



A Profile of Substance Use in Ohio

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INTRODUCTION

The objective of this report is to describe the public health burden of tobacco use, binge drinking, and drug use among adults and adolescents in Ohio. It is important for public health officials to understand the burden of substance use so that targeted programs can be created. Therefore, in this report only prevalence estimates are reported, overall and by select demographic characteristics of individuals.

Tobacco use: Tobacco is one of the leading causes of mortality in the United States, responsible for approximately 480,000 deaths each year.¹ In addition to being a major risk factor for heart disease, cancer, and lung disease among tobacco users, exposure to secondhand smoke has been linked to asthma and ear infections among children and chronic diseases among adults.¹ Healthcare spending for tobacco-related illnesses is estimated to be \$10 billion each year, or 8.7% of annual healthcare spending. Public programs, such as Medicaid and Medicare, pay for approximately 60% of the total healthcare costs due to smoking.²

Alcohol use: Alcohol is the third leading preventable cause of death in the United States, resulting in an estimated 88,000 deaths per year.³ In 2016, an estimated 66.6 million Americans age 12 years and older were classified as binge drinkers, representing 25% of the population.⁴ Another 16.7 million people age 12 years and older were classified as heavy alcohol users. Alcohol misuse is associated with many serious health risks including damage to the brain and liver, heart disease, hypertension, increased risk of cancer, fetal alcohol syndrome, and a weakened immune system.⁵ In 2010, alcohol misuse cost the United States nearly \$250 billion.⁵ Not all individuals who need treatment for alcohol misuse receive it. In 2016, among adults age 18 years

or older who needed treatment for alcohol misuse, only 7.9% actually received it.⁷

Other substance use: In 2016 there were approximately 28.6 million illicit drug users aged 12 or older.⁸ Illicit drug use costs the United States approximately \$11 billion in healthcare expenses.⁸ Marijuana is the most commonly used illicit drug in the United States, used by an estimated 24 million people aged 12 or older (8.9% of the population age 12 years and older).⁸ Marijuana has many short-term effects including memory and learning problems, and loss of coordination. In the long term it affects brain development, can severely impair mental functioning, and is associated with an increased risk of mental illness.⁹

In 2016 an estimated 1.9 million Americans ages 12 or older were reported as current users of cocaine.⁸ Cocaine is highly addictive and long-term use is associated with adverse health effects involving the respiratory, cardiovascular, and central nervous systems; its use can also lead to overdose and death.¹⁰

Opioid use is one of the most pressing public health concerns. With respect to types of opioids, heroin was used by nearly 1 million Americans ages 12 or older in 2016.⁷ In addition to being a highly addictive substance, long-term use of opioids has been shown to alter the physical structure and physiology of the brain and contributes to mental disorders, sexual dysfunction, damage to mucosal tissues, and many other poor health outcomes.¹⁰ In Ohio, 523 unintentional overdose deaths were due to prescription opioids excluding fentanyl in 2017, down from 564 in 2016.¹¹ Overall, since 2011 overdose deaths related to prescription opioids are down 28% in Ohio. However, fentanyl and related

drug overdose deaths were at 3,431 in 2017, up from 2,357 in 2016. This is a concern among health officials in the state, and many groups are trying to address the issue in various ways.

METHODS

Data sources: Three data sources were used in this report: the 2004-2017 Ohio Family Health Survey (OFHS)/Ohio Medicaid Assessment Survey (OMAS) series, the Ohio Youth Tobacco Survey (OYTS), and the National Survey on Drug Use and Health (NSDUH). Details about each data set can be found on the last page of this report.

Definitions:

Tobacco: Among adults, *current smoking* is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day. Among adolescents, *current tobacco use* is defined as any use in the past 30 days. Susceptibility to using a product is defined as answering anything but “definitely not” to the question “Do you think you will try a [PRODUCT] soon?” This measure has been found to predict future tobacco use among adolescents.

Drinking: *Binge drinking* is defined as consuming 5 or more drinks in a sitting for men, and 4 or more drinks in a sitting for women in the past month.

Other substances: Marijuana, heroin, cocaine, and prescription pain relievers are reported as past 30-day use and past year use. In addition, substance use

disorder diagnosis in the past year is reported.

