

Current Prevalence

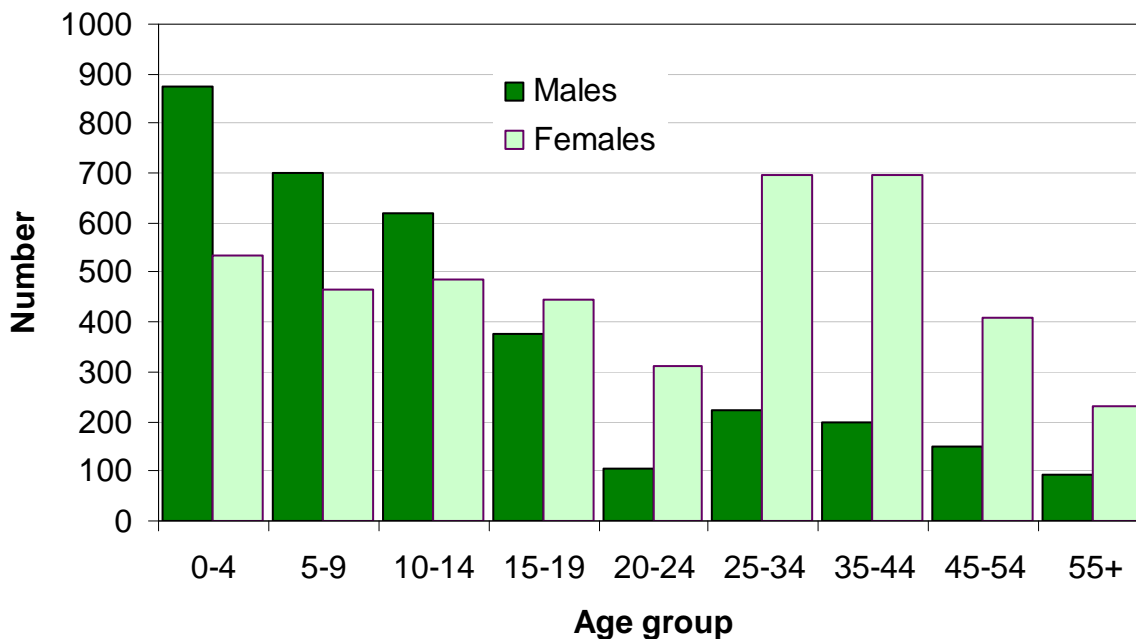
The age and gender distribution of current asthma among Vermonters follows national trends suggesting those most affected by asthma are boys and women.

In 2005, 9.8%, or approximately 48,000 adult Vermonters, and 8.2%, or approximately 11,000 Vermont youth (under 18), have current asthma according the Behavioral Risk Factor Surveillance System.

Asthma prevalence varies by age and gender. The overall prevalence of asthma among adult men in 2005 is 8.2% compared to a significantly higher rate in women, of 11.2% (See Table 1).

Figure 1 presents the distribution of asthma prevalence by gender and age group in the Vermont PC Plus population. The PC Plus Program is the primary care case management program for the Vermont Medicaid program, enrolling approximately two thirds of all Medicaid beneficiaries annually.

Figure 1. Prevalence of current asthma by age and sex – Vermont adult residents in the PC Plus population, 2004.



