



Cancer Data Pages: Cancer-Related Risk Factors and Preventative Behaviors

Introduction

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

The purpose of this report is to present cancer-related data from the Behavioral Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Survey (YRBS), and the National Immunization Survey (NIS) about cancer-related risk factors.

Note: Throughout this report, data comparisons presented as “higher,” “lower,” “larger,” “smaller,” “better,” “worse,” or as “significantly different” are all considered statistically significant differences.

Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would fall which is calculated based on the observed data. For this analysis, we used a 95% confidence interval, meaning that we are 95% confident that the true value of the parameter being examined falls within the specified confidence interval. Statistical significance is assessed by comparing the confidence intervals of different groups. If the confidence intervals from two groups, do not overlap we consider the estimates to be significantly different from one another.

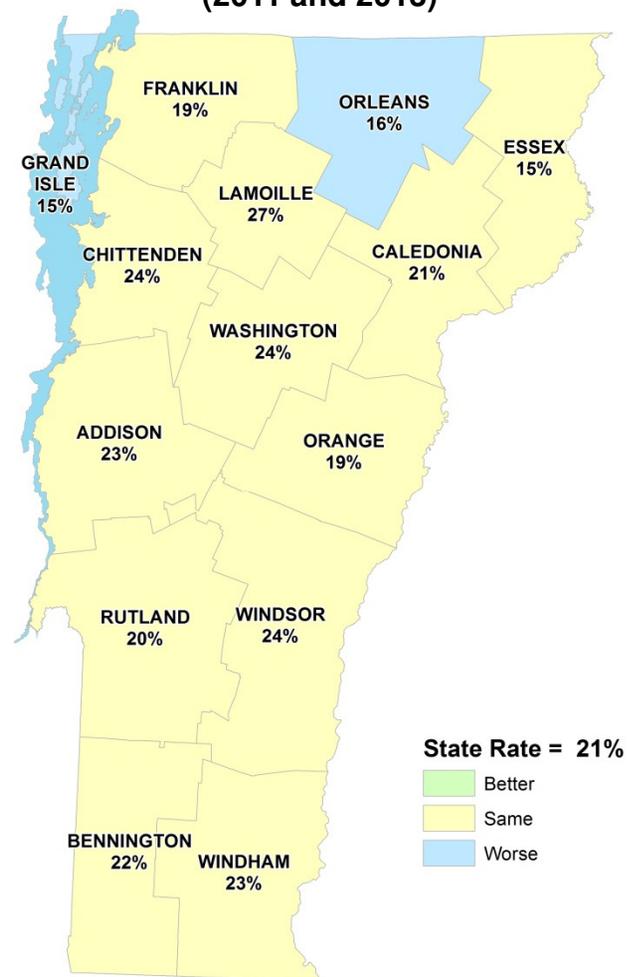
Cancer Related Preventative Behaviors

Eating at Least Five Servings of Fruits and Vegetables

21% of Vermonters (2013) eat at least five servings of fruits and vegetables a day. This is higher than the national rate of 17% (2013).

Vermonters living in Orleans and Grand Isle Counties had lower rates of eating five or more servings of fruits and vegetables daily (16% and 15% respectively) than the state as a whole (2011 and 2013). All other counties had similar rates of appropriate fruit and vegetable consumption (2011 and 2013).

Percent of Adults Eating at Least Five Servings of Fruits and Vegetables Daily by County (2011 and 2013)



Note: All rates are age adjusted to the 2000 U.S. standard population.

