Health Equity

VERMONT
DEPARTMENT OF HEALTH

Vermont State Health Assessment • 2018

Contents

= For more information online

The *State Health Assessment 2018* is also available online at **healthvermont.gov/SHA**

Vermont Department of Health 108 Cherry Street, PO Box 70, Burlington, VT 05402

June 1, 2018

VERMONT
DEPARTMENT OF HEALTH

Dear Vermonter,

Public health is what we as a society do to collectively assure the conditions in which people can be healthy. While Vermont has been ranked as one of the healthiest states for many years, this update on the health of Vermonters shows that we are not all equally healthy, nor do we all have similar opportunities for good health.

To better understand the root causes of health outcomes and differences in health status among us, this assessment is focused on the concept of health equity. Health equity exists when all people have a fair and just opportunity to be healthy – especially those who have experienced socioeconomic disadvantage, historical injustice, and other systemic inequalities that are often associated with the social categories of race, gender, ethnicity, social position, sexual orientation, and disability.

The following pages present a vast array of data available on the health of Vermonters at this point in time. We have not, however, included all of the data that is available on all aspects of health for all groups of people. Instead we have chosen to examine the differences in health that exist among us.

The voices and stories of so many Vermonters have informed and enriched this assesssment. We thank the many partner organizations (listed on the back cover) that participated in the public engagement process, and the individuals who responded during the public comment period. This *State Health Assessment 2018* – what we know about the health status of Vermonters – lays a solid foundation for the next five year *State Health Improvemen Plan*, which willl mark the path forward for our work together to improve health and health equity for all Vermonters.

Sincerely,

Mark Levine, MD
Commissioner of Health

A Vision of Health Equity

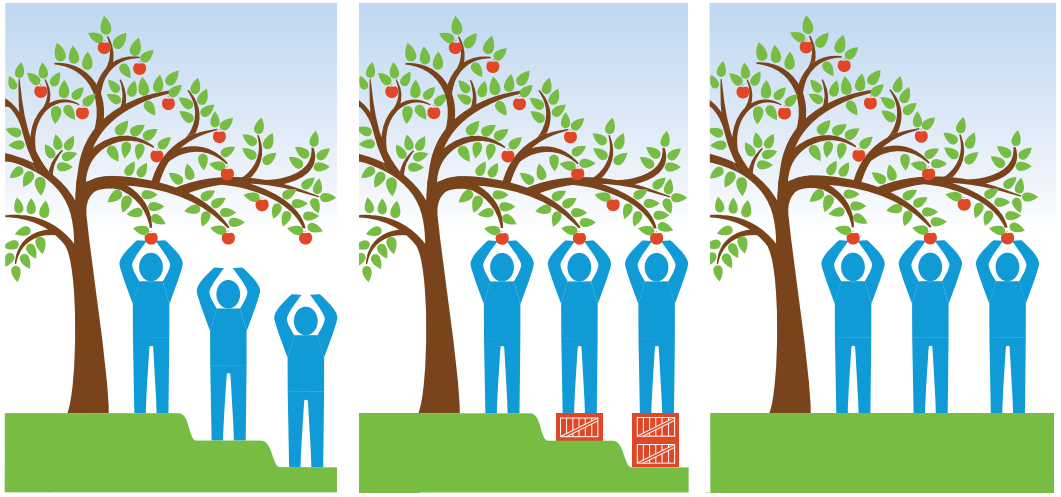
What is the State Health Assessment?

The 2018 State Health Assessment is the five year update on what we know about the health status of Vermonters. It provides vital data for examining health inequities by race and ethnicity, gender, age, sexual orientation, disability, socioeconomic status and geography.

To build the state health assessment, we drew upon an extensive array of public health data reports and data sources, the last state health assessment published in 2012 as *Healthy Vermonters 2020*, and the *Midway to 2020 Report Card*.

We reviewed concerns detailed in the state's hospital community health needs assessments and expressed in *Building Bright Futures* reports. The Vermont Agency of Human Services' *Community Profiles,* which included input from nine regional workshops across the state, provided a strong foundation.

The purpose of this assessment is to prioritize goals and objectives for health, and to help us monitor trends, identify gaps and track progress. This will be the basis for developing the next State Health Improvement Plan for 2018-2023. The following pages present telling data about health outcomes and disparities, and are informed by what we know about the factors that contribute to health, as they relate to child and family health, chronic disease and injuries, environmental health, infectious disease, and access to care.



Health equity exists when all people have a fair and just opportunity to be healthy – especially those who have experienced socioeconomic disadvantage, historical injustice, and other avoidable systemic inequalities that are often associated with social categories of race, gender, ethnicity, social position, sexual orientation, and disability.

How do we move toward health equity?

Vermont is consistently ranked as one of the healthiest states in the nation, but data shows that not everyone has a fair and just opportunity to be healthy. Past health assessments have focused on access to health care and the individual behaviors that influence our health, but changing the health care system and personal behaviors alone will not create the fair and just opportunities that are necessary for all Vermonters to be as healthy as they can be. This assessment is designed to look more deeply into the health disparities that exist among Vermonters, and ask ourselves *why?*

We will only move toward health equity when we consider the social and environmental factors, the power structures and systemic racism, class oppression and other forms of discrimination that shape our lived experience.

When we work together to improve opportunties for health where we live, work, learn and play, when our systems and structures are designed to support health for all, when we explicity name and address underlying causes of health disparities – only then will we be moving closer to our vision of health equity.

Looking through a Health Equity Lens

With this assessment, we are taking a closer look at health factors and health outcomes that vary across the state, and among populations, to begin to tell the complex story that is the health of Vermonters.

We are using a health equity lens to clearly see where there are health inequities, and where there are opportunities for change. Health equity was considered at each step in the process, including:

- *who is engaged in planning and priority setting*
- *how we engage people*
- *what data is considered and how it is analyzed*
- *how data is reported*
- *who is part of the decision-making process*

Communities in Vermont that have experienced health inequities were represented in decision-making throughout the engagement process to ensure that their voices are reflected in this work.

Populations in Focus

Four broad groups of Vermonters were chosen for special focus, based on data, what we know about historical injustices they have faced, and what Vermonters themselves have told us:

- Race, Ethnicity & Culture
- LGBTQ Identity
- People Living with Disabilities
- Social Class & Socioeconomic Status

Quotes on these pages are from partners who participated in the state health assessment engagement process.

The Engagement Process

We invited more than 140 organizations large and small to participate in an engagement process, and more than 80 agreed to serve on the State Health Assessment Advisory Committee. The group included experts in health and health care, human services, agricultural and rural issues, racial justice, immigrant rights, disability rights, veterans' affairs, aging, and youth leaders. We have worked with some of these partners for many years; with others, this was the start of a new relationship.

Along with the advisory committee, we convened a steering committee to assess our current system and to develop priorities for data analysis.

Creating the Vision

Together with our partners, we created the vision for our work ahead to create fair and just opportunities for improving the health of all Vermonters. Our partners shaped this assessment by:

- sharing insights and expertise concerning the factors that are driving us toward this vision, or working against it.

- identifying a range of community and statewide assets and efforts underway to create the conditions to achieve our vision.

- suggesting cross-sector strategies to improve health outcomes.

Methodology & Data Sources – pages 70-71

Populations in Focus – pages 12-21

Advisory Committee participants – back cover

Our Vision

All people in Vermont have a fair and just opportunity to be healthy and live in healthy communities.

•

Everyone feels respected, valued, included, and safe to pursue healthy and meaningful lives.

•

All ages, all abilities, and all Vermonters have equitable access to the conditions that create health.

•

Investments are focused on promoting the conditions that create positive health outcomes.

•

Services are available, accessible, affordable, coordinated, culturally appropriate, and offered with cultural humility.

•

– Our Core Values –

Equity • Affordability • Access

The Public Health System

★ Health Department Local Offices

Vermont's Commitment to Public Health

Vermont has a longstanding commitment to promoting health and healthy communities. The Health Department and other partners work to align efforts of the many service providers to ensure access to quality, affordable care. Our public health system includes partners from many other sectors beyond health that are responsible for creating conditions for people to be healthy.

The Public Health Authority

Public health authority in Vermont is established in Title 18. To achieve this mandate, the state has a centralized public health department with 12 local offices. The health commissioner has broad authority to act to protect the health of Vermonters. Collaborating with public, private and community partners, the Health Department leads efforts in five functional areas, and these form the structure for this state health assessment:

- maternal, child and family health
- chronic disease and injury prevention
- environmental public health
- infectious disease
- access to and links with clinical care

Public health is sustained by cross-cutting support functions such as health surveillance and disease investigation, public health laboratory, the chief medical examiner, Emergency Medical Services, and all-hazards preparedness and response – including the volunteer Medical Reserve Corps and Strategic National Stockpile.

Hopitals & Health Care

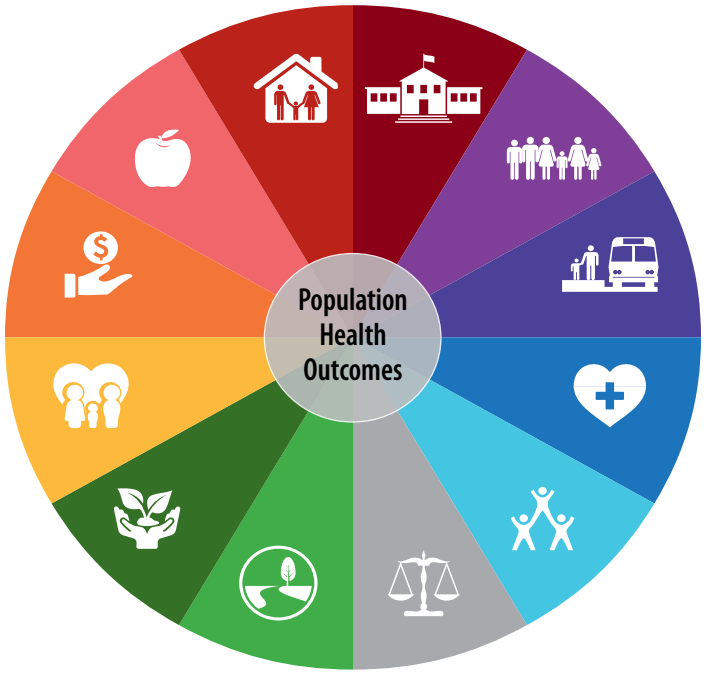
Access to health insurance sets Vermont apart from much of the United States. In 2016, 95% of Vermonters had health insurance, compared to the national average of 88%; 98% of Vermont's children were insured, also above the national average of 96%.

For a small rural state, Vermont has a robust clinical health system. Our network of hospitals, clinics and primary care medical homes, coupled with nearly universal insurance coverage, provides a strong foundation for most clinical care. Thirteen hospitals are located within the state, and we have an interstate relationship with Dartmouth Hitchcock Medical Center in neighboring New Hampshire. Both Dartmouth and the University of Vermont Medical Center in Burlington have strong medical education programs.

Many Vermonters receive their primary care from one of 12 Federally Qualified Health Centers (FQHCs), or patient-centered medical homes, where a primary care provider can connect patients to additional government and community services or supports.

Increasingly, partners in the clinical system are integrating physical health, mental health and substance use disorder services. Vermonters in need of treatment for alcohol/drug use, or mental health services are linked to specialty providers located around the state. Vermont's *Care Alliance for Opioid Addiction* Hub & Spoke system of medication-assisted treatment is recognized as a model for other states.

See Access to Care pages 64-69 for maps of health care professionals, hospitals, FQHCs, rural health clinics, and free clinics.



Family Wage Jobs, Job Opportunities & Economic Prosperity

Access to Affordable, Healthy, Local Food

Affordable, Safe, Quality Housing

Quality Education

Strong, Vibrant Communities

Access to Safe & Efficient Transportation

Access to Health & Prevention Services

Civic Engagement & Community Connections

Equitable Law & Justice System

Access to Recreation, Parks and Natural Resources

Clean & Sustainable Natural Environments

Safe & Supported Community Early Childhood Development

Health Care Transformation Efforts

Major transformation initiatives are underway to provide better care at lower cost to improve the health of populations. One important example is the Accountable Communities for Health movement. Embedded within these initiatives is the recognition of the social determinants of health, and the need to engage with partners beyond the health care system.

The goal is to improve health by connecting health care with social services and community partners to provide housing, transportation and other supports to individuals. Public health offers prevention strategies, including investments in community-wide infrastructure and policy changes, to reduce disparities in the distribution of health and wellness opportunities for all.

Cross-Sector Action & Accountability

Access to health care is essential but insufficient for positive health outcomes. Leaders in other sectors are also recognizing the opportunity for their decisions to impact health and equity. There are many examples in our state of cross-sector actions that improve health – from Safe Routes to School, to Farm to Table, to worksite wellness.

Vermont's Health in All Policies Task Force is a governor-appointed, cabinet level group with the charge to consider health in the budgets, policies and programs of nine other state agencies that do not explicity have health as their mission.

The task force can apply the authority and tools of government to make changes that encourage improvements in health.

Reader's Guide

How is this state health assessment organized?

In addition to background context on purpose and process, this report presents quantitative and qualitative data for the populations we have chosen to focus on as well as a wide range of health topics. Following a few pages of demographic and fundamental public health statistics, data and key points on dozens of public health topics are organized into five thematic chapters: Child & Family Health; Chronic Disease & Injuries; Environmental Health; Infectious Disease; and Access to Care.

These chapters are consistent with the Foundational Public Health Services Model. In addition to the five foundational themes listed above, this model includes foundational capabilities for health departments within a broader public health system. This report also builds on Healthy People 2020 and Healthy Vermonters 2020 initiatives. Both are 10-year plans that outline population health indicators and goals. As a five-year assessment, this report addresses many 2020 goals in depth by looking at subsets of the population.

What information is *not* included?

This report cannot display all meaningful health and well-being indicators, comparisons or populations. We have tried not to duplicate existing reports, and instead pulled highlights from many different topics and data sources. Although this report presents some geographic analysis, more population data for counties, health districts and hospital service areas is available in the Public Health Data Explorer and the Agency of Human Services' *Community Profiles*. Because this is a comprehensive assessment, no topic area goes into significant depth, and may not represent the most up-to-date data. More information is available in program and disease-specific reports at **healthvermont.gov** and websites of our partners. For current data on a wide range of health indicators, see link below to our Performance Scorecards.

What statistical methods were used for analysis?

Statistical methods were used throughout this report. Often, comparisons that are statistically significant are noted in the text – comparing Vermont to the U.S. or comparing subgroups within Vermont – e.g. females to males. *For more information, see Methodology, page 70.*

How will data be displayed? What are the data sources?

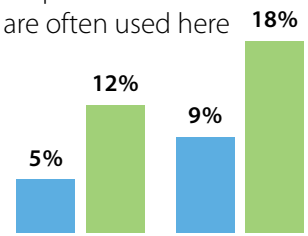
Each chapter presents information in charts, graphs, maps, and text to show indicators that demonstrate current health status of Vermonters. Charts, graphs, maps and tables are labeled with titles, data sources and data years. In addition to data sources on health status, there are many data sources that can capture poverty, education, housing, transportation and other structural influences on health.
See page 71 for a list of data sources and references.

How will data/information be presented?

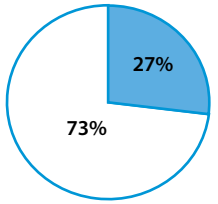
TEXT provides a brief interpretation of results and context for understanding the assessment.

QUOTES represent qualitative data told in the voices of our partners who contributed to this assessment.

BAR GRAPHS allow for comparison across multiple indicators. They are often used here to show differences in demographic categories of gender, age, race/ethnicity, poverty level and education.

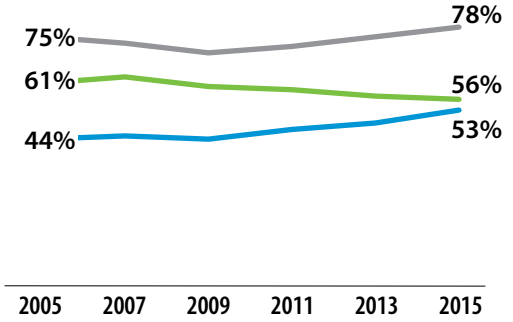


PIE CHARTS compare parts of a whole. Pie charts cannot present multiple indicators in the same chart, or changes over time.



TABLES are occasionally the most straightforward way to simply present a lot of information.

TREND LINES can be used to visualize data points over a period of time.

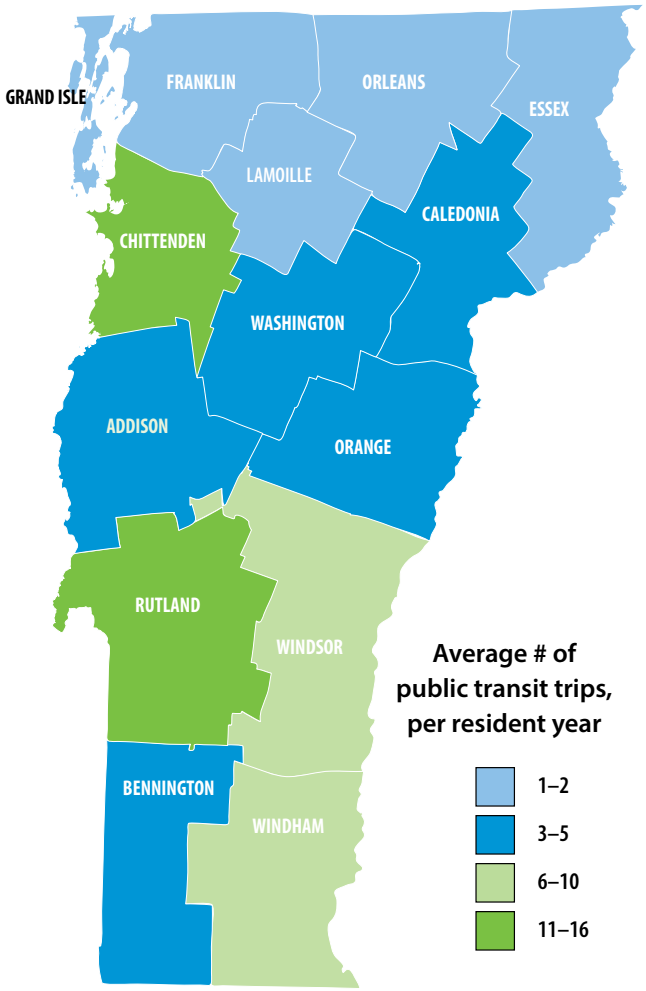


healthvermont.gov/about/performance

MAPS display comparisons across regions. The most commonly used geographical unit is county, but in some cases towns or Rational Service Areas are used.

Public Transit Trips, by County

Agency of Transportation Route Performance Report • 2016



What types of health indicators are included?

BEHAVIORS are the modifiable actions people take that can affect their health. In this report, you will see both behaviors that increase risk for disease (morbidity) or death (mortality), and behaviors that protect against disease or death.

MORBIDITY is a diseased state, or poor health due to any cause. It can refer to the existence of any form of disease, or to the degree that the health condition affects a person. Co-morbidity is the simultaneous presence of two or more medical conditions, such as heart disease and diabetes. Prevalence is often used to measure morbidity.

MORTALITY refers to death. A mortality rate is a measure of the number of deaths in general, or due to a specific cause for a population over a period of time. Throughout this report, deaths are counted per 100,000 people to allow comparisons between groups of different sizes. One exception is infant mortality, which counts the number of deaths per 1,000 births.

DEMOGRAPHICS are characterisitics of people that tend not to change. These often include birth date, age, gender, race, ethnicity, and place of birth. Education level and poverty status are measures of socioeconomic status, which can change over time.

SYSTEMS are features of health care facilities, organizations, housing, transportation, the natural environment or communities.

How do we collect the data?

CENSUS is any data collection that measures the entire population of interest. Registries are one type of census. Birth and death certificates are a census.

SURVEYS are used to collect information from a sample of participants within the population. A survey is usually administered as a questionnaire to collect self-reported data.

REGISTRIES are a systematic collection of health information for a defined patient population. Each registry focuses on a specific health event or disease, and usually provides incidence data.

BILLING & ADMINISTRATIVE DATA SETS include data based on documented health care services or other medical records.

QUALITATIVE DATA is data that is not numerical in nature. Qualitative data was collected for this project throughout the engagement process, and is reflected in the narrative and quotes throughout the pages of this report.

Key Demographics

• A Small State, More or Less Rural

Vermont is home to nearly 625,000 people. Our land mass is small – 9,216 square miles – and averages 68 people per square mile. More than one-quarter of Vermonters live in Chittenden County. Rutland County is the next most populous, and Washington County is a close third. Caledonia, Essex and Orleans, the counties that make up the Northeast Kingdom, are the least populated and the most rural.

• An Aging Population

Vermont is aging faster than other states. In 2015, our median age was 43 years, compared to the national median of 38. By the year 2020, the percentage of Vermonters age 65+ is projected to exceed the percentage of those younger than 20.

• Growing Diversity

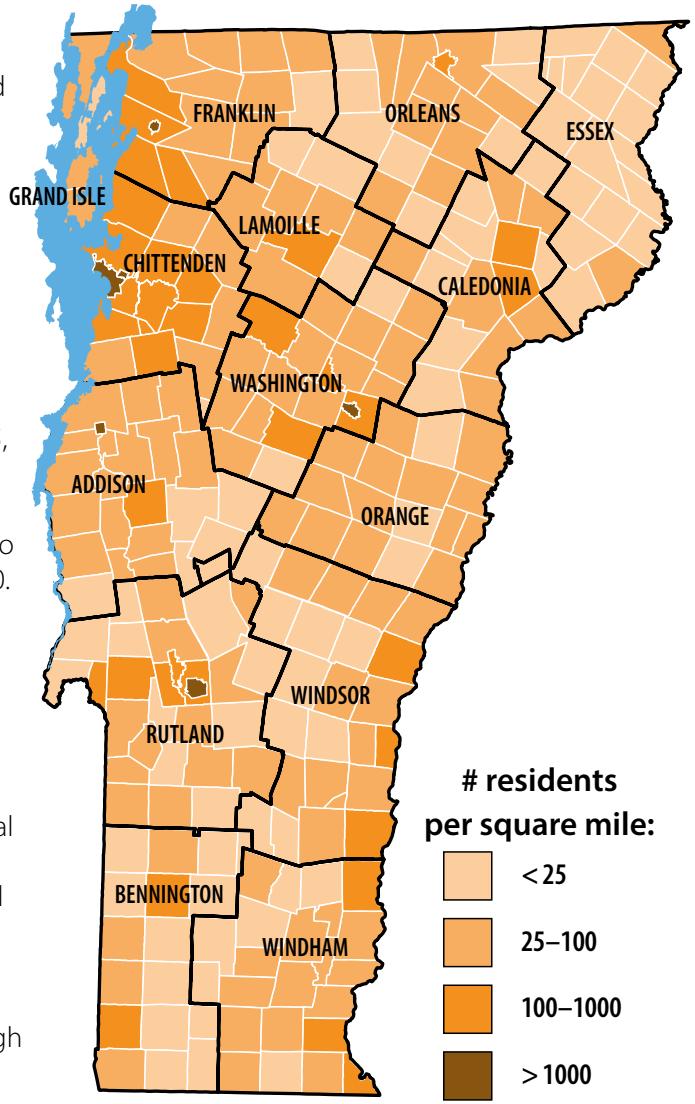
At 7% of the total, the population of people of color is growing in Vermont, but still proportionately small compared to the rest of the U.S. Not included in these numbers are the thousands of temporary Vermonters, such as students, seasonal employees and residents, and undocumented farm workers who support the state's agricultural industries.

• Income & Education

In 2015, 91% of adults age 25 and older had a high school education or more, and 36% had at least a bachelor's degree. Nearly half of all households have an annual income below $50,000. Median income in 2015 was $35,512.

Population Density, by Town

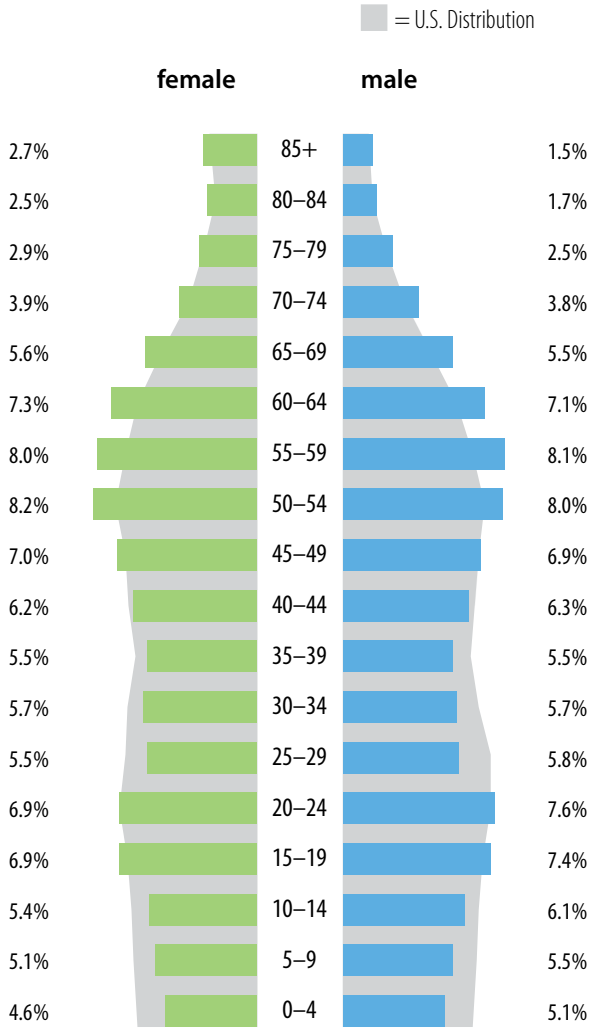
Vermont Population Estimates • 2016



Age Distribution, Vermont & U.S.

American Community Survey • 2011–2015

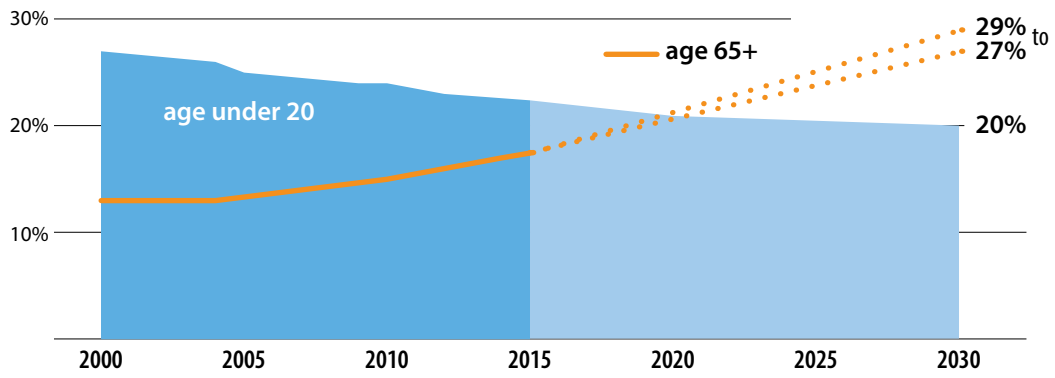
% of total Vermont population that falls into each age group, shown against the percentages for the entire U.S.



Projected Aging Trends

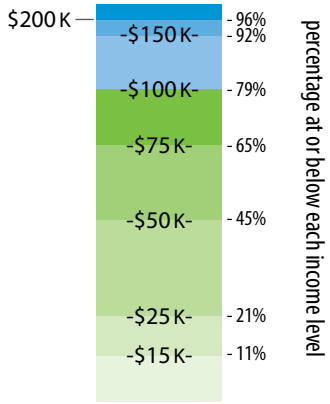
U.S. Census / Intercensal Population Estimates • 2000–2015
Vermont Agency of Commerce & Community Development • 2013

Projected decline of the younger age groups and growth of the older age groups in the Vermont population



Income of Households in Vermont

American Community Survey • 2011–2015



Population, by Race & Ethnicity

Vermont Population Estimates • 2016 / American Community Survey • 2011–2015

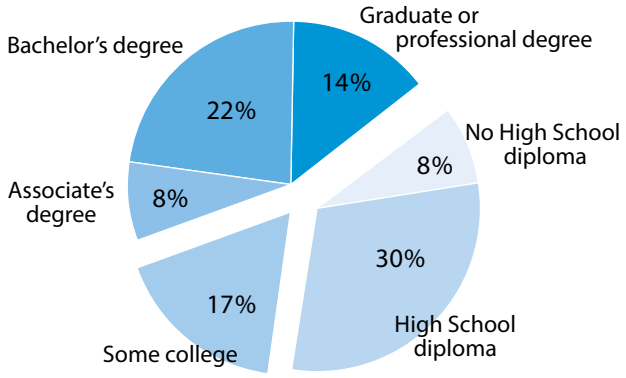
2016 Vermont Population —		
White, non-Hispanic	581,225	93.1%
Hispanic *	11,651	1.9%
Asian/Pacific Islander	11,113	1.8%
Black/African American	7,558	1.2%
Native American/Alaska Native	2,032	0.3%
Multi-racial	11,015	1.8%
TOTAL	**624,594**	

* *The racial identification of those in the ethnic Hispanic population is:*

82.8%	White
5.1%	Black
3.4%	Native American
1.9%	Asian/Pacific Islander
6.8%	Multi-racial

Educational Attainment of Vermonters

American Community Survey • 2011–2015



Fundamental Health Statistics

• Birth & Fertility

In 2015, Vermont had the lowest number of resident births (5,093) and the lowest fertility rate of all the states. Fertility is highest among women age 25 to 34. Fertility among teens age 15 to 19 has decreased by about half since 2000.

• Infant Mortality

There were 27 infant deaths among Vermont residents in 2015. This translates to an infant mortality rate of 4.6 deaths per 1,000 live births. The greatest risk factors are low birth weight and pre-term birth. One-third of infant deaths in Vermont are among low-birth weight babies. Of resident births, 7% are low birth weight and 0.9% are very low birth weight, similar to the U.S. (8% and 1.4%), and 7% of resident births are premature, compared to 10% for the U.S.

• Life Expectancy & Quality of Life

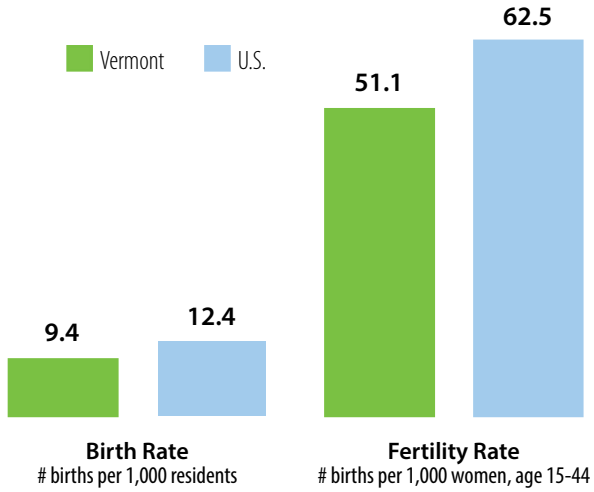
Life expectancy at birth for Vermonters is 80.5 years, slightly higher than for all U.S. residents (78.7 years). Among adults in Vermont, 11% report having poor physical health and 12% report poor mental health. This pattern is similar to U.S. adults and has changed little over time.

• Causes of Death & Years of Life Lost

Years of potential life lost is a measure of premature death (before age 75). Among Vermont residents, the five most common causes of death accounted for two-thirds of the years of life lost due to premature death.

Birth & Fertility

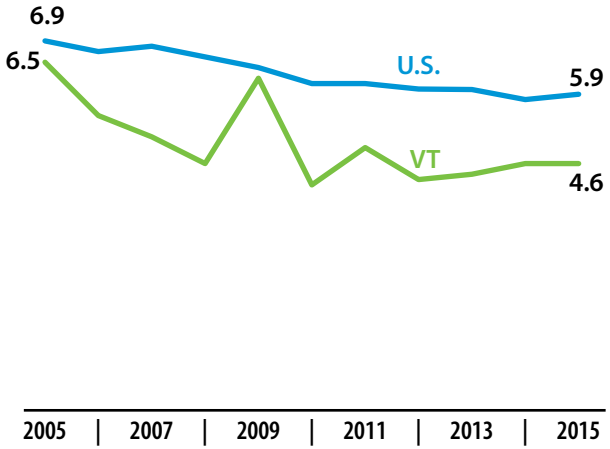
Vermont Vital Statistics • 2015
National Center for Health Statistics • 2015



Infant Mortality

Vermont Vital Statistics • 2005–2015
National Center for Health Statistics • 2015

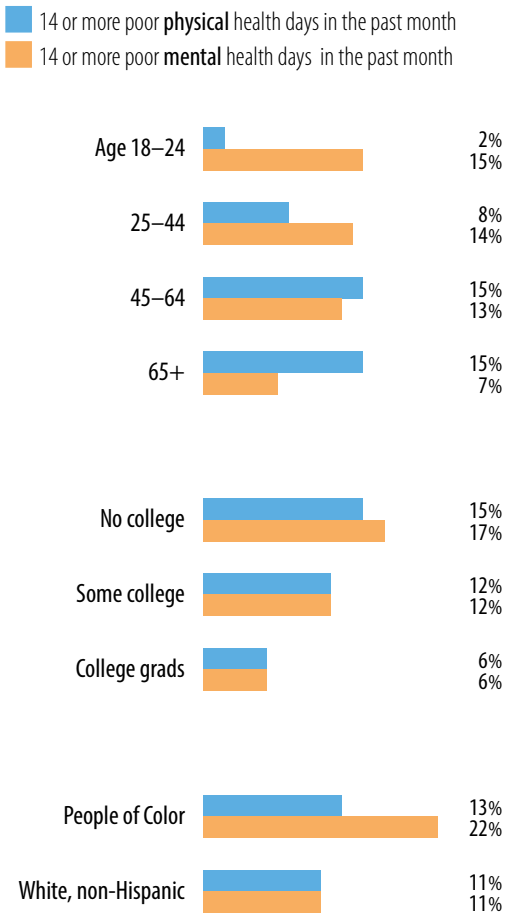
# of infant deaths, per 1,000 live births



Quality of Life

Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults who report they are in poor physical or mental health

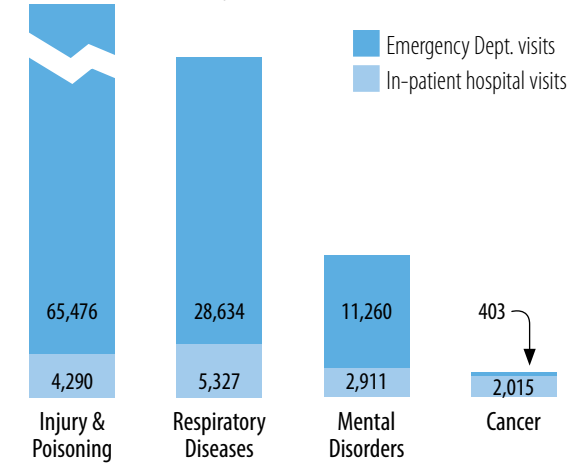


healthvermont.gov/stats

Leading Causes of Hospitalization

Vermont Uniform Hospital Discharge Data Set • 2015

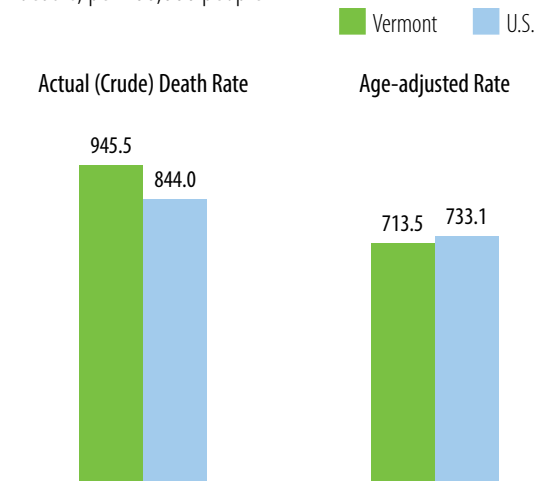
# of hospital and emergency department visits among Vermont residents at Vermont hospitals in 2015



Vermont & U.S. Death Rates

Vermont Vital Statistics • 2015
National Center for Health Statistics • 2015

deaths, per 100,000 people

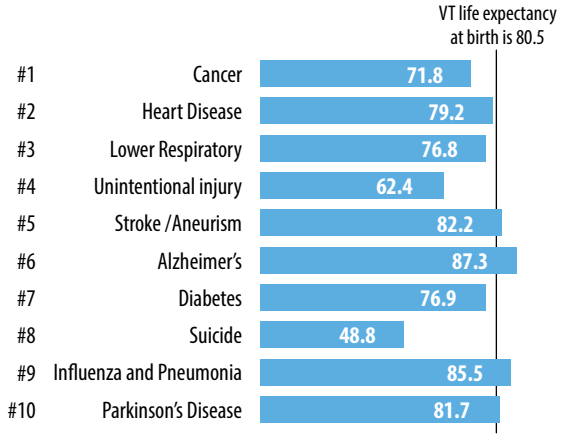


The higher death rate in Vermont is due to its aging population

Average Age at Death

Vermont Vital Statistics • 2015

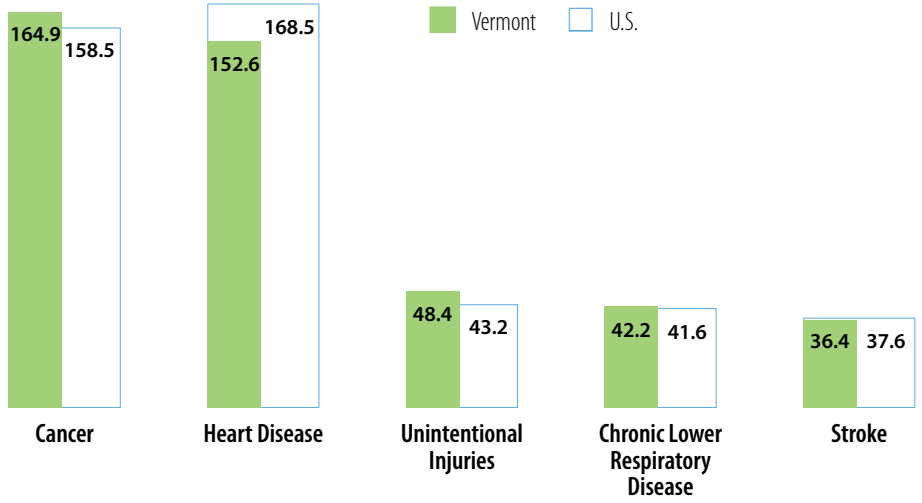
Average age at death for the top 10 causes



Leading Causes of Death

Vermont Vital Statistics • 2015 / National Center for Health Statistics • 2015

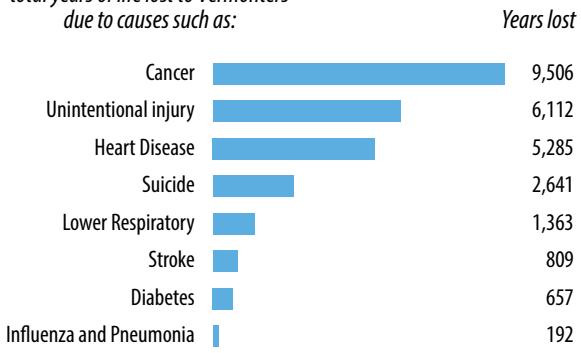
deaths, per 100,000 people (age-adjusted)



Years of Life Lost to Premature Death

Vermont Vital Statistics • 2015

In 2015 there were an estimated 35,215 total years of life lost to Vermonters due to causes such as:



Populations in Focus

Health Inequities Among Vermonters

Some of us have more opportunities than others to enjoy good health and quality of life. Vermonters who are white and heterosexual, do not have a disability, live in urban or suburban areas, or are middle or upper class generally have better health compared to other Vermonters.