ANALYSIS

Descriptive statistics are reported in the tables and figures below. No statistical testing was performed. Adult smoking and binge drinking data, from the OFHS and OMAS data, are reported by sociodemographic characteristics. The OYTS data are only reported for high school students overall due to small cell counts for other sociodemographic groups. For a similar reason, NSDUH data are only reported by age. It is not possible to get estimates for other sociodemographic groups because of small sample sizes.

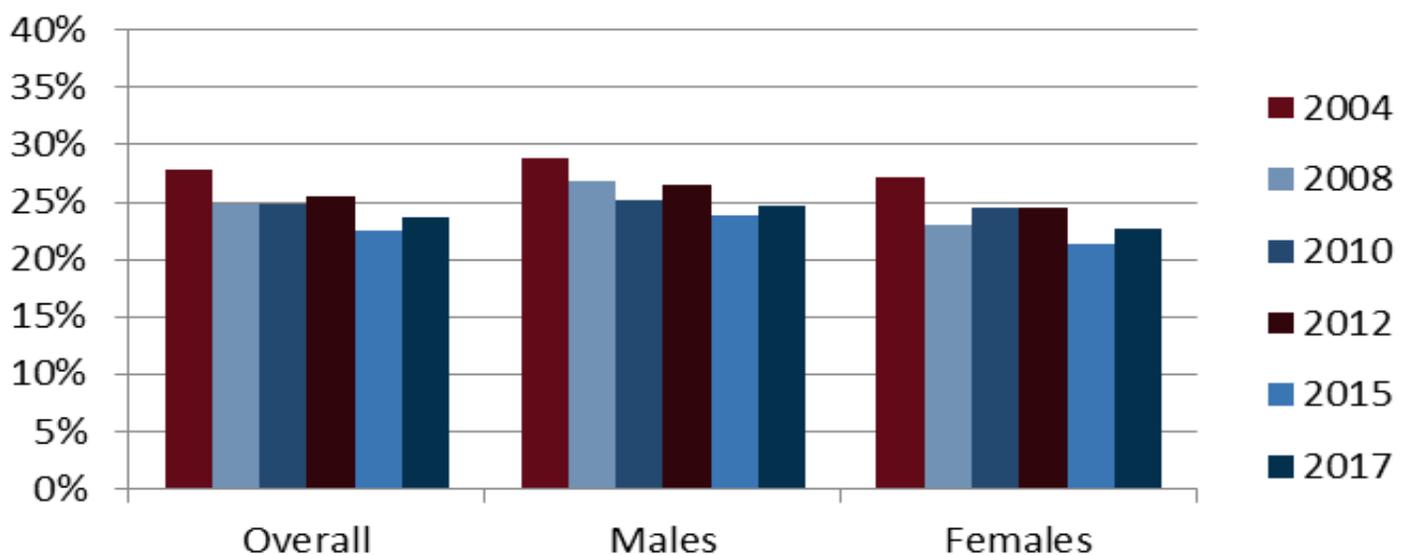
RESULTS

Current Smoking Trends among Ohio Adults by Demographic Characteristics

As indicated in Figure 1, current smoking prevalence among adults in Ohio has changed little since 2004, when the estimate was 28% in Ohio (24% in 2017). In the United States, 15.5% of adults are current smokers.¹² Thus, Ohio is nearly 10 percentage points above the national average. Moreover, the smoking rate in Ohio is the 6th highest in the nation. The prevalence of smoking is similar for male and female adults in Ohio.

