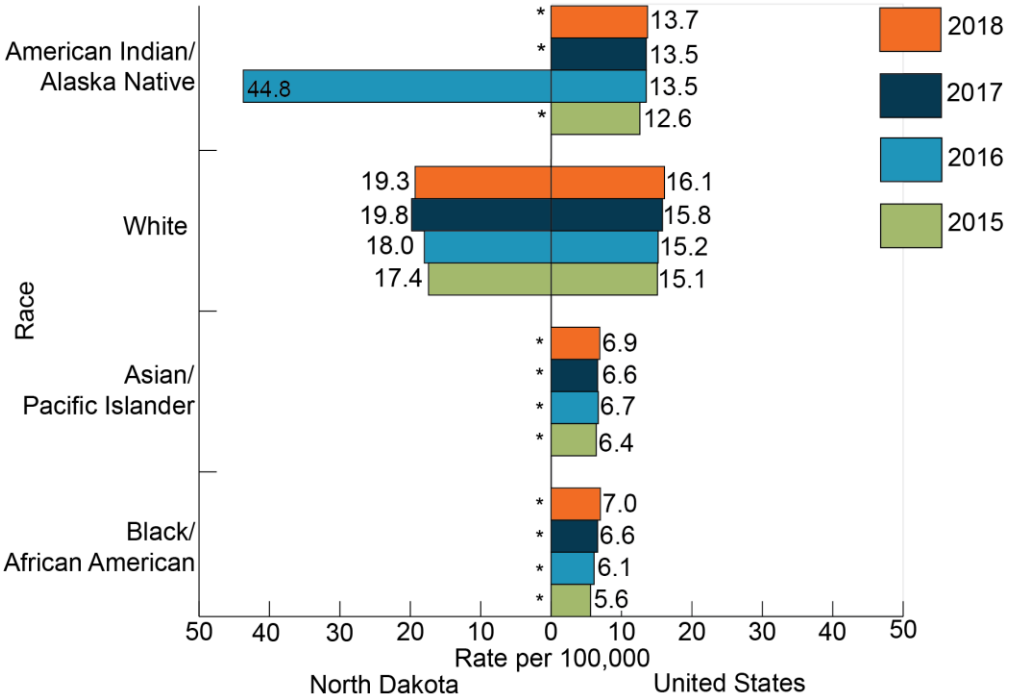
Data Source: NDSOYA

Figure 5.23: Suicide Rate per 100,000 by Gender, ND vs. U.S., by Year



Data Source: CDC Wonder

Figure 5.24: Suicide Rate per 100,000 by Race, ND vs. U.S., by Year



Data Source: CDC Wonder
Data Note: (*) Data is suppressed if respondents per subgroup count falls below the determined “cut-off” value for confidentially and/or poor reliably.

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).

Data Source(s)

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

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

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

FirstLink Annual Report: 2016-2018

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

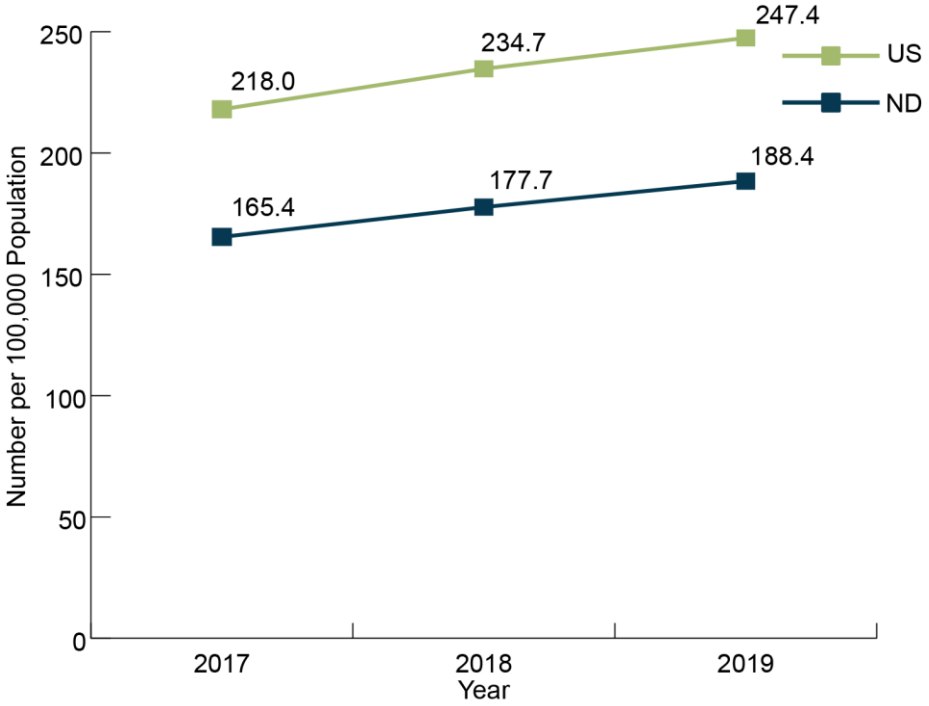
America's Health Rankings: Annual Report 2018 (AHR). Mental Health Providers (MHP)