When we compare the majority population to the minority populations in our state, differences in health, or *health disparities*, are revealed. Too often these differences result from historically unfair and unjust systems, structures, policies, attitudes and cultural norms. These differences in health that are avoidable, unfair, and unjust are *health inequities*.

Throughout this report, we demonstrate health inequities by the numbers. Even when we cannot measure differences due to the small numbers of some groups of Vermonters, there is every reason to believe they share similar experiences with people across the country: the stigma, racism, bias, discrimination, social isolation, and unequal access that are at the root of trauma and toxic stress, worse health, and lower quality of life. These Vermonters also possess strength and resilience, qualities that are not easily measured.

"Our society would have to look radically different for everyone to have an equal opportunity to be healthy. We need to have more equal distribution across the board – not just health but other systems as well."

"Vermont doesn't do a good job recognizing or acknowledging people who aren't white."

Race, Ethnicity and Culture

The land that is now Vermont has been home to Abenaki and other Native American groups since long before it was a state. Some Black and African American Vermonters chronicle their families living in Vermont for centuries. Others, like many white Vermonters, are newer arrivals.

While Vermont remains one of the whitest states in the U.S., over the past 15 years the percentage of people of color has nearly doubled. In 2016, 7% of the population are people of color, and 93% are white, non-Hispanic.

Some of the growing diversity across the state is due to immigration from other countries. Refugees make up a small percentage of people of color – and not all refugees are people of color. Vermont is also a home for several thousand farm workers from Mexico and Central America who help to maintain the state's agricultural economy.

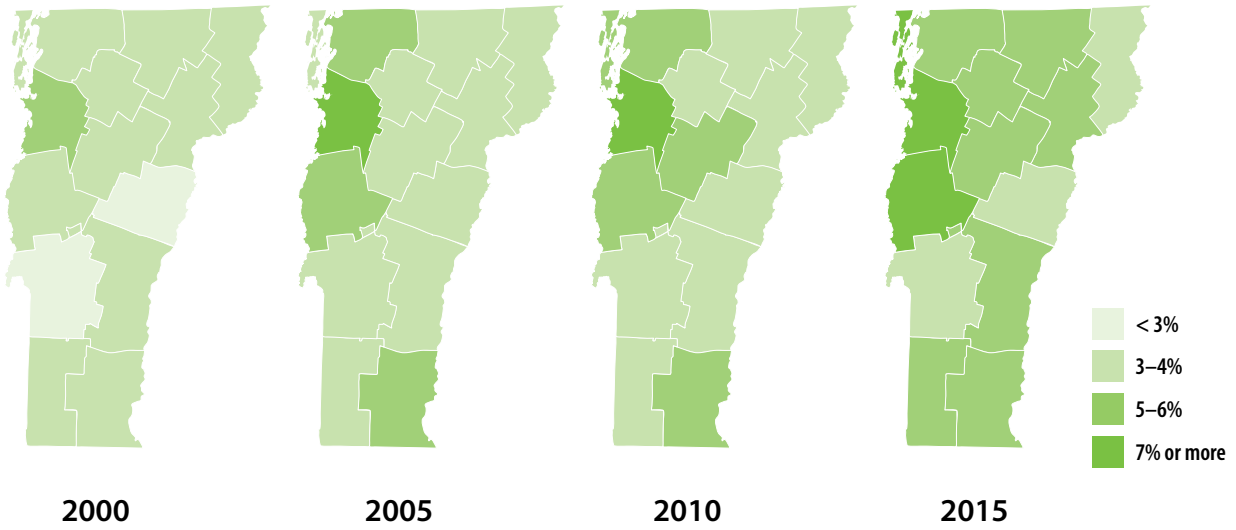
"All health issues are LGBTQ health issues, so LGBTQ should be part of all conversations."

LGBTQ Identity

An estimated 5% of adult Vermonters identify as lesbian, gay, bisexual or transgender. People age18 to 24 are most likely to identify as LGBT, and those age 65+ are least likely; 8% of high school students identify as lesbian, gay or bisexual.

Changing Racial Makeup of Vermont

U.S. Census • 2000-2015 – % of county residents who are people of color



"The problem is that this world is not created for people with a disability."

People Living with Disabilities

Nearly one-quarter (22%) of adult Vermonters have at least one type of disability: a physical, cognitive, intellectual or developmental disability, hearing or vision loss. Some of these disabilities can be seen and others are not readily apparent. Of those adults who have a disability, 10% have two or more. And some groups are more affected: people of color and those who identify as LGBT are more likely to have one or more disabilities.

"In this day and age you wouldn't expect a gender wage gap in a progressive state like Vermont."

Social Class & Socioeconomic Status

Income is the most common measure we have of socioeconomic status. Along with education and occupation, income is strongly associated with health outcomes. Throughout this report, when we refer to poverty, we mean people living at or below 100% of the Federal Poverty Level (FPL), as calculated from household income and family size. Eligibility for Medicaid is 133% FPL, and eligibility for other health and social services are capped at 185%, 200% and 250% of FPL.

In 2016, 12% of Vermonters were living at or below 100% of FPL, but there are income inequities across the state. And while we can map the percentage of town residents living in poverty, this may still mask wide disparities of income among residents within a town.

2017 Federal Poverty Levels

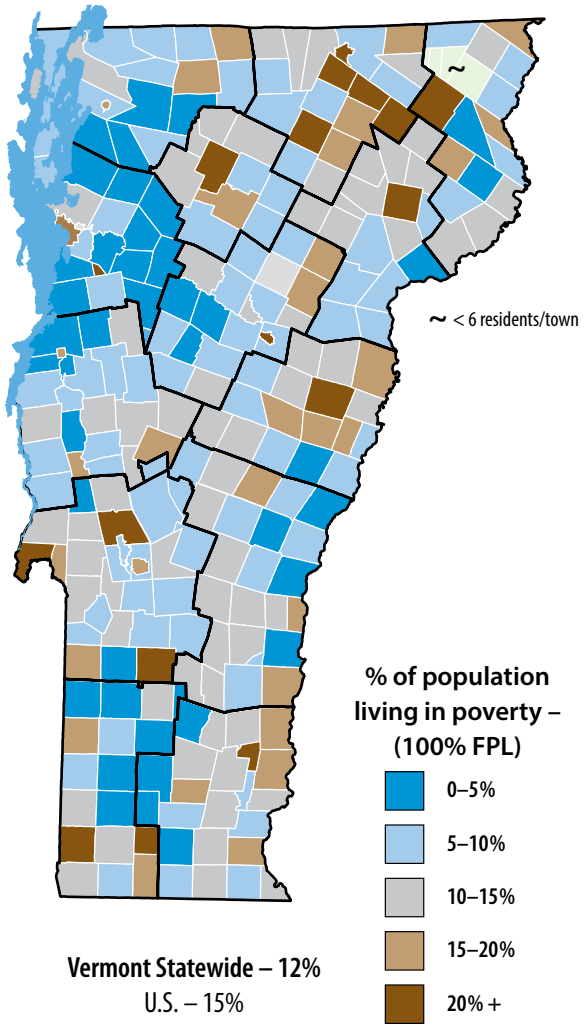
U.S. Department of Health & Human Services • 2017

Family Size	100%	133%	185%	200%	250%
1	$12,060	$16,040	$22,311	$24,120	$30,150
2	$16,240	$21,599	$30,044	$32,480	$40,600
3	$20,420	$27,159	$37,777	$40,840	$51,050
4	$24,600	$32,718	$45,510	$49,200	$61,500
5	$28,780	$38,277	$53,243	$57,560	$71,950
6	$32,960	$43,837	$60,976	$65,920	$82,400
7	$37,140	$49,396	$68,709	$74,280	$92,850
8	$41,320	$54,956	$76,442	$82,640	$103,300

For larger families/households, add $4,180 for each additional person.

Population Living in Poverty, by Town

American Community Survey • 2012–2016



Race, Ethnicity & Culture

• Who are Vermonters of Color?

Vermonters come from a wide range of ethnic, religious and cultural backgrounds. In 2016, 7% or more than 43,000 Vermonters, were people of color. This includes approximately 8,100 Black/African Americans, 2,400 American Indian/Alaskan Natives, 11,300 Asian/Pacific Islander, 11,700 Hispanics, and 11,800 people of two or more racial groups. Since 1994, more than 6,000 refugees have arrived in the state, some of whom are people of color.

• Health Care & Quality of Life

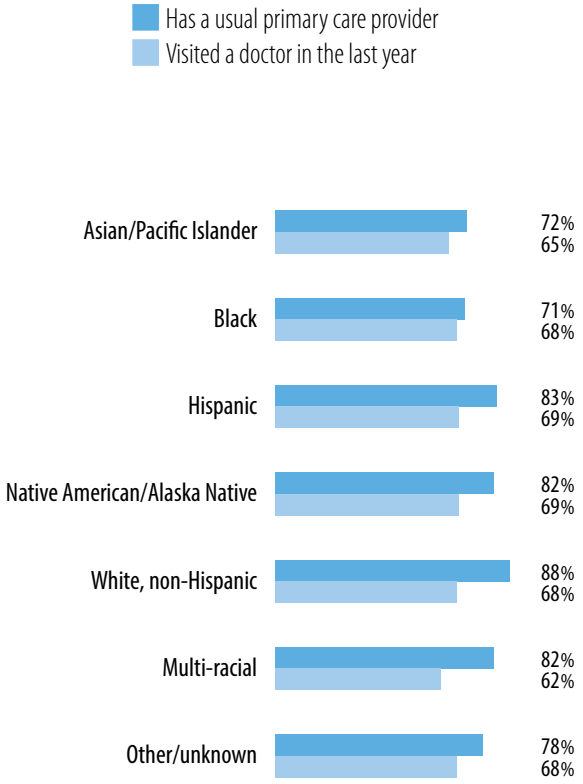
While white Vermonters and Vermonters of color visit the doctor at about the same rate, white Vermonters are more likely to report having a usual primary care provider. Adults who are Native American/Alaska Native and multi-racial are more likely to report fair or poor general health when compared to other races and ethnicities. There are many possible reasons for these differences.

Our partners told us that, as people of color, they do not see themselves represented or respected by the systems that are meant to promote health. They may not have trusting relationships with their providers, or believe that the health care and other systems will understand their needs. Added to that may be experiences of prejudice or being discriminated against by the system meant to serve them. These factors can all lead to chronic stress and worse physical and mental health.

Access to Health Care

Vermont Behavioral Risk Factor Surveillance System • 2012–2016

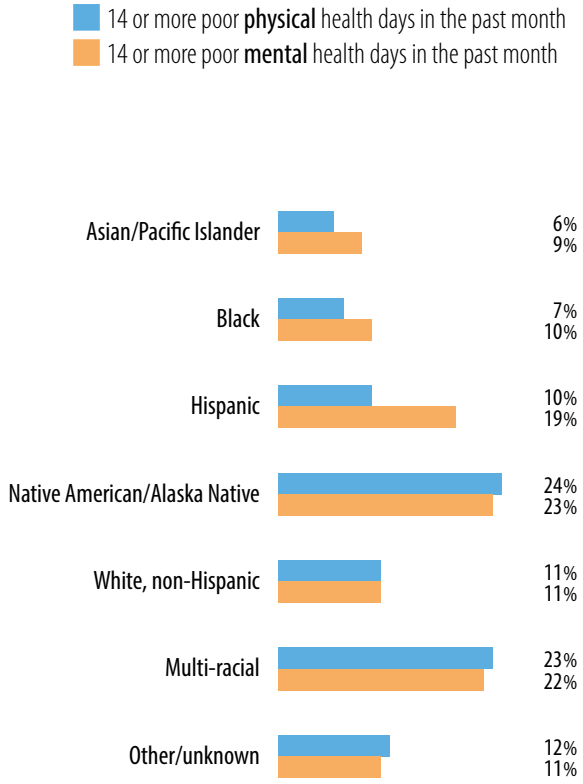
% of adults who report having regular health care



Quality of Life

Vermont Behavioral Risk Factor Surveillance System • 2012–2016

% of adults who report poor physical and mental health

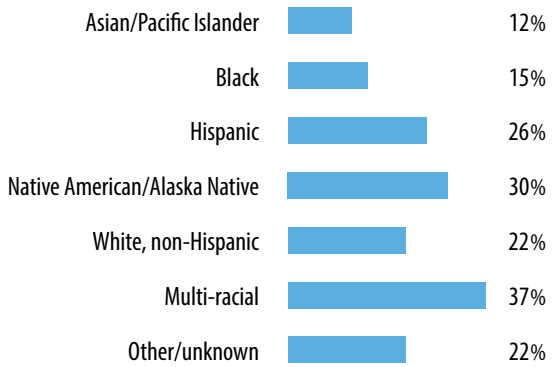


"Representation is really important, whether it's in a school or in a hospital ... being able to connect to somebody."

Depression Among Adults

Vermont Behavioral Risk Factor Surveillance System • 2012–2016

% of adults who have ever been diagnosed with depression

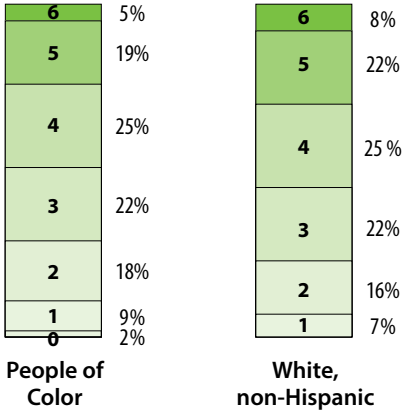


Protective Factors for Youth

Vermont Youth Risk Behavior Survey • 2015

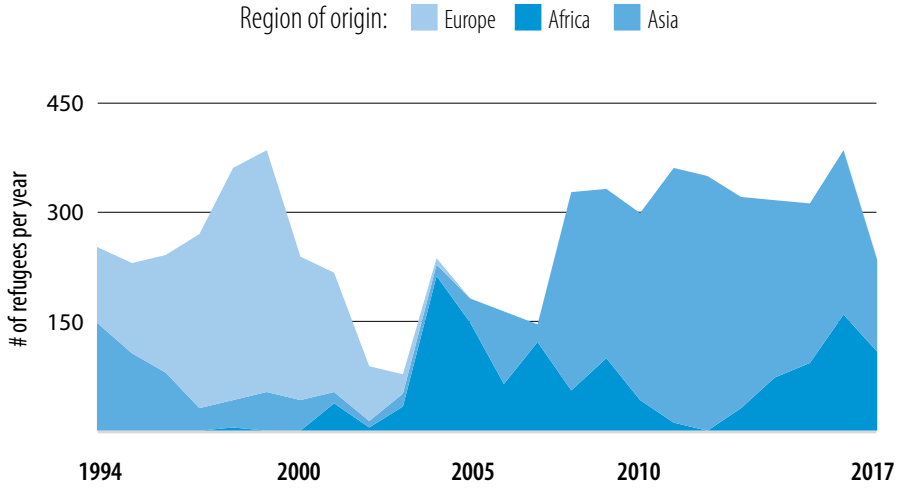
% of high school students who have 0-6 of these factors:

Talk with parents about school at least weekly • Spend 10 + hours in after-school activities
Have teachers who care about you • Feel valued by your community
Can help decide what happens at school • Feel safe at school



Number of Refugees Resettled in Vermont

U.S. Committee for Refugees & Immigrants • 1994-1999 & Refugee Processing Center • 2000–2007



Since 1994, 6,340 refugees have arrived in Vermont. The yearly average is 266 people. To date, 29 countries are represented.

• Mental Health

National measures of mental health are similar across racial groups. One indicator of mental health for which we have data is depression. In Vermont, multi-racial adults are most likely to have ever been diagnosed with depression.

Mental health was a major concern expressed by our partners, who witness the challenges in their communities. The mental health system has limited capacity to understand or recognize the chronic stress or generational trauma of racism.

And many of the people who came to Vermont as refugees have been traumatized by violence and displacement, but cultural stigma may be a barrier to seeking mental health care. When they do seek care, they are further challenged by a system that does not understand their unique cultural or linguistic needs and experiences of trauma.

"Most of our parents immigrated here because of war. They saw those tragic things happen ... they came to America and had to deal with those things by themselves. They have to go through the trauma by themselves."

• A Sense of Belonging

Many of our partners said that people of color are not treated equally in their communities and are made to feel they do not fully belong. Feeling such disconnection is a risk to both physical and mental health. When we survey high school students about protective factors that relate to connectedness and community, youth of color generally report having fewer of these protective factors compared to white youth.

LGBTQ Identity

• Who are LGBTQ Vermonters?

The Health Department's data sources do not yet fully reflect Vermont's LGBTQ population. To best represent the available data, we use LGB when referring to youth, and LGBT for adults. Of the 5% of adult Vermonters who identify as lesbian, gay, bisexual, or transgender, young adults are most likely to identify as LGBT and older adults are least likely. Among 8% of high school students who identify as LGB, 2% describe themselves as lesbian or gay, and 6% as bisexual; another 4% are not sure. Female students are more likely than male students to describe themselves as bisexual (10% compared to 3%), and are more likely to be unsure of their gender orientation (5% compared to 4%).

• Health Care & Quality of Life

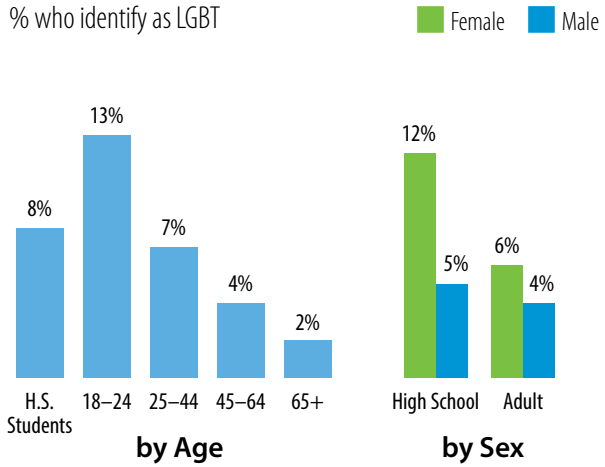
LGBT adults are slightly less likely than heterosexual adults to have a usual primary care provider, or to have visited a doctor or a dentist in the past year. They are, however, twice as likely as heterosexual adults to delay care, or be unable to get care due to cost. A greater proportion of LGBT Vermonters report worse health than heterosexual Vermonters. Lack of access to quality, affirming health care is a concern expressed by many LGBT Vermonters. Many experience discrimination or find themselves having to educate their health care providers about their particular health needs.

"We need more knowledgeable health care providers and clinics with all staff – including front desk and clinical–welcoming of LGBTQ patients."

Gender Orientation

Vermont Youth Risk Behavior Survey • 2015
Vermont Behavioral Risk Factor Surveillance System • 2016

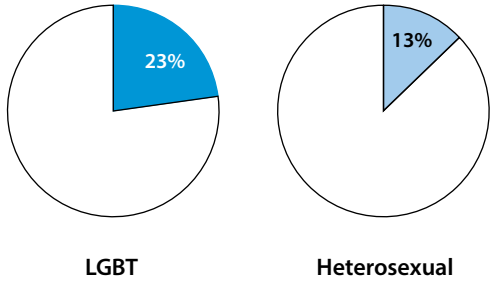
% who identify as LGBT



Quality of Life

Vermont Behavioral Risk Factor Surveillance System • 2016

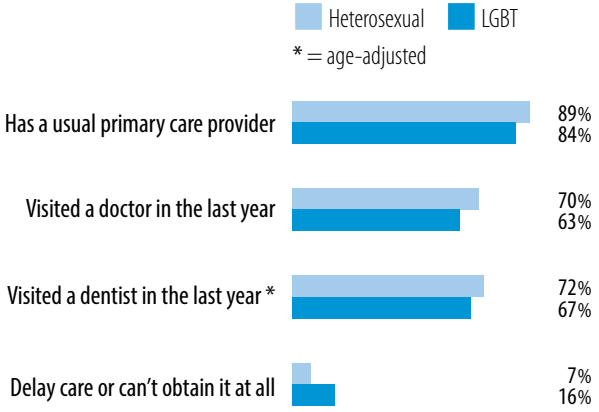
% of adults who report having fair or poor health



Access to Health Care

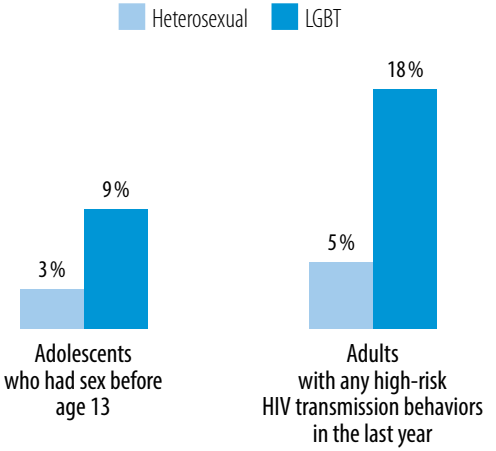
Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults who report having regular health care



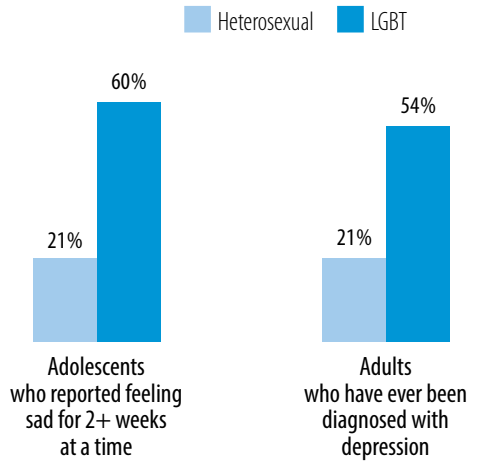
Sexual Health Risk Behaviors

Vermont Youth Risk Behavior Survey • 2015
Vermont Behavioral Risk Factor Surveillance System • 2016



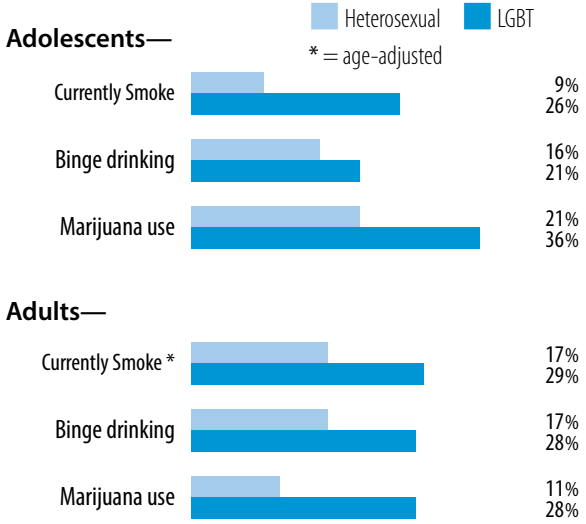
Depression

Vermont Youth Risk Behavior Survey • 2015
Vermont Behavioral Risk Factor Surveillance System • 2016



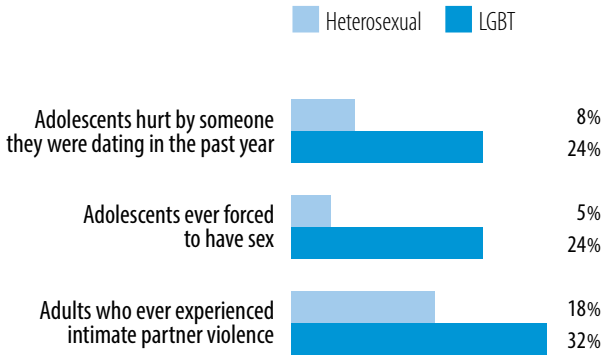
Tobacco, Alcohol & Drug Use

Vermont Youth Risk Behavior Survey • 2015
Vermont Behavioral Risk Factor Surveillance System • 2016



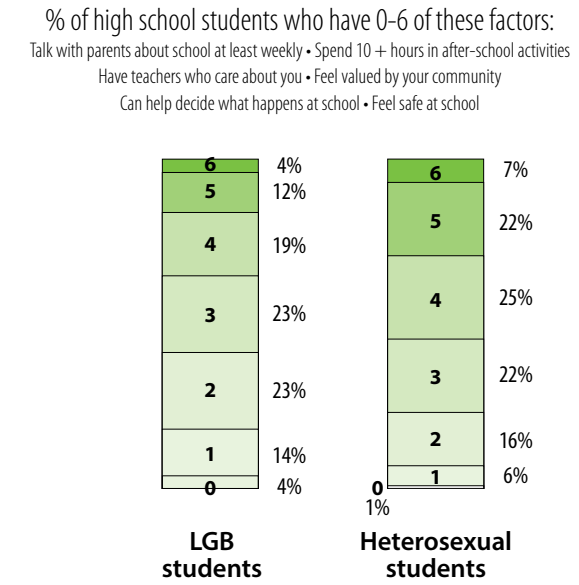
Intimate Partner & Sexual Violence

Vermont Youth Risk Behavior Survey • 2015
Vermont Behavioral Risk Factor Surveillance System • 2014



Protective Factors for Youth

Vermont Youth Risk Behavior Survey • 2015



"It's frustrating because providers and public health professionals still do not engage with this community adequately ... in my experience, doctors don't even ask and just adopt hetero-normative language, which makes an appointment even more difficult."

• Mental Health

National research shows that people who identify as LGBTQ have more mental health risk factors, depression and mental illness than those who are heterosexual. These differences in health may stem from bullying, discrimination and rejection that the LGBTQ community continues to face. The growing visibility of LGBTQ issues can be felt to be both supportive and stressful for individuals.

• Risk Behaviors

Smoking, binge drinking and marijuana use is more common among LGB youth and LGBT adults than among heterosexuals. Although data is limited, risk behavior surveys show that sexual violence is also more common, especially for LGB youth. LGBTQ males and females are more likely than heterosexuals to have ever been tested for HIV, and to have been tested within the past year, as recommended for all who are sexually active.

• A Sense of Belonging

Many Vermonters have found a sense of belonging through LGBTQ-welcoming organizations and groups, while others have found connectedness through informal networks. Having a positive and supportive community can build resilience and connections.

"It's important to feel supported within your own community."

People Living with Disabilities

• Who has a disability?

Among Vermonters of all ages, 15% are living with a disability. The likelihood of having disabilities increases with age. By adulthood, nearly one-quarter (22%) of Vermonters have at least one type of disability, and 10% have multiple disabilities. Vermonters of color and those who are LGBT are more likely to have a disability than white, non-Hispanics and heterosexuals.

• Health Care & Quality of Life

People who are living with disabilities are as likely as those without disabilities to have a regular primary care provider, are more likely to have visited a doctor in the past year, but less likely to have seen a dentist.

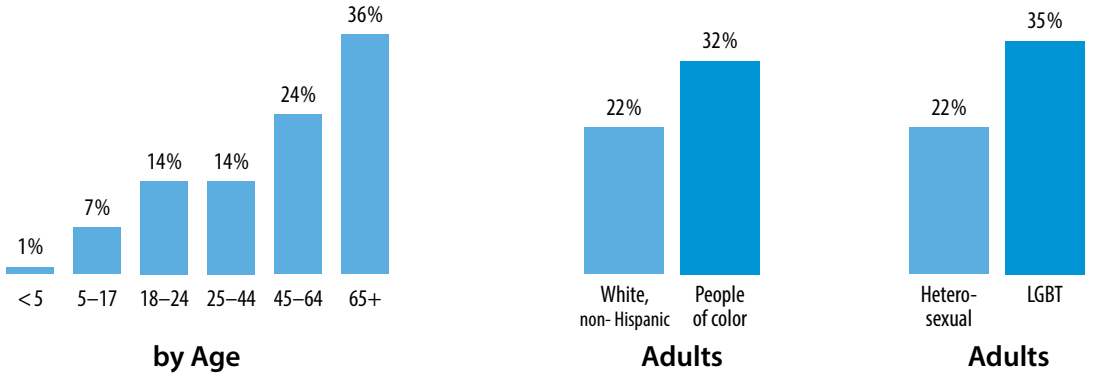
People with disabilities report that transportation to care is difficult, and they often feel discriminated against by health care providers, or feel their providers have insufficient training to understand their disabilities and particular health needs.

People with disabilities also experience multiple other inequities, with fewer opportunities for higher education, to have better jobs and incomes, adequate housing and transportation options. The built environment – public buildings, parks, green spaces, etc. – too often discourage participation in community life and physical activity. Such daily challenges can result in worse health. Adults who have any disability are nearly seven times more likely to report fair or poor health compared to those who do not have a disability.

People with Disabilities

Vermont Behavioral Risk Factor Surveillance System • 2016
American Community Survey • 2016

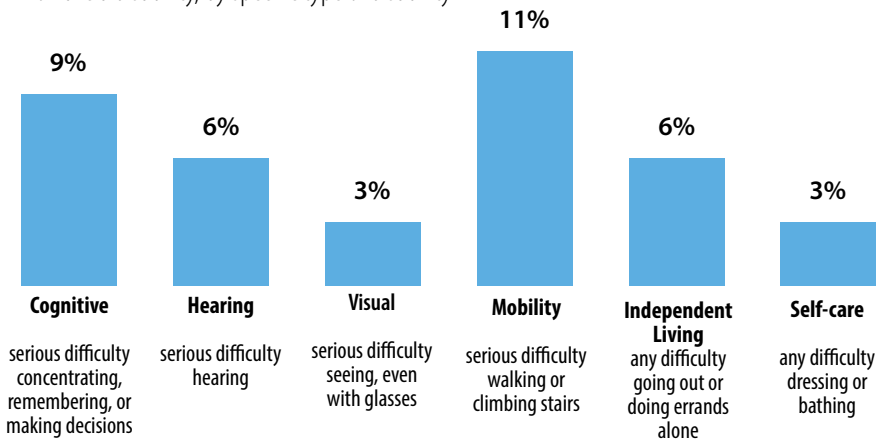
% of Vermonters who have one or more disabilities



Types of Disabilities Among Adults

Vermont Behavioral Risk Factor Surveillance System • 2016

% of Vermonters who have a disability, by specific type of disability

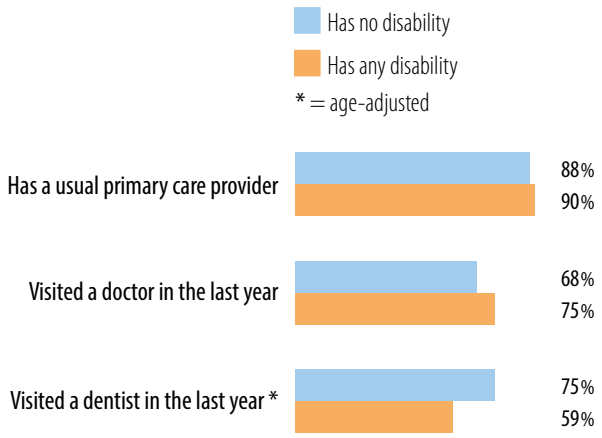


"I want to be seen as a person, not a disability. I deserve equal treatment and equal quality of care."

Access to Health Care

Vermont Behavioral Risk Factor Surveillance System • 2016

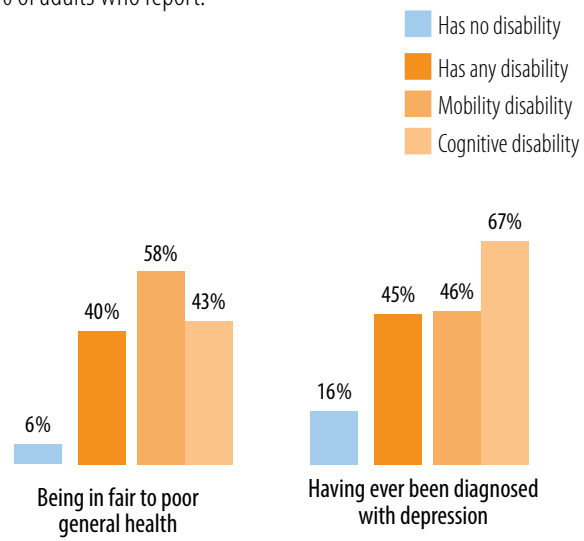
% of adults who report having regular health care



Quality of Life

Vermont Behavioral Risk Factor Surveillance System • 2016

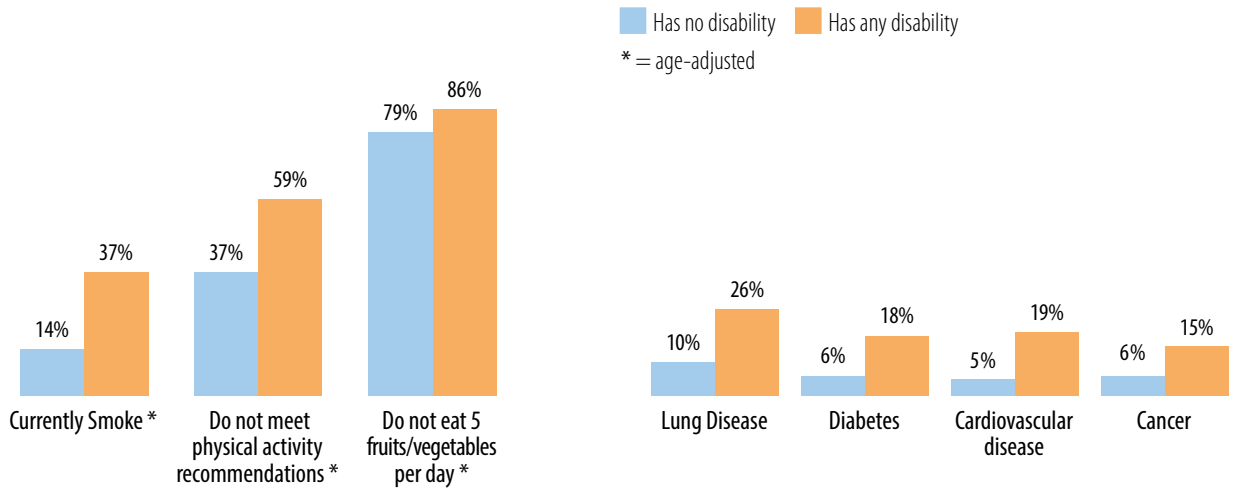
% of adults who report:



Risk Behaviors & Chronic Disease

Vermont Behavioral Risk Factor Surveillance System • 2015 & 2016

% of adults who report risk behaviors – and – % of adults who have a chronic disease



"I want equal treatment in the medical system and appropriate accommodations, like doctors who know how to communicate with people with disabilities and exam rooms that are sensory-friendly."

• Risks, Chronic Disease & Mental Health

Health risks such as smoking, physical inactivity and poor nutrition are more common among adults with disabilities.

Adults with disabilities are also much more likely to have lung disease, diabetes, cardiovascular disease, cancer or to have been diagnosed with depression, compared to adults who do not have a disability. Two-thirds of adults with a cognitive disability have ever been diagnosed with depression, more than people with any other type of disability.

• A Sense of Belonging

Vermonters who have disabilities shared that they do not always feel connected or valued in their communities. They report social isolation, and the feeling that they are perceived as their disability rather than as a person with a disability.

While they desire full inclusion in their community, they also value their connections with others who have had similar experiences and can support each other. In a rural state like Vermont, the ability to connect online and through social media is a valuable resource.

"People with disabilities aren't given equal opportunities for health, community participation, or following our dreams."

Social Class & Economic Status

• How do we measure social class?

Income is sometimes used to signify social class, but income and class are not exactly the same. Social class – or socioeconomic status – is also influenced by education and occupation, which are both closely tied to income. Socioeconomic status shapes many areas of our lives: where we live, the food we eat, the air we breathe and water we drink, our schools, and the opportunities we have for social connectedness.

To analyze health status by socioeconomic status, we most often use the Federal Poverty Level (FPL). This is a measure of poverty based on guidelines issued each year by the U.S. Department of Health & Human Services. *(See page 13 for specific income levels by family size.)* Educational attainment is another valuable measure, in combination or when information on income is not available.

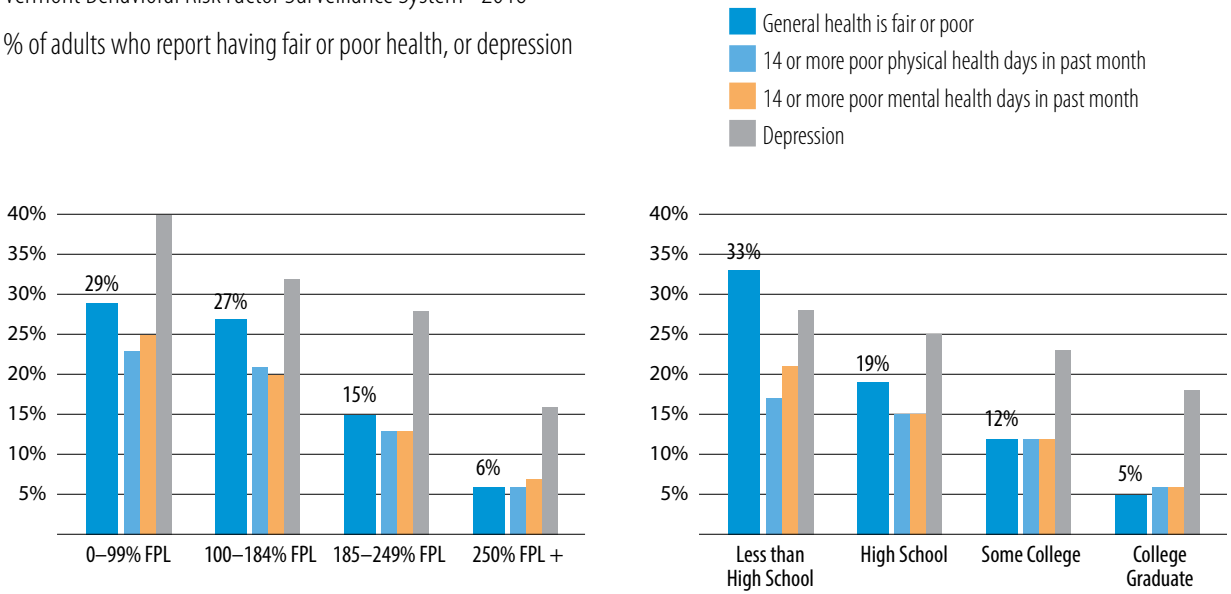
• Income, Education & Health Disparities

In 2016, 12% of all Vermonters were living at or below 100% of FPL: 11% were white, non-Hispanic, 15% were younger than 18, 13% were female, 11% were male, and 9% were age 65+. Vermonters without a high school diploma are six times more likely to report being in fair or poor health compared to those with a college degree. Similar differences are seen by income. When comparing income at all education levels, the median earnings for males are higher than for females. For females with a bachelor's degree, earnings are only slightly higher than for males with a high school diploma.