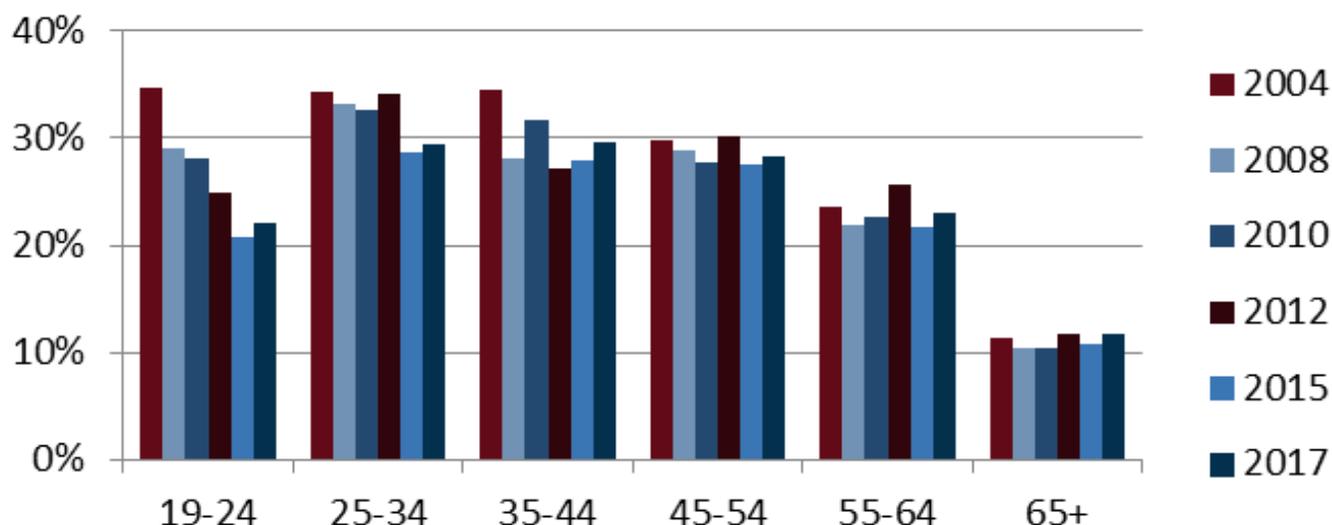
As indicated in Figure 2, there have been declines in cigarette smoking among young adults (ages 19-24 and ages 25-34). However, the decline has been less

Figure 1. Trends in Smoking Prevalence Among Adults Age 19 or Older in Ohio



Source: Ohio Family Health Survey (OFHS) and Ohio Medicaid Assessment Survey (OMAS)

Figure 2. Trends in Smoking Prevalence by Age in Ohio



Source: *OHHS and OMAS*

steep for adults ages 35 and older. Smoking tends to decline with older age, starting with the 55-64 age group. It is important to note that national trends also show a steep decline in cigarette smoking among adolescents and young adults. However, total tobacco use has remained steady because these groups use other products, like e-cigarettes and cigar products.

Table I presents the current smoking prevalence by poverty level, education, race/ethnicity and county type. Smoking and poverty level are clearly related: with each increasing income category, smoking prevalence decreases. Similarly, smoking and education have an inverse relation. Non-Hispanic black adults have the highest prevalence of smoking, followed by non-Hispanic white adults and Hispanic adults. Smoking has the highest prevalence in Appalachian counties.

Tobacco Use among Ohio Youth

As indicated in Table 2, e-cigarettes are the most popular product among high school students, followed by cigars, cigarillos or little cigars, and then cigarettes and hookah. It is important to note, too, that susceptibility to tobacco use (i.e., interest in trying in the future) follows a similar trend, with e-cigarette susceptibility highest and cigarette susceptibility lowest (hookah was not asked).

Secondhand smoke exposure is rather high among high school students. Nearly 1 in 5 students (17.2%)

Table I. Current Smoking among Adults (age 19 years and older) by Select Indicators in Ohio in 2017

Group	Current Smoking
Income Category	
0 – 138% FPL	38.3%
139 – 206% FPL	26.1%
207 – 400% FPL	18.8%
> 400% FPL	13.0%
Education Level	
< High School	43.6%
High School/GED	29.2%
> High School	17.1%
Race/Ethnicity	
White	23.6%
Black	27.5%
Hispanic	22.4%
Other	20.2%
County Type	
Appalachian	27.3%
Metropolitan	23.6%
Rural non-Appalachian	23.0%
Suburban	22.2%

Source: *OMAS*

Table 2. Past 30-Day Tobacco Use Estimates* among High School Students in Ohio in 2016

Tobacco Product	Past 30-Day Prevalence	Susceptibility among Never Users
Cigarettes	8.4%	30.2%
Cigars, Cigarillos, or Little Cigars	9.2%	35.5%
E-cigarettes	10.5%	37.8%
Hookah	4.5%	NA

Source: Ohio Youth Tobacco Survey (OYTS)

report living in a household that allows smoking at least some of the time.

