

The Health Disparities of Vermonters • 2010



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To reduce health disparities in Vermont

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March 2010

More than 20 years ago, the Institute of Medicine defined public health as “what we as a society do to collectively assure the conditions in which people can be healthy.”

Over the past decade, Vermonters have time and again been judged, by many researchers and by many measures, to be among the healthiest citizens of any state. Vermont is notable for lower smoking rates, lower prevalence of obesity, and lower rates of preventable death, among other important measures.

The health status of our population as a whole is truly good to excellent. But when we take a closer look at ourselves and the social determinants of health – our collective access to education, jobs, a living wage, healthy foods, medical care, safe housing and healthful, supportive and connected communities – we find another story.

Too many of us, especially younger, less educated and lower income Vermonters, experience the consequences of health disparities that are largely preventable.

What is a *health disparity*? In purely analytical terms, it is a measure of health that sets one group of people apart from another. In human terms, it amounts to real differences in years of healthy life enjoyed by one group compared to another.

The following pages present information, maps, data and trends that highlight health disparities as they exist today in our state, as well as recommended actions that can be taken to reduce these disparities.

This is the true calling of public health, and we ask government, communities and individuals to continue to work together toward our common goal: to better the health of *all* Vermonters.

Reader's Guide

Data Sources

The information in this report on health disparities among Vermonters comes from a variety of sources, including birth and death records, hospital discharge data, personal interviews and telephone surveys.

Unless otherwise noted, data are for adults age 18 and older (or 25 and older in the when referring to educational status) and are from the year 2008.

United States

Centers for Disease Control & Prevention
Environmental Protection Agency
Federal Bureau of Investigation
Kaiser State Health Facts
U.S. Bureau of Labor Statistics
U.S. Census Bureau
Vital Statistics System

Vermont

Agency of Human Services
Dept. of Health

- Behavioral Risk Factor Surveillance System (including the Asthma Callback Survey)
- Blood Lead Surveillance System
- Cancer Registry
- Children with Special Health Needs
- Dentist Survey
- Farmer Health Survey
- HIV, AIDS, & Sexually Transmitted Disease Program
- Immunization Registry
- Oral Health Survey
- Physician's Survey
- Pregnancy Risk Assessment Monitoring System
- Special Supplemental Nutrition Program for Women, Infants & Children (WIC)
- Vital Statistics System
- Youth Risk Behavior Surveillance System

Agency of Transportation
Dept. of Banking, Insurance, Securities
& Health Care Administration (BISHCA)
• Uniform Hospital Discharge Data
Dept. of Housing & Urban Development
• Point in Time Survey
Dept. of Labor
Dept. of Taxes
Joint Fiscal Office
• Basic Needs Budgets & the Livable Wage
University of Vermont
• Center for Rural Studies
VT Center for the Deaf & Hard of Hearing
VT Coalition of Clinics for the Uninsured
VT Foodbank
VT Housing Council & Vermont Housing
Awareness Campaign
VT Internet Service Provider Dataset
VT Office of Economic Opportunity
• Emergency Shelter Grant Program

With special thanks to –

- Friends of Burlington Gardens
- VT Agency of Human Services
- VT Agency of Transportation
- VT Department for Children & Families
- VT Department of Education
- VT Department of Public Safety
- VT Foodbank

Federal Poverty Level

Federal Poverty Guidelines are issued each year by the U.S. Department of Health & Human Services. They are a national measure of poverty and are used to determine eligibility for an array of programs and services. These guidelines are sometimes referred to as the Federal Poverty Level (FPL), as they are in this report.

While all data presented in this report use the current Federal Poverty Level measure, there is a movement underway to revise the method the federal government uses to measure poverty. The current measure, developed in the 1960s, estimated poverty based on the assumption that Americans spend approximately one-third of their after-tax income on food.

Proponents of the new method argue that families typically spend about one-seventh of their income on food, but spend much more than that on housing, transportation, and child care expenses. The current method also does not take non-cash assistance such as food stamps, housing subsidies and tax credits into consideration.

Reporting Race & Ethnicity

For more than 20 years, current standards in the U.S. Office of Management and Budget (OMB) Statistical Policy Directive No. 15 have provided a common language to promote uniformity and comparability for data on race and ethnicity. These data standards were developed in cooperation with federal agencies to provide consistent data on race and ethnicity throughout the federal government. These standards came about, in large measure, from new responsibilities for enforcing civil rights laws; data were needed to monitor equal access in housing, education, employment, and other areas, for populations that had historically experienced discrimination and differential treatment because of their race or ethnicity.

Using these standards, race and ethnicity have been reported in the decennial census household surveys, on administrative forms (e.g., school registration and mortgage lending applications), and in medical and other research.

Especially since the 1990 census, these standards have come under criticism from those who believe that the minimum categories set forth in Directive No. 15 do not reflect the current diversity of the population, primarily a result of expanded immigration and interracial marriage.

In response to these observations, in July 1993 the OMB started a comprehensive review of the current categories for data on race and ethnicity.

As a result of the review, on January 1, 2003, all federal programs were required by the OMB to adopt revised standards for collecting and reporting racial and ethnic status. These standards were published in the *Federal Register* on October 30, 1997, under the title: “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.”

This classification provides a minimum standard for maintaining, collecting, and presenting data on race and ethnicity for all federal reporting purposes. Additional categories are permitted, provided they can be aggregated to the standard categories. The categories in the classification are social-political constructs, and should not be interpreted as being scientific or anthropological in nature. They are not to be used as determinants of eligibility for participation in any federal program, but should be used for statistical reporting, general program administrative and grant reporting, civil rights and other compliance reporting, and presentation of data on race and ethnicity.

Federal Categories & Definitions:

- **American Indian or Alaska Native**

A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

- **Asian**

A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, Philippine Islands, Thailand, and Vietnam.

- **Black or African American**

A person having origins in any of the black racial groups of Africa. Terms such as “Haitian” can be used in addition to “Black or African American.”

- **Hispanic or Latino**

A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

- **Native Hawaiian or Other Pacific Islander**

A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

- **White**

A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Respondents shall be offered the option of selecting one or more racial designations.

Reference

www.whitehouse.gov/omb/rewrite/fedreg/ombdir15.html

Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.



Income

Goal

A healthy standard of living for all

Income is the most common measure of socioeconomic status, and a strong predictor of the health of an individual or community.

When assessing the health of a population, considering income apart from education and occupation is nearly impossible. Having enough money is closely tied to both, and to the greater realm of social, economic and environmental resources that favor good health. A supply of fresh and nutritious foods, access to reliable health insurance

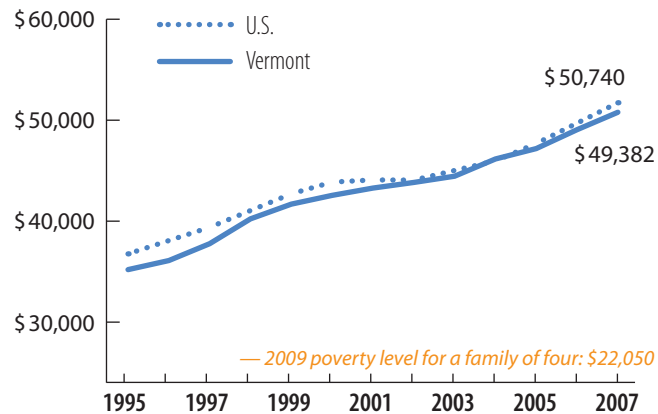
and quality medical care, safe housing in communities that encourage physical activity, play, learning, social and civic interaction, and discourage smoking and other unhealthy behaviors – these are all income-related predictors of optimal health.

Wealth = health

Health tracks income. Studies in the U.S. and Europe show a distinct relationship between income and health. The greater the income, the more likely a person will enjoy more years of healthy life. The lower the income, the greater the likelihood a person will suffer from chronic conditions such as diabetes, heart disease and stroke, and face untimely death.¹

Income Trends

Median household income, VT and U.S.



What is poverty?

Poverty can be defined as the lack of means to provide material needs or comforts. In terms of dollars, federal poverty guidelines are set each year by the U.S. Department of Health & Human Services as a national measure used to determine eligibility for an array of programs and services. These guidelines are sometimes referred to as the Federal Poverty Level, or FPL.

> The 2009 poverty level for one person is \$10,830 in annual income, and \$22,050 for a family of four.²

> In Vermont for 2005 to 2007, the median income per person was \$26,223, and the median household income was \$49,382.³

Definitions

Household Income = The pooled income of all members of a household.

Family Income = This is NOT the same as household income, as it only includes households with two or more people related by blood, marriage, or adoption.

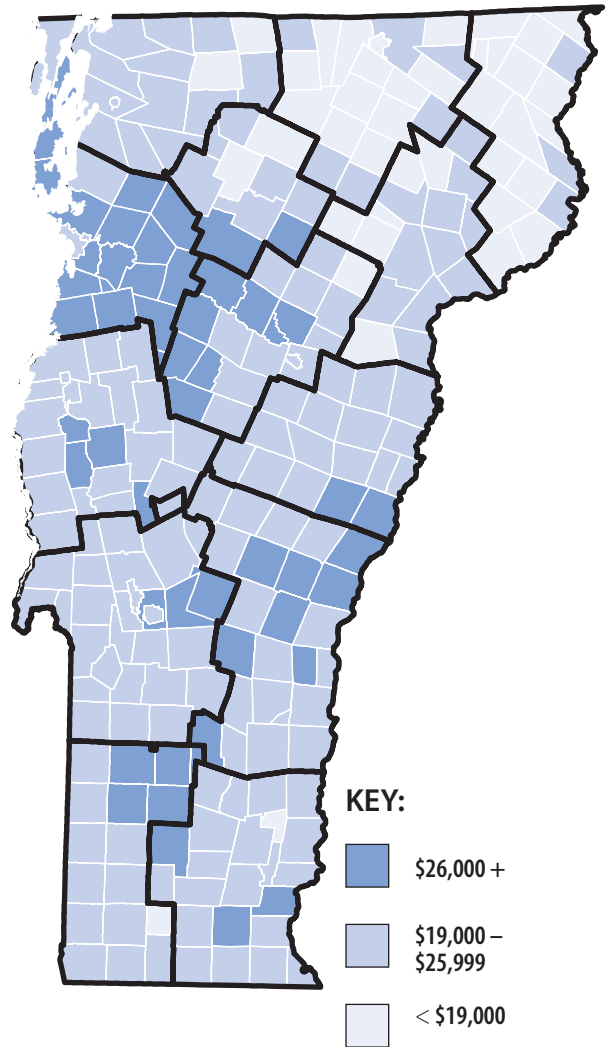
Median Income = Middle point of all incomes measured.

Median Household Income = Middle point of all the household incomes measured.

Poverty = Lack of means to provide for material needs or comforts. Every year the U.S. government sets Federal Poverty Levels (FPL). These are guidelines used to determine income eligibility for an array of programs.

Income Distribution

Average personal adjusted gross income per person
Vermont income tax returns, by town • 2007



Family Size % of Federal Poverty Level (FPL) • 2009

	100%	130%	185%	250%
1	\$10,830	\$14,079	\$20,036	\$27,075
2	\$14,570	\$18,941	\$26,955	\$36,425
3	\$18,310	\$23,803	\$33,874	\$45,775
4	\$22,050	\$28,665	\$40,793	\$55,125
5	\$25,790	\$33,527	\$47,712	\$64,475
6	\$29,530	\$38,389	\$54,631	\$73,825
7	\$33,270	\$43,251	\$61,550	\$83,175
8*	\$37,010	\$48,113	\$68,469	\$92,525

* For families with more than 8 people, add \$3,740 for each additional person

Who is poor in Vermont?

While the median household income has climbed steadily over the past decade, both in the state and nationally, there are still too many Vermonters struggling to make ends meet.

In Vermont, from 2005 to 2007:

> 7% of all families reported their past year's income to be below the poverty level.

> 13% of families with children under the age of 5 reported their past year's income to be below the poverty level.

> 40% of families with a single mother and children under the age of 5 reported their past year's income to be below the poverty level.³

In Vermont, low income people are more likely to be:

- > young (18 to 34 years old)
- > less educated
- > unemployed or unable to work
- > female
- > a member of a racial or ethnic minority

What the Federal Poverty Level means

Government programs, both federal and state, often use a percentage of the poverty level to determine eligibility. This is done because many households earning above the poverty level still lack sufficient income to meet basic needs. People who earn as much as 250 to 300 percent of the Federal Poverty Level can still be considered low income:

> Eligibility guidelines for free or reduced price meals and milk in school are households earning 130% to 185% of the poverty level.⁴

> Families with an income below 185% of the poverty level are income-eligible for federal WIC food and nutrition education provided by the Health Department.

> Women who earn up to 250% of the poverty level are eligible for cancer and heart health screenings through the Health Department's *Ladies First* program.

Health, Education & Food Safety Net Programs

% of Federal Poverty Level (FPL) eligibility and estimated enrollment in Vermont • June 2009

% FPL	Program	Enrollment
100%	Head Start pre-school education	1,542 per year
130%	School Meals - free & reduced (up to 185%)	29,000 per year
130%	3SquaresVT (formerly food stamps)	76,000 per month
130%	Commodity Supplemental Food Program (to 185%)	3,800 per month
185%	WIC: Supplemental Nutrition Program for Women, Infants & Children	24,239 per year
185%	Farm to Family food coupons	4,885 households per year

> And uninsured Vermonters are eligible for a variety of public health insurance programs, with eligibility based on percentages of poverty level up to 300%.

The cost of living in Vermont

Living in Vermont can be expensive compared to elsewhere in the U.S., and federal poverty guidelines may not take into account cost-of-living differences across the states.

> In Vermont, a family of four would have to earn over \$10,000 more than the same size family elsewhere in the U.S. to have equal purchasing power.⁵

Due to the higher cost of living here, many Vermonters may not qualify for the help they need.



Vermont Livable Wage

Hourly pay by family type, rural or urban • 2008

Family Type	Urban	Rural
1 person	\$17.08	\$16.41
1 parent + 1 child	\$25.04	\$23.04
1 parent + 2 children	\$31.37	\$28.58
2 adults + 0 children	\$13.10	\$13.04
2 adults + 2 children (1 wage earner)	\$31.23	\$30.11
2 adults + 2 children (2 wage earners)	\$20.07	\$18.75

Definition

Liveable Wage = The hourly wage for work needed to provide the essential needs of daily life such as food, shelter, clothing, transportation, health care, etc.

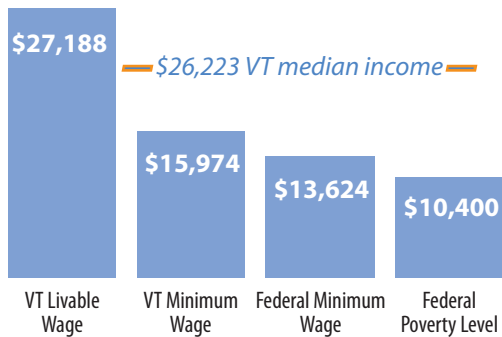
To highlight the cost of living, in 1999 the Legislative Liveable Income Study Committee created a *Basic Needs Budgets and Livable Wage* calculation for Vermont, which is now updated every year. This calculation takes into account the estimated costs for essential needs such as food, housing, transportation, child care, clothing, household expenses, telecommunications, health and dental care, renter's insurance, life insurance, savings and taxes. Budgets are based on family size and whether the family lives in an urban or a rural part of the state.⁶

> In July 2009, the federal minimum hourly wage was \$7.25.⁶

> At \$8.06 per hour, Vermont's minimum wage is higher than the federal minimum wage, but it is still far less than the wage determined to be "livable" in our state.⁷

Livable Wage Comparison

Vermont per capita income & wage levels • 2008





Health Care & Income

Vermont adults age 18-64 • 2008

income less than
2½ times
poverty level



22%

income more than
2½ times
poverty level



6%

those who report having no health insurance

42%

9%

those who report they needed a doctor,
but did not go due to cost

38%

16%

those who have not visited a dentist
in the past year

The high cost of health care

Studies have shown many income-related disparities in health care. In Vermont, low income people are most likely to report having no health insurance, not going to see a doctor due to cost, and not seeing a dentist in the past year.

To improve access to health care for all, Vermont has progressively implemented a series of health insurance programs for adults and children. These programs are now known as Green Mountain Care.

(See Access to Care chapter for more about state public health insurance programs.)

The health costs of poverty

Income is correlated with adult health habits and overall health.

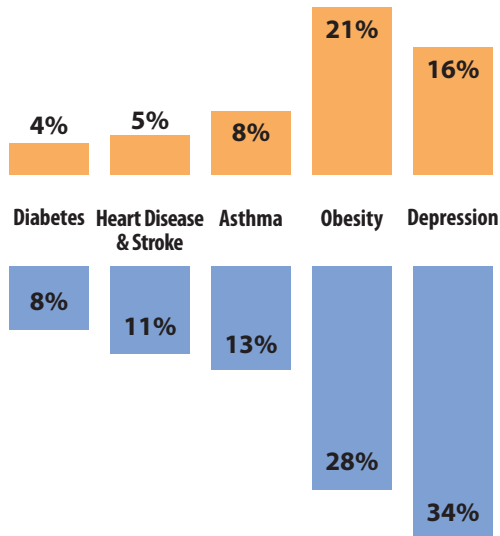
> Lower income Vermonters report higher rates of depression and chronic conditions such as obesity, asthma, heart disease, stroke, and diabetes.