Quality of Life, by Federal Poverty Level & Education

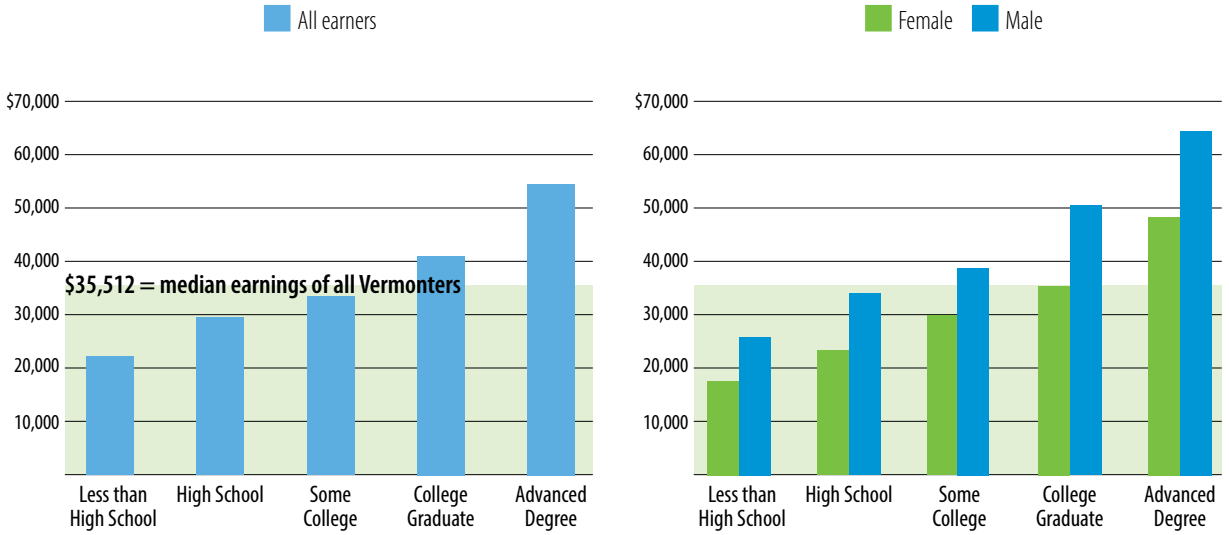
Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults who report having fair or poor health, or depression



Median Earnings, by Education & Gender

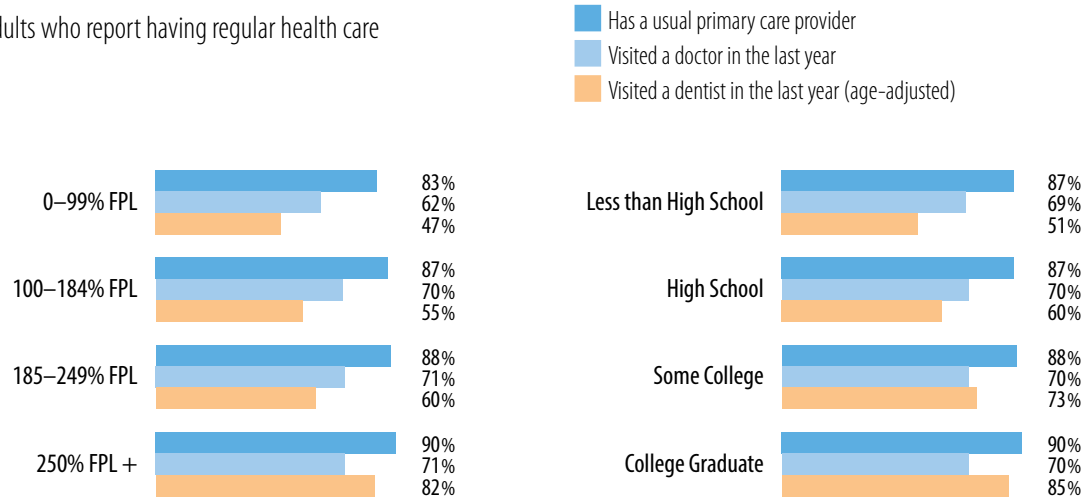
American Community Survey • 2011–2015



Access to Health Care, by Federal Poverty Level & Education

Vermont Behavioral Risk Factor Surveillance System • 2016

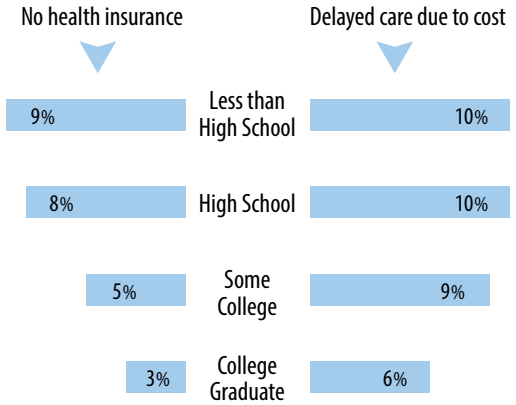
% of adults who report having regular health care



Costs Associated with Health Care

Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults who report cost-associated barriers to care

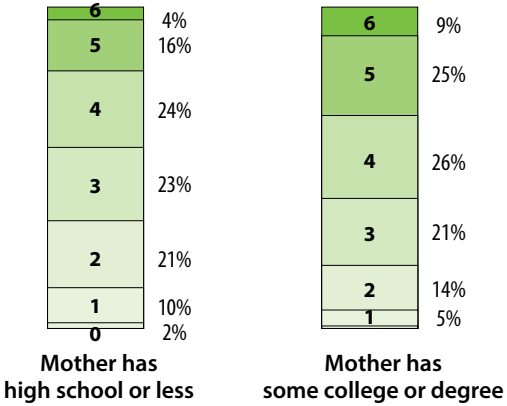


Protective Factors for Youth

Vermont Youth Risk Behavior Survey • 2015

% of high school students who have 0-6 of these factors:

Talk with parents about school at least weekly • Spend 10 + hours in after-school activities
Have teachers who care about you • Feel valued by your community
Can help decide what happens at school • Feel safe at school



"I work round the clock and still can't afford the basics to keep my family healthy."

• Mental Health

Many stressors are associated with poverty. Safe and affordable housing, nutritious and affordable food, reliable transportation and quality child care can be difficult to access, and these stressors can affect a person's mental outlook. Poor mental health makes it more difficult for a person to complete their education and hold a job. As a result, people with poor mental health are more likely to live in poverty. The likelihood of having depression and a string of poor mental health days decreases as income and education rises.

• Access to Health Care

Adults at all education and income levels are equally likely to visit a doctor in the past year, but adults in higher income households are more likely to have a usual primary care provider than those in lower income households. The likelihood of seeing a dentist within the past year increases with higher education and higher income.

• A Sense of Belonging

High school students from families with a mother who has been to college are more likely to feel connected in their homes, schools and communities. When we survey students about protective factors that relate to connectedness and community, those who have mothers with some college or a degree are more likely to have more of these protections than students with mothers who have a high school diploma or less.

• A Healthy Start in Life

The health and wellness of children and families is a foundation for the health of all Vermonters. But there are inequities from the start: in Vermont, 17% of children from birth up to age 5 are living in poverty (at or below 100% of the Federal Poverty Level). Poverty can have severe and lifelong effects on health and development, starting from the prenatal period and lasting throughout life.

• Planning for Healthy Families

Family planning contributes to better outcomes for everyone – babies, children, parents and whole communities. Planning helps families be more intentional about timing, birth spacing and family size. Parents who intentionally prepare for child-bearing are more likely to have opportunities to be healthy themselves, and their babies are then more likely to be born healthy.

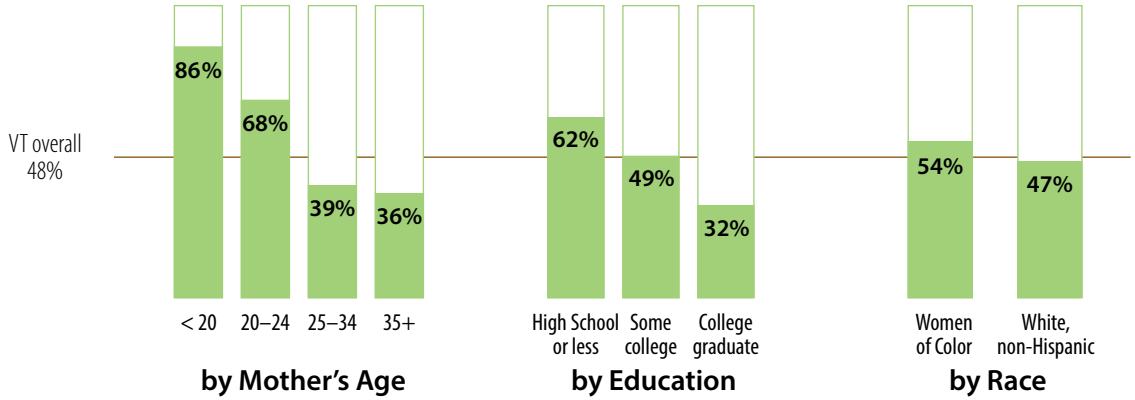
• Unintended vs. Planned Pregnancy

Nearly half of all pregnancies in Vermont are unintended. This happens more often among younger and less educated mothers, and these families may be stressed due to poverty. As a result, prenatal care may be delayed and there is a greater risk of depression, distress and violence in the family. Babies born of unintended pregnancies are at greater risk for birth defects and low birth weight, and may not have the benefit of breastfeeding. As they grow into their teens, these children are more likely to experience trauma, be in poor mental and physical health, have behavioral problems and lower academic achievement.

Unintended Pregnancy

Vermont Vital Statistics & Vermont Pregnancy Risk Assessment Monitoring System • 2014

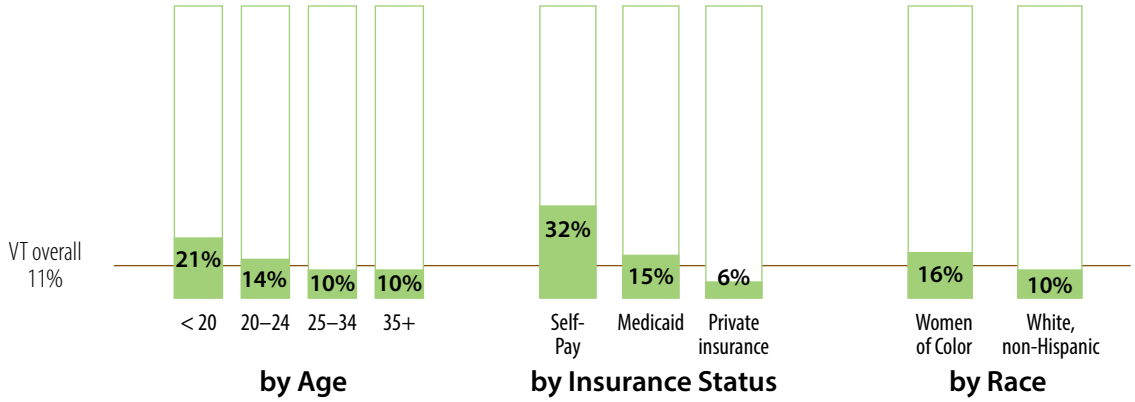
% of pregnancies that were unintended



Prenatal Care

Vermont Vital Statistics • 2015

% of mothers whose prenatal care was not adequate in terms of timing and number of visits

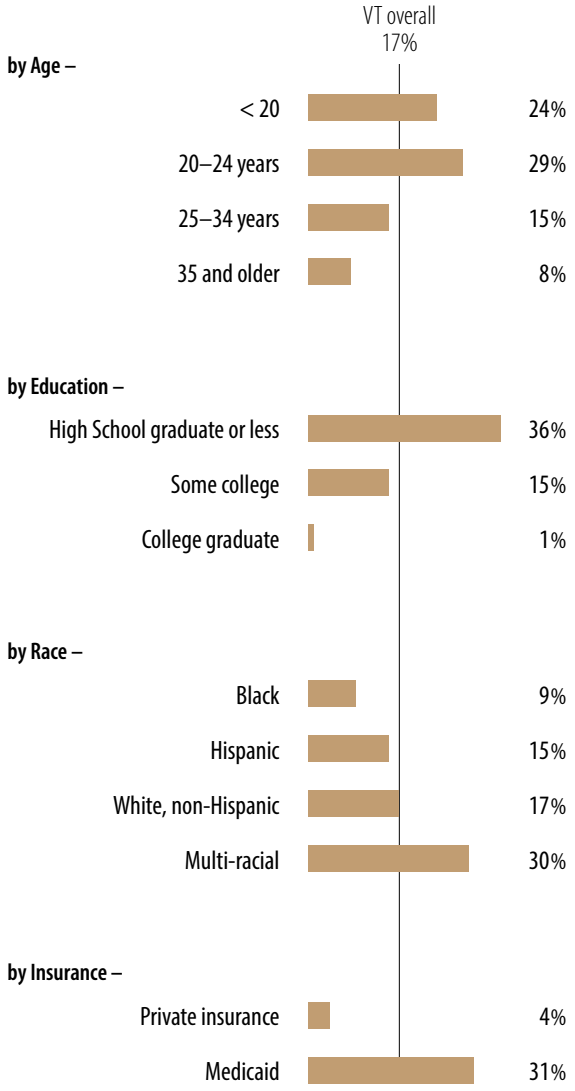


healthvermont.gov/family

Smoking During Pregnancy

Vermont Vital Statistics • 2015

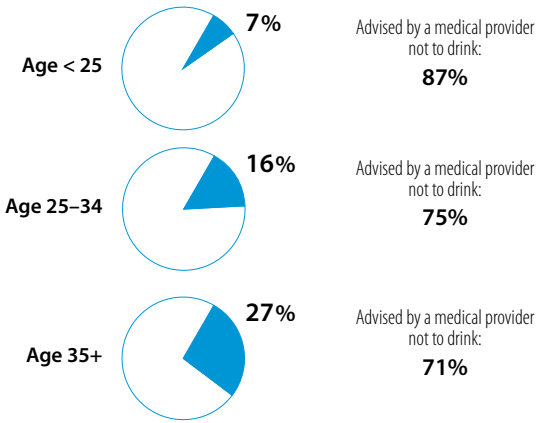
% of women who smoked during pregnancy



Drinking During Pregnancy

Vermont Pregnancy Risk Assessment Monitoring System • 2015

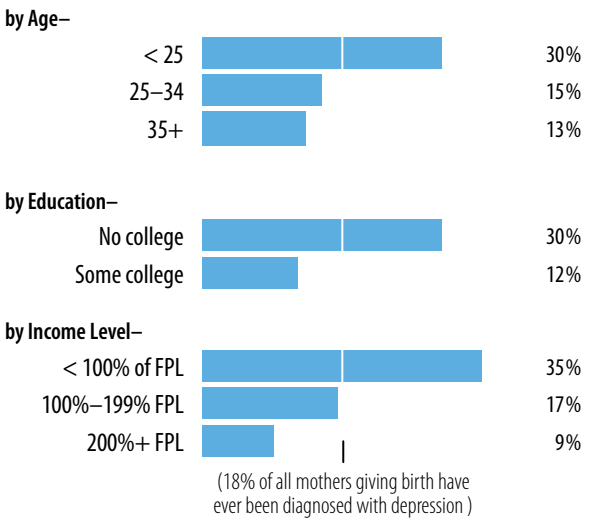
% of women who drank alcohol during pregnancy



Depression History of Birth Mothers

Vermont Pregnancy Risk Assessment Monitoring System • 2015

% of mothers giving birth in 2015 who had ever been previously diagnosed with depression



• The Importance of Preconception Care

A preconception visit with a health care provider is an important time for women of reproductive age to get screenings, counseling and immunizations before and between pregnancies. These services can help prevent or treat conditions such as high blood pressure, asthma or depression, and improve reproductive health. Approximately two-thirds of Vermont women age 18 to 44 had a visit with their health care provider in the past year.

• Prenatal Care

Early and timely health care during pregnancy is essential for assuring a healthy pregnancy and the best health for both parent and child. Babies of mothers who do not have adequate prenatal care are more likely to have a low birth weight (less than 2,500 grams) or die. About one in 10 Vermont women do not have adequate prenatal care.

• Smoking During Pregnancy

Smoking is the most preventable cause of low birth weight, and low birth weight is linked to infant death. Smoking around children can also cause frequent ear infections, asthma, respiratory illnesses, hospitalizations and sudden unexpected infant death. In Vermont, most pregnant women do not smoke, yet smoking during pregnancy is twice the national rate.

• Drinking During Pregnancy

Prenatal exposure to alcohol can cause birth defects, intellectual disabilities and developmental disorders in newborns. Vermont has consistently high rates of alcohol use during pregnancy. Older mothers are most likely to drink during pregnancy, yet least likely to be advised not to drink.

• Pre-Term Births

Of the 5,093 births in Vermont in 2015, 7% were pre-term. Pre-term birth is when a baby is born too early, before 37 weeks of pregnancy. These babies are at risk of having both immediate and lifelong health problems, and may need to stay in hospital longer than full-term babies. Lower income mothers (those with Medicaid for insurance) are more likely to have a pre-term birth.

• Developmental Screening

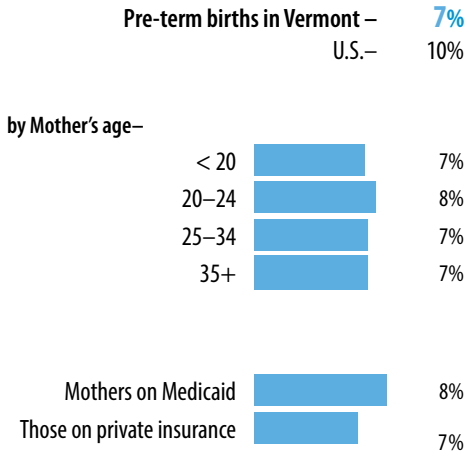
Early identification of children who are at risk for developmental delays and disabilities is critical for their well-being and that of their families. When children are identified, they will often need early intervention or further assessment. In Vermont, the percentage of children with a developmental or behavioral disorder has been increasing, yet screening is not universal.

• Breastfeeding is Best

Exclusive breastfeeding for the first six months of life is the healthiest way to feed infants. There are many immediate benefits, including reduced risk of infant mortality and fewer illnesses. Breastfeeding helps prevent obesity and diabetes in children, and breastfeeding mothers are at lower risk of breast and ovarian cancer, diabetes, hypertension and cardiovascular disease. In Vermont, breastfeeding rates are improving, but disparities persist. Lower income parents who participate in WIC, the federal Women, Infants & Children nutrition program, have lower rates of breastfeeding than those not participating in WIC.

Pre-term Births

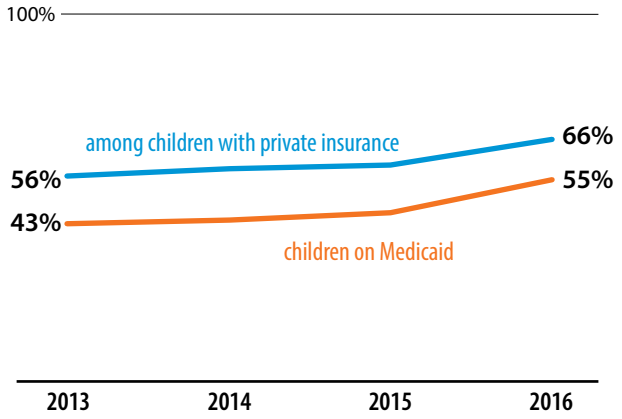
Vermont Vital Statistics • 2015



Developmental Screening & Insurance

Vermont Blueprint for Health Clinical Registry • 2013–2016

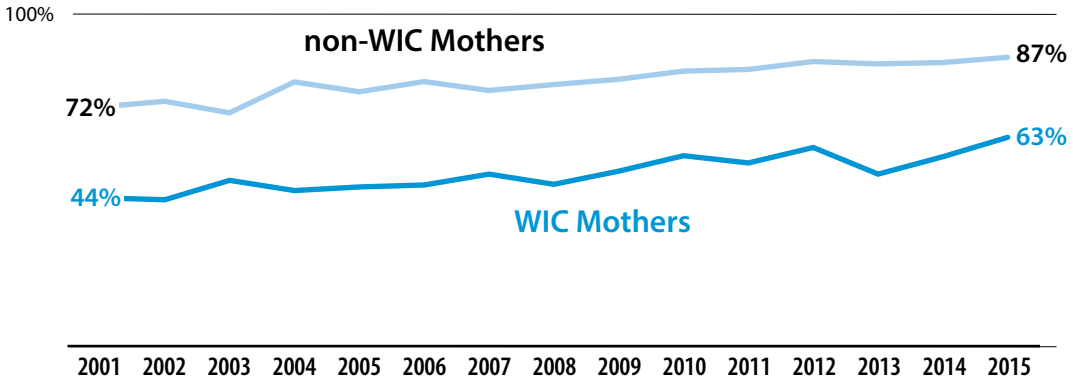
% of children who receive developmental screening in the first 3 years of life



Breastfeeding

Vermont Pregnancy Risk Assessment Monitoring System • 2001–2015

% of mothers who are breastfeeding at 8 weeks, by participation in the Women, Infants & Children nutrition program

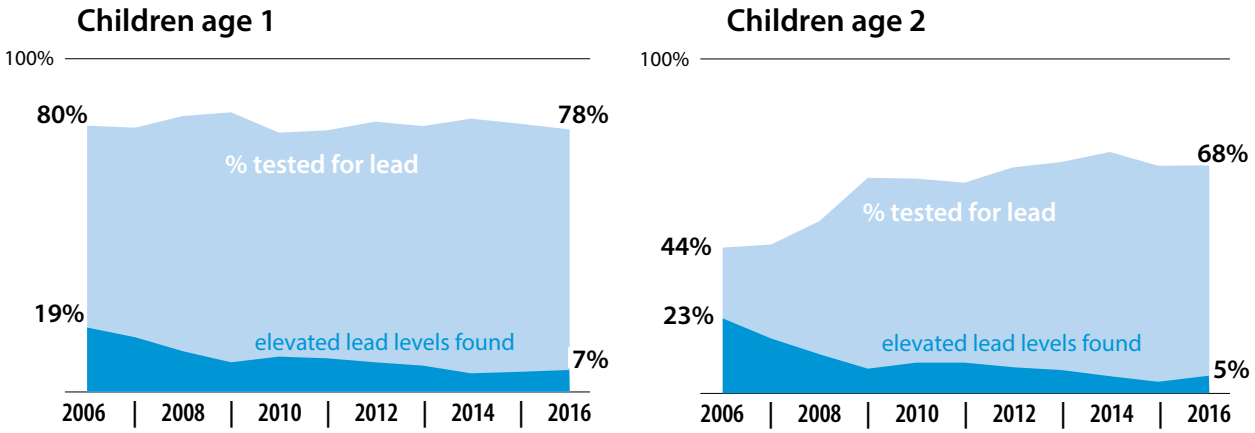


healthvermont.gov/family

Blood Lead Levels in Children

Vermont Department of Health/ Healthy Homes Program • 2006–2016

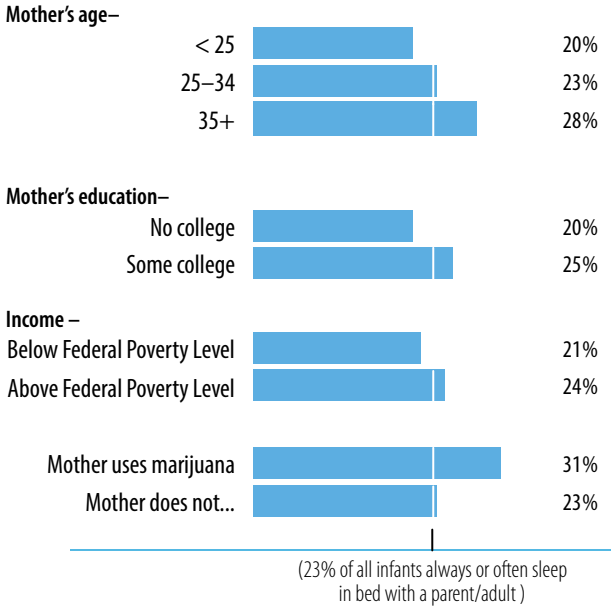
% of children tested for lead in their blood – and – % of children found to have elevated blood lead levels



Bed-Sharing Risks

Vermont Pregnancy Risk Assessment Monitoring System • 2012–2015

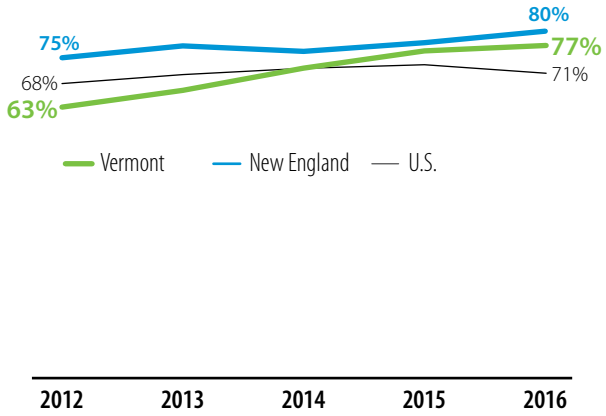
% of infants who always or often sleep in bed with a parent/adult



Childhood Immunizations

National Immunization Survey/ Vermont • 2012–2016

Children age 19–35 months who are up to date with the combined 7-vaccine series: hepatitis B, diphtheria/tetanus/pertussis, haemophilus influenzae B, poliovirus, pneumococcal, measles/mumps/rubella, varicella



• Lead Testing at Age 1 and 2

There is no safe level of lead in the body. In children, exposure to lead may result in learning disabilities, behavioral problems, decreased intelligence and developmental delays.

Dust from lead paint in older homes is the main source of exposure. A child's exposure to lead can be identified easily with testing, and early interventions can prevent further exposure to this harmful toxin. Although lead testing for 1-year-olds in Vermont is comparatively high, too many 1- and 2-year-olds are still not tested at their Well Child visits.

• Infant Safe Sleep Environments

To prevent injuries and deaths from unintentional suffocation, newborns and infants need a safe sleep environment. This means putting babies to sleep on their back, on a firm sleep surface, and sharing a room, but not a bed.

Mothers who are older, have higher incomes and more education are more likely to have an infant sleeping in a shared bed. The same is true of mothers who use marijuana.

• Immunizations for Young Children

Children who are fully immunized are protected against vaccine-preventable diseases or severe illness and death, and they help protect the greater community from disease outbreaks.

At 77%, the immunization rate for Vermont toddlers age 19 to 35 months against 11 diseases is below the New England states overall (80%), and below state and national targets.

• Oral Health Care for All

Oral health care is integral to overall health. Tooth decay is one of the most common chronic diseases in children, and infections in the mouth have been linked to development of diabetes, heart disease and stroke. In Vermont, young children from lower income families (eligible for the National School Lunch Program at 185% of the Federal Poverty Level) are more likely to have tooth decay compared to higher income children. This suggests that they do not have the benefit of early oral health care, and are less likely to go to a dentist for treatment.

• Youth Who Feel That They Matter

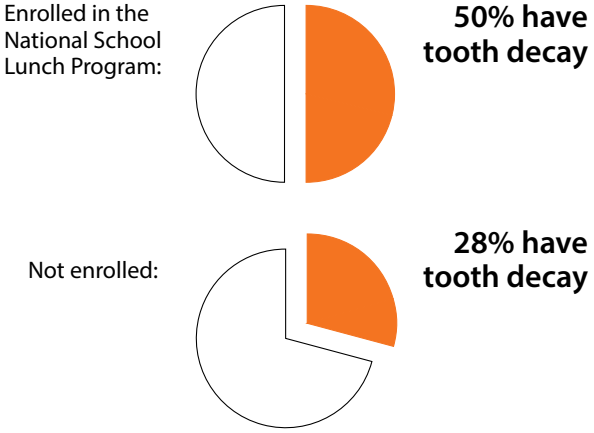
Youth who feel empowered, and who believe they matter to people in their community, are more likely to be engaged in their own health and wellbeing. The belief that they are valued by others in the community encourages healthy behaviors, and discourages risk behaviors – which then favors positive outcomes in life: better mental health, fewer teen pregnancies and sexually transmitted diseases, fewer suicides, fewer motor vehicle crashes, and lower prevalence of obesity and other chronic health conditions.

In Vermont, boys are more likely than girls to feel that they matter. Asian/Pacific Islander, white non-Hispanic and black students are more likely than other students of color to feel that they matter. And students who identify as heterosexual are more likely than those who identify as lesbian, gay or bisexual to feel that they matter.

Tooth Decay in Children

Vermont Oral Health Survey • 2016–2017

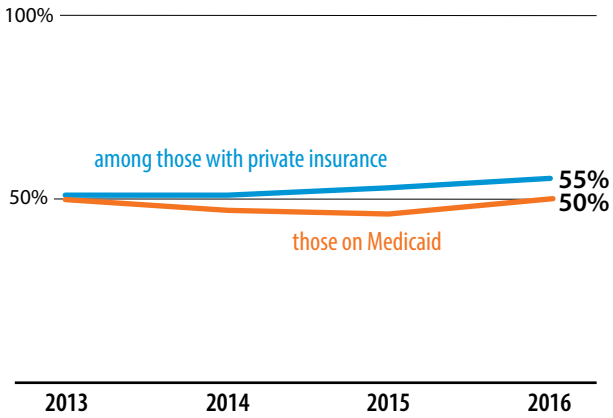
% of third graders who have had any tooth decay, by eligibility for the National School Lunch Program



Well-Care Visits and Insurance

Vermont Blueprint for Health Clinical Registry • 2013–2016

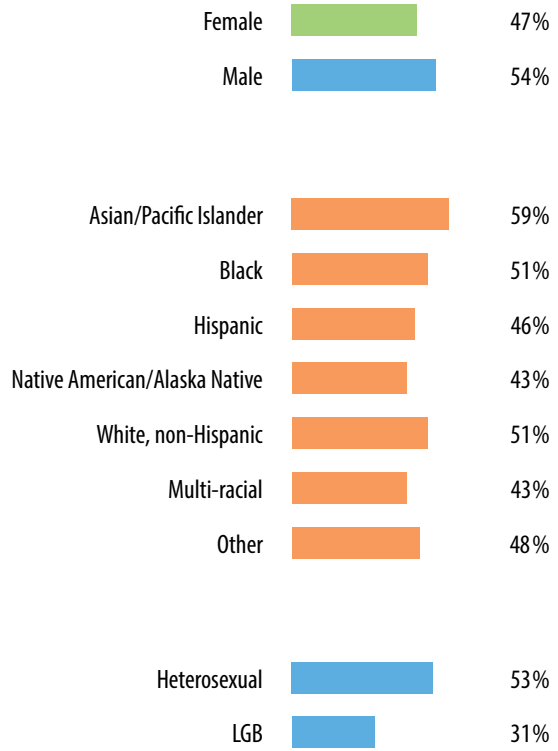
% of adolescents who have had a well-care visit with a primary care physician or ob/gyn in the past year



Student Connectedness

Vermont Youth Risk Behavior Survey • 2015

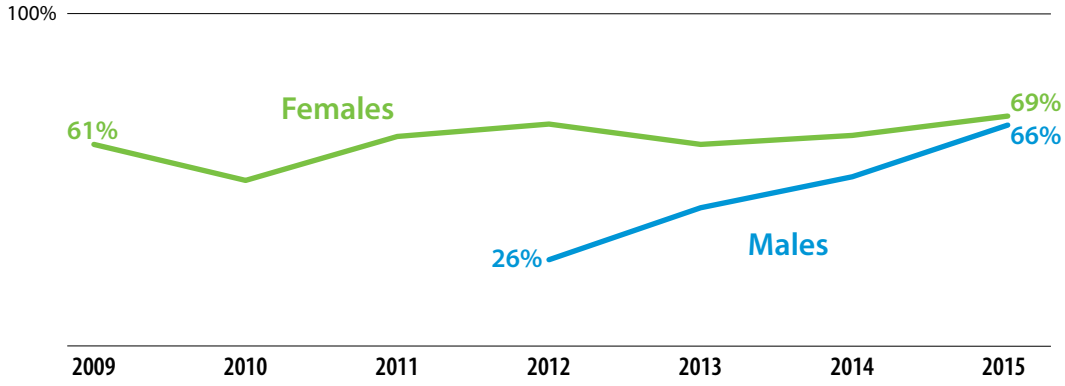
% of students in grades 9–12 who feel they matter to their community



HPV Vaccination

National Immunization Survey/Vermont • 2009–2015

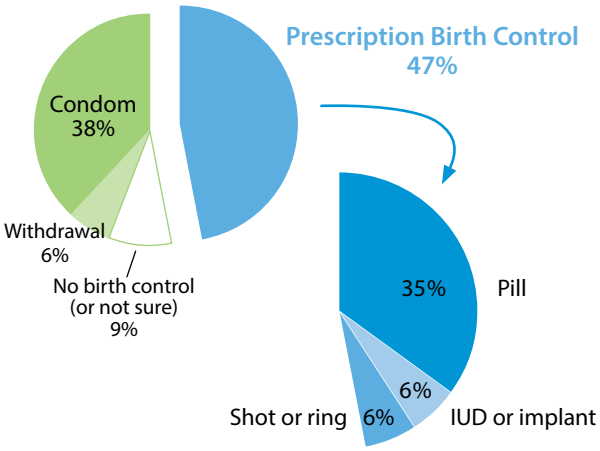
% of adolescents who have received the human papillomavirus vaccination



Birth Control Practices of Adolescents

Vermont Youth Risk Behavior Survey • 2015

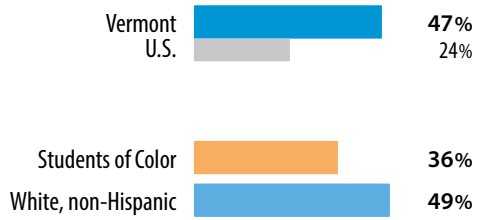
Methods of birth control used by sexually active Vermont high school students in grades 9-12



Prescription Birth Control Use

Vermont Youth Risk Behavior Survey • 2015

% of sexually active high school students in Vermont who use most or moderately effective contraceptives (IUD/implant, pill, shot/ring):



• Adolescent Well Care Visits

Among adolescents, most diseases and deaths caused by risky sexual activity, alcohol or drug use, motor vehicle crashes, self-harm or violence against others are preventable. The annual Well Care visit can be a time to detect and correct problems early. This is an opporunity to build a trusting relationship between an adolescent or teen and their health care provider, and a time for the provider to support their strengths and healthy development. This relationship can reinforce the understanding that they matter.

In Vermont, two out of 10 adolescents and teens with special health care needs receive services to help smooth the transition to adult health care. This is about the same percentage as those who do not have special health care needs.

• Immunize Against Cancer

HPV vaccine prevents six types of cancer caused by infection with carcinogenic strains of the human papillomavirus. In Vermont, the percentage of HPV immunization continues to increase among both males and females age 11 to 26. A majority had their first HPV vaccine before age 15. Vaccinating early results in higher immunity and lower health care costs.

• Preventing Pregnancy & STIs

Approximately half of sexually active high school students in Vermont use a contraceptive that is the most or moderately effective method for birth control: IUD/implant, pill, or shot/vaginal ring. Many fewer use one of these plus a condom, putting themselves at risk for sexually transmitted infections such as chlamydia and HIV as well.

• What are protective behaviors?

Regular physical activity and good nutrition are behaviors that protect against overweight and obesity, plus a number of other chronic conditions. While the health benefits are clear, behavior is complicated and change is not easy for anyone. Vermonters with the least resources too often have the fewest opportunities for healthy behaviors. Not enough money, time or access, combined with the daily stressors brought on by lack of money, time and access, means that more immediate needs take priority over a healthy diet and regular exercise.

• Elements of a Healthy Diet

As a measure of good nutrition, a healthy diet includes two servings of fruit and three servings of vegetables every day. By this measure, most Vermonters do not have the best nutrition, a trend that has changed little over time. Youth of color are more likely to eat the recommended number of servings compared to white youth. Adults with higher income and education are more likely to eat the recommended number of servings.
By another measure, the news is good: most Vermonters do not drink more than one sugar-sweetened beverage a day.

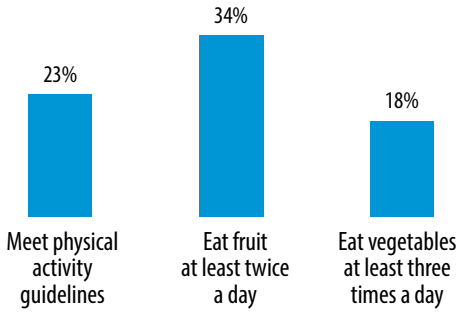
• The Problem with Food Insecurity

Food insecurity means not having enough food to eat, and not having enough money to buy food. Adults who do not have food security must often compromise quality, buying less nutritious but lower cost foods for themselves and their families.