Cancer Related Preventative Behaviors

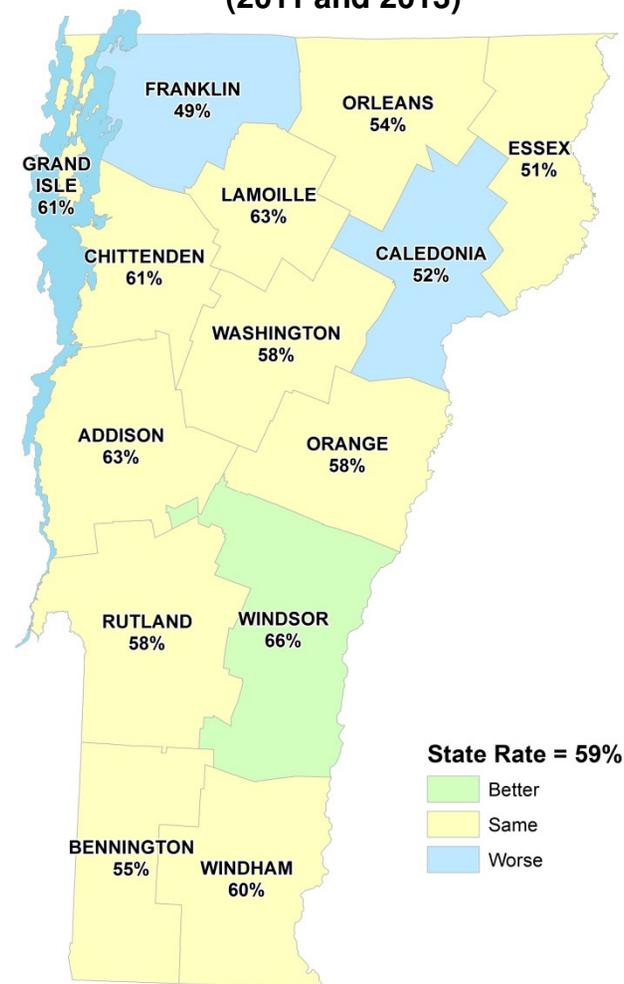
Physical Activity

In 2008 the U.S. Department of Health and Human Services released the physical activity guidelines for Americans. These included both aerobic and muscle-strengthening guidelines for adults. The aerobic guidelines are: a minimum of 2.5 hours of moderate aerobic activity (i.e., brisk walking) weekly, or a minimum of 1.25 hours of vigorous aerobic activity (i.e., running) weekly.

In Vermont, 59% of the population met the recommended aerobic physical activity guidelines (2013). The U.S. had a lower percentage of the population (50%) that engaged in adequate aerobic physical activity (2013).

Within Vermont, people who lived in Caledonia and Franklin Counties were less likely to report meeting aerobic physical activity guidelines (52% and 49% respectively) than the state as a whole (2011 and 2013). However, people in Windsor County were more likely to report meeting the aerobic physical guidelines (66%) than the state overall (2011 and 2013). All other counties were similar to the state rate (2011 and 2013).

Percent of Adults that Met the Aerobic Physical Activity Guidelines by County (2011 and 2013)



Note: All rates are age adjusted to the 2000 U.S. standard population.