> 15% of low income Vermont adults have two or more chronic conditions, compared to 7% of higher income Vermonters.

Chronic Conditions & Income

Vermont adults who report having a chronic condition, by Federal Poverty Level • 2008

HIGHER INCOME % with income more than 2½ times poverty level



LOWER INCOME % with income less than 2½ times poverty level

Definition

Food Insecurity = Refers to the lack of access to enough food to fully meet one's basic nutritional needs, due to lack of money.

> As income rises, a person's perception of his or her general health also improves.

• Nutrition

People without food security must too often compromise quality for quantity, eating higher-calorie but lower cost and nutritionally deficient foods. Over time, food insecurity can lead to malnutrition, obesity and chronic illness. According to Vermont Behavioral Risk Factor Surveillance System data:

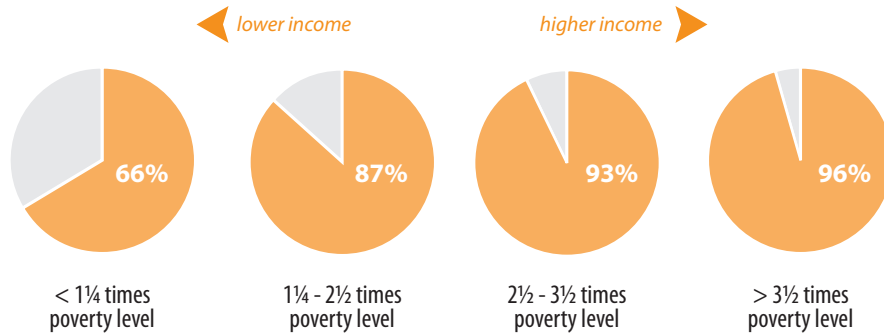
> 16% of low income Vermonters eat less than they feel they should because there is not enough food, or money to buy food.

> 28% of Vermonters who earn less than 250% of the poverty level are obese.

More than half of all the babies born in Vermont and their families benefit from the healthy food package they receive through the WIC supplemental nutrition program. Offerings include whole grain and lower-fat foods, and a debit-like card that enables them to buy fresh fruit and vegetables at a number of Vermont markets.

Personal Health & Income

Vermont adults who report they are in good or excellent health, by Federal Poverty Level • 2008



• Physical inactivity and obesity

Low-income people are less likely to have regular physical activity and more likely to become obese than people with higher incomes—and this trend starts in early childhood.

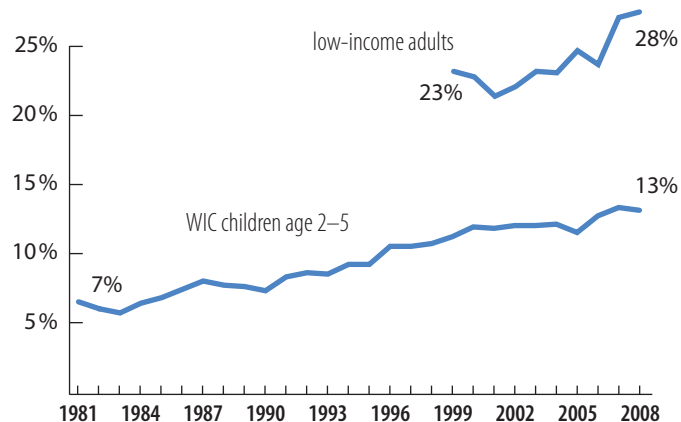
> 39% of low income adult Vermonters engage in regular physical activity, compared to 47% of those who are not low income.

• Smoking

Low income Vermonters are also more likely to smoke. Smoking is still the leading killer, causing or aggravating asthma, cancer, heart disease, lung disease, stroke, pneumonia, low birthweight and infant death.

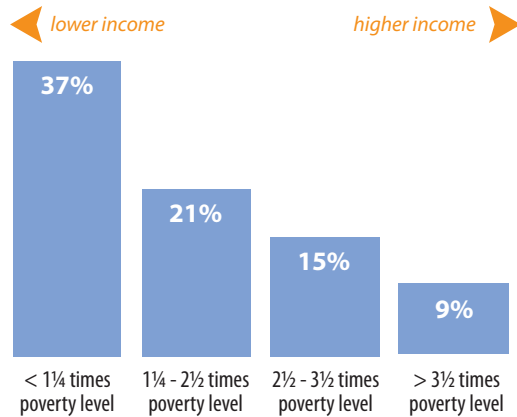
Weight & Income

% of low-income Vermonters who are obese (weighing ≥ 95th percentile Body Mass Index for age and gender)



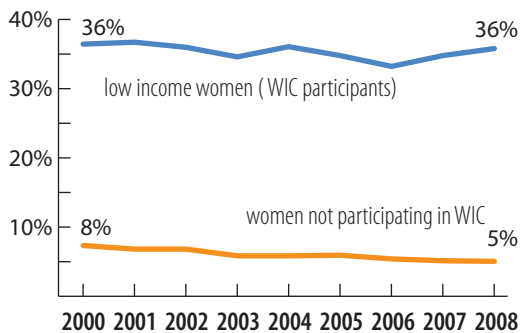
Smoking & Income

% of Vermont adult smokers, by Federal Poverty Level • 2008



Smoking during Pregnancy

% pregnant Vermonters who smoked during pregnancy



Definition

Inadequate prenatal care = Entering care later than the fourth month of pregnancy, and also having fewer than 80% of the recommended number of prenatal care visits.

Off to a less healthy start?

The most important reason for getting into prenatal care early, and continuing with regular visits, is to identify medical risks and behavioral risks (such as smoking) – or other health issues that need to be addressed early in pregnancy.

> Twice as many low income women (as represented by enrollment in WIC) have inadequate prenatal care, compared to other women.

> Seven times as many low income women (as represented by enrollment in WIC) smoke during pregnancy, compared to other women.

> And, while rates of smoking during pregnancy have decreased over the last decade among women not in WIC, smoking rates have stayed the same among low income women (as represented by enrollment in WIC).



Women who have inadequate prenatal care or who smoke during pregnancy are more likely to deliver premature or low birth weight babies. These babies are, in turn, at greater risk of not surviving to their first birthday, and of suffering some degree of disability.⁸

> 8% of low income women (as represented by enrollment in WIC) have low birth weight babies, compared to 5.5% of other women.

Breastfeeding is the cheapest, the most nutritious, and the most protective way to feed a baby during the first months of life, yet breastfeeding is less common among lower income women.

> 69% of pregnant women enrolled in WIC said they planned to breastfeed, while 91% of women not in WIC said they intended to breastfeed.▼

References

¹ *Unnatural Causes: Is Inequity Making Us Sick? California Newsreel with Vital Pictures, Inc. Presented by the National Minority Consortia of Public Television. 2008.*

² *U.S. Dept. of Health & Human Services. www.aspe.hhs.gov*

³ *U.S. Census Bureau, Vermont. Selected Economic Characteristics:*

2005-2007. www.factfinder.census.gov U.S. Census Bureau, Vermont. Small Area Income & Poverty Estimates.

www.census.gov

⁴ *U.S. Dept. of Agriculture.*

www.fns.usda.gov

⁵ *www.statehealthfacts.org*

⁶ *Basic Needs Budgets and the Livable Wage. Prepared by the Vermont Joint Fiscal Office, in accordance with Act No. 202 of 2008. January 15, 2009.*

⁷ *Vermont Dept. of Labor.*

www.vtlmi.info

⁸ *WIC/PNSS Reports, 2006 – Pregnancy Nutrition Surveillance System, Vermont Dept. of Health, Public Health Statistics, May 2008.*



Education & Occupation

Goal

Well educated citizens with opportunities to earn a living wage

Education and occupation combine with income to provide a thorough measure of socioeconomic status – and a person's socioeconomic status is one of the strongest predictors of his or her health.

Research suggests that people who complete higher levels of schooling have greater cognitive and social survival skills, such as problem-solving, teamwork, structure, routine, and dependability.¹ And gainful employment can have a beneficial effect on health, both directly and indirectly – as a way to access benefits that promote health, earn the income to pay for basic necessities and, often, to give a sense of purpose and wellbeing.

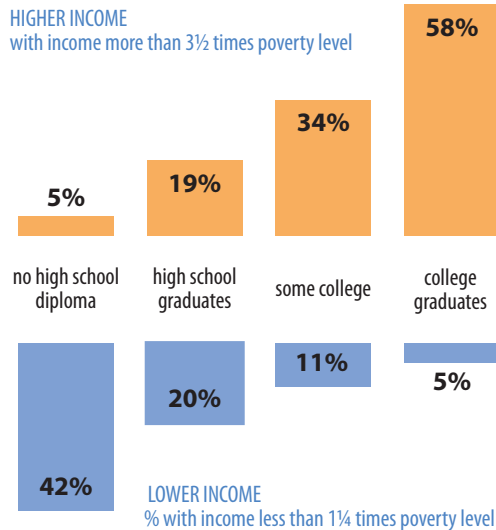
Although income, education and occupation each play a unique role in a person's overall health, all three measures are closely linked:

> While 42% of Vermonters who have less than a high school education earn an income below the federal poverty level, only 5% of those who have a college degree earn so little.

> 5% of Vermonters who had less than a high school diploma were unemployed, as compared to 2% of those who had a college degree or more.

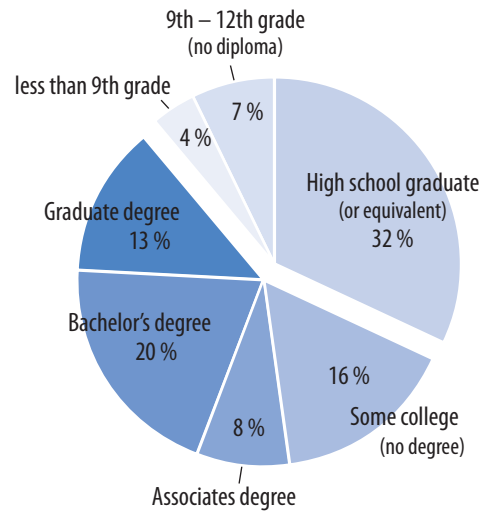
Income & Education

Vermonters age 25+ • 2008



Educational Attainment

Among Vermonters age 25+ • 2005-2007



How educated are Vermonters?

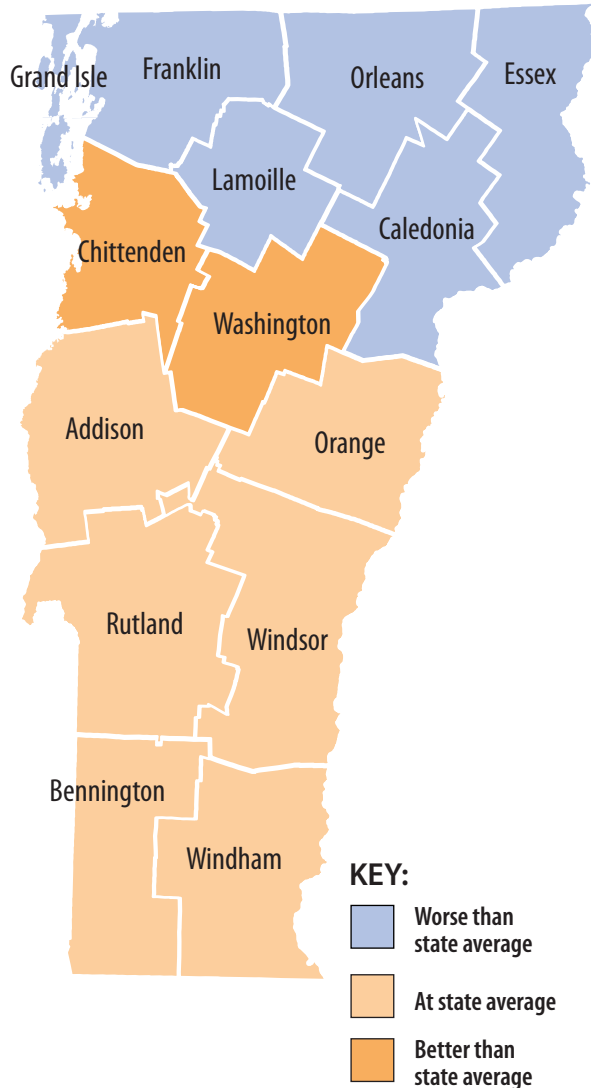
Vermonters are slightly more educated than people in the rest of the country:

- > Nearly 90% of Vermont adults have a high school education or more, compared to 84% for the U.S.²
- > 33% hold a bachelor's degree or more, compared to 27% for the U.S.²
- > Educational attainment also varies across the state. Chittenden and Washington counties have higher levels of educational attainment, while Vermont's northern counties have lower levels.



Educational Status

% of Vermonters age 25+ who have less than a high school diploma, by county • 2003-2008



Employment trends

The Vermont Department of Labor reported the state's overall unemployment rate at 6.4 percent in November 2009 – a trend up from 4.6 percent unemployed at the same time one year before. The U.S. unemployment rate is generally higher than in Vermont, at 10 percent in November 2009 and 6.8 percent the year before.

These percentages translate to about 23,100 Vermonters who are out of work, although Vermont's Agency of Agriculture estimates there are approximately 2,000 undocumented farm workers who are not reflected in these data. These workers are mostly Mexican and Spanish-speaking, who work for hourly wages and no health insurance.

Who is working and who is not?

There is some variation in unemployment rates throughout Vermont:

> Orleans, Essex and Grand Isle counties had the highest rates of unemployment in 2008, compared to Chittenden and Windsor counties, which had the lowest.

From 2003 to 2008:

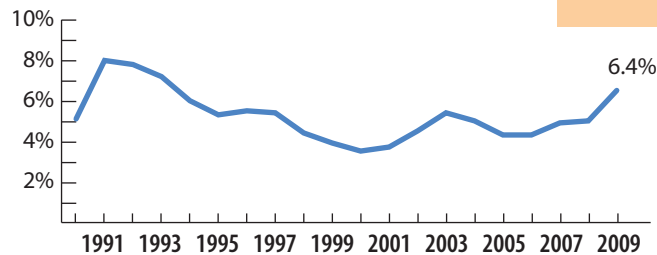
> The unemployment rate for people age 18 to 24 was 8%, compared to 4% for 35- to 64-year-olds.

> The unemployment rate for racial or ethnic minorities was 6%, compared to 4% for white, non-Hispanic people.

> The unemployment rate for adults who have never married was 8% and 6% for those who are divorced or separated – and 3% for those who are married.

Unemployment Trends

Vermont Department of Labor figures



Working in Vermont

Based on a 2005–07 community survey, Vermonters age 16+ work in the following industries:

	#	%
Educational services, health care, social assistance.....	84,967	26%
Manufacturing	38,654	12%
Retail trade.....	38,523	12%
Arts, entertainment, recreation, accommodation, food services	30,055	9%
Construction	27,390	8%
Professional, scientific, management, administrative services	26,966	8%
Finance, insurance, real estate, rental & leasing.....	16,091	5%
Public administration	15,746	5%
Other services except public administration	15,041	5%
Transportation & warehousing, utilities	11,793	4%
Wholesale trade.....	9,347	3%
Agriculture, forestry, fishing & hunting, mining	7,989	2%
Information.....	7,170	2%



Higher education = better health

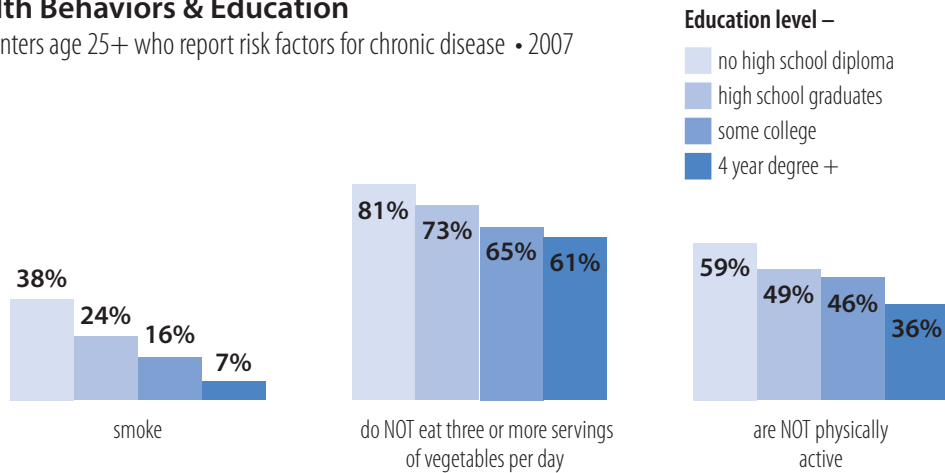
Vermonters with less than a high school education are more likely to have diabetes, heart disease, asthma, obesity and depression, compared to those who have a college degree.