Protective Behaviors Among Youth

Vermont Youth Risk Behavior Survey • 2015

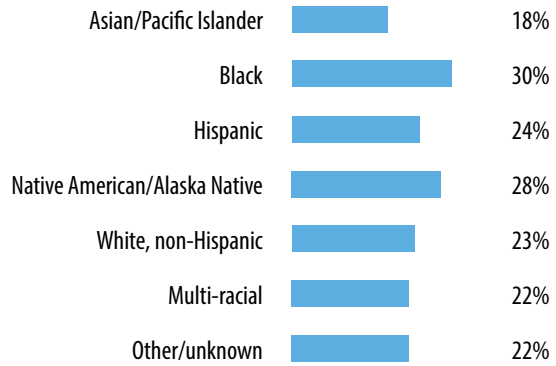
% of students in grades 9–12 who meet recommendations



Youth Physical Activity

Vermont Youth Risk Behavior Survey • 2015

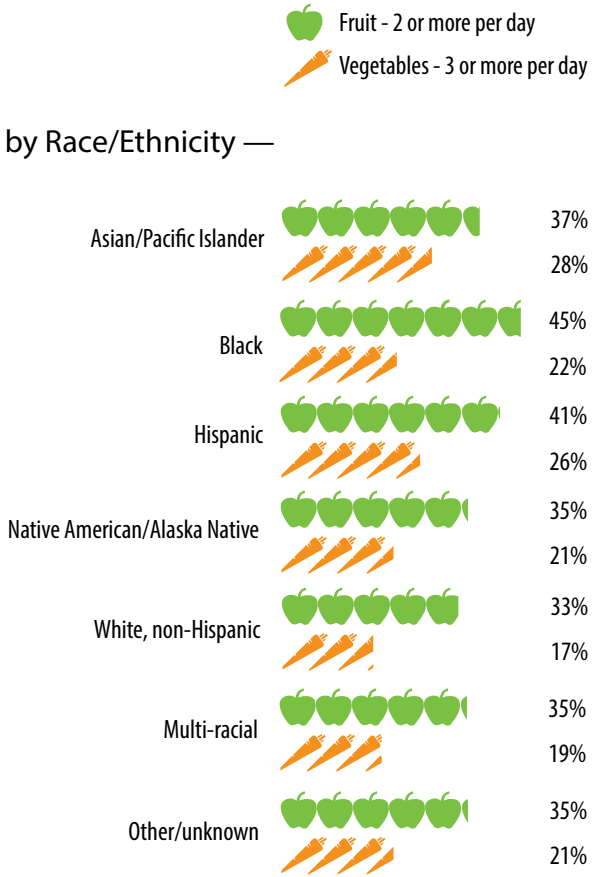
% of students in grades 9–12 who meet guidelines



Youth Healthy Eating Habits

Vermont Youth Risk Behavior Survey • 2015

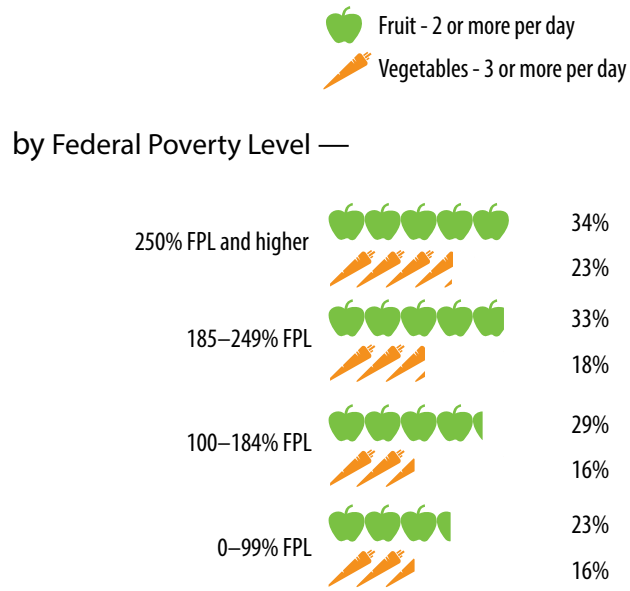
% of students in grades 9–12 who meet recommendations



Adult Healthy Eating Habits

Vermont Behavioral Risk Factor Surveillance System • 2016

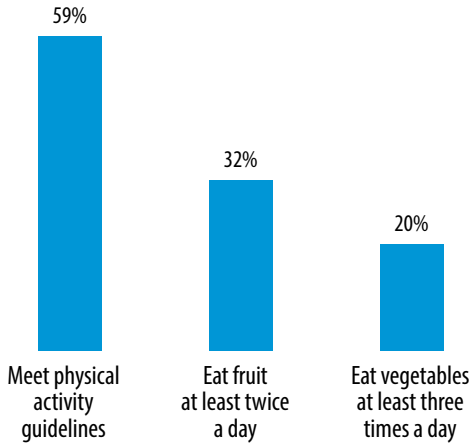
% of adults who meet recommendations (age-adjusted)



Protective Behaviors Among Adults

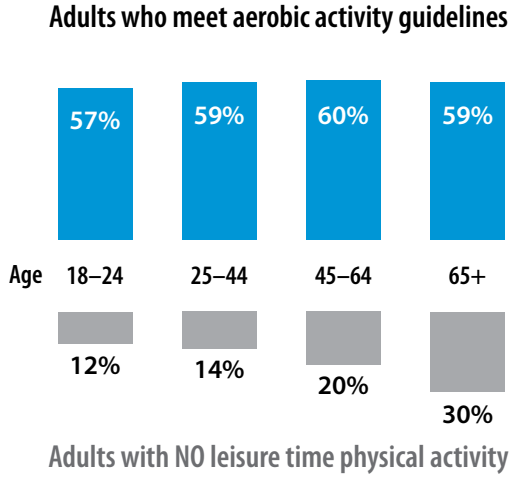
Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults who meet recommendations (age-adjusted)



Adult Physical Activity

Vermont Behavioral Risk Factor Surveillance System • 2016



• Are healthy foods within reach?

Communities that provide easy access to affordable food within a reasonable distance promote health by making it easier for residents to have a healthy diet. Still, some areas of of the state can seem to be a food desert, especially during the long winter months.

Vermonters with lower incomes who live in a rural agricultural area may live in a food desert if they can't afford to buy nutritious foods from a local market or neighbors. With limited or unreliable transportation to a grocery store, it's easier to stock up on shelf-stable, but less healthful foods.

For people with disabilities, getting a ride to the grocery store is a lower priority for transportation services, which may mean having to schedule rides far in advance. Our partners said that they may want to eat healthy, but it takes a lot of work.

• Differences in Physical Activity

Overall, 59% of adult Vermonters meet guidelines for physical activity (30 minutes a day), but they tend to become less active as they age. Adults age 65+ are much less likely than younger adults to be active in their leisure time. Likewise, adults age 45 to 64 are less likely than those age 18 to 44 to be active in their leisure time.

For youth, physical activity should add up to at least 60 minutes a day. Among students in grades 9-12, there is no difference when comparing white, non-Hispanic students to all students of color.

• What influences our behavior?

Behavior is not driven by our personal preferences and choices alone, but is greatly influenced by the conditions, communities, systems and social structures in which we live. The need to belong to a group that shares common values and habits is another powerful influence on behavior. And many policies have kept already disadvantaged groups from having equal opportunities for health.

• 3-4-50: Risk Behaviors & Chronic Disease

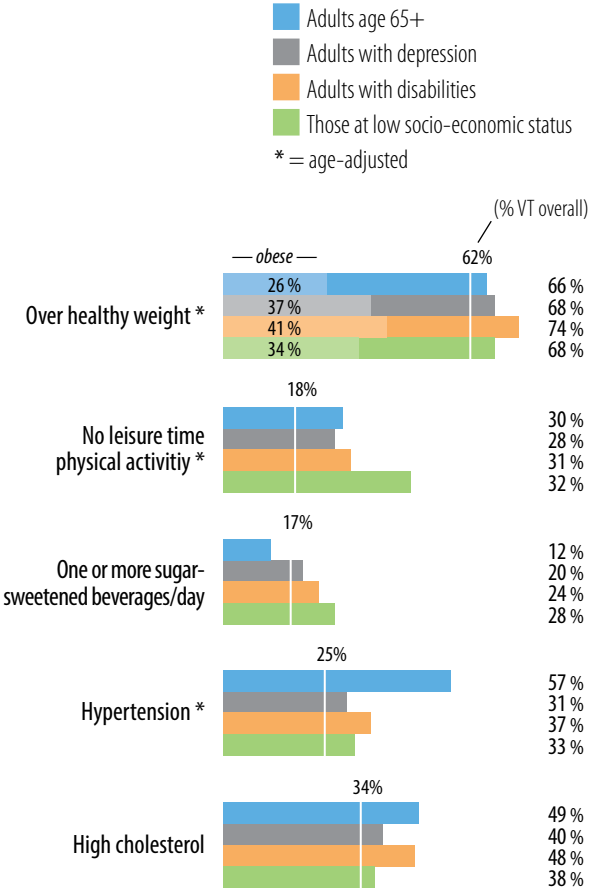
Poor nutrition, lack of physical activity and tobacco use are *3 behaviors* that contribute to development and severity of *4 chronic diseases* that cause more than *50% of the deaths* of all Vermonters. But focusing on changing behavior person by person is not the solution for preventing disease in the population. Vermont communities can be powerful agents of change. Simple changes in local policies or programming can help create conditions for everyone to have an equal chance to be healthy.

• Who is most at risk for chronic disease?

Lower income Vermonters, those who have a high school education or less, have depression or disabilities, people of color, LGBT and older adults have a higher prevalence of risk behaviors and chronic illnesses. And some risks can be circular: Vermonters who are obese or smoke have more tooth loss, making it harder to eat healthy foods. Poor diet and sugar-sweetened beverages are linked to tooth decay, which are risks for obesity. These disparities are at least partly a result of not having fair and just opportunities.

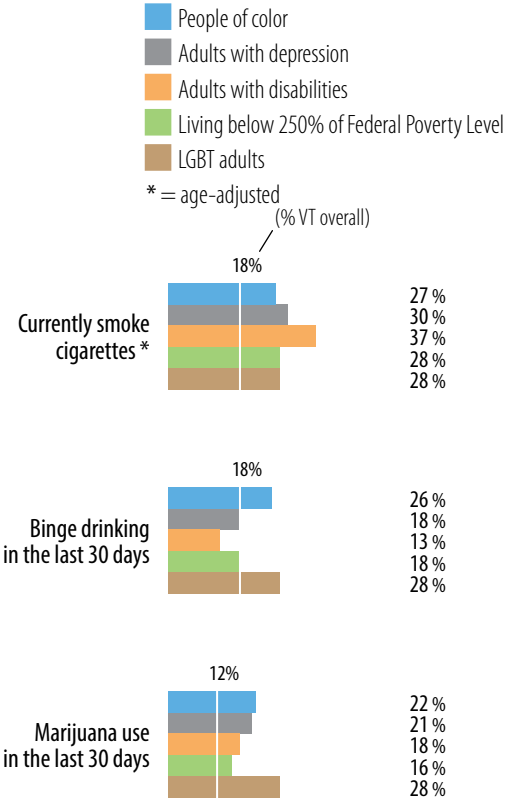
Physical Activity & Nutrition Risks

Vermont Behavioral Risk Factor Surveillance System • 2016



Tobacco, Alcohol & Marijuana Use Risks

Vermont Behavioral Risk Factor Surveillance System • 2016



Tobacco, Weight & Tooth Loss

Vermont Behavioral Risk Factor Surveillance System • 2016

Vermonters who use tobacco or who are obese are more likely to have tooth loss, even when accounting for other factors such as differences in education, income, dental visits, and age:

If you use tobacco every day, the odds of losing all your teeth are 15x greater than someone who has never used.

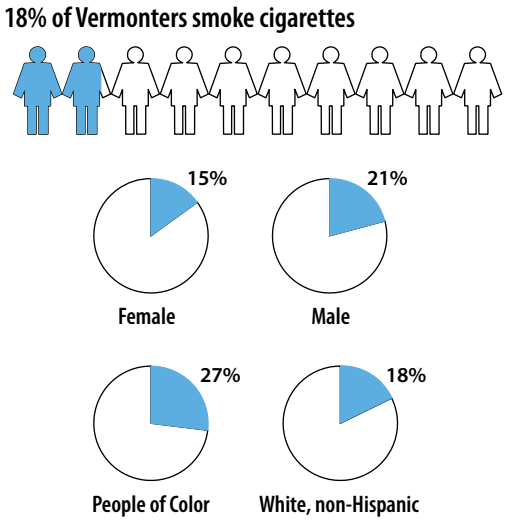
If you previously used tobacco but quit, the odds of losing all your teeth are 5x greater.

If you are obese, the odds of losing all your teeth are 2x greater than those who are at a healthy weight or underweight.

healthvermont.gov/3-4-50

Adult Smoking

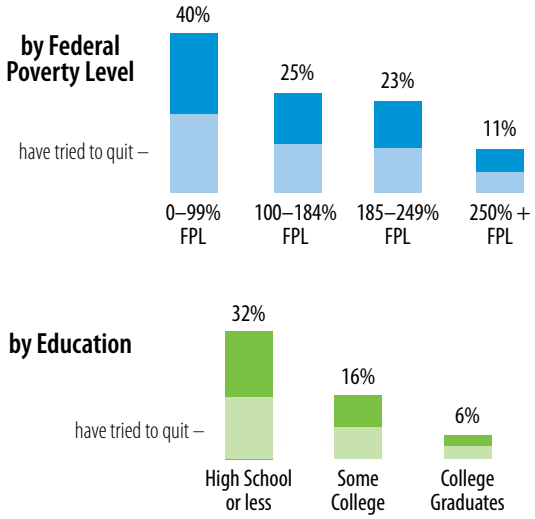
Vermont Behavioral Risk Factor Surveillance System • 2016 (age-adjusted)



Adult Smoking & Quit Attempts

Vermont Behavioral Risk Factor Surveillance System • 2016

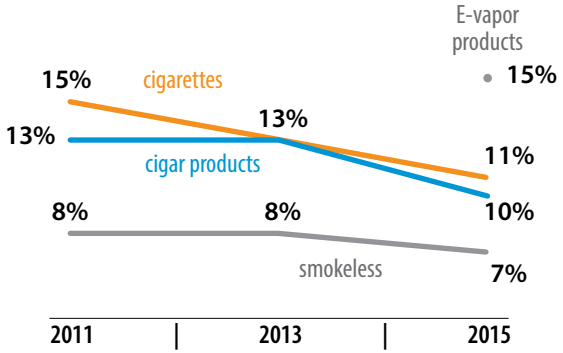
% of current smokers (age-adjusted)



Youth Tobacco Use, by Product

Vermont Youth Risk Behavior Survey • 2011–2015

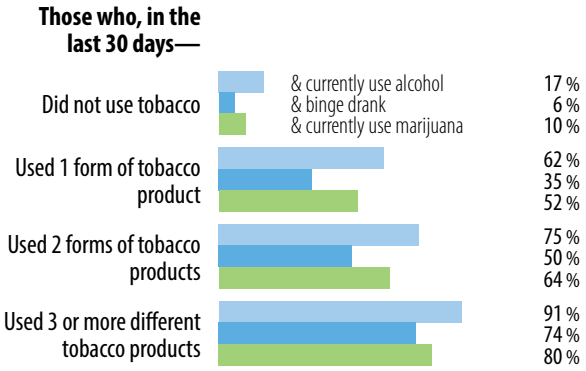
% of students in grades 9-12 who use tobacco



Youth Smoking, Alcohol & Marijuana

Vermont Youth Risk Behavior Survey • 2015

% of students in grades 9-12 who use tobacco + alcohol or marijuana



• Adult Smoking & Quit Attempts

Half of all adult smokers have attempted to quit in the past year. Both smoking and quit attempts among adults have stayed relatively unchanged over the past 10 years. In 2016, 18% of all adult Vermonters smoked. Smoking rates vary by population. As income and education rises, fewer people smoke. Males are more likely to smoke than females. Vermonters of color are more likely to smoke than white, non-Hispanic Vermonters, but they are also more likely to make a quit attempt (59% compared to 49%).

• Youth Tobacco Use

In 2015, one-quarter of high school students reported using a tobacco product (cigarette, cigar, smokeless tobacco or e-vapor) in the past month. Of the 35 states that collect data on e-cigarette/vapor use, Vermont is currently the lowest, at 15%. West Virginia is highest, at 31%.

Frequency of use varies by product. Among cigarette users, 37% smoked on 20+ days in the past month, similar to smokeless tobacco users. Cigar and e-vapor users were more likely to use these products rarely or occasionally. Only 13% of cigar or e-vapor users reported frequent use.

• Tobacco & Other Risk Behaviors

Use of multiple tobacco products is linked with other risks. Vermont high school students who used one or more tobacco products in the past month were much more likely to use marijuana, alcohol, and to binge drink compared to students who do not use tobacco. For students who have asthma, the use of tobacco, alchol and marijuana may make asthma symptoms worse.

• Why do people use alcohol and drugs?

There are many reasons why people use alcohol, tobacco and other drugs: to relieve physical or psychological pain, to counter stress, to alter traumatic experiences or feelings of hopelessness. Prioritizing future health over immediate needs is especially difficult in the face of multiple daily stressors and pervasive marketing that can make it seem as if alcohol or drugs will make life easier.

Addiction is not a choice or a moral failing. Some people are genetically prone to addiction, and this in itself is a risk factor in developing a substance use disorder. As a chronic illness, addiction becomes a physiological and psychological need. Quitting or seeking treatment is never easy, and relapse is common. Adding to the stress of behavior change is the feeling of isolation that may come from avoiding friends or situations that may trigger smoking, drinking or drug use.

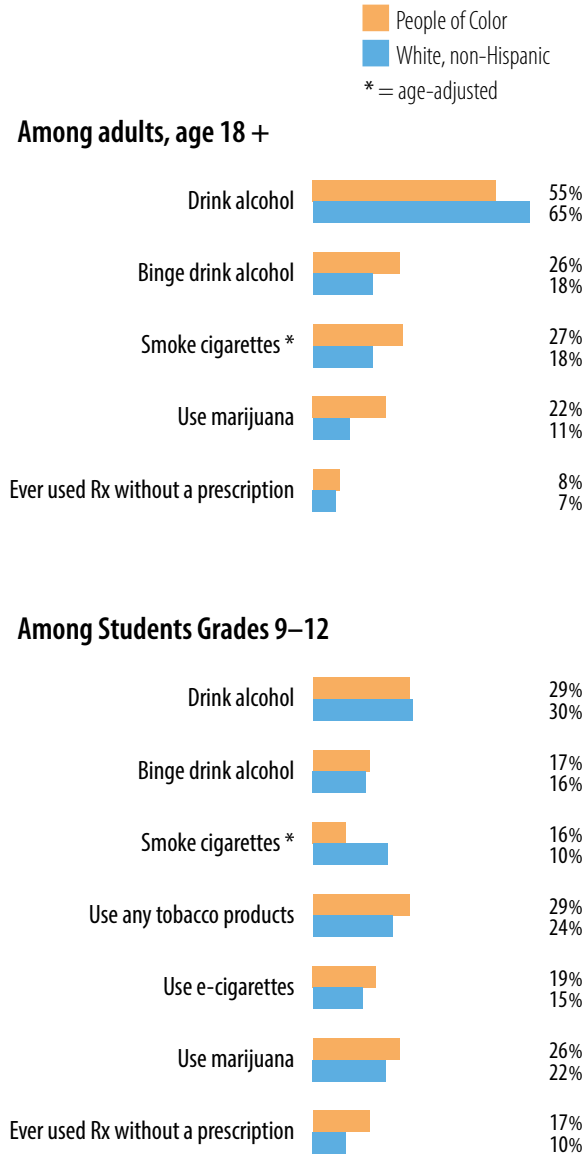
• Perception of Harm Matters

Perceptions of risk and community acceptance strongly influence behavior. In Vermont, more people drink alcohol and use marijuana compared to the U.S. population overall. For Vermonters age 12+, alcohol is by far more commonly used than marijuana or any other drug.

More than three-quarters of high school students think it is wrong or very wrong for someone their age to smoke cigarettes, yet only a little over half think it is wrong or very wrong to use marijuana or to drink.

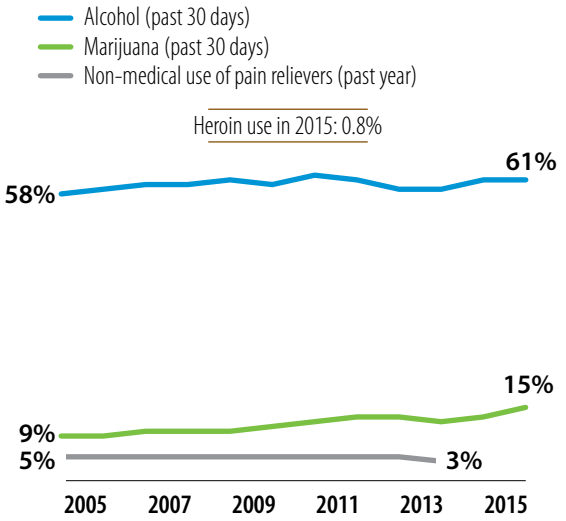
Current Alcohol, Tobacco & Drug Use

Vermont Behavioral Risk Factor Surveillance System • 2016
Vermont Youth Risk Behavior Survey • 2015



Alcohol/Drug Use (Age 12+)

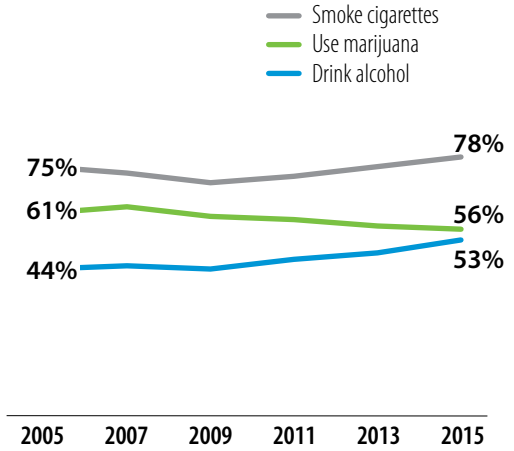
National Survey on Drug Use & Health/Vermont • 2004–2015



Perception of Harm Among Youth

Vermont Youth Risk Behavior Survey • 2005–2015

% of students in grades 9–12 who think it is wrong or very wrong for someone their age to:

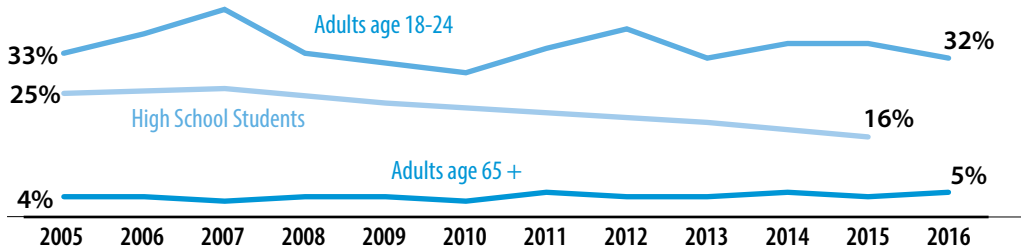


healthvermont.gov/alcohol-drugs

Binge Drinking

Vermont Youth Risk Behavior Survey • 2005–2016
Vermont Behavioral Risk Factor Surveillance System • 2005–2016

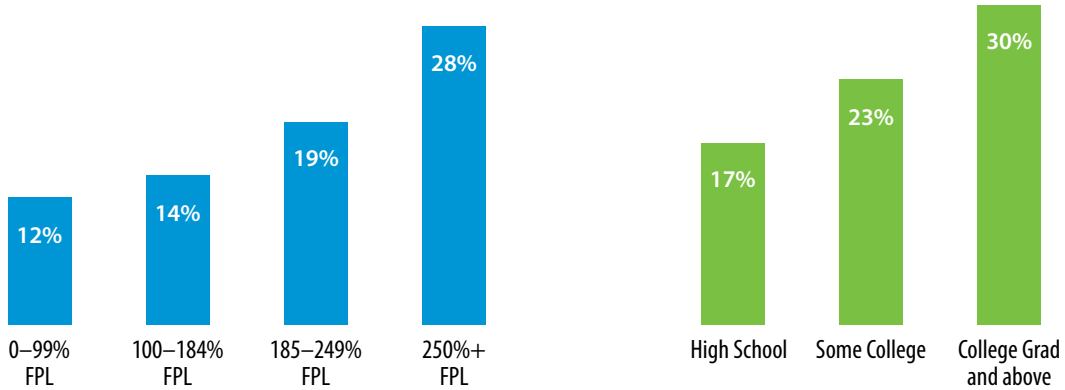
% of Vermonters who binge drank in the last month



High Risk Drinking Among Older Adults

Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults age 65+ who drink at a level of risk = 2+ drinks for females/3+ drinks for males on one occasion in the past month:



By percentage of Federal Poverty Level

By educational level attained

• Youth & Adult Drinking Patterns

The age when a young person starts drinking strongly predicts alcohol dependence later in life. By middle school, 2% of students in Vermont binge drink, defined as having five or more drinks on one occasion. By high school, 16% of students binge drink. The percentage of high school students who are current drinkers, having one or more drinks in the past month, has decreased significantly – from 42% in 2005 to 30% in 2015. As adults, one in three of those age 18 to 24 binge drink, and 5% of older adults age 65+ binge drink.

• What is risky drinking for older adults?

Older adults are more susceptible to health risks of alcohol due to physiological changes, a chronic disease they may have, or medications they take. Excessive alcohol use can increase the risk for dementia.

One in four (25%) Vermonters age 65+ engage in risky alcohol use, higher than the U.S. average of 19%. Risky drinking for this age group is two or more drinks on one occasion for females, three or more for males. In contrast to other risk behaviors, older adults with higher incomes and education are more likely to engage in risky drinking compared to those with lower incomes and less education.

• Alcohol Use Disorder

Problem drinking that becomes severe is given the medical diagnosis of alcohol use disorder– a chronic relapsing brain disease characterized by compulsive alcohol use, loss of control over intake, and a negative emotional state when not using. An estimated 33,000 Vermonters are in need, but have not received treament for alcohol use disorder.

• Is marijuana use a community norm?

Most Vermonters do not use marijuana. Still, the prevalence of marijuana use is higher than other states. The percentage of Vermonters who have tried marijuana for the first time at an early age is also higher than the U.S. overall.

Marijuana use is widely accepted, and this may be due to a number of influences: the perception that it is less harmful than alcohol or other drugs, ease of access, and the policy shift toward legalization. But early and continuous use of marijuana is linked with lower academic achievement in youth, and lower income as an adult. These factors are generally associated with worse health outcomes.

• Marijuana Use Among Youth

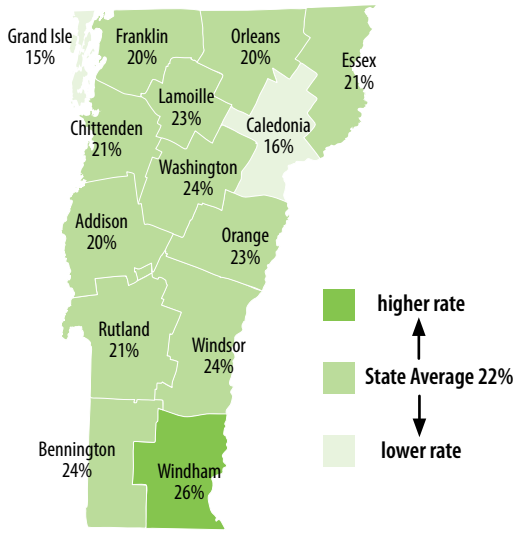
More than one-third (37%) of high school students in Vermont report ever using marijuana, and 6% have tried marijuana before age 13. By the time they graduate, half (49%) have tried marijuana.

Marijuana use varies across the state, by gender, race and socioeconomic status. Windham County high school students report more marijuana use than students in the rest of the state. Students who identify as LGB are much more likely to use marijuana compared to heterosexual students. White students are more likely than students of color, students with mothers who did not graduate from high school are more likely than those with mothers who did, and students with average or failing grades are more likely to use marijuana, compared to those who earn As or Bs.

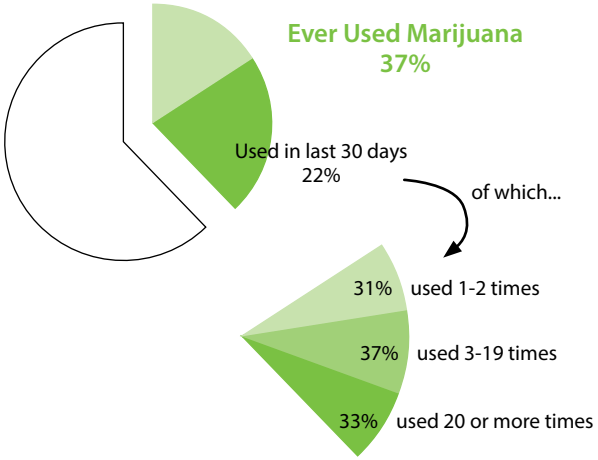
Marijuana Use Among High School Students

Vermont Youth Risk Behavior Survey • 2015

% of students in grades 9–12 who used marijuana in the past 30 days, by county



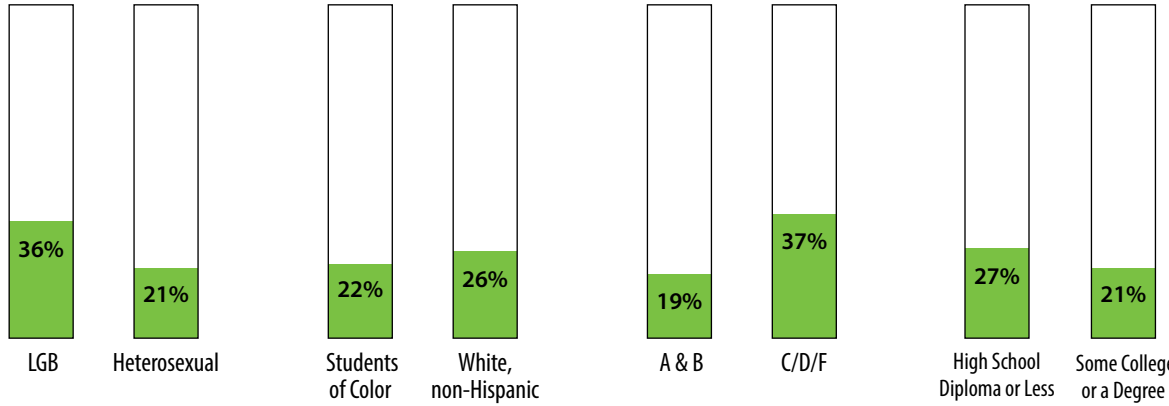
% of students in grades 9–12 who used marijuana, by frequency of use



Marijuana Use Among High School Students

Vermont Youth Risk Behavior Survey • 2015

% of students in grades 9–12 who use marijuana, by various populations



healthvermont.gov/alcohol-drugs

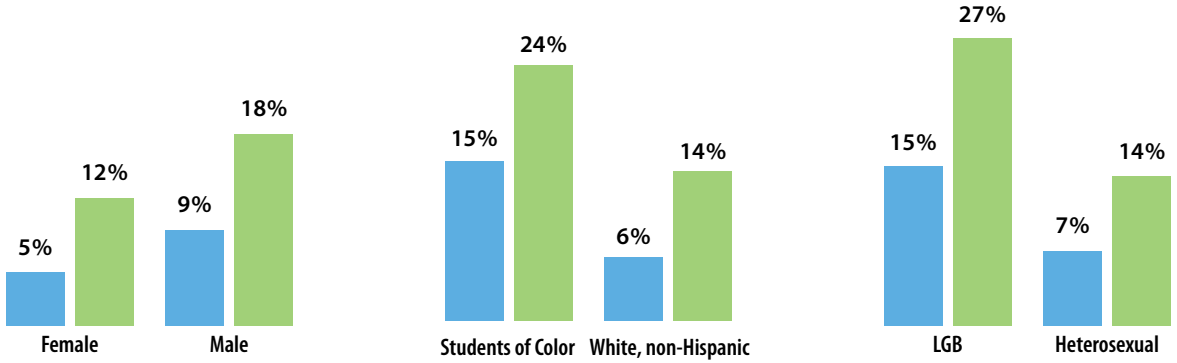
Student Driving Under the Influence

Vermont Youth Risk Behavior Survey • 2015

% of students in grades 9–12 who drove under the influence in the past 30 days

7% of all Vermont high school students who drive have done so under the influence of alcohol

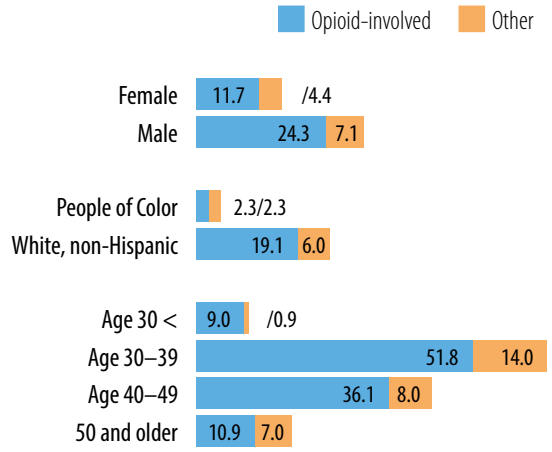
15% have driven under the influence of of marijuana



Drug-related Deaths, by Population

Vermont Vital Statistics • 2016

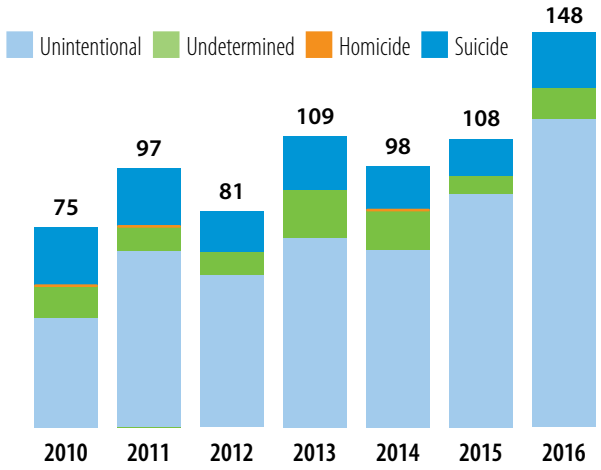
deaths, per 100,000 people



Drug-related Deaths, by Intention

Vermont Vital Statistics • 2010–2016

deaths and manner of death in 6 years



• Driving Under the Influence

Alcohol is a risk or contributing factor to almost every category of injury, including injuries from falls, assaults and motor vehicle crashes.

Among all Vermont high school students who drive, 7% have driven after drinking and 15% have driven after using marijuana. Males are more likely than females, people of color are more likely than white students, and those who identify as LGB are more likely than heterosexual students to drive under the influence of alcohol or marijuana.

And among adults who used marijuana, three in 10 drove within three hours of using.

• Drug-Related Deaths

In 2016, 148 deaths in Vermont were drug-related, and most were due to opioids. This is an increase from 108 drug-related deaths in 2015, and nearly double the number of deaths in 2010.

Most deaths were the result of unintentional overdoses, rather than suicide or homicide, and most were due to a combination of drugs, rather than a single drug – e.g. prescription opioids and cocaine, or benzodiazepines and alcohol.

Nearly all of the drug-related deaths are among white, non-Hispanic adults. Two-thirds are among males. People age 30 to 50 accounted for most of the deaths. The average age at death is 43.

• Chronic Stress & Depressive Disorders

Stress is a risk to health that is difficult to quantify, but anyone who lives with great stress from day to day knows the toll it can take on one's energy, mental outlook and quality of life.

• What is depression?

A depressive disorder is not a passing blue mood, but rather persistent feelings of sadness and worthlessness. According to the National Institute of Mental Health, depression is a common but serious mood disorder. It causes severe symptoms that affect how you feel, think and handle daily life: interacting with others, sleeping, eating, or working. To be diagnosed with depression, symptoms must be present for at least two weeks.

• Who has depression?

In 2016, among Vermont children age 3 to 17, about 11% had a diagnosis of anxiety, and 3% had a diagnosis of depression. Over the past decade, the percentage of adults who have been diagnosed with depression has remained unchanged, at 20% to 23%.

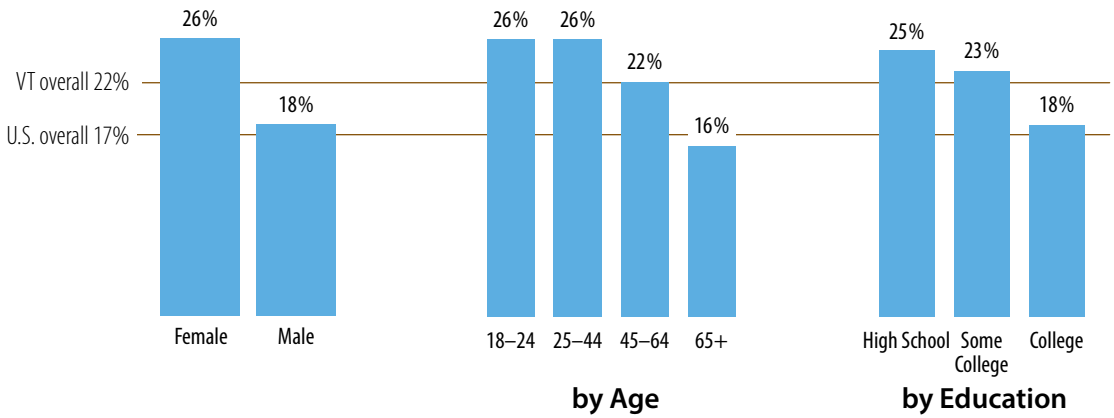
• Mental Health Treatment

About half of all adults who have been diagnosed with a mental health condition are not in treatment or counseling. For children, a small percentage who need to see a mental health professional are not in care. For those age 6 and older, about half who sought care had a diagnosable condition.

Adults Diagnosed with Depression

Vermont Behavioral Risk Factor Surveillance System • 2016

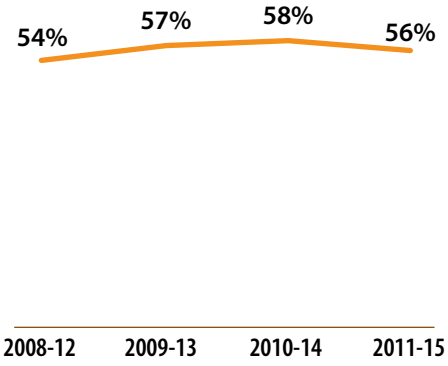
% of Vermont adults who report having ever been told they have a depressive disorder



Adults in Mental Health Treatment

Substance Abuse & Mental Health Services Administration
Vermont Behavioral Health Barometer • 2013–2016

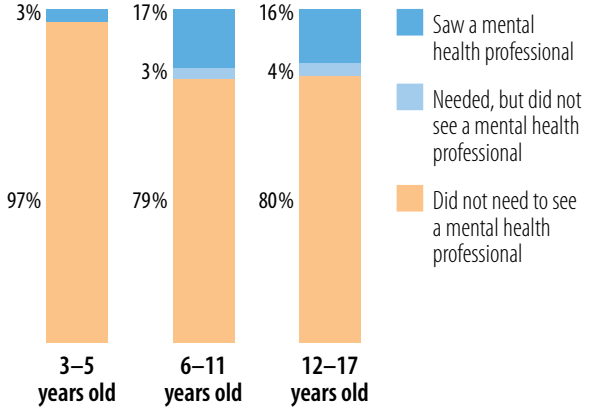
% of Vermont adults with any mental health condition who are receiving treatment or counseling (5-year averages)



Children in Mental Health Treatment

National Survey of Children's Health/Vermont • 2016

% of Vermont children who –

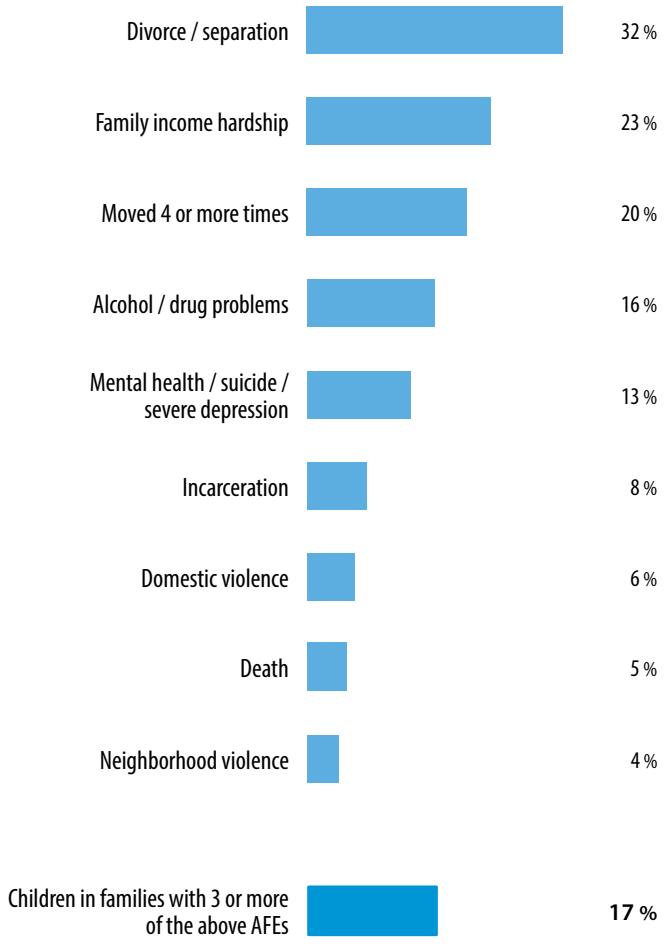


mentalhealth.vermont.gov

Adverse Family Experiences

National Survey of Children's Health/Vermont • 2016

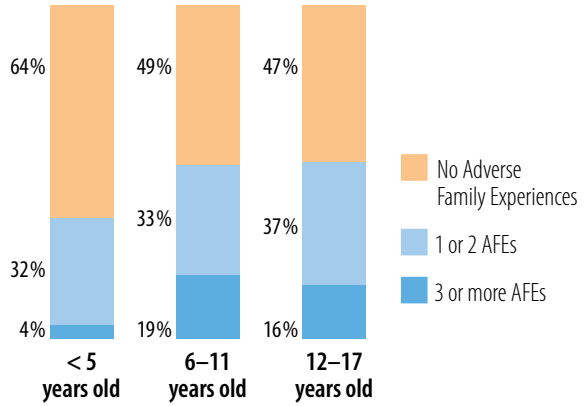
% of Vermont children age 6–17 living in households with Adverse Family Experiences (AFE)



Adverse Family Experiences, by Age

National Survey of Children's Health/Vermont • 2016

% of Vermont children living with 0-3 or more Adverse Family Experiences (AFE)



Early Signs of Thriving or Flourishing

National Survey of Children's Health/Vermont • 2016

Responses from Vermont parents of children age <6

	Definitely True	Somewhat True
Child is affectionate	95%	5%
Child smiles / laughs	95%	5%
Child is interested / curious	97%	3%
Child is resilient / bounces back	72%	28%

• Family Strengths & Adversities

About half (47%) of Vermont's children live in families that are stressed due to one or more of these types of experiences: divorce or separation, financial hardship, unstable housing, alcohol or drug problems, mental health issues, incarceration, violence or death. These stressors accumulate as children grow up and they carry their experience into adulthood.