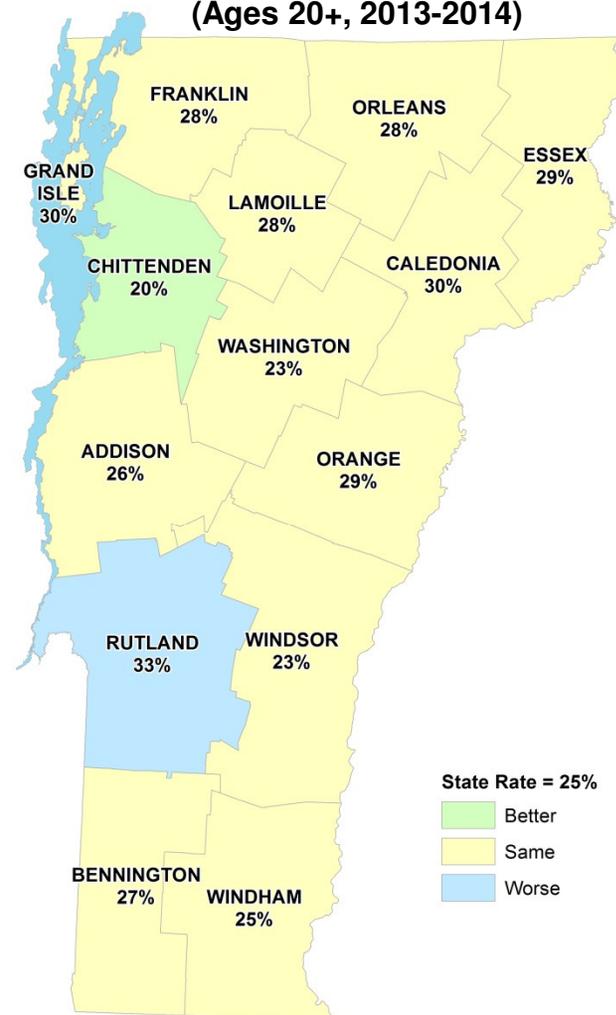
Cancer Related Risk Factors

Obesity

In the United States, 30% of adults 20 and older are obese (2014). In Vermont the rate is 25%, which is lower than the national rate (2014).

While most Vermont counties have obesity rates that are similar to the state as a whole, Chittenden County had a lower obesity rate of 20% and Rutland County had a higher obesity rate of 33% (2013-2014).

**Percent of Adults that are Obese by County
(Ages 20+, 2013-2014)**



Notes: All rates are age adjusted to the 2000 U.S. standard population. Obesity rates include adults, age 20 and over, with a Body Mass Index (BMI) classified as obese (BMI of 30+)

Cancer Related Risk Factors

Smoking

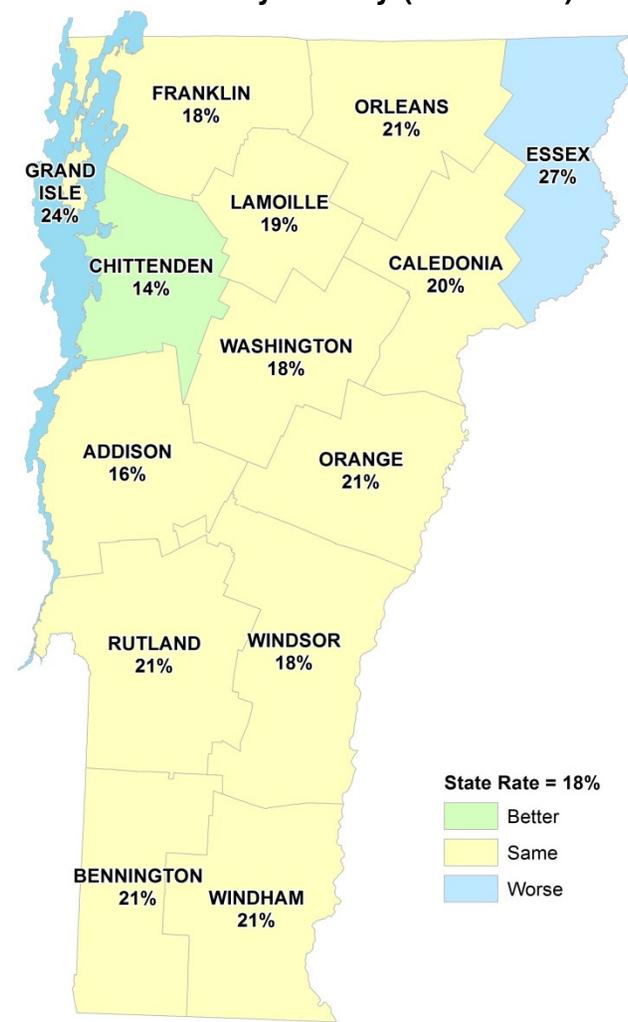
Eighteen percent of Vermonters reported being current smokers, identical to the national rate (2014).

Within Vermont, Chittenden County had a lower smoking rate (14%) than the state, while Essex County had a higher smoking rate (27%) than the state (2013-2014). The remaining counties had similar smoking rates to the state as a whole (2013-2014).

