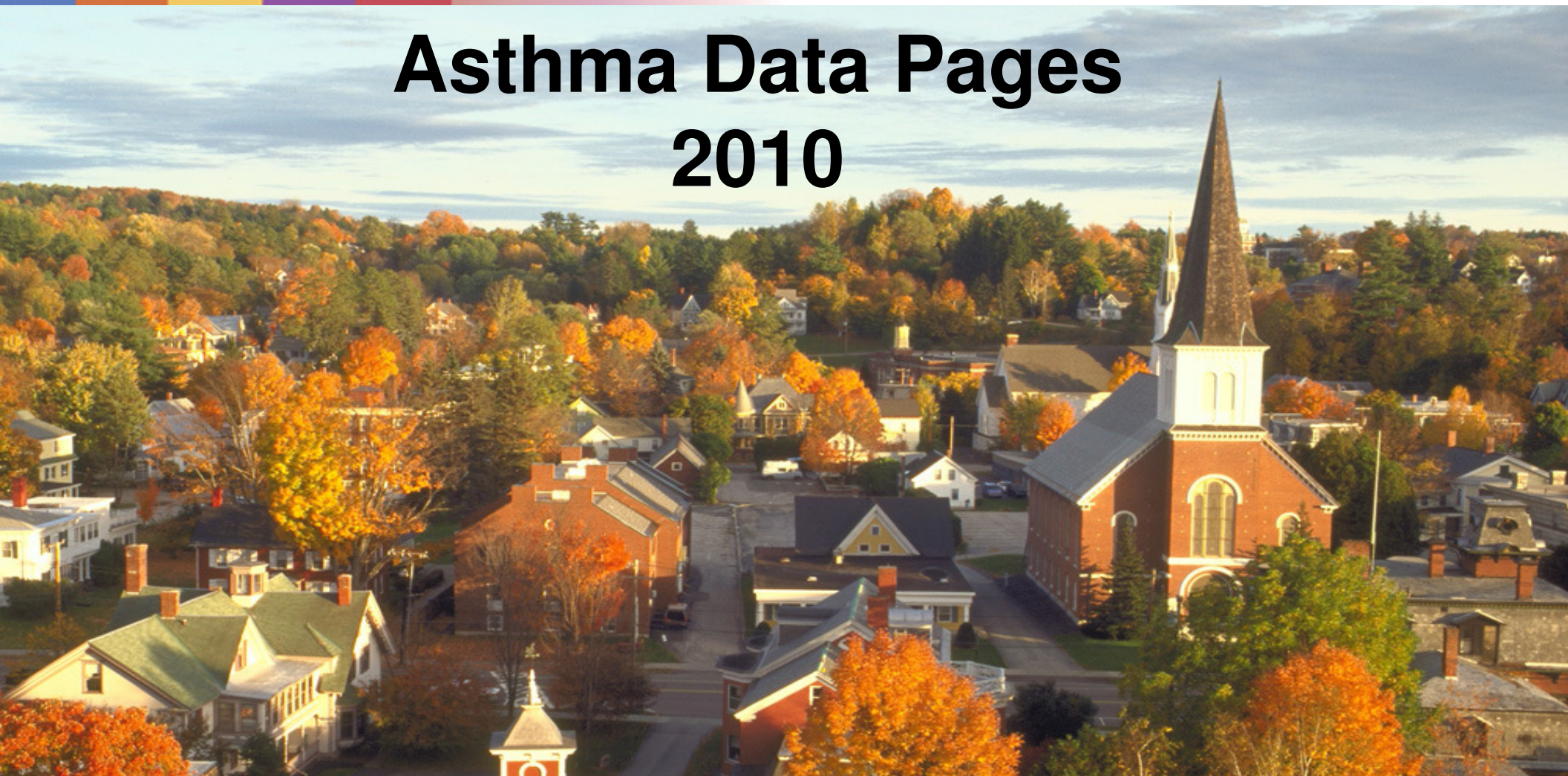


Vermont Department of Health

Asthma Data Pages 2010



Guidance • Support • Prevention • Protection

Vermont Department of Health
June 2012



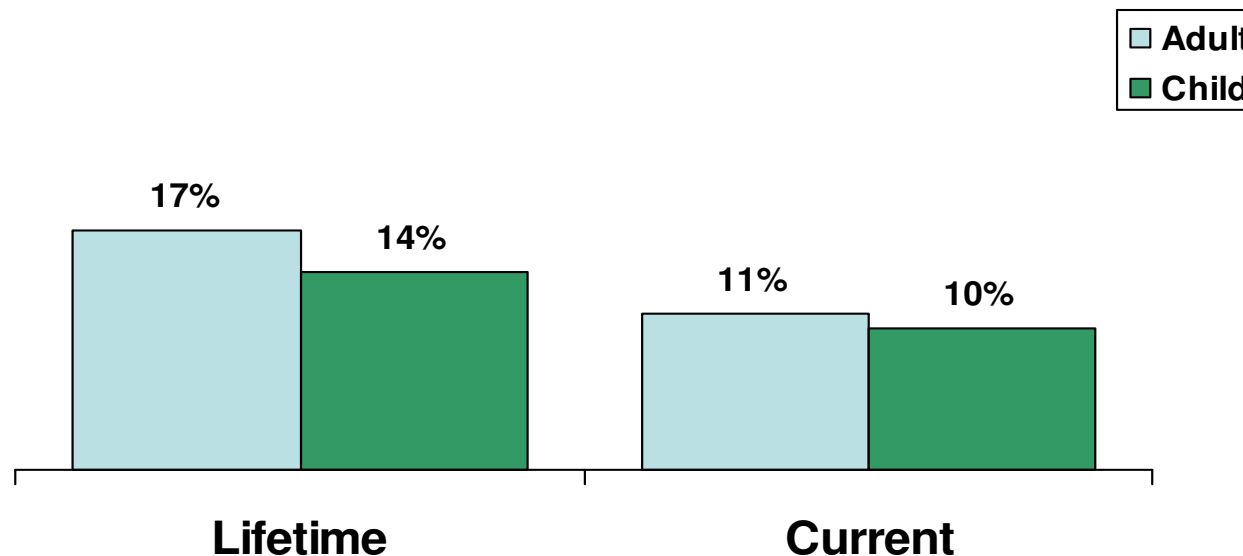
Asthma Prevalence

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Asthma Prevalence Among Adults

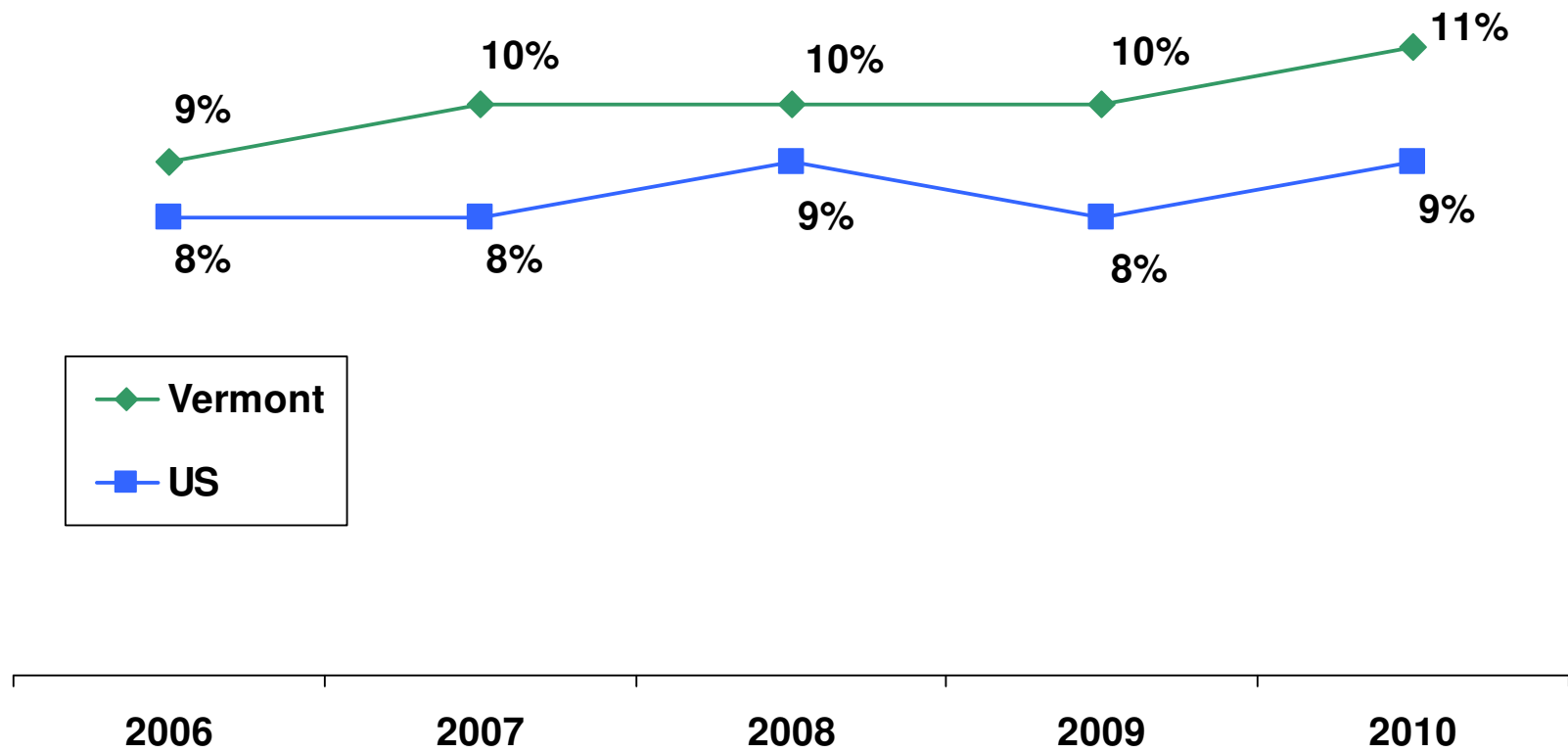
In 2010, 11% of adult Vermonters reported having current asthma and 17% of adult Vermonters reported being diagnosed with asthma at some point in their lifetime. This equated to approximately 55,000 adult Vermonters with current asthma in 2010. One in 10 children in Vermont had current asthma in 2010.

