



ADDRESSING TOBACCO USE AND ITS ASSOCIATED HEALTH CONDITIONS IN WEST VIRGINIA

A strategic plan to prevent tobacco use and promote cessation, creating a “win-win” situation for West Virginia:
Comprehensive tobacco control programs save lives and save money!

Addressing Tobacco Use and its Associated Health Conditions in West Virginia

Key Goals are to:

- Reduce Adult Tobacco Utilization.
- Reduce Youth Tobacco Utilization.
- Focus on Improving Chronic Obstructive Pulmonary Disease and Cancers Associated with Tobacco Use.
- Reduce Exposure to Secondhand Cigarette Smoke.
- Reduce the Utilization of Smokeless Tobacco and Other Nicotine Products.

Problem Statement: The consequences of tobacco use are well known to West Virginians, yet residents continue to use tobacco in alarming numbers. Tobacco use is the number one preventable cause of premature death and disease. West Virginia is aggressively addressing the problem by implementing evidence-based tobacco control programs through the West Virginia Department of Health and Human Resources, Bureau for Public Health’s Division of Tobacco Prevention. Annual federal and state funding for these efforts has decreased in the past few years (averaging around \$6 million). This funding has included a combination of both federal and state funding, and is approximately 22% of the Centers for Disease Control and Prevention’s (CDC) “Best Practice” recommendation of \$28 million annually.

Adult Tobacco Use: There are a few different ways that adult tobacco use is measured in West Virginia. Two key surveys that are well accepted nationwide are the nationally-recognized Behavioral Risk Factor Surveillance Survey (BRFSS) and the Adult Tobacco Survey (ATS).

Adult Cigarette Smoking: West Virginia continues to have the highest reported adult smoking rates in the nation: 26.7% of adults living in West Virginia are current smokers - smoking every day or some days (see graph on the next page). This rate has decreased the last four reported years of BRFSS (from 28.6% in 2011 to 26.7% in 2014). The national smoking prevalence for adults is 17.4% (BRFSS, 2014).

Prevalence of Cigarette Smoking in West Virginia (reference source 2014 WVBRFSS): The prevalence of current adult cigarette smoking was significantly higher than the national prevalence. West Virginia ranked the highest among BRFSS participants.

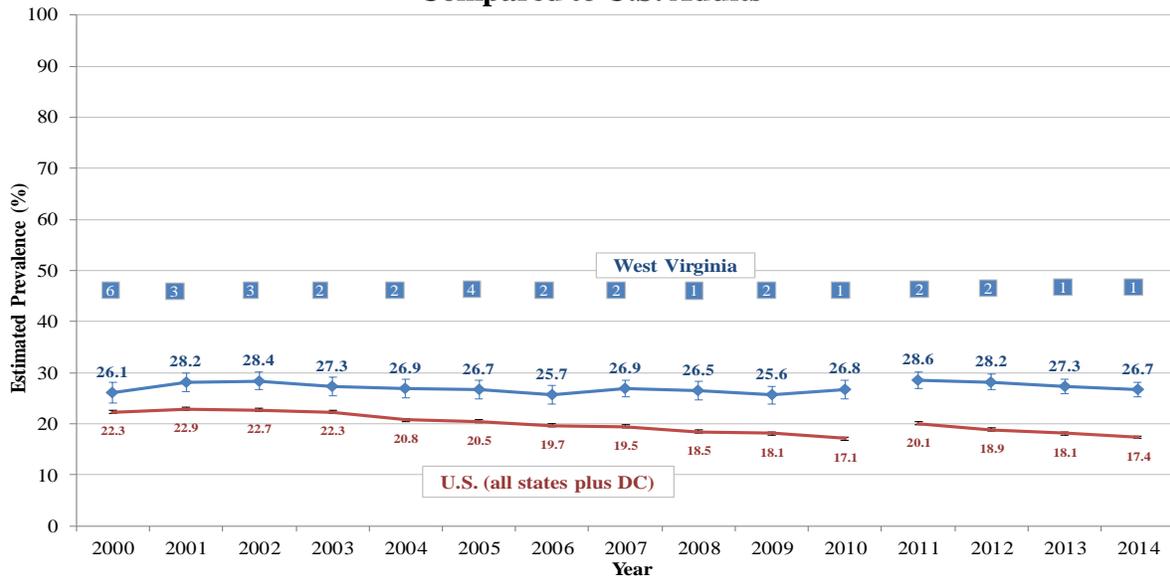
Gender - Men: 27.8% and Women: 25.6% reported current smoking in 2014.

Race/Ethnicity

White, Non-Hispanic:	26.7%
Black, Non-Hispanic:	25.7%
Other, Non-Hispanic:	*30.6%
Multiracial, Non-Hispanic:	*22.1%
Hispanic:	*29.6%

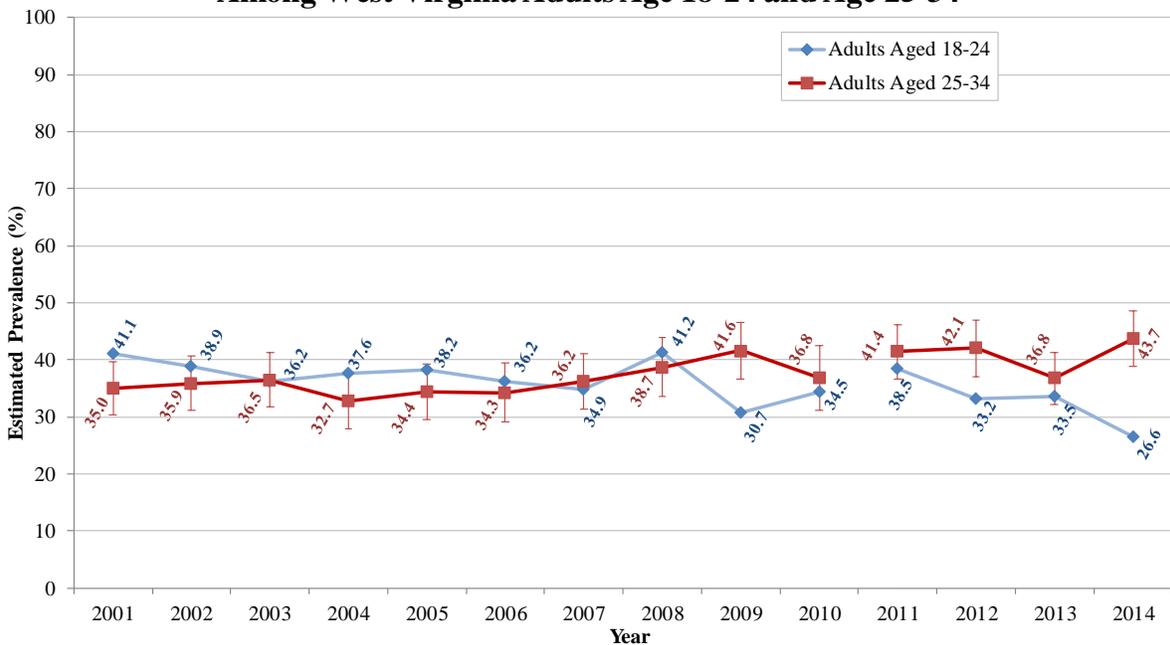
*There was no race or ethnicity difference in the prevalence of cigarette smoking in 2014.

Prevalence of Current Cigarette Smoking Among West Virginia Adults, Compared to U.S. Adults



Current smoking is defined as having smoked 100 or more cigarettes in a lifetime and currently smoking cigarettes every day or some days. The U.S. (all states plus District of Columbia) average is the mean. Numbers inside boxes indicate West Virginia's rank in current smoking prevalence compared to all other states plus District of Columbia (1=highest prevalence). Confidence Interval brackets are indicated around each value.
 Note: In 2011 there were changes made to the weighting methodology and the sample composition in BRFSS, therefore the 2011 prevalence data and beyond is not directly comparable to previous years of BRFSS data.
 Data Sources: West Virginia Health Statistics Center, Behavioral Risk Factor Surveillance System; U.S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Prevalence of Current Cigarette Smoking Among West Virginia Adults Age 18-24 and Age 25-34



Current smoking is defined as having smoked 100 or more cigarettes in a lifetime and currently smoking cigarettes every day or some days. The West Virginia Behavioral Risk Factor Surveillance System (BRFSS) population for this graph is adults age 18-24 years and 25-34 years. Confidence Interval brackets are indicated around each value for prevalence among Adults Age 25-34.
 Note: In 2011 there were changes made to the weighting methodology and the sample composition in BRFSS, therefore the 2011 prevalence data and beyond is not directly comparable to previous years of BRFSS data.
 Data Source: West Virginia Health Statistics Center, Behavioral Risk Factor Surveillance System.

Age - In general, the prevalence of smoking was higher among those aged 18-54 than those aged 55 and older. The prevalence of smoking was significantly lower among those 55-64 (23.4%) and those aged 65 and older (12.7%) than among any other age group. The prevalence of smoking was highest in the 25-34 age group (43.7%). Note: see graph on previous page.

Education - The prevalence of smoking was lowest among college graduates (13.0%) and was significantly lower than all other education groups. Adults with less than a high school degree had the highest prevalence of current cigarette smoking (42.2%), and the prevalence was significantly higher than all other education groups.

Household Income - The prevalence of current smoking decreased as household income increased. The highest prevalence of smoking was among those earning less than \$15,000 per year (44.4%). The lowest prevalence of smoking was among adults earning \$75,000 or more per year (14.9%).

Approximately 52.7% of current smokers had tried to quit smoking in the past year which was the lowest reported quit attempt rate in the nation.

Other West Virginia data and facts to consider (from DTP report: Smoking is Costing and Killing Us: 2013):

- 10 West Virginia residents die each day because they smoked cigarettes.
- 19% of the state's mortality is attributed to smoking.
- Historically, when compared with the rest of the nation, West Virginia has had very high rates of adult cigarette smoking and smokeless tobacco use.
- Smoking is most common in the southwestern and central counties of the state. *Note that these regions also reflect areas of lower socioeconomic status.

Adult Smokeless Tobacco (ST) Use: West Virginia ranked the highest in the nation in ST use at 8.5% (those reporting ST use "every day" or "some days").

Prevalence – West Virginia: 8.5% and U.S.: 3.7% (in 2014)

Gender - Men: 18.2% and Women: 0.8%

There was a significant gender difference in the prevalence of ST use with men having a significantly higher prevalence than women. No further analysis with the female smokeless tobacco use data could be performed due to small sample size.

Race/Ethnicity (Smokeless tobacco use among all adults in West Virginia):

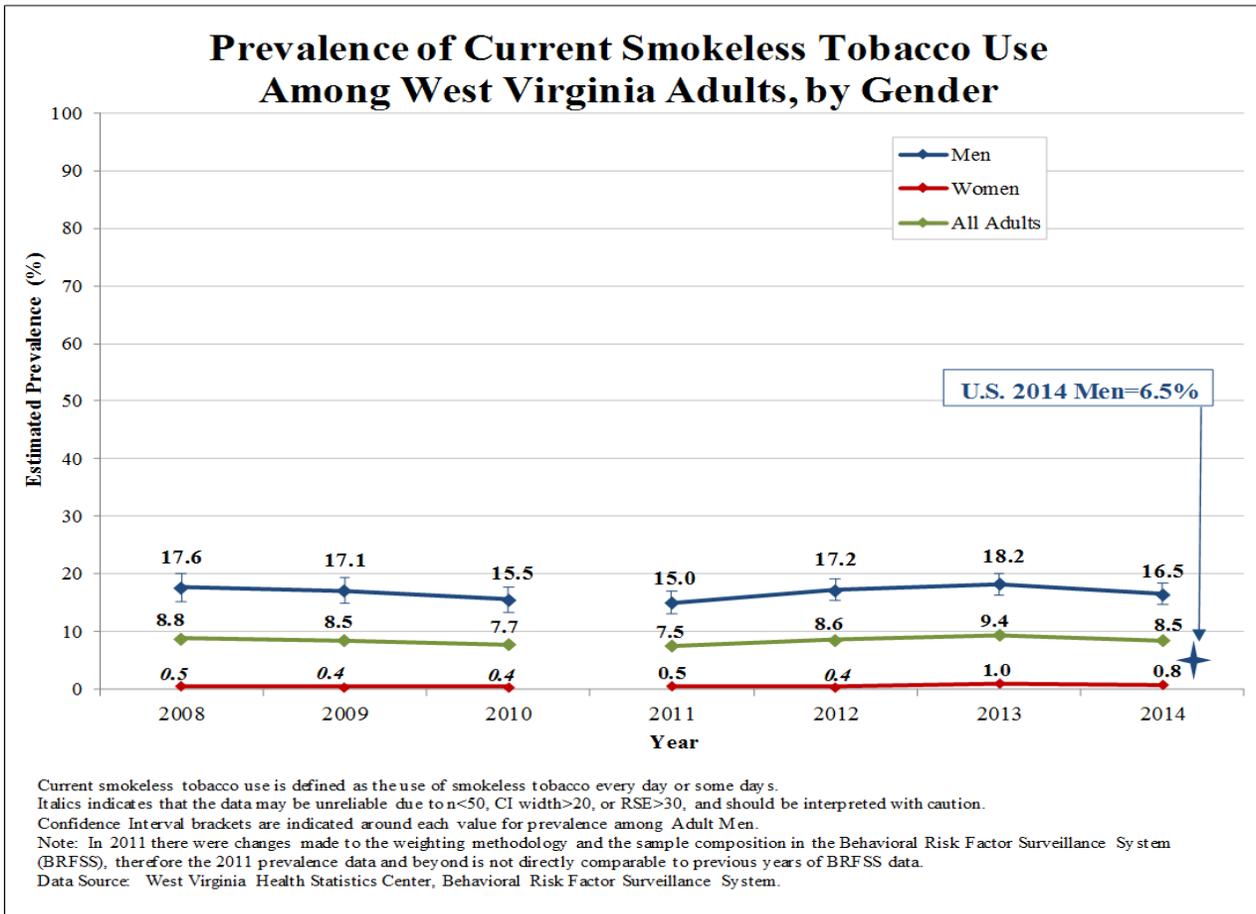
White, Non-Hispanic:	8.7%
Black, Non-Hispanic:	*5.6%
Other, Non-Hispanic:	*4.5%
Multiracial, Non-Hispanic:	*6.7%
Hispanic:	*1.8%

**Note: Caution that this data may be unreliable; small sample sizes (< 50 responses).*

Age - The prevalence of ST use was highest among adults aged 18-24 (13.3%) and lowest among adults aged 65 and older (5.0%).

Education - College graduates had the lowest prevalence of ST use (3.7%). This prevalence was significantly lower than the prevalence among those with less than a high school education (11.3%) and those with a high school degree (10.6%).

Household Income - There was no income difference in ST tobacco use.



Electronic cigarettes: Electronic cigarettes, commonly known as e-cigarettes, are emerging as a popular product in the marketplace. These products are battery-powered devices, often designed to resemble cigarettes, which deliver a nicotine containing aerosol, not just water vapor. E-cigarettes have many names, especially among youth and young adults, such as e-cigs, e-hookahs, hookah pens, vapes, vape pens, vape pipes, or mods.