Among current smokers in Vermont, 59% reported quitting for at least one day in the past 12 months (2014). This was similar to the national quit attempt rate of 60% (2014).

While most Vermont counties have a similar percentage of smokers who quit for at least one day in the past 12 months, Washington County had a lower percentage (45%, 2013-2014).

Percent of Adults that are Current Cigarette Smokers by County (2013-2014)



Note: All rates are age adjusted to the 2000 U.S. standard population.

Cancer Related Risk Factors

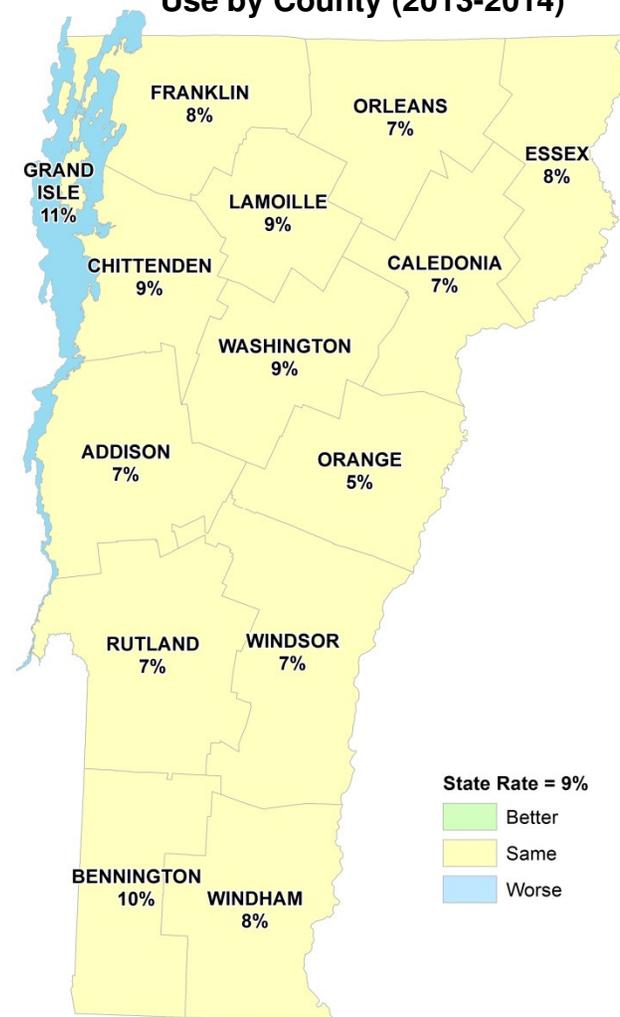
Heavy Alcohol Use

Heavy alcohol use is defined as: an average of more than two drinks per day for men, and an average of more than one drink per day for women. One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor.

In Vermont, 9% of the adult population reported heavy drinking (2014). This rate was higher than the 6% rate of heavy drinking reported nationwide (2014).

All counties in Vermont had similar rates of heavy drinking when compared to the state overall (2013-2014).

Percent of Adults Reporting Heavy Alcohol Use by County (2013-2014)