While Ohio data are not available to examine tobacco use by race/ethnicity (due to the small sample size which does not allow for reporting), national data from middle and high school students suggest that past 30-day use of any tobacco product is highest among Native Hawaiian and Pacific Islander (23.4%) youth, followed by American Indian and Alaskan Native (20.6%), multiracial (16.5%), white (15.3%), Hispanic (14.6%), black (11.5%), and Asian (5.0%) youth.¹³

Binge Drinking Trends among Ohio Adults by Demographic Characteristics

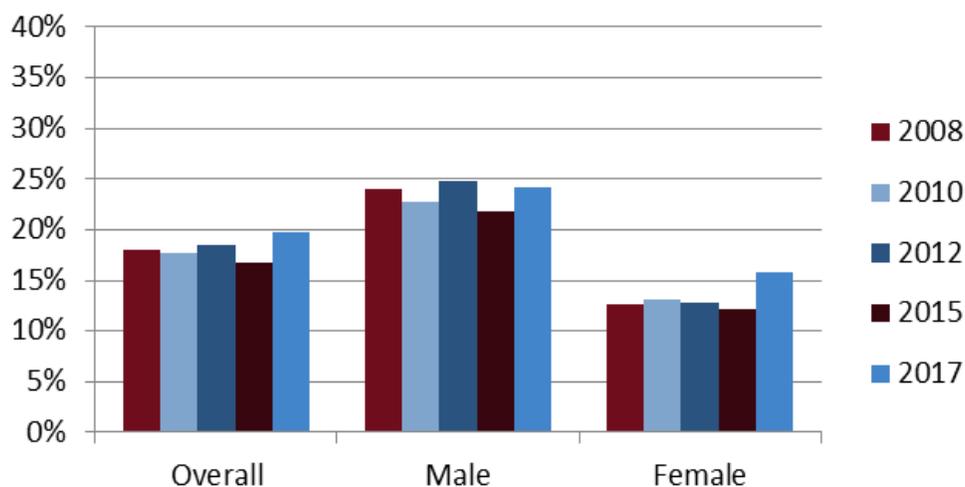
As indicated in Figure 3, binge drinking has been fairly stable since 2008 (it was not measured in 2004). However, in 2017 there appears to be a slight increase in binge drinking among both males

and females age 19 years and older. It will be important to continue to track this indicator over time in Ohio. Nationally, the median prevalence of binge drinking is 16.9%, which is lower than the 2017 prevalence in Ohio.

As indicated in Figure 4, binge drinking is most prevalent among young adults (19-24 and 25-34 years), with prevalence decreasing as age increases. While there is some year-to-year variability, it appears that the prevalence of binge drinking has increased in all age groups in the most recent OMAS survey.

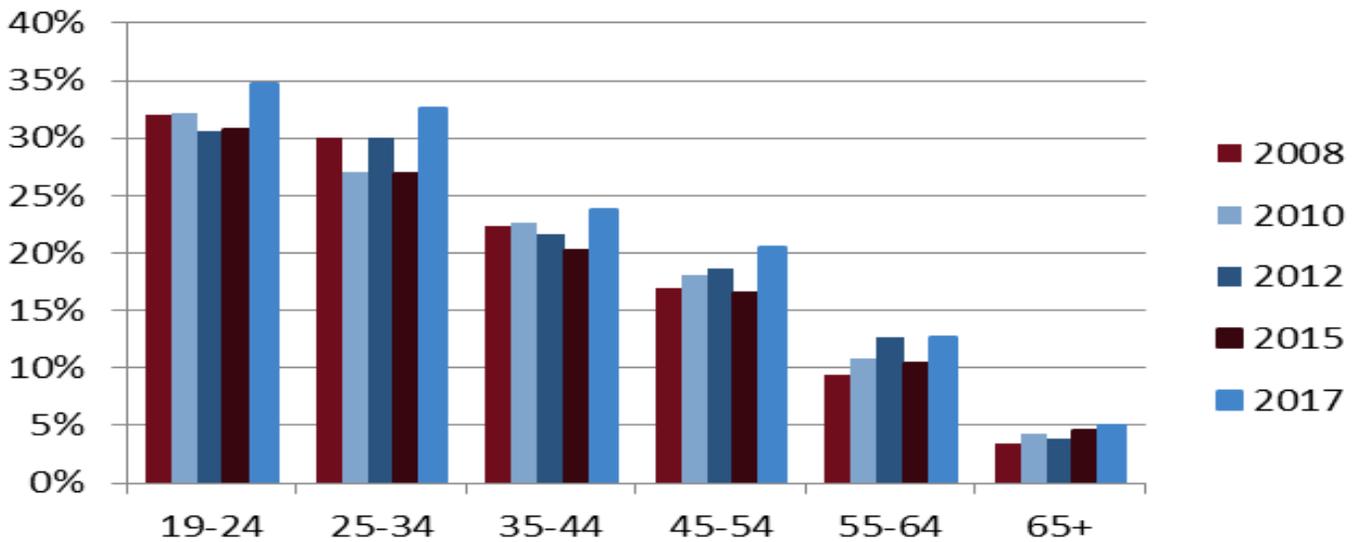
Table 3 presents the binge drinking prevalence by poverty level, education, race/ethnicity and county type. Unlike smoking, binge drinking prevalence increases with income and education. Asian and other race/ethnicity have the lowest prevalence of binge drinking, whereas there is not much variability