> Two-thirds of people with less than a high school education report having one or more chronic conditions, compared to one-third of those who have a college degree or more.

> A person's perception of his or her own health is more positive among those who are more educated.

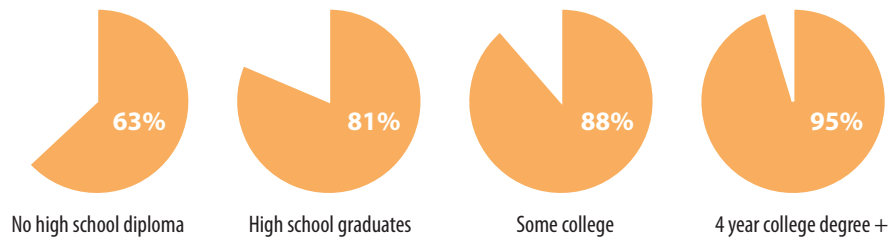
Health Behaviors & Education

Vermonters age 25+ who report risk factors for chronic disease • 2007



Personal Health & Education

Vermonters age 25+ who report they are in good or excellent health, by educational level • 2008

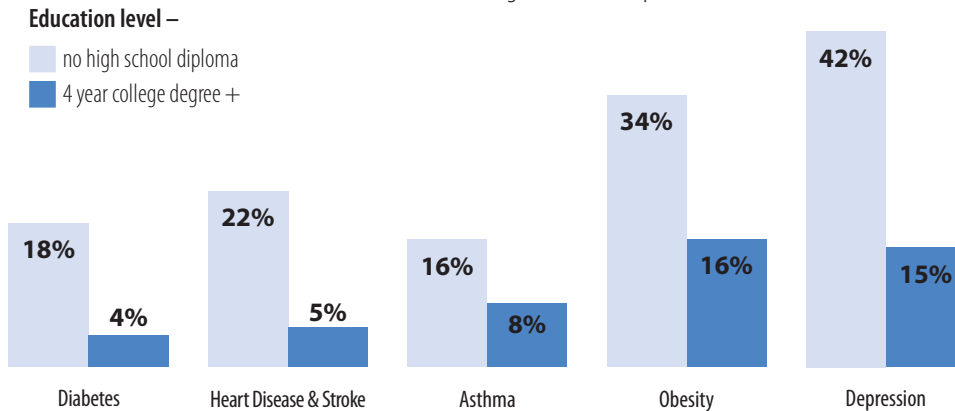


The well-known risk factors for chronic health conditions – smoking, poor nutrition, inactivity – are less common among those with more education. In Vermont, alcohol and drug use do not appear to vary according to educational attainment.

However, studies have shown that even when these risk factors are present, people with a higher socioeconomic status are less likely to suffer from chronic diseases like diabetes, heart disease and stroke. This is possibly because they do not have to struggle to meet the basic needs of daily life.

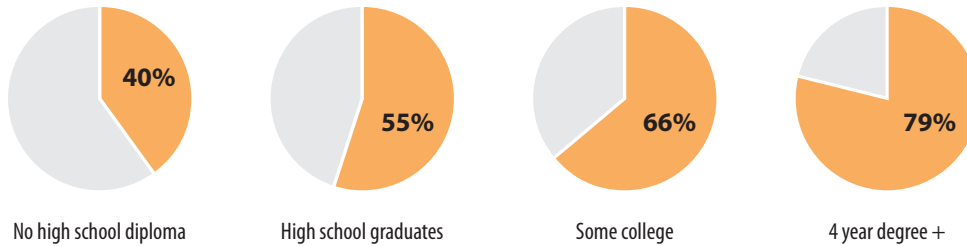
Chronic Conditions & Education

Vermonters age 25+ who report risk factors for chronic disease • 2007



Education & Pregnancy

Pregnant Vermonters who report their pregnancies were planned, by educational level • 2008



Parents' education matters

Many studies show correlations between educational attainment of the mother and birth outcomes – starting with planning for parenthood.

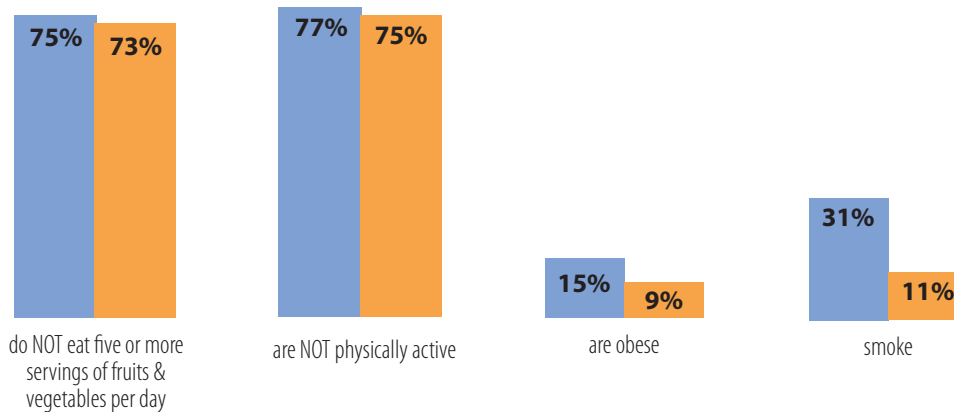
> 79% of women who hold a college degree report that their pregnancy was intended, compared to 40% of women without a high school diploma.

Smoking and drinking during pregnancy is more commonplace among less educated women. And both of these behaviors are linked to poor birth outcomes.

> Infant mortality is almost twice as high among babies born to women with less than a high school education, compared to women with a four-year college degree.

Student's Health Risk Behaviors & Mother's Education Level

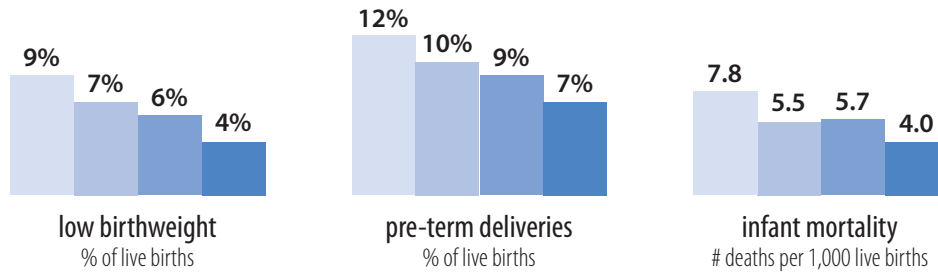
Vermont Youth Risk Behavior Survey of 8th-12th graders • 2009



Education & Childbirth

Vermont birth records • 2007

Mother's educational level –



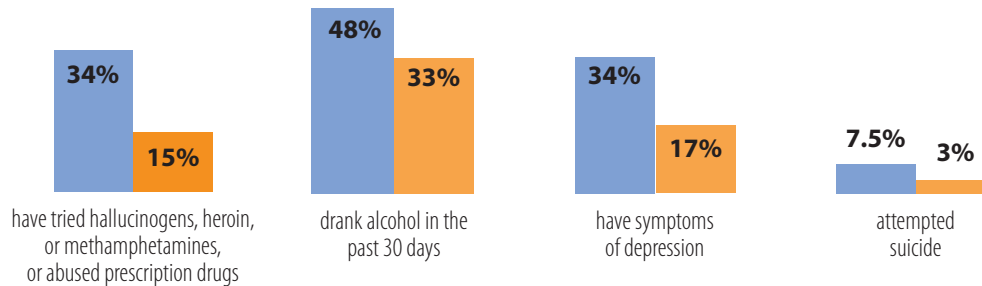
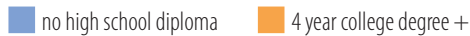
> Less educated women are more likely to have a pre-term delivery, and to have a low birthweight babies.

Maternal education appears to play a role in childhood obesity, depression and suicide attempts as well.

Children with more educated mothers are more likely to achieve higher grades in school, and more likely to engage in healthy behaviors such as not smoking, drinking or using drugs.

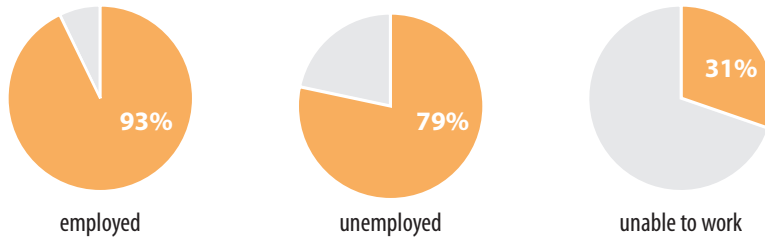
> 55% of all high school students who had a mother with less than a high school diploma reported getting As and Bs, compared to 85% of high school students with mothers who had a four year college degree or more.

Students with mothers who have –



Personal Health & Employment Status

Vermont adults who report they are in good or excellent health, by employment status • 2008



Employment = better health

Unemployment affects a person's health, and this is documented by a variety of data.

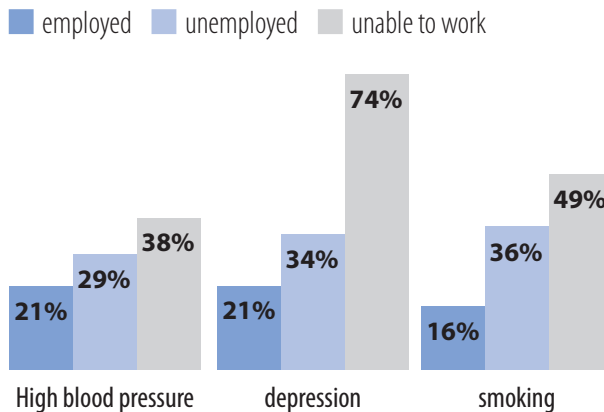
> The largest group of people who report having high blood pressure, depression and who are smokers are unemployed or unable to work.

> The percentage of Vermonters who do not have health insurance among the unemployed is over double that of people who have a job.

Unemployment can also affect community life and social wellbeing. As joblessness is more prevalent, social networks and collective engagement in solving neighborhood and community problems tends to grow weaker.

Employment & Well-being

% of high blood pressure (2005-07), depression (2008), and smoking (2008) among Vermont adults who are –

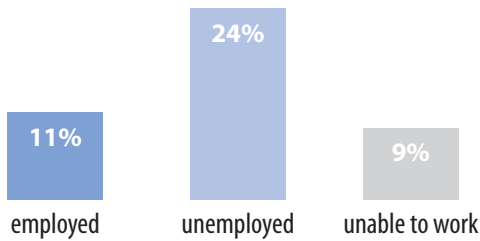


On-the-job safety, or not?

Some occupations are riskier than others. Manual labor, for example, is associated with a greater chance for certain chronic conditions and injury, exposure to toxic substances, or death. In a 2006 survey of farmer's health conducted by the Vermont Department of Health, 87 percent of owner-operator farmers reported that they had symptoms of arthritis, pain and stiffness of joints, with most having had such symptoms for more than a year.

Health Insurance & Employment

% of Vermonters without health insurance • 2008



Vermont hospital discharge data detail the range of injuries with claims related to work. In 2006:

> 8,420 visits to the emergency room were coded as worker's compensation claims.

> 274 Vermonters were hospitalized for work injuries.

> From 2003 to 2007, a total of 12 deaths were coded as worker's compensation claims. ▼

References

¹ Heras-Muney A. *The Relationship between Education and Adult Mortality in the U.S. Review of Economic Studies*. 2005; 72:189-221.

² U.S. Census Bureau. *Selected Economic Characteristics*. 2005-2007.

Vermont Emergency Dept. Visits

visits related to Workers' Comp claims per year

2002	9,600
2003	8,290
2004	8,274
2005	8,597
2006	8,420

Worker's Comp Claims

Most frequent claims resulting in emergency room visit • Vermont 2006

Cutting & piercing injuries	1,445
Overexertion & strenuous movements	1,345
Falls	1,177
Struck by objects or persons.....	764
Caught in or between objects	409
Machinery-related	242
Foreign body entering eye and adnexa	243
Struck by falling object	272
Hot substance or object, caustic or corrosive material & steam	238
Motor vehicle traffic.....	150



Housing & the Built Environment

Goal

Everyone has a safe, healthy place to live

On any given day, we are all likely to spend a substantial portion of time in our homes. So it is important for everybody to have a reliable shelter, and that the environment there be safe and healthy. A variety of health effects result when people must live in sub-standard housing, or have no place to call home.¹

Beyond housing, the “built” environment matters, too. The conditions in our community directly affect our exercise and play patterns, the kinds of foods, goods and services we can access, the quality of the air we breathe and the water we drink, and how well we are able to connect socially with other people.²

The extent to which these factors affect our health should not be underestimated. Efforts focused solely on education or encouraging behavior change—without taking into account physical and social environments—may fail to reduce health inequities.

What is homelessness?

There is more than one definition of homelessness. The McKinney-Vento Act, a federal law designed to assist people who are homeless, defines this status broadly. While also covering the more traditional images of street and shelter homelessness, this federal definition includes people who are often considered “precariously” housed.

This may mean that they double-up at the home of a friend or relative, or move from one of these places to another.

The U.S. Department of Housing & Urban Development (HUD) defines homelessness as living in a place that is “not meant for human habitation” (a car, abandoned building, etc.), as well as homeless shelters (including shelters for victims of domestic abuse who have nowhere else to go), or sub-standard traditional housing.

Too many with no place to call home

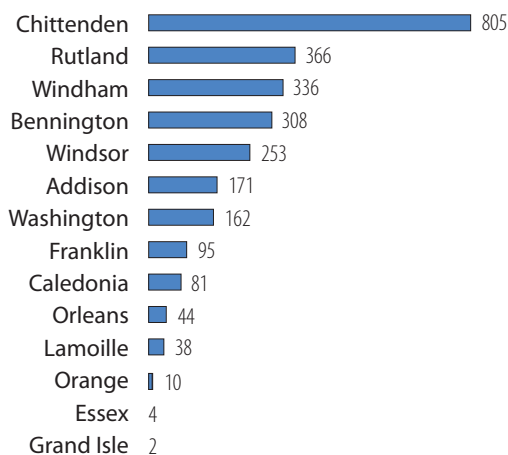
Most counts of homelessness understate the problem. For example, it is estimated that in addition to the 3,500 Vermonters counted in homeless shelters in 2008, there were an additional 1,650 homeless people in Vermont that year, for a total of more than 5,000 without a home.³

The state’s most recent point-in-time survey, conducted by the Vermont Housing Council on January 28, 2009, counted 2,666 homeless Vermonters. Of those, 1,410 were classified as homeless (as defined by HUD), 1,136 were classified as precariously housed, and 120 were not classified.

The greatest number of people contacted in that survey were living in Chittenden County, and people younger than age 35 made up most of the homeless population in Vermont.

Homeless Vermonters, # by County

Point-in-Time Survey • January 28, 2009



NOTE: Statewide unduplicated counts may not equal the sum of county totals.

Definitions

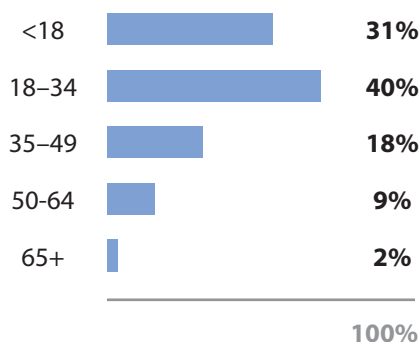
Affordable housing = A standard definition is when no more than 30 percent of a household’s income is paid out for rent, utilities, mortgage, taxes, and homeowners’ insurance.

Built Environment = The way neighborhoods are designed and maintained. The built environment includes roads and paths, common spaces and buildings, playgrounds, stores and shops, utilities, etc.

Homelessness = This can mean living in a place not meant for human habitation, to staying in a temporary shelter – to “doubling-up” at the home of a friend or relative or moving from one place to another every few nights (*precariously housed*).

Homeless Vermonters, % by Age

Point-in-Time Survey • January 28, 2009



Although the number of people counted in the 2007, 2008 and 2009 surveys has not changed dramatically, the number of homeless people who are part of a family group has grown steadily – from 928 in 2007, to 1,049 in 2008, to 1,222 in 2009.

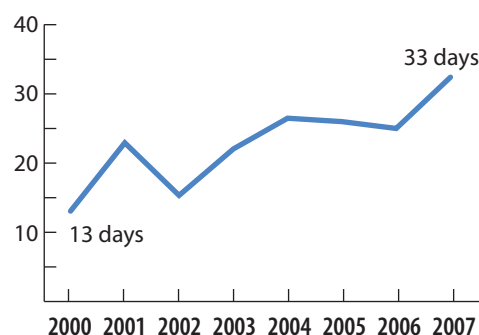
Homeless Vermonters are not always able to find a place to stay. From 2000 to 2007, the number who were able to find a room in one of the 22 state-funded homeless shelters declined, because the length of time people stayed in shelters more than doubled.

> In 2000, the total number of homeless people served by shelters in Vermont was 4,897, compared to 3,463 in 2007.

> In 2000, the average length of stay in a homeless shelter was 13 days, compared to 33 days in 2007.

Length of Stay in Homeless Shelters

Average # days per stay in a Vermont shelter



The high cost of housing

Developing more housing that is affordable for low-income people, particularly housing with supportive services, may be a key solution for many people.