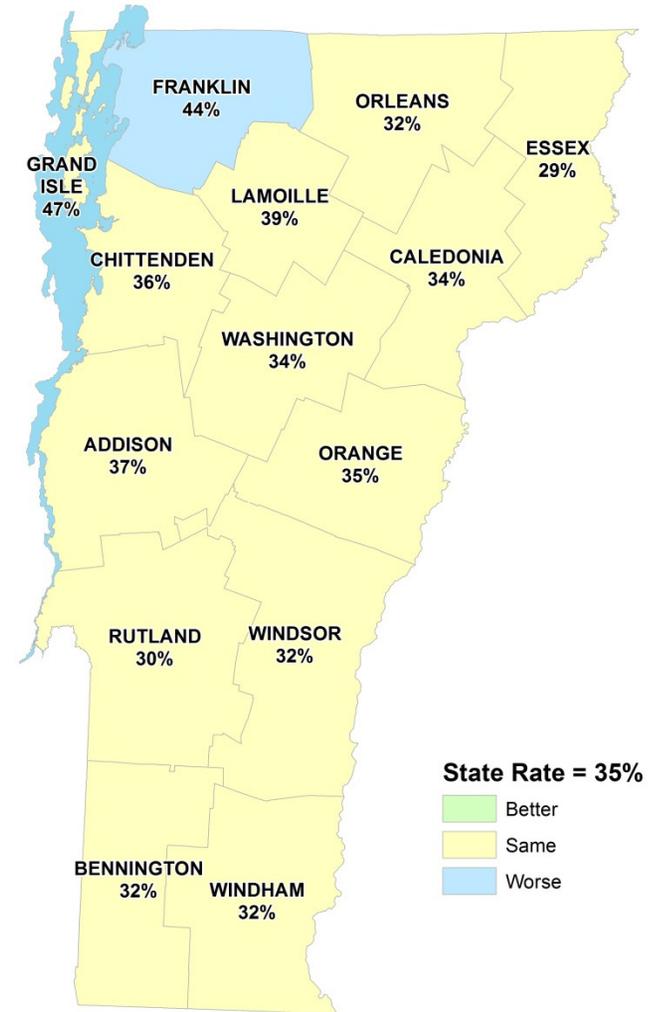
Cancer Related Risk Factors

Sun Exposure

Among Vermont adults, 35% reported having one or more sunburns in the past year (2013).

Sunburn rates were similar to the state in all counties except Franklin County, which had a higher rate of sunburn (44%) than the state overall (2013).

Percent of Adults Reporting One or More Sunburns in the Past Year by County (2013)



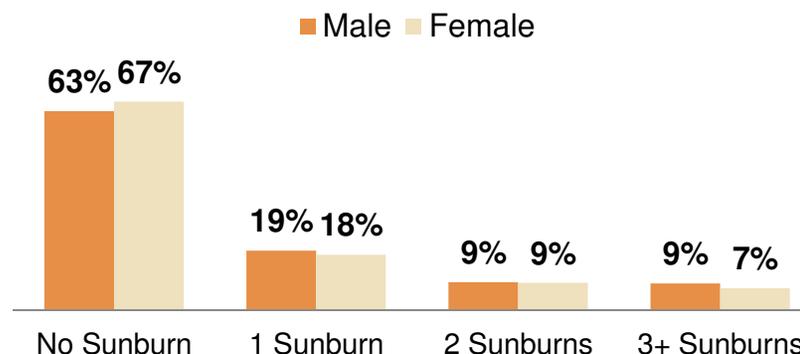
Sun Exposure

Men and women were equally likely to have reported having zero, one, two, or three or more sunburns in the past year (2013).

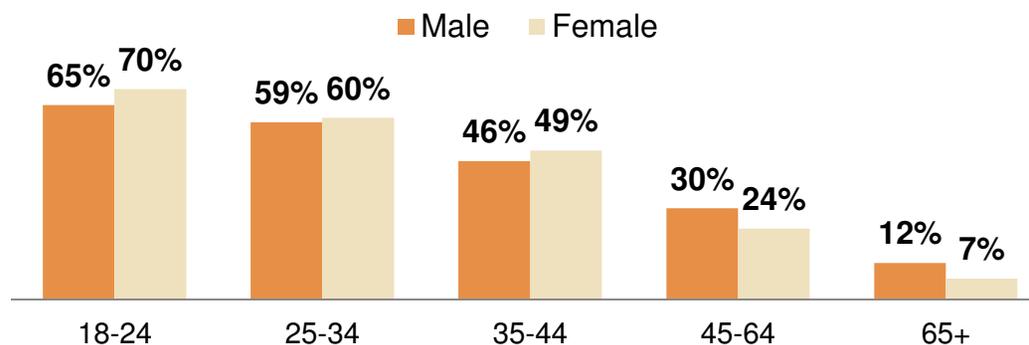
Vermonters aged 18-34 were more likely to have reported at least one sunburn in the last year than those aged 35 and older (2013). The percentage of Vermonters reporting one or more sunburns decreased with increasing age group, starting at age 25 (data not shown, 2013). Among those 18-44 men and women were equally likely to report at least one sunburn in the past year (2013). Among those 45 and older, men were more likely than women to report at least one sunburn in the past year (2013).

