

Data Report: New Hampshire Youth Risk Behavior Surveillance Survey Tobacco Use



Background

Tobacco use is easy to start but hard to quit. Tobacco use remains the leading preventable cause of disease and death in the United States. The 2012 Surgeon General Report, *Preventing Tobacco Use Among Youth and Young Adults*, points out that youth are vulnerable to social and environmental influences, messages and images that make tobacco use appealing to them are omnipresent, resulting in nearly all tobacco use beginning before 18 years of age.ⁱ More than 80% of adult tobacco use begins during adolescence, with 99% of first use occurring by the age of 26 years.ⁱⁱ

Among U.S. youths, cigarette smoking has declined in recent years; however, the use of some other tobacco products has increased,ⁱⁱⁱ and nearly half of tobacco users use two or more tobacco product types. In New Hampshire, every year approximately 1,000 youth begin smoking, with the vast majority becoming addicted to nicotine by young adulthood.

Reducing youth tobacco use is extremely important to New Hampshire's health and economic standing, and is a primary goal of the [NH State Health Improvement Plan](#) (NH SHIP). The New Hampshire Department of Health and Human Services (DHHS) collects data about the risk-taking behaviors of high school aged youth using the [Youth Risk Behavior Surveillance Survey](#) (YRBSS). These data are used to monitor trends that inform and educate communities and state stakeholders, empowering these partnerships to identify where resources are most needed. Once health problems are identified, action is taken to develop policies and plans that support individual and community health efforts. [Youth tobacco use should not be accepted as part of normal teenage experimentation](#) as it may lead to addiction and onset of chronic diseases early in life. Data presented in this brief have been rounded to whole numbers for ease of review.

How Nicotine Affects the Brain

Nicotine is a chemical stimulant found in combustible and noncombustible products which includes electronic cigarettes.^{iv} Stimulants are drugs that cause temporary improvements in either mental or physical functions or both. When the drug nicotine enters the brain it causes an increase in the level of dopamine, a neurotransmitter (chemical messenger) responsible for managing the pleasure center of the brain. As dopamine levels increase it overstimulates the system, producing a feeling of wellbeing, which strongly reinforces the behavior of using tobacco, teaching the user to continue to want to use.^v

As the temporary positive effects wane, the level of dopamine decreases leaving the body feeling cold, tired, and lacking physical energy. There are additional psychological effects or withdrawal leaving the users feeling apathetic, irritable, tired, and having trouble focusing on tasks, resulting in the need to consume additional cigarettes or other tobacco products.

Why Adolescent Tobacco Use Is of Concern

Tobacco use by adolescents is illegal; however, it occurs and can have damaging effects on adolescent brain development. The research is clear. Adolescence and young adulthood are critical times for the

physical development of the brain and central nervous system. Because changes occur rapidly in the body, the effects of smoking cigarettes can have long-term health consequences for adolescents once they reach adulthood. Preventing youth from starting to smoke begins with increasing their knowledge of the dangers of tobacco use and its addicting properties, changing their attitudes toward tobacco use, and increasing public support for policies that reduce the likelihood that they will use tobacco. Smoking cigarettes is illegal for those under the age of 18 years of age. Chewing tobacco and other tobacco products (excluding cigarettes) can be used covertly, which is an attractive feature for youth. Co-occurring tobacco use often happens in the presence of social pressure and passive marketing. For example, in sports-related peer groups, youth may be looking for a way to improve ability and social standing, which may lead to an increased use of chewing tobacco. Chewing tobacco use has been normalized in athletics. For many years, tobacco companies have had a role in advertising within the sports industry. Tobacco companies employed the strategies of athletic endorsements, sponsorships of events, and creating powerful associations of tobacco and active lifestyles in order to advertise their products. Slowly trends are shifting as athletes today are more likely to endorse tobacco prevention efforts as opposed to tobacco products. For example, in minor league baseball, tobacco use on the field and in the dugouts is prohibited.

Current Tobacco Use and Cigarette Smoking

Figure 1 highlights a significant decrease in current tobacco use among New Hampshire high school-aged students that occurred between 2011 and 2013 surveillance periods. *The Healthy People 2020 Target Measure is 21%.*