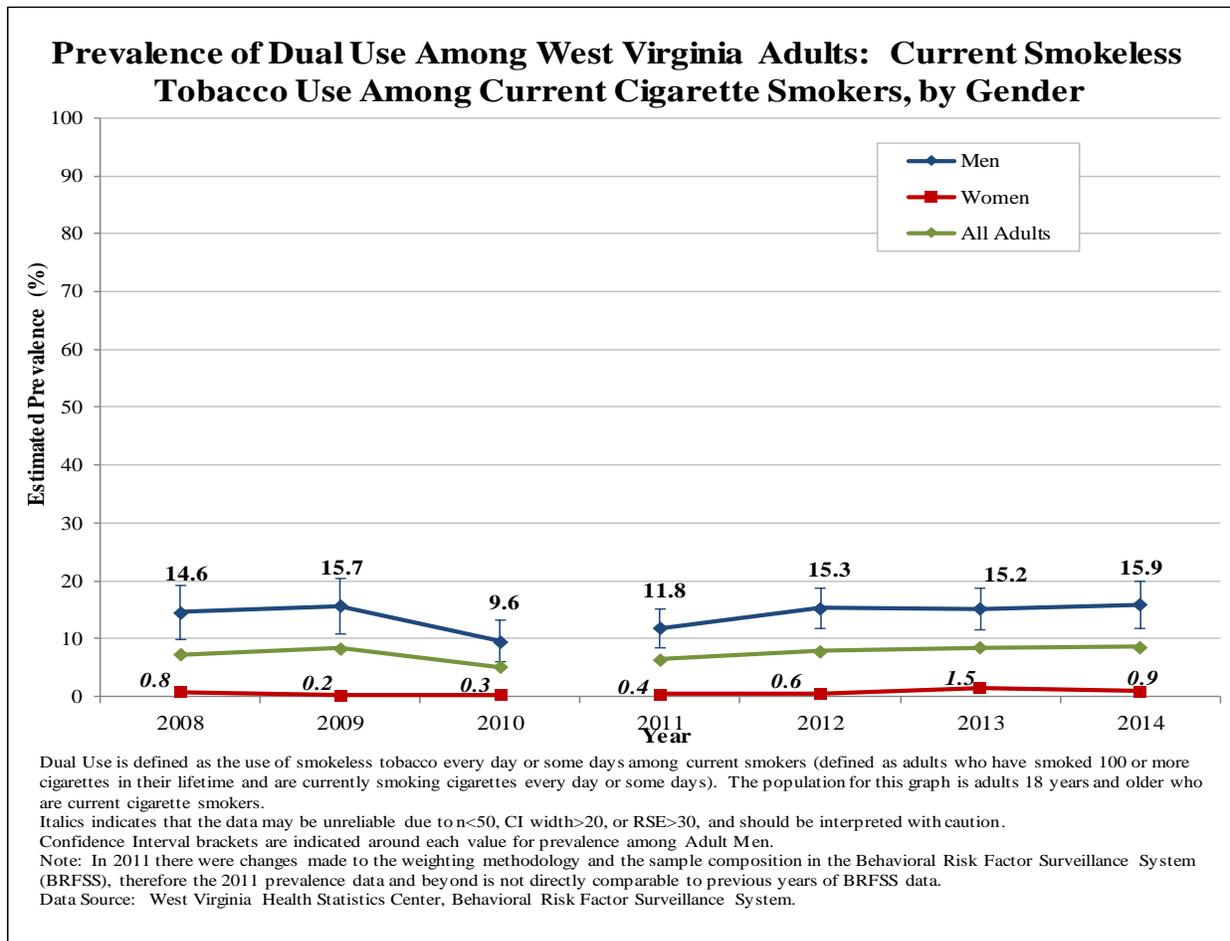
Electronic Cigarette Use among West Virginia Adults (from 2014 Adult Tobacco Survey or WVATS):

The current use of e-cigarettes by West Virginia adults was 7.1%.

- One in five adults (20.6%) had tried electronic cigarettes. This included:
 - 37.0% of adults 18-24 years old.
 - 35.9% of adults 25-34 years old.
 - 61.3% of current smokers.
 - 16.5% of former smokers.
 - 5.6% of adults who never smoked had used e-cigarettes.
 - 31.3% of smokers reported using e-cigarettes during a recent quit attempt.

Note: e-cigarette use has not been explored by previous WVATS reports, thus the 2014 WVATS will serve as baseline data.

Dual Tobacco Use Among Adults in West Virginia (from 2014 WVBRFSS): 15.9% of adult male smokers were also using smokeless tobacco; 0.9% of female adults reported dual tobacco use.



Smoking Cessation Among Adults in West Virginia:

Definition - Current smokers who responded (2014 WVBRFSS) they stopped smoking for 1 day or longer while trying to quit (in past year).

Prevalence – West Virginia: 52.7%. U.S.: 56.0%

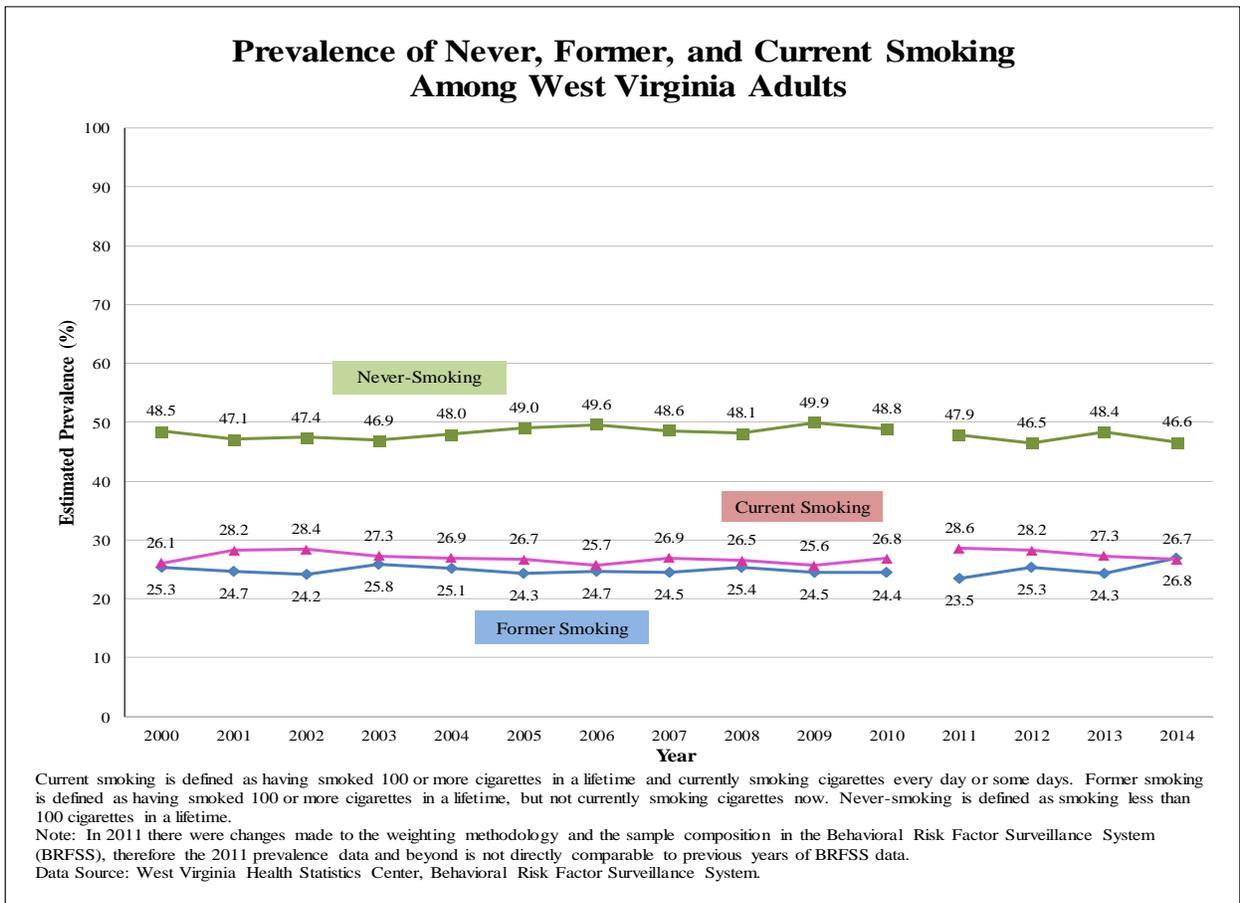
The U.S. prevalence of smoking cessation was significantly higher than the state rate, as West Virginia ranked the lowest among 53 BRFSS participants in 2014.

Gender - Men: 49.5% and Women: 54.9%

Race/Ethnicity

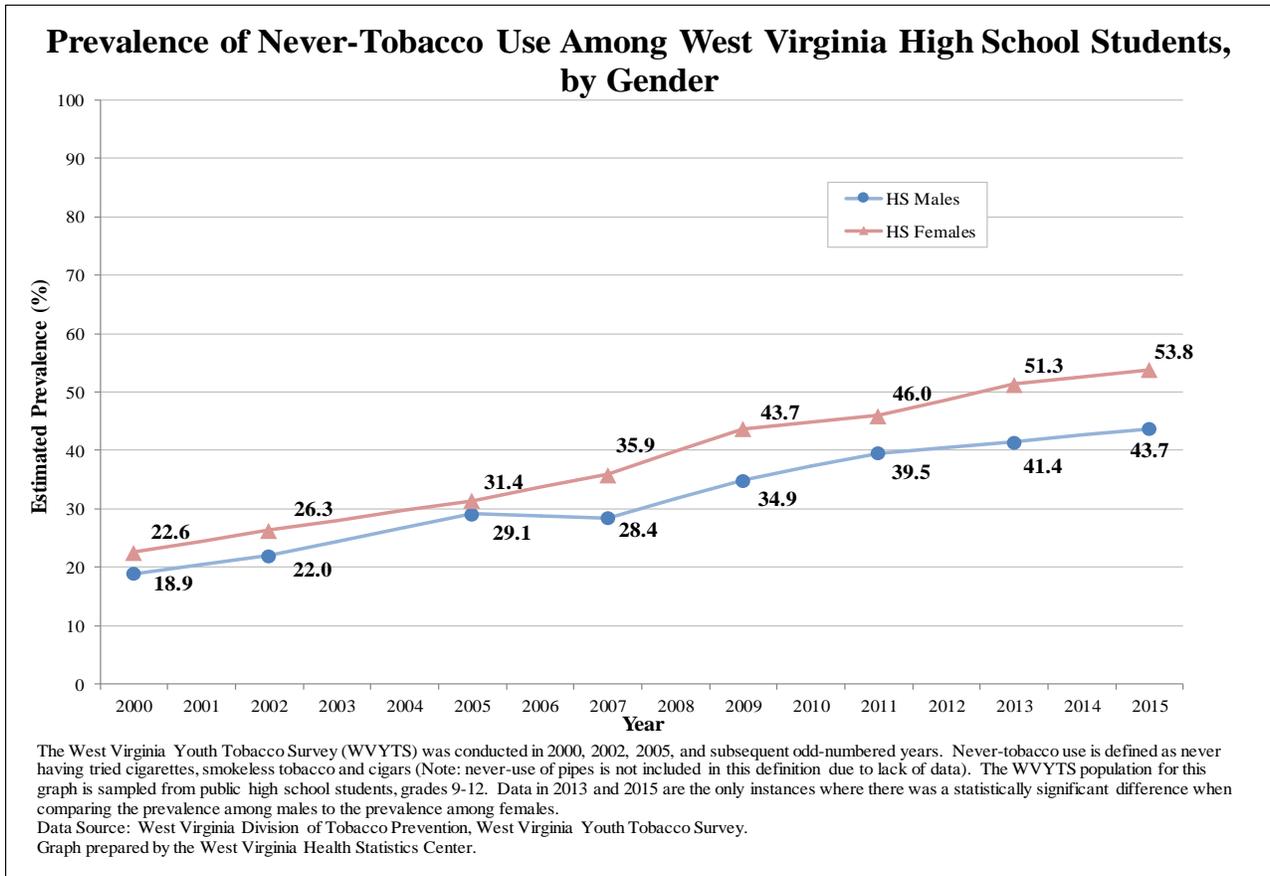
White, Non-Hispanic: 52.1%
 Black, Non-Hispanic: *68.1%
 Other, Non-Hispanic: *41.7%
 Multiracial, Non-Hispanic: *59.0%
 Hispanic: *63.3%

*No race/ethnicity analysis was conducted for smoking cessation due to small sample size.



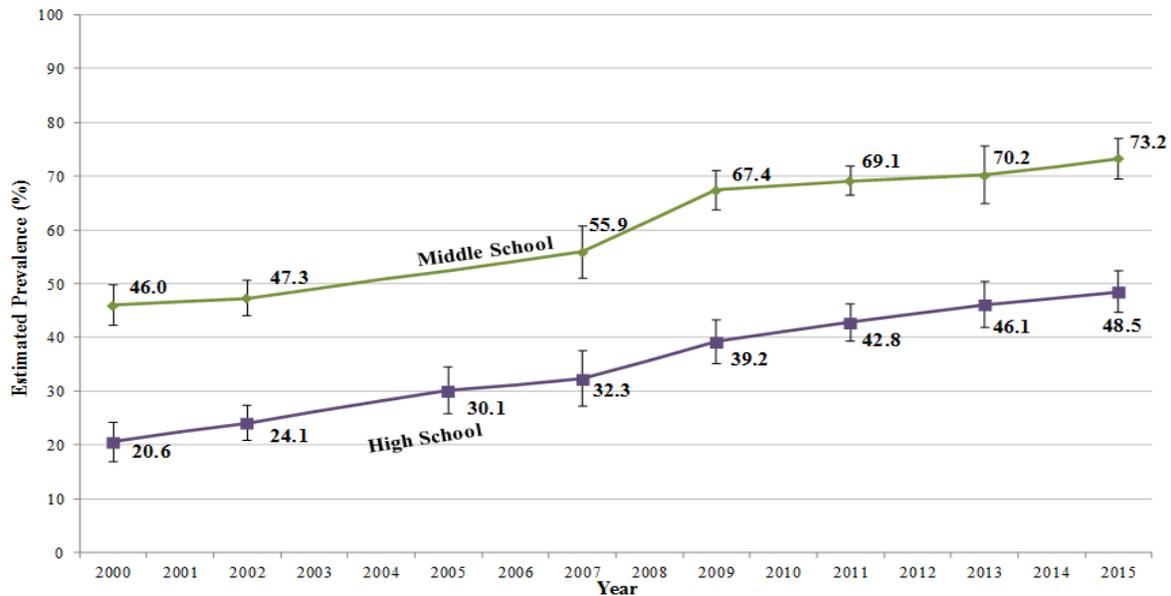
Age, Education, and Household Income – No categorical differences in these measures.

Never, Former, and Current Smoking among West Virginia Adults: As stated previously, the prevalence of current adult cigarette smokers has slightly dropped (but not significantly) from 2011 (28.6%) through 2014 (26.7%). Additionally, measures for never smokers and former (quit) smokers have remained static for several years. Almost half of West Virginia adults report they have never smoked cigarettes. More than 25% of West Virginia adults are former smokers (see graph on previous page).