Data source: VPQHC Medicaid database

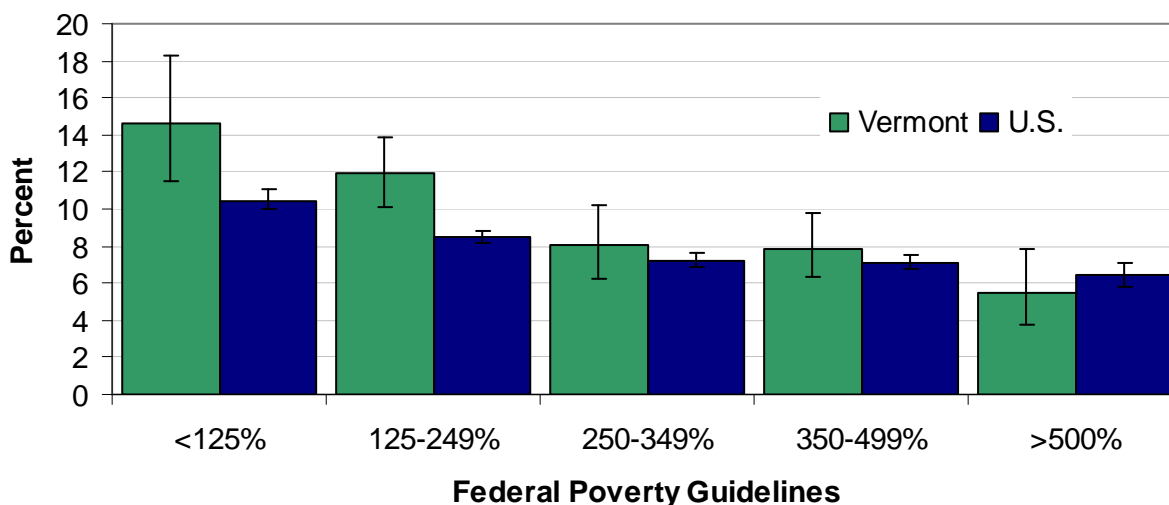
Adult Demographics

Among Vermont adults, the highest rates of asthma are observed in non-whites, those with less education or lower income, and those that have health insurance.

Race: In 2004-2005, whites have lower rates of asthma (9.0%) than non-whites (12.0%). This relationship is inconsistent with U.S. trends, which show whites having higher rates of asthma than non-whites (Table 1).

Income/Education: Adults with the lowest incomes and educational background have the highest rates of asthma. In Vermont, 14.6% of those making less than 125% of the Federal Poverty Level have asthma compared to only 5.4% in those making over 500% of the Federal Poverty Level; 13.8% of Vermonters with less than a high school diploma have asthma compared to 8.0% of those with a college degree or higher (Figure 2).

Figure 2. Prevalence of current asthma by income (as a measure of Federal Poverty Level) – Vermont and U.S. adult residents, 2005.



Health Insurance: Rates of asthma are higher among those with health insurance compared to the uninsured (10.3% versus 6.6%). This may be a result of an increased need for health insurance in those with asthma or an increased awareness of their diagnosis due to physician recognition.

Vermont and U.S. data tables are presented on the following page.

Adult Demographics

Table 1. Prevalence of current asthma by demographics – Vermont and U.S. adult residents, 2005.

	Vermont	US
	% (95% CI)	% (95% CI)
Total	9.8 (8.9-10.8)	7.9 (7.7-8.0)
Gender / Age		
Male	8.3 (6.8-9.9)	5.6 (5.4-5.8)
18-24	15.1 (8.4-25.5)	7.1 (6.2-8.1)
25-44	8.3 (6.5-10.6)	5.3 (5.0-5.7)
45-64	6.0 (4.7-7.6)	5.2 (4.9-5.6)
65+	6.8 (5.0-9.4)	5.7 (5.3-6.2)
Female	11.2 (10.1-12.4)	10.0 (9.8-10.3)
18-24	10.0 (5.9-16.3)	11.4 (10.5-12.4)
25-44	13.2 (11.3-15.4)	9.8 (9.5-10.2)
45-64	11.5 (9.9-13.4)	10.7 (10.3-11.1)
65+	8.0 (6.4-9.9)	8.5 (8.0-8.9)
Race		
White	9.0 (8.4-9.7)*	8.2 (8.0-8.4)
Non-white	12.0 (9.6-14.9)*	7.4 (7.1-7.8)
Household income		
<125% FPL	14.6 (11.5-18.3)	10.5 (10.0-11.0)
125-249% FPL	11.9 (10.2-13.9)	8.5 (8.2-8.9)
250-349% FPL	8.0 (6.3-10.3)	7.2 (6.8-7.6)
350-499% FPL	7.9 (6.3-9.8)	7.2 (6.8-7.6)
500% FPL	5.4 (3.7-7.9)	6.4 (5.8-7.1)
Education		
Less than high school	13.8 (10.2-18.5)	8.7 (8.2-9.3)
High school or G.E.D.	10.4 (8.7-12.3)	7.6 (7.3-7.9)
Some college or technical school	10.4 (8.7-12.4)	8.4 (8.0-8.7)
College degree or greater	8.0 (6.8-9.5)	7.4 (7.1-7.7)
Health insurance		
Yes	10.3 (9.3 (11.5)	8.2 (8.0-8.4)
No	6.6 (4.7-9.2)	6.9 (6.4-7.5)