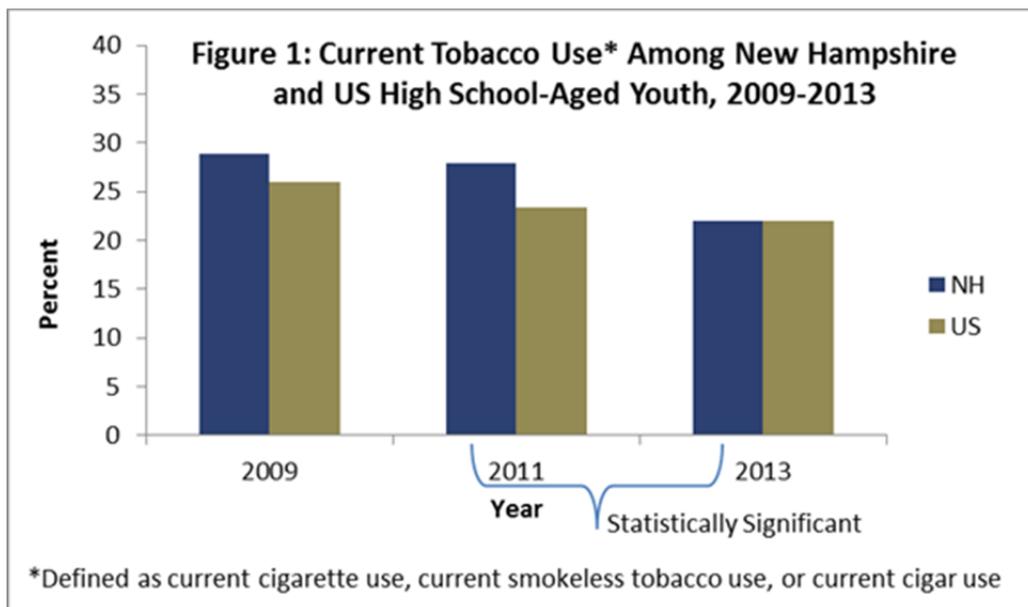


Figure 2 below depicts consistently higher prevalence of tobacco use among New Hampshire high school-aged males as compared with females. The percentage difference between males and females is significant across each of the three surveillance periods.

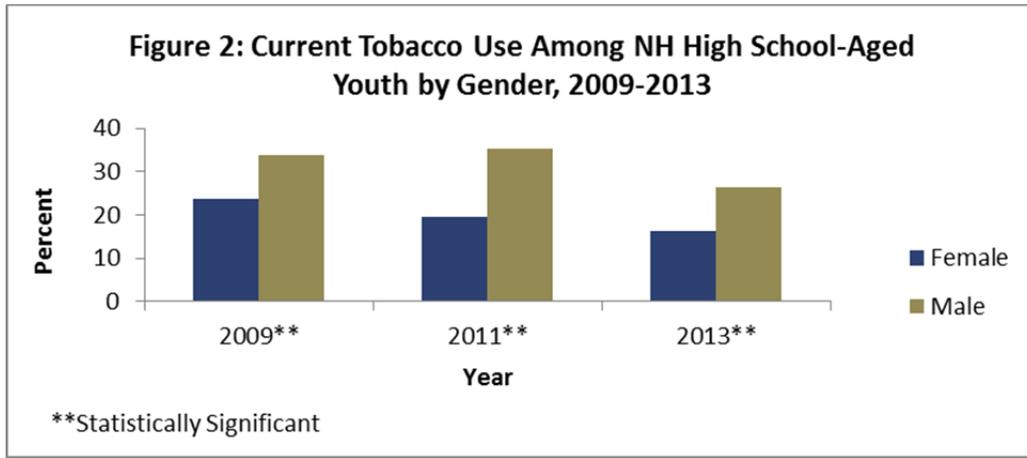


Figure 3 shows an increase in tobacco use by age. The increase from 12% in the 9th grade to 19% in the 10th grade is significant.