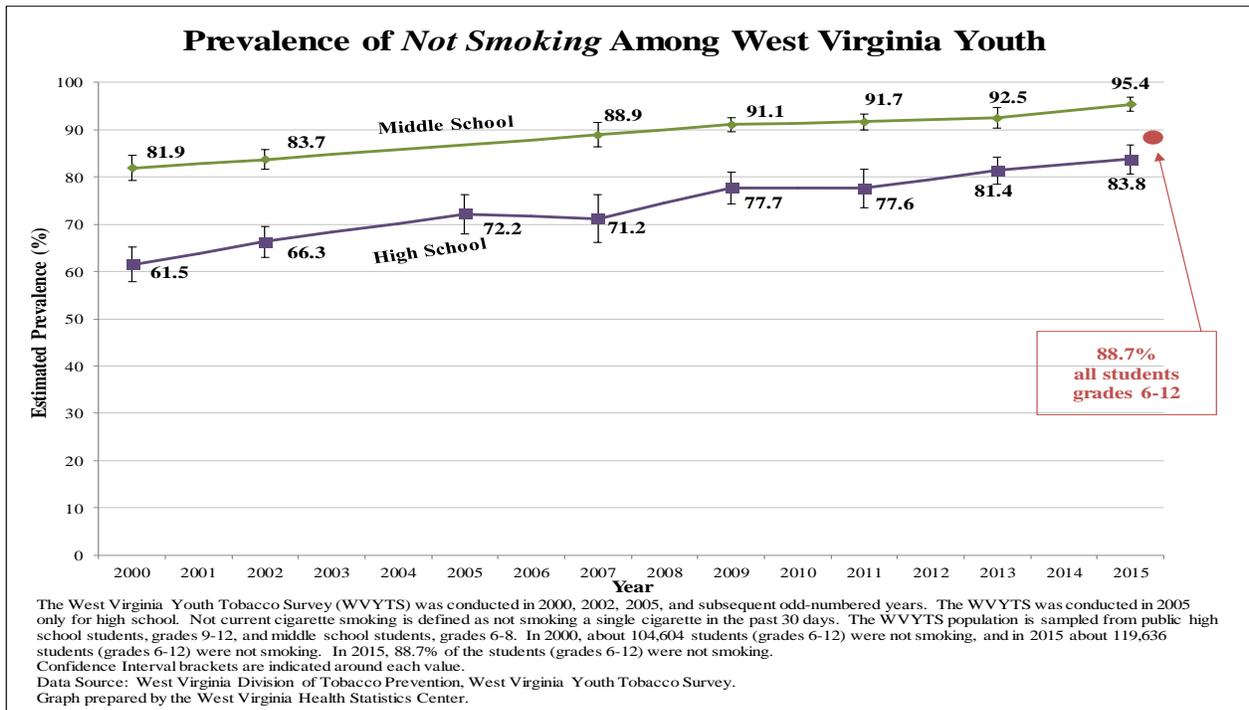
Youth Tobacco Use: There have been significant strides made in the past 12 years with on-going youth tobacco prevention efforts in West Virginia. The prevalence for never-tobacco use has increased 124 percent since 2000, with almost half of West Virginia high school students now (2015) reporting they have never used any tobacco. More females report never-tobacco use than males (see graph above). High school/middle school overall rates for never-tobacco use are found in the graph on the following page.

Prevalence of Never-Tobacco Use Among West Virginia Youth

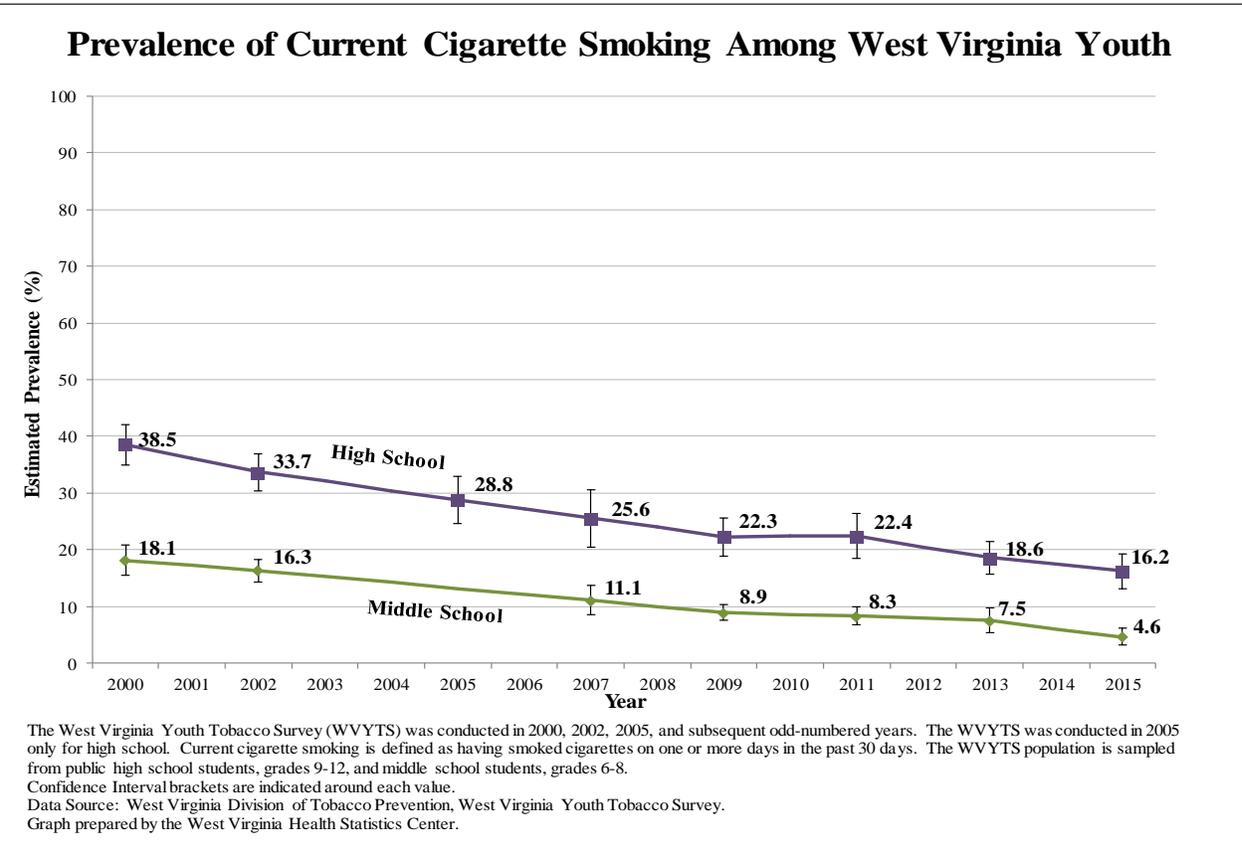


The West Virginia Youth Tobacco Survey (WVYTS) was conducted in 2000, 2002, 2005, and subsequent odd-numbered years. The WVYTS was conducted in 2005 only for high school. Never-tobacco use is defined as never having tried cigarette, smokeless tobacco and cigars (Note: never-use of pipes is not included in this definition due to lack of data). The WVYTS population is sampled from public high school students, grades 9-12, and middle school students, grades 6-8. In 2000, about 47,021 students (grades 6-12) were never-tobacco users, and in 2015, about 77,481 students (grades 6-12) were never-tobacco users. Confidence Interval brackets are indicated around each value.
 Data Source: West Virginia Division of Tobacco Prevention, West Virginia Youth Tobacco Survey.
 Graph prepared by the West Virginia Health Statistics Center.

The prevalence of not smoking among West Virginia youth (both middle school and high school aged) has steadily increased since 2000. Eighty-six point three percent of school-aged youth (grades 6 through 12) reported not smoking in 2015 (2015 WVYTS). See the following chart.

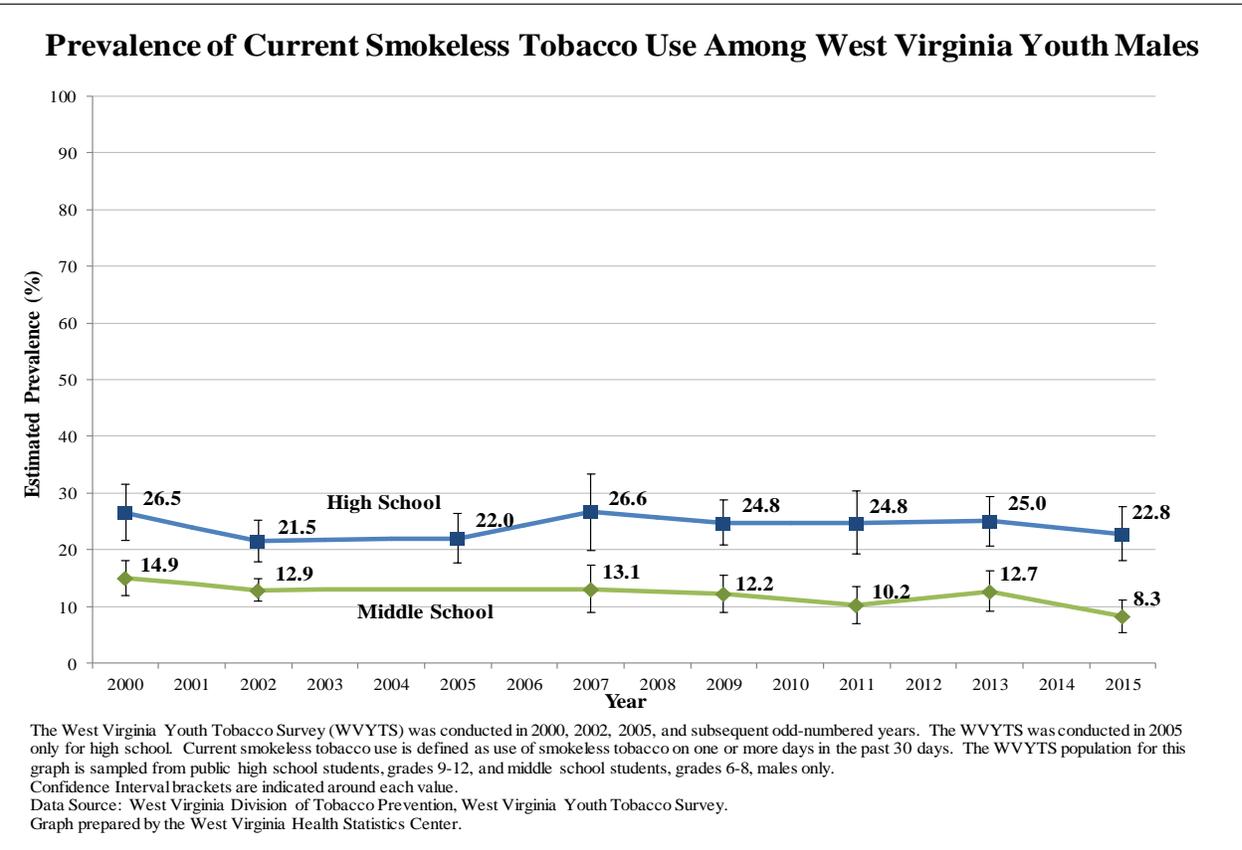


Prevalence of Youth Cigarette Smoking in WV (reference source 2015 WVYTS): In 2015, current high school youth smoking dropped to 16.2%. This represents a 58% decrease in the percentage of high school students who reported current smoking of cigarettes (16.2% in 2015 – was 38.5% in 2000). See chart below.



Prevalence of Current Youth Smokeless Tobacco Use in West Virginia (from 2015 WVYTS):

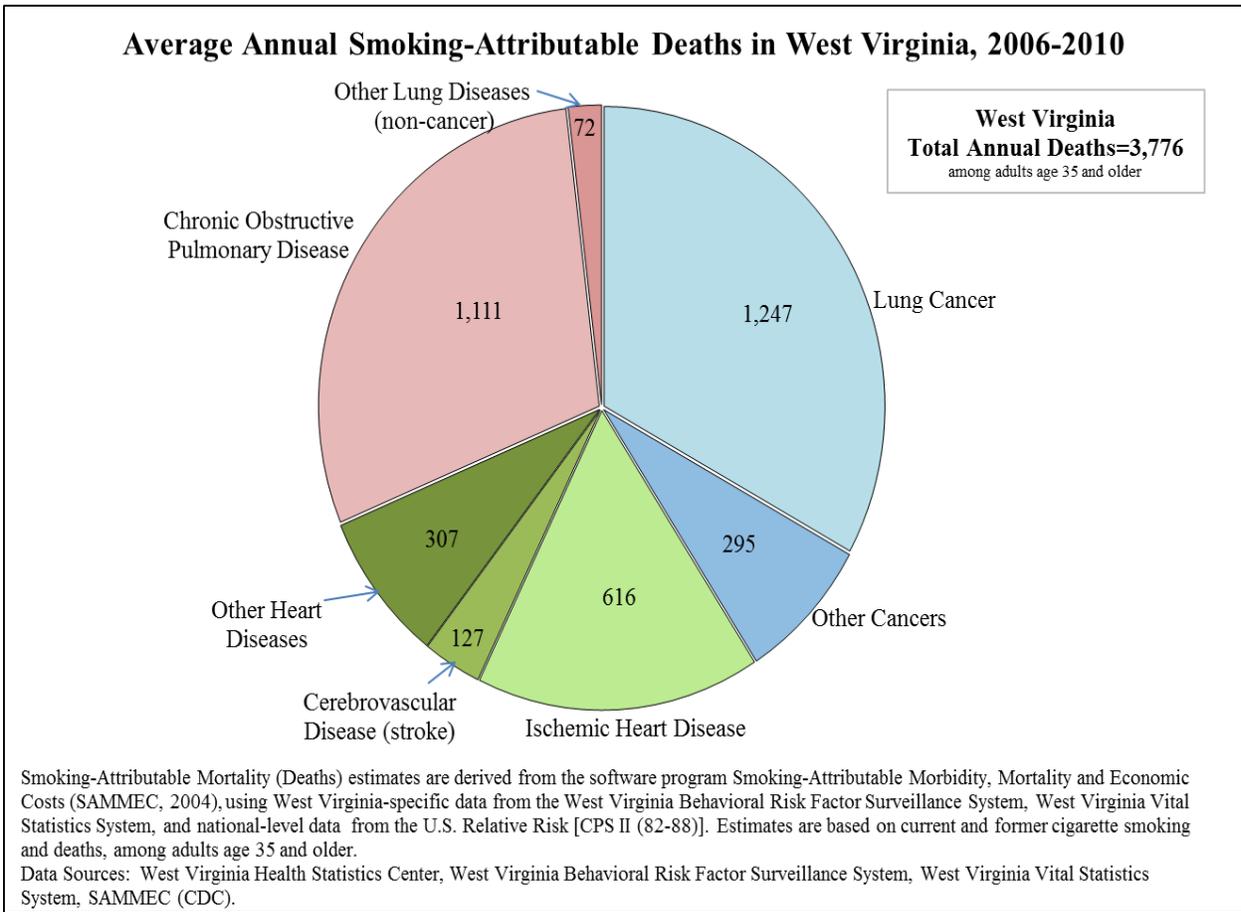
Reported use of ST remains a significant health issue for West Virginia’s male youths (as it also does for adult males). There has not been a significant decrease or increase in smokeless tobacco use among HS males in the past few years. While the prevalence is slightly lower since 2007, a prevalence of 25% of high school males using ST is unacceptable. See chart on following page.