Data source: BRFSS

Age-adjusted rates for all except sex/age groups.

*2004-2005 data combined due to small numbers.

County-level Prevalence

Although some variation is observed in asthma prevalence rates by county, when developing asthma prevention and control programs, it is important to target populations with known risk factors for asthma: income, education, health insurance, race, and age/gender.

There is little variation in adult asthma prevalence between counties in Vermont according to BRFSS data from years 2001-2005 combined.

However, among Vermonters in the PC Plus Program, rates of current asthma between 2003 and 2004 were consistently higher in Bennington county and consistently lower in Essex county.

DATA TABLES

Table 2. Prevalence of current asthma by county – Vermont adult residents, 2001-2005.

	2001-2005
	<u>% (95% CI)</u>
Addison	9.0 (7.3-11.1)
Bennington	10.3 (8.5-12.5)
Caledonia	8.6 (7.1-10.5)
Chittenden	8.3 (7.4-9.2)
Essex	7.5 (4.9-11.3)
Franklin	10.4 (8.6-12.4)
Grand Isle	11.6 (8.1-16.2)
Lamoille	7.7 (6.0-9.8)
Orange	9.6 (7.9-11.8)
Orleans	10.2 (8.2-12.6)
Rutland	8.9 (7.7-10.3)
Washington	8.1 (6.9-9.5)
Windham	9.0 (7.7-10.5)
Windsor	8.4 (7.1-9.9)

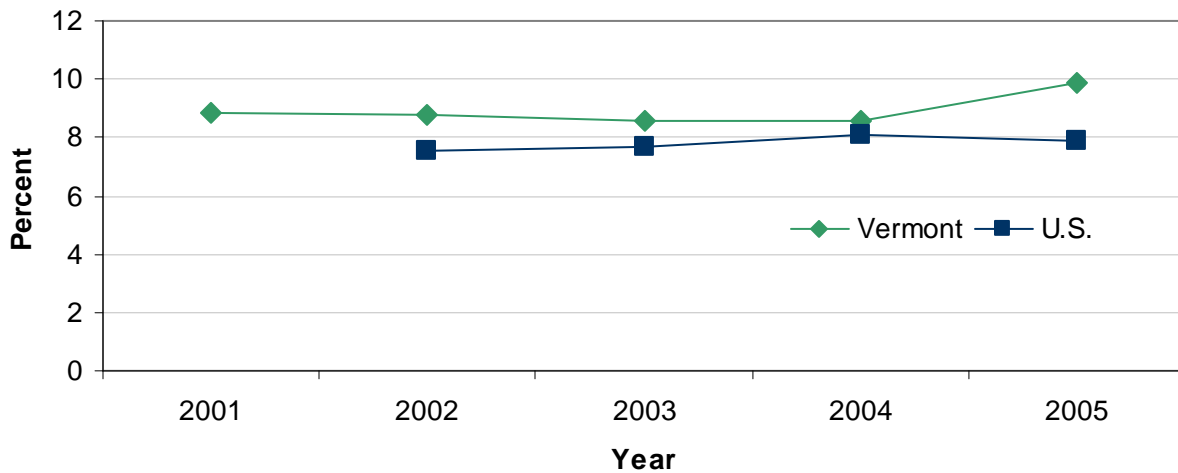
Adults—Time Trends

With consistently higher rates of asthma in Vermont and throughout New England compared to the United States, preventing and controlling asthma is a top priority in Vermont.