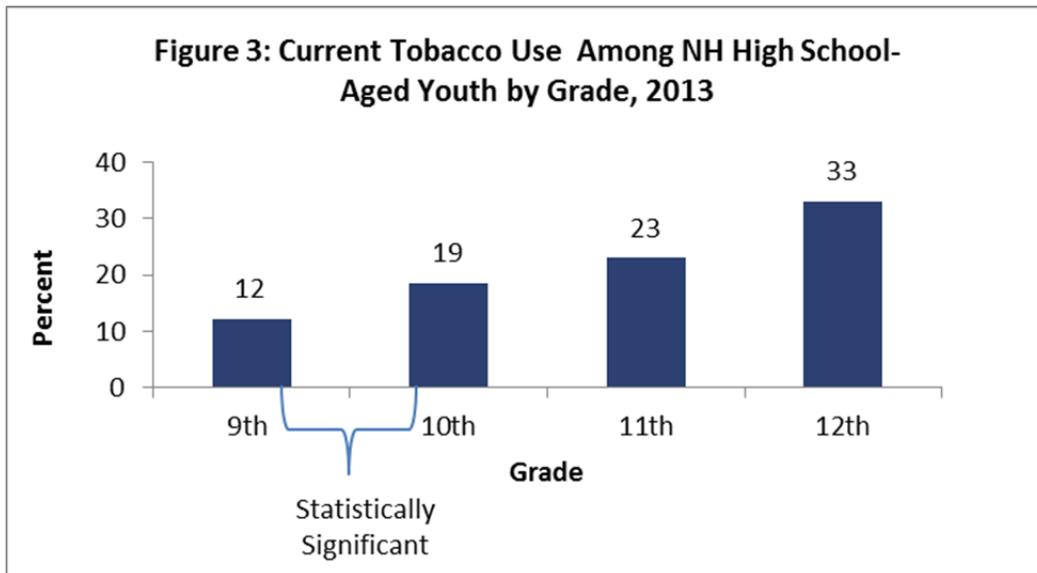


Figure 4 illustrates how New Hampshire compares with the region and includes the states with the lowest and highest prevalence. The prevalence of current tobacco use among New Hampshire high school-aged youth is significantly higher than other states in the region.

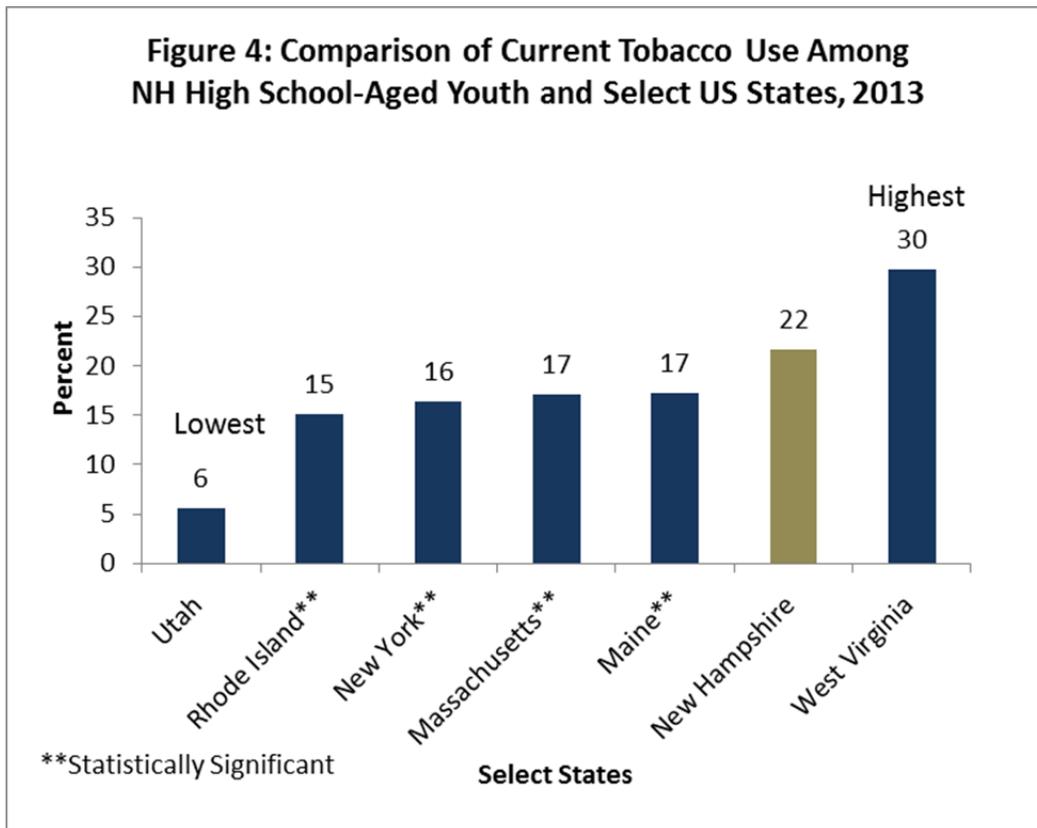


Figure 5 shows a slight decrease in age of initiation of cigarette smoking over the past three surveillance periods.