The median purchase price of a home in Vermont was \$200,000 in 2008, slightly more than double the median price in 1996. To afford such a home would require an annual household income of \$63,000, plus \$14,000 cash to cover a 5 percent down payment and closing costs. Most Vermont households (61%) do not have the income to afford such a home.³

The median income for Vermont households is \$49,382.⁴ With that income, a buyer could afford a home priced at about \$163,000, assuming the buyer also had \$11,000 in cash for a down payment and closing costs.



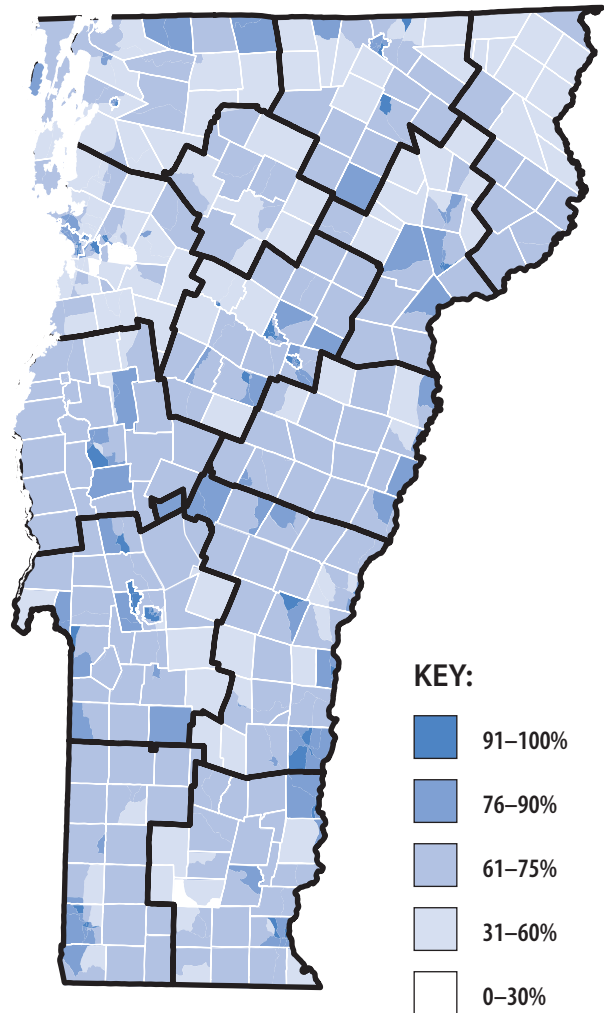
> 34% of Vermonters are living in homes considered *not* affordable (costing more than 30% of household income).⁵

To rent or not?

Renting in Vermont is not always an affordable alternative to buying. The Fair Market Rent for a modest two-bedroom apartment in Vermont was \$914 in 2009. This is a 9 percent increase since the year before, and a 63 percent increase since 1996.³ To afford the 2009 rent, a household would need to earn \$17.57 per hour (more than double the minimum wage of \$8.06 per hour), or \$36,550 annually. At least 52 percent of Vermont's non-farm workforce—more than 151,216 people—were employed in jobs paying less than that.³

> 45% of Vermonters are living in rental units considered *not* affordable (costing more than 30% of household income).⁵

Older Housing Stock
 % of housing built before 1980, by town
 • 2000 Census Block data





Indoor air quality

The physical structure and the routine maintenance of a home can affect the health of its occupants. Both children and adults who live in older or dilapidated housing can be exposed to allergens and irritants that provoke asthma and cause more severe symptoms. A Vermont survey on asthma conducted in 2006 to 2008 found that 16 percent of adults who had poorly controlled asthma reported they had seen or smelled mold (a musty odor) in their home, compared to 11 percent of adults who had well controlled asthma.

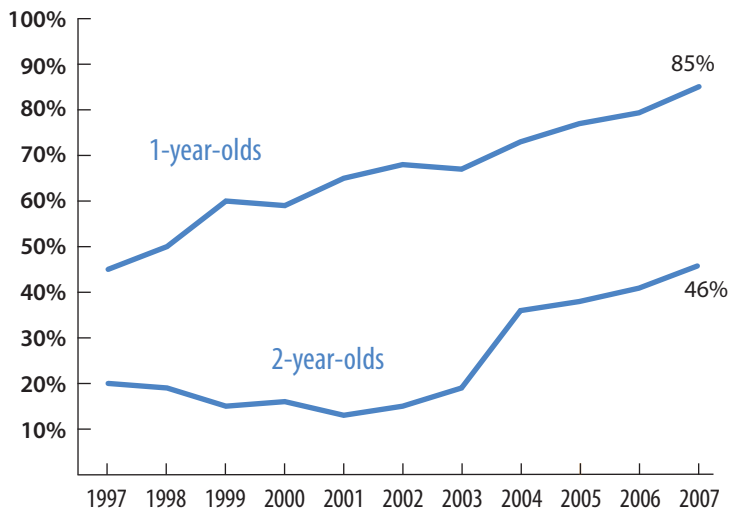
This old house may be leaded

Lead is also a concern in older housing. Lead paint and dust from lead paint are the main sources of lead exposure for children. In Vermont, as much as 70 percent of housing was built before 1978, the year

that lead was banned in residential paint due to its known toxicity.⁶ According to the 2008 Behavioral Risk Factor Surveillance System, among Vermonters with children age 6 or younger living in the household, 55 percent live in buildings built before 1978 and may be exposed to lead paint.

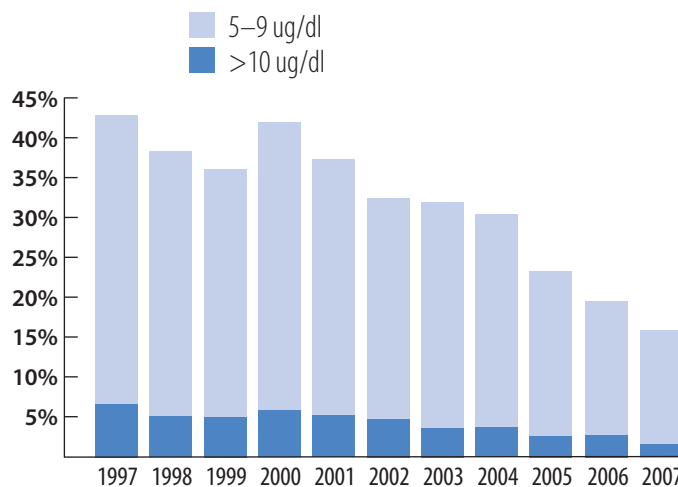
Blood Lead Level Testing

% of children tested for lead poisoning



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 poisoning. The Vermont Department of Health's Childhood Lead Poisoning Prevention Program monitors lead levels in children throughout the state, and reaches out to communities that have a higher risk for lead poisoning due to older housing stock.

Elevated Blood Lead Levels of 1-year-olds tested for lead in Vermont, % with elevated blood lead levels



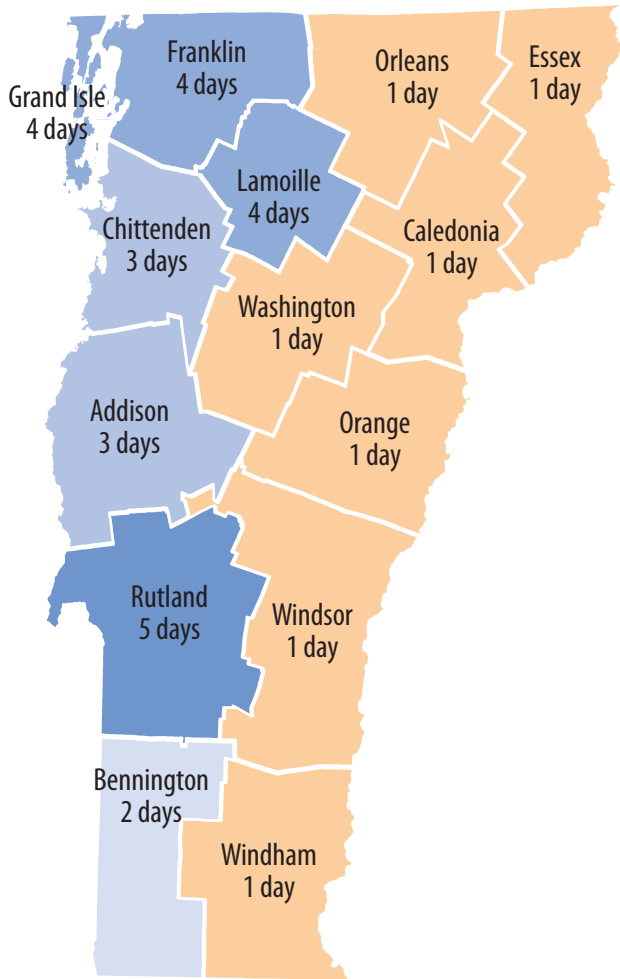
Trends in testing rates have continued to rise. In 2007, 85 percent of 1-year-olds and 46 percent of 2-year-olds were tested for lead, compared to 45 percent of 1-year-olds and 20 percent of 2-year-olds in 1997.

With more children being tested, data show a decline in the rate of children with reported elevated blood lead levels as well – from 13 percent of children tested in 1994 to 1.9 percent in 2007. However, in 2007 there were still 183 children between birth and 6 years who were identified with blood lead levels of 10 ug/dL or greater.



Air Pollution Days

Average # of days per year with high levels of fine particulate matter in the air
CDC/EPA Collaboration • 2005



Outdoor air quality

Many studies have shown that poor air quality can contribute to increases in chronic conditions, particularly respiratory illnesses, and death. Vermont has substantially less traffic congestion, commerce or industry that could contribute to poor air quality, but still there are days when high levels of fine particulate matter in the air make it risky for the very young, the very old, or people with chronic conditions such as asthma to be outdoors and physically active.

According to a 2005 collaborative study by the Centers for Disease Control & Prevention and the Environmental Protection Agency, Rutland County had the most bad air days due to high levels of fine particulate matter, and the eastern and central counties had the fewest bad air days.

Safe routes to work, school and play

Physical environments that are designed to encourage commuting to work or school by foot, bicycle, or public transit help promote physical activity by making it part of people's daily routine. Safe routes and public transportation options also expand access to jobs, education, healthy foods, social interaction, recreation and health care.



As a largely rural state, public transportation options are limited in many areas. The most recent census data shows that less than 1 percent of Vermont workers age 16 and older take some form of public transportation to work, compared to 5 percent nationally.⁵

Some larger communities do offer public transportation. In Burlington, where there is a relatively extensive network of buses, nearly 4 percent of workers take public transportation, compared to nearly 2 percent for all of Chittenden County. Compared to the rest of the U.S., however, Vermonters are walkers. Overall, about 6 percent of Vermonters age 16 and older walk

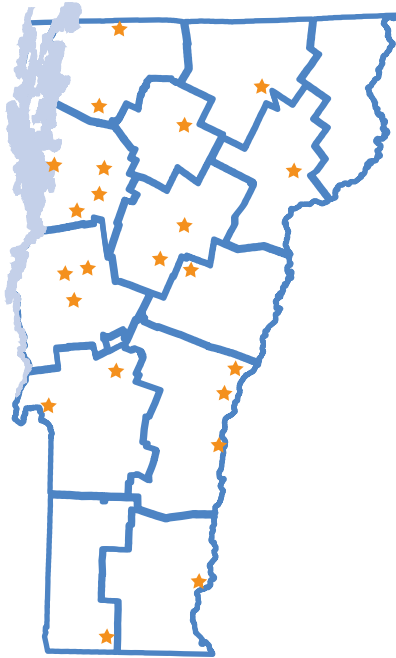
to work – twice the national average of 3 percent. In recent years, a number of communities in the state have been working to become more walkable – constructing sidewalks and creating bike paths for safe recreation and commuting to work and school.

By the end of 2008, the Vermont Agency of Transportation's Bicycle & Pedestrian Program had completed or started construction on 73 new miles of multi-use trails, funded with nearly \$35M in federal awards. An additional 100 miles of projects are in planning, including 92 miles of the Lamoille Valley River Trail. In addition to these projects, another 11 community sidewalk and other pedestrian enhancement projects were completed in 2008, totaling \$1.7M in federal awards.



Safe Routes to School

Construction of pedestrian & bike paths •2008



★ Safe Routes to School Projects:

Bristol	Elementary & Middle Schools
Burlington	CP Smith School
	JJ Flynn Elementary School
Chittenden	Frederic Duclou Barstow Memorial School
Fairfax	Bellows Free Academy
Fair Haven	Grade School
Franklin	Central School
Hartford	Dothan Brook School
Hinesburg	Community School
Hyde Park	Elementary School
Jericho	Elementary School
	Camel's Hump Middle School
Middlebury	Mary Hogan Elementary School



More communities have applied for project funding than there are funds available. For schools, approximately \$1.75M has been allocated to the Safe Routes to School Program, to fund sidewalk expansion projects and other infrastructure that promotes safe paths to schools.⁷

Montpelier	Main Street Middle School/ Union Elementary School
New Haven	Beeman Elementary School
Northfield	Elementary School
Norwich	Marion Cross School
Orleans	Elementary School
Putney	Central School
Richmond	Elementary School
Readsboro	Central School
St. Johnsbury	School
Williamstown	Elementary School
Windsor	State Street School

Safe and secure communities matter

Fear, resulting from high crime rates in a community, can keep people from feeling safe enough to use sidewalks and other multi-use trails for access to goods and services or for recreation. Unsafe communities can also lead to chronic stress among individuals in these communities.

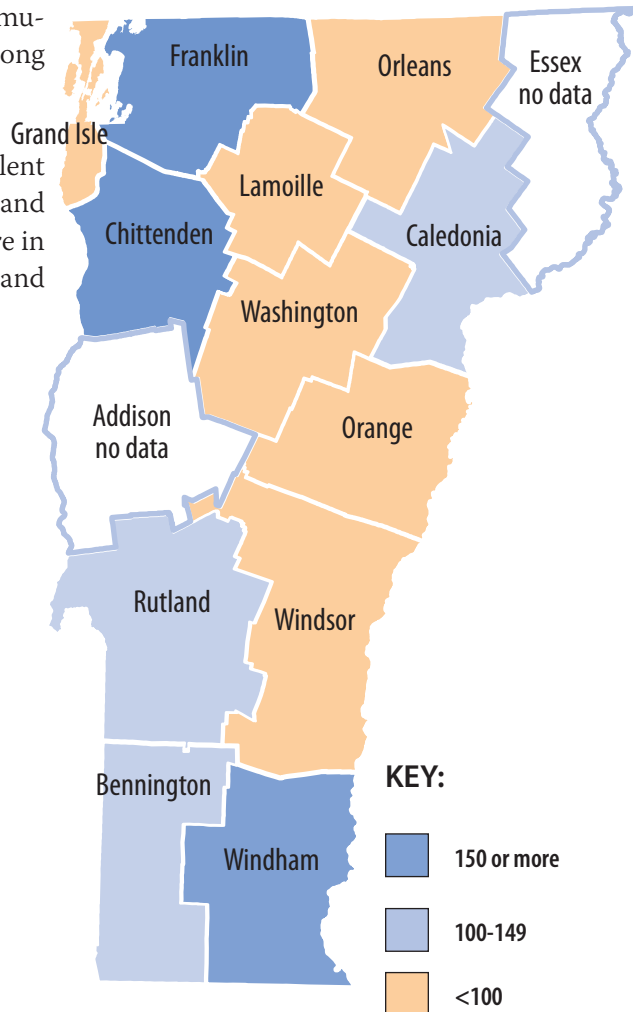
In Vermont, the highest rates of violent crime are in Franklin, Chittenden and Windham counties. The lowest rates are in Grand Isle, Orleans, Orange, Lamoille and Washington counties.

Violent Crimes per 100,000 people, by Vermont county

Addison	—
Bennington	130
Caledonia	133
Chittenden	189
Essex	—
Franklin	216
Grand Isle	44
Lamoille	75
Orange	73
Orleans	67
Rutland	108
Washington	86
Windham	164
Windsor	116

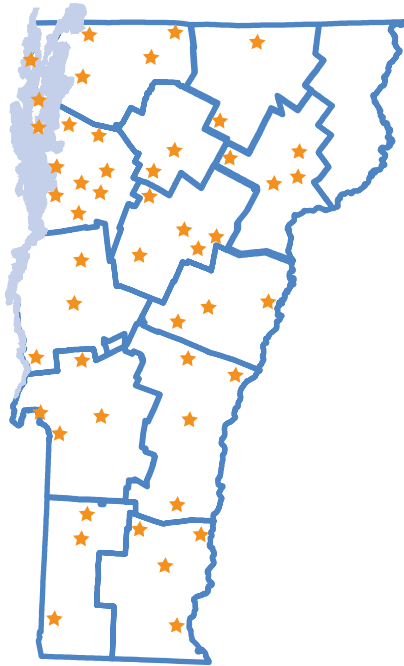
Safe Communities

of violent crimes per 100,000 people
Uniform Crime Reporting, FBI • 2005 -2007



Farm-to-Family Food Coupons

Participating markets • 2009



★ Farmers Markets that accept Farm-to-Family Coupons:

Barre	Highgate	Randolph
Bellows Falls	Hinesburg	Richford
Bennington	Isle La Motte	Richmond
Bradford	Jericho	Royalton
Brandon	Londonderry	Rutland
Brattleboro	Lyndonville	Shelburne
Bristol	Manchester Center	South Hero
Burlington	Middlebury	St. Albans
Chelsea	Milton	St. Johnsbury
Chester	Montpelier	Stowe
Craftsbury Common	Morrisville	Townshend
Danville	Newport	Waitsfield
Dorset	North Hero	Waterbury
Enosburg Falls	Norwich	Westford
Fair Haven	Orwell Village	Williston
Grand Isle	Plainfield	Winooski
Hardwick	Poultney	Woodstock

Definition

Food Desert = A place where people have little or no access to healthy food choices.