Asthma Prevalence 2010



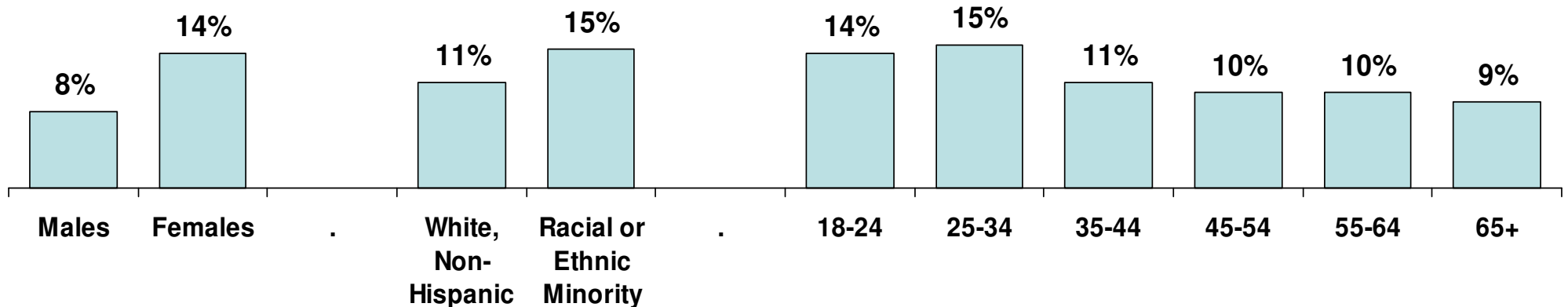
Asthma Prevalence Among Adults

In 2010, the prevalence of current asthma in the U.S. was 9% among adults. Since 2007, the prevalence of asthma in adult Vermonters has been significantly higher than the adult asthma prevalence in the U.S.



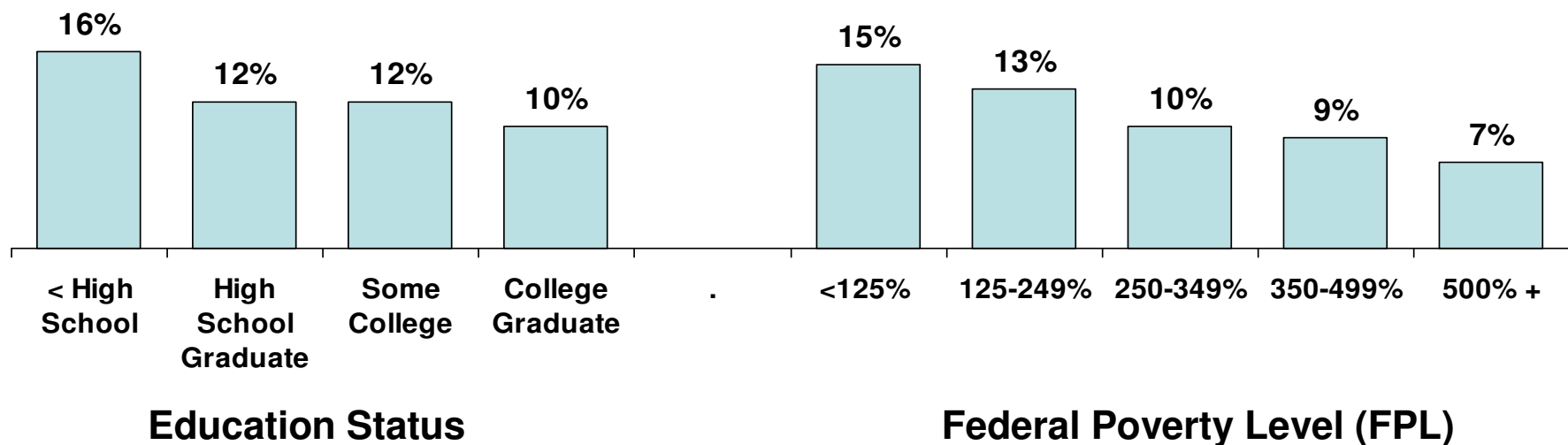
Asthma Prevalence Among Adults

In 2010, women had a significantly higher prevalence of current asthma compared to men. Adults 65 years of age and older had significantly lower prevalence of current asthma than any other age group.



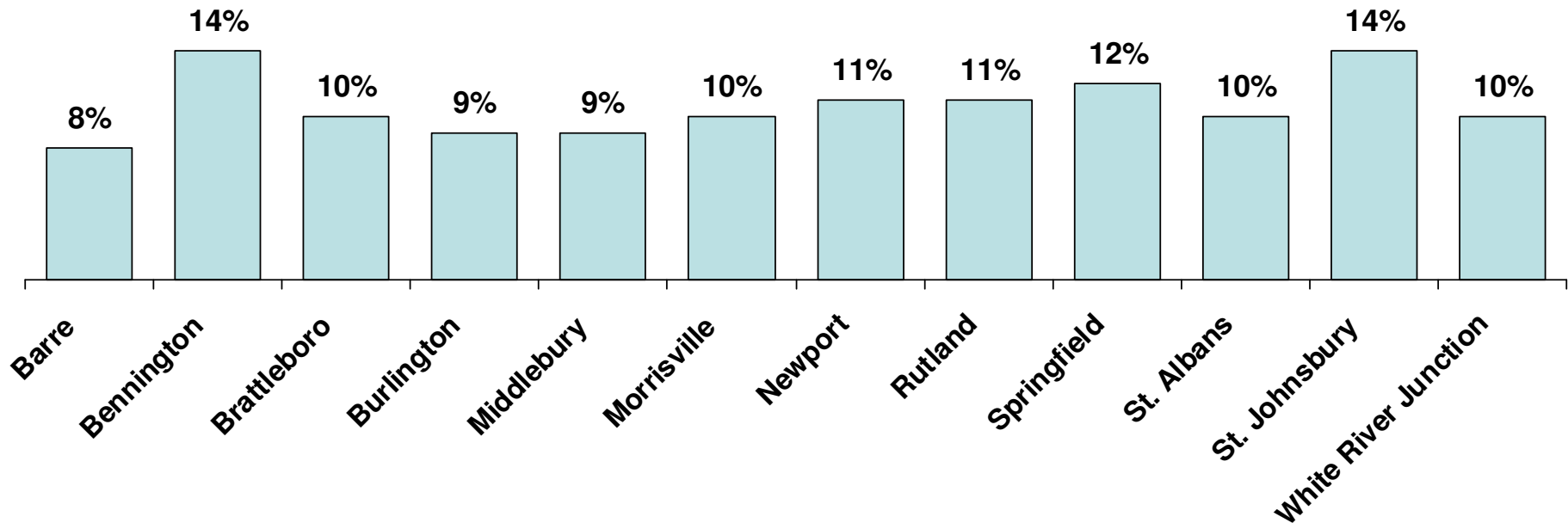
Adult Asthma Prevalence by Education and Income

Adults with less education and adults with a household income closer to the federal poverty level (FPL) had a higher prevalence of current asthma. However, these differences were not statistically significant.