There were no differences in the percentage of Vermonters reporting one or more sunburns in the last year by education level (among those over 25 years of age) or relation to 250% of the Federal Poverty Level (data not shown, 2013).

**Sunburn in the past 12 Months:
Adults Aged 18+ (2013)**



Percent of Adults Reporting at Least One Sunburn in past 12 Months by Age and Sex (2013)



Cancer Related Risk Factors

Sun Exposure

Female high school students were four times as likely to have reported using a tanning booth or sun lamp (17%) compared to male high school students (4%, 2011).

The percentage of high school students that reported using a tanning booth or sun lamp one or more times in the past year increased with each increasing grade from 9th grade through 12th grade (2011).

**Used a Tanning Booth or Sun Lamp
in the past 12 Months
Youth Grades 9-12 (2011)**



**Used a Tanning Booth or Sun Lamp
in the past 12 Months: by Grade (2011)**



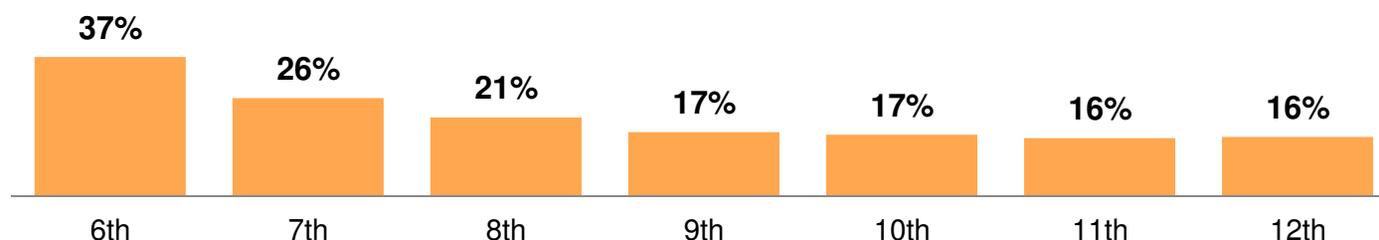
Cancer Related Preventative Behaviors

Sun Exposure

A smaller percentage of high school students (16%) reported wearing sunscreen always or most of the time than middle school students (27%, 2013). The percentage of middle school students that reported wearing sunscreen always or most of the time significantly declined with each increasing grade, from 6th grade through 8th grade, whereas high school students reported similar rates of use by grade (2013).

In both middle and high school, male students were less likely than female students to have reported wearing sunscreen always or most of the time (middle school: males 21%, females 34%; high school: males 10%, females 23%, 2013).