Are essential foods within reach?

Eating two or more servings of fruit and three or more servings of vegetables every day is part of a healthy diet. Communities that have affordable fresh fruit and vegetables within reasonable distance promote health by enabling people to eat healthier foods.

Living in an environment where there is a lack of healthy foods, yet a high concentration of unhealthy goods and services, such as liquor stores and fast-food restaurants, shapes health behaviors and perceptions about the neighborhood.

Such “food deserts” are often found in low-income urban areas. However, rural areas of Vermont, where people may live more than a short and easy drive away from a well-stocked grocery store, can also seem to be a food desert – particularly during the long winter months.



One expanding resource for fresh fruits and vegetables are farmers' markets, many of which accept *Farm to Family* coupons. People who are eligible for coupons include families enrolled in the Vermont Department of Health's WIC program and other individuals or families who are low income. As of 2009, 51 towns in Vermont hold eligible farmers' markets at some point throughout the summer.

The Farm to Family Program began in 1987, with three farmer's markets accepting coupons, and has grown every year since. The coupons were redeemable at 56 Vermont market sites, and that number will top 60 markets in the 2010 growing season. ▼

References

¹*Alliance for Healthy Homes.*

www.afhh.org.

The Characteristics and Needs of Families Experiencing Homelessness.

www.community.familyhomelessness.org

²*Prevention Institute.*

The Built Environment and Health.

www.preventioninstitute.org

³*Vermont Housing Council and*

Vermont Housing Awareness Campaign,

"Between a Rock and A Hard Place:

Housing and Wages in Vermont,"

April 2009.

⁴*U.S. Census Bureau. Current Population*

Survey three-year average median income estimates for years 2005-2007.

⁵*U.S. Census Bureau, 2005-2007*

American Community Survey.

⁶*Vermont 2006 Childhood Lead Poisoning*

Prevention Program Annual Report to the Legislature, submitted January 16, 2008.

⁷*Vermont Agency of Transportation.*



Covered or not?

A person's health insurance status is a major determinant of his or her access to health care services in the United States.

In 2008, 7.6 percent, or about 47,000 Vermonters, were uninsured – a significant decrease from 2005, when 9.8 percent or about 61,000, were uninsured.¹

Access to Care

Goal

Equal access to quality health care

Good access to health care influences a person's use of health care services and improves overall health. While the subject of health insurance is often at the center of any discussion about health care, access to care involves more than simply having health insurance coverage. Barriers to timely and comprehensive health care are many: a shortage of providers or hospitals, lack of reliable transportation or long drives to care, cultural or personal beliefs, language and education – as well as a lack of insurance or being underinsured.

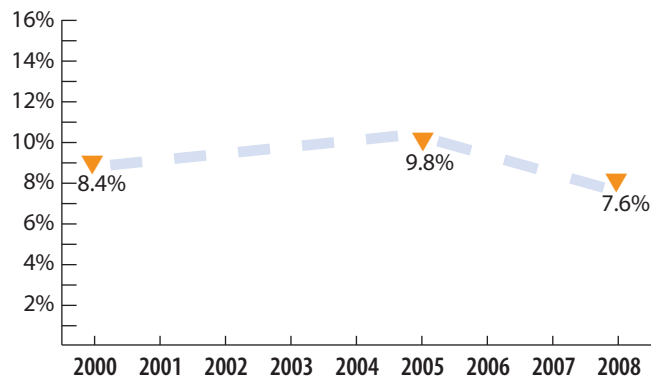
Among Vermonters in 2008:

> 22% of 18- to 24-year-olds are uninsured, the highest percentage of any age group.

> 2.9% of children under age 18 have no insurance, the lowest percentage of any age group.

Uninsured Vermonters

% of all residents without health insurance



> Half of uninsured Vermonters had been without health insurance coverage for a year or less, while one-quarter lacked coverage for five or more years.

Private or public insurance?

Over half of Vermonters (60%) had private insurance as their primary type of health coverage, while 14 percent were covered by Medicare as their primary health insurer, and 2.4 percent by military insurance.

> Although the rates of coverage by private insurance and Medicaid have not changed, the percentage with military insurance has gone up from 1.6 percent in 2005.

For those Vermonters who meet income and other eligibility criteria, Green Mountain Care offers no or low-cost premiums and co-payments.

Family Size	% of Federal Poverty Level (FPL) • 2009				
	100%	150%	185%	200%	300%
1	\$10,830	\$16,245	\$20,036	\$21,660	\$32,490
2	\$14,570	\$21,855	\$26,955	\$29,140	\$43,710
3	\$18,310	\$27,465	\$33,874	\$36,620	\$54,930
4	\$22,050	\$33,075	\$40,793	\$44,100	\$66,150
5	\$25,790	\$38,685	\$47,712	\$51,580	\$77,370
6	\$29,530	\$44,295	\$54,631	\$59,060	\$88,590
7	\$33,270	\$49,905	\$61,550	\$66,540	\$99,810
8*	\$37,010	\$55,515	\$68,469	\$74,020	\$111,030

* For families with more than 8 people, add \$3,740 for each additional person

However, for those enrolled in publicly funded health insurance programs, coverage can still be precarious. In an average month, up to 70 percent of children enrolled in the Vermont Department of Health's Children with Special Health Needs program lose their Medicaid coverage at least temporarily.

Green Mountain Care

Vermont's public health insurance programs, income eligibility & June 2009 enrollment

% FPL	Eligibility
150%	adults without dependent children
185%	adults with dependent children
200%	pregnant women
300%	children younger than 18

for CHILDREN younger than 18		enrollment
Dr. Dynasaur - State Health Insurance (300% FPL)		20,798
Medicaid (100% FPL)		37,519
State Children's Health Insurance Program (200% FPL)		3,330
for ADULTS 18 and older		
VT Health Access Program (VHAP)		31,954
Catamount Health		9,162
Employer Sponsored Insurance Assistance		578
Medicaid		37,857



Reasons for this range include failing to pay monthly premiums, documents filed late, and fluctuations in family income. Adults enrolled in Green Mountain Care programs can face similar challenges.

Trends show the number of Vermonters enrolled in Green Mountain Care has been increasing since 2000. However, more could be taking advantage of these programs.

> At the end of 2008, about 3,000 uninsured children from birth to 17 years met eligibility requirements for Medicaid or Dr. Dynasaur.

> Among uninsured adults age 18 to 64, about 23,000 met eligibility requirements for Green Mountain Care programs.

> 13% of low-income residents (earning less than 200% of the FPL) are uninsured, compared to 2.8% of higher-income residents (earning 400% or more).

Lack of awareness about state health insurance programs may be limiting the number of Vermonters who enroll in Green Mountain Care programs. Still, cost appears to be a significant barrier:

> Only 4.9% of uninsured adults reported they would *definitely* or *very likely* enroll in a state health insurance program if the monthly premium were \$400. This is compared to 18% of uninsured adults, who reported they would *definitely* or *very likely* enroll in a state health insurance program for a monthly premium of \$200. This rises to 47% for \$100, and 72% for \$60.

But even if all eligible children and adults enrolled in Green Mountain Care, there are still approximately 850 children and 20,000 adults who are uninsured but not eligible for any state health insurance program or premium assistance.

These Vermonters may find the medical care they need at one of 10 free primary health care clinics associated with the Vermont Coalition of Clinics for the Uninsured.

> In 2008, the clinics served 6,188 people.

> Of those served, 78 percent were not insured and 76 percent reported that, if not for the free clinics, they would have delayed care because they couldn't afford medical services.

Definition

Medical Home = A consistent health care setting with a regular primary care provider or team to ensure appropriate care.

To have a medical home

Independent of insurance status, when a person does not have a medical home the result may be less access to and utilization of health care, with worse outcomes.

> In 2008, an estimated 12% of Vermonters, or about 55,000, did not have a specific source of primary care, compared to 20% nationally.

> In Vermont, the highest percentages of people with no medical home are among those younger than 35, those earning less than 250% of the poverty level, and those with a high school diploma or less.

Where to find a primary care provider?

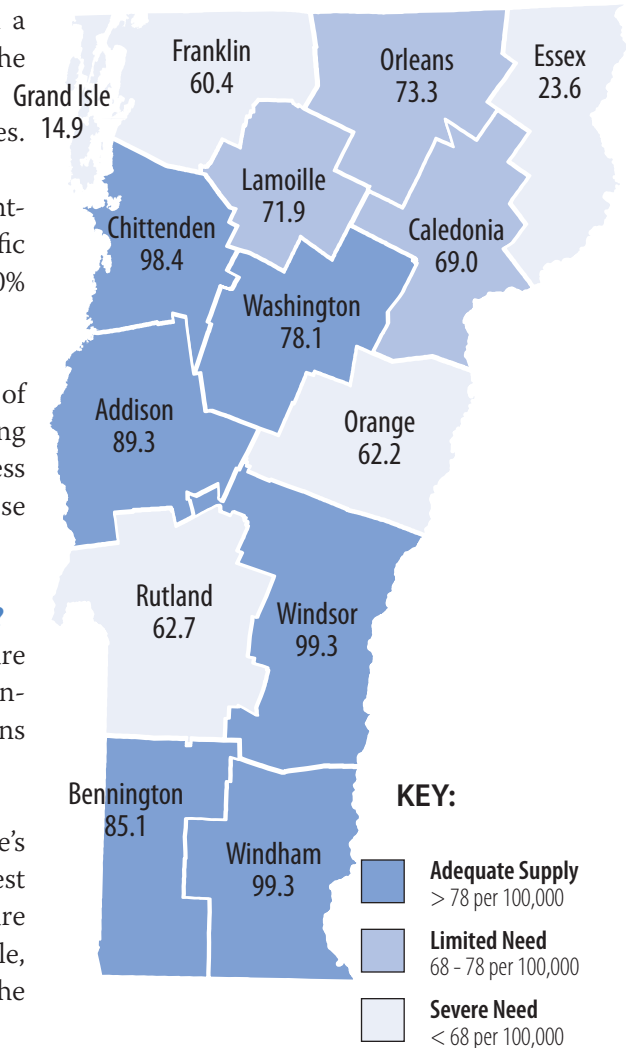
There is clear inequity in access to care when you consider the location and concentration of primary care physicians compared to population.

Chittenden County, home to the state's largest medical facility, has the highest ratio of full-time equivalent primary care physicians at 98.4 per 100,000 people, compared to Grand Isle, which has the lowest, at 14.9 per 100,000 people.

Supply of Primary Care Physicians

full-time equivalent (FTE) primary care physicians per 100,000 people • 2008

Statewide total: 80.2



Physicians Accepting New Patients

of Vermont primary care physicians who accepted –

	1998	2008
any new patients	87%	80%
new Medicaid patients	81%	69%
new Medicare patients	81%	68%

It is also important to consider that many physicians are not accepting new patients. Based on the 2008 physician survey, fewer primary care physicians are accepting new patients compared to 10 years ago.

> In 1998, 87% of physicians were accepting new patients overall, compared to 80% in 2008.

> In 1998, 81% of physicians were accepting both new Medicaid and new Medicare patients compared to 69% and 68%, respectively, in 2008.

Where to find a dentist?

Disparities in access to primary care dentists are similar to those among primary care physicians—with Chittenden County having 83 of the 282 primary care dentists in the state in 2007. The lowest numbers of dentists are found in the northern counties of Essex, Grand Isle, and Orleans.

While the number of practicing dentists hasn't changed dramatically over the past 10 years, the average number of hours that dentists are available to patients has decreased, resulting from more dentists working part-time rather than full-time.

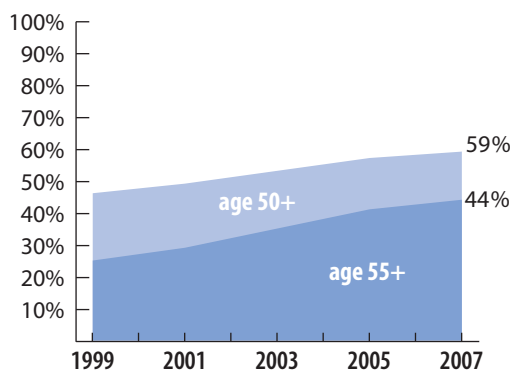
Supply of Dentists

and Full Time Equivalent (FTE) primary care and specialty dentists in Vermont –

	1999	2001	2003	2005	2007
total active dentists	347	354	367	352	355
total full time equivalent (FTE) dentists	290.2	284.6	280.8	267.1	269.8
FTEs primary care/100,000 people	37.8	36.5	36.6	34.7	35.7
FTE specialists/1000 people	10.2	10.0	8.7	8.2	7.8

Aging of the Dental Profession

% of Vermont dentists by age group



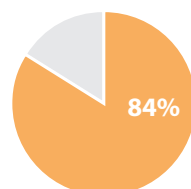
The aging of dentists is another trend that will affect access to oral health care in the future. Over the past 10 years, the percentage of dentists over age 50 has steadily increased. Of the 355 dentists (both primary care and specialists) now working in the state, 210 are age 50 and older.

A total of 67 dentists reported that they plan to retire or leave their practice, and another 17 said they plan to appreciably reduce their hours, within the next five years. Without a rapid inflow of younger dentists, dentist-to-population ratios will continue to worsen as older dentists begin retiring. This trend will make it that much more difficult for many in the state to get reliable oral health care.

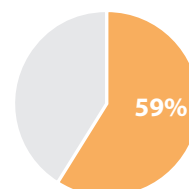
Access to Breast Cancer Screening

Vermont women age 40+ who met screening guidelines for breast cancer • 2008

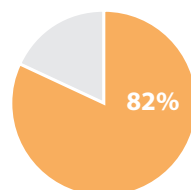
among those who:



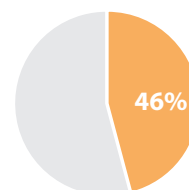
had medical insurance



had no medical insurance



had a primary care doctor



did not have a primary care doctor

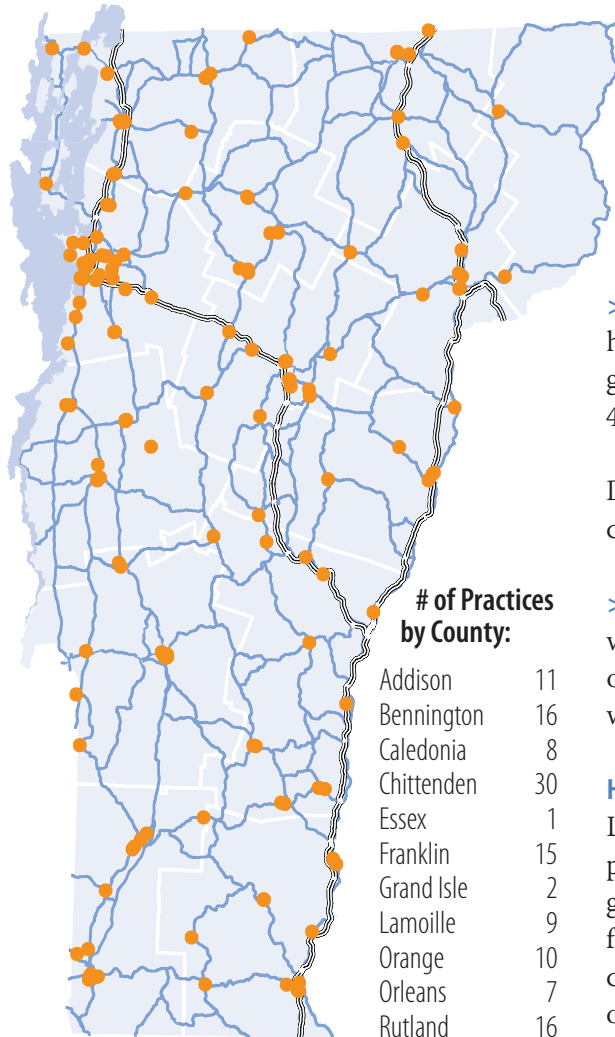
Access to care and health

When people have health insurance and guidance from a personal physician, there is a higher likelihood that they will have quality™ consistent care in accordance with health screening guidelines.

> 84% of Vermont women age 40 and older with health insurance had a mammogram in the past two years, compared to 59% who don't have health insurance.