Figure 3. Trends in Binge Drinking among Adults Age 19 and Older in Ohio



Source: OHHS and OMAS

Figure 4 . Trends in Binge Drinking by Age in Ohio



Source: OMAS and OFHS

Table 3 . Binge Drinking among Adults (age 19 years and older) by Select Indicators in Ohio in 2017

Group	Binge Drinking
Income Category	
0 – 138% FPL	17.2%
139 – 206% FPL	18.7%
207 – 400% FPL	19.2%
> 400% FPL	23.1%
Education Level	
< High School	16.1%
High School/GED	18.3%
> High School	21.2%
Race/Ethnicity	
White	19.7%
Black	20.5%
Hispanic	21.5%
Other	16.8%
County Type	
Appalachian	17.8%
Metropolitan	21.1%
Rural non-Appalachian	17.4%
Suburban	18.8%

Source: OMAS

among the other race/ethnicity groups. Adults in metropolitan counties binge drink at the highest rate.

Co-Occurrence of Mental Health Impairment and Smoking/Binge Drinking among Ohio Adults

Substance use and mental health impairment are related in most populations. As indicated in Figure 5, the prevalence of smoking increases with an increasing number of mentally impaired days. Binge drinking prevalence, however, increased between 0 and 1-6 days, but decreased with a greater number of mentally impaired days.

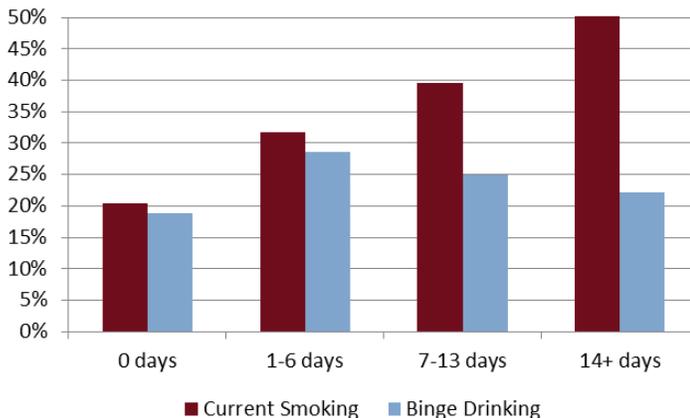
Co-Occurrence of Developmental Disability and Smoking/Binge Drinking among Ohio Adults

As indicated in Figure 6, the prevalence of smoking is about double among adults with a self-reported developmental disability, whereas binge drinking prevalence is similar between the two groups.

Substance Use among Ohio Adults and Youth

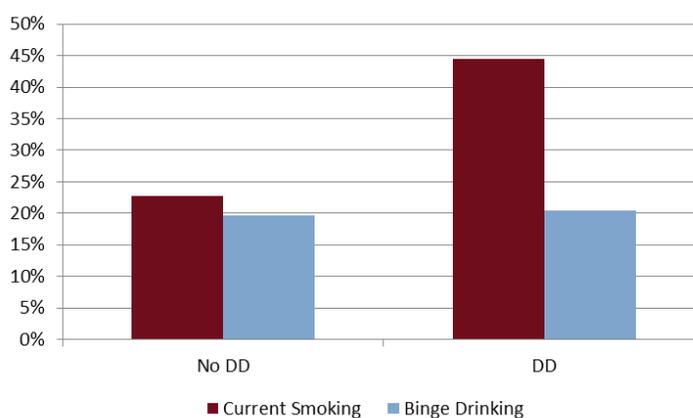
OMAS does not collect data on substances other than alcohol and tobacco among adults, and no substance data are collected through the child proxy survey. Therefore, the data in Table 4 are from the 2015 and 2016 NSDUH surveys that were collected in Ohio. For all substances, past 30-day and past year prevalence estimates are higher among adults compared to youth. Of all substances reported in NSDUH, marijuana is the most