Among adults age 18 to 44, one-quarter grew up in a household with a parent or caregiver who was severely depressed, suicidal or had another mental health condition.

Despite these early childhood stressors, parents' responses to the National Survey of Children's Health show that the youngest Vermonters are generally flourishing. One area of concern is resilience: one in three children under age 6 have difficulty "bouncing back" or managing emotions when faced with a frustration. Among those age 6 to 17, about half have difficulty staying calm and in control when challenged.

• The Stigma of Mental Illness

Anyone can be affected by mental illness, but those who are brave enough to admit they have a problem are often blamed for their condition. The stigma applied by society to people who experience mental illness can lead to exclusion or discrimination within social circles or the work-place. Some groups of people may be especially resistant to seeking care due to stigmatization in their own communities. To remove the stigma, our partners wished for more outreach about mental health, and greater access to welcoming, culturally and linguistically competent care.

• The Burden of Chronic Disease

Of all adult Vermonters, 64% had at least one chronic disease in 2016. In addition to the physical and social burden of illness, medical care for chronic diseases cost the state $2.17 billion that same year.

• What does 'over healthy weight' mean?

The terms 'overweight' and 'obese' describe weight ranges above what is medically considered to be healthy. Obesity is a complex, multi-faceted condition but, simply put, it is most often the result of poor nutrition and physical inactivity. As a chronic condition, obesity increases one's risk for other serious illnesses and conditions – such as high blood pressure, high cholesterol, diabetes, heart disease, stroke, gallbladder disease, osteo-arthritis, sleep apnea and some cancers.

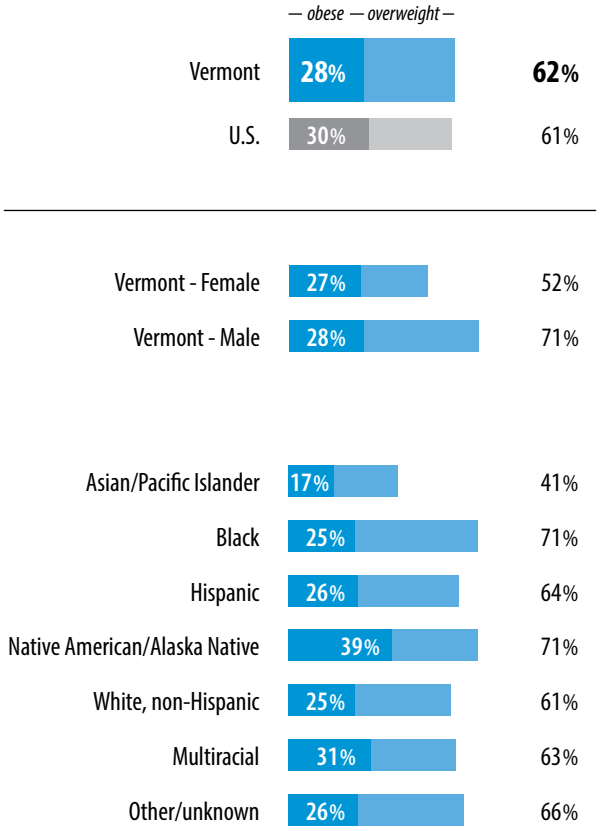
• A Growing Trend toward Obesity

Vermonters, like other Americans, are becoming more overweight. In 2016, two-thirds of adults were overweight or obese. Compared to the U.S., Vermont adults have a lower rate of obesity (28% compared to 30%), but a similar rate of overweight. This growing trend affects males and females, and people of all races, incomes and education levels, but especially Vermonters at the lower end of the socioeconomic ladder. And just as we are more likely to become less active as we age, we are also more likely to gain weight. Adults age 65+ are more likely to be overweight compared to those age 20 to 44. Adults age 45 to 64 are likewise more likely to be overweight than those age 20 to 24.

Overweight & Obesity, by Population

Vermont Behavioral Risk Factor Surveillance System • 2016

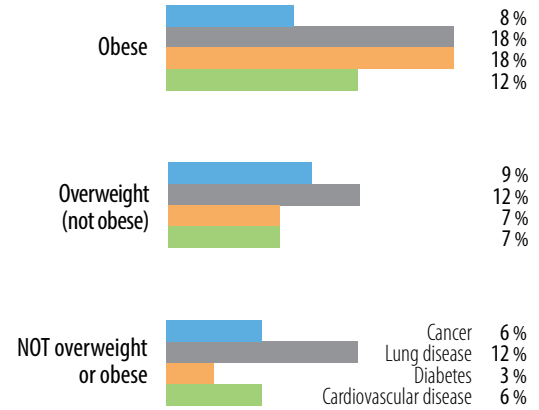
% of adults age 20+ who are over a healthy weight (age-adjusted)



Weight & Chronic Diseases

Vermont Behavioral Risk Factor Surveillance System • 2016

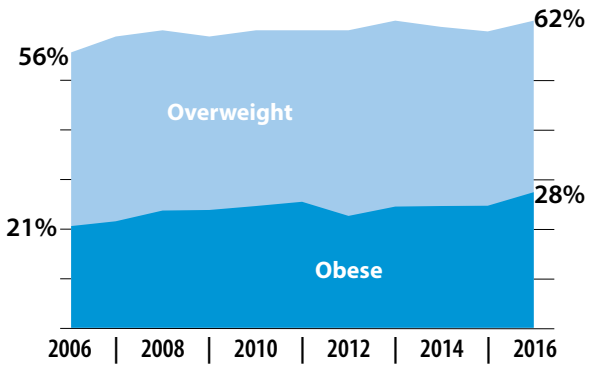
% of adults with chronic diseases by weight category



Overweight & Obesity Trend

Vermont Behavioral Risk Factor Surveillance System • 2016

% of adults age 20+ who are over a healthy weight (age-adjusted)

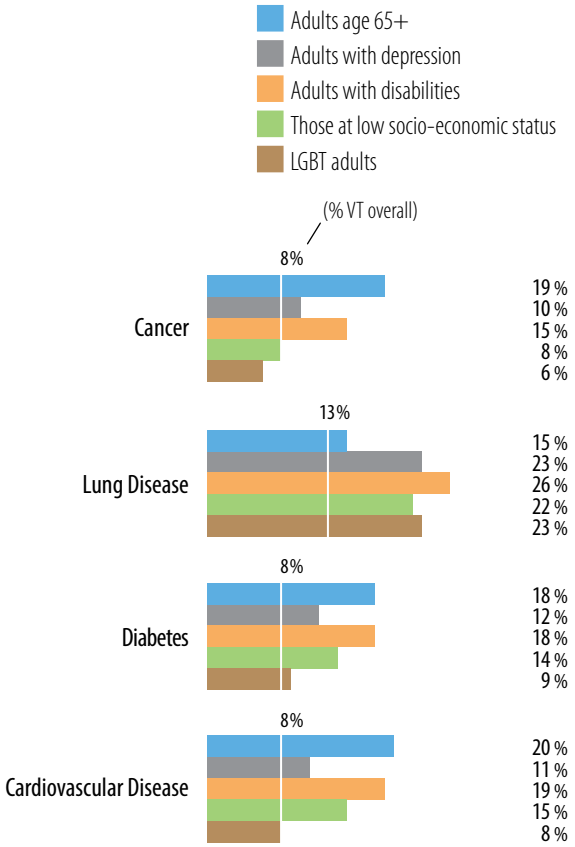


healthvermont.gov/wellness

Chronic Diseases, by Population

Vermont Behavioral Risk Factor Surveillance System • 2016

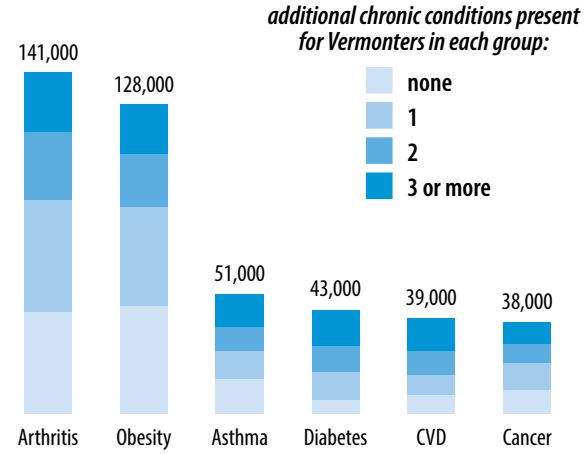
% of adults who have chronic diseases among –



Adults with Multiple Chronic Conditions

Vermont Behavioral Risk Factor Surveillance System • 2016

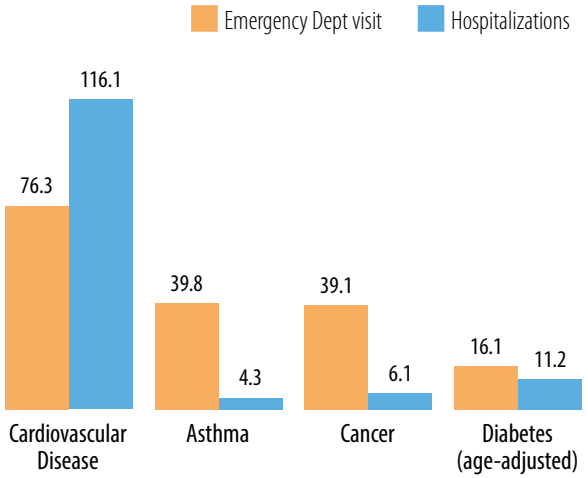
Estimated total # by disease/condition (rounded to nearest 1,000)



Hospitalizations & Emergency Dept. Visits

Vermont Uniform Hospital Discharge Data Set • 2015

hospitalizations & ED visits per 10,000 people with primary diagnosis of these chronic conditions:



• Obesity & Chronic Disease

Adults who are obese are more likely than those who are overweight or at a healthy weight to have cancer, lung disease, diabetes or cardiovascular disease. These four chronic diseases are the cause of more than half of all deaths in Vermont.

Older adults are more likely to have one or more chronic conditions. Beyond age, adults who have disabilities, depression, or who are of low socio-economic status face a greater burden of disease.

• Multiple Chronic Diseases

Chronic conditions are common: six in 10 adult Vermonters have at least one chronic disease or condition, and 14% have two or more.

Depending on the condition – obesity, diabetes, cardiovascular disease, asthma or arthritis – two-thirds to nine in 10 adults who have one or more of these conditions also have at least one other.

As an example, of the128,000 Vermonters who are obese, 35% have no other chronic conditions, and 16% have three or more. This is in contrast to 38,000 Vermonters who have diabetes, 11% of whom have no other conditions, and 37% have three or more other conditions.

• Hospital & Emergency Department Visits

Vermonters who have chronic diseases are going to the emergency department or being hospitalized to treat heart disease, stroke, asthma, cancer or diabetes, but generally only if their illness is life-threatening. For asthma and cancer, the rates of emergency department visits are much higher than the rates of hospitalization.

• Cancer is Not One Disease, but Many

Cancer is not a single disease, but a group of more than 100 different diseases that often develop gradually as the result of a complex mix of genetic, behavioral and environmental factors.

• Cancer Incidence & Risk Factors

Cancer affects thousands of Vermonters and is a leading cause of death. Cancer occurs in people of all ages, but risk increases significantly with age. Approximately four in 10 of all males and females in the U.S. will develop cancer in their lifetime.

Some types of cancer are more prevalent among Vermonters compared to the U.S. population. For females, the incidence of breast cancer, cancers of the lung/bronchus, uterus, urinary bladder, and melanoma of the skin is worse than in the U.S. For males, the incidence of melanoma of the skin, urinary bladder cancer, non-Hodgkins lymphoma and esophageal cancer is worse than in the U.S.

Nearly two-thirds of cancer deaths in the U.S. can be linked to tobacco use, poor nutrition, lack of physical activity, and obesity. Not all cancers can be prevented, but risk for many can be reduced through a healthy lifestyle.

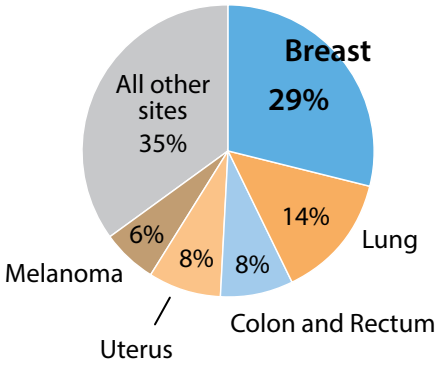
• Cancer is Survivable

Cancer is most survivable when found and treated early, before it has spread. That's why it's important for everyone to have the recommended cancer screenings.

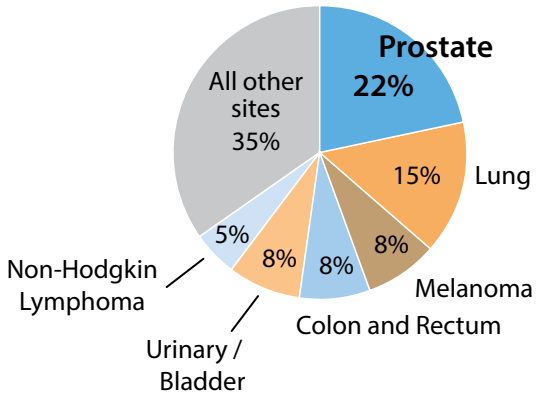
Most Common Cancers Among Vermonters

Vermont Cancer Registry • 2010–2014

Female



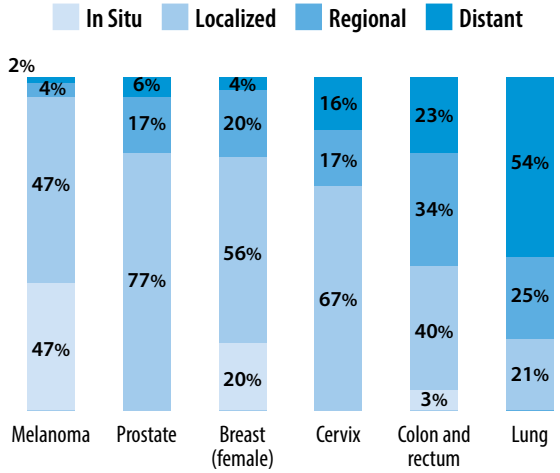
Male



Cancer Stage at Time of Diagnosis

Vermont Cancer Registry • 2010–2014

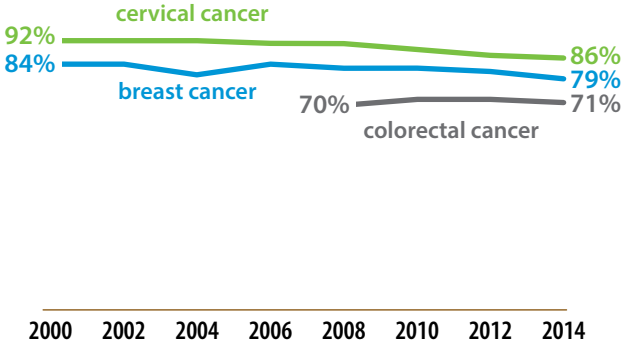
Stage of progression when major cancers are first diagnosed



Cancer Screening

Vermont Behavioral Risk Factor Surveillance System • 2014

% of adults who get the screening recommended for them (age-adjusted)

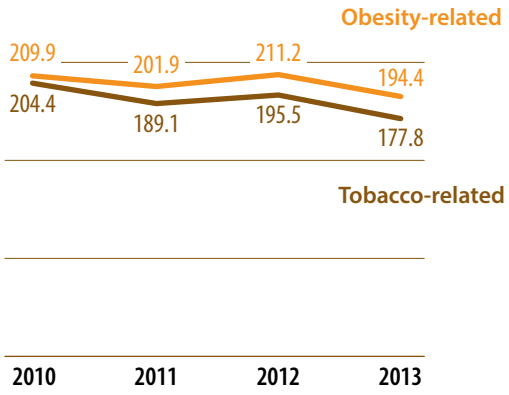


healthvermont.gov/wellness/cancer

Tobacco & Obesity-Associated Cancers

Vermont Cancer Registry • 2010–2013

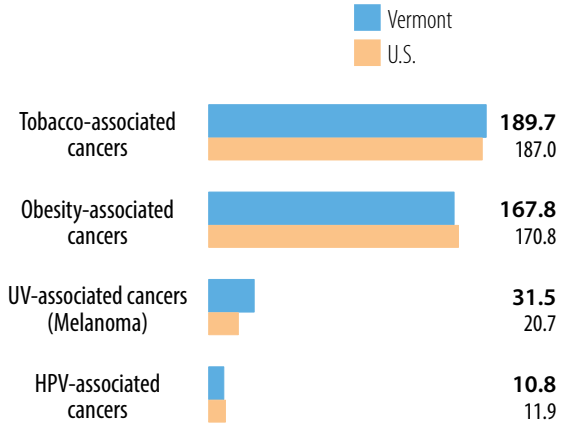
# of new cases, per 100,000 Vermonters (age-adjusted)



Cancer Rates, by Risk

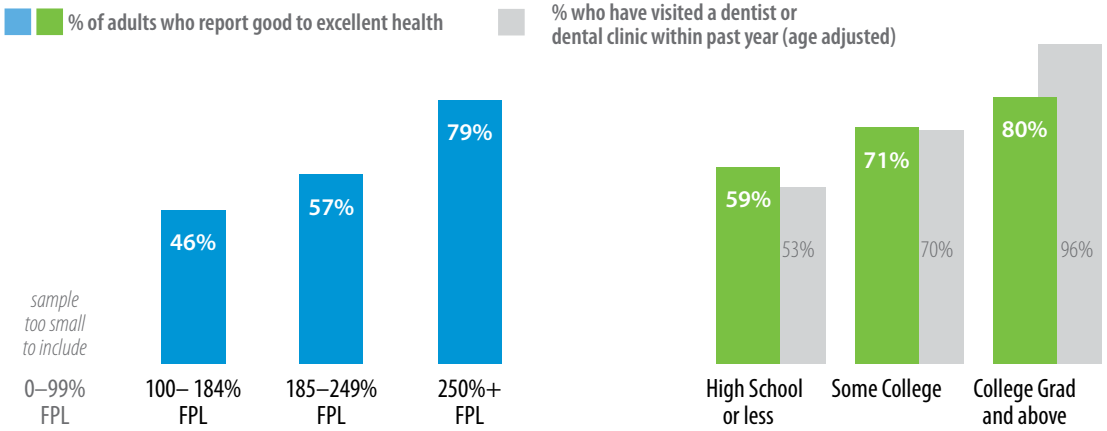
Vermont Cancer Registry • 2010–2013

# of new cases, per 100,000 people



Cancer Survivors — Health Status & Dental Care

Vermont Behavioral Risk Factor Surveillance System • 2016



by percentage of Federal Poverty Level

by education level attained

• Obesity-Associated Cancers

Being over a healthy weight increases a person's risk of developing a number of different cancers. Nearly one-third of cancers diagnosed in the U.S. are linked to excess weight. Cancer patients and survivors who are overweight or obese also have higher rates of complications from treatment, recurrence of cancer, and death.

• Tobacco-Associated Cancers

Smoking can cause cancer almost anywhere in the body. One-third of cancers diagnosed in the U.S. are associated with tobacco; nine out of 10 cases of lung cancer are caused by smoking. Vermont adults with non-skin cancer smoke at a higher rate than those without cancer (25% vs. 18%), which can worsen the odds of survival.

• HPV-Associated Cancers

Cervical cancer is the most common cancer associated with the human papilloma virus or HPV. Oral and throat cancers are common HPV-associated cancers in males. The majority of these cancers can be prevented with the HPV vaccine.

• Melanoma

Ultraviolet radiation exposure from the sun, sun lamps and tanning beds is the greatest risk factor associated with melanoma. Melanoma is largely preventable by protecting the skin from UV rays.

• Quality of Life for Cancer Survivors

As quality of life measures, the percentage of cancer survivors who report they are in good or excellent health, and who have visited a dentist or dental clinic within the past year, generally corresponds with higher income and education.

• Mortality & Years of Potential Life Lost

Vermonters today are more likely to die from a largely preventable chronic disease than from infectious disease. Seven of the top 10 causes of death in the state are chronic diseases *(page 11)*. Years of potential life lost is a measure of premature death (before age 75). Cancer, heart disease, and lower respiratory disease (bronchitis and asthma) are chronic diseases that are among the top five contributors to years of life lost.

• Cancer

Since the 1960s, cancer and heart disease have been the leading causes of death. Vermont's overall cancer mortality rate is higher than the U.S. White, non-Hispanic Vermonters (166.1 per 100,000) are about twice as likely to die from cancer than Vermonters of color (86.1 per 100,000). Males have a higher risk compared to females, and risk increases signficantly as adults age.

• Heart Disease & Stroke

Deaths from heart disease and stroke have been declining steadily over the past decade. Vermonters are significantly less likely to die from stroke than Americans overall.

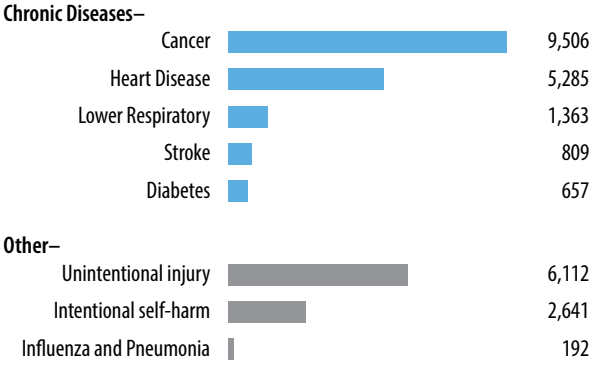
• Lung Disease

Deaths from chronic lower respiratory disease – bronchitis, emphysema, asthma – is the #3 cause of death, and there has been no change over time. Nearly all of these deaths occur among adults age 45+. The death rate increases with age, and is higher among white, non-Hispanic Vermonters.

Years Lost to Premature Death

Vermont Vital Statistics • 2015

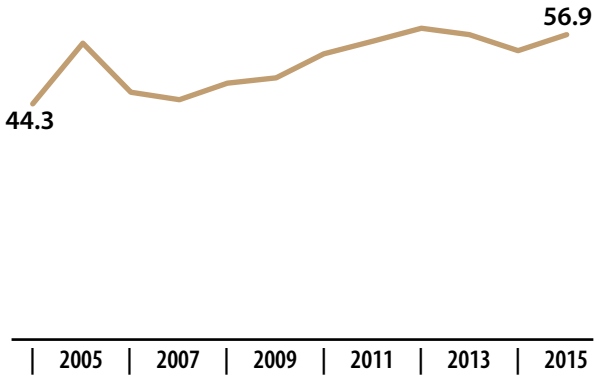
In 2015 there were an estimated 35,215 total years of life lost to Vermonters due to causes such as:



Chronic Lower Respiratory Disease Deaths

Vermont Vital Statistics • 2004–2015

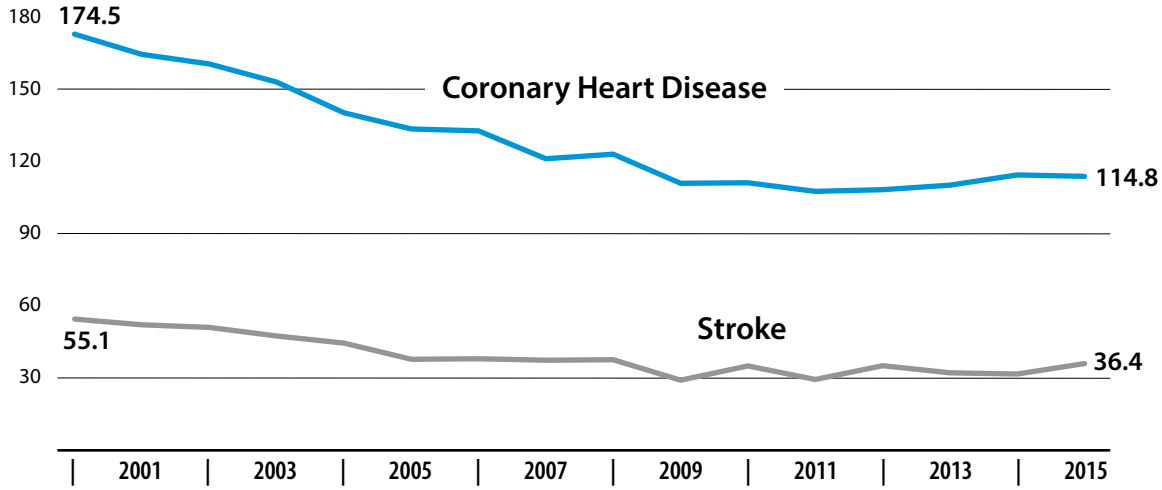
# of deaths, per 100,000 people



Cardiovascular Disease Deaths

Vermont Vital Statistics • 2000–2015

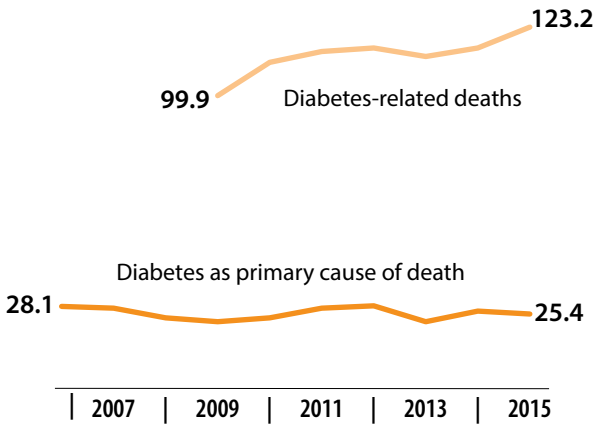
# of deaths, per 100,000 people (age-adjusted)



Diabetes-related Deaths

Vermont Vital Statistics • 2006–2015

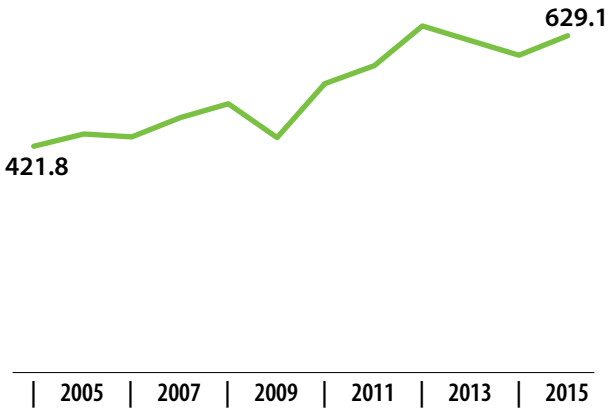
# of deaths, per 100,000 people



Alzheimer's Disease Deaths

Vermont Vital Statistics • 2004–2015

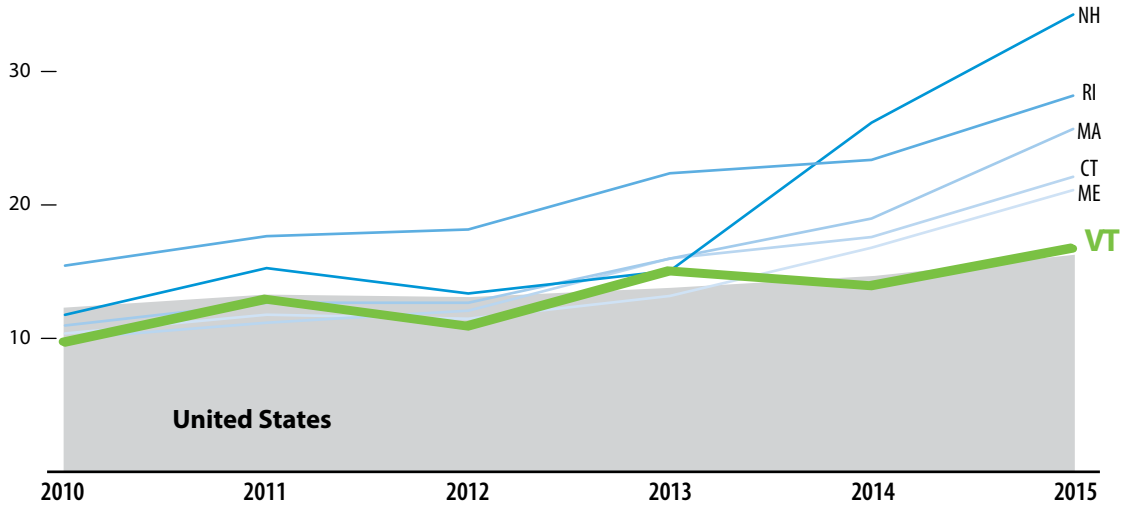
# of deaths among adults age 75+, per 100,000 people



Drug Overdose Deaths in New England States

Vermont Vital Statistics / National Center for Health Statistics • 2010–2015

# of deaths by drug poisoning, per 100,000 population



• Diabetes

In 2015, diabetes was the primary cause of 25.4 deaths for every100,000 Vermonters, and the contributing cause for 123.2 deaths per 100,000 Vermonters.

The difference between primary and contributing cause likely reflects the fact that diabetes is the cause of other fatal diseases. For example, diabetes is the most common cause of kidney disease, which can progress to death from kidney failure.

• Alzheimer's Disease

Alzheimer's is a disease of the brain that is not yet fully understood. The disease primarily affects adults age 75+. In Vermont, the number of deaths due to Alzheimer's disease has steadily increased since the 1990s. Among Vermonters age 75+, the mortality rate has nearly doubled in the past decade. The average age at death is 87.

• Drug Overdose

Compared to other chronic diseases, substance use disorder is not a leading cause of death. Still, an increasing number of people have been dying from opioid drug overdoses. In Vermont in 2016, 96 people died from accidental or undetermined drug poisoning from opioids.

Heroin and fentanyl-related deaths have risen sharply since 2013, and fentanyl is now the main contributor to opioid-involved fatalities.

The New England states have higher rates of drug overdose deaths compared to the U.S. Of the New England states, Vermont has the lowest death rate, which is similar to the U.S. rate overall.

Injuries • All Causes

• Injuries are Not Simply Accidents

Injuries are not simply random acts of fate or the result of individual carelessness, but events to understand and prevent.

Most injuries are unintentional. Whether unintentional, or resulting from intentional or violent acts, most injuries can be prevented with public health interventions.

• ED Visits & Hospitalizations

Each year, between 50,000 and 60,000 Vermonters go to the emergency department or are hospitalized as a result of injuries – a trend that has been increasing over time.

Falls are overwhelmingly the top cause of injury-related visits, followed by poisoning and motor vehicle crashes.

Although many injuries are of minor severity, causing no more than a few days of restricted activity, a great number result in brain trauma, serious fractures, major burns or other long lasting and significant disability.

• The Death Toll of Injuries Across All Ages

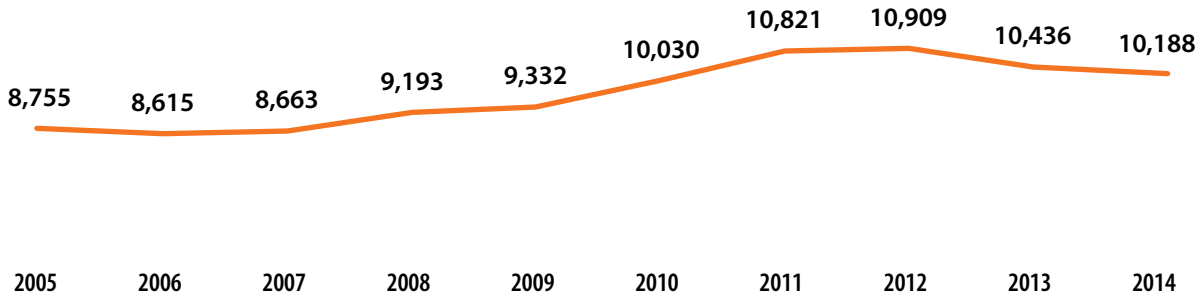
Death rates from injury have been rising over time. On average, more than 400 Vermonters lose their lives to injuries each year. Injuries are the leading killer of our children, teens and young adults.

Injuries rank among the top 10 causes of death for every age group.

Injury-Related Hospital/ Emergency Department Visits

Vermont Uniform Hospital Discharge Data Set • 2005–2014

# of visits, per 100,000 people

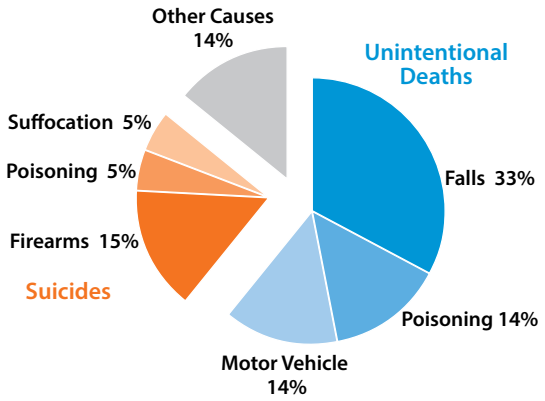


total # injury-related visits each year:

54,386	53,662	54,009	57,379	58,308	62,761	67,787	68,290	65,393	63,832

Causes of All Injury Deaths

Vermont Vital Statistics • 2010–2014

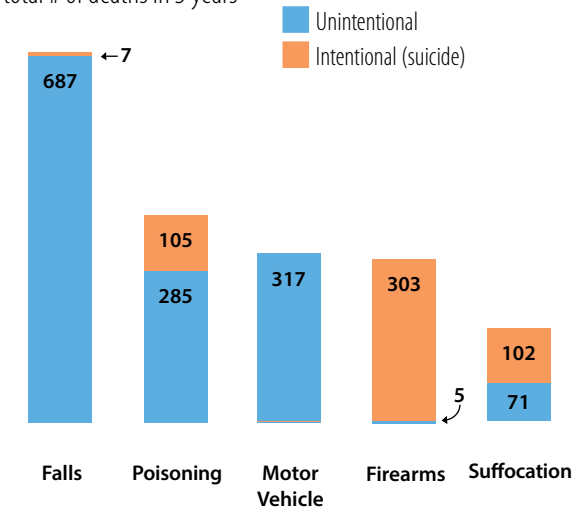


14% Other Causes = Unintentional: Suffocation 3% • Drowning 2% Fire/Flame 1% • Natural/Environment 1% • Other Causes 4% Intentional: Homicide by Firearm 1%; Intent Unknown: Poisoning 2%

Top 5 Causes of Injury Death

Vermont Vital Statistics • 2010–2014

total # of deaths in 5 years

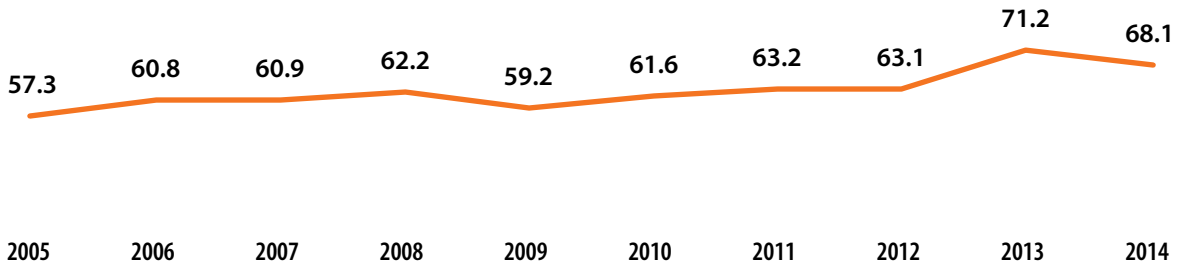


healthvermont.gov/emergency/injury

Injury-Related Deaths

Vermont Vital Statistics • 2005–2014

# of deaths, per 100,000 people



total # injury-related deaths each year:

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
367	401	404	422	411	426	438	436	496	476

• Falls, Poisoning, Firearms, Crashes

Falls are the cause of most injury deaths, and nearly all are unintentional. Poisoning is the second cause; two-thirds are unintentional drug overdoses, and one-third are suicides. Firearms are the third cause; nearly all of these deaths are suicides. Motor vehicle crashes, all unintentional, are the fourth cause. Suffocation is the fifth cause of injury death, either intentional as suicide (hanging), or unintentional (choking).

• Injury Death Disparities

White Vermonters are more likely to die due to an injury compared to Vermonters of color, and this is consistent with the U.S. trend. Overall, injury deaths are higher for males than for females.