Location of Physician Practices

Family practice specialists, osteopathic doctors, naturopathic doctors, and pediatricians who participate in the Vermont Department of Health's Vaccines for Children program

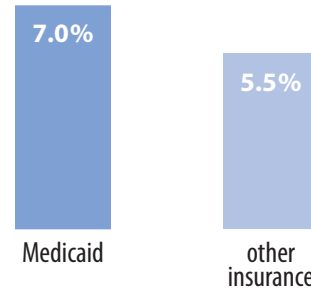


of Practices by County:

Addison	11
Bennington	16
Caledonia	8
Chittenden	30
Essex	1
Franklin	15
Grand Isle	2
Lamoille	9
Orange	10
Orleans	7
Rutland	16
Washington	15
Windham	22
Windsor	10

Low Birth Weight & Insurance Type

% of Vermont women giving birth who had low birth weight babies, by insurance type • 2007



> 82% of women age 40 and older who have a personal physician had a mammogram in the past two years, compared to 46% who don't have a personal physician.

Data also show variations in health outcomes based on type of insurance.

> In 2007, pregnant women in Vermont with Medicaid insurance had higher rates of low birth weight babies compared to women with other types of insurance.

How do you get to medical care?

Lack of transportation options, compounded by Vermont's winter weather and geography, is a significant barrier to care for many people. Especially in some rural communities, long driving times and lack of public transportation may markedly influence treatment patterns. Depending on where you live, drive times to hospital emergency rooms may exceed 45 minutes.

Drive times may be even longer for those in need of specialty care for certain serious diseases. For example, cancer survivors who need radiation treatment have only four choices for in-state care: the Norris Cotton Cancer Center North, located in St. Johnsbury, Fletcher Allen Health Care in Burlington, Rutland Regional Medical Center, and Southwestern Vermont Medical Center in Bennington.

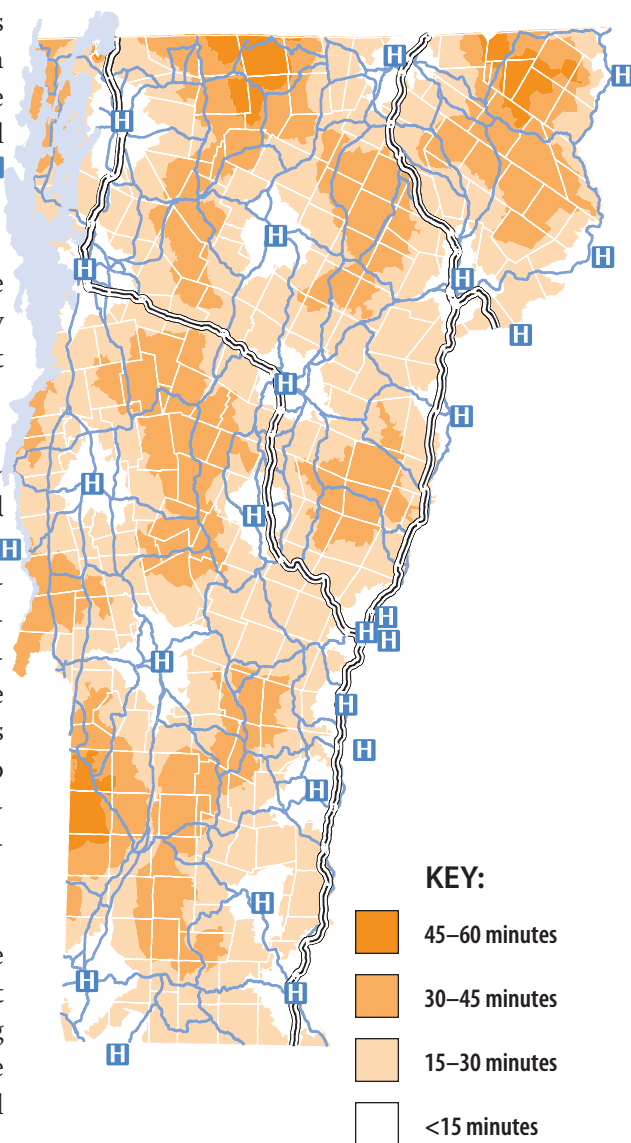
Vermonters who have cancer may be receiving less than optimal treatment only due to the logistics of getting to the nearest treatment center.

A study of women patients in New Hampshire who had been recently diagnosed with early stage breast cancer showed that they were less likely to choose breast-conserving surgery (as opposed to mastectomy) the farther they lived from the treatment facility. Of those who did choose breast-conserving surgery, radiation was less likely to be used by the women who lived more than 20 miles from the nearest radiation facility, or among those diagnosed in the winter.²

A similar study looking at oncologic care in rural northern New England found that sentinel lymph node dissection among women who had breast cancer was more common in urban as compared to rural areas.

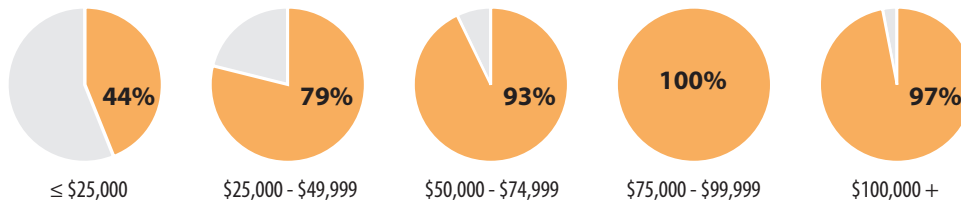
Access to Hospital Emergency Care

Drive times to hospital emergency departments



Computer Access & Income

% of Vermont households with a computer, by household income • 2009



The study also found differences in surgical treatment, lymph node sampling, and delivery of chemotherapy between colon cancer patients in rural as compared to urban areas.³

Total travel burden – including making arrangements for transportation, travel time, child care, the cost of transportation and of missed work – can play a significant role in an individual’s treatment-seeking behaviors for diabetes as well. Another study showed that, among older, rural Vermonters with diabetes, longer driving distances from home to the site of primary care were associated with poorer glycemic control.

After controlling for gender, marital status, education, income, insurance coverage, seasonal variation, and diabetic complications, each 35 kilometers of driving distance was associated with a 0.25 percent increase in blood sugar measurement.⁴

The health information digital divide

As our day-to-day reliance on the internet continues to expand, and more and more households have personal computers, people are increasingly going online for personal health information.

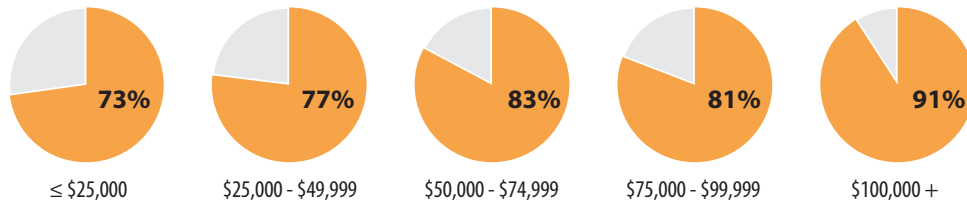
> The percentage of Vermont households with a personal computer at home has held steady at about 80 percent for several years.

According to current surveys, almost all homes with a computer are now connected to the internet, and the percentage of these connections that are high-speed continues to rise.

> Overall, 68 percent of Vermont households had broadband high speed access in 2009.

High Speed Internet Access & Income

Among Vermont households with internet access, % with a broadband connection, by household income • 2009



However, a “digital divide” or inequalities related to access to information technology still exists. Households with higher incomes are more likely to have personal computers, and those with lower incomes are less likely to have internet access, particularly high-speed connections.⁵

Language barriers to health care

Five percent of Vermont residents at least 5 years old in 2006 through 2008 spoke a language other than English at home.

> Of Vermonters speaking another language at home, about one-third spoke French and one-fifth spoke Spanish.

> The number of French speakers has dropped since the 2000 U.S. Census, from 14,600 to 10,144 in 2008.

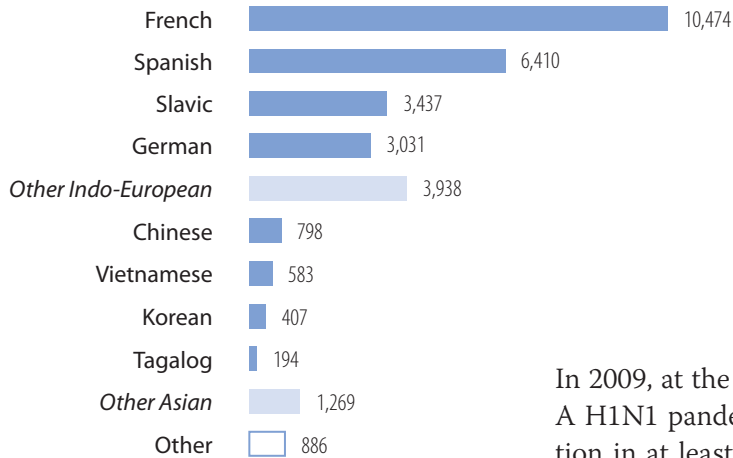
> About 1.5 percent of Vermonters 5 years and older report speaking English “not very well”.

Health care for these individuals may suffer unless translation services are readily available, but the diversity of languages spoken by small numbers of new Vermonters is challenging.



Languages Spoken in Vermont

Vermont residents age 5+ who spoke a language other than English at home • 2006–2008



In 2009, at the start of the novel influenza A H1N1 pandemic, basic health information in at least 11 languages besides English was required to communicate with all Vermonters. These include: Arabic, Burmese, Chinese, French, Nepali, Russian, Serbo-Croatian, Somali, Spanish, Swahili and Vietnamese.

According to the Vermont Center for the Deaf and Hard of Hearing, more than 20,000 Vermonters are living with hearing loss, 2,000 of whom are profoundly deaf. These Vermonters who use American Sign Language may require a professional interpreter in many medical situations.

Without access to health care and health information delivered in their own native language, many Vermonters do not have full access to quality health care. ▼

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³ Johnson, A, Rees Jr, Schwenn M, Riddle B, Verrill C, Celaya MO, Nicolaidis DA, Cherala S, Feinberg M, Gray A, Rutsein L, Katz MS, Nunnink JC. *Oncology Care in Rural Northern New England*. (in publication).

⁴ Strauss, K; MacLean C, Troy A, Littenberg B.

Driving Distance as a Barrier to Glycemic Control in Diabetes.

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⁵ *Vermont Poll 2009*. UVM Center for Rural Studies.



Vermont Population, by Racial & Ethnic Category

	1990 U.S. Census –		2007 Estimate –	
	Total #	Percent	Total #	Percent
White Non-Hispanic	552,413	98.2%	596,777	96.0%
Hispanic or Latino	5,687	0.7%	8,170	1.3%
Asian*	3,215	0.5%	7,573	1.2%
Black/African American	1,951	0.3%	6,485	1.0%
American Indian/ Alaskan Native	1,696	0.3%	2,839	0.5%
Total Population	562,758	100%	621,254	100%

*This category also includes Native Hawaiian/Other Pacific Islander

Race, Ethnicity & Cultural Identity

Goal

Better health for *all* Vermonters

Twenty years ago in 1990, the United States Census estimated Vermont's racial and ethnic minority populations to be about 2 percent of the total population. By 2007, that figure had doubled to 4 percent, representing about 24,500 Vermonters.

While these numbers are still proportionally small compared to the rest of the U.S., Vermont's racial and ethnic populations are growing at a much faster rate than the population overall. Between 1990 and 2007, Blacks or African Americans have been the fastest growing population in Vermont, with their numbers more than tripling in the past 18 years.

The second fastest growing racial group in Vermont are Asians, including Native Hawaiian and other Pacific Islanders—with populations increasing from 0.5 percent of the total population in 1990, to 1.2 percent in 2007.

Who is a Vermonter?

Vermonters come from a wide range of racial, ethnic and cultural backgrounds, including Black Americans and American Indians, many of whom are descendants of the aboriginal Abenakis. Many more recent residents come from Africa, the Middle East, Asia and Eastern Europe – and a Hispanic/Latino population from Mexico, Cuba and the Americas.

Definitions

Race and Ethnicity = Racial and ethnic classifications are used by federal, state and local governments, private agencies, and researchers to define group characteristics, track morbidity and mortality, and assess the health status of populations. *For more information on reporting race and ethnicity, see the Reader's Guide, page 8.*

Immigrant = A person who leaves one country to settle permanently in another.

Refugee = A person who flees in search of refuge, as in times of war, political oppression, or religious persecution.

Some of these are refugees, some are immigrants, and all may have varying health needs and concerns.

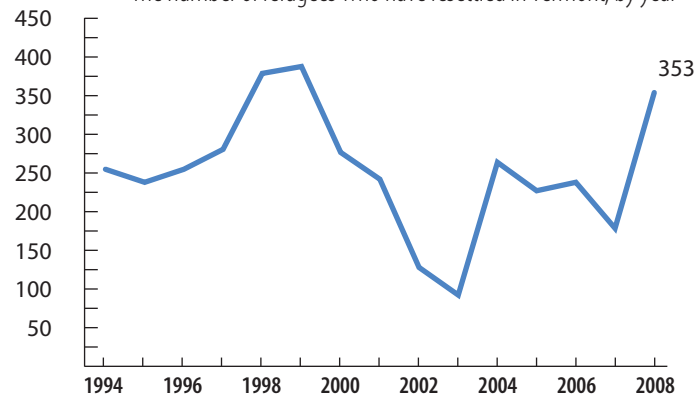
Vermont's Refugee Resettlement Program welcomed 353 people from countries throughout Africa and Asia in 2008. Since 1994, more than 4,000 refugees have resettled in the state.

Racial and ethnic minority populations are living throughout the state in urban and rural areas.



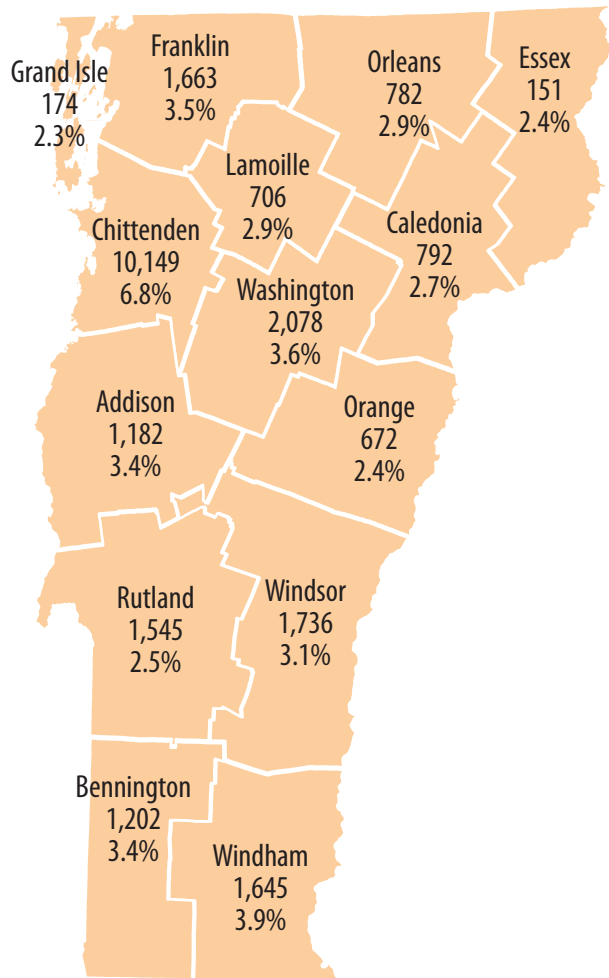
Refugees in Vermont

The number of refugees who have resettled in Vermont, by year



Racial & Ethnic Minority Populations

and % of total population, by county • 2007 Estimates



> More than half of all the state's racial and ethnic minority populations, and two-thirds of the Hispanic population, live outside Chittenden County.

> Franklin County is home to the greatest number of American Indians.

Education and race

There is wide variation in educational attainment among racial and ethnic groups. This may be due to differences in access to education either here in the U.S. or in a person's country of origin.

In some cases, Vermont mirrors national trends. In others, we are more unique. Data presented here are from the 2000 U.S. Census.

Whites, Hispanics & Blacks:

> In Vermont, White non-Hispanics, Hispanics and Blacks have similar educational attainment, with between 13% and 16% reporting less than a high school education, and 29% to 37% reporting a bachelor's degree or higher.

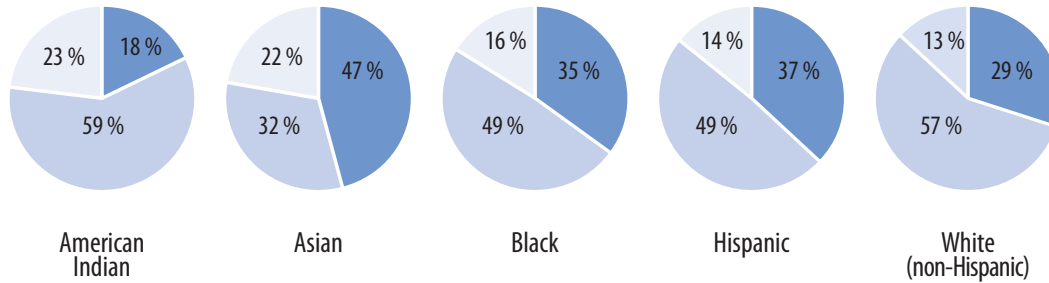
> White non-Hispanics in the U.S. have similar educational attainment as in Vermont. However, the percentage of U.S. Hispanics and Blacks who have less than a high school education is dramatically higher nationally than in Vermont (48% and 28% respectively).

