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Youth Tobacco Use

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Summary

In the United States, children and teens constitute the majority of all new smokers (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). The earlier young people begin using tobacco products, the more likely they are to use them as adults and the longer they will remain users (Institute of Medicine, 2015). The Wyoming Tobacco Prevention and Control Program (TPCP) shares two key goals with the federal tobacco prevention and control program: (a) reduce youth initiation of tobacco use (Centers for Disease Control and Prevention [CDC], 2014) and (b) promote quitting tobacco use among youth (CDC, 2015) as part of a comprehensive tobacco prevention and control program.

In Wyoming, prevalence of current cigarette use among high school students has decreased in recent years. Wyoming's prevalence rates have generally been near the national average. In addition, the majority of 2015 high school smokers had made at least one quit attempt in the past year (Wyoming Youth Risk Behavior Survey [WY YRBS], 2015; Youth Risk Behavior Surveillance System [YRBSS], 2015).

Wyoming middle and high school students generally perceive smoking cigarettes and smokeless tobacco use as socially unacceptable (Prevention Needs Assessment [PNA], 2014).

Tobacco control programs reduce youth smoking prevalence and susceptibility (youth who have never smoked and are at risk for trying smoking). Tobacco control policies, such as smoke-free air policies and high prices for tobacco products, can decrease the smoking prevalence for youth and, in time, contribute to a lower adult smoking prevalence, thereby reducing negative health conditions associated with smoking (Singh, Arrazola, Corey, Husten, Neff, Homa, & King, 2016).

Age of Initiation: Young Smokers

Youth who have never smoked can be identified as susceptible to smoking based on their estimated likelihood of smoking. Farrelly et al. (2013) operationalized smoking susceptibility as answering anything but "definitely not" to two questions from the National Survey on Drug Use and Health (NSDUH): "If one of your best friends offered you a cigarette would you smoke it?" and "At any time during the next 12 months do you think you will smoke a cigarette?" Susceptibility to smoking among never smoking youth decreased from 23% to 20% between 2002 and 2008.

Table 1: 15- and 16-Year-Olds Are at Greatest Risk

Modal age for smoking initiation

Grade	Age	% of All Students
9th grade	13 or 14	10%
10th grade	15 or 16	10%
11th grade	15 or 16	14%
12th grade	15 or 16	8%

Source: *WY YRBS, 2015.*

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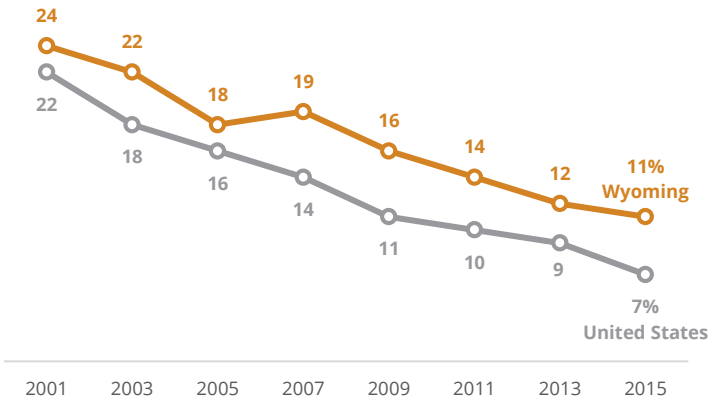
Smoking initiation is defined as the age at which a person first smokes one whole cigarette. According to the Wyoming YRBS (2015), teens aged 15 or 16 are the highest risk for smoking initiation. More students in 10th, 11th, and 12th grades report smoking initiation at that age than at other ages (Table 1). Typically, teens turn 15 during 9th grade.

The percentage of Wyoming high school students who smoked one whole cigarette before turning 13 declined between 2001 and 2015. From 2001 to 2015, U.S. high school students showed a similar decline (Figure 1; WY YRBS, 2015; YRBSS, 2015).