Top 5 Causes of Injury Death, by Age

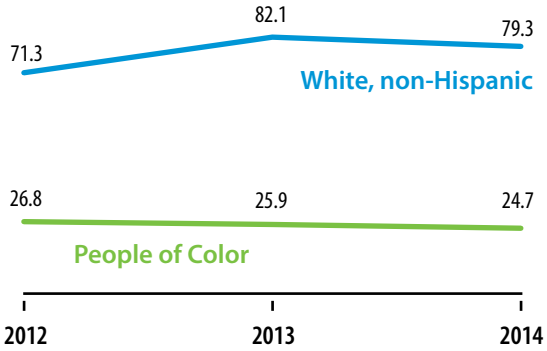
Vermont Vital Statistics • 2010–2014

	Age 0–14	Age 15–24	Age 25–44	Age 45–64	Age 65+
1	**Suffocation**	**Motor Vehicles**	**Poisoning**	**Suicide Firearms**	**Falls**
2	Motor Vehicles	Suicide Firearms	Motor Vehicles	Poisoning	Suicide Firearms
3	Drowning	Suicide Suffocation	Suicide Firearms	Motor Vehicles	Motor Vehicles
4		Poisoning	Suicide Suffocation	Falls	Suffocation
5		Drowning	Suicide Poisoning	Suicide Poisoning	Poisoning

Injury Deaths, by Race/Ethnicity

Vermont Vital Statistics • 2012–2014

# of deaths, per 100,000 people



NOTE: Any cause of death not labeled as suicide is unintentional.
For ages 0-14, various other causes are tied for the #4 and #5 cause of death.

Injuries • Unintentional

• Most Injuries are Unintentional

Unintentional injuries make up the largest portion of injury-related deaths. Of these, the majority are caused by falls, followed by motor vehicle crashes and poisoning. Less common causes of unintentional injury are suffocation, drowning, natural or environmental factors (such as hypothermia or heat stroke), and fire.

• Falls and Older Adults

Most visits to the hospital or emergency department for injuries from a fall are made by older adults. Among the younger age groups, males are most likely to go to the emergency department or to be hospitalized. For those age 25+, the reverse is true – females are most likely.

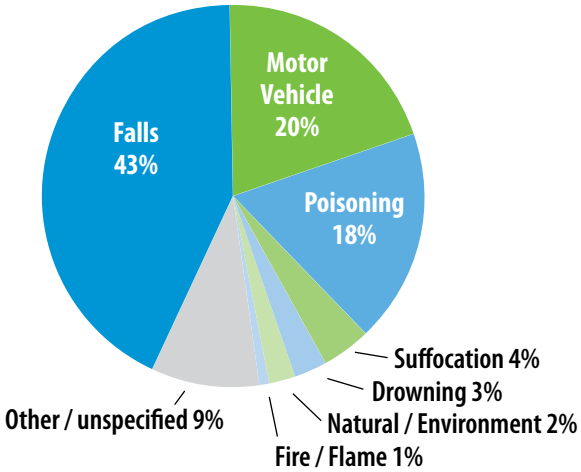
Deaths resulting from falls are almost always among people age 65+. In 2014, the rate of females dying from falls was nearly twice as high as males. As Vermont's population continues to age, this already significant problem will keep growing.

• Falls are Preventable

In 2016, more than one-third (35%) of adults age 65+ said they fell at least once in the past year; 8% said they fell two or three times. Injuries from falls among the elderly can have a profound impact on their quality of life, mobility, independent living, and can put them at higher risk for hospitalization and premature death. Unintentional falls are preventable with specific and practical interventions.

Causes of Unintentional Injury Deaths

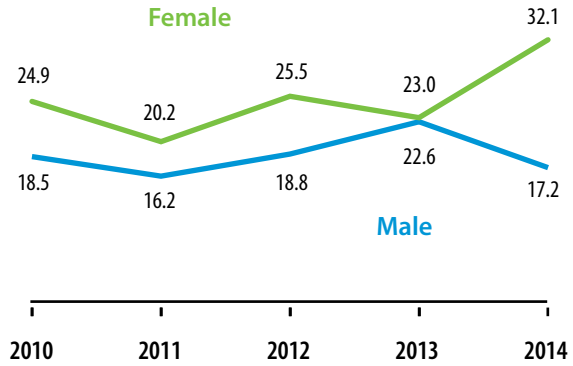
Vermont Vital Statistics • 2010–2014



Unintentional Fall-Related Deaths

Vermont Vital Statistics • 2010–2014

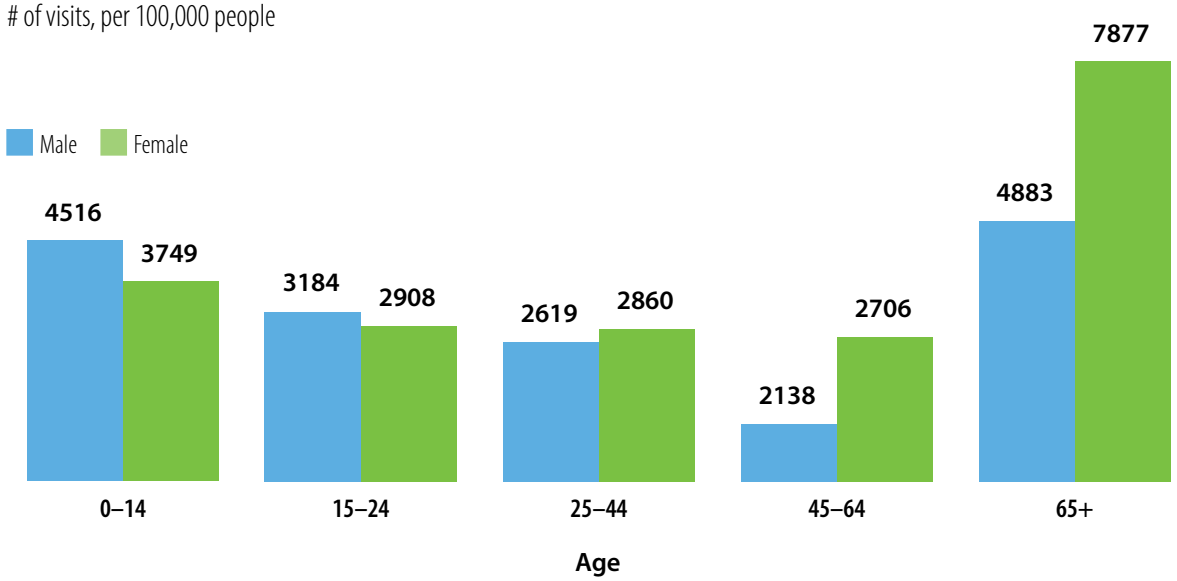
# of deaths, per 100,000 people



Fall-Related Hospital/Emergency Department Visits

Vermont Uniform Hospital Discharge Data Set • 2010–2014

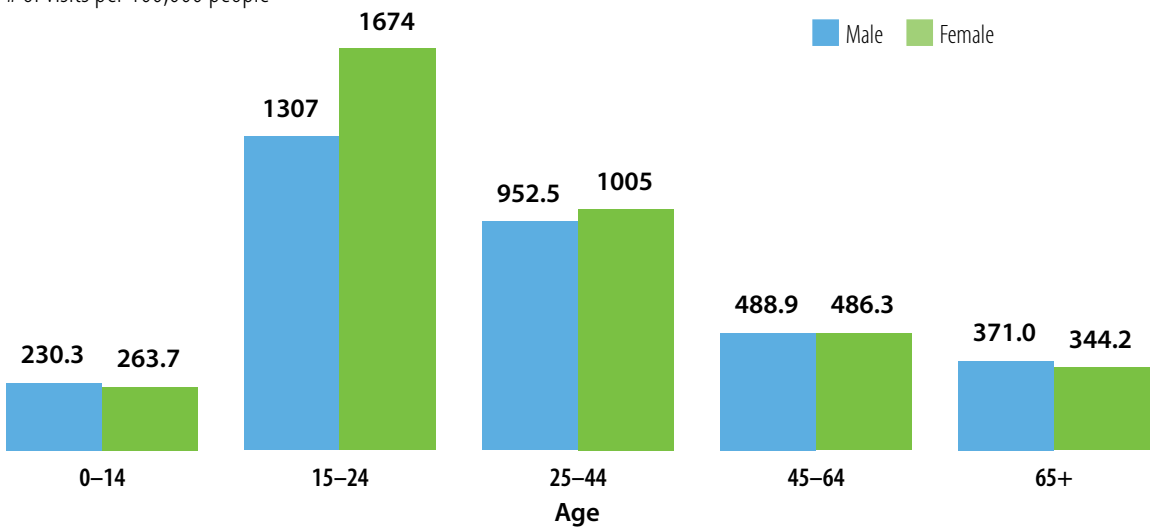
# of visits, per 100,000 people



healthvermont.gov/emergency/injury

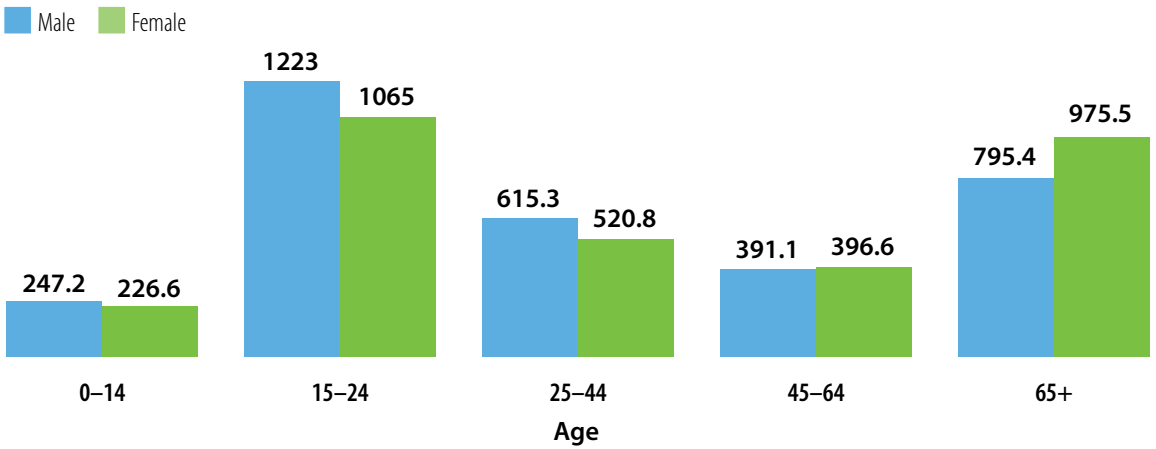
Motor Vehicle Hospital/Emergency Department Visits

Vermont Uniform Hospital Discharge Data Set • 2010–2014



Traumatic Brain Injury Hospital/Emergency Department Visits

Vermont Uniform Hospital Discharge Data Set & Vermont Vital Statistics • 2010–2014



• Motor Vehicle Crashes

Injuries from motor vehicle crashes are a major cause of injury-related hospital and emergency department visits, especially for teens and young adults. Underlying causes are many and complex: young or inexperienced drivers, driving under the influence, speeding and distracted driving, often in combination with snow and ice.

For the years 2010-2014, females had higher rates of hospital and emergency department visits compared to males for motor vehicle crash-related injuries.

• Traumatic Brain Injury (TBI)

Traumatic brain injury results from a bump, blow, jolt or penetrating head injury that disrupts the normal functioning of the brain. TBI has multiple causes, including firearms, motor vehicle crashes, falls, etc.

Males up to age 44 have a slightly higher rate of TBI-related hospitalizations and emergency department visits compared to females, while females have slightly higher rates at age 45+. For both, the highest rates are among teens and young adults, followed closely by those age 65+.

At all ages, TBI-related deaths are far higher among males compared to females. The death rate for males is highest at age 65+. Females follow the same pattern. In general, the rate of TBI-related deaths increases with age.

Death from traumatic brain injury can also be intentional, as a result of suicide or homicide by firearm.

• Suicide

Suicide is an intentional act, and has been the eighth leading cause of death in Vermont for many years. Since 2010, more than 100 people have died by suicide every year except 2012.

Firearms are the means used in more than half of all suicides in Vermont (52%), mostly among males. An equal number of suicides are the result of poisoning and suffocation (hanging). Females are most likely to die from suicide by poisoning, followed by firearms and suffocation.

• Who is at risk for suicide?

Research suggests that 90% of people who die by suicide have depression or other mental health diagnosis, often in combination with a substance use disorder. Other risks for suicide are a prior attempt, firearms in the home, family history or exposure to suicide behavior, and family violence.

In Vermont, males are much more likely than females to take their own lives, no matter their age. In general, death by suicide increases with age, except among females age 65+.

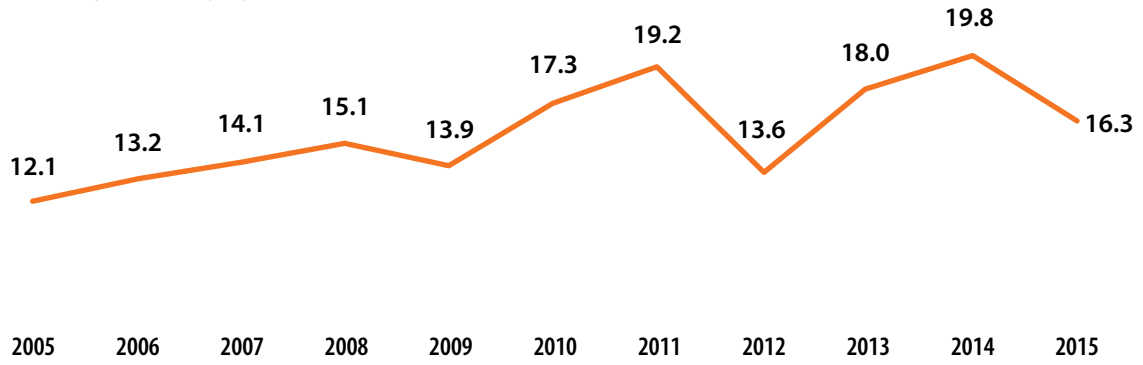
• Veterans at Higher Risk

Veterans are known to be at a higher risk for suicide and, in Vermont, the overall rate of suicide among veterans is higher than for non-veterans. The highest rates for veterans are among those age 18 to 34, and 65+. Overwhelmingly, firearms are the means used by both male and female veterans for suicide.

Suicide Deaths

Vermont Vital Statistics • 2005–2015

# of deaths, per 100,000 people



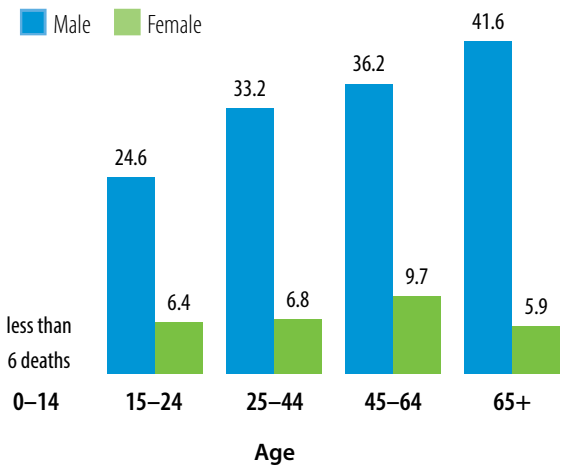
total # suicide deaths each year:

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
75	82	88	94	87	108	120	85	113	124	102

Suicide Deaths, by Age

Vermont Vital Statistics • 2010–2014

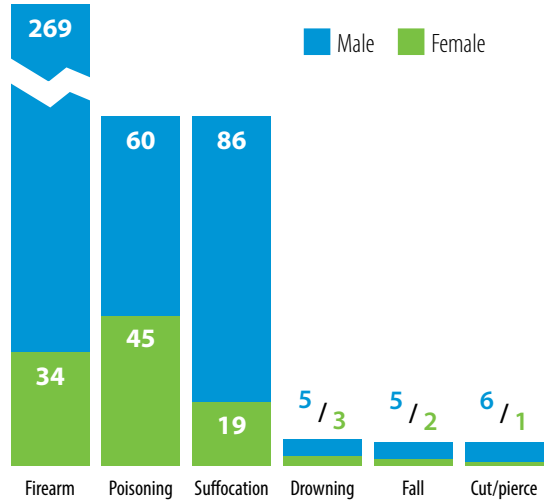
# of deaths, per 100,000 people



Suicide Deaths, by Means

Vermont Vital Statistics • 2010-2014

total # of deaths in 5 years

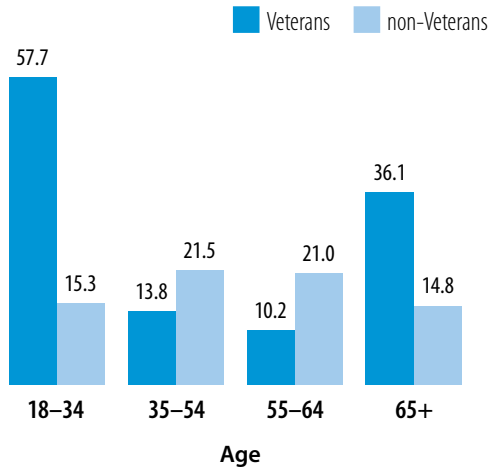


healthvermont.gov/emergency/injury

Suicide Rate, by Veteran Status

Vermont Vital Statistics • 2014–2015

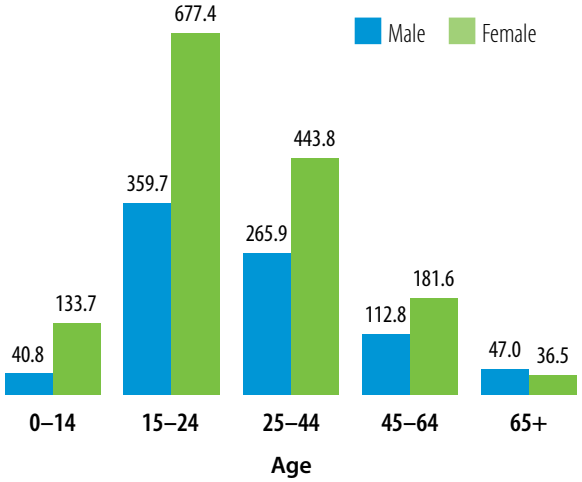
# of deaths, per 100,000 people



Self-Harm Hospital/ED Visits

Vermont Uniform Hospital Discharge Data Set • 2010–2014

# of visits, per 100,000 people

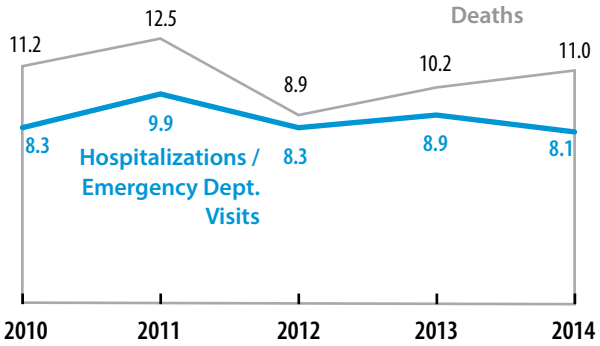


Firearm Deaths & Hospital/ED Visits

Vermont Vital Statistics • 2010–2014

Vermont Uniform Hospital Discharge Data Set • 2010–2014

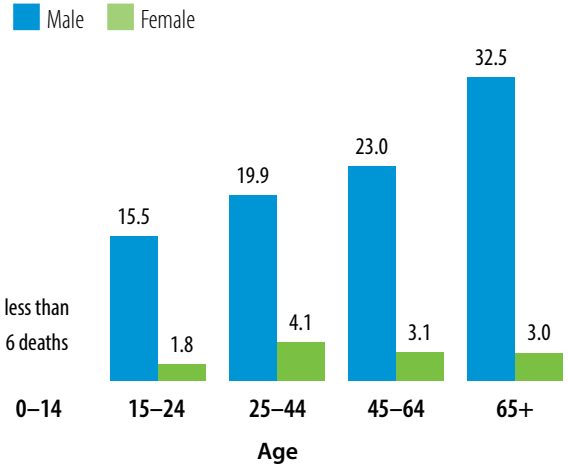
hospital/Emergency Department visits and # of deaths per 100,000 people



Firearm Deaths

Vermont Vital Statistics • 2010–2014

# of deaths, per 100,000 people



• Self-Harm is Not Suicide

Self-harm or self-injury is not necessarily suicidal behavior. In contrast to suicide deaths, self-harm is higher among younger females. For males and females, the rate of self-harm seen in the hospital or emergency department decreases after age 24.

Males are more likely to die from self-harm than females, and this is influenced by the more lethal means used by males (firearms) compared to females (poisoning).

• Firearms

There has been little change in the pattern of firearm injuries and deaths over time. Nearly nine in 10 deaths from firearms are suicides, but half of all hospitalizations and emergency department visits for firearm injuries are unintentional.

Males are more likely than females to die from firearms, and the rate increases with age. Males are also more likely than females to go to hospital or the emergency department for injuries from firearms, and this is especially true for younger males.

• Intimate Partner Violence

Despite a small increase from 1.9 in 2010 to 2.7 deaths per 100,000 people in 2014, the rate of intimate partner violence-related deaths has stayed about the same. Nearly half of all homicides in Vermont are related to domestic violence. Hospitalizations for these injuries are likely to be under-reported at hospitals and emergency departments. Under-reporting may be due to stigma or fear on the part of survivors, in addition to a lack of specific hospital coding for injuries resulting from intimate partner violence.

• The Environment & Our Health

The food we eat, the air we breathe, the products we use, and the environments in which we live, work, learn and play affect our health and quality of life. State agencies monitor and identify health inequities, and work to prevent illness or disease that may be caused by environmental threats, both naturally occuring and human-made. This is done by applying science and regulation to reduce or eliminate harmful environmental exposures, and by alerting and educating Vermonters about the connections between health and the environment.

• Cyanobacteria Monitoring

Warmer water temperatures provide more favorable conditions for cyanobacteria. Cyanobacteria blooms are now a frequent occurrence in Lake Champlain and other Vermont waters. Under certain conditions, some types of these cyanobacteria can release toxins into the water.
A network of trained volunteers identifies and reports their observations of blooms from sites around Lake Champlain and several inland lakes.

• Lake Champlain Drinking Water Testing

Lake Champlain is the drinking water source for 22 public water systems in Vermont, serving more than 150,000 people. It is possible for toxins produced by cyanobacteria to still be present in drinking water after it has been treated. While EPA does not require testing for cyanotoxins, Vermont has been testing since 2015. All results through 2017 have been below the state's level of concern.

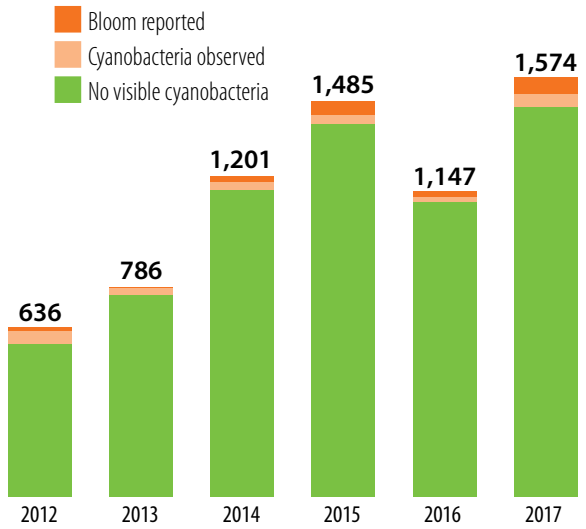
Cyanobacteria Routine Monitoring Sites

Lake Champlain Committee, Vermont Department of Health, Department of Environmental Conservation Data • 2017

Cyanobacteria Blooms Reported

Lake Champlain Committee, Vermont Department of Health, Department of Environmental Conservation Data • 2012–2017

routine observations and status



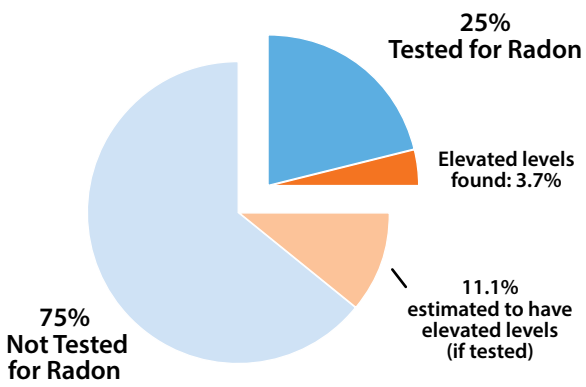
Climate Change & Health in Vermont • October 2017

healthvermont.gov/environment

School Radon Testing

Radon School Testing Data • 2006–2017

% of public schools tested for radon



Vermont Yankee Radiation Surveillance

Vermont Dept. of Health/Radiological Health Program • 2015

Sample Type	# Tests
Water	1126
Air: Particulates, Gases and Vapors	400
Direct Gamma Radiation	288
Milk	36
Sediments	36
Fish	8
Total Tests Performed:	**1894**

Reponse to Environmental Health Risks

Vermont Department of Health • 2010–2017

2010 - 2012
- Tritium contamination at Vermont Yankee Nuclear Power Station
- Mold, drinking water, food safety, chemical contamination concerns after Irene flooding
- Mercury spills

2013 - 2015
- Chlorpyrifos contamination of homes in the Rutland area
- Mercury spills

2016 -2017
- PFOA contamination of drinking water in the Bennington & Pownal area
- Drinking water testing for lead in schools
- Indoor air testing for child care facilities located near dry cleaners
- Ricin threat at retirement facility in Shelburne

• Drinking Water Tests for Child Care

To protect young children from exposure to lead and other waterborne contaminants, child care providers that have a private or spring well are required by the Department for Children & Families to have water quality testing.

• Radon Testing in Schools

Radon is a naturally occurring radioactive gas that can cause lung cancer. For most school children and staff, their second largest exposure to radon is likely to occur at school. Schools should test for radon every five years, and after upgrades to heating and ventilation systems. Only 25% of schools have tested for radon.

• Vermont Yankee Radiation Surveillance

Vermont Yankee Nuclear Power Station in Vernon is monitored for radiological and non-radiological impacts on the environment and public health. In 2015, nearly 1,900 environmental samples and measurements taken at and around Vermont Yankee were analyzed; all of the results were in compliance with Vermont's Radiological Health Rule. Similar tests in 2010 detected tritium contamination, a result of leaking components and systems at the facility. Future testing can help identify contamination that could result during the decommissioning process.

• Technical Assistance & Hazard Response

The Health Department consults with Vermonters about everday concerns such as water quality, radon, mold, asbestos, lead and food safety. We also work with our partner agencies to respond to environmental health risks.

• Food & Lodging

Proper sanitation, handling and preparation at food and lodging establishments is important to ensure consumer safety and prevent food and waterborne diseases. More than 6,000 sites where food is prepared, served, processed or stored are licensed and regularly inspected. Inspectors respond to all complaints received from the public, investigate foodborne disease outbreaks, and trace back recalled products. Lodging facilities, including hotels, bed and breakfasts, and children's camps are also regulated.

• Chemicals in Children's Products

Children's bodies are especially susceptible to chemical exposures. In 2014, Act 188 created the Chemical Disclosure Program at the Health Department to collect information from the manufacturers on the presence of chemicals in children's products. As of 2017, 66 were designated as "chemicals of high concern to children". Nearly 700 disclosure reports of children's products containing these chemicals have been submitted. We encourage consumers to learn more about these chemicals.

• X-Ray Safety Inspections

More than 500 facilities that use x-rays for medical diagnostics are registered and inspected to prevent excess radiation exposure for patients and workers. Most safety compliance issues relate to patient shielding, quality of film storage and use, and radiation monitoring of workers. In 2016, 95% of facilities were in compliance after inspection.

Food & Lodging Inspections

Food & Lodging Program • 2017

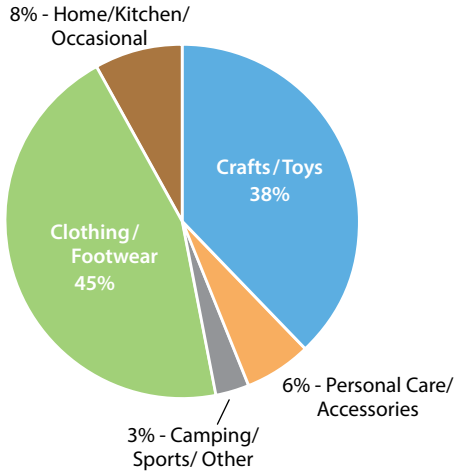
Types of food and lodging establishments inspected:

- **Restaurants, Commercial Caterers**
- **Mobile Food Units, Push Carts**
- **Manufactured Foods**
- **Temporary Food Stands (Fairs, Farmer's Markets)**
- **Home Bakers, Home Caterers**
- **School Lunch Programs**
- **Seafood Vending**
- **Shellfish Sanitation**
- **Children's Camps**
- **Lodging Sanitation**

Chemicals in Children's Products Reports

Chemical Disclosure Program • 2016–2017

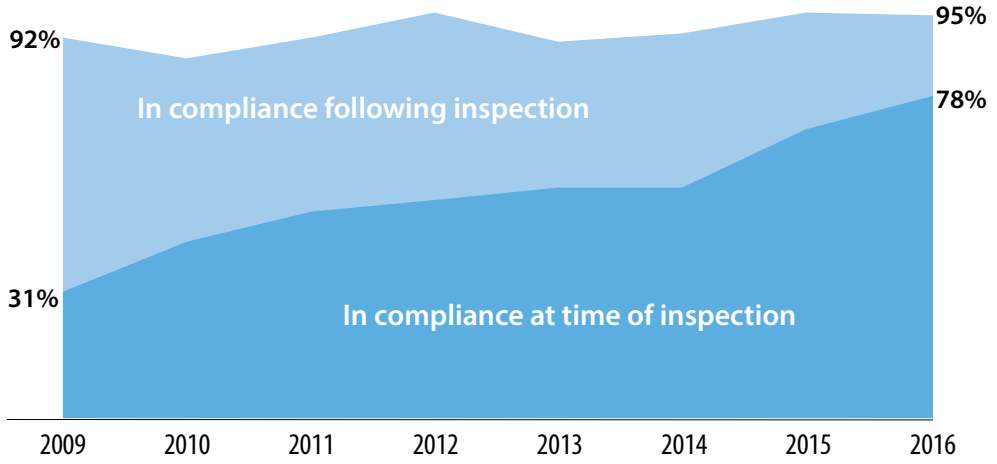
Product categories for 681 reports submitted since 2016 –



Safety Inspections of X-Ray Facilities

Radiological Health Program • 2009–2016

% of inspected facilities in compliance with health and safety standards

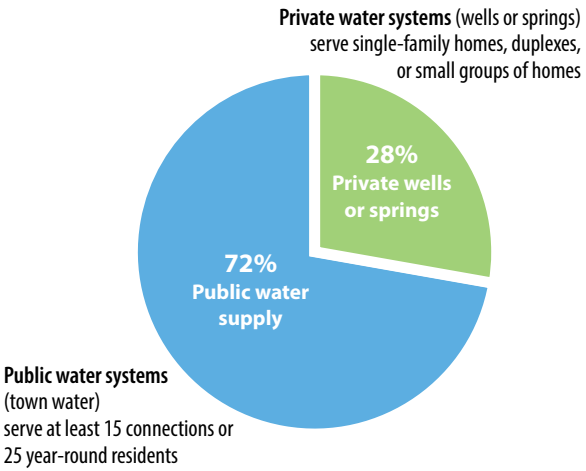


healthvermont.gov/environment

Public & Private Drinking Water Sources

Drinking Water Watch Program • 2016

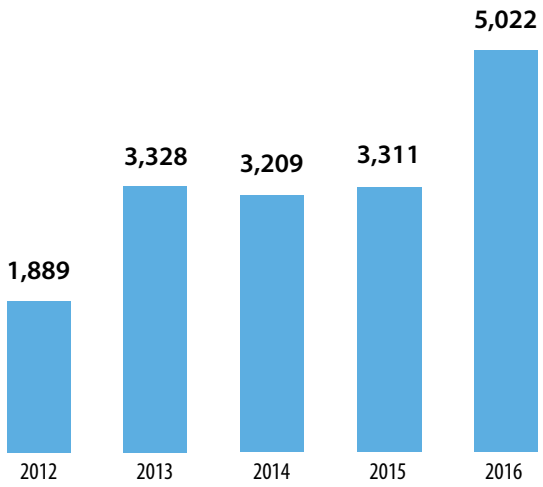
% of Vermonters served by drinking water source



Home Drinking Water Testing

Vermont Department of Health Laboratory Data • 2012–2016

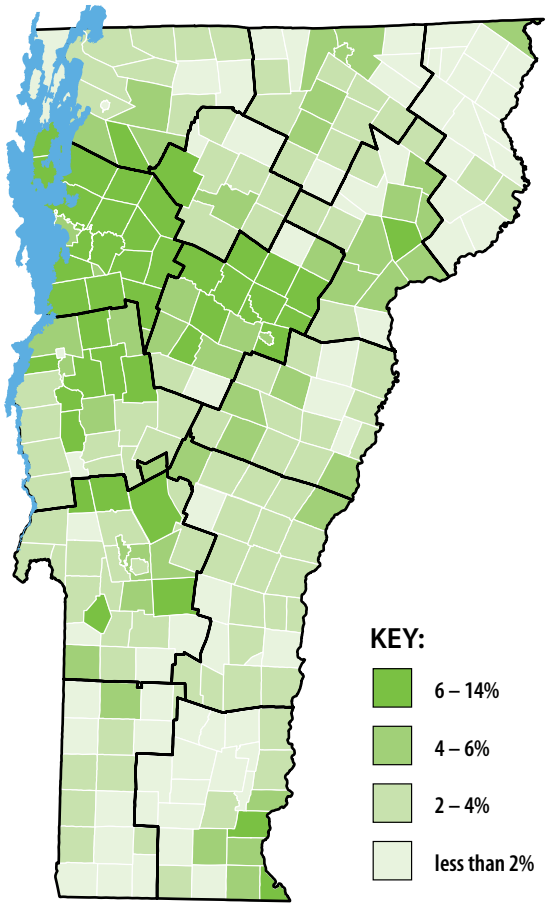
water quality test kits analyzed from private wells and springs



Home Radon Testing

Radon Program • 1988–2017

% of residential buildings tested, by town



• Healthy Homes: Safe Drinking Water

More than one-quarter of Vermonters get their drinking water from a private spring or well. Unlike public systems, private water sources are not required to be tested, yet many naturally occurring and human-made contaminants can be present. You often cannot see, smell or taste these contaminants, and they can affect your health.

Since 2013, information about private well testing has been provided to home owners when a new well is drilled, and when a home with an existing well is purchased. Only 5% of Vermonters with private drinking water sources have had their water tested. Private wells should be tested regularly.

• Healthy Homes: Radon Testing

Radon is a naturally occurring radioactive gas that is estimated to kill 50 Vermonters a year due to lung cancer. Radon can only be detected by testing, and homes with elevated radon levels are found throughout the state. The average level of radon in homes is 2.3 picocuries per liter, compared to 1.3 in the U.S. All homes should be tested.

• Asbestos & Lead Regulation

Asbestos and lead are common building materials that, if improperly handled, can be hazardous to health. State regulations are designed to protect Vermonters from exposure to these materials when maintaining, renovating or demolishing buildings, and when cleaning up after a fire, flood or storm damage. In performing maintenance, repairs, renovation or demolition on a building, there are specific state regulations to follow for safely working with asbestos-containing materials or lead-based paint.

• Climate Change Affects Our Health

Climate change in Vermont is resulting in hotter summers, shorter winters, and more frequent storms. Extensive flooding from Tropical Storm Irene, increasing occurrence of Lyme disease, and more frequent cyanobacteria (blue-green algae) blooms are examples of how climate change can affect our health.

While all Vermonters are affected, some people and places may be more challenged by these changes than others.

• 87° F is Hot for Vermont

Vermonters are at greater risk for serious heat-related illnesses, and even death, when the statewide average temperature reaches 87°F or hotter.

Although 87°F may not seem very hot, Vermonters may be especially at risk for heat illness because we don't experience hot weather very often. Many homes do not have air conditioning, and we have a large population of older adults who tend to be at higher risk for heat illnesses.

• Hot Weather in Our Future

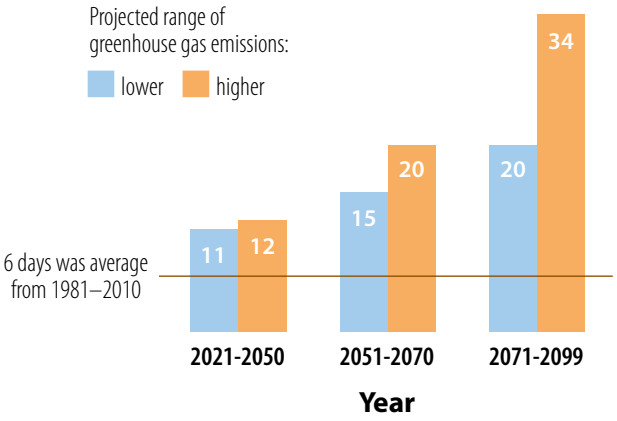
Between 1981 and 2010, Vermont experienced an average of six days each year when the temperature reached or exceeded 87°F.

Projections by climate scientists show that we can expect 15 to 20 days per year reaching 87°F or hotter by mid-century, and 20 to 34 days per year by the end of the century.