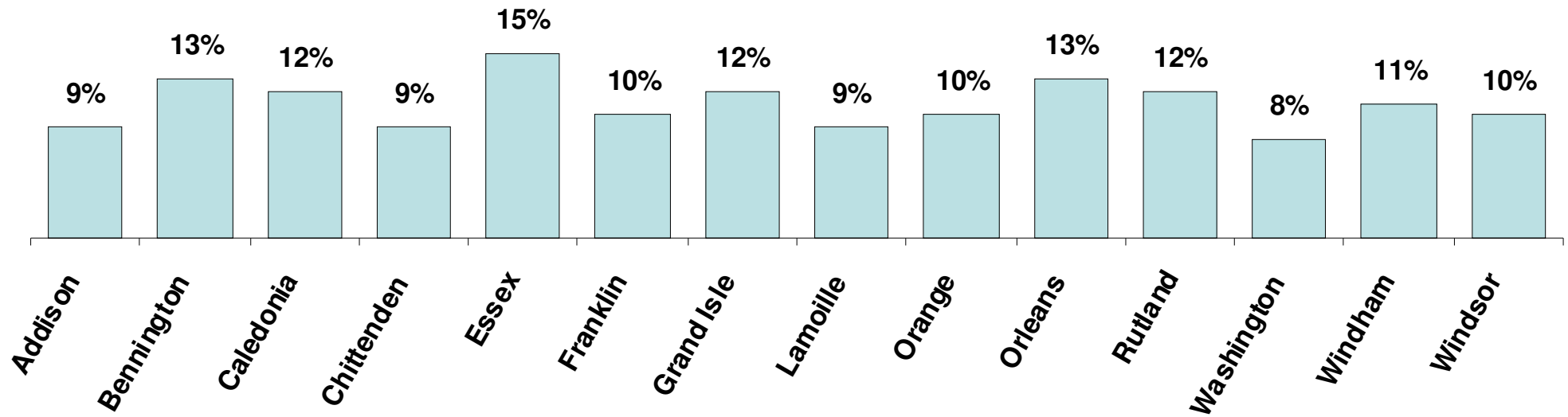
Adult Asthma Prevalence by District Office

The prevalence of current asthma in adult Vermonters ranged from 8% at the Barre District Office to 14% at the Bennington and St. Johnsbury District Offices. There were no statistically significant differences in current asthma prevalence of district offices and the current asthma prevalence of the state.



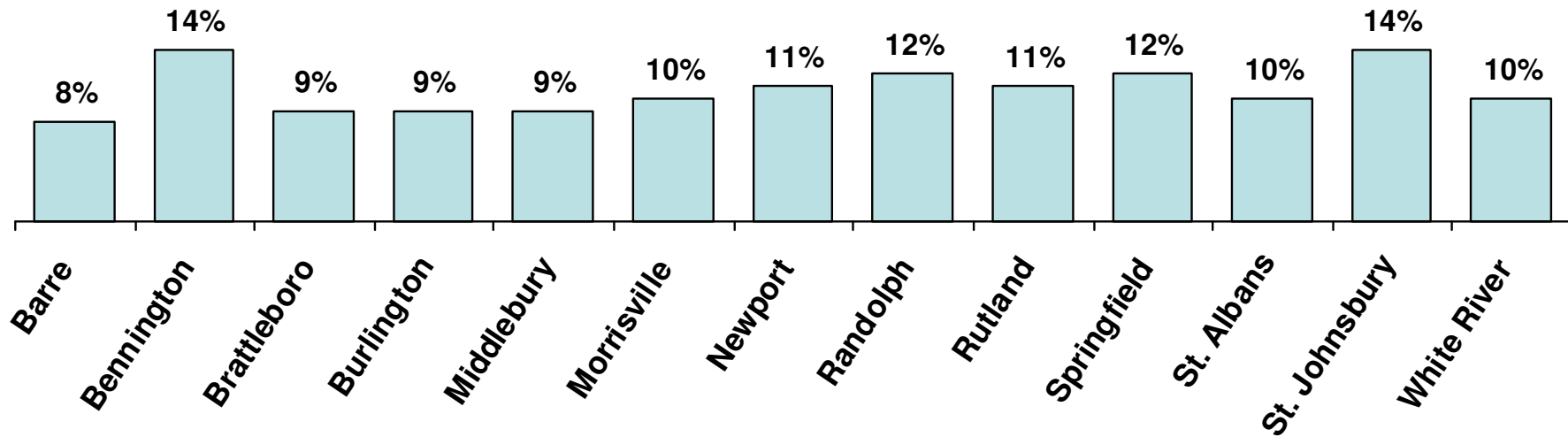
Adult Asthma Prevalence by County

Current asthma prevalence ranged from 8% in Washington county to 15% in Essex county. Only Bennington county had a significantly higher prevalence of current asthma when compared to the state prevalence.



Adult Asthma Prevalence by Hospital Service Area

Current asthma prevalence of adult Vermonters ranged from 8% to 14% in the various hospital service areas. The Bennington hospital service area was the only hospital service area with a current adult asthma prevalence higher than the state.



Asthma Morbidity

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Quality of Life

Activity Limitation

In 2010, close to half of adults and nearly three quarters of youths indicated their daily activities were at least a little limited by asthma.

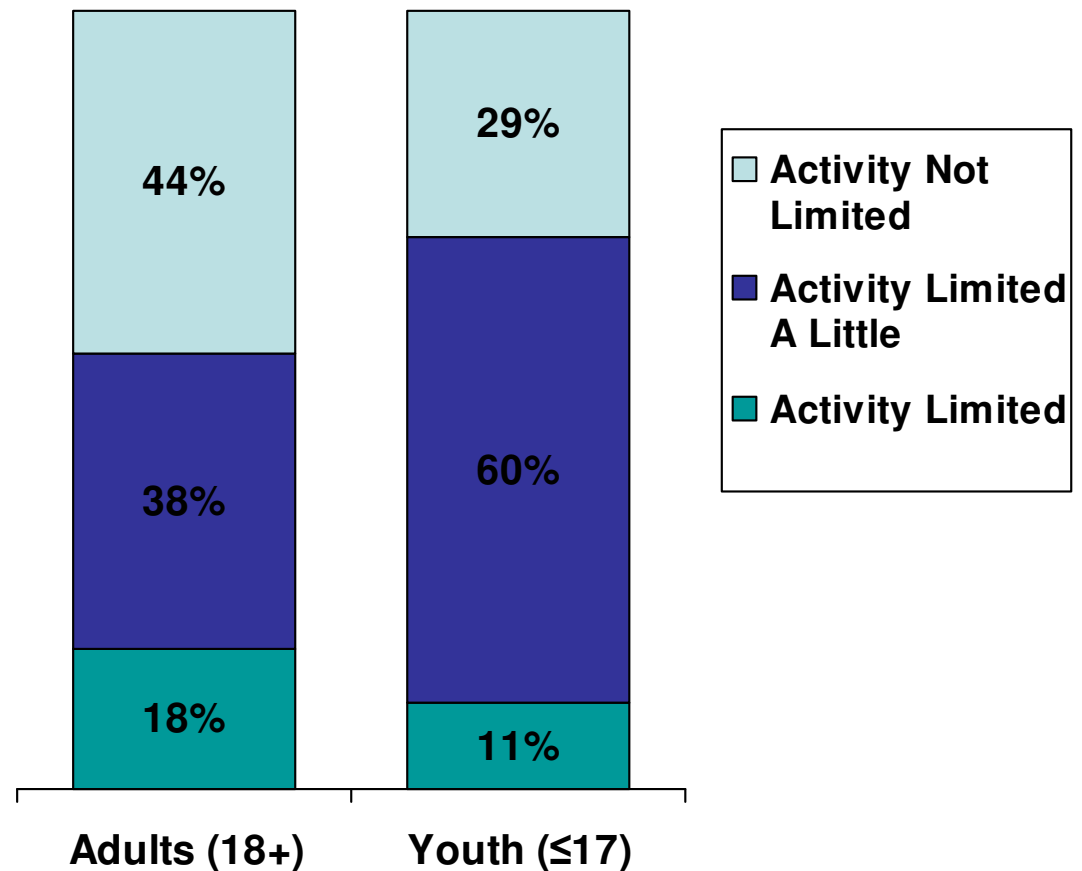
Sleep

Among adults with current asthma, 21% reported that symptoms made it difficult for them to sleep on one or more nights in the past month.