Impact of Tobacco Use: Smoking and Chronic Disease: The epidemic of smoking-caused disease in the twentieth century ranks among the greatest public health catastrophes of the century, while the decline of smoking consequent to tobacco control is surely one of public health's greatest successes. However, the current rate of progress in tobacco control is not fast enough, and much more needs to be done to end the tobacco epidemic. Unacceptably high levels of smoking-attributable disease and death, and the associated costs, will persist for decades without changes in our approach to slowing and even ending the epidemic. If smoking persists at the current rate among young adults in this country, 5.6 million of today's Americans younger than 18 years of age are projected to die prematurely from a smoking-related illness (from "2014 United States Surgeon General Report on The Health Consequences of Smoking").

Additionally, more than 20 million Americans have died as a result of smoking since the first Surgeon General's report on smoking and health was released in 1964. This would include more than 200,000 state residents who died a premature death from cigarette smoking. For example, the risks for smoking-related disease and mortality remain high — with both men and women having a much higher risk for lung cancer and chronic obstructive pulmonary disease (COPD).

The following chart shows smoking attributable deaths in West Virginia (2006-2010):



The Health and Economic Burden of Smoking in West Virginia – 2006-2010 Tobacco is Killing and Costing Us Report (July 2013 Summary Report): The West Virginia Division of Tobacco Prevention collaborates with the West Virginia Health Statistics Center and the U. S. Centers for Disease Control and Prevention (CDC) to maintain frequent updates and publish *Tobacco Is Killing (and Costing) Us*, which serves as an outline of the burden of smoking in the state. West Virginia data analyzed through CDC’s *Smoking Attributable Mortality, Morbidity and Economic Costs* (SAMMEC), which estimates smoking-related deaths, years of potential life lost, smoking-related direct health care costs and productivity losses for West Virginia adults. The SAMMEC calculations are based on data for current and former smokers age 35 and older, by gender.

Smoking-Related Years of Potential Life Lost (YPLL): Smoking remains the leading cause of preventable death and disease in West Virginia and in the U.S. YPLL is a measure of the number of years of life lost due to death before the age of 75 and is an indicator of premature and preventable mortality.

Analysis by the West Virginia Health Statistics Center of smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) data (2006-2010) reveals:

West Virginia Smoking-Related Measures (2006-2010) Among Adults (who are age 35 and older)	
Annual Smoking-Related Deaths	3,776 deaths
Each smoker who dies prematurely loses	14.6 years of life
Annual Smoking-Related Costs	\$1,778,000,000
Annual Costs per smoker (18 and older)	\$4,676 per smoker
Annual Costs per pack of cigarettes	\$9 per pack

Cause of Death	WV Average Annual Deaths
Smoking-Related Cancers	1,543
Smoking-Related Heart Disease	1,050
Smoking-Related Lung Disease	1,183
Total Smoking-Related Deaths	3,776

In each year 2006-2010:

- An average of 55,151 YPLL were lost among adults age 35-74 due to premature death caused by cigarette smoking. This is about 44% of all YPLL lost among this group.
- Every smoker who died lost an average of 14.6 years of life due to premature death.

Smoking-Related Economic Costs in West Virginia can be separated into:

- 1) Direct health care costs related to cigarette smoking; and,
- 2) Productivity losses due to smoking-related deaths.
 - During the years 2006-2010, the estimated annual direct health care costs were \$709 million, and the estimated annual lost productivity (lost wages and other economic contributions of those who died early) amounted to \$1.07 billion.
 - Combined, these smoking-related costs totaled \$1.778 billion annually.
 - If viewed as a cost per pack of cigarettes sold in West Virginia, these costs total approximately \$9 per pack.
 - When expressed per smoker, it is approximately \$4,676 per adult smoker (18 and older).

The 2014 Surgeon General's Report provided more evidence that smoking impacts nearly every organ of the body, strengthened that there is no risk-free level of exposure to secondhand smoke, and gave new evidence that liver cancer and colorectal cancer are now added to the long list of cancers caused by smoking.

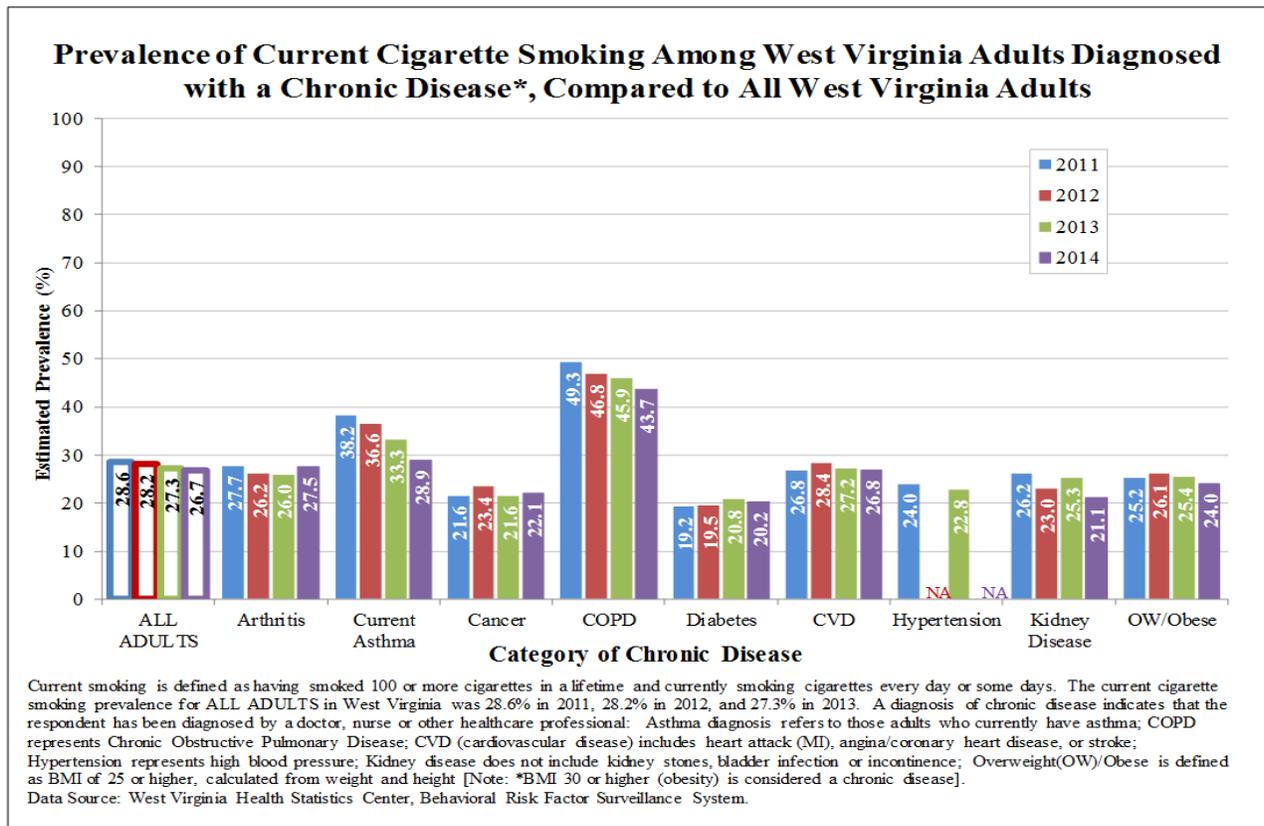
These new 2014 Surgeon General Report findings include:

- Smoking causes general adverse effects on the body.
- Smoking increases the risk of dying from cancer and other diseases; liver cancer and colorectal cancer are caused by smoking.
- Exposure to secondhand smoke is a cause of stroke.
- Smoking causes increased inflammation and also impairs the immune system.
- Smoking is a cause of diabetes mellitus.
- Smoking is a cause of rheumatoid arthritis.

The burden of death and disease from tobacco use in the United States (and in West Virginia) is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden.

Cigarette smoking is known to be a causative factor among many West Virginia adults who are diagnosed with a chronic disease. The following chart shows cigarette smoking prevalence among West Virginia adults diagnosed with a chronic disease (compared to all West Virginia adults). In 2013, almost 28% of West Virginia residents having a chronic disease were cigarette smokers.

Many of these smoking-related chronic diseases are illustrated in the following chart:

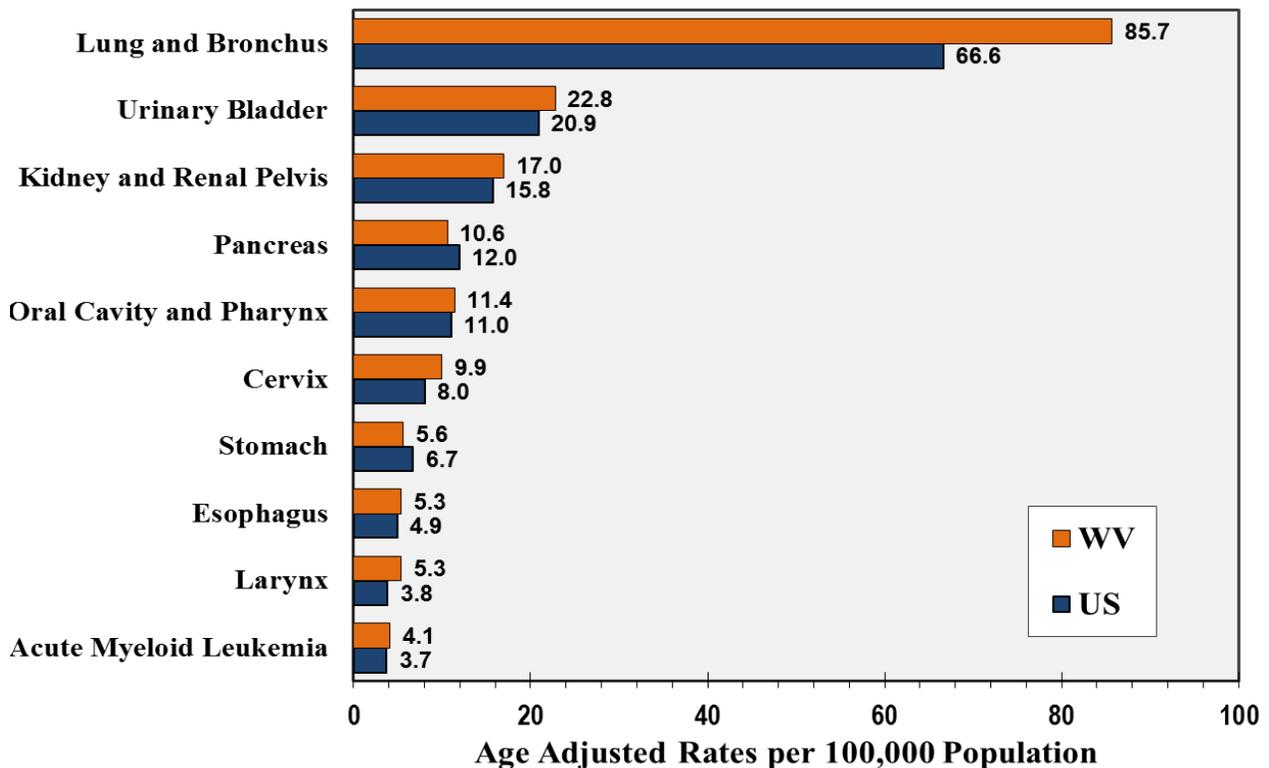


According to the Chronic Obstructive Disease (COPD) Foundation in 2013, COPD most often occurs in people 40 years of age and older who have a history of smoking. These may be individuals who are current or former smokers. While not everybody who smokes cigarettes gets COPD, most of the individuals who have COPD (about 90% of them) have smoked. According to the 2014 WVBRFSS, 43.7% of current West Virginia smokers report that they have COPD.

It is scientifically well known that cigarette smoking is a causative factor for tobacco-related cancers. Smoking is now known to cause 13 different types of cancer - almost everywhere in the body. One out of three U.S. cancer deaths is tobacco-related. Unfortunately, because of prolonged high smoking rates, West Virginia cancer rates are significantly higher than overall U.S. rates. Two more smoking-related cancers are documented in the new 2014 *Surgeon General Report (Colorectal and Liver Cancer the Second Deadliest Cancer Behind Lung Cancer)*.

The following chart, (Figure 1) shows *Tobacco-Related Cancer Incident Rates, WV and US* from 2006 through 2010 (data sources from West Virginia Cancer Registry and West Virginia Health Statistics Center).

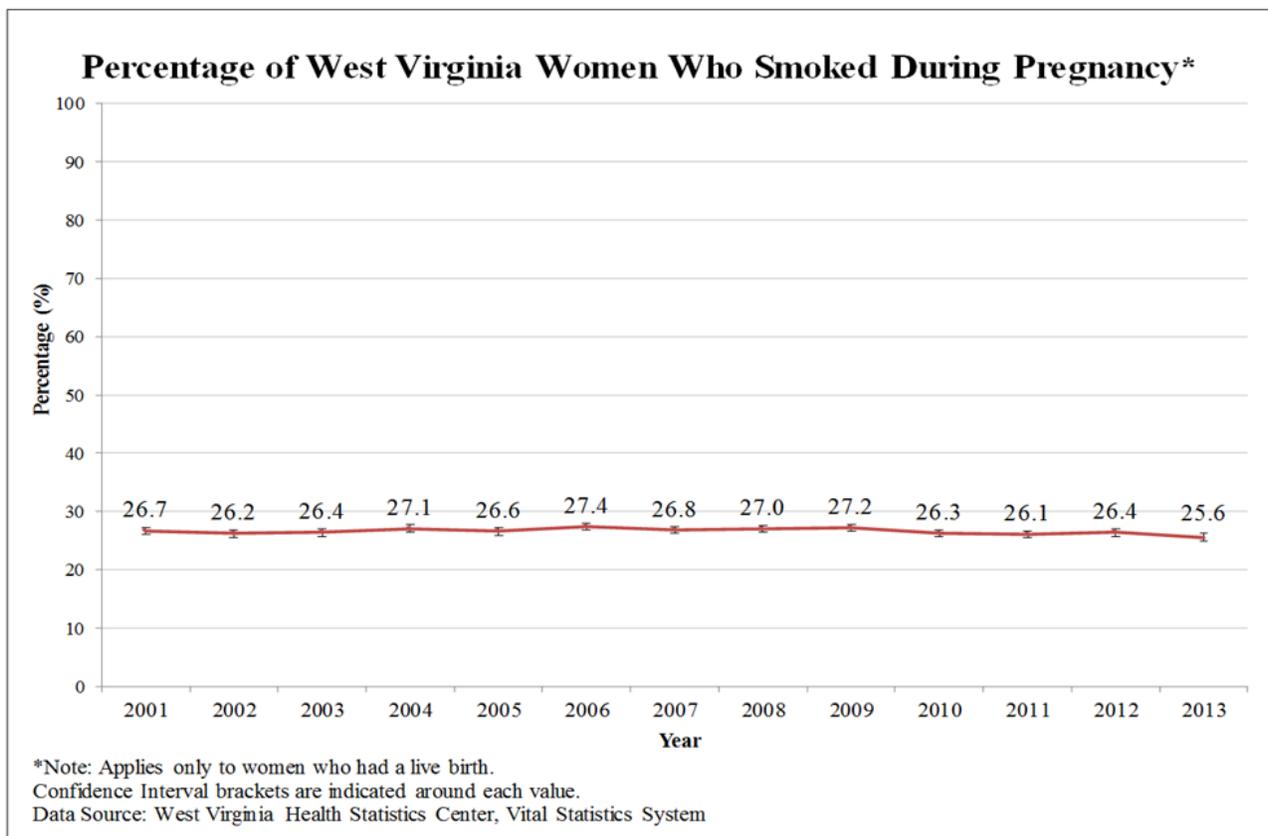
Figure 1. Tobacco-Related Cancer Incidence Rates, WV and US, 2006-2010