Figure 1: Students Who Smoked First Whole Cigarette Before Age 13 Declines

Percentage of students who first smoked a whole cigarette before the age of 13, 2001-2015



Source: *WY YRBS, 2015; YRBSS, 2015.*

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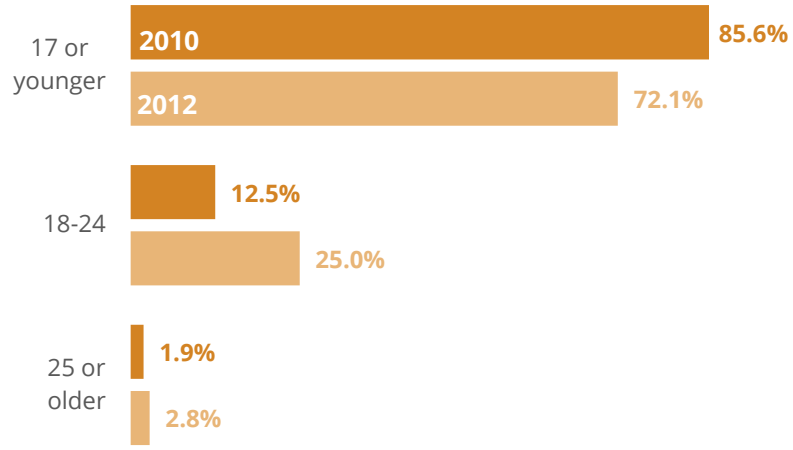
Age of Initiation: Adult Smokers

Overall, it is clear that most Wyoming adults who are or have been regular smokers began smoking before the legal age of 18. Few current, former, or experimental smokers (people who have smoked, but reported smoking fewer than 100 cigarettes in their lifetime) reported starting smoking after the age of 24. For *current* smokers, the age of smoking initiation appears to be increasing. Between 2010 and 2012, the percentage of current smokers who reported first smoking a whole cigarette before the legal age of 18 *decreased* by 14 percentage points. In the same time frame, the percentage of smokers who reported first smoking a cigarette between the ages of 18 and 24 *increased* by 13 percentage points. Finally, the percentage of current smokers who reported first smoking a cigarette after the age of 24 increased slightly (but not significantly), by 1 percentage point (Figure 2). There is a similar pattern among former smokers, but it did not change from 2010 to 2012 (WYSAC, 2014).

Figure 2: Smoking Initiation Declines with Age

Percentage of current Wyoming adult smokers and smoking initiation, by age



Source: *WYSAC, 2014.*

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Like current and former smokers, few *experimental smokers* (adults who had not smoked at least 100 cigarettes in their lifetime but had tried cigarette smoking) first smoked a whole cigarette after the age of 24. Unlike current and former smokers, the percentage of experimental smokers who first smoked a cigarette before the legal age of 18 compared to between the ages of 18 and 24 are similar. As with former smokers, the changes between 2010 and 2012 were relatively small and not statistically significant (WYSAC, 2014).

Youth Prevalence of Cigarette Smoking: Wyoming and the United States

Over time, preventing young people from starting to smoke and increasing the number of young smokers who quit can reduce the number of adults who smoke. Decreasing the prevalence of smoking among youth and adults can greatly improve community health (Institute of Medicine, 2015).

According to national data from the 2015 YRBSS, Wyoming tied with Arkansas for the third highest smoking prevalence for youth. When compared to the five bordering states with available data, Wyoming was highest with an estimated youth smoking prevalence of 16% (Table 2; YRBSS, 2015).

Table 2: Youth Smoking in Wyoming Highest in Region

Youth smoking prevalence by state

Location	Percentage
Wyoming	16%
Montana	13%
Nebraska	13%
United States	11%
Idaho	10%
South Dakota	10%
Colorado	Not available
Utah	Not available

Note: The 2011 prevalence rate in Colorado was 16%. The 2013 prevalence rate in Utah was 4%.

Source: *YRBSS, 2015.*

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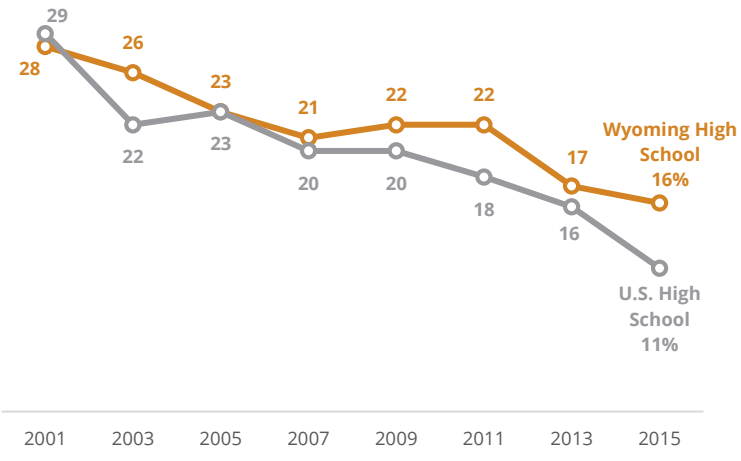
Figure 3: Number of Students Who Smoked Cigarettes in Past 30 Days Declines