Race & Education

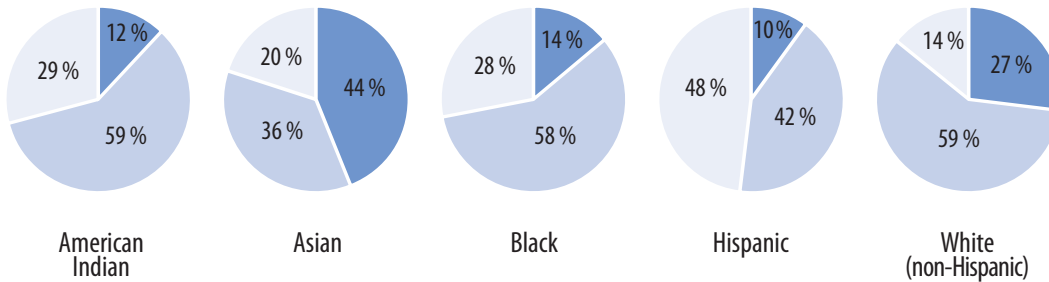
% of population age 25+ by race and educational attainment • 2000 U.S. Census

■ Didn't finish high school
 ■ High school graduate (or equivalent)
 ■ Bachelor's degree and above

Vermont



U.S.



Asians:

> 47% of Vermont's Asian populations have a bachelor's degree or greater, the highest for any racial or ethnic group. Asians also have a high percentage of people who have less than a high school diploma (22%).

> Educational attainment among Asians is similar in Vermont and the U.S.

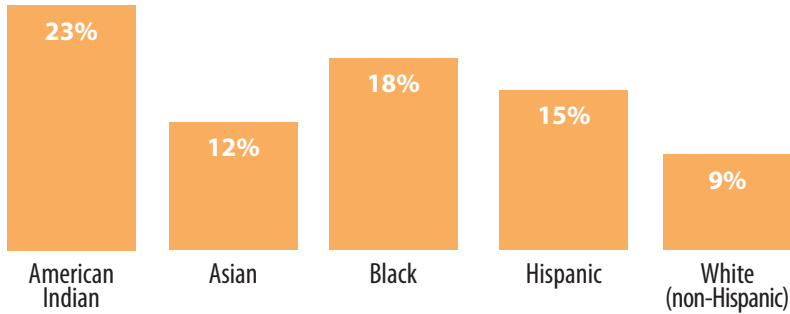
American Indians:

> American Indians in Vermont have the lowest percentage for having a bachelor's degree or more (18%), and the highest for not finishing high school (59%).

> Educational attainment for American Indians is similar in Vermont and the U.S.

Race & Income

% of Vermonters living below the Federal Poverty level (FPL) • 2000 U.S. Census



Family Size 100% FPL 2009

1	\$10,830
2	\$14,570
3	\$18,310
4	\$22,050
5	\$25,790
6	\$29,530
7	\$33,270
8	\$37,010

Race and income

In Vermont, racial disparities that relate to income also exist.

> Based on the 2000 Census in Vermont, while approximately one in 10 White non-Hispanics and Asians were living below the poverty level, one in four American Indians fell into that category.

Owning your own home

There are also racial and ethnic disparities in home ownership in Vermont.

> While 71% of White non-Hispanics owned their own home in 2000, only 33% of Blacks lived in an owner-occupied housing unit.

See Housing & the Built Environment chapter for more details.

Race & Home Ownership

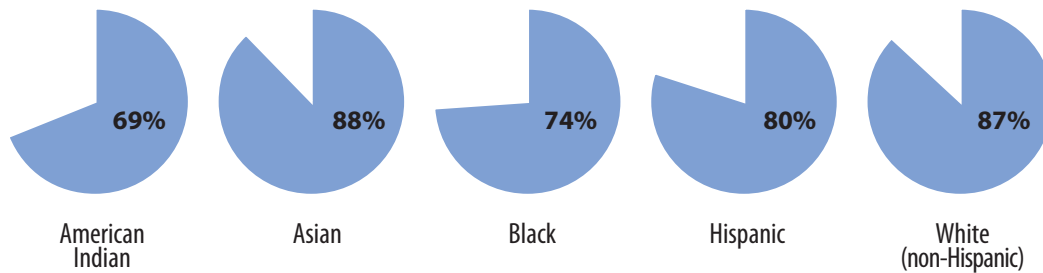
% of Vermonters living in owner-occupied housing units • 2000

	2000 U.S. Census –
White Non-Hispanic	71%
Hispanic or Latino	51%
American Indian/Alaska Native	50%
Asian	44%
Black/African American	33%



Race & Health Insurance

% of Vermonters age 18-64 with health insurance • 2003-2008



A different access to health care

Access to care often differs according to race and ethnicity. The greatest disparities in access to health care are found among American Indian/Alaskan Native groups.

In Vermont, between 2003 and 2008:

- > Approximately one-third of American Indian and Alaskan Native adults age 18 to 64 reported that they did not have health insurance in the past year.
- > Between 22% and 25% of American Indians, Asians and Blacks did not have a personal doctor – more than twice as many as White non-Hispanic Vermonters.
- > At 27%, almost three times as many American Indians reported not having enough money to see a doctor in the past year, compared to White non-Hispanic Vermonters.

Most Vermonters, however, are unaware of these disparities in access to care:

- > Three of four adults believe that their experiences when seeking health care were the same as for people of other races.

Also see Access to Care chapter for more about language barriers to health care.

The health status of minority groups

Due to the small numbers of racial and ethnic minorities in Vermont, race reporting errors and statistical analysis limitations sometimes make it difficult to determine if there are differences in health status across racial and ethnic groups. While nationally disparities by race can often be observed in incidence or deaths from cancer, and hospitalizations, injuries or deaths from any cause, it is not possible to observe such disparities in Vermont.^{3,4,5,6}



There are, however, measurable disparities by race in prevalence of chronic disease and overall reported health status.

Rates for prevalence of diabetes, asthma and obesity all vary by race, as does the percentage of Vermonters who say their health is good or excellent.



Smoking, lack of exercise and poor nutrition, all key determinants of poor health, vary by race, too.

• **Diabetes, asthma, obesity**

Among Vermonters from 2003 to 2008:

> 12% of American Indians have diabetes, compared to 6% of White non-Hispanics.

> 18% of American Indians have asthma, compared to

10% of Blacks, 11% of Hispanics, 9% of White, non-Hispanics, and 5% of Asians.

> 33% of Blacks are obese, compared to 4% of Asians.

• **Smoking**

From 2003 to 2008:

> 13% of Asians and 41% of Indians smoke, compared to 18% of White non-Hispanics.

From 2005 to 2007:

> At 19%, smoking during pregnancy is highest among White non-Hispanic women, compared to 10% for Black women, and only 4% for Asian women.

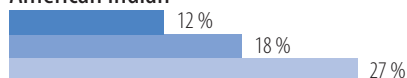
Race & Chronic Conditions

Vermonters age 18+ • 2003-2008

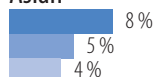
% with

- diabetes
- asthma
- obesity

American Indian



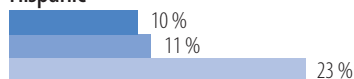
Asian



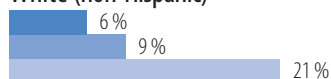
Black



Hispanic



White (non-Hispanic)



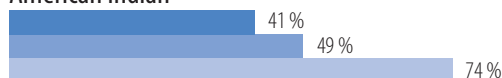
Race & Health Risk Factors

Vermonters age 18+ • 2003-2008

% that

- smokes
- doesn't meet physical activity guidelines
- does not eat 3+ vegetables per day

American Indian



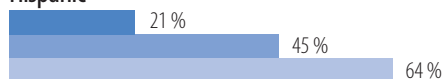
Asian



Black



Hispanic



White (non-Hispanic)



• Physical activity and nutrition

From 2003 to 2008:

> 63% of Blacks *do not* get the recommended amount of physical activity, compared to 43% of White non-Hispanics.

> 56% of Asians reported that they *do not* eat at least three servings of vegetables a day, compared to nearly three-quarters of Blacks and American Indians.

• Sexually Transmitted Diseases

Another area where health disparities by race can be observed is in the prevalence of sexually transmitted diseases.

Among Vermonters in 2007:

> The rate of chlamydia among White non-Hispanics was 161.4 per 100,000 people. Among Blacks, the rate was six times higher, at 900.3 per 100,000 people.



> Blacks also have higher rates of gonorrhea than White non-Hispanics (198.1 per 100,000 compared to 7.8 per 100,000).

Youth smoking, drinking and drug use

Youth risk behaviors also vary greatly by race and ethnicity. Among Vermont eighth through 12th graders from 2005 to 2007:

> Students of Native Hawaiian/ Pacific Islander descent have the highest rates of smoking, drinking and other drug use, while White non-Hispanics and Asians often have the lowest rates for the same behaviors.

> Approximately one in five Black students have ever injected narcotic drugs and 21% reported using cocaine in the past 30 days.

> Among American Indians, while use of injected narcotics is lower than that of most other race and ethnic groups, they have high rates of smoking, binge drinking and marijuana use.

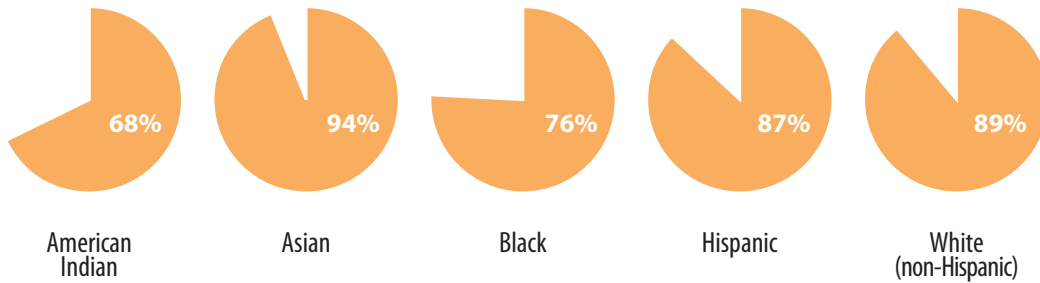
Stress reactions to racial discrimination

Among all Vermonters, 1.5%, or roughly 6,800 adults, have experienced physical symptoms (a headache, upset stomach, tensing of muscles, or pounding heart) in the past 30 days, as a result of how they were treated based on their race.

> These Vermonters are four times more likely to report poor or fair health compared to Vermonters who did not report physical symptoms related to their race (40% compared to 6%).

Race & Perception of Health

Vermonters age 18+ who report they are in good or excellent health • 2003-2008



> They are also more likely to smoke (46% compared to 16%), be depressed (59% compared to 22%), and have low incomes (78% compared to 40%).

> 6% of White non-Hispanic mothers have low birthweight babies, compared to 11% of Black mothers, and 8% of Asian/Pacific Islander mothers.

When stress related to discrimination is compounded over a lifetime, the effects on health can begin to be seen.⁷

> 9% of White non-Hispanic mothers have pre-term births, compared to 15% of Black mothers, and 7% of Asian/Pacific Islander mothers.

Stress and birth outcomes

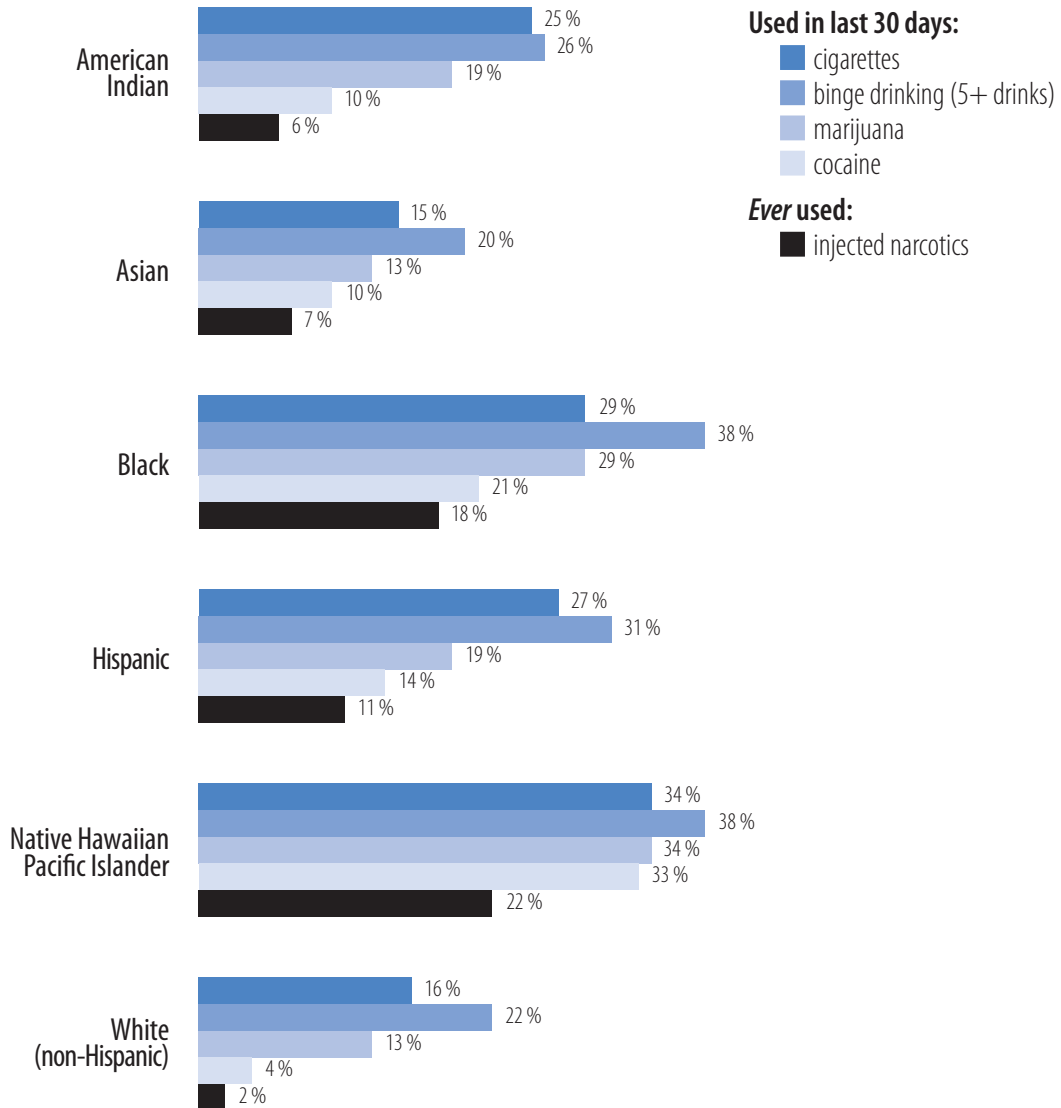
It is possible that poor birth outcomes, independent of the mother's socioeconomic status, may be a result of chronic stress and racial discrimination.⁸

Vermont data from 2005 to 2007 highlight racial disparities in maternal and child health:



Youth Risk Behaviors

Vermont Youth Risk Behavior Survey • 2005 & 2007
 % of 8th-12th graders who have —



> 9% of White non-Hispanic mothers have pre-term births, compared to 15% of Black mothers, and 7% of Asian/Pacific Islander mothers.

> 64% of Black mothers receive adequate prenatal care compared to 88% of White non-Hispanic mothers.

Stress reactions among youth

Youth who are of a racial or ethnic minority are more likely to report stressful school environments.



Among Vermont eighth through 12th graders in 2005 and 2007:

> Compared to White non-Hispanic students, students who are of a racial or ethnic minority are more likely to report being bullied, missing school because they felt unsafe, or being threatened or injured by a weapon at school in the past 12 months

> Suicide attempts are between two and five times higher in other racial groups compared to White non-Hispanics.