Absenteeism

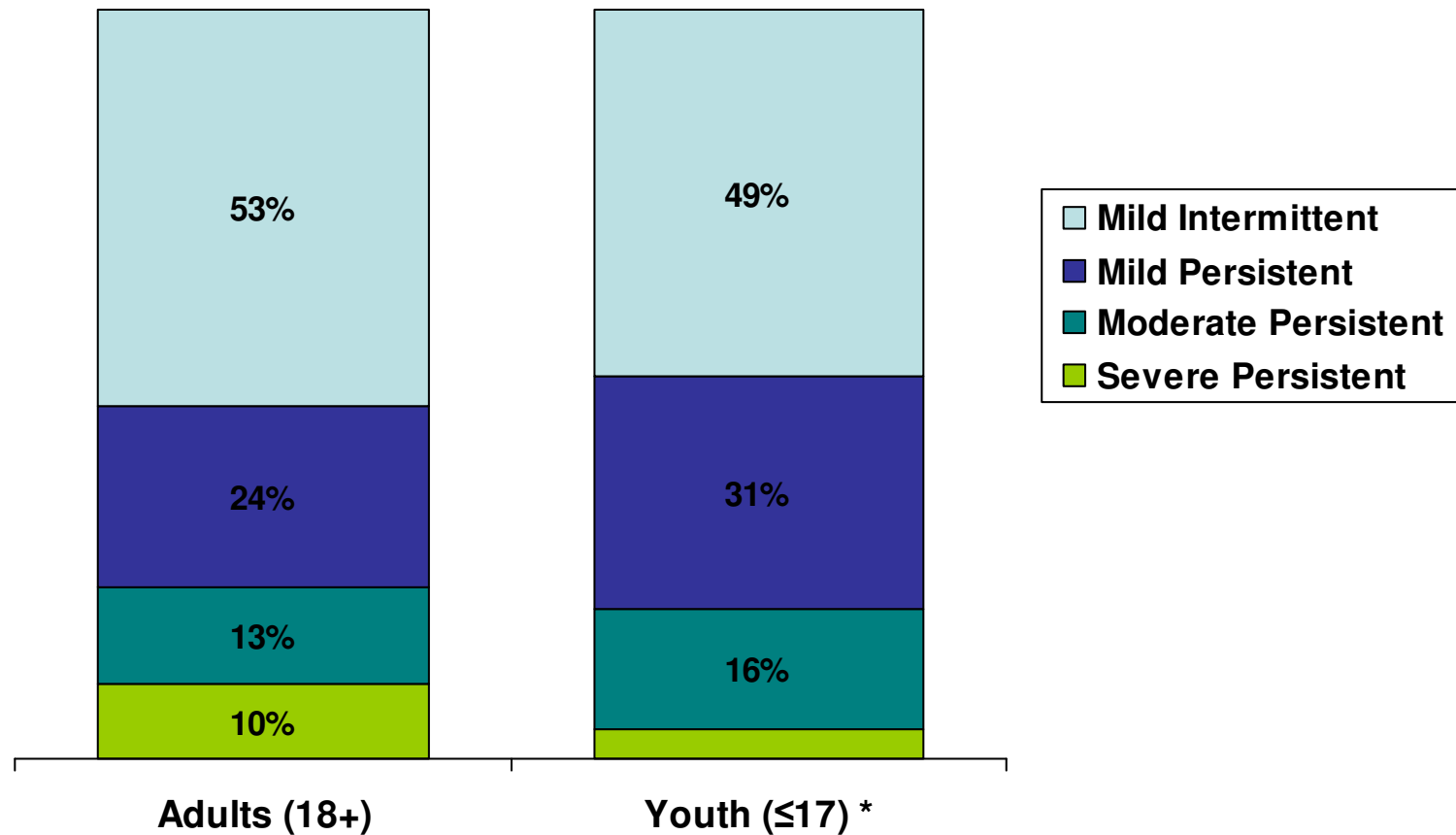
Approximately one quarter of adults reported missing at least one day of work in the past year due to their asthma (26%). Nearly half of youths missed school at least once in the past year because of their asthma (46%).

Activity Limitations Among Those with Current Asthma



Quality of Life - Asthma Severity

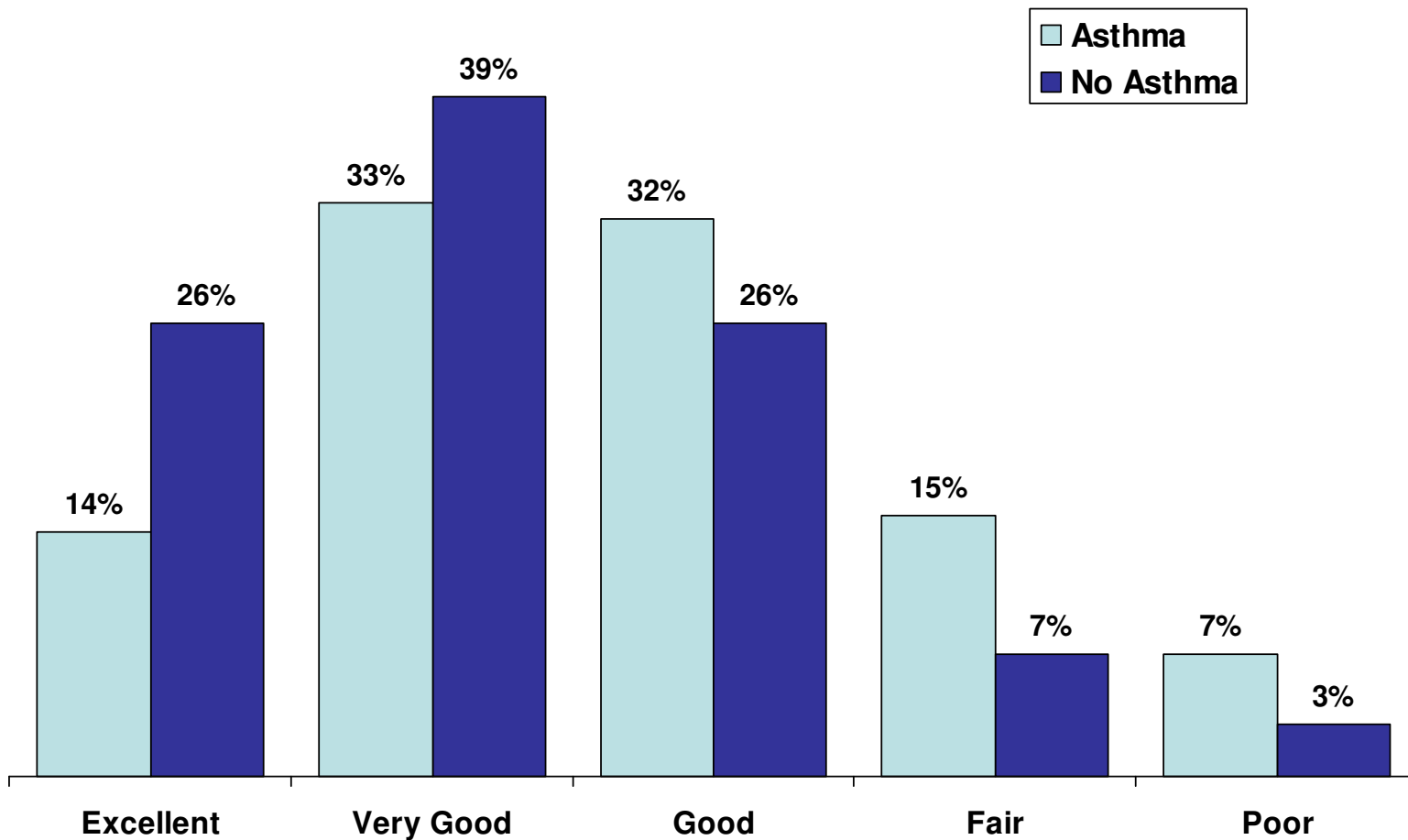
Approximately half of adults and youths with current asthma reported that their asthma was mild and intermittent. A quarter of adults and one out of five youths reported either moderate or severe asthma.



*Due to small numbers, youth data includes 2009-2010 data

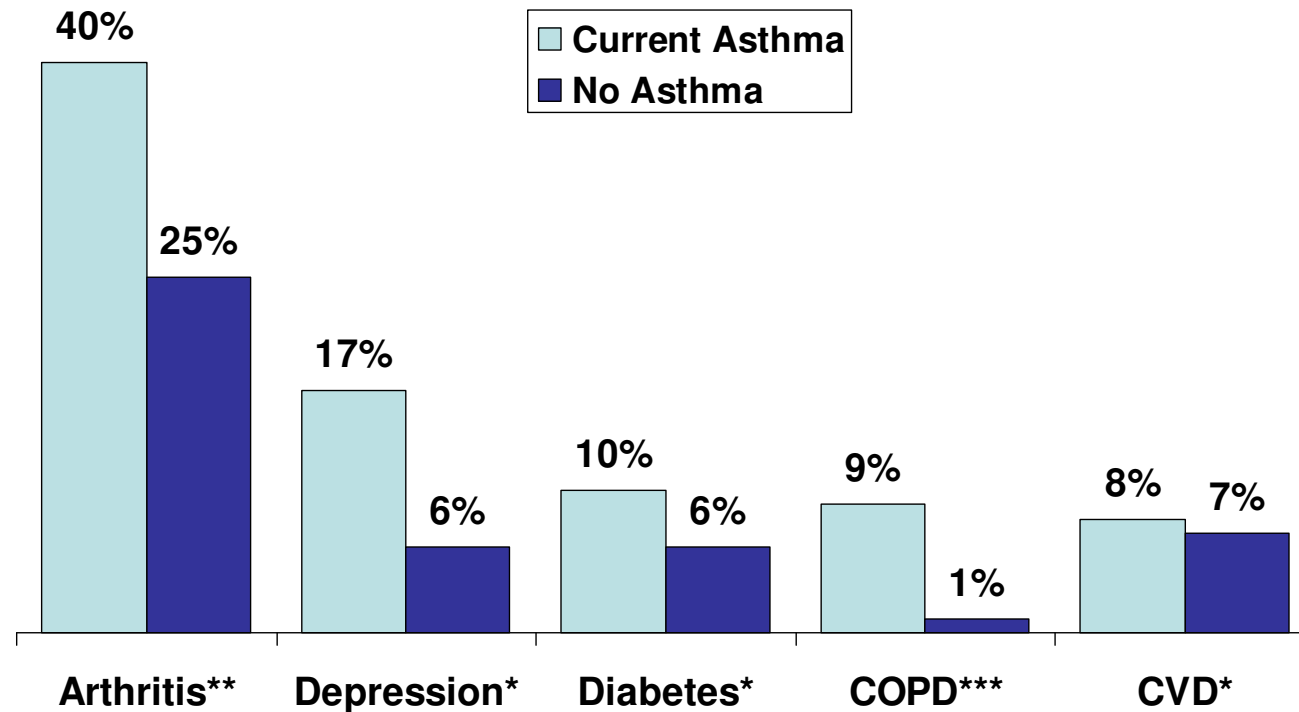
Asthma and Overall Health Status

Adults with current asthma were significantly more likely to rate their health as fair or poor and less likely to rate their health as excellent when compared to adults that do not have asthma.