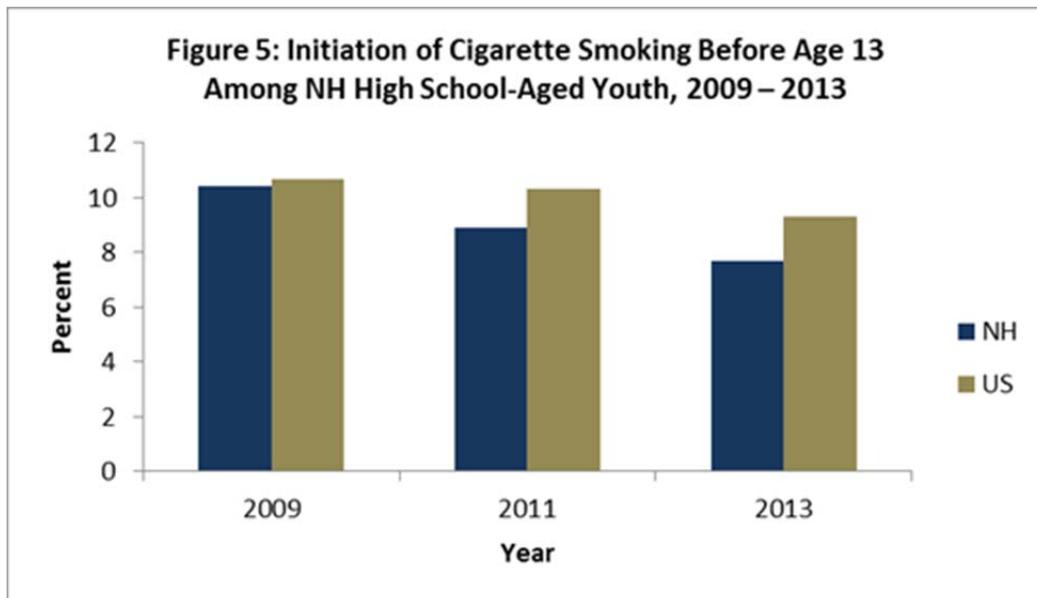


Figure 6 depicts a decline among current cigarette smoking of New Hampshire high school–aged youth. The 2013 NH YRBS–specific data point is 13.8% and is statistically significantly lower in 2013 when compared with 2011. *Current cigarette smoking by adolescents is a Healthy People 2020 Leading Health Indicator. The target for the country is 16%.*

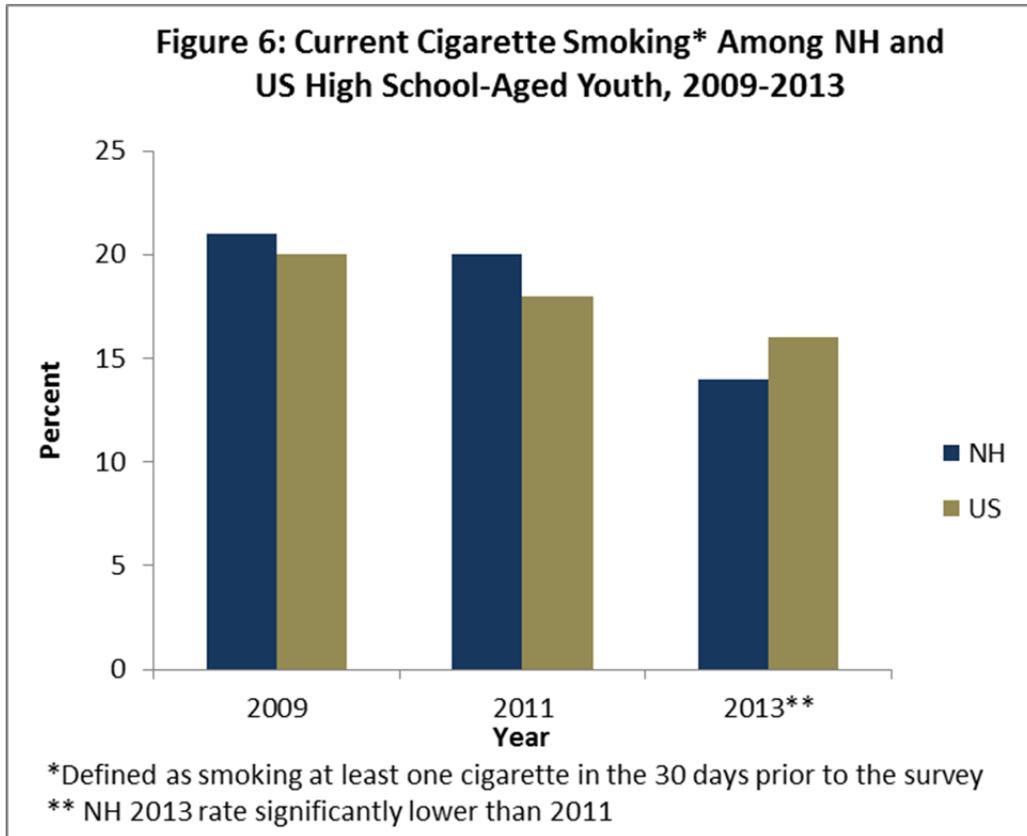


Figure 7 shows that current use of cigarettes by high school–aged youth increases with age or grade advancement. The difference between 9th and 12th grade is statistically significant.