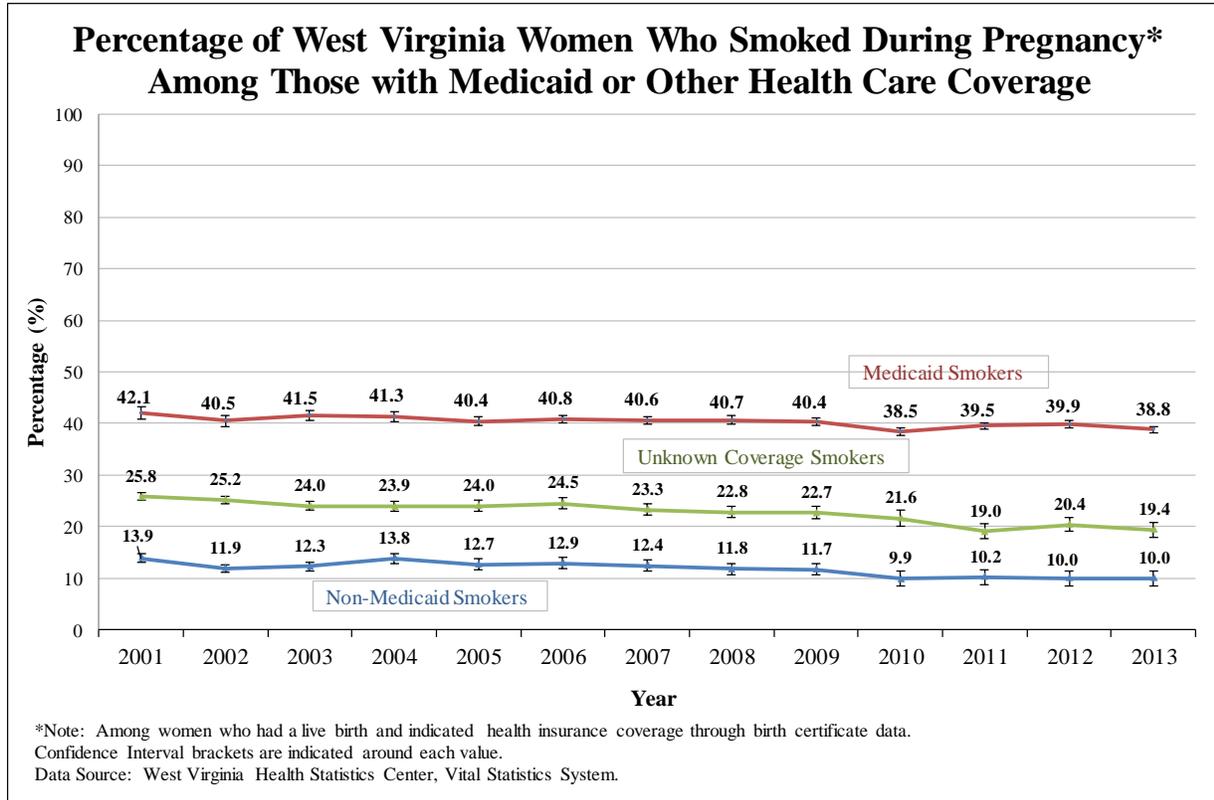
Lung cancer remains one of the most common cancers diagnosed among West Virginia residents and remains the leading cause of cancer-related death in the state. Tobacco use accounts for 30% of all cancer deaths and 85% to 90% of lung cancer deaths in the state.

Lung cancer claims more lives each year than colon, prostate, ovarian, lymphoma, bladder and breast cancer combined. High rates of lung cancer speak directly to lifestyle and the associated risk factors for lung cancer. As long as West Virginia continues to have high rates of smoking, the rates of lung cancer will not decrease. Again, the *2014 Surgeon General Report on the Consequences of Smoking* points to other parts of the country where there are higher tobacco product prices, strict statewide clean indoor air laws, and significant decreases in personal smoking habits. The rates of lung cancer also decreased; however, this has not happened in West Virginia.

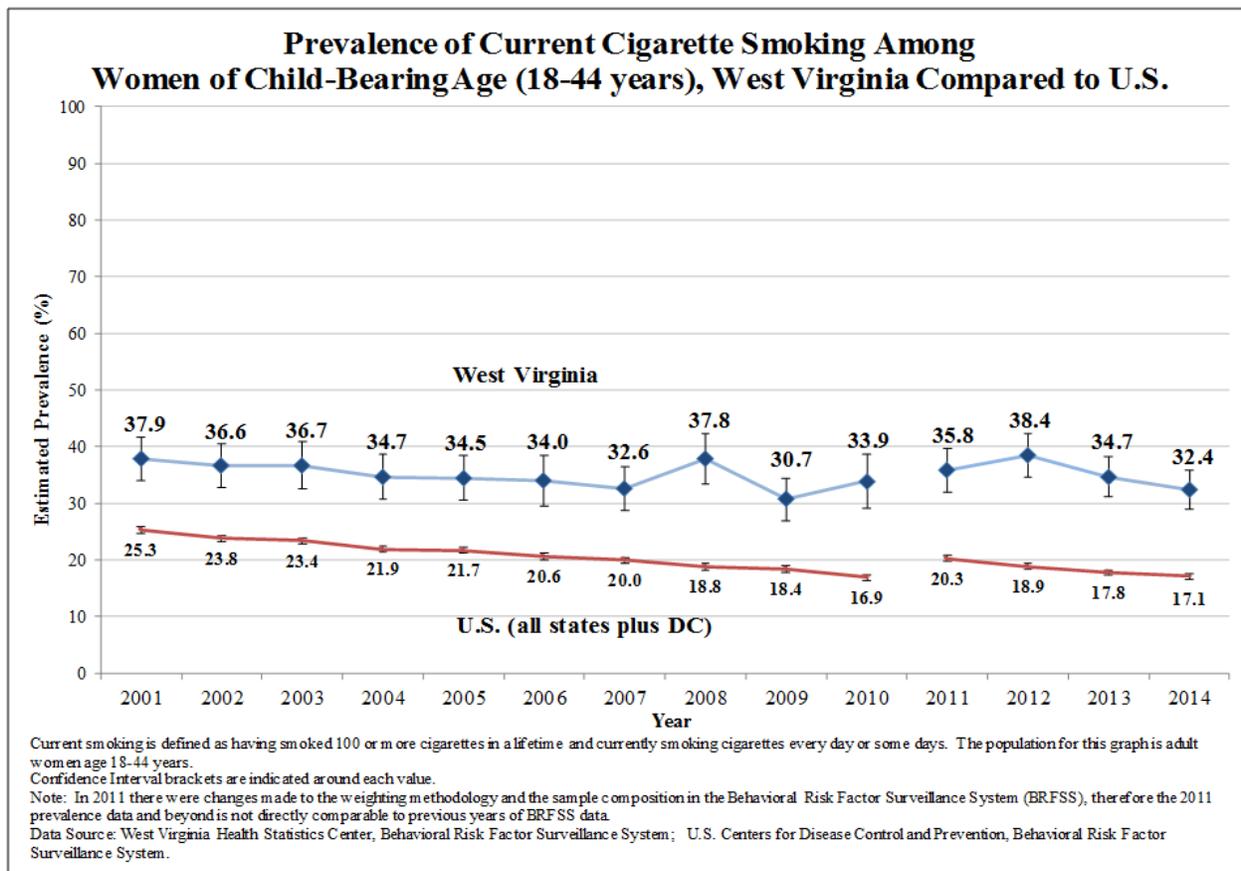
Impact of Tobacco Use: Smoking and Pregnancy: According to the *2013 West Virginia Vital Statistics Report* data, 25.6% of women reported smoking during pregnancy, which is well above the national rate of 9% (from www.childtrends.org data using 2003 revision of standard birth certificate form).



Notwithstanding multiple and varied interventions, this rate has remained stagnant for the past decade (see table below). Furthermore, in 2013, 38.8% of women enrolled in Medicaid in West Virginia use tobacco and (also in 2013), 57.6% of all live births in the state where insurance status was known were financed by Medicaid.



According to the 2014 WVBRFSS data, more than 95,054 women (32.4%) of West Virginia’s adult women of childbearing age (age 18-44) are current cigarette smokers. The chart on the following page shows the number of women who had a live birth and reported cigarette smoking while pregnant from 2001 through 2013 (from 2013 West Virginia Vital Statistics Report).



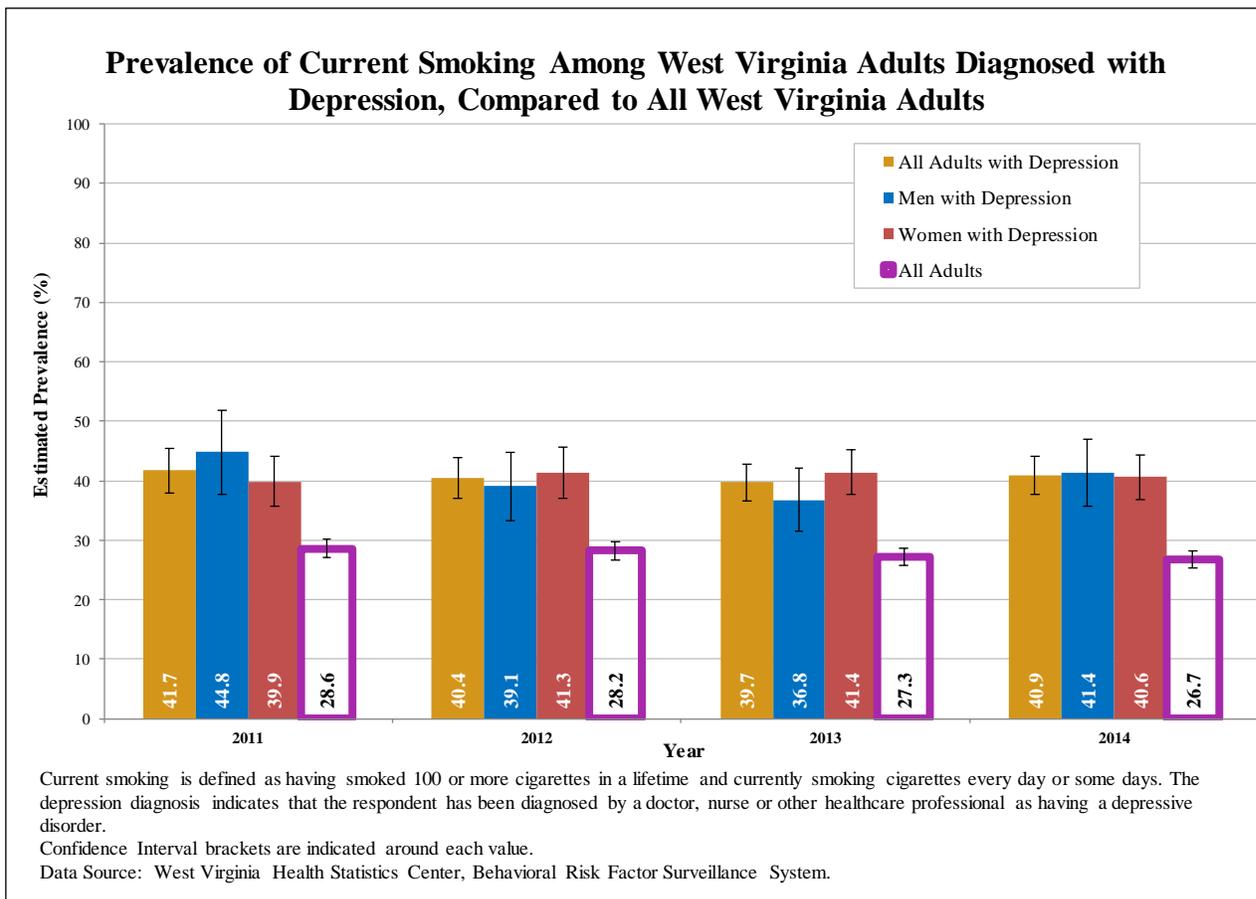
It is well known that women who are of low socioeconomic status and/or covered by Medicaid have a higher prevalence of cigarette smoking. The chart (based on West Virginia Vital Statistics System reporting in 2013) shows that 38.8% of women covered under Medicaid smoked during pregnancy, compared to 10.0% of women who were non-Medicaid. The chart below shows that the overall prevalence of West Virginia adult women of child-bearing age (18-44) who smoked during pregnancy was 32.4% (from 2014 BRFSS).

Smoking and Depression among West Virginia Adults: The association between depression and cigarette smoking has been recognized for decades. The following chart (based on 2014 WVBRFSS data) shows the association between current cigarette smoking and those adults diagnosed by a health care provider with depression. More than 40% (40.9%) of West Virginia adults diagnosed with depression report cigarette smoking, and almost 45% of this population report current tobacco use (use of cigarettes, smokeless tobacco).

According to the CDC's February 2013 Vital Signs Report on Adult Smoking: Nationally, almost 1 in 5 adults (or 45.7 million adults) have some form of mental illness, and 36% of these people smoke cigarettes. In comparison, 21% of adults without mental illness smoke cigarettes. (Mental illness is defined here as diagnosable mental, behavioral, or emotional conditions and does not include developmental and substance use disorders.)