Section Summary

- The rate of mental health providers per 100,000 population increased from 2017 to 2019 in North Dakota and the U.S. (AHR, 2019; see Figure 5.25).
- The percentage of U.S. and North Dakota adults between the ages of 18 and 25 who reported receiving mental health services increased between 2017 and 2018 (NSDUH, 2019; see Figure 5.26).
- The number of FirstLink phone connections increased overall (49,353 to 60,148) between 2016 and 2019 (FirstLink, 2019; see Table 5.1).
- 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).
- 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).

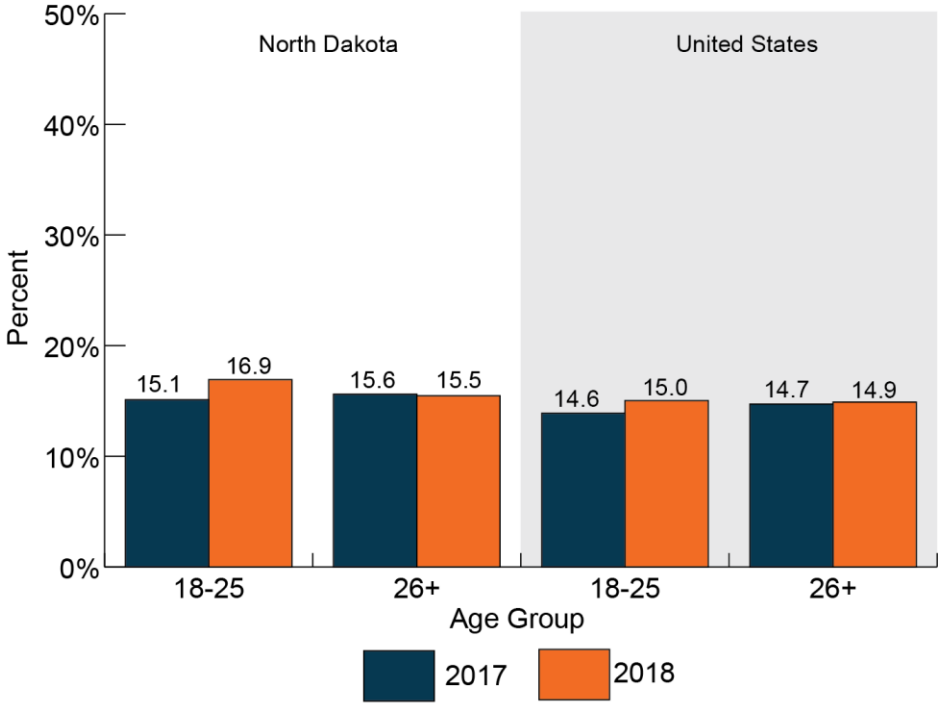
- The number of clients served (per 1,000 people) by the North Dakota State Mental Health Authority System decreased from 2015 to 2018, while national rates increased over the same time period (ND URS, 2018; see Figure 5.28).

Figure 5.25: Mental Health Providers per 100,000 Population, ND vs. U.S., by Year