Figure 5. Smoking and Binge Drinking by Mentally Impaired Days over the Past Month among Adults Age 19 and Older in Ohio in 2017



Source: OMAS

Figure 6. Smoking and Binge Drinking by Developmental Disability Status among Adults Age 19 and Older in Ohio in 2017



Source: OMAS

Table 4. Past 30-Day and Past Year Substance Use Estimates* among Youth and Adults in Ohio in 2015-2016

	12-17 year-olds	18+ year-olds
Past Month Estimates		
Marijuana use	6.4%	9.2%
Substances other than marijuana	2.1%	3.2%
Past Year Estimates		
Marijuana use	12.0%	14.0%
Cocaine	0.5%	1.8%
Heroin	0.1%	0.4%
Pain reliever misuse	3.8%	4.6%
Substance use disorder	4.3%	8.3%

Source: National Survey of Drug Use and Health 2015 and 2016

prevalent, followed by pain relievers. Nearly 5% of youth and 10% of adults meet the diagnostic criteria for a substance use disorder in the past year.

POLICY CONSIDERATIONS

Smoking continues to be a public health problem in Ohio. While the smoking prevalence has declined among younger adults over time, older Ohio adults continue to smoke at a relatively high rate.

Therefore, continued efforts should promote cessation among adults. Moreover, while the prevalence of cigarette smoking is now low among Ohio youth, other tobacco products are common and should be targeted with prevention efforts. Finally, given the somewhat high prevalence of

smoking exposure in the home, efforts could focus on reducing such exposure. These goals are in line with the Center for Disease Control and Prevention’s (CDC) National Tobacco Control Program targets, which are to: 1) eliminate exposure to secondhand smoke; 2) promote quitting among adults and youth; 3) prevent initiation among youth; and, 4) identify and eliminate disparities among population groups.¹⁴

The prevalence of binge drinking has increased slightly in Ohio in the past two years. It will be important to continue to monitor this trend with OMAS data. The Substance Abuse and Mental Health Services Administration has promoted the Screening, Brief Intervention, and Referral to Treatment, or the SBIRT, model.¹⁵ The benefits of this approach to alcohol abuse and illicit drug use are that many different provider types and places where individuals receive health care (primary care clinics, emergency departments, and community settings) can reach out and identify individuals who need treatment for substance use disorders (SUDs). Following screening, brief intervention can occur, which involves motivating the individual to seek treatment, which is the last step of the process.

Beyond these general recommendations for smoking, binge drinking, and substance use prevention and cessation, it is important to ensure that interventions are conducted with appropriate language and are culturally sensitive, given the diversity of Ohio's population.

While not presented in this report, research suggests that low-income communities are often the target of tobacco and alcohol marketing efforts.^{16,17} Therefore, policy initiatives could focus on reducing the reach of these marketing strategies in low-income communities.

DATA SOURCES

OMAS is a telephone survey that samples both landline and cell phones of Ohio residents. The survey examines insurance status, access to the health system, health statuses, demographics and other characteristics of Ohio's Medicaid, Medicaid-eligible, and non-Medicaid populations. In 2017, researchers completed 39,711 interviews with adults and 9,202 proxy interviews of children. The 2017 OMAS is the sixth iteration of the survey (previously known as Ohio Family Health Survey). For details, please see the 2017 OMAS Methodology Report (<https://grc.osu.edu/OMAS>).

OMAS data from 2012 and 2015, as well as OFHS data from 2004, 2008, and 2010 were also analyzed. In this report, tobacco data is reported for adults for all survey years since 2004 and binge drinking data since 2008 (binge drinking was not measured in 2004).

The Ohio Youth Tobacco Survey is a school-based survey of students in grades 6-12. It has been conducted every two years since 2000, in collaboration with the CDC. The survey allows for the estimation of the prevalence of tobacco use and cessation, access to tobacco products, knowledge about and attitudes towards tobacco, advertising exposure, prevention education, and secondhand smoke exposure. This report includes 2016 data on high school students.

The National Survey on Drug Use and Health (NSDUH) is an in-person survey that has been conducted every year since 1971. It is currently sponsored by the Substance Use and Mental Health Administration. Data on tobacco, alcohol, and other substance use are collected among the non-institutionalized civilian population age 12 years and older in the United States. For this report, Ohio substance use data from 2015 and 2016 is presented for adolescents age 12-17 years and adults age 18

years and older.

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