Adult Asthma Comorbidities

Those with current asthma were significantly more likely to report moderate to severe depression, diabetes, arthritis, and chronic obstructive pulmonary disease (COPD) than those without asthma. There were no significant differences in cardiovascular disease (CVD) rates based on current asthma status.

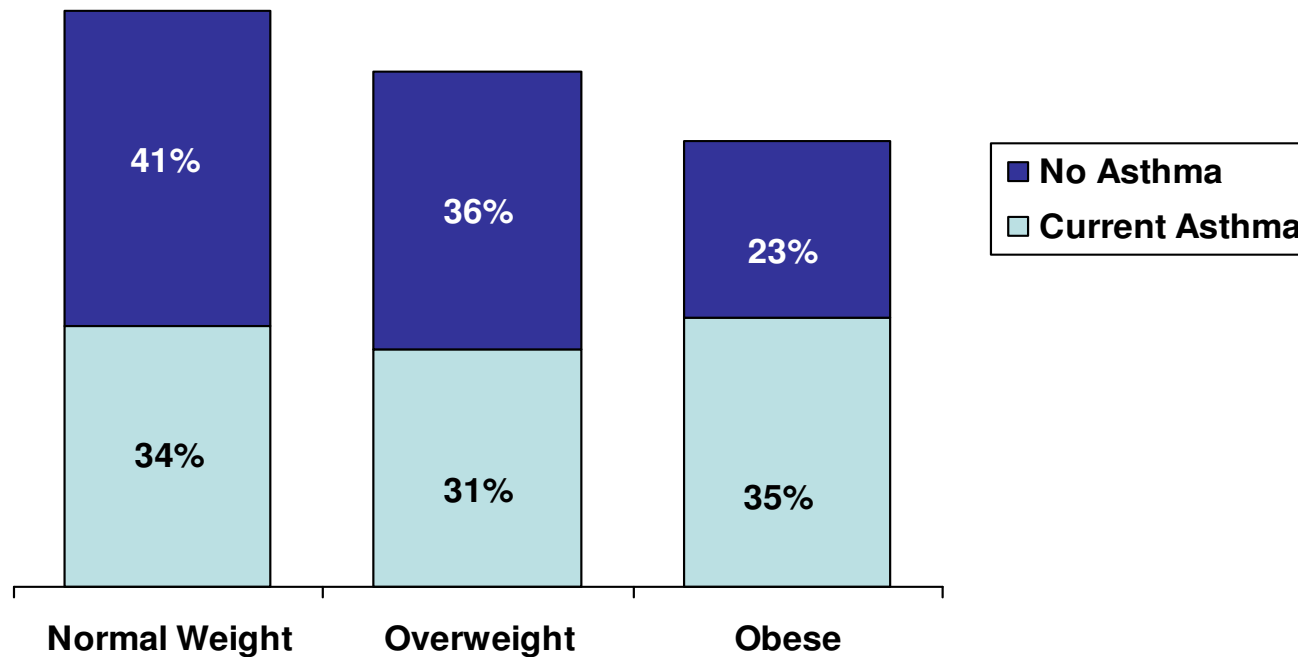


*BRFSS 2010; **BRFSS 2009; ***BRFSS 2008

Adult Asthma Comorbidities

Vermont adults with current asthma were significantly more likely to be obese than those without asthma.

Body Mass Index

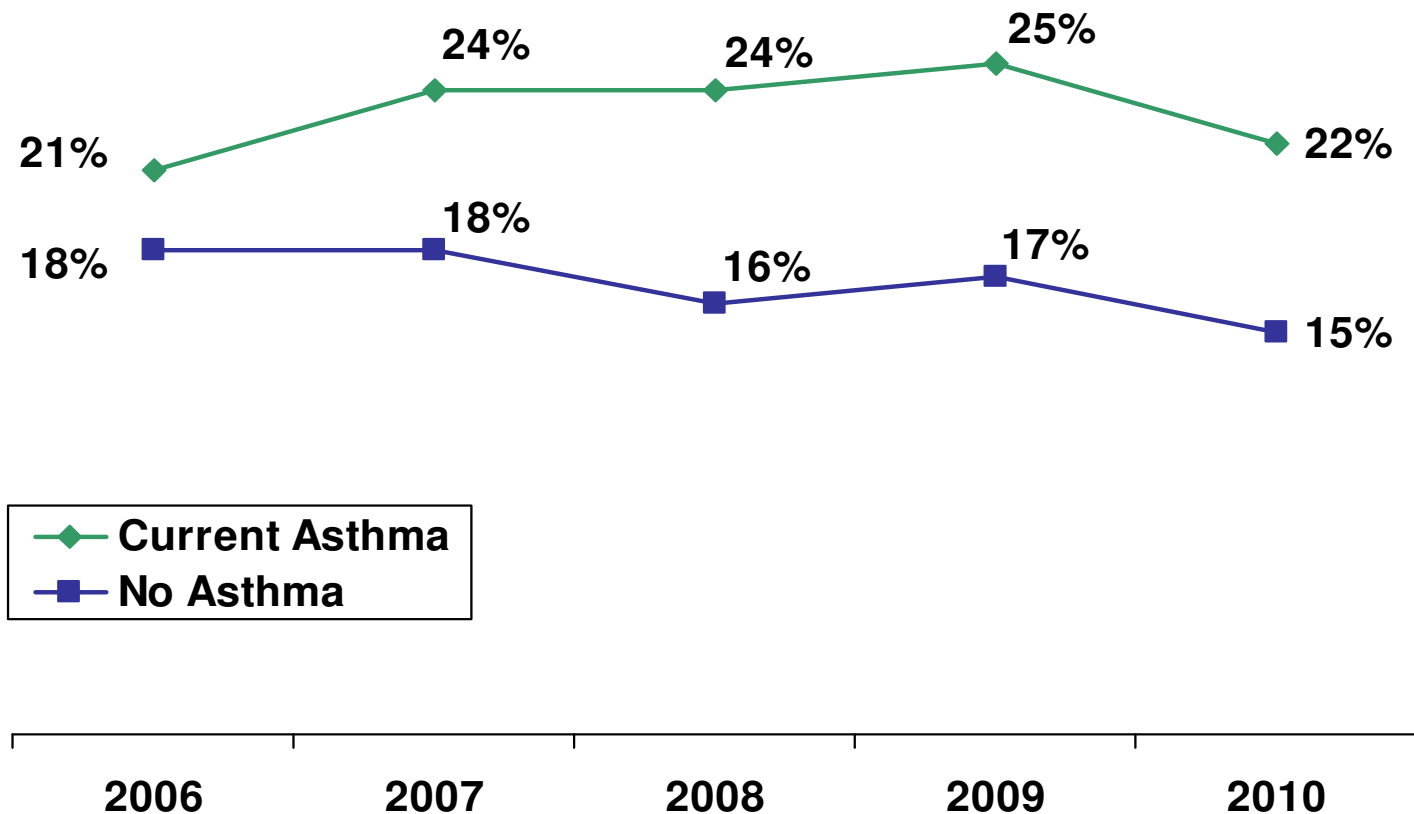


Asthma Risk Factors

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Asthma Risk Factors – Smoking Prevalence