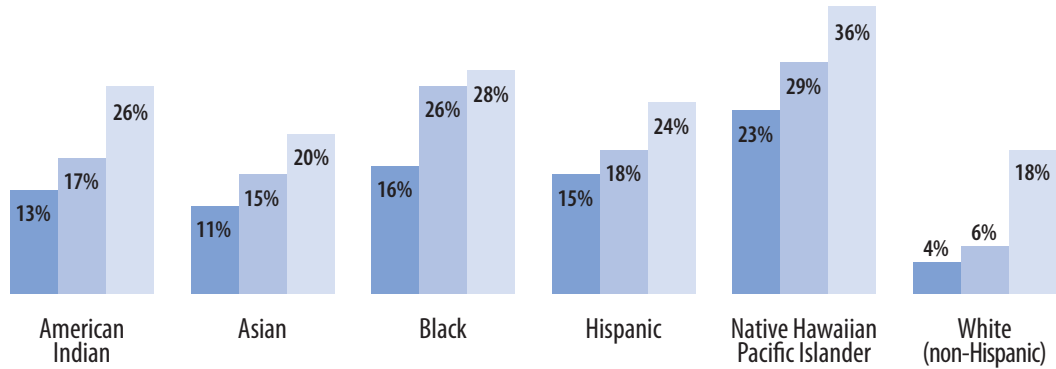
(Also see the Disability, Stress & Depression chapter.) ▼

School Security & Race

Vermont Youth Risk Behavior Survey • 2005 & 2007

% of Vermont students in grades 8–12 who:

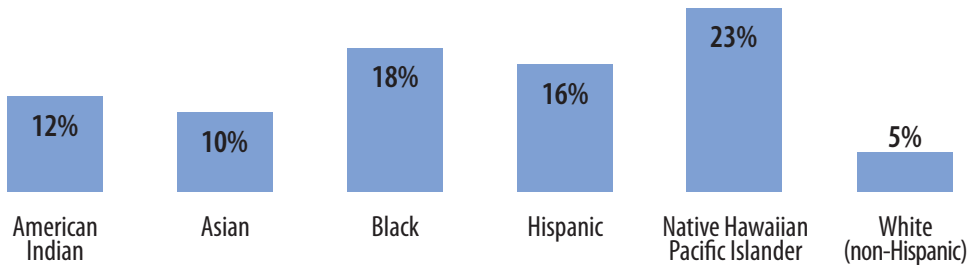
- missed school in the last 30 days because they felt unsafe
- were threatened or injured by a weapon at school in the last 12 months
- were bullied in the last 30 days



Suicide & Race

Vermont Youth Risk Behavior Survey • 2005 & 2007

% of 8th–12th graders who attempted suicide in the last 12 months



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⁸JF Bell, FJ Zimmerman, PK Diehr. *Maternal Work and Birth Outcome Disparities.*

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Stress, Disability & Depression

Goal

Overcome the health toll of chronic stress

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

There are many types of daily stress: health problems or disability; excessive demands on the job; difficulty balancing work and family life; lack of money for basic living expenses and for long term aspirations; excessive medical bills; living in unhealthy or unsafe housing; discrimination due to race, ethnicity, cultural identity or sexual

orientation. Constant stress increases a person's risk for disease as a result of psychological and physiological processes that can damage the immune system and cardiovascular health.¹

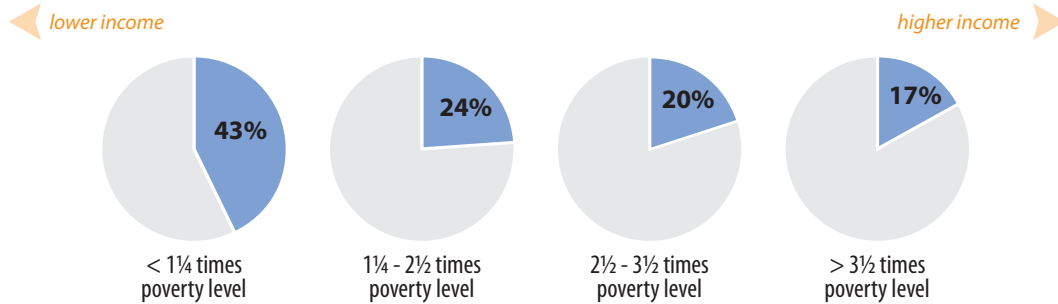
Stress of disability/disability of stress

In 2008, 21 percent of Vermont adults, about 105,000 people, reported that their day-to-day activities are limited due to physical, mental or emotional problems.

And 6 percent, or about 31,000 people, reported a health problem that requires them to use special equipment.

Disability & Income

% of Vermonters age 18+ who are disabled, by Federal Poverty Level • 2008



When looking at a combined measure, rates of disability increase among adult Vermonters with low incomes or lack of education:

> 43% who have an income that is less than 125% of the poverty level are disabled, as compared to 17% who have an income that is 350% or more of the poverty level.

> 42% who did not graduate from high school are disabled, compared to 19% who have a four year college degree or more.

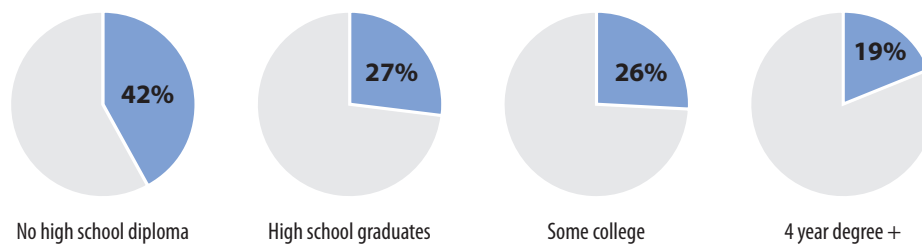
Adult Vermonters who have a disability are also more likely to have behaviors that compromise health, and to suffer worse health outcomes:

> 22% of those who are disabled smoke, compared to 17% of the total population.

> 56% of those who are disabled do not get regular physical activity, compared to 42% of the total population.

Disability & Education

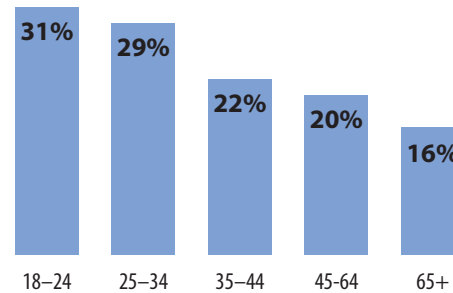
% of Vermonters age 25+ adults who are disabled, by education level • 2008





Depression, by Age

% Vermonters age 18+ who report being depressed • 2008



> 60% of those who are disabled have one or more chronic health conditions (asthma, lung disease, cancer, diabetes, obesity or heart disease), compared to 40% of the total population.

> 34% of those who are disabled report fair or poor health, as compared to 11% of the total population.

Stress and depression

While some people are, by nature, more vulnerable to stress, persistent and long-term chronic stress, for whatever reason, can put anyone at risk for extreme anxiety, emotional difficulties and depression.²

Depression begins to affect Vermonters at an early age and continues through adulthood.

Among eighth through 12th graders:

> 20% report feeling so sad or hopeless almost every day in the past two weeks that they stopped their usual activities.

> 27% of girls report being depressed, compared to 14% of boys.

Among adults:

> 22% report depression or anxiety.

> 31% of 18- to 24-year-olds report being depressed, compared to 16% of adults age 65 and older.

> 24% of adult women report depression, compared to 20% of adult men.

A person's marital status also correlates with depression:

- > Highest rates of depression are among people who have been divorced (33%), and people who are separated from their spouse (47%).
- > Lowest rates of depression are among people who are married (17%), followed by people who are widowed (24%).

Socioeconomics of depression

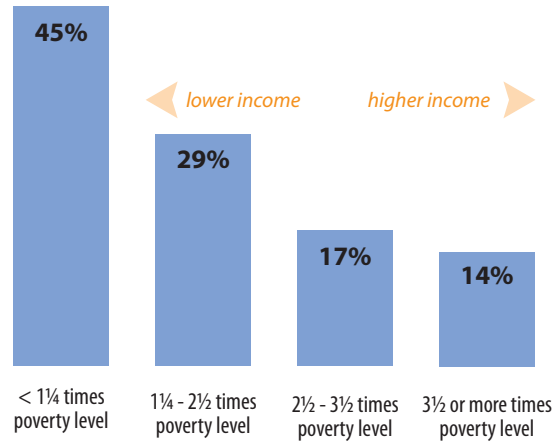
Depression correlates closely with income, education, and employment:

> People with lower incomes or less education report depression more often than those who enjoy a higher socioeconomic status.

> Unemployment among Vermonters who report depression is almost double that of people who report not being depressed (6% compared to 3.5%).

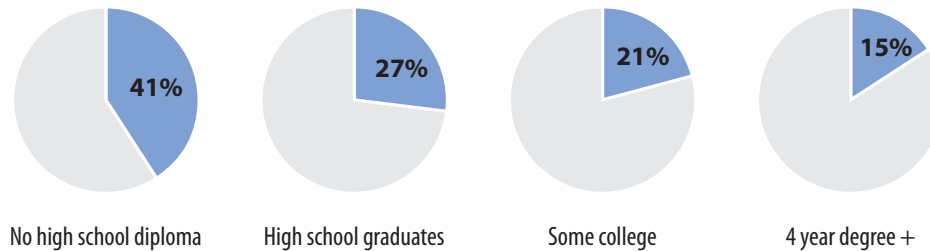
Prevalence of Depression, by Income

% Vermonters age 18+ who report being depressed • 2008



Depression & Education

% of Vermonters age 25+ who report they are depressed, by education level • 2008





People of relatively low socioeconomic status may be especially vulnerable to stress because they may have fewer resources and less effective coping strategies – or because their stressors are more serious.

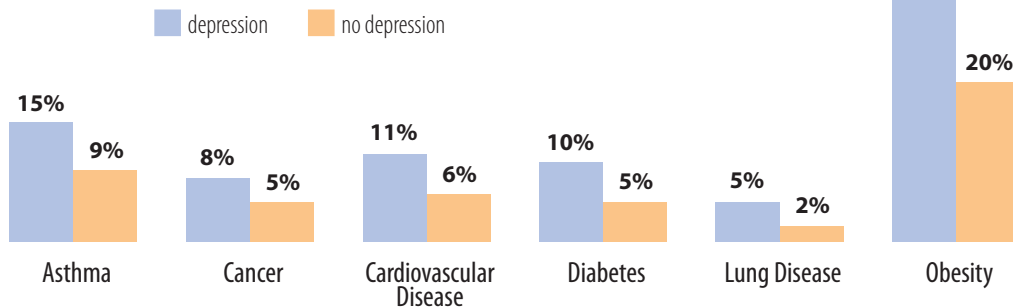
Health effects of depression

People with high rates of depression also often have higher rates of other health problems. Among adult Vermonters:

- > 27% who are depressed report having fair or poor health, compared to 5% of those without depression.
- > 54% who are depressed have a chronic disease (asthma, lung disease, cancer, diabetes, obesity, or heart disease), compared to 35% of the those without depression.
- > Smoking prevalence among adults who also report depression is about 31%, compared to about 17% statewide.

Depression & Chronic Disease

% Vermonters age 18+ who have a chronic disease • 2008
among those who have –



Depression, heart disease and stroke

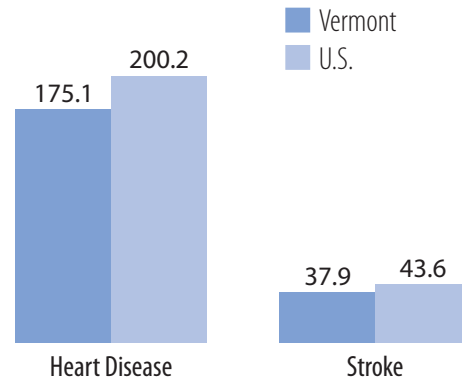
More and more evidence suggests a relationship between heart disease and environmental/psychosocial factors, but more research is needed. It is not yet known whether stress acts as an “independent” risk factor for cardiovascular disease, or if it affects other risk factors and behaviors, such as high blood pressure and cholesterol levels, smoking, physical inactivity and overeating.³

> In Vermont in 2006, there were 265 deaths from stroke and 1,245 deaths from heart disease as an underlying cause.

> More males die from both heart disease and stroke in Vermont, although rates of heart disease and stroke are lower in Vermont compared to the U.S.

Cardiovascular Disease

of people who have heart disease or stroke, per 100,000 people • 2006



> In 2007, 25% of adults have ever been told they had high blood pressure (27% among men and 23% among women).





Depression and suicide

Untreated depression is the number one cause of suicide.⁴ On average in Vermont every year, there are 85 suicide deaths, or about 13.6 deaths per 100,000 people.

> In 2006, there were approximately 33,000 suicide deaths in the U.S., or about 10.9 suicide deaths per 100,000 people.

> Males in Vermont have consistently higher rates of suicide deaths than females. Highest rates are among men age 75 years and older.

> Among women, the highest suicide rates occur between the ages of 35 and 54.

• Depression and suicide plans

Many more suicides are contemplated or attempted, but not completed.

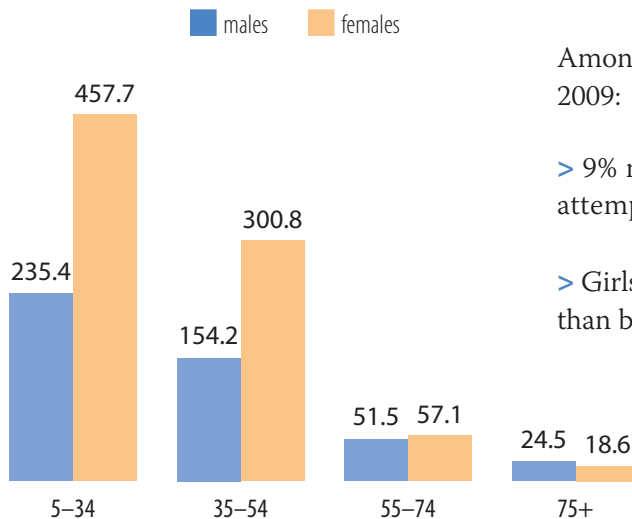
Among eighth through 12 graders in 2009:

> 9% made a plan about how they would attempt suicide.

> Girls were more likely to plan a suicide than boys.

Suicide Attempts, by Age

of hospitalizations or emergency room visits in Vermont due to a suicide attempt, per 100,000 people • 2003-2007



Among adults in 2006:

> 3% reported they had seriously considered attempting suicide. This represents about 12,000 people.

> There were no differences by gender, but younger adults were more likely to have considered suicide in the past year, compared to older adults.

• *Depression and suicide attempts*

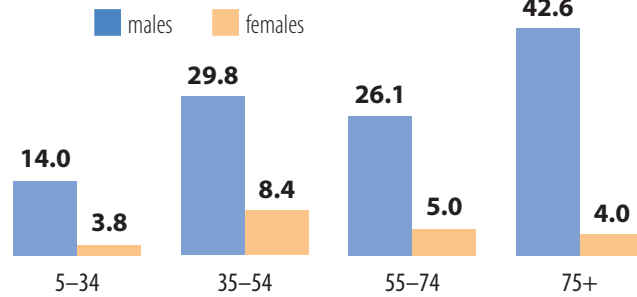
Among eighth through 12th graders in 2009:

> 5% actually attempted suicide, and 2% made a suicide attempt that required medical attention.

> Girls are more likely to attempt suicide, but there are no significant differences by gender in attempted suicides that required medical attention.

Suicide Deaths, by Age

Average # of deaths in Vermont each year, per 100,000 people • 2003-2007



Among adults in 2006:

> While adult males successfully carry out more suicides, females make more attempts that lead to hospitalization or emergency room visits, but not death.

> The majority of attempts were made by women younger than 55 years old. ▼

References

¹*American Institute of Stress.*

www.stress.org

²*HM von Praag. Can Stress Cause Depression?*

World J Biol Psychiatry.
2005;6 Suppl 2:5-22.

³*American Heart Association.*

www.americanheart.org

⁴www.suicide.org

Recommendations

To reduce health disparities

Income

A healthy standard of living for all

- Tailor efforts to address obesity, smoking and inadequate prenatal care among people with lower incomes
- Increase use of preventive health services among people with lower incomes
- Make state/federal assistance programs more accessible to low-income Vermonters
- Raise the state's minimum wage to more closely match the Vermont Liveable Wage

Education & Occupation

Well educated citizens with opportunities to earn a living wage

- Focus on improving education as a means of reducing health disparities
- Continue to expand access to higher education
- Make health materials easier to comprehend
- Provide job-seeking assistance for Vermonters looking for work
- Promote safety in the workplace

Housing & the Built Environment

Everyone has a safe, healthy place to live

- Develop affordable housing for low-income Vermonters
- Expand access to affordable fresh fruit and vegetables
- Raise awareness about health effects related to living in substandard housing
- Help families improve indoor air quality and reduce exposure to lead
- Expand support for communities to develop safe bike and walking paths

Access to Care

Equal access to quality health care

- Continue the upward trend in Vermonters with health insurance
- Ensure an adequate supply of primary care doctors and dentists across the state
- Improve transportation systems for accessing health care
- Raise awareness about the importance of culturally appropriate health care
- Increase use of cultural and linguistic translators in the health care setting

Race, Ethnicity & Cultural Identity

Better health for *all* Vermonters

- Improve reporting of racial and ethnic data by federally defined categories, and by more distinct populations
- Make schools safer for students who belong to a racial or ethnic minority
- Address factors that contribute to suicide attempts by young Vermonters who belong to a racial or ethnic minority
- Increase the number of Vermonters who belong to an ethnic or racial minority who have access to health insurance and who have a primary care provider
- Increase efforts to prevent chronic disease and sexually transmitted diseases among racial and ethnic minority groups

Stress, Disability & Depression

Overcome the health toll of chronic stress

- Improve recognition of chronic stress and depression
- Promote screening and treatment for depression among all Vermonters, especially young adults, people living with a disability, and people who have chronic diseases