**Students That Use Sunscreen:
 “Always” or “Most of the Time”
 By Grade (2013)**



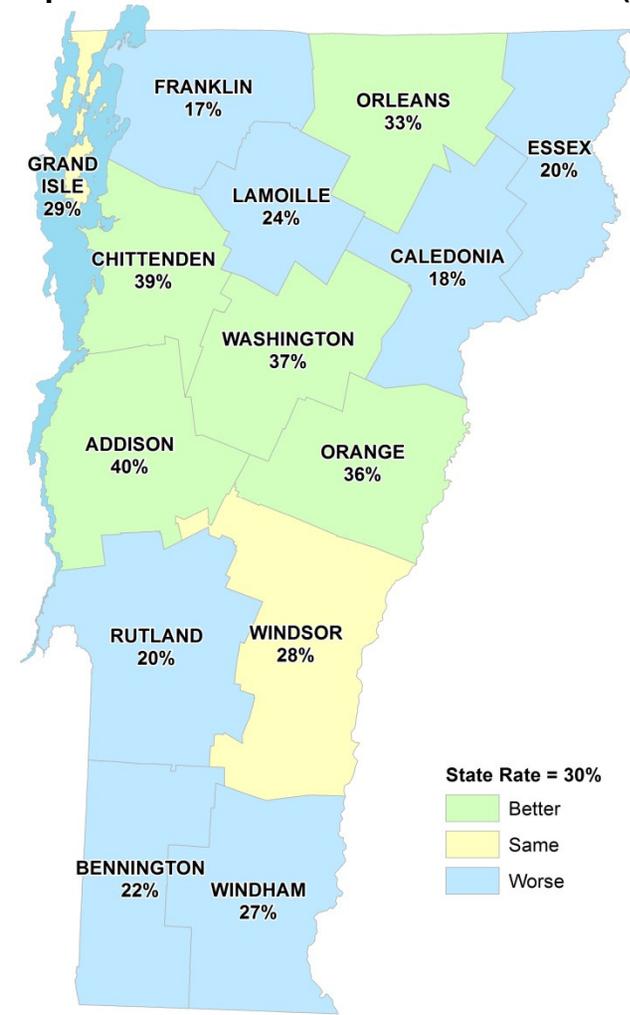
Note: Sunscreen use is defined as wearing a sunscreen with SPF of 15 or higher when outside for more than an hour on a sunny day.

Cancer Related Preventative Behaviors HPV Vaccination - Males

Among Vermont adolescent males ages 13-17 30% have completed the full HPV vaccine series (2014).

Rates of full HPV series vaccination among male adolescents ages 13-17 were higher than the state overall in Addison (40%), Chittenden (39%), Washington (37%), Orange (36%), and Orleans (33%) counties (2014). Rates of full HPV series vaccination among male adolescents ages 13-17 were lower than the state overall in Franklin (17%), Caledonia (18%), Essex (20%), Rutland (20%), Bennington (22%), Lamoille (24%), and Windham (27%) counties (2014).

Percent of Adolescent Males (Ages 13-17) Who Completed the 3 dose HPV Vaccine Series (2014)



Notes: Adolescents included were born January 1996 through February 2002. Excludes adolescents with no reported immunizations in at least 10 years.