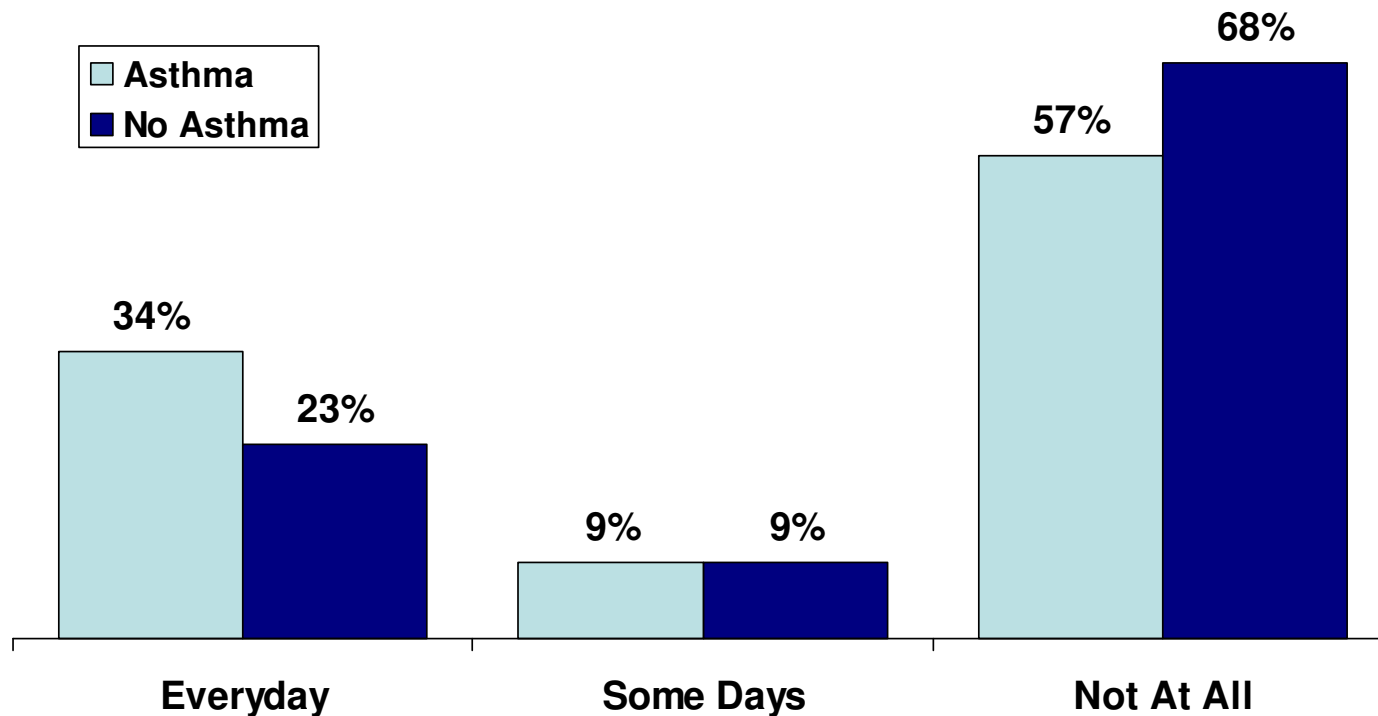
In the last 5 years, there has been a higher prevalence of smoking among adult Vermonters with current asthma than adults that do not have asthma. In 2010, adult Vermonters with current asthma were significantly more likely to smoke than adults without asthma.



Asthma Risk Factors - Smoking

Adults with current asthma were significantly more likely to smoke everyday than adults that did not have asthma (34% and 23% respectively). Though not statistically significant, the number of quit attempts, where one stops smoking for at least a day, was higher among adults with current asthma (72%) than adults without asthma (61%).

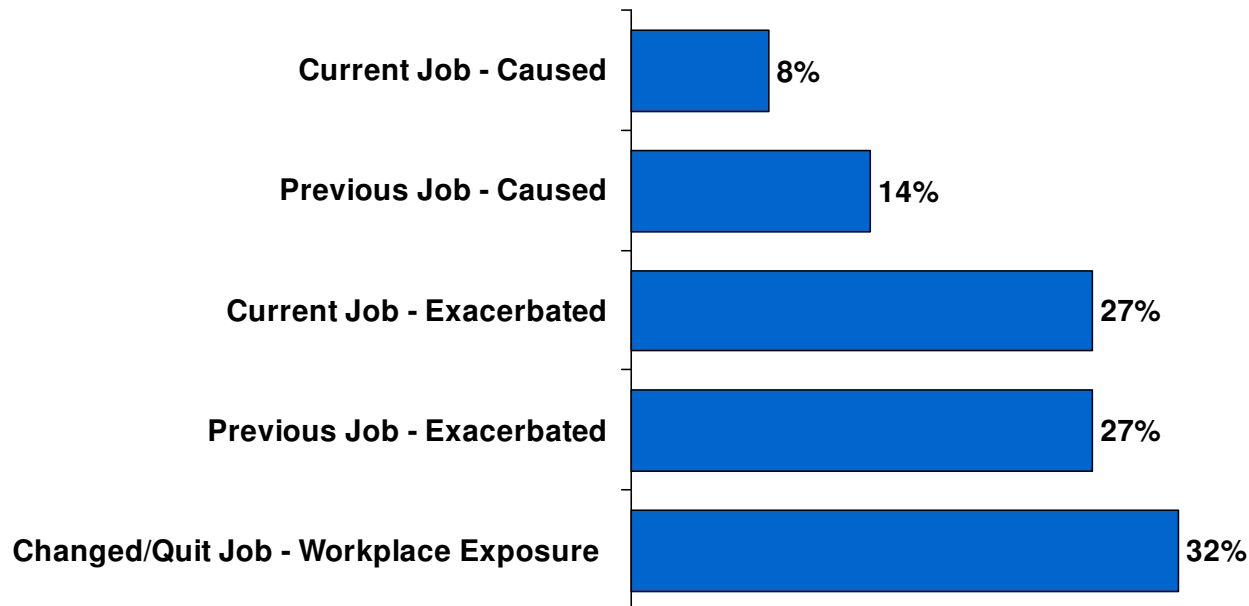
Smoking Frequency Among Those Who Have Ever Smoked 100+ Cigarettes



Asthma Risk Factors – Workplace Exposure

In 2010, 8% of Vermont adults with asthma indicated they believe their asthma was *CAUSED* by chemicals, smoke, fumes, or dust at their current workplace. Another 27% believe their asthma was made worse by these factors in their current job. Among adults with current asthma, 32% reported quitting a job due to workplace factors they believed caused their asthma or made it worse.

Despite the relatively high percentage of adults who reported issues with workplace exposures and asthma exacerbation, only 8% had *told a doctor* they believed their asthma was related to work and only 6% had actually been *told by a doctor* that their asthma was related to their work.

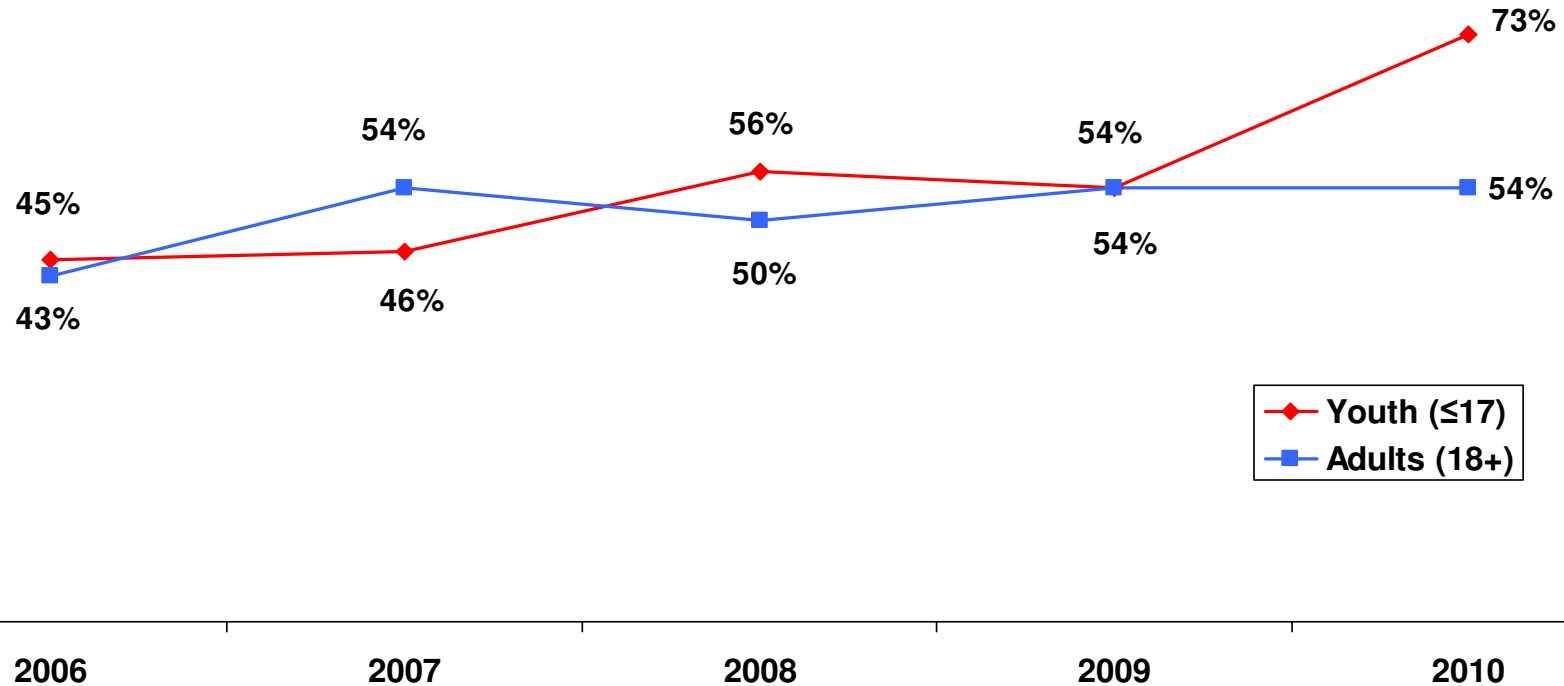


Asthma Risk Factors - Immunization

In 2010, approximately half of adults with current asthma (54%) had a flu shot within the previous year. Among youths with current asthma, 73% had a flu shot within the previous year.

Adults with asthma were significantly more likely to receive a pneumonia vaccine (42%) when compared to adults without asthma (26%) in 2010.