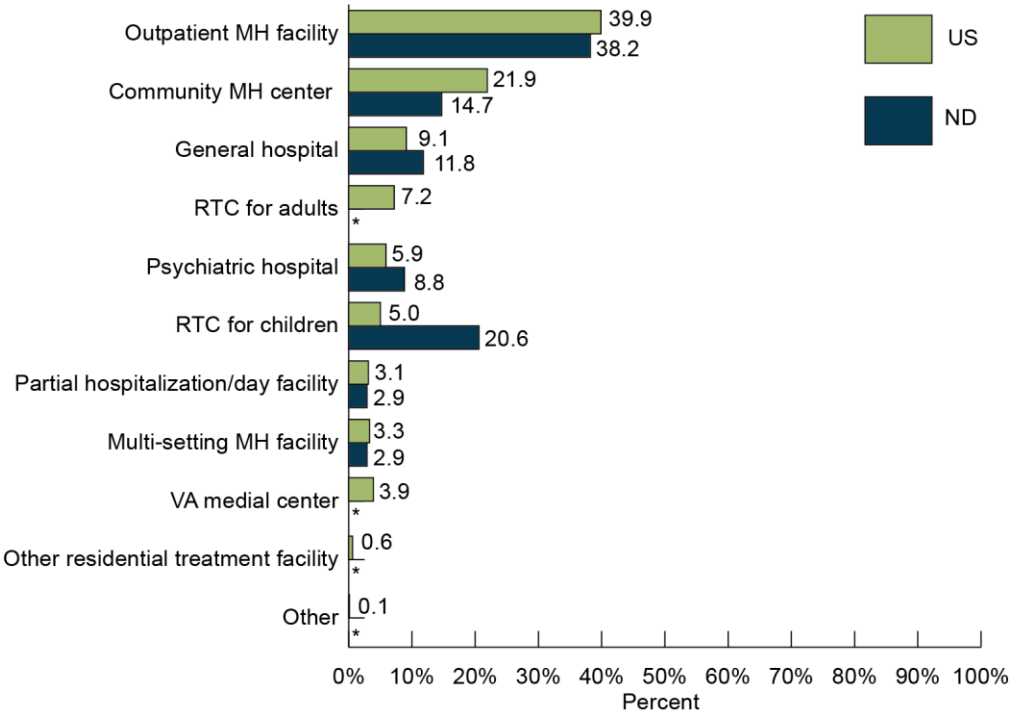
Data Source: AHR
Data Note: (*) Providers included psychiatrists, psychologist, licensed clinical social workers, counselors, marriage and family therapists, substance use providers, and mental health advance practice nurses.

Figure 5.26: Percentage who Received Mental Health Services in the Past Year, ND vs. U.S., by Year



Data Source: NSDUH

Figure 5.27: 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.

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 2015

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

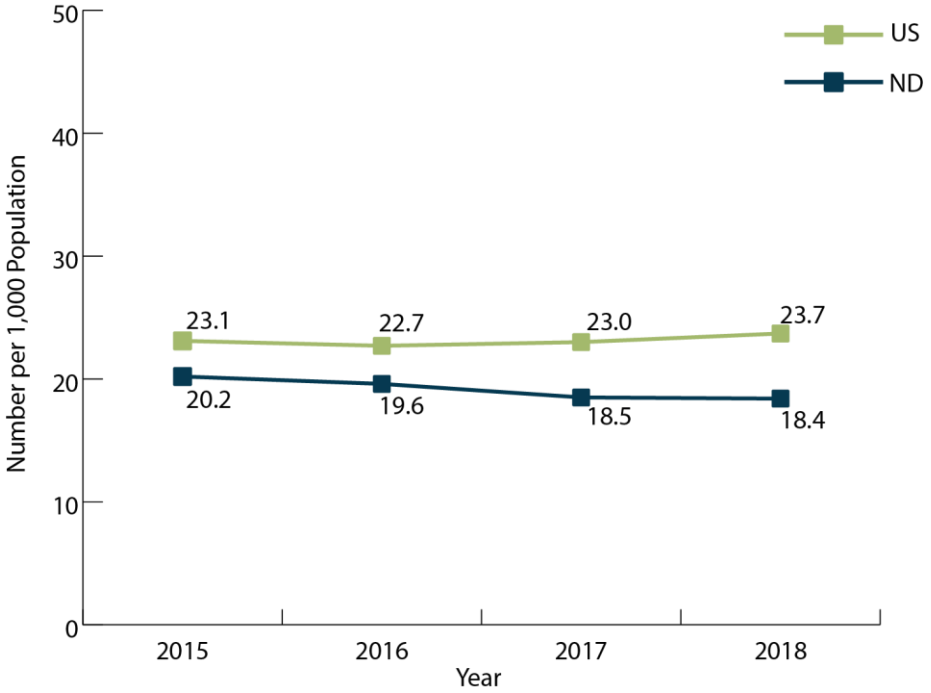
Data Source: FirstLink

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



Data Source: ND URS

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.

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

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

Rural is defines 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).

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).

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).

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).

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).

Data Sources

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/

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

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

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.

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

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

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

The NDCS in 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

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.

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/.

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://wwwdasis.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

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.

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.

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/.

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.

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/.

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/.

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?.

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/.

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/.

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/.

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.

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/.

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/.

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/.

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 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/.

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://wwwdasis.samhsa.gov/dasis2/nmhss.htm.

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 programing. The annual and state reports can be accessed at https://www.samhsa.gov/data/data-we-collect/urs-uniform-reporting-system.