Based on the latest findings of the Asthma Regional Council, among adults, the prevalence of asthma in New England increased significantly between 2001 and 2004. However, when looking at only Vermont data, there have been no statistically significant changes in asthma prevalence in Vermont between 2001 and 2005.

The Asthma Regional Council also indicates that asthma rates in New England are consistently higher for both adults and children compared to the rest of the country. In 2002 and 2005, the prevalence of current asthma in Vermont is statistically significantly higher than the U.S. rate.

Figure 3. Prevalence of current asthma – Vermont and U.S. adult residents, 2001-2005, age-adjusted rates.



DATA TABLES

Table 3. Prevalence of current asthma – Vermont and U.S. adult residents, 2001-2005, crude and age-adjusted rates.

	Vermont		U.S.
	Crude	Age-adjusted	Age-adjusted
	% (95% CI)	% (95% CI)	% (95% CI)
2001	8.8 (7.9-9.9)	8.9 (7.9-9.9)	*
2002	8.7 (7.7-9.7)	8.8 (7.8-9.8)	7.6 (7.4-7.7)
2003	8.4 (7.4-9.4)	8.6 (7.6-9.7)	7.7 (7.5-7.9)
2004	8.5 (7.8-9.3)	8.6 (7.8-9.4)	8.1 (7.9-8.3)
2005	9.8 (8.9-10.8)	9.9 (8.9-10.9)	7.9 (7.7-8.0)

Data source: BRFSS
*Not available.

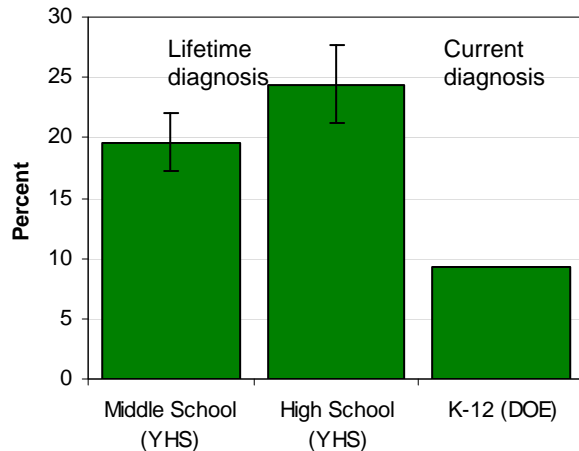
Asthma Prevalence in Schools

Approximately 1 in 10 students currently has asthma, and 1 in 5 students has ever had asthma.

The Vermont Department of Health uses a variety of sources to collect asthma data among students. Figure 5 presents all of our school-level asthma data. Note that the Youth Health Survey only collects lifetime prevalence (having ever been diagnosed) while the Department of Education captures current asthma prevalence.

The **Youth Health Survey (YHS)** measures lifetime asthma prevalence among middle and high school students. A total of 19.5 percent of all middle school students and 24.3 percent of all high school students have ever been diagnosed with asthma by a health care professional. Although high school students have higher rates than middle school students, the difference is not statistically significant. There are also no significant differences in asthma rates by gender.

Figure 4. Prevalence of lifetime and current asthma among youth—2004-2005.



The **Department of Education (DOE)** collected data on asthma prevalence as part of their School Nurse Reports during the 2005-2006 school year. Based on nurse reports, current asthma prevalence in Vermont schools (K-12) is 9.2%.

DATA TABLES

Table 4. Prevalence of lifetime asthma—Middle and high school students, 2002-2004.

	2002	2004
	<u>% (95% CI)</u>	<u>% (95% CI)</u>
Middle school (YHS)	18.1 (16.5-19.7)	19.5 (17.3-22.0)
Male	18.8 (16.3-21.6)	20.5 (17.2-24.3)
Female	17.3 (14.9-20.1)	18.3 (16.0-21.4)
High school (YHS)	*	24.3 (21.2-27.7)
Male	*	24.3 (20.5-28.1)
Female	*	24.1 (20.2-28.4)

* High school students not included in the survey in 2002. 2/12/2007
Crude rates. Data source = YHS and Department of Education.