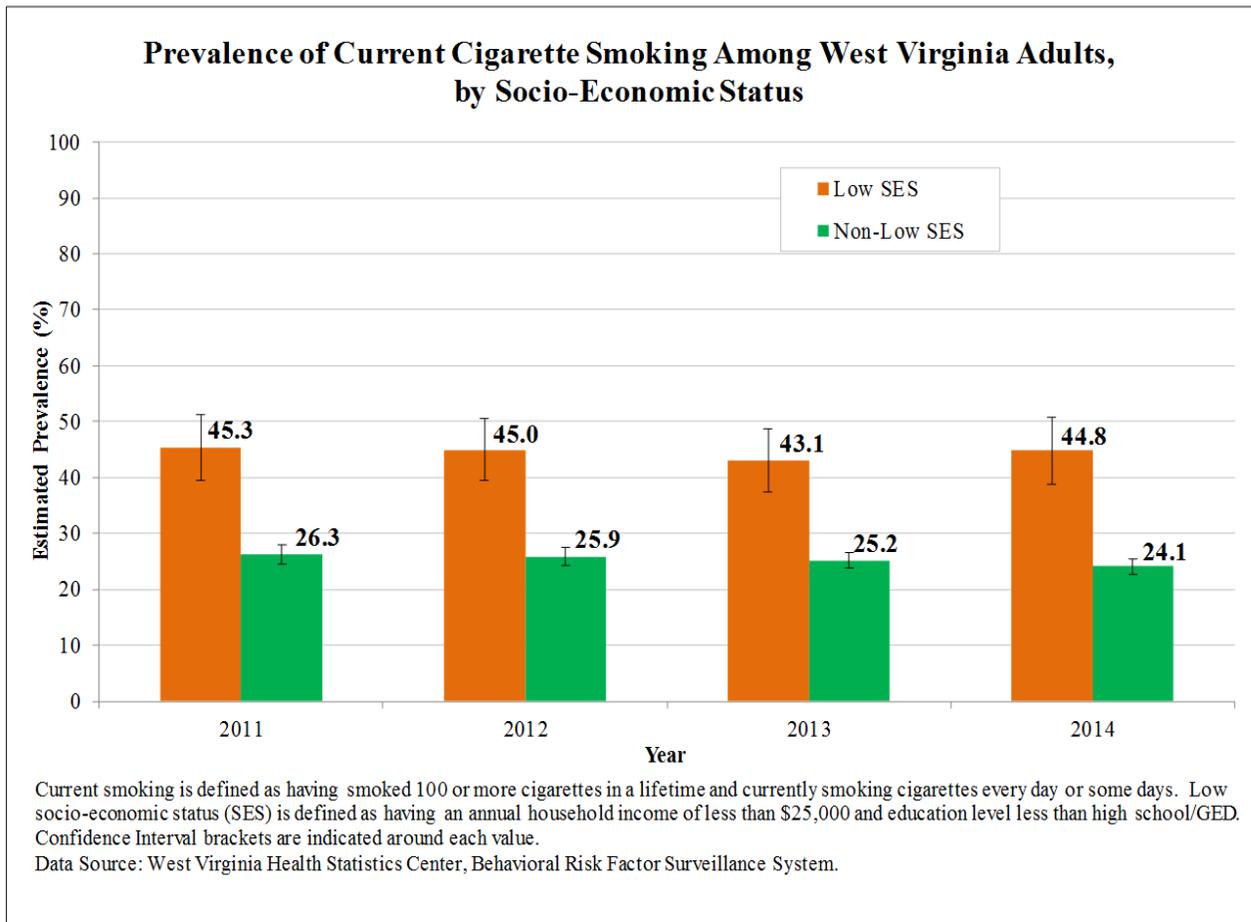
There are other troubling statistics from the report:

- 31% of all cigarettes are smoked by adults with mental illness.
- 40% of men and 34% of women with mental illness smoke.
- 48% of people with mental illness who live below the poverty level smoke, compared with 33% of those with mental illness who live above the poverty level.



Smoking Prevalence and Low Socioeconomic Status (Low SES): A high percentage of the state’s tobacco users remain poor. In 2014, 13% of college graduates smoked compared with 42.2% of adults lacking a high school diploma or GED. Among West Virginia adults in the low SES category (less than a high school/GED education and a household income of less than \$25,000/year), 44.8% are current smokers. This is in comparison to a smoking prevalence of 24.1% for adults who are not in the low SES population. Of those West Virginia adults with incomes less than \$15,000 per year, 47% were smokers compared to 14% of adults with annual household incomes over \$75,000 (*data from 2014 WVBRFSS).

Many socioeconomic factors influence behaviors that promote or threaten health, but the greatest predictor for tobacco use is socioeconomic status. Characteristics to define low SES include low income, less than 12 years of education, medically under-served, unemployed, and working poor. They can also be mentally ill, incarcerated, homeless, and a Veteran (25% of homeless adults in the US are Veterans). Low-income people smoke more, suffer more, spend more, and die more from tobacco use (from DTP report: *Tobacco is Killing and Costing Us, June 2012*).



It is well known that those enrolled in Medicaid are more likely to smoke than the general population, and that smoking-related disease (i.e., cancer, COPD, and cardiovascular disease) is a significant contributor to increasing Medicaid costs.

“The tobacco industry has succeeded in addicting those who have the least information about the health risks of smoking, the fewest resources, the fewest social supports, and the least access to cessation services. The link between smoking and low income and lower levels of education cannot be over emphasized. Tobacco is not an equal-opportunity killer” (from DTP report: *Tobacco is Killing and Costing Us, June 2012*).

From the 2014 U.S. Surgeon General Report on the Burden of Smoking: The century-long epidemic of cigarette smoking has caused an enormous avoidable public health tragedy. Since the first Surgeon General's report in 1964, more than 20 million premature deaths can be attributed to cigarette smoking.

The Effects of Smoking on Cancer and Other Chronic Diseases: The report showed that smoking impacts nearly every organ of the body, and reemphasized the conclusion that the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke. Even 50 years after the first Surgeon General's report, research continues to newly identify diseases caused by smoking, including such common diseases as diabetes mellitus, rheumatoid arthritis, and colorectal cancer.

Exposure to secondhand tobacco smoke has been causally linked to cancer, respiratory and cardiovascular diseases, and to adverse effects on the health of infants and children.

The disease risks from smoking by women have risen sharply over the last 50 years and are now equal to those for men for lung cancer, chronic obstructive pulmonary disease, and cardiovascular diseases.

In addition to causing multiple diseases, cigarette smoking has many adverse effects on the body, such as causing inflammation and impairing immune function.

The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden.

Impact of Nicotine and Addiction: Nicotine was found to be addicting in the prior Surgeon General's reports. Nicotine is a pharmacologically active agent that has acute toxicity and that readily enters the body and is distributed throughout. Beyond causing addiction, it activates multiple biologic pathways that are relevant to fetal growth and development, immune function, the respiratory system, the cardiovascular system, the central nervous system, and carcinogenesis.

Nicotine exposure during fetal development, a critical window for the brain, has lasting adverse consequences for brain development. Nicotine exposure during pregnancy also contributes to adverse reproductive outcomes, such as preterm birth and stillbirth.

Impact of Cigarette Smoking on General Health: Smokers have long been known to suffer from poorer general health than nonsmokers, beginning at an early age and extending throughout adult life. Although emphasis has been given to smoking as a cause of specific and avoidable diseases, it is a powerful cause of ill-health generally. These health deficits not only reduce the quality of life of smokers but also affect their participation in the workplace and increase their health care costs.

Impact of Cigarette Smoking on Cancer: Lung cancer, the most well-known of many deadly diseases to be identified in a Surgeon General's report as being caused by smoking, is now the nation's most common cancer killer among both men and women. The report evaluated the evidence on other cancers and concluded that smoking is a cause of liver cancer and of colorectal cancer, the fourth most diagnosed cancer in the U.S. and the cancer responsible for the second largest number of cancer deaths annually. The report found that the evidence is suggestive but insufficient to conclude that smoking and exposure to secondhand smoke causes breast cancer, and that smoking is not a cause for prostate cancer. The report also found that smoking increases the risk of dying from cancer and other diseases in cancer patients and survivors, including increased risks in breast and prostate cancer patients.

Impact of Cigarette Smoking on Respiratory Diseases: Smoking is well-established to be the main cause of chronic obstructive pulmonary disease (COPD). Because smoke is inhaled into the lungs and its components are deposited and absorbed in the lungs, it has long been linked to adverse effects on the respiratory system, causing malignant and nonmalignant diseases, exacerbating chronic lung diseases, and increasing the risk for respiratory infections.

For asthma, another obstructive lung disease, the evidence was found to be sufficient to infer that smoking worsens asthma in adults who smoke. The report comments on benefits of implementing smoke-free policies for workers with asthma. Evidence points to a reduction in hospital admissions for respiratory diseases following the enactment of a smoke-free policy.

Tuberculosis was once a leading cause of death in the United States. Now, far less frequent in the United States, it remains prominent worldwide. Evidence reported over the last decade is sufficient to lead to a conclusion that smoking increases the risk for tuberculosis and for dying from tuberculosis.

The Impact of Cigarette Smoking on Cardiovascular Diseases: Although lung cancer is often assumed to be the largest smoking-attributable cause of death in the United States, cardiovascular disease actually claims more lives of smokers 35 years of age and older every year compared with lung cancer.

Exposure to secondhand smoke causes significantly more deaths due to cardiovascular disease than due to lung cancer, and this new report finds that exposure to secondhand smoke is also a cause of stroke. Exposure to secondhand smoke increases the risk for stroke by an estimated twenty to thirty percent. Nonetheless, the evidence is clear that reductions in smoking and exposure to secondhand smoke have contributed to the decline in death rates from cardiovascular diseases since the late 1960s. Smoke-free laws and policies have been proven to reduce the incidence of heart attacks and other coronary events among people younger than 65 years of age, and evidence suggests that there could be a relationship between such laws and policies and a reduction in cerebrovascular events. Additionally, other heart disease outcomes, including angina, circulatory dysfunction, and out-of-hospital sudden coronary death also are reduced.

The Impact of Cigarette Smoking on Diabetes: Previous Surgeon General's reports have found that smoking complicates the treatment of diabetes and that smokers who have been diagnosed with diabetes are at a higher risk for kidney disease, blindness, and circulatory complications leading to amputations. This report concludes that smoking is a cause of type 2 diabetes mellitus, and that the risk of developing diabetes is 30-40% higher for active smokers than nonsmokers. Furthermore, the risk of developing diabetes increases as the number of cigarettes smoked escalates.

The Impact of Cigarette Smoking on Immune and Autoimmune Disorders: This report finds that smoking is a cause of general adverse effects on the body, including systemic inflammation and impaired immune function. One result of this altered immunity is increased risk for pulmonary infections among smokers. For example, risks for mycobacterium tuberculosis and for death from tuberculosis disease are higher for smokers than nonsmokers. Additionally, smoking is known to compromise the equilibrium of the immune system, increasing the risk for several immune and autoimmune disorders. This report finds that smoking is a cause of rheumatoid arthritis, and that smoking interferes with the effectiveness and attainment of certain treatments for rheumatoid arthritis.

The Impact of Cigarette Smoking on Reproduction: Several additional adverse reproductive effects are now found to be attributable to smoking. One is ectopic pregnancy, in which the embryo implants in the Fallopian tube or elsewhere outside the uterus. Ectopic pregnancy is very rarely a survivable condition for the fetus and is a potentially fatal condition for the mother. This report finds that maternal smoking during early pregnancy is causal for orofacial clefts in infants, and evidence suggests that smoking could be associated with certain other birth defects. This report also finds that the evidence is now sufficient to conclude that there is a causal relationship between smoking and erectile dysfunction in men.

The Impact of Cigarette Smoking on Eye Disease: Cigarette smoking has an adverse effect on the anatomical function of the eye. The retina is a delicate, light-sensitive tissue that lines the inside of the eye. The macula is the most sensitive part of the retina and is the part of the eye that supplies sharp vision. Age-Related Macular Degeneration (AMD) gradually destroys the macula and can ultimately lead to loss of vision in the center of the eye. This report finds that smoking is a cause of AMD. Evidence in the report also suggests that quitting smoking may reduce the risk for AMD, but the reduced risk may not appear for twenty or more years after smoking cessation.

The Effect of Cigarette Smoking on All-Cause Mortality: The evidence in the report reaffirms that smoking is a major cause of premature death. During the past 50 years, as generations of men and women who began smoking in adolescence and continued to smoke into middle and older ages have been stricken with the health consequences of lifetime smoking, the relative risk for all-cause mortality associated with current cigarette smoking has increased.

The age-standardized relative risk, comparing the all-cause death rate in current smokers to that of never smokers, has more than doubled in men and more than tripled in women during the years since the release of the first Surgeon General’s Smoking and Health report.

The lives of smokers are cut short by the development of the many diseases caused by smoking and by their greater risk of dying from common health events, such as complications of routine surgeries and pneumonia. Smoking shortens life far more than most other risk factors for early mortality; smokers are estimated to lose more than a decade of life.

Smoking cessation by 40 years of age reduces that loss approximately 90%. Even stopping by about 60 years of age reduces that loss approximately 40%. However, the number of cigarettes smoked per day is much less effective than quitting entirely for avoiding the risks of premature death from all smoking-related causes of death.

Social Determinants of Tobacco Use, Smoking (2014 Surgeon General Report on Smoking and Health): Since the first Surgeon General’s Report on Smoking in 1964, the number of smoking-related deaths in West Virginia alone is at least 190,000 – equal to over 10% of our current total population. Achieving social justice in the arena of tobacco control remains a mammoth task. Each day, 2400 young people in the United States are offered their initial cigarette. Of these, 12 West Virginia youths will become daily smokers. These youth represent “replacement smokers” for the tobacco industry, consequently becoming the substitutes for the 11-12 smoking-related deaths that occur daily in the State.

It cannot be assumed that the war on tobacco has been won, especially in West Virginia where nearly 3,900 residents die prematurely to smoking and secondhand smoke exposure each year, and unnecessarily spend billions of dollars to treat smoking-related diseases and suffer occupational losses annually.

Key Tobacco Use Related Health Indicators:

- Decrease the prevalence of current smoking among adults from 27.3% in 2013 to 24.5% in 2020 (BRFSS).
- Increase the prevalence of never-cigarette smoking among adults from 48.3% in 2013 to 50% in 2020.
- Increase the prevalence of never smoking among:
 - High school students from 53.2% in 2013 to 63.7% in 2020 (YTS); and
 - Middle school students from 76.5% in 2013 to 85.1% in 2020 (YTS).
- Decrease the prevalence of current cigarette smoking among:
 - High school students from 18.6% in 2013 to 14.7% in 2020 (YTS); and
 - Middle school students from 7.5% in 2013 to 4.6% in 2020 (YTS).
- Decrease the prevalence of smokeless tobacco use among adult males from 18.2% in 2013 to 14.4% in 2020 (BRFSS).

- Increase the prevalence of never using smokeless tobacco among:
 - High school male students from 61.4% in 2013 to 65.2% in 2020 (YTS); and
 - Middle school males students from 77.9% in 2013 to 85.2% in 2020 (YTS).
- Increase the proportion of population protected by a comprehensive smoke-free policy from 47% in 2013 to 70% in 2020 (data from Division of Tobacco Prevention).
- Reduce the prevalence of current smoking among West Virginia adults in the low socioeconomic status population from 43.1% in 2013 to 35.0% in 2020 (BRFSS).
- Decrease the percentage of West Virginia women who smoked during pregnancy from 27.9% in 2014 to 23.0% in 2020 (VSS).
- Reduce the prevalence of current smoking among West Virginia adults who have been diagnosed with chronic obstructive pulmonary disease from 45.9% in 2013 to 37.1% in 2020 (BRFSS).

The Division of Tobacco Prevention has multiple key tobacco-related health measures that are followed and updated either annually or semi-annually. A complete chart of these indicators (including their baselines, most current measures, and projected 2020 targets) is attached at the end of this report.

Action Area Strategy – Research Proven and Effective Tobacco Control Interventions:

In 1996, the U.S. Department of Health and Human Services established the *Task Force on Community Preventive Services (Community Task Force)* to identify population health interventions that are scientifically proven to save lives, increase lifespans, and improve the quality of life. The *Community Task Force* produces recommendations (and identifies evidence gaps) to help inform the decision making of federal, state, and local health departments, other government agencies, communities, health care providers, employers, schools and research organizations.

The *Community Task Force* developed *The Guide to Community Preventive Services (The Community Guide)* which addresses the effectiveness of community-based interventions for three strategies to promote tobacco use prevention and control — prevent tobacco product use initiation, increase cessation, and reduce exposure to environmental tobacco smoke.