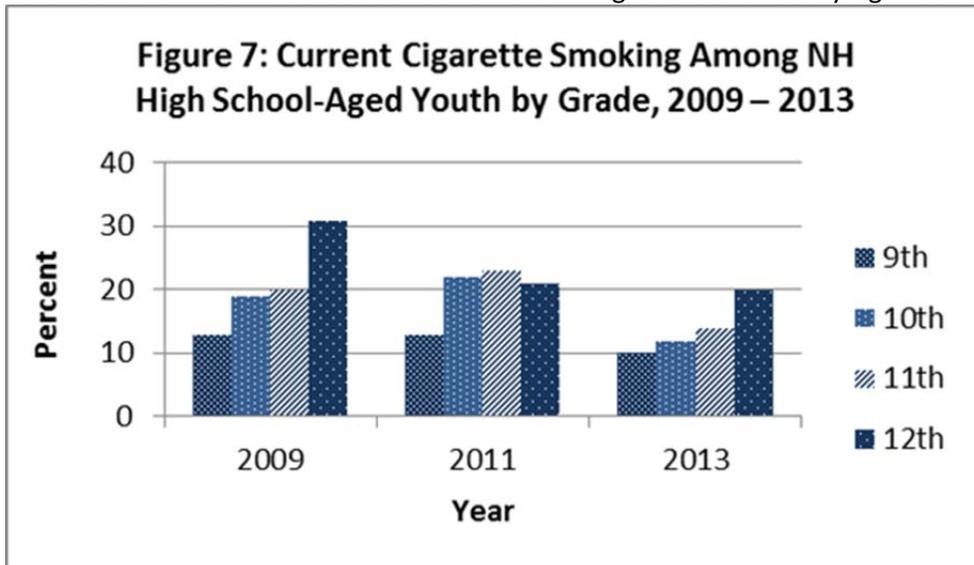
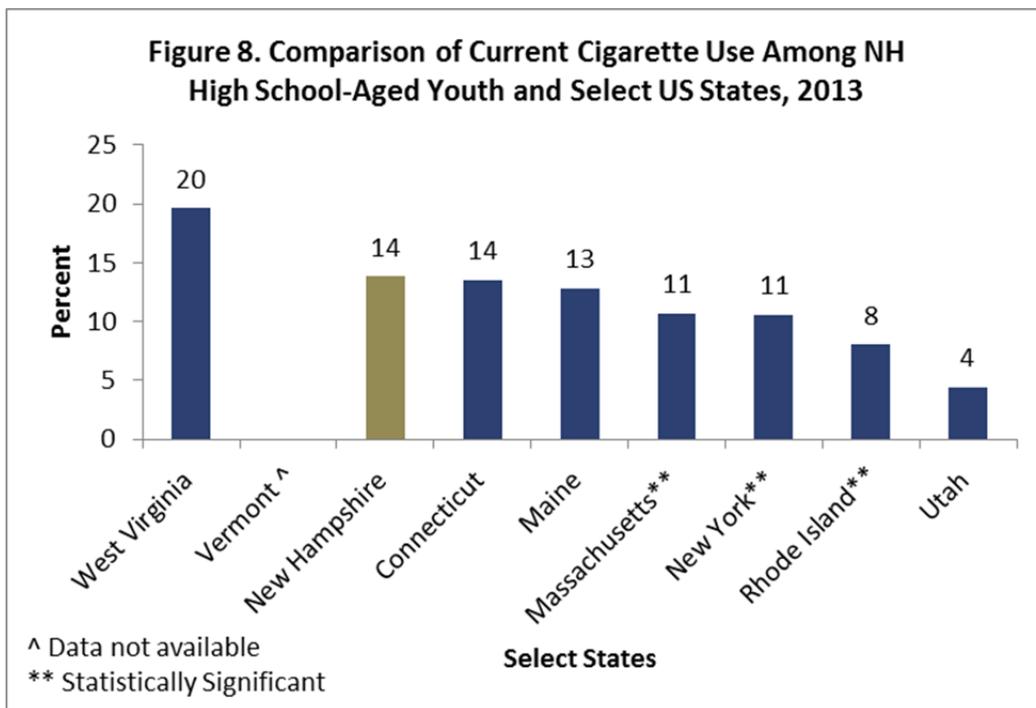


Figure 8 compares New Hampshire with the region and includes the lowest (UT) and highest (WV) state prevalence. When comparing current cigarette use among high school-aged youth, New Hampshire is significantly higher compared with Massachusetts, New York, and Rhode Island.



Other Tobacco Products

Data in Figure 9 shows a significant decrease of other tobacco product use between 2011 and 2013. It also shows that the prevalence of current cigar, cigarillo, or little cigar use among New Hampshire high school-aged youth was significantly higher than the US prevalence in 2011.