Flu Shot in the Past Year - Current Asthma

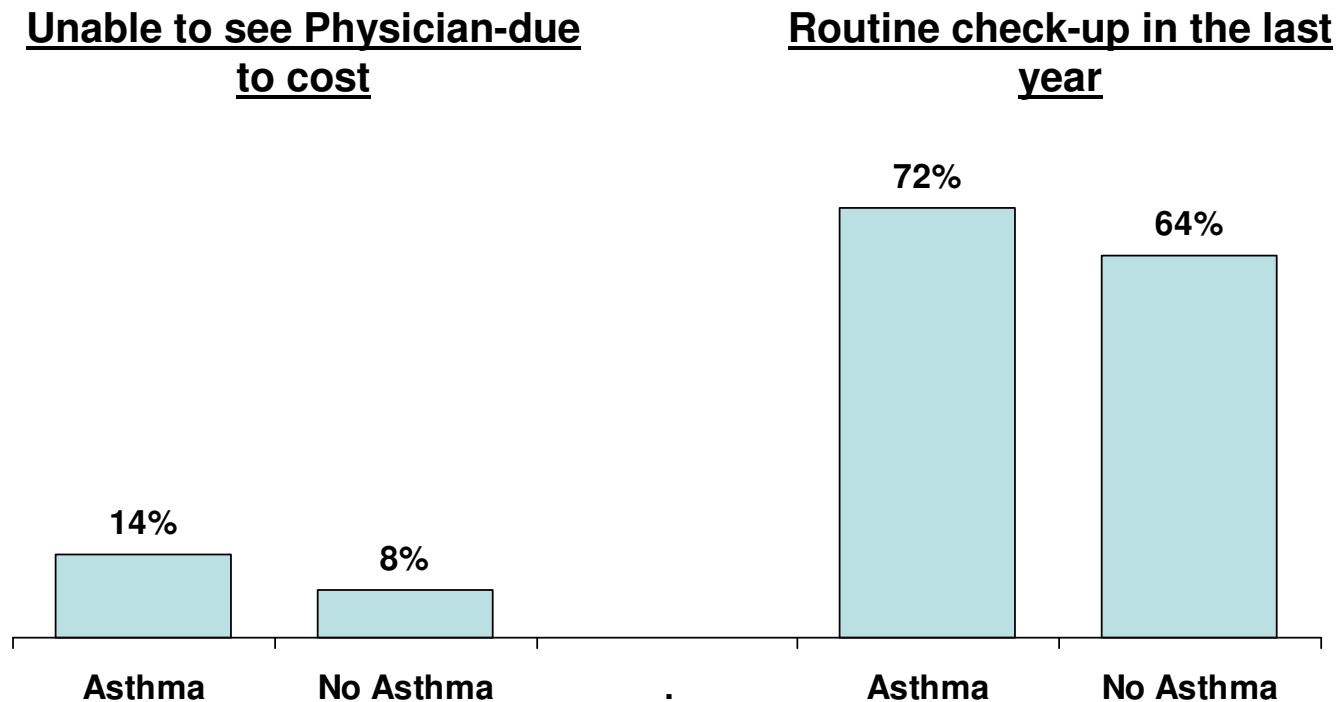


Self and Clinical Care Management

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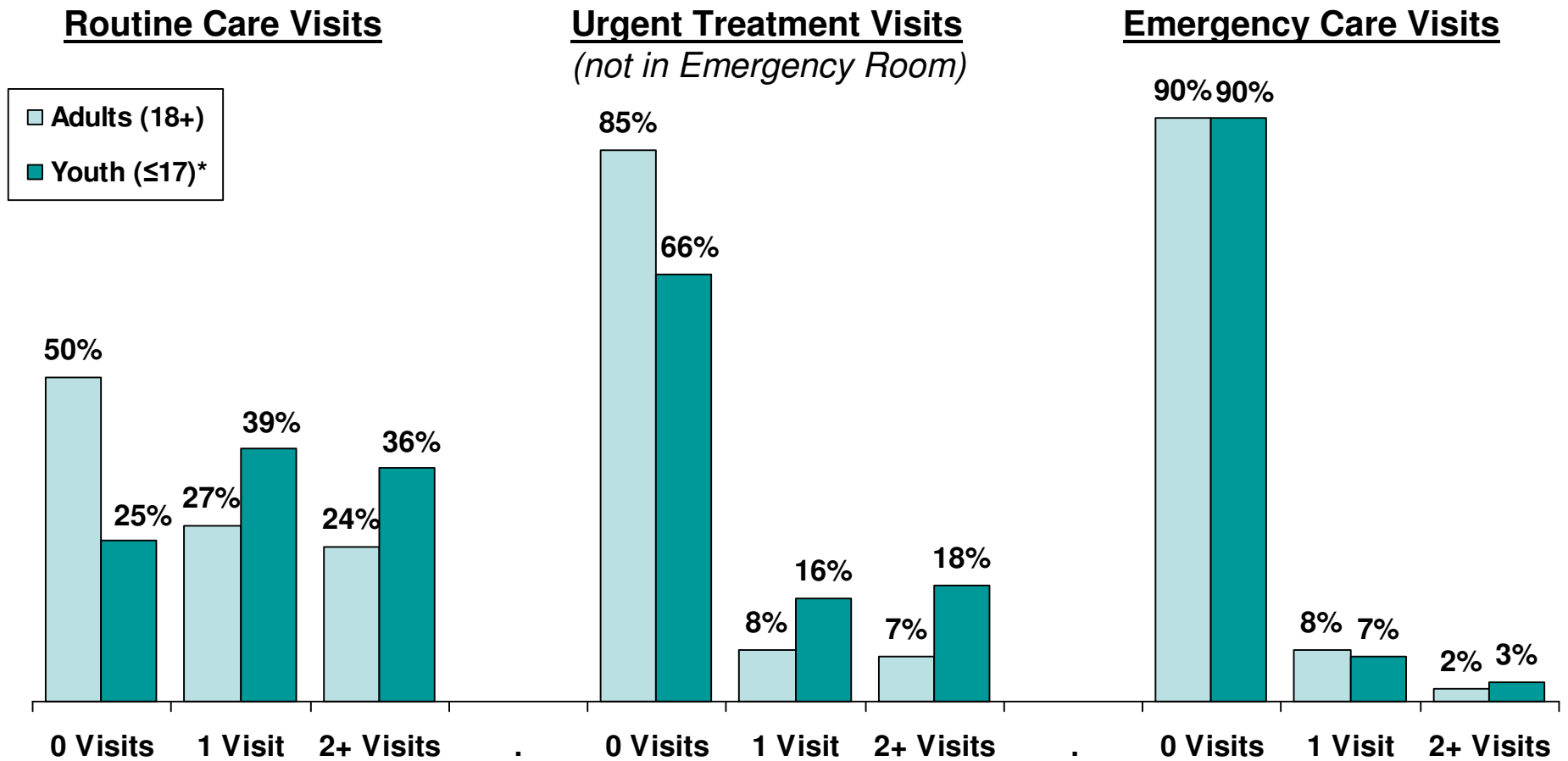
Health Care and Health Insurance

In 2010, 91% of adults with current asthma reported they had some type of health care coverage, which could include health insurance, prepaid plans such as HMOs, or government plans such as Medicare. Though adults with current asthma were significantly more likely to report that they could not see a physician because of cost, they were also significantly more likely to see a physician for a routine check-up in the previous year than those without asthma.



Asthma Management – Clinical Care

Nine out of ten adults or youths did not need an emergency care visit for their asthma. Compared to adults, a higher proportion of youth had one or more urgent care and routine care visits.