Percentage of students who smoked cigarettes on one or more of the past 30 days, 2001–2015



Source: *WY YRBS, 2015; YRBSS, 2015.*

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Prevalence of Cigarette Smoking: Trends

Between 2001 and 2015, the smoking rates for Wyoming and U.S. students declined. The trend among Wyoming high school students is similar to the national trend and has continued in 2015 (Figure 3; WY YRBS, 2015; YRBSS, 2015).

Quitting Smoking

The yearly percentage of Wyoming high school smokers who had attempted to quit in the 12 months prior to the survey declined from

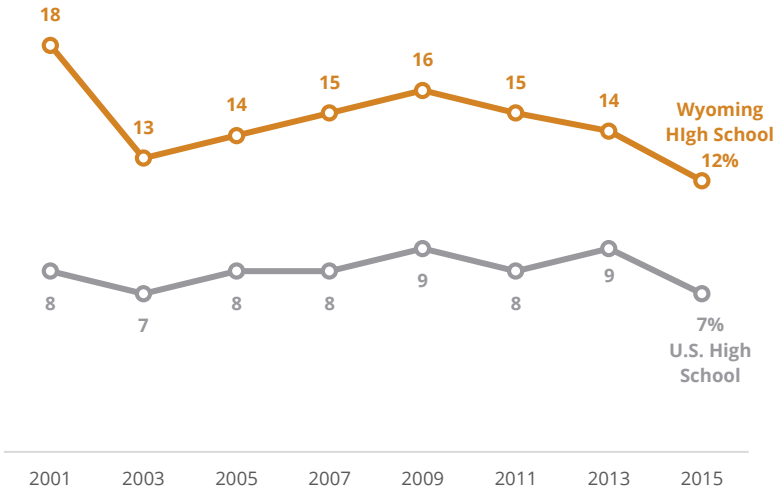
58% in 2001 to 53% in 2015, Nationwide, the percentage declined from 57% in 2001 to 45% in 2015 (WY YRBS, 2015; YRBSS, 2015).

Prevalence of Smokeless Tobacco Use

Based on use during the 30 days prior to being surveyed, smokeless tobacco use in Wyoming was more common among high school students (12%; WY YRBS, 2015) than among adults (9%; Behavioral Risk Factor Surveillance System [BRFSS], 2014) and more common among high school young men (17%) than high school young women (6%; WY YRBS, 2015).

Figure 4: Wyoming Smokeless Tobacco Use Higher than National Rate

Percentage of high school students who used smokeless tobacco on one or more of the past 30 days, 2001–2015



Source: *WY YRBS, 2015; YRBSS, 2015.*

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Prevalence of Smokeless Tobacco Use: Trends

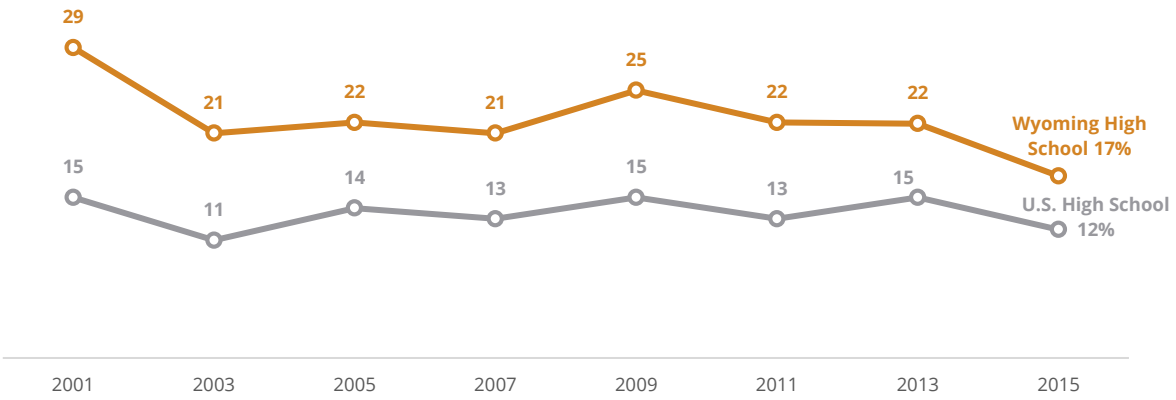
In 2015, 12% of Wyoming high school students used smokeless tobacco in the past 30 days. This rate was significantly higher than the national rate of 7% in 2015. At all ages, smokeless tobacco use is more common among young men than young women (WY YRBS, 2015; YRBSS, 2015).