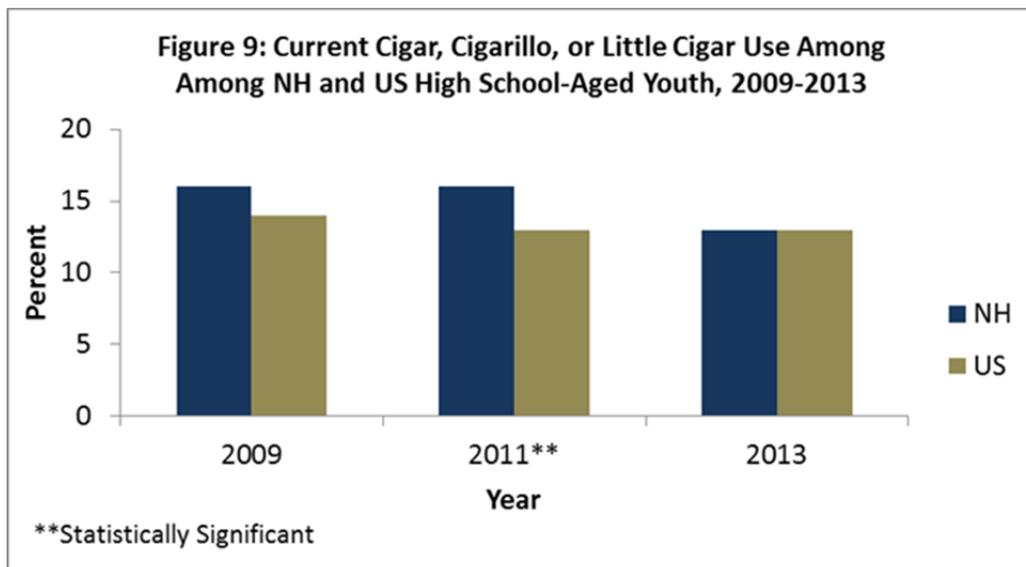


Figure 10 illustrates a significant increase in current use of cigars, cigarillos, or little cigars among New Hampshire high school-aged youth between grade levels 9th and 10th, and 11th and 12th.

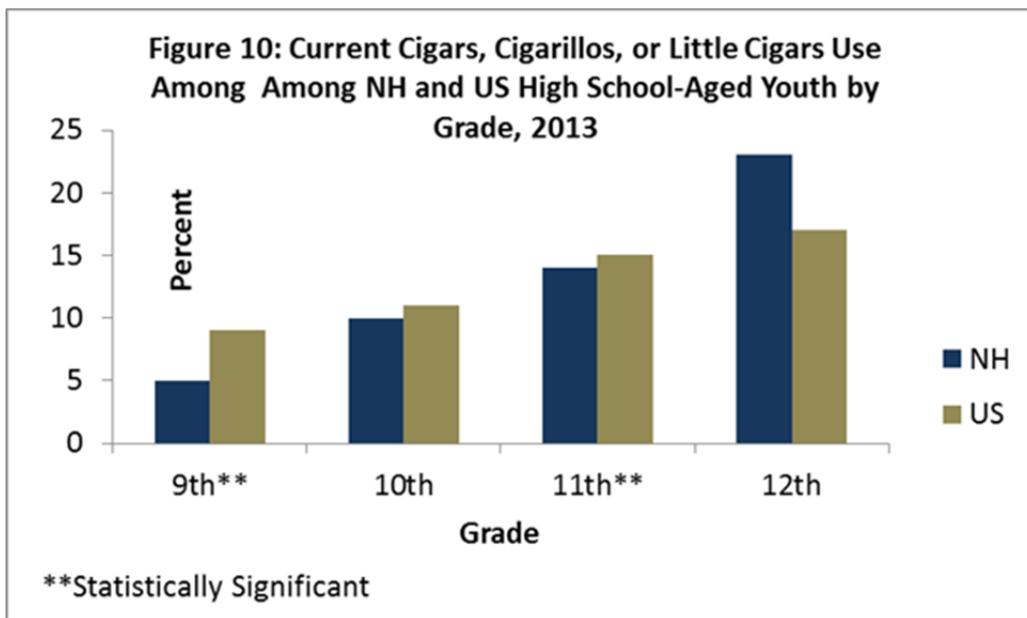


Figure 11 shows that New Hampshire high school-aged males use cigars, cigarillos, or little cigars at a significantly higher prevalence than female peers across all years (2009–2013). There is a slight decrease of use by males between 2013 and 2011 but the decrease is not significant.