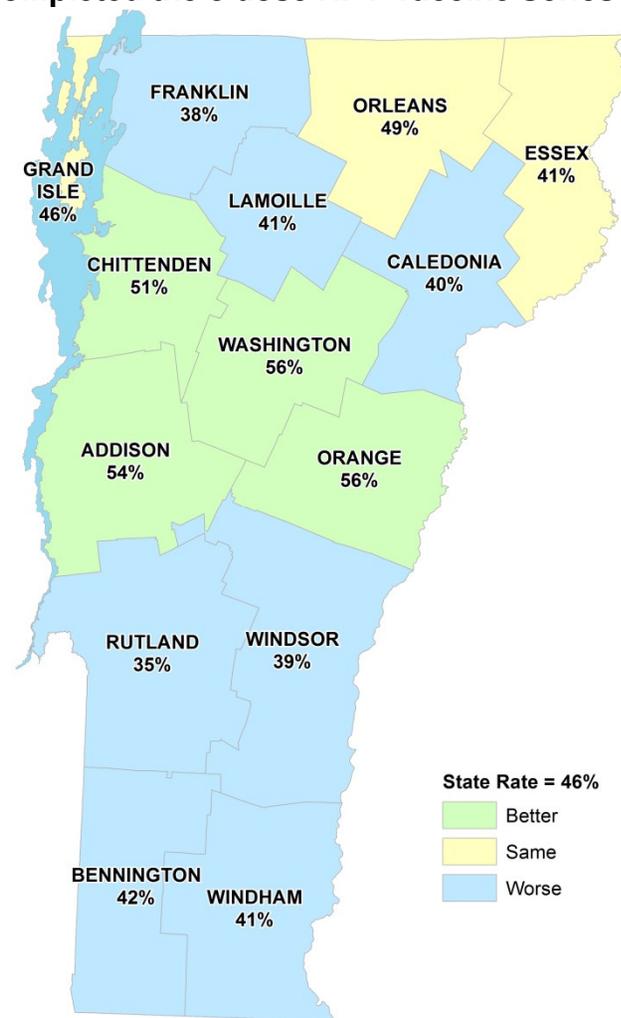
Cancer Related Preventative Behaviors

HPV Vaccination - Females

Among Vermont adolescent females ages 13-17 46% have completed the full HPV vaccine series (2014).

Rates of full HPV series vaccination among female adolescents ages 13-17 were higher than the state overall in Orange (56%), Washington (56%), Addison (54%), and Chittenden (51%) counties (2014). Rates of full HPV series vaccination among female adolescents ages 13-17 were lower than the state overall in Rutland (35%), Franklin (38%), Windsor (39%), Caledonia (40%), Lamoille (41%), Windham (41%), and Bennington (42%) counties (2014).

Percent of Adolescent Females (Ages 13-17) Who Completed the 3 dose HPV Vaccine Series (2014)



Notes: Adolescents included were born January 1996 through February 2002. Excludes adolescents with no reported immunizations in at least 10 years.

Cancer-Related Risk Factors and Preventative Behaviors

Data Notes

Behavioral Risk Factor Surveillance System (BRFSS): Vermont tracks risk behaviors using this telephone survey of adults. The results are used to plan, support, and evaluate health promotion and disease prevention programs. Since 1990, Vermont, along with the 49 other states and three territories, has participated in the BRFSS with the Centers for Disease Control and Prevention (CDC). Over 7,000 Vermonters are randomly and anonymously selected and called annually. An adult (18 or older) in the household is asked a uniform set of questions. The results are weighted to represent the adult population of the state.

Youth Risk Behavior Survey (YRBS): Every two years since 1993, the Department of Health's Division of Alcohol and Drug Abuse Program, and the Department of Education's Coordinated School Health Programs have sponsored the YRBS. The YRBS measures the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among youth. The YRBS is part of a larger effort to help communities increase the "resiliency" of young people by reducing high risk behaviors and promoting healthy behaviors.

Vermont Immunization Registry (IMR): A confidential system for maintaining immunization records for all Vermont residents and those who seek medical care in Vermont. It was designed, developed, and is operated by the Vermont Department of Health, and was first made available to providers in July, 2004. It receives immunization data from medical providers, hospitals, health insurers, and increasingly, from pharmacies and nursing homes. The advantage of using the IMR for immunization data is that unlike survey information, it is much more comprehensive, and is not subject to selection bias. As is the case with any large database, the IMR has its limitations. It can be very difficult to keep up with the residences of all these individuals, resulting in a larger population base in the registry than actually live in the state of Vermont. As a result, our denominator can be too large, and this is especially true for older age groups.

Education: Comparisons among those with different levels of education are always limited to those aged 25 and older since many adults under age 25 are in the process of obtaining additional education.

Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Age Adjustment: Measures from BRFSS and YRBS are adjusted for age only if they are Healthy Vermonters 2020 goals. Age adjustment groupings come from those determined by Healthy People 2020.

Confidence Intervals used for statistical comparisons: A confidence interval represents the range in which a parameter estimate could fall which is calculated based on the observed data. For this analysis, we used a 95% confidence interval, meaning that we are 95% confident that the true value of the parameter being examined falls within the specified confidence interval. Statistical significance is assessed by comparing the confidence intervals of different groups. If the confidence intervals from two groups, such as that for the state and a specific county, do not overlap we consider the estimates to be significantly different from one another.

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