Prevalence of Smokeless Tobacco Use: Young Men

The smokeless tobacco use rates for U.S. and Wyoming high school men did not consistently decline from 2001 to 2015. However, the rate for Wyoming high school men was lowest in 2015. Consistently since 2001, high school young men in Wyoming have used smokeless tobacco at a significantly higher rate than high school young men nationally (Figure 5; WY YRBS, 2015; YRBSS, 2015).

Figure 5: Wyoming High School Men Use Smokeless Tobacco at Higher Rate than High School Men Nationally

Percentage of Wyoming and U.S. high school men who used smokeless tobacco in the past 30 days, 2001–2015



Source: *WY YRBS, 2015; YRBSS, 2015.*

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Prevalence of Youth Use of Electronic Delivery Systems (ENDS)[1]

Electronic nicotine delivery systems (ENDS; also known as e-cigarettes, e-cigs, or vape-pens) are battery powered devices that produce a vapor by heating a liquid instead of producing smoke from burning tobacco. As of May 2016, the U.S. Food and Drug Administration (FDA) considers ENDS to be tobacco products. Regulations prohibiting the sale of ENDS to minors went into effect on August 8, 2016. Contents of the liquid vary across products, and some models allow for customized liquids.

Overall, 49% of Wyoming high school students had ever used ENDS, similar to the estimate of 45% nationwide. However, a greater percentage of Wyoming high school students (30%) are current ENDS users when compared to the national estimate (24%; WY YRBS, 2015; YRBSS, 2015).

The YRBS only asked about ENDS use in 2015, making a trend analysis impossible. Different data identify a rapid increase in ENDS use. Nationally, ENDS use by high school students increased from 2% in 2011 to 16% in 2015, becoming the most commonly used tobacco product in this age group (Singh, et al., 2016).

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[1] For more information on ENDS, please see *Issue Brief 10: Electronic Nicotine Delivery Systems*.

Community and Social Factors

Social and demographic factors play a role in youth tobacco initiation. Communities with low socioeconomic status, lower overall education, and higher unemployment tend to have a higher prevalence of youth smoking (Bernat, Lazovich, Forster, Oakes, & Chen, 2009). Tobacco use by peers (U.S. Department of Health and Human Services, 2012), perceived social acceptability of tobacco use among peers, and having a parent who smokes are strongly associated with youth initiation of tobacco use (Albers, Biener, Siegel, Cheng, & Rigotti, 2008).