The *Community Task Force* strongly recommends:

- Increasing the unit price of tobacco products.
- Comprehensive smoke-free policies and regulations.
- Community mobilization with additional interventions.
- Conducting mass media education campaign combined with other proven community interventions.
- Providing telephone-based cessation counseling.
- Reducing out-of-pocket tobacco cessation costs for patients.
- Implementing health care provider reminder systems (either alone or combined with provider education).
- Incentives and competitions to increase smoking cessation attempts (when done in combination with additional recommendations).

The Community Guide stresses that comprehensive tobacco control programs are to be well coordinated, population-level interventions to reduce appeal and acceptability of tobacco use, increase tobacco use cessation, reduce secondhand smoke exposure, and prevent initiation of tobacco use among young people. These programs should combine and integrate evidence-based educational, clinical, regulatory, economic, and social strategies.

The Health Consequences of Smoking — 50 Years of Progress: A Report of the Surgeon General, 2014 calls for increased and sustained action to rapidly eliminate the use of cigarettes and other forms of combustible tobacco products. This report calls for the following:

- Raising the average excise cigarette taxes to prevent youth from starting smoking and encouraging smokers to quit.
- Fulfilling the opportunity of the Affordable Care Act to provide access to barrier-free proven tobacco use cessation treatment including counseling and medication to all smokers, especially those with significant mental and physical comorbidities.
- Expanding smoking cessation for all smokers in primary and specialty care settings by having health care providers and systems examine how they can establish a strong standard of care for these effective treatments.
- Effective implementation of FDA’s authority for tobacco product regulation in order to reduce tobacco product addictiveness and harmfulness.
- Fully funding comprehensive tobacco control programs at CDC recommended levels.
- Extending comprehensive smoke-free indoor protections to 100% of the population.

The CDC’s *2014 Best Practices: Comprehensive Tobacco Control Programs* remains the key research-effective guideline for knowing what works to improve adverse health effects related to tobacco use. A comprehensive tobacco control program is a statewide, coordinated effort to establish smoke-free policies and social norms, to promote quitting and help tobacco users quit, and to prevent tobacco use initiation. These programs are designed to reduce tobacco-related disease, disability, and death.

The Bureau for Public Health’s Division of Tobacco Prevention has an established infrastructure for implementing evidence-based comprehensive tobacco control program for West Virginia. The five key elements to support comprehensive tobacco control programs from the Best Practices report are titled:

- *State and Community Interventions.*
- *Cessation Interventions.*
- *Mass-Reach, Health Communication Interventions.*
- *Surveillance and Evaluation Interventions.*
- *Administration, Management, and Infrastructure.*

*All elements should also address tobacco-related disparities.

Comprehensive tobacco control programs are designed to reduce tobacco-related disease, disability, and death, are research-proven to work if well-funded and sustained over time, and are a public health “best buy.” It is known that:

- Funding comprehensive tobacco control programs have high return on investment; and
- Sustained funding for these programs improves health and leads to even greater returns on investment.

Among tobacco control interventions, the most effective include:

- Sustained best practices funding for comprehensive programs.
- Tobacco product excise tax increases.
- Comprehensive, 100% smoke-free policies.
- Sustained, aggressive media campaigns.
- Access to tobacco cessation services.

Well-funded, sustained comprehensive tobacco control programs are founded on strong evidence of effectiveness in reducing tobacco use and secondhand smoke exposure. Evidence indicates these programs reduce the prevalence of tobacco use among adults and young people, reduce tobacco product consumption, increase quitting, and contribute to reductions in tobacco-related diseases and deaths. Economic evidence indicates that comprehensive tobacco control programs are cost-effective, and savings from averted health care costs far exceed program costs.

The key element for West Virginia's reduction of tobacco use is the policy intervention of sustaining the ideal investment for comprehensive tobacco control programs.

Note: Programs funded at the higher recommended level see the greatest return on investment and population health effect. The Division of Tobacco Prevention is currently (SFY16) funded at just under \$6 million per year. The CDC recommended annual funding level for West Virginia's tobacco education and control programs is \$27.4 million.

Action Area Strategy – Proposed Goals/Objectives/Strategies to Reduce the Prevalence of Tobacco Use in West Virginia:

Goal/Strategy #1: Enhance West Virginia's tobacco cessation and prevention evidence-based efforts as recommended by the 2014 CDC Best Practices for Comprehensive Tobacco Control Programs, the 2014 Surgeon General's Report on Smoking, and the Community Preventive Services Task Force's Community Guide.

This goal/strategy includes strengthening and sustaining the following recommendations:

Comprehensive statewide tobacco control infrastructure

- Sustained comprehensive CDC Best Practices recommended programs and funding.
- Develop a fully functioning infrastructure in place to achieve the capacity to implement effective interventions.
- Develop sufficient capacity as an essential component for program sustainability, efficacy, and efficiency, and enable the program to plan the on-going strategic efforts and sustainability.

- Provide for strong leadership, and foster collaboration among the state, regional, and local tobacco control and other health promotion communities.

Proven interventions that prevent initiation of tobacco use among youth/young adults

- Tobacco-free youth education programs in schools and communities.
- Enforcement of tobacco-free policies in public schools.
- Establish tobacco-free policies on college/university campuses.
- Restrict minors' access to all tobacco products.
- Expand/strengthen and evaluate local clean indoor air regulations and other policies.

Proven interventions that promote cessation, quitting among youth and adults

- Clinician and provider education/training in proven cessation treatment.
- Provider reminder systems and effective patient referral for quit services.
- Expanded, readily-available statewide Tobacco Cessation Quitline services.
- Require all West Virginia health insurers to provide coverage for tobacco cessation services.
- Expand and strengthen local clean indoor air regulations and other smoke-free and tobacco-free policies.

Proven interventions that eliminate nonsmoker's exposure to secondhand smoke

- Expand, strengthen and evaluate local clean indoor air regulations and other policies.
- Enforce tobacco-free policies in public schools, college/university campuses and other public venues.
- Increase policies for smoke-free multi-unit and public housing.

Proven surveillance and evaluation system

- Essential monitoring and reporting that is necessary to fully understand program effectiveness, make decisions, and ensure accountability.
- Grow and advance tobacco control surveillance and evaluation system that can monitor and document key short-term, intermediate, and long-term outcomes within populations.
- Assure that data from surveillance and evaluation systems can be used to inform program and policy directions.
- Report and demonstrate program effectiveness, monitor progress on reducing health disparities.
- Ensure fiscal accountability/oversight and engage stakeholders.

Supportive mass media outreach campaigns (combined with other recommended interventions and efforts)

- Mass-reach health communication interventions can prevent initiation, promote cessation, and shape social norms about tobacco use.
- These campaigns are proven to be effective in countering pro-tobacco advertising and promotion, especially among youth and young adults.

- Evidence shows that graphic, hard-hitting ads work best, and the longer and more intense the campaign, the greater the decline in tobacco use.

A strategic CDC Best Practices recommendation is to **raise West Virginia’s tobacco products excise taxes to current (2015-2016) national average of all state excise taxes (with an equivalent tax on all tobacco/nicotine products).**

Note: West Virginia cigarette tax is currently \$0.55 per pack (last raised in 2003).

**US National Average Cigarette Tax is \$1.60 per pack (as of 09-01-15).*

- Significantly raising the price of tobacco products has been shown to reduce tobacco consumption in both youth and adults.
- Tobacco taxes are the single most effective component of a comprehensive tobacco control program.

Goal/Strategy #2: All West Virginia health insurers (including Medicaid) to provide comprehensive tobacco cessation services as an essential health benefit for all eligible enrollees.

Cigarette smoking is one of the greatest drivers of adverse health outcomes and costs for the state’s Medicaid program and other state and private insurers. Tobacco treatment is one of the most cost-effective preventive services with as much as a \$4 return on every dollar invested.

West Virginia can reduce smoking rates and health care costs, and thus improve health outcomes by investing in comprehensive smoking (and other tobacco/nicotine product) cessation programs. Tobacco dependence treatment is also one of the most cost-effective preventive services, providing substantial return on investment in both the short and long term.

It is known that every West Virginia smoker costs an additional \$4,700 annually (\$1,865 per smoker in smoking, smoking-related medical expenses plus \$2,811 per smoker in lost productivity). These additional annual economic costs of smoking-related diseases (health care costs plus lost wages due to death) amount to about \$9 per pack of cigarettes sold.

Some examples of specific State Health Improvement Plan efforts addressed by this plan:

A. Public health policies

- Support research proven, evidence-based tobacco control programs and policies.
- Enhance local clean indoor air regulations and other smoke-free/tobacco-free policies.
- Enforcement of tobacco-free policies in public schools, college/university campuses and other public venues.
- Increase policies for smoke-free multi-unit and public housing.
- Ensure that the definition of “tobacco product” in new laws, policies, and regulations is sufficiently broad to include all types of tobacco products, including dissolvable tobacco products, e-cigarettes, and vaping products.
- Enforce policies and programs to reduce youth access to tobacco products (e.g., Syнар and Food Drug Administration inspection programs, state laws).

- Ensure essential monitoring and reporting that is necessary to fully understand program effectiveness, make decisions, and ensure accountability.

B. Prevention and health promotion efforts

- Sustain comprehensive tobacco prevention and control programs and policies.
- Sustained and enhance a fully functioning infrastructure to achieve the capacity to implement effective tobacco control interventions.
- Develop sufficient capacity as an essential component for program sustainability, efficacy, and efficiency, and enable the program to plan on-going strategic efforts and sustainability.
- Maintain and enhance efforts of the Regional Tobacco Prevention Network with well trained, skilled Regional Tobacco Prevention Coordinators strategically and geographically located throughout the State.
- Continue supportive, paid media advertising to educate about illness caused by tobacco use, and encourage tobacco and nicotine cessation and tobacco-free living.
- Provide access to free or reduced cost cessation programs (i.e., West Virginia Tobacco Quitline) and encourage use of these services.
- Educate youth and adults about the health risks associated with smoking and use of tobacco products (premature death, COPD, emphysema, various cancers).
- Maintain, sustain, and expand the youth empowered, youth driven Raze tobacco prevention program.

C. Access to comprehensive, integrated health care

- Partner with state medical schools, the West Virginia Prevention Research Center, health and dental care providers for health care provider tobacco cessation training.
- Continue focus on special populations known to have high tobacco use – African Americans, LGBT, Low SES Status, the Medicaid population, active military and veterans, coal miners, factory workers and other blue collar workers.
- School Health Coordination through self-assessment tool to assess school policies, activities and programs in physical activity, nutrition and tobacco use prevention.

D. Supporting West Virginia's health care system

- Provide education for health care providers on use of evidence-based tobacco cessation guidelines as part of curriculum and continuing education.
- Maintain public health surveillance systems to monitor the burden of tobacco usage and produce regular surveillance reports based on the data collected.
- Increase the percentage of health care professionals who are advising patients on risks associated with tobacco usage.
- Increase the percentage of health care professionals who are referring their patients to the West Virginia Tobacco Cessation Quitline and other tobacco usage prevention services.

Conclusion: If this Tobacco Use/Health Improvement Plan for West Virginia would indeed include and maintain all of the proposed main goals/objectives/strategies/subsets to reduce the prevalence of tobacco use, then this would create an incredible, never-before attained environment for improving the population health of the State.

Raising the West Virginia tobacco product excise taxes to the current national average of \$1.60 per pack (with an equivalent tax on all other tobacco products) would have proven, targeted health effects and lower tobacco use by both adults and youth. It is important to originate the *State's Tobacco Reduction Plan* on CDC's Best Practices. This will allow for a far-reaching, fully comprehensive state tobacco control program that promotes quitting among adult tobacco users and continues the trended reduction of tobacco use initiated by West Virginia youth.

These wide-ranging programs reduce tobacco-related disease and are a public health "best buy." Comprehensive tobacco control programs have high return on investment. Sustained best practices programs improve health and lead to even greater returns on investment.

Encouraging all West Virginia insurers and Medicaid to implement tobacco cessation coverage will promote, enable, and encourage many more of the state's tobacco users to quit. Insurers (and the state's population health) should see lower costs and return on investment by helping tobacco users to quit.

All of these create a "win-win" situation for West Virginia. Comprehensive tobacco control programs save lives and save money. Utilizing *CDC's Best Practices for Comprehensive Tobacco Control Programs–2014* as a guide based on the best available knowledge and science will help West Virginia achieve significant progress in addressing its significant tobacco-related epidemic, and to reduce economic costs and other shortfalls in the State's population health plan.

The Division of Tobacco Prevention has multiple key tobacco-related health measures that are followed and updated either annually or semi-annually. The following appendix includes a complete chart of these indicators (including their baselines, measures through 2014 WVATS and 2014 WVBRFSS), and projected 2020 targets follow. Note that some WVBRFSS data are still undergoing vetting (as of May 2016), and that this chart will be updated periodically.

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INDICATORS: Population Measures		Historic Measure	Measure at Application Date: BASELINE	Most Recent Measure	2020 TARGET
Reduce tobacco use by adults					
1	Reduce the prevalence of current cigarette smoking among adults.	28.2% (WVBRFSS 2001)	27.3% (WVBRFSS 2013)	26.7% (WVBRFSS 2014)	24.5% (WVBRFSS 2019)
2	Increase the prevalence of never-cigarette smoking among adults.	47.1% (WVBRFSS 2001)	48.3% (WVBRFSS 2013)	46.6% (WVBRFSS 2014)	50.0% (WVBRFSS 2019)
3	Reduce the prevalence of current cigarette smoking (the initiation of the use of cigarettes) by young adults aged 18 to 24 years.	41.1% (WVBRFSS 2001)	33.5% (WVBRFSS 2013)	26.6% (WVBRFSS 2014)	32.0% (WVBRFSS 2019)
4	Increase the prevalence of never-cigarette smoking among adults age 18 to 24 years.	47.9% (WVBRFSS 2001)	57.7% (WVBRFSS 2013)	61.2% (WVBRFSS 2014)	68.0% (WVBRFSS 2019) projected using Joinpoint
5	Reduce the prevalence of current cigarette smoking (the initiation of the use of cigarettes) by young adults aged 25 to 34 years. <small>Analysis of these data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.</small>	35.0% (WVBRFSS 2001)	36.8% (WVBRFSS 2013)	43.7% (WVBRFSS 2014)	34.0% (WVBRFSS 2019) projected using Joinpoint
6	Increase the prevalence of never-cigarette smoking among adults age 25 to 34 years. <small>Analysis of these data indicate a decreasing annual percent change, therefore reaching the goal set for 2020 may be challenging.</small>	49.9% (WVBRFSS 2001)	45.7% (WVBRFSS 2013)	38.3% (WVBRFSS 2014)	40.0% (WVBRFSS 2019) projected using Joinpoint
7	Reduce the prevalence of current cigarette smoking among young adults age 18-34.	37.7% (WVBRFSS 2001)	35.3% (WVBRFSS 2013)	36.0% not vetted (WVBRFSS 2014)	32.0% (WVBRFSS 2019) projected using Joinpoint
8	Reduce the prevalence of current cigarette smoking among women age 18-44.	37.9% (WVBRFSS 2001)	34.7% (WVBRFSS 2013)	32.4% (WVBRFSS 2014)	33.0% (WVBRFSS 2019)
9	Reduce cigarette smoking during pregnancy.	26.7% (WVSS 2001)	26.1% (WVSS 2011)	25.6% (WVSS 2013)	23.0% (WVSS 2018)
10	Reduce the prevalence of current cigarette smoking among West Virginia African American adults.		30.9% (WVBRFSS 2013)	25.7% (WVBRFSS 2014)	18.9% (WVBRFSS 2019)