Current & Projected Extreme Heat Waves

PRISM Climate Group, Oregon State • 1981–2010
Vermont State Climate Office • Projections 2021–2099

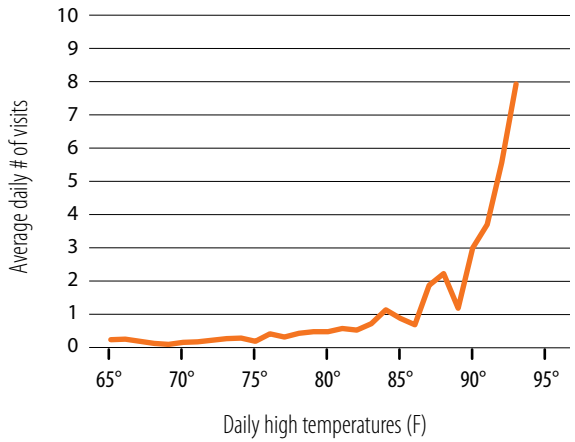
Estimated # days per year reaching at least 87° F



Emergency Dept. Visits for Heat Complaints

Vermont Early Aberration Reporting System • 2004–2013
PRISM Climate Group, Oregon State • 1981–2010

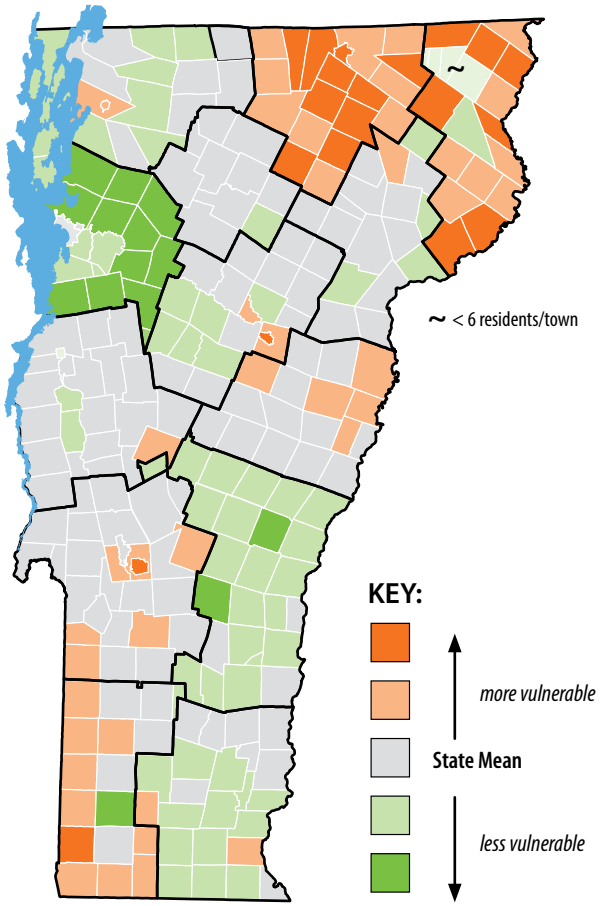
Average daily # of visits for heat complaints, by daily high temperature



Heat Illness Vulnerability Index

Vermont Heat Vulnerability Assessment Report • 2016

Towns with populations that are more/less at risk from heat



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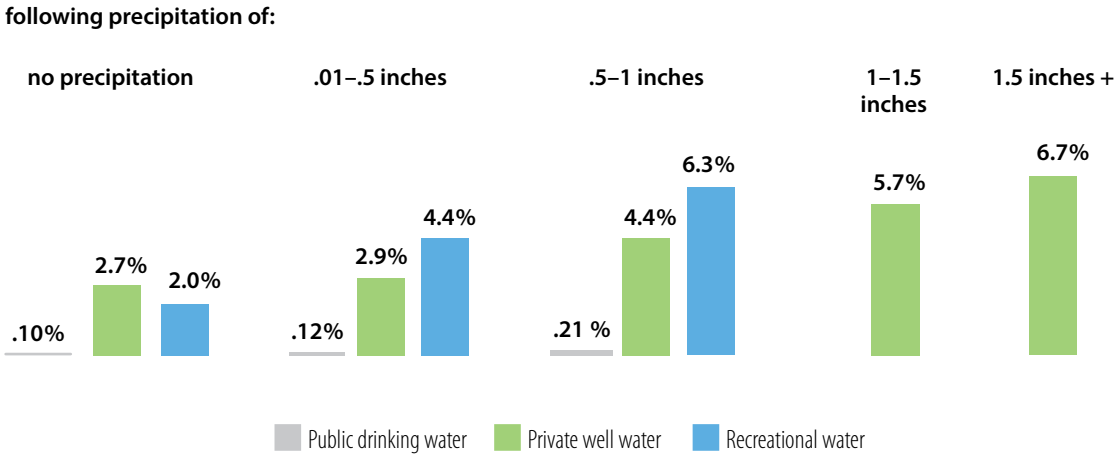
Climate Change in Vermont

National Oceanic & Atmospheric Administration (NOAA)/Climate at a Glance • 1965–2017
Vermont Climate Change Indicators/Weather, Climate & Society • 2011
U.S. Historical Climatology Network • 1965–2014

Precipitation Events & E.coli Detection

Vermont Department of Health Laboratory • 2005–2014

% of positive E. coli tests increases as amount of recent precipitation increases



• Vermont's Heat Vulnerability Index

The heat vulnerability index draws together 17 measures in six different themes to quantify the risk for heat-related illness at the town/city level. The index takes into account measures related to population, socioeconomics, health, environment, climate and heat illness. The index maps the overall vulnerability of Vermont towns to heat-related events – a first step in identifying populations that may be most affected by hot weather.

• Climate Change & Precipitation

Compared to average weather conditions from 1981 to 2010, by the end of the century the Vermont State Climate Office projects that the total annual precipitation will increase by three to 10 inches, and the frequency of the heaviest precipitation events (about three inches of rain) will increase from a once every seven years occurrence to once every two to three years.

• E.coli as a Measure of Water Quality

A common way to detect bacterial contamination in water is to monitor for Escherichia coli (E. coli) bacteria. The presence of E.coli in water can indicate recent fecal contamination.

Historical analyses of state meteorological and water quality data from 2005 to 2014 indicate that the risk of bacterial contamination of drinking water increases following heavier precipitation events. Drinking water quality was negatively affected following precipitation of 0.5 inches or more. Although detection of E. coli in public drinking water rarely occurred, detection rates in private well water doubled following days with at least 0.5 inches of precipitation.

• Infectious Disease Surveillance

The incidence of infectious disease in Vermont is less common than chronic disease. Still, we must keep a close watch as new risks emerge due to drug resistance, novel infections and zoonotic agents. Generations of Vermonters who have never experienced outbreaks of life-threatening infectious diseases may not understand the risks of an under-vaccinated population.

Disease reporting enables public health officials to collect, analyze and distribute data about illness and death. Reporting helps to describe disease trends, identify outbreaks, and control the sources of infection. The information helps us find and treat people who may have been exposed, plan disease prevention campaigns, and educate the health care community and residents.

• Sexually Transmitted Infections

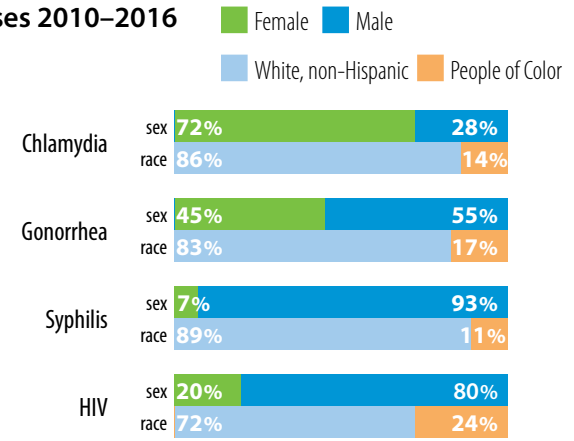
Chlamydia, gonorrhea, syphilis and HIV are sexually transmitted infections that must be reported by health care providers to the Health Department. Most people who have a sexually transmitted infection do not have immediately recognizable symptoms, and this delays treatment. Testing is recommended for nearly everyone who is sexually active. Early treatment can mean a longer and better quality of life. Having an untreated sexually transmitted infection also increases a person's risk for infertility, and for acquiring HIV. In Vermont, men who have sex with men are disproportionately affected by gonorrhea and HIV.

Vermonters Diagnosed with Sexually Transmitted Infections

Vermont Reportable Disease Surveillance / Vermont Enhanced HIV/AIDS Reporting System • 2010–2016

	Chlamydia	Gonorrhea	Syphilis	HIV
age: <19	3,354	83	2	5
20–39	8,650	520	49	47
40–69	340	68	44	44
69+	3	0	0	0
Total	**12,347**	**671**	**95**	**96**
median annual diagnoses	1,727	97	9	13

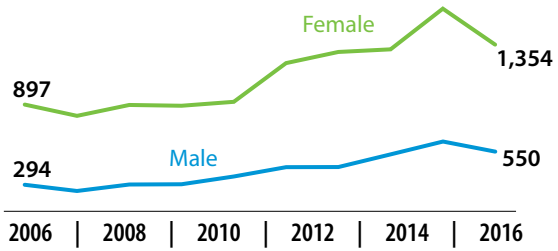
New Diagnoses 2010–2016



Chlamydia Cases

Vermont Reportable Disease Surveillance • 2006–2016

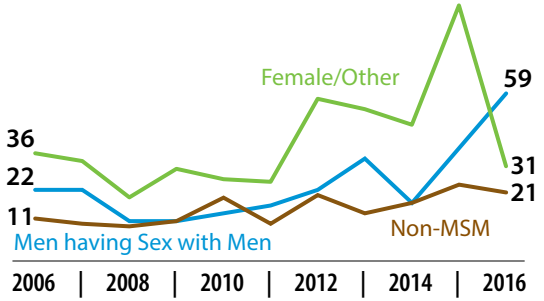
# of Vermonters diagnosed each year with chlamydia



Gonorrhea Cases

Vermont Reportable Disease Surveillance • 2006–2016

# of Vermonters diagnosed each year with gonorrhea



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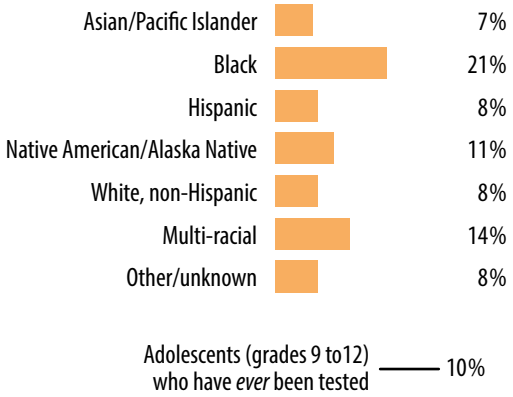
HIV Testing, Adults & Adolescents

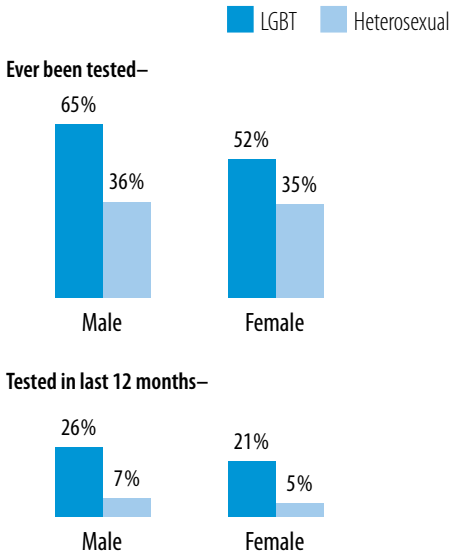
Vermont Behavioral Risk Factor Surveillance System • 2016
Vermont Youth Risk Behavior Survey • 2015

% of adults age 18–64 tested in the past 12 months



HIV Testing, Adults by Gender

Vermont Behavioral Risk Factor Surveillance System • 2016

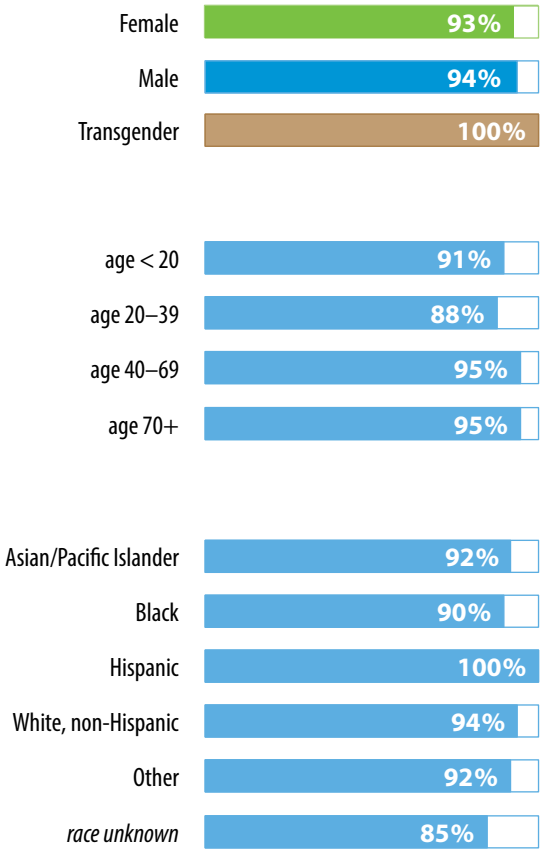


HIV Viral Suppression

Vermont Enhanced HIV/AIDS Reporting System • 2016

% of people with viral suppression among Vermonters living with diagnosed HIV infection in 2016

94% of HIV infections in Vermonters have been virally suppressed



• Chlamydia

Chlamydia is the most commonly reported infectious disease in the U.S. and in Vermont. Chlamydia is preventable, but cases continued to rise since 2004, especially among younger people. Females usually experience no symptoms, but infection can result in pelvic inflammatory disease, a major cause of infertility, ectopic pregnancy and chronic pelvic pain. Females are diagnosed more than twice as often as males, often when seeking reproductive health services. This may account for the greater number diagnosed between age 15 and 24. Males rarely have health problems linked to chlamydia.

• Gonorrhea

Vermont's overall rates of gonorrhea are well below the national average. Males and females have been almost equally affected in past years, but in 2016 most cases were among men who have sex with men. Between 2014 and 2015, there was a steep increase in cases among females for reasons that are unclear. Untreated gonorrhea can cause serious and permanent health problems in both males and females. The emergence of multi-drug resistant gonorrhea in other states makes early diagnosis and treatment a pressing health priority.

• Suppressing the HIV Virus

Compared to most of the U.S., Vermont has a relatively small number of people living with HIV. Most Vermonters living with HIV are in medical care, take medications, and are virally suppressed. A person who is virally suppressed has very low levels of virus in their body. Viral suppression lowers a person's infectiousness, and the risk of transmission to others.

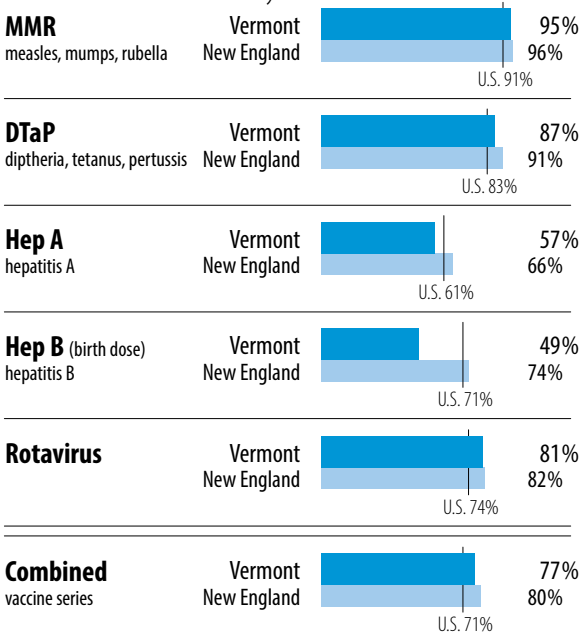
• Vaccinate for a Healthy Life

Vaccines have repeatedly been shown to be safe and effective in preventing many infectious diseases. A person who is immunized is protected against vaccine-preventable diseases or severe illness, and helps prevent disease outbreaks in the community.

The overall immunization rate for children younger than 3 years is improving. In 2016, 77% were immunized with the full series of recommended vaccines, higher than the national average of 71%. Still, one in four children in this age group have not received the full series of these vaccines.

Early Childhood Immunizations

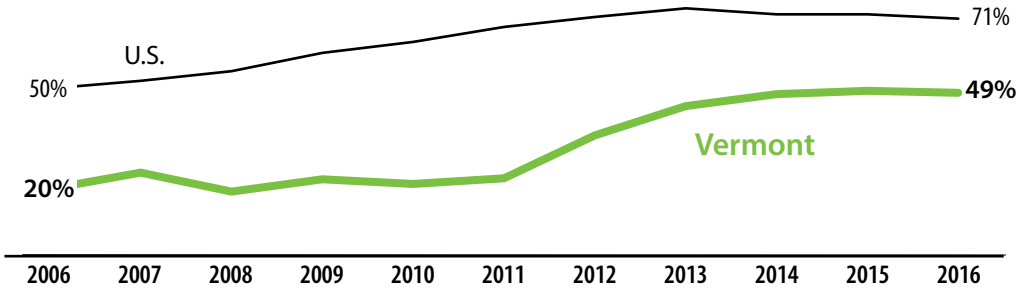
National Immunization Survey • 2006–2016



Birth Dose of Hepatitis B Vaccine

National Immunization Survey • 2006–2016

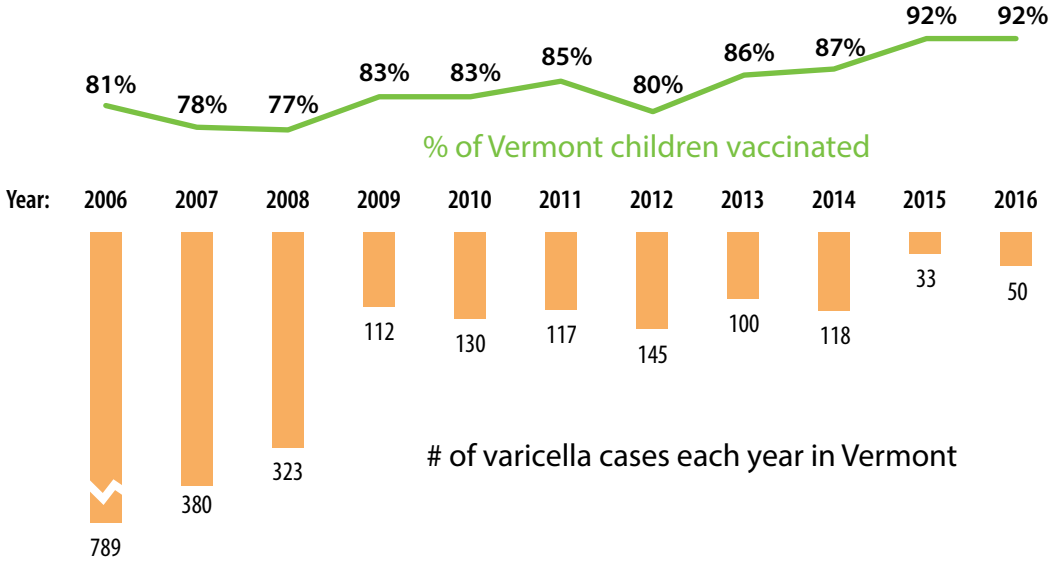
% of children 19–35 months old who have received a dose of hepatitis B vaccine at birth



Varicella Vaccination & Disease Rates

Vermont Reportable Disease Surveillance • 2006–2016

% of Vermont children age 19–35 months who are vaccinated, and the # of varicella cases in the Vermont population each year



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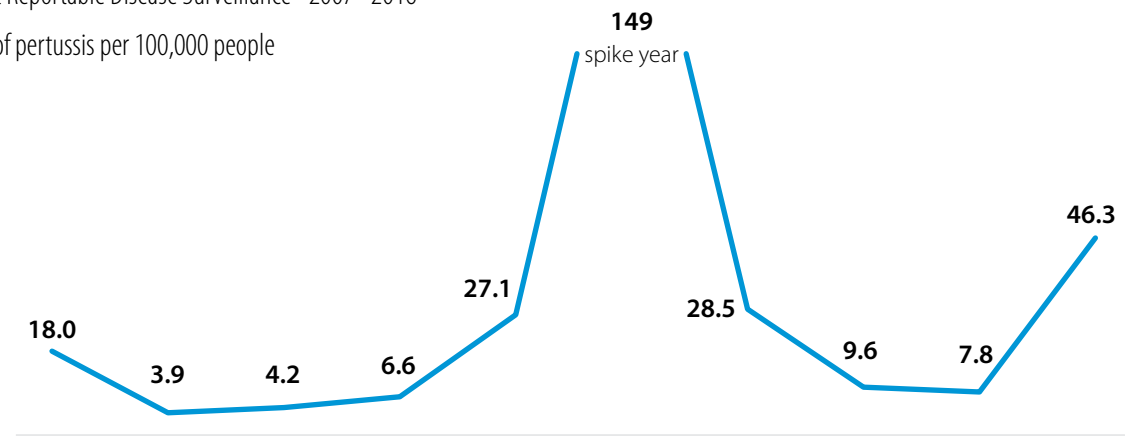
Pertussis Cycles

Vermont Reportable Disease Surveillance • 2007–2016

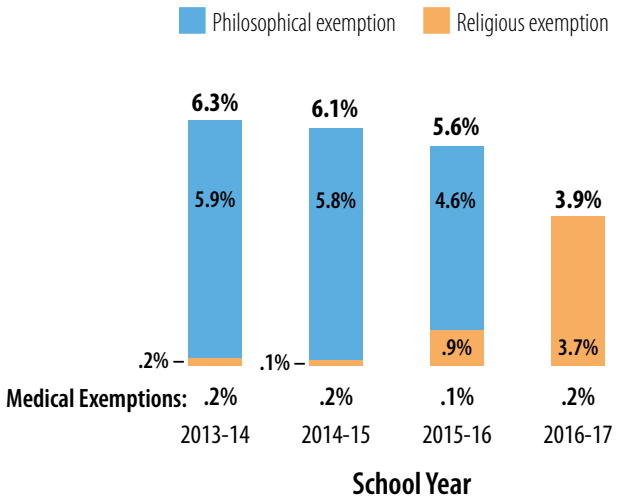
cases of pertussis per 100,000 people



Vaccination Exemptions in Kindergarten

Vermont Annual Immunization Report • 2013–2017

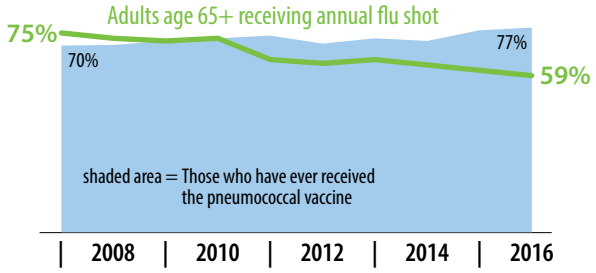
% of incoming Kindergarteners in Vermont who have exemptions from required vaccinations, by school year



Vaccination Among Adults Age 65+

Vermont Behavioral Risk Factor Surveillance System • 2007–2016

% of Vermonters age 65+ receiving the annual flu shot and the one-time pneumococcal vaccine



• Hepatitis B Vaccine at Birth

Hepatitis B is a life-threatening liver infection caused by a virus. All infants should receive a dose of hepatitis B vaccine at birth. This is important because 90% of infants who contract the disease become chronic carriers and are at risk for liver cancer. Yet of all the states, Vermont has the lowest rate of hepatitis B vaccine dose given at birth.

• Varicella (Chickenpox)

Higher rates of varicella vaccination correlate with lower numbers of cases of the disease. A second dose of vaccine at 4 to 6 years is recommended. In 2016, 5- to 9-year-olds accounted for 22% of all cases of varicella, down from 58% in 2006.

• Pertussis (Whooping Cough)

Pertussis outbreaks tend to occur in waves, with peaks every three to five years. Vaccination rates in Vermont are high: 94% of Kindergarteners and 93% of 7th graders are appropriately vaccinated.

• Vaccines for Kindergarten Entry

Since the 2013-14 school year, non-medical exemptions from vaccines for school entry have decreased, and vaccination rates have increased to 94% for all students in grades K through 12. The philosophical exemption was eliminated in 2016.

• Vaccines for Older Adults

Older adults are at high risk for serious illness and death from flu and pneumococcal pneumonia, but vaccination rates are low. Vermonters age 65+ who have a college degree are more likely to get the flu vaccine than those with less education.

• The Emergence of Tickborne Diseases

Vermont is home to Lyme disease and at least four other tickborne diseases, several of which are becoming increasingly common in the state. Vermont has one of the highest rates of Lyme disease in the U.S., and other tickborne diseases such as anaplasmosis and babesiosis are emerging. These diseases cause a range of health outcomes, from self-limiting fever to death.

Tickborne diseases are both preventable and treatable. A timely diagnosis can help patients avoid further health complications. All cases that are diagnosed in Vermont must be reported to the Health Department.

• Lyme Disease, Anaplasmosis, Babesiosis

There is geographic variation in the incidence of tickborne diseases. Southern counties have the highest rate of tickborne disease reporting. Bennington County has by far the highest rate of tickborne diseases cases in the state.

• Who is most affected by ticks?

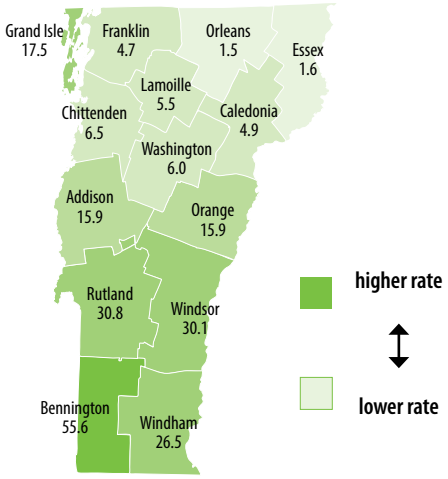
All Vermonters are at risk, but some groups are more at risk than others. People who spend time outdoors for work or recreation are more likely to encounter ticks that can spread these diseases.

Children and older adults have the highest numbers of confirmed cases of Lyme disease. Older adults and males have the highest numbers of cases of anaplasmosis.

Tickborne Disease Cases

Vermont Reportable Disease Surveillance • 2016

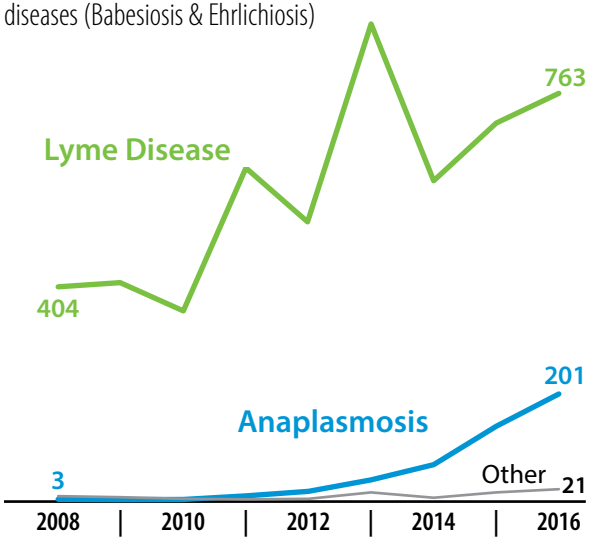
# of cases reported, per 10,000 people



Tickborne Disease Reports

Vermont Reportable Disease Surveillance • 2008–2016

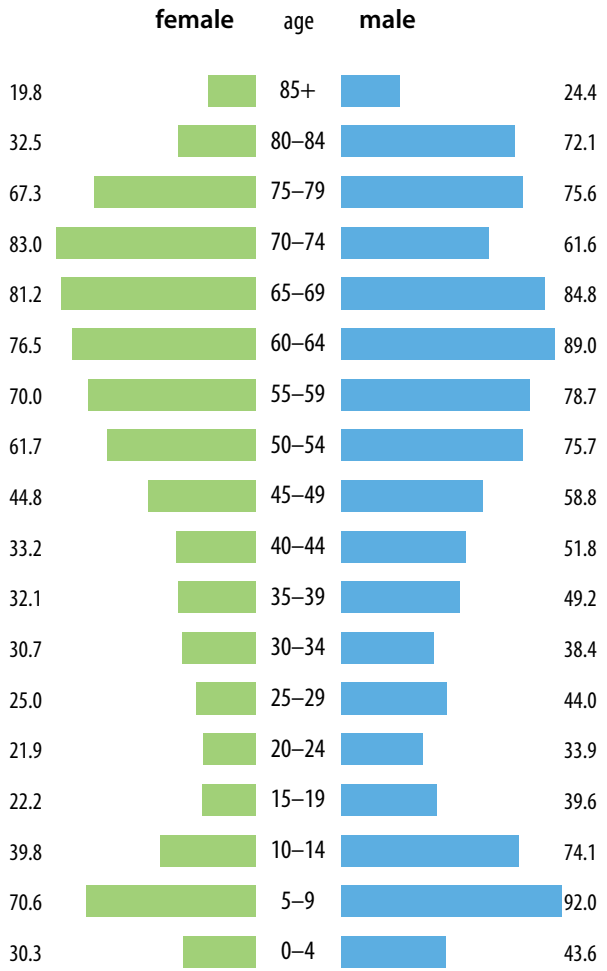
# of cases of Lyme Disease, Anaplasmosis & other tickborne diseases (Babesiosis & Ehrlichiosis)



Lyme Disease Cases

Vermont Reportable Disease Surveillance • 2008–2016

# of cases of Lyme disease in Vermont, per 100,000 people



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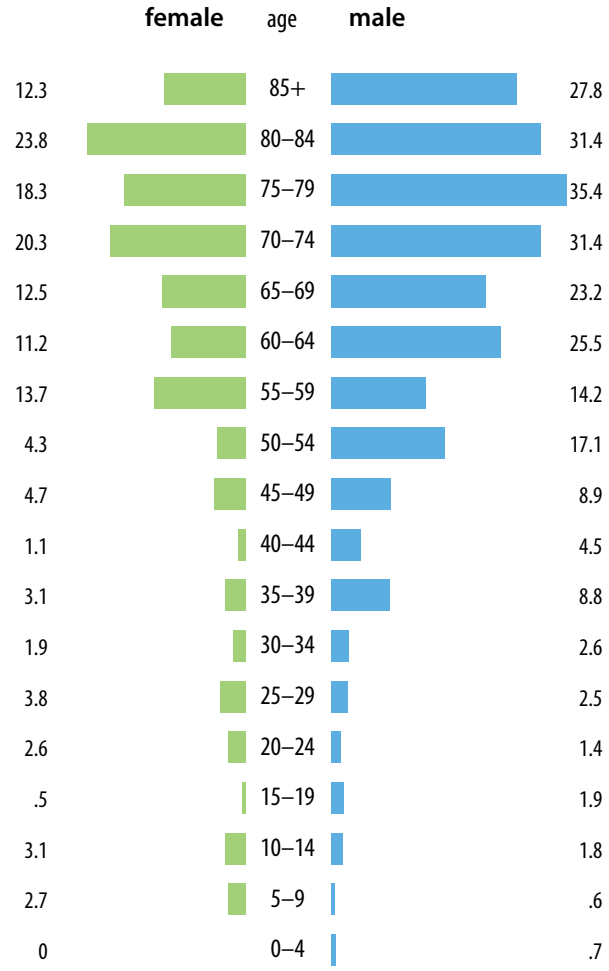
Anaplasmosis Cases

Vermont Reportable Disease Surveillance • 2008–2016

# of cases of anaplasmosis in Vermont, per 100,000 people

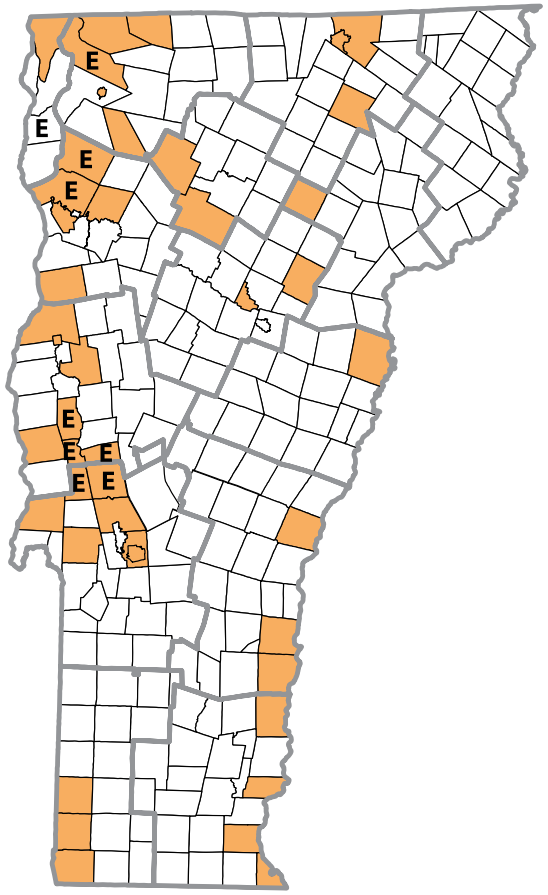


West Nile Virus & EEE in Mosquito Pools

Vermont Arbovirus Surveillance • 2013–2017

Towns where one or more mosquito pools have been found to contain –

West Nile virus Eastern Equine Encephalitis E Both E



• Mosquitoes & West Nile Virus

Based on years of monitoring, risk for West Nile virus appears to be widespread across the state. West Nile virus activity has been detected in all counties in birds, mosquitoes, people or animals. However, during the 2017 season, only 89 of 4,306 mosquito pools tested positive for West Nile virus.

In 2017, human infections with West Nile virus were identified in Chittenden, Addison and Grand Isle counties.

• Mosquitoes & EEE

No human cases of Eastern equine encephalitis (EEE) have been reported in Vermont since 2012.

Two areas of the state have had detections of EEE virus in mosquito pools in the past 10 years: western Franklin county, and northern Rutland/ southern Addison counties.

• Mosquito-borne Disease Monitoring

During the summer months, mosquitoes are monitored for mosquito-borne diseases. Each week, mosquitoes are collected at locations around the state by the Vermont Agency of Agriculture, Food & Markets. These collections of mosquitoes are tested by the Health Department Laboratory for diseases that affect humans, such as West Nile virus and Eastern equine encephalitis, known as EEE or 'Triple E'.

Like tickborne diseases, every human case of West Nile virus and EEE diagnosed in Vermont must be reported to the Health Department.

• Diseases Reportable to Public Health

The Health Department depends on health care professionals to identify and report certain diseases. This enables public health officials to investigate and act quickly to control the spread of disease.

Hepatitis C, tuberculosis and salmonellosis are three examples of infectious diseases of public health significance that affect some groups of people more than others.

• Health Care-Associated Infections (HAIs)

Health care-associated infections are infections that patients can acquire while receiving medical treatment in a health care facility. HAIs are a major, yet often preventable, threat to patient safety. Sepsis is a potentially life-threatening complication of infection, and may occur in health care settings.

Some HAIs are caused by viruses, bacteria or fungi that are resistant to one or more antimicrobials used to treat these infections. This makes HAIs dangerous for all people, but especially for those who are immunocompromised. Clostridium difficile (C. diff) is one example of an antibiotic-resistant bacteria that causes serious diarrheal illness, and can be picked up from contaminated surfaces or spread from the hands of a health care worker.

Older people are most affected by sepsis and C. difficile, likely because they tend to interact more often with the health care system.

Vermont Department of Health

Reportable Diseases

Reportable:

Any unexpected pattern of cases, suspected cases, deaths or increased incidence of any other illness of major public health concern, because of the severity of illness or potential for epidemic spread, which may indicate a newly recognized infectious agent, an outbreak, epidemic, related public health hazard or act of bioterrorism.

- Anaplasmosis
- AIDS
- ☎ **Anthrax**
- Arboviral disease
- Babesiosis
- Blood lead levels
- ☎ **Botulism**
- Brucellosis
- Campylobacteriosis
- *Chlamydia trachomatis* infection
- Cholera
- Creutzfeldt-Jakob disease/transmissible spongiform encephalopathies
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- ☎ **Diphtheria**
- Eastern Equine Encephalitis
- Ehrlichiosis
- Encephalitis
- Gonorrhea
- Guillain-Barré Syndrome
- *Haemophilus influenzae* disease, invasive
- Hantavirus disease
- Hemolytic Uremic Syndrome (HUS)
- Hepatitis A
- Hepatitis B
- Hepatitis B, positive surface antigen in a pregnant woman
- Hepatitis C
- Hepatitis E
- Human immunodeficiency virus (HIV)
- Influenza: Report only
- ☎ – **Individual cases of influenza due to a novel strain of Influenza A**
- – Pediatric influenza-related deaths
- – Institutional outbreaks
- Legionellosis
- Leptospirosis
- Listeriosis
- Lyme Disease
- Malaria
- ☎ **Measles (Rubeola)**
- Meningitis, bacterial
- ☎ **Meningococcal disease**
- Middle East Respiratory Syndrome (MERS)
- Mumps
- Pertussis (Whooping cough)
- ☎ **Plague**
- ☎ **Poliovirus infection, including poliomyelitis**
- Psittacosis
- Q Fever
- ☎ **Rabies, human** and animal cases
- Reye Syndrome
- Spotted Fever Rickettsiosis
- Rubella (German Measles)
- Rubella, Congenital Rubella Syndrome
- Salmonellosis
- ☎ **Severe Acute Respiratory Syndrome (SARS)**
- Shiga toxin-producing *E. coli* (STEC)
- Shigellosis
- ☎ **Smallpox**
- *Streptococcal* disease, Group A, invasive
- *Streptococcal* disease, Group B, invasive (infants less than 1 month of age)
- *Streptococcus pneumoniae* disease, invasive
- Syphilis
- Tetanus
- Toxic Shock Syndrome
- Trichinosis
- Tuberculosis
- ☎ **Tularemia**
- Typhoid Fever
- Varicella (Chickenpox only)
- ☎ **Viral hemorrhagic fever**
- Vibriosis
- West Nile Virus
- Yellow Fever
- Yersiniosis

Treatment: Human rabies postexposure treatment (HRPET) is reportable even when no evidence of rabies has been found.

Reporting of Diseases

The law requires that health care providers report diseases of public health importance. Persons who are required to report: health care providers, infection preventionists, laboratory directors, nurse practitioners, nurses, physician assistants, physicians, school health officials and administrators of long-term care and assisted living facilities. Cases of reportable diseases should be reported to the Health Department within 24 hours. Immediate notification is essential for diseases marked by a telephone symbol (☎).

Consultation and Inquiries 24/7:
802-863-7240 or 1-800-640-4374 (VT only)

HealthVermont.gov

VERMONT
DEPARTMENT OF HEALTH

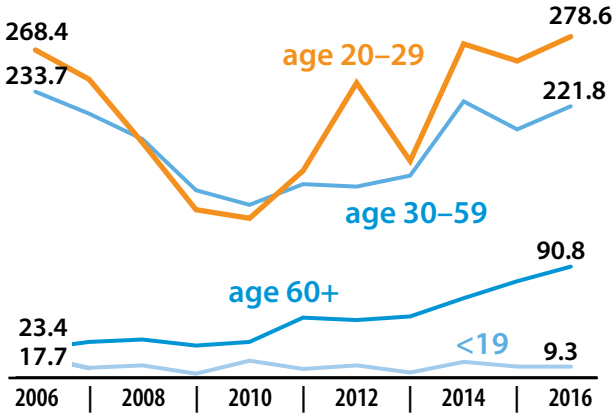
effective 3/26/15

healthvermont.gov/disease-control

Hepatitis C Cases

Vermont Reportable Disease Surveillance • 2006–2016

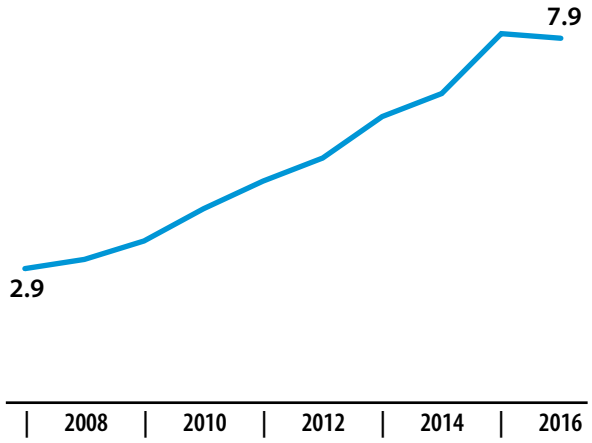
# of Vermonters diagnosed with hepatitis C, per 100,000 people



Sepsis Cases

Vermont Uniform Hospital Discharge Data Set • 2007–2016

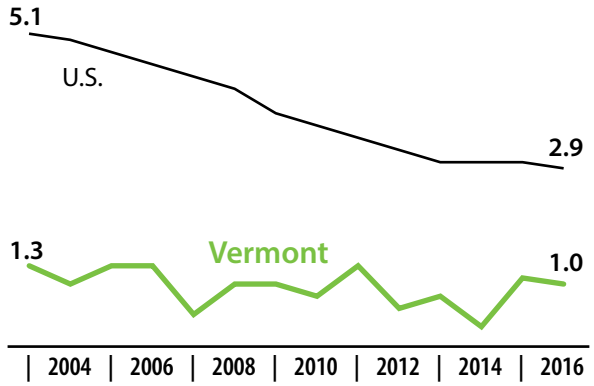
# of Vermonters diagnosed with sepsis, per 1,000 people



Tuberculosis Cases

Vermont Reportable Disease Surveillance • 2004–2016

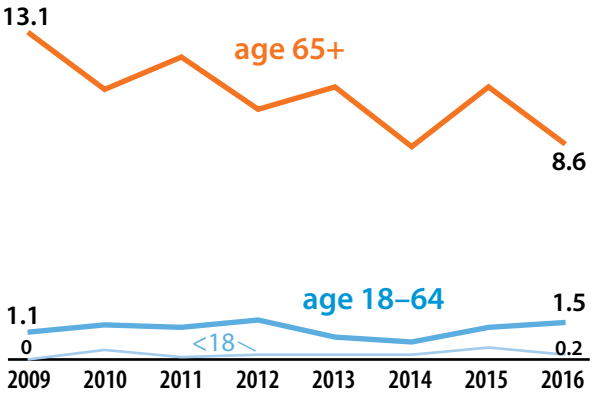
# of Vermonters diagnosed with tuberculosis, per 100,000 people



Clostridium Difficile

Vermont Uniform Hospital Discharge Data Set • 2009-2016

# of Vermonters diagnosed with C. diff, per 10,000 people

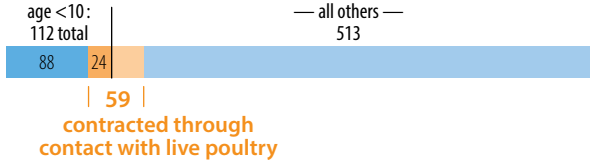


• **Hepatitis C** is a life-threatening viral infection of the liver. Since 2014, 800 to 900 cases of hepatitis C have been reported in Vermont residents each year, most commonly among baby boomers (born 1945-1965) and injection drug users.