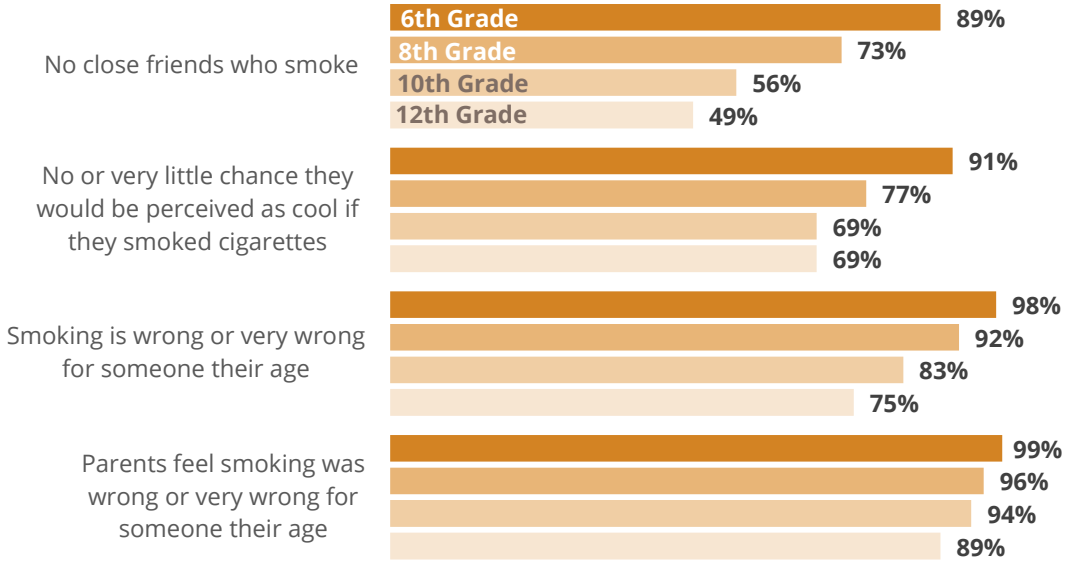
Attitudes Regarding Cigarette Smoking

Results from the 2014 PNA indicate that Wyoming students generally hold negative attitudes about the use of tobacco. In general, students in higher grades had less negative attitudes toward tobacco use than students in lower grades.

When asked how many of their four best friends smoked cigarettes, most 6th, 8th, and 10th grade students reported they had no close friends who smoked. Similarly, a plurality of 12th grade students reported they had no close friends who smoked (Figure 6; PNA, 2014).

Figure 6: Students Report Negative Attitudes Regarding Cigarettes

Percentage of Wyoming students' attitudes regarding cigarette smoking, 2014



Note: Responses from 18 year olds were removed from both questions about wrongness of smoking for someone their age.

Source: *PNA, 2014.*

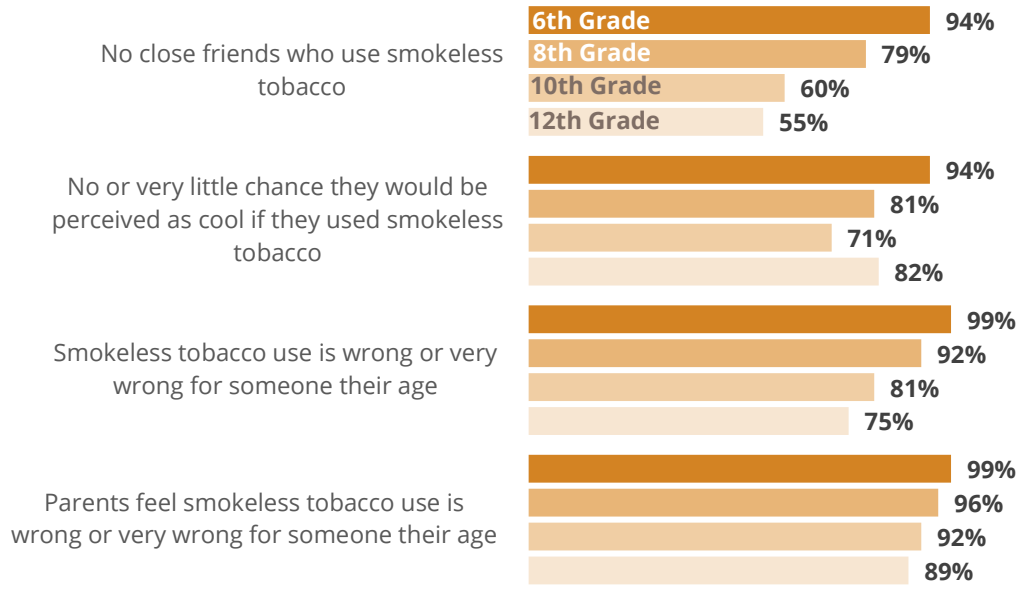
Most students in each grade reported there was no or very little chance they would be seen as cool if they smoked cigarettes, it was wrong or very wrong for someone their age (excluding 18-year-olds) to smoke cigarettes, or their parents felt it was wrong or very wrong for someone their age (excluding 18-year-olds) to smoke cigarettes (Figure 6; PNA, 2014).

Attitudes Regarding Smokeless Tobacco Use

The pattern was similar for smokeless tobacco. The majority of Wyoming students in 6th, 8th, 10th, and 12th grades reported they had no close friends who used smokeless tobacco, there was no or very little chance they would be seen as cool if they used smokeless tobacco, it was wrong or very wrong for someone their age (excluding 18-year-olds) to use smokeless tobacco, or their parents felt it was wrong or very wrong for someone their age (excluding 18-year-olds) to use smokeless tobacco (Figure 7; PNA, 2014).