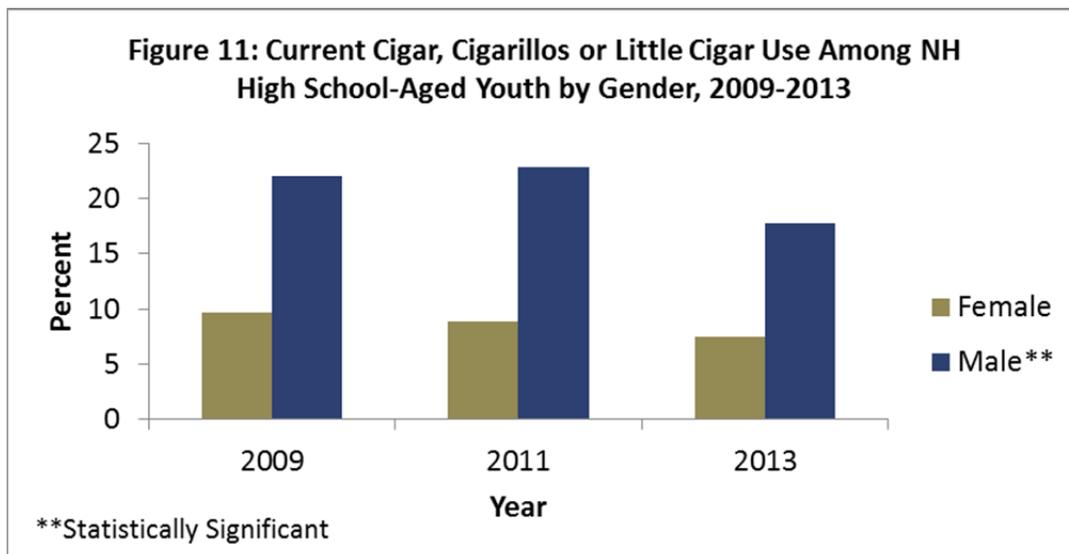
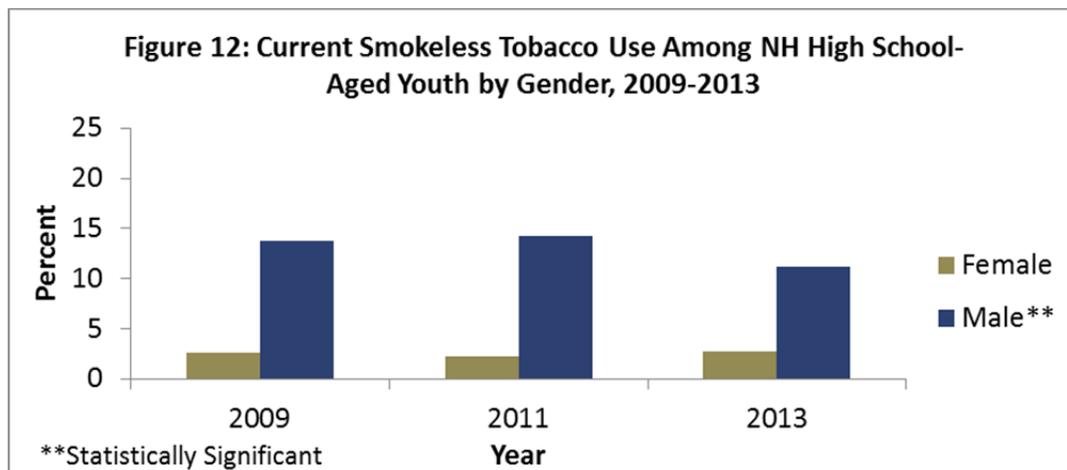


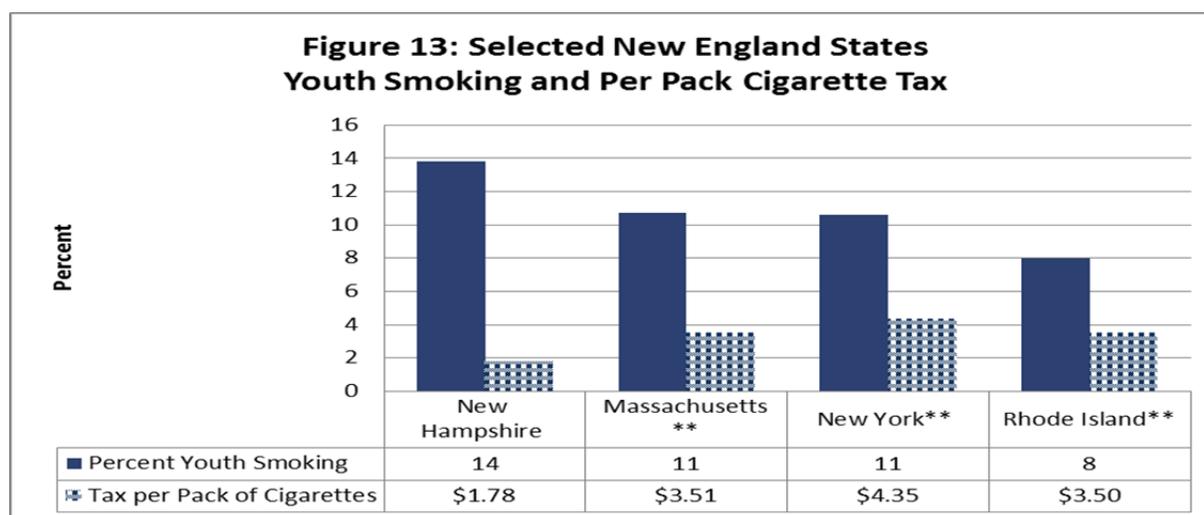
Figure 12 depicts that New Hampshire high school-aged males used smokeless tobacco products at a significantly higher prevalence than female peers over the past three surveillance periods. The 2013, decrease of use by males is lower than 2011 but the decrease is not significant.