• **Active Tuberculosis** disease is rare in Vermont, but still affects a few people each year. From 2003 to 2016, 82 cases were reported. Foreign-born and people of color are disproportionately affected.

• **Salmonellosis** Vermont Reportable Disease Surveillance data shows that while children under age 10 make up 11% of the population, 41% of the cases of salmonellosis due to contact with live poultry are among these young children.

625 Salmonella cases 2011–2015



41% of live poultry-related cases of salmonellosis are among children under 10

• **Sepsis** cases in Vermont appear to have sharply increased over the past decade. This could be a true increase, or may reflect better recognition of sepsis in hospitalized patients. In 2016, sepsis was the cause of 217 deaths among Vermonters.

• **Clostridium Difficile** is the #1 cause of infectious diarrhea in hospitalized patients in the U.S. The rate of C. difficile is increasing in Vermont. Older adults with current or previous antibiotic use and receiving medical care are at highest risk for infection.

Access • Primary & Oral Health Care

• A Vision for Health Care Equity

Equitable access to health care means that quality and comprehensive health services are equally available, affordable, coordinated, culturally appropriate and offered with respect to all Vermonters. As our partners clearly stated: "Access to health care should not be a privilege."

• Access is More Than Insurance

In Vermont, 96% of adults and 99% of children have primary health insurance, higher than many other states. Oral health is integral to overall health, yet only 57% of Vermonters have dental insurance that covers routine care. Having health insurance is a starting point for accessing medical and dental care, but it takes more than insurance.

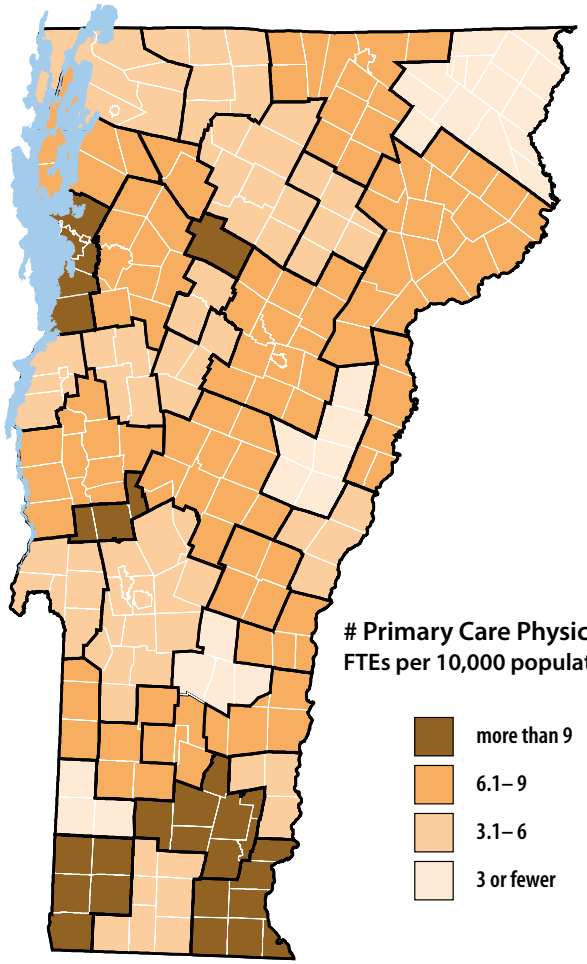
• Access to Medical & Dental Care

To measure access to care, we consider the ratio of physicians or dentists to the population of an area, and the percentage of the population that has insurance plus a usual care provider. Nurse practitioners and physician assistants also provide much of the primary care. By these measures, access varies across the state. Adult females (92%) are more likely than males (84%) to have a usual provider, and white, non-Hispanics are more likely than people of color. Vermont adults (71%) are much more likely than U.S. adults (65%) to have had a dental visit in the past year. Females are more likely than males, white, non-Hispanics are more likely than people of color, and those with higher income and education are the most likely to have regular dental care.

Supply of Primary Care Physicians

Vermont Department of Health/Health Care Provider Census • 2016

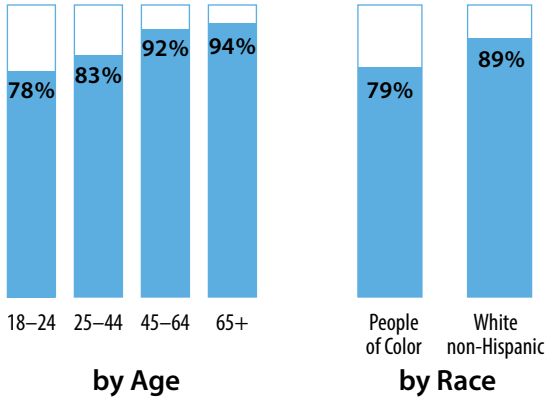
Full Time Equivalent (FTE) physicians to population



Access to Primary Care

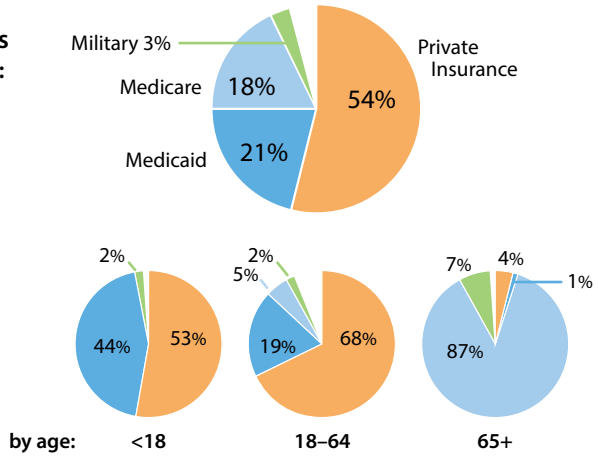
Vermont Behavioral Risk Factor Surveillance System • 2016

% of Vermont adults who have a usual primary care provider



Primary Health Insurance Sources

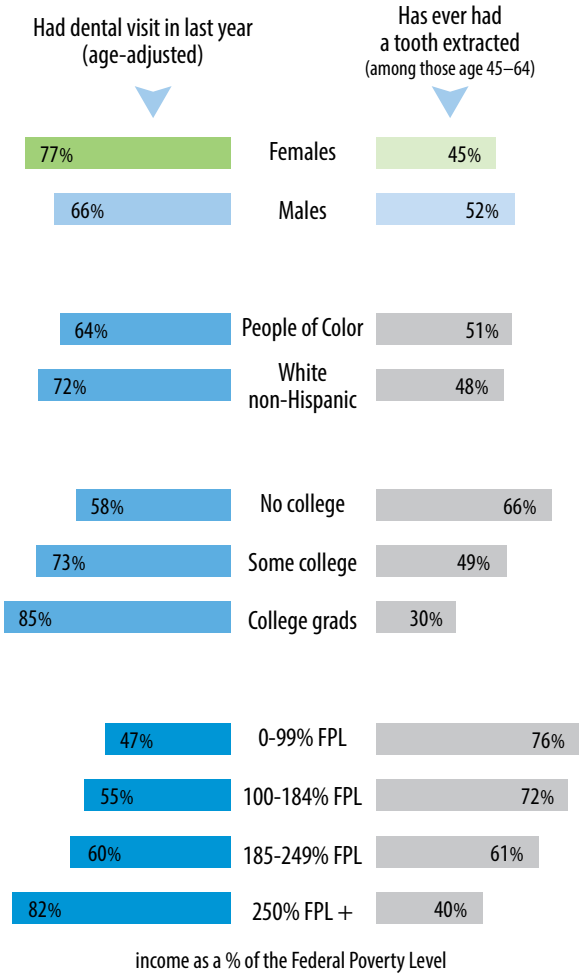
Vermont Household Health Insurance Survey • 2014



healthvermont.gov/systems

Dental Visits & Tooth Extractions

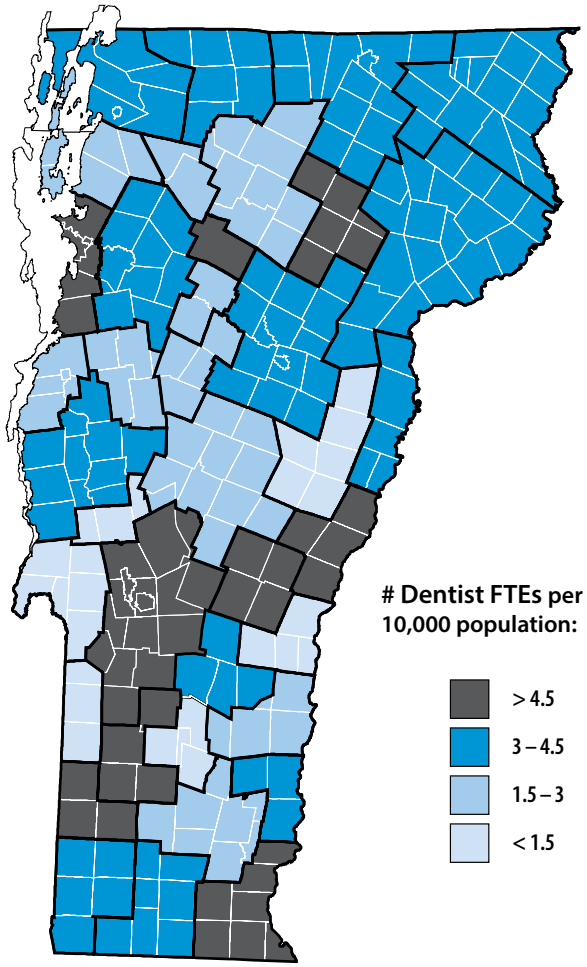
Vermont Behavioral Risk Factor Surveillance System • 2016



Supply of Dentists

Vermont Department of Health/Health Care Provider Census • 2017

Full Time Equivalent (FTE) dentists to population



• Barriers to Health Care

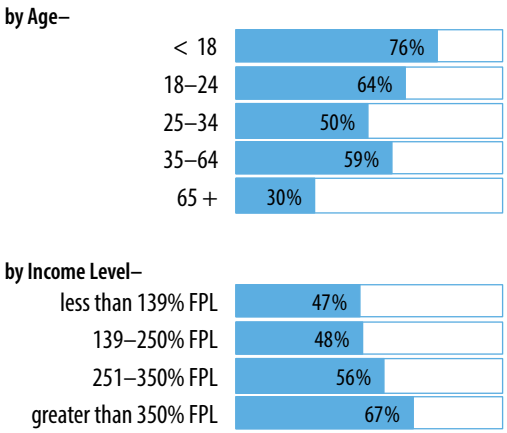
Beyond insurance and the supply of providers, a complex interplay of social, environmental and infrastructure barriers can stand in the way of accessing health care.

Our partners said that people of color, those who identify as LGBT, who have disabilities, or work on farms or in forestry may not see themselves represented, understood or respected by health care providers. Providers may not have sufficient training to understand, prevent or treat their particular health needs, or may have implicit bias that results in discrimination. Travel to care may be difficult for people who live in rural areas, for those with lower incomes or disabilities, especially when public transportation is inadequate.

Dental Insurance

Vermont Household Health Insurance Survey • 2014

% of Vermonters who have dental insurance, by age and income (as a % of the Federal Poverty Level)



• Access to Mental Health Professionals

Mental health professionals in the state include social workers, psychologists, mental health counselors, psychotherapists, psychiatrists, mental health advanced practice RNs, marriage and family therapists, psychoanalysts, and mental health physician assistants. Social workers are by far the largest group.

As a measure of access to mental health services, the ratio of mental health care providers to population varies widely across the state. Grand Isle and Essex counties have the fewest, while Windham, Chittenden and Washington counties have the greatest number of providers to residents.

• What is Substance Use Disorder?

Substance Use Disorder (SUD) occurs when the recurrent use of alcohol or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school or home. Having a combination of alcohol and drug use disorders is common, and substance use disorders often occur with mental health problems.

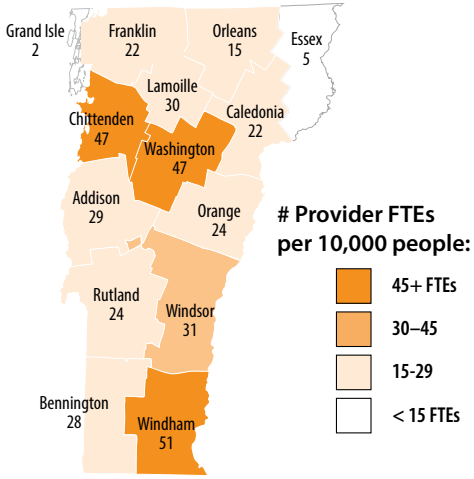
• Vermonters in Need of Treatment

An estimated 33,000 Vermonters are in need but not in treatment for alcohol use disorder, and 17,000 are in need but not in treatment for drug use. While a higher proportion of Vermonters living in poverty are in need of treatment, the total count is higher for those at the highest income level (250% or more of the Federal Poverty Level).

Supply of Mental Health Care Providers

Vermont Dept. of Health/Health Care Provider Census • 2016 & 2017

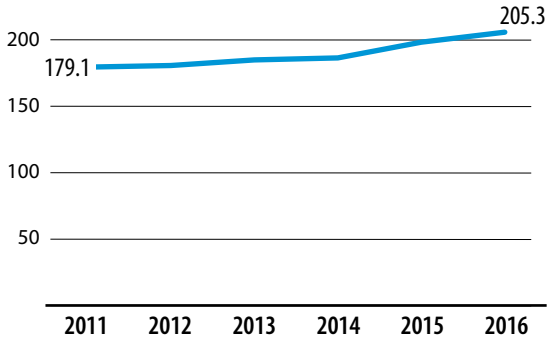
Full-Time Equivalent (FTE) providers of various mental health services, per 10,000 people



Mental Health Emergency Dept. Visits

Vermont Uniform Hospital Discharge Data Set • 2011–2016

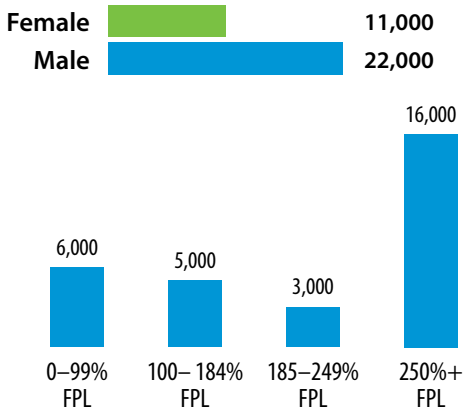
Emergency Department visits for mental health disorders, per 10,000 people



Vermonters Going Untreated for Alcohol Use

National Survey on Drug Use & Health/ Vermont • 2011–2014

Estimated # of people age 12+ who did not receive needed treatment, to nearest thousand

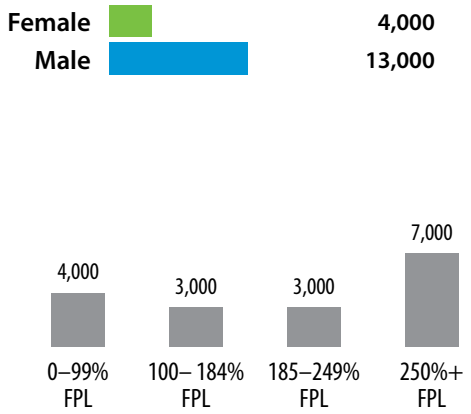


by percentage of Federal Poverty Level

Vermonters Going Untreated for Drug Use

National Survey on Drug Use & Health/Vermont • 2011–2014

Estimated # of people age 12+ who did not receive needed treatment, to nearest thousand



by percentage of Federal Poverty Level

healthvermont.gov/alcohol-drugs/help

mentalhealth.vermont.gov

Treatment for Substance Use Disorder

Health Effectiveness Data & Information Set • 2016

Of those diagnosed with a substance use disorder,

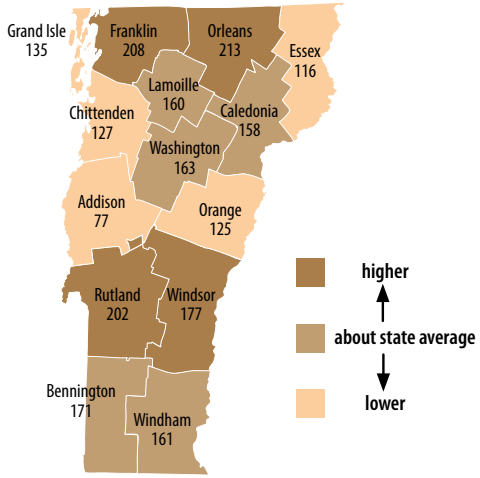
45% received a follow-up treatment, and

17% stayed in treatment

Treatment for Opioid Use Disorder

Medicaid & Substance Abuse Treatment Information System • 2016

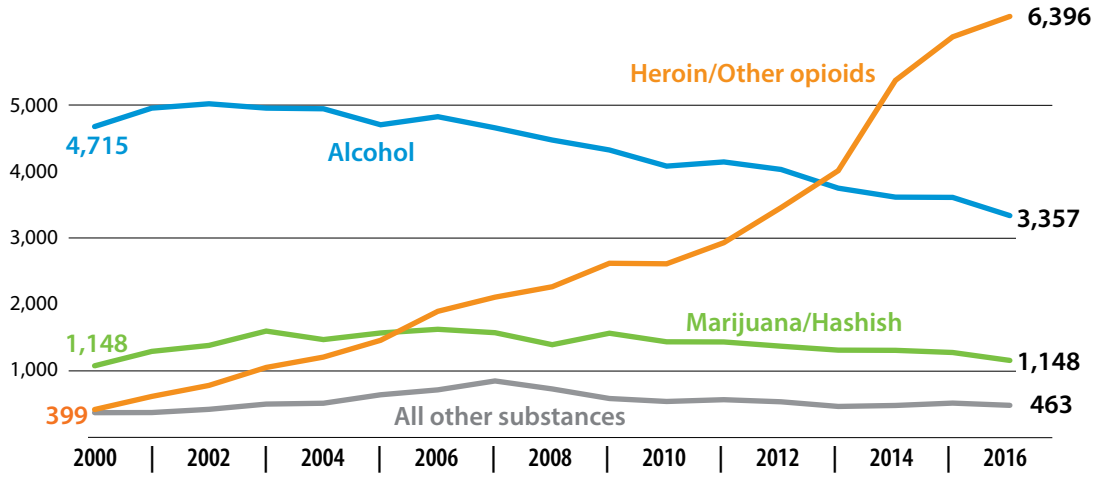
Estimated total # of people receiving medication-assisted treatment at a Hub or Spoke, per 10,000 people, by county



Substance Use Disorder Treatment Trend

Substance Abuse Treatment Information System • 2000–2016

Vermonters treated in preferred provider system for substance use disorder, by substance



• Medication-Assisted Treatment

There is strong evidence that medication-assisted treatment with methadone or buprenorphine is effective in keeping patients in treatment and in decreasing illicit opioid use.

• Why don't people go to treatment?

Many people with substance use disorder do not recognize that they need treatment. When they are diagnosed and treatment is recommended, they still may not go. And if they do enter treatment, they may not stay. Of Vermonters who were diagnosed with a substance use disorder in 2016, an estimated 45% entered treatment and, of those, 17% stayed in treatment.

There are many reasons why people may resist starting treatment, or staying in treatment. Personal, sociocultural, structural and systemic barriers that prevent a person from accessing health care are often even stronger barriers to accessing treatment for alcohol and drug problems or mental illness. And stigmatization of those who have mental illness or substance use disorder is still a strong force that keeps people from seeking help.

• Substance Use Disorder Treatment Trends

More Vermonters are in need of treatment for alcohol use disorder than for opioid use disorder.

Since 2013, as the Care Alliance for Opioid Addiction hub & spoke system of medication-assisted treatment has expanded, the number of people in treatment for opioids has surpassed the number of people in treatment for alcohol.

• Insured & Underinsured Vermonters

In 2014, 4% or 23,000 Vermonters had no health insurance – an improvement from 8% uninsured Vermonters in 2000 and 7% in 2012. But many people who have insurance are under-insured. Of those under the age of 65 who have private insurance, more than one-quarter (27% or 92,000 individuals) were considered under-insured due to either high deductibles, uncovered costs, or both.

• Access to Care for the Underserved

Vermont has 12 Federally Qualified Health Centers with more than 60 clinic sites, nine Rural Health Clinics and 10 Free Clinics. These health centers and clinics are spread out across the state, providing improved access to primary, dental and mental health services for the uninsured and under-insured.

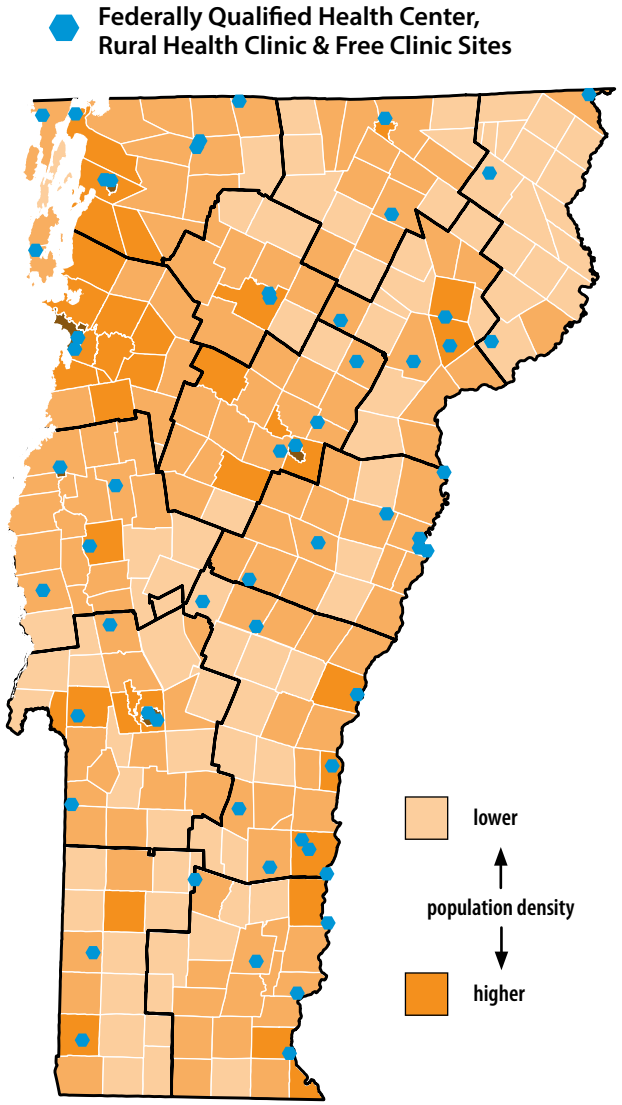
Federally Qualified Health Centers are health care practices that provide high quality, comprehensive primary care and preventive services. They offer these services even if the patients don't have health insurance or cannot pay the full cost. Payment is on a sliding scale basis.

Rural Health Clinics are located in rural, medically underserved areas to increase access to primary care for patients with Medicaid and Medicare.

Free Clinics offer their services to uninsured and low income individuals, at nominal or no cost. They also help patients find medical or dental care, and enroll in health insurance plans.

Health Clinics for the Underserved

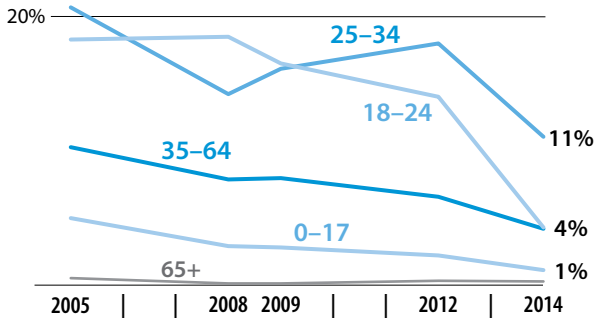
American Community Survey • 2016
Bi-State Primary Care Association • 2018



Uninsured Vermonters, by Age

Vermont Household Health Insurance Survey • 2005–2014

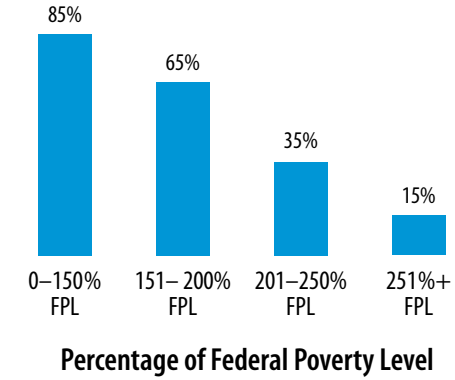
% of Vermonters who do not have any form of insurance



Under-insured Vermonters, by Poverty Level

Vermont Household Health Insurance Survey • 2014

% of Vermonters with private health insurance who are under-insured (age 0-64)

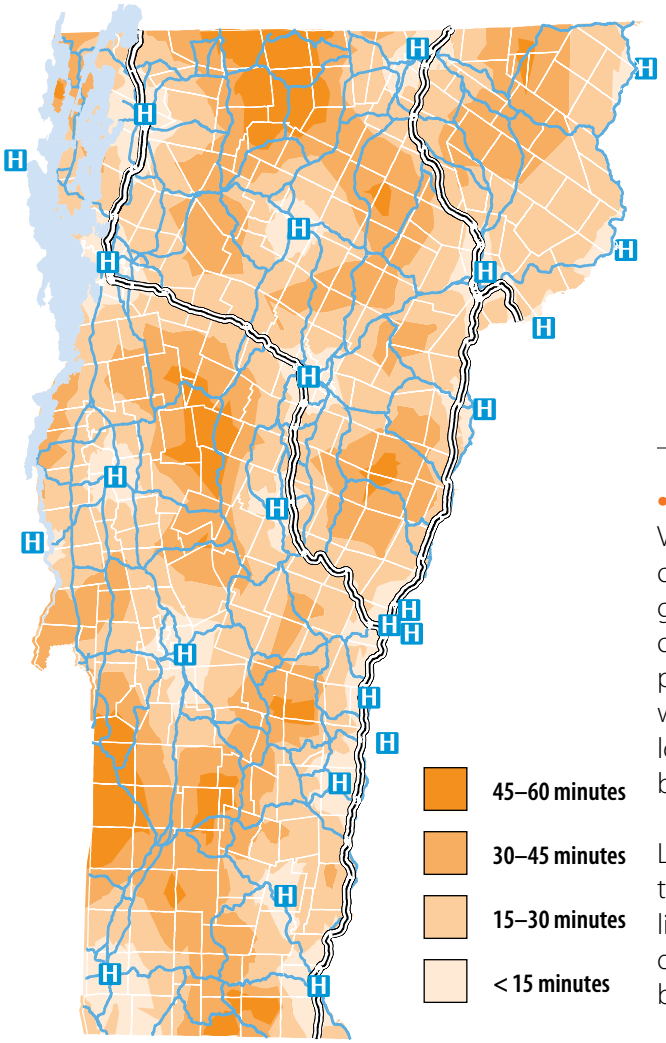


healthvermont.gov/systems

Hospital Drive Time

Vermont Department of Health /GIS • 2018

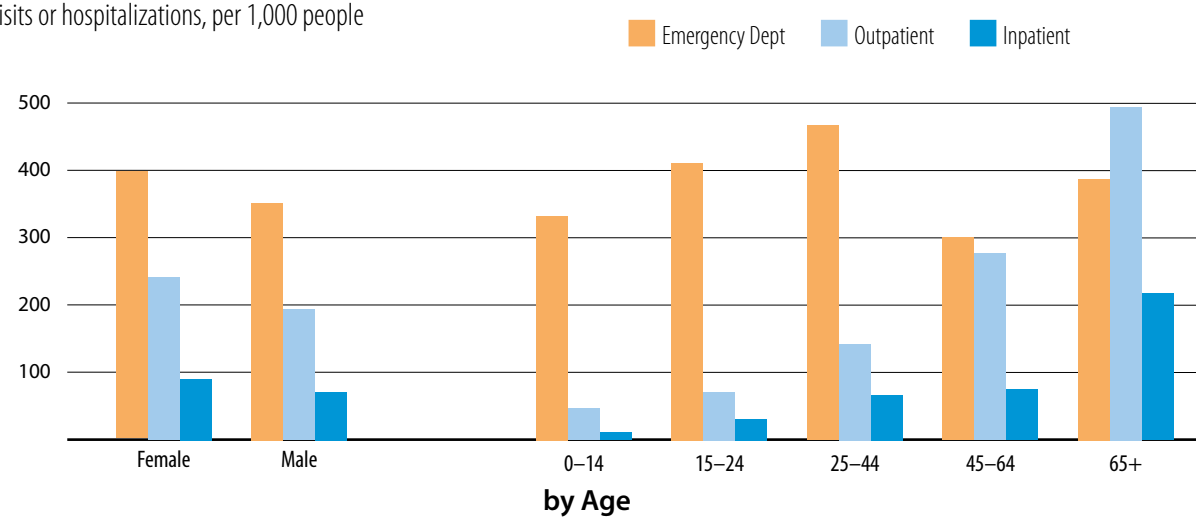
minutes it takes to drive to a hospital in or near Vermont



Hospital Utilization

Vermont Uniform Hospital Discharge Data Set • 2015

visits or hospitalizations, per 1,000 people



• How do you get to medical care?

Vermont's 14 non-profit hospitals and network of health care systems are well distributed geographically. However, the rural layout of our state, the many miles of dirt roads, limited public tranportation in some areas, and severe weather events all contribute to making the logistics of getting to a medical facility another barrier to accessing care.

Long driving times may markedly influence treatment patterns. Depending on where you live, it could take more than 45 minutes to drive to the nearest hospital. Drive times may be even longer to get to specialty care.

• Hospital Utilization

Hospitals are an integral part of the health care system, and hospital utilization data is useful in measuring trends in emergency department, outpatient and inpatient visits for chronic illnesses, infectious diseases, injuries and other emergencies. Such hospital utilization data is reflected throughout this assessment.

Overall in Vermont, hospital utilization of all types is higher for females compared to males. Both inpatient and outpatient hospitalizations increase with age. Vermonters age 25 to 44 are most likely to go to the emergency department, and those age 45 to 64 are least likely.

Methodology & Data Sources

This assessment employs methods from a variety of fields: public health, community engagement, qualitative and quantitative analysis, performance improvement, communication and visual design. The methodology used incorporates the Mobilizing for Action through Planning and Partnerships (MAPP) framework, with guidance developed by the Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officials (NACCHO). We have worked to meet standards and measures as outlined by the Public Health Accreditation Board (PHAB).

The data presented is extensive, but does not include all population indicator data available for Vermont. Specific charts, maps, graphs and tables were selected by epidemiologists and public health experts based on five criteria:

Magnitude	Are many Vermonters affected? Is the problem increasing?
Severity	Does this cause a high cost to health care, or lives lost?
Health Status	Are we in worse or better health than the U.S.? The region?
Equity	Are there differences among populations within Vermont?
Actionable	Can public health interventions have an effect?

The data selected was then shared with content experts and partners through the Advisory Committee and a public comment period. Health Department staff and other data stewards made revisions and additions based on this feedback.

Reliability & Validity

This assessment relies heavily on data collected by the Health Department. The data was chosen because it is systematic, reliable, and validated for public health surveillance. Other data, including the U.S. Census and American Community Survey, are frequently accessible online for analysis. All analysis included here represents current best practices in surveillance, epidemiology, and qualitative methods. However, methods and best practices evolve. For example, categorization of race/ethnicity, sexual orientation, and gender identity have changed over time and continue to present challenges to consistent measurement and interpretation.

Definitions – Statistical Analysis

AGE ADJUSTED: These are rates that would have been observed if the population under study had the same age distribution as the selected 'standard' population. This allows for comparisons across populations and geographies that differ in age distribution.

STATISTICALLY SIGNIFICANT: This refers to the likelihood that a relationship between two or more variables is caused by something other than random chance. To determine whether a result is statistically significant, an analyst will perform a hypothesis test and calculate a p-value. Depending on the dat-source, this report includes statistical comparisons using 95% confidence intervals and p-values of ≤ 0.05.

SMALL NUMBERS: To protect confidentiality, and ensure statistical reliability, validity and accurate results, data is not included if the source has insufficient numbers. Often, to overcome this challenge, analysis will combine years of data to increase the size. For example, if one year of Behavioral Risk Factor Surveillance System data is too small to show comparisons by race, three years of data can be combined. This can limit trend analysis and may mask recent changes in the indicator.

Definitions – Data Interpretation

INCIDENCE: Incidence rate is the number of newly appearing cases of the disease per population over a period of time.

PREVALENCE: Prevalence rate is the proportion of individuals in a population who have a particular disease or attribute at a specific point in time over a specific period of time. Prevalence differs from incidence in that prevalence includes all cases, both new and preexisting, in the population at a specific time, whereas incidence is limited to new cases only.

RATE: A rate is the ratio of the frequency of events during a specific period of time, divided by the number at risk of the event during that time period. For example, the infant mortality rate can be calculated by taking the number of infant deaths per 1,000 live births during a calendar year.

healthvermont.gov/sites/default/files/documents/pdf/Data_Encyclopedia.pdf

Data Sources & References

VERMONT

Agency of Human Services

Department of Health
- Arbovirus Surveillance
- Behavioral Risk Factor Surveillance System
- Cancer Registry
- Chemical Disclosure Program
- Early Aberration Reporting System
- Enhanced HIV/AIDS Reporting System
- Envision Program
- Food & Lodging Inspection Data
- Health Care Provider Census
- Health Laboratory Water Testing Data
- Healthy Homes & Lead Poisoning Prevention Surveillance
- Household Health Insurance Survey
- Immunization Registry
- Oral Health Survey
- Pregnancy Risk Assessment Monitoring System
- Radon Mitigation Survey
- Reportable Disease Surveillance
- Substance Abuse Treatment Information System
- Vital Statistics
- WIC: Special Supplemental Nutrition Program for Women, Infants & Children
- Youth Risk Behavior Survey

Department of Vermont Health Access
- Blueprint for Health Clinical Registry
- Medicaid

Bi-State Primary Care Association

Green Mountain Care Board
- Vermont Uniform Hospital Discharge Data Set

Agency of Commerce & Community Development

Agency of Natural Resources

Department of Environmental Conservation
- Drinking Water Watch
- Lake Champlain Committee

Agency of Transportation
- Governor's Highway Safety Program Data
- Public Transit Route Performance

UNITED STATES

Agency for Healthcare Research & Quality
- Health Care Cost & Utilization Project

Centers for Disease Control & Prevention
- Chronic Disease Cost Calculator
- Healthy People 2020
- National Center for Health Statistics
- National Healthcare Safety Network
- National Immunization Survey
- National Notifiable Disease Surveillance System
- National Survey for Children's Health

Department of Health & Human Services

National Cancer Institute
- Surveillance, Epidemiology & End Results Registries (SEER)

National Highway Traffic Safety Administration

National Oceans & Atmospheric Administration

Substance Abuse & Mental Health Services Administration

U.S. Census Bureau & U.S. Bureau of Labor Statistics
- American Community Survey
- Annual Social & Economic Supplement to the Current Population Survey

U.S. Department of Labor/ Occupational Safety & Health Administration
- Annual Survey of Occupational Injuries & Illnesses

State Health Assessment Partners

AALV
AALV Youth Group
Alzheimer's Association
American Cancer Society
American Lung Association
Black Lives Matter Vermont
Blue Cross Blue Shield of Vermont
Brain Injury Association of Vermont
Building Bright Futures
Center for Health & Learning
Champlain Valley Head Start
Community of Vermont Elders (COVE)
Disability Rights Vermont
Efficiency Vermont
Greater Burlington YMCA
Green Mountain Care Board
Green Mountain Crossroads
Green Mountain Self Advocates
Howard Center
Hunger Free Vermont
Lund Center
Migrant Justice/Justicia Migrante
Nulhegan Abenaki Tribe
OneCare

Published June 2018

Advisory & Steering Committee Participating Organizations

Outright Vermont
Permanent Fund
Population Health Systems
Pride Center of Vermont
Rights & Democracy
Special Olympics Vermont
Spectrum Youth & Family Services
Sudanese Foundation of Vermont
United Ways Vermont/2-1-1
USCRI Vermont Refugee Resettlement Program
University of Vermont Medical Center
UVM Center on Disability & Inclusion
UVM Extension Vermont Migrant Education Program
UVM Children's Hospital
UVMMC Community Health Improvement
Vermont Area Health Education Center Network
Vermont Association of Area Agencies on Aging
Vermont Association for the Blind & Visually Impaired
Vermont Association of Hospitals & Health Systems
Vermont Association of the Deaf
Vermont Care Partners
Vermont CARES
Vermont Child Health Improvement Program
Vermont Commission on Women
Vermont Dental Hygienists Association
Vermont Developmental Disabilities Council
Vermont Ethics Network
Vermont Family Network
Vermont Farm Health & Safety Coalition
Vermont Food Bank
Vermont Hindu Temple
Vermont Housing Finance Agency
Vermont League of Cities & Towns
Vermont Legal Aid
Vermont LEND (Leadership Education in Neurodevelopmental Disabilities)
Vermont Network Against Domestic & Sexual Violence
Vermont Principals Association
Vermont Psychiatric Survivors
Vermont Recovery Network
Vermont State Dental Society
Veterans in Vermont
VNAs of Vermont
Voices for Vermont's Children
VT FEED-Shelburne Farms
Youth Safety Council of Vermont

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