11	Reduce the prevalence of current cigarette smoking among West Virginia adults who identify as LGBT. <i>Baseline established in 2012 WVATS.</i>		40.7% (WVATS 2012)	23.8% (WVATS 2014)	35.7% (WVATS 2019)
12	Reduce the prevalence of current cigarette smoking among West Virginia adults in the Low SES (socio-economic status) population.	45.3% (WVBRFSS 2011)	43.1% (WVBRFSS 2013)	44.8% (WVBRFSS 2014)	35.0% (WVBRFSS 2019)
13	Reduce the prevalence of current cigarette smoking among West Virginia adults age 55 years and older.	16.1% (WVBRFSS 2001)	17.3% (WVBRFSS 2013)	17.5% not vetted (WVBRFSS 2014)	15.0% (WVBRFSS 2019)
14	Reduce the prevalence of current cigarette smoking among West Virginia adults who have been diagnosed with particular chronic health conditions. Analysis of these data indicate an increasing annual percent change for diabetes, heart disease and OW/OB, therefore reaching the goals set for 2020 may be challenging.		arthritis: 26.0%; asthma: 33.3%; cancer: 21.6%; COPD: 45.9%; diabetes: 20.8%; heart disease: 27.2%; hypertension: 22.8%; kidney disease: 25.3%; OW/Obese: 25.4% (WVBRFSS 2013)	arthritis: 27.5%; asthma: 28.9%; cancer: 22.1%; COPD: 43.7%; diabetes: 20.2%; heart disease: 26.8%; hypertension: NA; kidney disease: 21.1%; OW/Obese: 24.0% (WVBRFSS 2014)	arthritis: 21.5%; asthma: 21.3%; cancer: 21.0%; COPD: 37.1%; diabetes: 20.0%; heart disease: 26.0%; hypertension: 12.0%; kidney disease: 22.1%; OW/Obese: 23.0% (WVBRFSS 2019) projected using Joinpoint
15	Reduce the prevalence of COPD diagnoses (adults diagnosed with COPD, by dr/ahp) among West Virginia adults (baseline 2014). Analysis of these data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.			13.5% (WVBRFSS 2014)	13.0% (WVBRFSS 2019) projected using Joinpoint
16	Reduce the number of West Virginia adults aged 35 years and older who died prematurely each year from cigarette-smoking diseases (new baseline due to changes in methodology, 2009-2013).			4,240 annual deaths (WV SAMMEC 2009-2013)	4,150 annual deaths (WV SAMMEC 2016-2020) projected using Joinpoint
17	Reduce the prevalence of current cigarette smoking among adults who have been diagnosed with a depressive disorder.		39.7% (WVBRFSS 2013)	40.9% (WVBRFSS 2014)	35.5% (WVBRFSS 2019)
18	Reduce the prevalence of current cigarette smoking among adults who are heavy drinkers.	47.0% (WVBRFSS 2006)	53.5% (WVBRFSS 2013)	49.6% not vetted (WVBRFSS 2014)	45.0% (WVBRFSS 2019)
19	Reduce the prevalence of current cigarette smoking among adults who are binge drinkers.	43.4% (WVBRFSS 2006)	49.3% (WVBRFSS 2013)	47.0% not vetted (WVBRFSS 2014)	43.0% (WVBRFSS 2019) projected using Joinpoint
20	Increase the prevalence of adult smokers who have tried to quit smoking in the past 12 months.	52.9% (WVBRFSS 2001)	55.1% (WVBRFSS 2013)	52.7% (WVBRFSS 2014)	54.0% (WVBRFSS 2019) projected using Joinpoint

21	Increase the number of adult tobacco users who have been enrolled in Quitline services.	Average 311/month enrolled (2015 Cessation Program)	Average 350/month enrolled (2014 Cessation Program)		Average 500/month enrolled (2019 Cessation Program)
22	Increase the number of workplaces with a cessation program or contract with the WV Quitline to provide cessation services.	Average 0 (2015)	0 (2014 Cessation Program)		100 Workplaces (2020 Cessation Program)
23	Decrease the prevalence of current use of e-cigs (or e-hookah, e-cigar or vape pens) among adults. Baseline to be established with 2016 WVBRFSS.	No data prior to 2016	No data prior to 2016	No data prior to 2016	Target will be established after baseline is set
24	Reduce the prevalence of current smokeless tobacco use among male adults.	17.6 (WVBRFSS 2008)	18.2% (WVBRFSS 2013)	16.5% (WVBRFSS 2014)	14.4% (WVBRFSS 2019)
25	Reduce the initiation of the use of smokeless tobacco products by male young adults aged 18 to 24 years.	23.1% (WVBRFSS 2008)	24.5% (WVBRFSS 2013)	25.0% not vetted (WVBRFSS 2014)	19.2% (WVBRFSS 2019)
26	Reduce the initiation of the use of smokeless tobacco products by male young adults aged 25 to 34 years.	23.9% (WVBRFSS 2008)	19.4% (WVBRFSS 2013)	15.5% not vetted (WVBRFSS 2014)	14.0% (WVBRFSS 2019)
27	Reduce the prevalence of “dual use” (current smokeless tobacco use among current cigarette smoking males). Analysis of these data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.	10.9% (WVBRFSS 2001)	15.2% (WVBRFSS 2013)	15.9% (WVBRFSS 2014)	15.0% (WVBRFSS 2019) projected using Joinpoint
Reduce the initiation of the use of tobacco products among children and adolescents aged 12 to 17 years					
28	Increase the prevalence of never-tobacco use of any kind (any of 13 types of products) among high school students (baseline 2013). Analysis of related data indicate a decreasing annual percent change, therefore reaching the goal set for 2020 may be challenging.	No data prior to 2013	44.2% not vetted (WVYTS 2013)	44.2% not vetted (WVYTS 2015)	45.0% (WVYTS 2019)
29	Increase the prevalence of never-tobacco use of any kind (any of 13 types of products) among middle school students (baseline 2013). Analysis of related data indicate a decreasing annual percent change, therefore reaching the goal set for 2020 may be challenging.	No data prior to 2013	66.3% not vetted (WVYTS 2013)	67.7% not vetted (WVYTS 2015)	67.0% (WVYTS 2019)

30	Increase the prevalence of never-smoking among high school students.	25.7% (WVYTS 2000)	53.2% SD (WVYTS 2013)	58.4% (WVYTS 2015)	63.7% (WVYTS 2019)
31	Increase the prevalence of never-smoking among middle school students.	53.1% (WVYTS 2000)	76.5% SD (WVYTS 2013)	80.4% (WVYTS 2015)	85.1% (WVYTS 2019)
32	Reduce the prevalence of age-of-onset for cigarette smoking: among high school students who had ever smoked, those who smoked part/whole cigarette by the age of 12 years.	40.5% (WVYTS 2000)	35.4% (WVYTS 2013)	13.5% (WVYTS 2015)	33.0% (WVYTS 2019)
33	Increase the prevalence of never-smokeless tobacco use among male high school students.	51.8% (WVYTS 2000)	61.4% (WVYTS 2013)	62.8% (WVYTS 2015)	65.2% (WVYTS 2019)
34	Increase the prevalence of never-smokeless tobacco use among male middle school students.	68.3% (WVYTS 2000)	77.9% SD (WVYTS 2013)	81.1% (WVYTS 2015)	85.2% (WVYTS 2019)
35	Reduce the prevalence of age-of-onset for smokeless tobacco use: among male high school students who had ever used smokeless tobacco and those who used it by the age of 12 years.	48.3% (WVYTS 2000)	36.9% (WVYTS 2013)	38.3% not vetted (WVYTS 2015)	32.6% (WVYTS 2019)
Reduce tobacco use by adolescents aged 12 to 17 years					
36	Reduce the prevalence of current tobacco use of any kind (any of 13 types of products) among public high school students. <small>Analysis of related data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.</small>	No data prior to 2013	31.3% not vetted (WVYTS 2013)	32.5% not vetted (WVYTS 2015)	31.0% (WVYTS 2019)
37	Reduce the prevalence of current tobacco use of any kind (any of 13 types of products) among public middle school students. <small>Analysis of related data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.</small>	No data prior to 2013	15.5% not vetted (WVYTS 2013)	12.2% not vetted (WVYTS 2015)	15.0% (WVYTS 2019)
38	Reduce the prevalence of current cigarette smoking among public high school students.	38.5% (WVYTS 2000)	18.6% SD (WVYTS 2013)	16.2% (WVYTS 2015)	14.7% (WVYTS 2019)
39	Reduce the prevalence of current cigarette smoking among public middle school students.	18.1% (WVYTS 2000)	7.5% SD (WVYTS 2013)	4.6% (WVYTS 2015)	4.6% (WVYTS 2019)
40	Reduce the prevalence of current use of e-cigs among public high school students (baseline 2013). <small>Analysis of related data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.</small>		4.9% (WVYTS 2013)	13.5% (WVYTS 2015)	4.7% (WVYTS 2019)

41	Reduce the prevalence of current use of e-cigs among public middle school students (baseline 2013). Analysis of related data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.		2.1% (WVYTS 2013)	4.2% (WVYTS 2015)	2.0% (WVYTS 2019)
42	Increase the prevalence of making at least one quit smoking attempt in the past 12 months among high school students (among those who smoked in the past 12 months and did try to quit).		65.2% (WVYTS 2013)	59.9% not vetted (WVYTS 2015)	75.0% (WVYTS 2019)
43	Increase the prevalence of participation in tobacco cessation programs among high school students (among those who used tobacco in the past 12 months and did try to quit).		6.6% not vetted (WVYTS 2013)	15.0% not vetted (WVYTS 2015)	12.0% (WVYTS 2019)
44	Increase the prevalence of high school students who have not smoked in the past 30 days (among established smokers).	15.7% (WVYTS 2000)	17.0% (WVYTS 2013)	13.5% not vetted (WVYTS 2015)	19.5% (WVYTS 2019)
45	Reduce the prevalence of current smokeless tobacco use among male high school students.	26.5% (WVYTS 2000)	25.0% (WVYTS 2013)	22.8% (WVYTS 2015)	23.6% (WVYTS 2019)
46	Reduce the prevalence of current smokeless tobacco use among male middle school students.	14.9% (WVYTS 2000)	12.7% (WVYTS 2013)	8.3% (WVYTS 2015)	10.9% (WVYTS 2019)
47	Reduce the prevalence of “dual use” among male high school students (among current cigarette smokers, those who currently use smokeless tobacco). Analysis of these data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.	43.3% (WVYTS 2000)	60.1% (WVYTS 2013)	63.4% not vetted (WVYTS 2015)	59.0% (WVYTS 2019) projected using Joinpoint
48	Reduce the prevalence of “dual use” among male middle school students (among current cigarette smokers, those who currently use smokeless tobacco). Analysis of these data indicate an increasing annual percent change, therefore reaching the goal set for 2020 may be challenging.	45.7% (WVYTS 2000)	65.3% (WVYTS 2013)	61.6% not vetted (WVYTS 2015)	64.0% (WVYTS 2019) projected using Joinpoint
INDICATORS: Health System Changes		<i>Baseline</i>	<i>Measure at Application Date: Baseline</i>	<i>Most Recent Measure</i>	<i>2020 Target</i>
49	Increase the prevalence of adults who indicate that they currently have healthcare insurance among those age 18-64. Baseline to be established with data from 2014 WVBRFSS.	No data prior to 2014	No data prior to 2014	87.0% (WVBRFSS 2014)	88.0% (WVBRFSS 2019)
50	Increase the prevalence of West Virginia adults currently using tobacco, who were advised by a doctor/allied health professional (dr/ahp) to quit tobacco use.	No data prior to 2014	65.4% (WVATS 2012)	56.7% (WVATS 2014)	70.0% (WVATS 2019)

51	Increase the prevalence of women who smoked during their pregnancies and were advised by a dr/ahp to quit smoking during their pregnancy.	Not analyzed	67% (WVPRAMS 2010)	69.9% in 2011 (2011 WV PRAMS)	75.0% (WVPRAMS 2018)
52	Increase the number of dr/ahp trained in AHRQ clinical guidelines to provide face to face tobacco cessation counseling.	No data prior to 2014	No data prior to 2014		100 dr/ahp (Cessation Program)
53	Increase the prevalence of high school students who have said they were advised by dr/ahp to not use tobacco of any kind.	No data prior to 2013	36.1% (WVYTS 2013)	41.6% not vetted (WVYTS 2015)	40.0% (WVYTS 2019)
54	Increase the prevalence of middle school students who have said they were advised by dr/ahp to not use tobacco of any kind.	No data prior to 2013	33.9% (WVYTS 2013)	37.5% not vetted (WVYTS 2015)	40.0% (WVYTS 2019)
INDICATORS: Social and Environmental Changes		<i>BASELINE</i>	<i>Measure at Application Date: BASELINE</i>	<i>Most Recent Measure</i>	<i>2020 TARGET</i>
Reduce the proportion of adolescents aged 12 to 17 years exposed to secondhand smoke					
55	Increase the prevalence of high school students living in a smoke-free home.	55.9% (WVYTS 2007)	68.6% SD (WVYTS 2013)	71.8% (WVYTS 2015)	75.0% (WVYTS 2019)
56	Increase the prevalence of middle school students living in a smoke-free home.	57.5% (WVYTS 2007)	69.4% SD (WVYTS 2013)	69.1% not vetted (WVYTS 2015)	75.0% (WVYTS 2019)
57	Increase the prevalence of high school students who are current smokers who believe that smoking should never be allowed in their home.	No data prior to 2013	41.8% (WVYTS 2013)	74.3% (WVYTS 2015)	50.0% (WVYTS 2019)
58	Increase the number of local health department clean indoor air regulations that cover all enclosed public places and enclosed workplaces.	2 counties (CIA Program, 2002)	29 counties (CIA Program, 2014)	31 counties (CIA Program, 2015)	39 counties (CIA Program, 2020)
59	Increase the percentage of West Virginia population covered by 100% smoke-free regulations (data from the document Protecting the Public from Secondhand Smoke Spreadsheet).	30.4% (PPSHS 1-7-10, based on 2004-2008)	52.0% (PPSHS 5-22-14, based on 2006-2010)	58.1% (CIA Program, 2015)	70.0% (PPSHS 2020)

60	Maintain tobacco-free environments in public schools, including all school facilities, property, vehicles, and school events.	WV State Rule 125CSR66 (CIA Program, 1998)	WV State Rule 125CSR66 (CIA Program, 2014)	WV State Rule 125CSR66 (CIA Program, 2015)	WV State Rule 125CSR66 (CIA Program, 2020)
61	Maintain that West Virginia has no state laws that preempt stronger local tobacco control laws.	No pre-emption (CIA Program, 1992)	No pre-emption (CIA Program, 2014)	No pre-emption (CIA Program, 2015)	No pre-emption (CIA Program, 2020)
Other Indicators					
62	Reduce the illegal sales rate to minors: Enforce laws prohibiting sale of tobacco to minors.				
63	Increase (and sustain) the funding for a sustainable and comprehensive, evidence-based tobacco control program in West Virginia.				
64	Increase the Federal and State tax on all tobacco and tobacco-derived products.				