Cigarette Tax

Figure 13 below compares New Hampshire's and New England States' per pack cigarette tax to the youth smoking prevalence for each state. Figure 13 shows the association of higher per pack cigarette tax and youth smoking prevalence.

The Community Preventive Services Task Force recommends interventions that increase the unit price of tobacco products based on strong evidence of effectiveness in reducing tobacco use. When unit price increases occur, those increases, when applied at the proper level, have an impact on reducing the total amount of tobacco consumed defined by: reduction in the prevalence of tobacco use, increases in the number of tobacco users who quit, reduction in initiation of tobacco use among young people, and reduction in tobacco-related morbidity and mortality. The intervention outlined in *The Guide to Community Preventive Services* states that increasing the unit price for tobacco products by 20% would reduce overall consumption of tobacco products by 10.4%, prevalence of adult tobacco use by 3.6%, and initiation of tobacco use by young people by 8.6%.^{vi}



What We Can Do in New Hampshire

It is important that we continue our collaborations in order to develop and manage highly effective cross-sector and multi-stakeholder partnerships that address major social and developmental challenges.^{vii} Through partnerships with New Hampshire organizations, including the New Hampshire Departments of Health and Human Services and Education, and the Regional Public Health Network system we can work together to raise awareness and empower decision makers to understand the significance of ensuring that *Health in All Policies* becomes a standard for the future.

1. Support efforts for *comprehensive, evidence-based tobacco prevention and control programs*. Other states have found success in using a portion of tobacco revenue to strengthen evidence-based tobacco prevention programs.^{viii}
2. Support efforts to raise *tobacco taxes* that are dedicated to establishing a generation free from tobacco addiction. According to *The Guide to Community Preventive Services*, the intervention to increase the unit price of tobacco products has strong/sufficient evidence in reducing tobacco use among youth.^{ix}
3. Monitor youth use of all tobacco products and electronic cigarettes through the use of surveillance tools including the YRBS.
 - Be mindful of terminology of electronic cigarette use. The terms vape, vaping, juice, e-juice have been developed by the industry selling the products.
4. Join mobilized community partnerships including the New Hampshire Regional Public Health Networks to become involved with other community members to increase the health of all people in New Hampshire.
5. Health Systems should develop and implement policies and plans that support brief clinical interventions focused on tobacco addiction. **Ask** (your patient about tobacco use), **Assist** (by writing prescriptions for approved tobacco cessation medications including over-the-counter so patients can avoid co-pays), and **Refer** to tobacco treatment services by: **Indirectly Refer** the patient who is not ready to try to quit in the next 30 days to 1-800-QUIT-NOW and document the indirect referral in the patient electronic health record (EHR). Patients ready to quit in the next 30 days should be **Directly Referred** to QuitWorks-NH. All patients regardless of referral process have access to evidence-based tobacco treatment behavioral counseling and nicotine replacement therapy at no cost while supplies last.

To learn more about tobacco use mortality, as well as other public health priorities in New Hampshire, please visit <http://wisdom.dhhs.nh.gov/wisdom/>.

ⁱ U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General. Atlanta: 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, 2014.

ⁱⁱ U.S. Department of Health and Human Services. 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, 2012.

^{iv} <http://www.merriam-webster.com/medical/stimulant> [accessed March 11, 2015].

^v https://www.drugabuse.gov/sites/default/files/soa_2014.pdf [accessed March 11, 2015].

^{vi} <http://www.thecommunityguide.org/tobacco/increasingunitprice.html> [accessed March 11, 2015].

^{vii} <http://www.collaborativeimpact.net/> [accessed March 11, 2015].

^{viii} Ending the Tobacco Problem: A Blueprint for the Nation, are available from the National Academies Press, 500Fifth Street, N.W., Lockbox 285, Washington, DC 20055.

^{ix} Initiation of Tobacco Use: A 20% increase in tobacco unit price would be associated with: 8.6% median reduction in initiation among young people (7 studies, median elasticity of -0.43; IQI: -0.90 to -0.00).



WISDOM

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NH Health WISDOM:
The New Hampshire Division of
Public Health Service's State
Health Data Priorities Portal
<http://wisdom.dhhs.nh.gov/wisdom/>