Figure 7: Students Report Negative Attitudes Towards Smokeless Tobacco

Percentage of Wyoming students' attitudes regarding smokeless tobacco, 2014



Note: Responses from 18 year olds were removed from both questions about wrongness of smoking for someone their age.

Source: *PNA, 2014.*

References

Albers, A. B., Biener, L., Siegel, M., Cheng, D. M., & Rigotti, N. (2008). Household smoking bans and adolescent antismoking attitudes and smoking initiation: Findings from a longitudinal study of a Massachusetts youth cohort. *American Journal of Public Health, 98*(10), 1886-1893. doi: 10.2105/AJPH.2007.129320

Behavioral Risk Factor Surveillance System [Datafile 1995-2014]. (2014). Atlanta, GA: Centers for Disease Control and Prevention. Retrieved April 25, 2016, from http://www.cdc.gov/brfss.

Bernat, D. H., Lazovich, D., Forster, J. L., Oakes, J. M., & Chen, V. (2009). Area-level variation in adolescent smoking. *Preventing Chronic Disease, 6*(2), 1-8. Retrieved June 18, 2012, from http://www.cdc.gov/pcd/issues/2009/apr/08_0048.htm.

Centers for Disease Control and Prevention. (2014). *Preventing Initiation of Tobacco Use: Outcome Indicators for Comprehensive Tobacco Control Programs–2014*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Centers for Disease Control and Prevention. (2015). *Promoting quitting among adults and young people: outcome indicators for comprehensive tobacco control programs—2015.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Farrelly, M. C., Loomis, B. R., Han, B., Gfroerer, J., Kuiper, N., Couzens, G. L., … Caraballo, S. (2013). A comprehensive examination of the influence of state tobacco control programs and policies on youth smoking. *American Journal of Public Health*, *103*(3), 549-55. doi: 10.2105/AJPH.2012.300948

Institute of Medicine. (2015). Public health implications of raising the minimum age of legal access to tobacco products. *Committee on the Public Health Implications of Raising the Minimum Age for Purchasing Tobacco Products, Board on Public Health and Public Health Practice, Institute of Medicine, The National Academies*. Washington, DC: The National Academies Press. doi: 10.17226/18997

Monitoring the Future. (2015). *Trends in 30-day prevalence of use of other tobacco products for grades 8, 10, and 12.* Retrieved May 17, 2016, from http://www.monitoringthefuture.org/data/15data/ 15drtbl3.pdf

Prevention Needs Assessment [Data File 2001–2014]. (2014). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming. Retrieved March 21, 2016, from http://www.pnasurvey.org/

Singh, T., Arrazola, R. A., Corey C. G., Husten, C. G., Neff, L. J., Homa, D. M., King, B. A. (2016). Tobacco use among middle and high school students – United States, 2011-2015. *MMWR Morbidity and Mortality Weekly Report*, *Centers for Disease Control and Prevention, 65*, 361-367. doi: http://dx.doi.org/10.15585/mmwr.mm6514a1

Substance Abuse and Mental Health Services Administration (2014). *Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings.* (Office of Applied Studies, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863). Rockville, MD. Retrieved March 24, 2016, from http://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHTML2013/Web/NSDUHresults2013.pdf.

U.S. Department of Health and Human Services (2012). *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved January 8, 2013, from http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf

U.S. Food and Drug Administration. (2016). *Extending Authorities to All Tobacco Products, Including E-Cigarettes, Cigars, and Hookah.* Retrieved May 31, 2016, from http://www.fda.gov/TobaccoProducts/Labeling/ucm388395.htm

Wyoming Youth Risk Behavior Survey [Data File 2001–2015]. (2015). Cheyenne, WY: Wyoming Department of Education. Retrieved March 24, 2016, from http://edu.wyoming.gov/data/yrbs/

WYSAC. (2014). *Report on the 2012 Wyoming Adult Tobacco Survey*, by M. Kato, L. H. Despain, & T. Comer Cook. (WYSAC Technical Report No. CHES-1408). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.

Youth Risk Behavior Surveillance System [Data File 1991–2015]. (2015). Atlanta, GA: Centers for Disease Control and Prevention. Retrieved June 13, 2016, from http://www.cdc.gov/healthyyouth/yrbs/index.htm