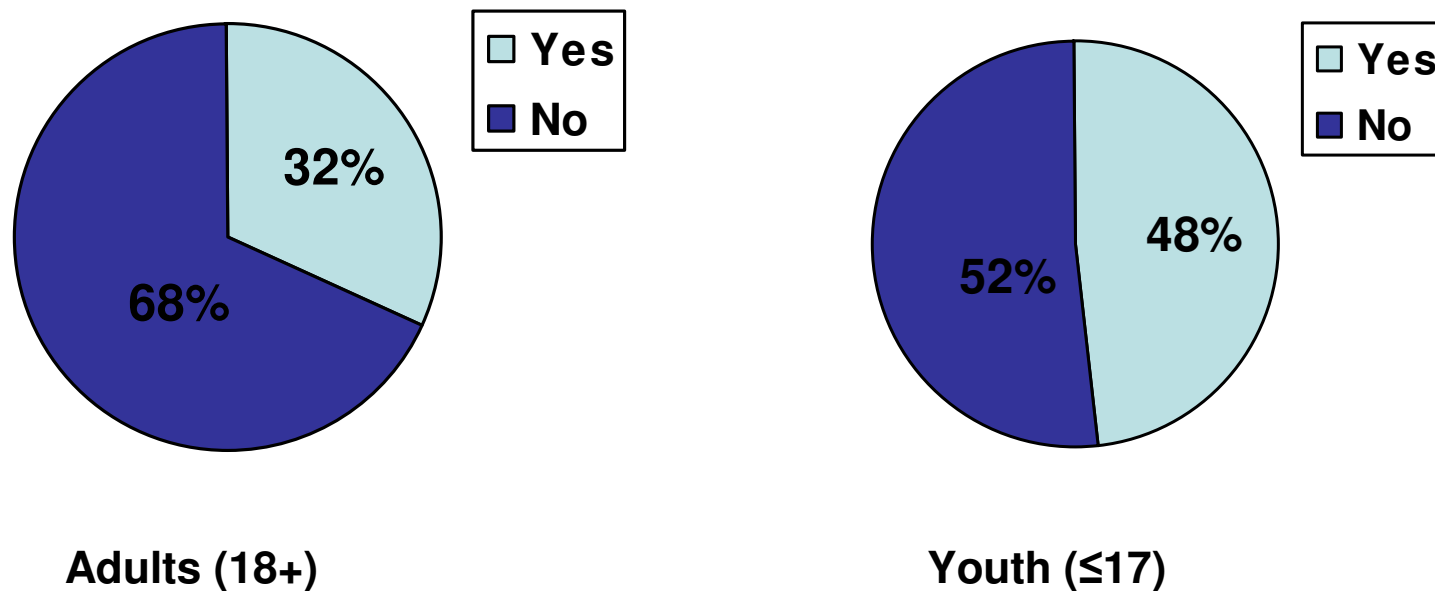


*Due to small numbers, youth data includes 2009-2010 data

Asthma Management – Action Plans

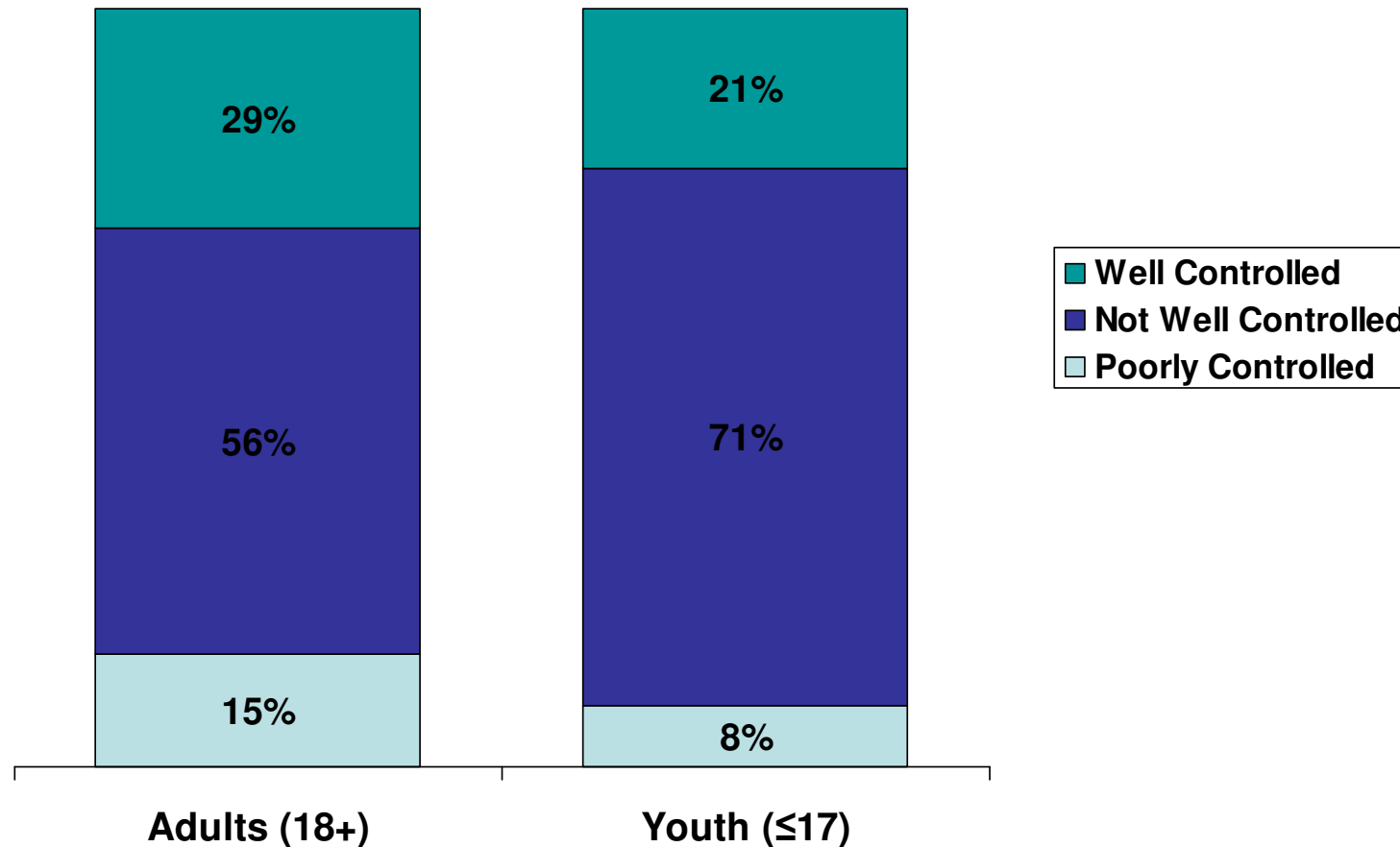
Approximately one-third of adult Vermonters with current asthma reported having ever received an asthma action plan from a health care provider (32%). Almost half of youths reported that they received an asthma action plan from their health care provider.

Have you ever received an asthma action plan?



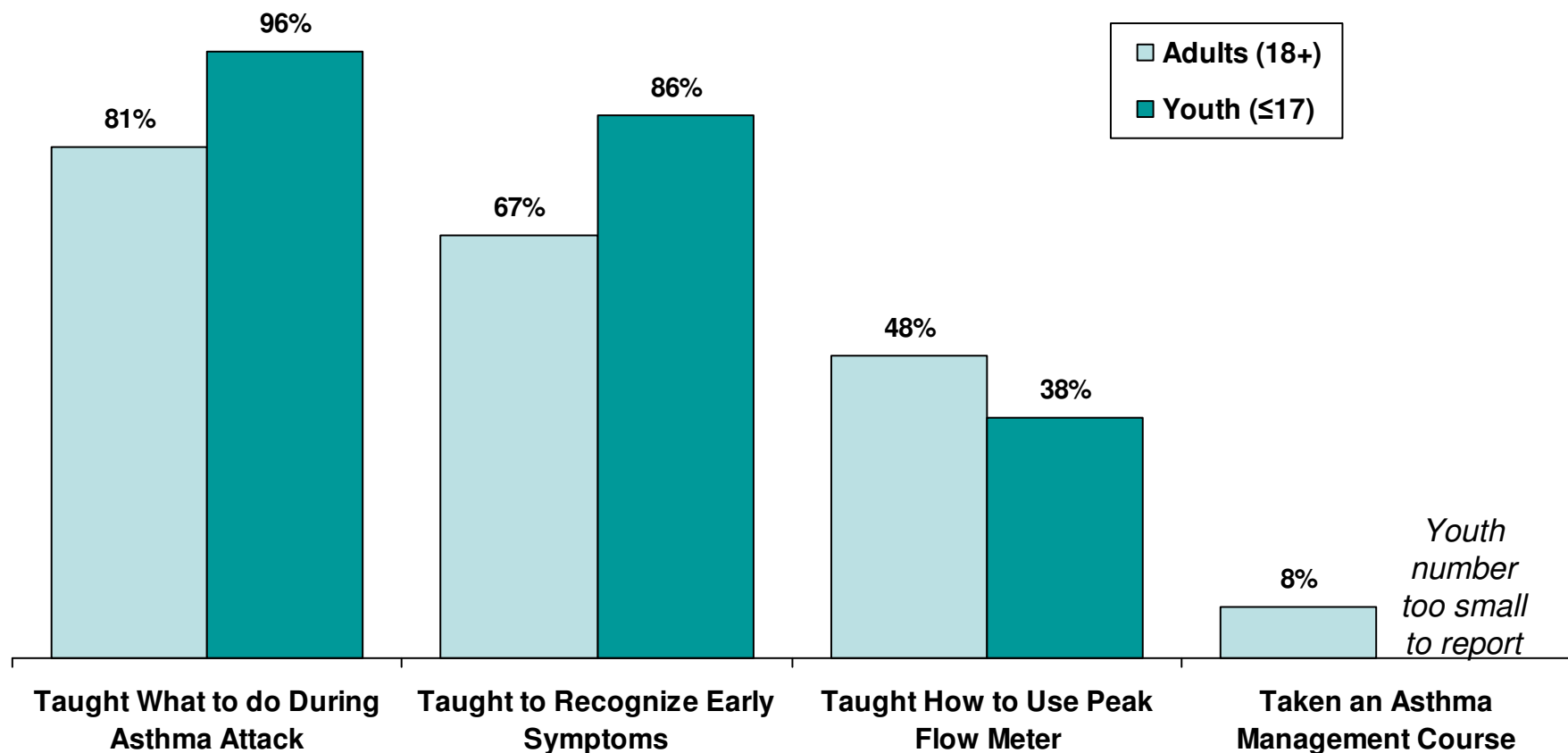
Asthma Management - Control

Among those with current asthma, fewer than a third had their asthma well controlled. More than half of adults and almost three quarters of youths had asthma that was not well controlled. In 2010, 15% of adults and 8% of youths had poorly controlled asthma.



Asthma Management – Self Care

The majority of adults (81%) and youths (96%) with asthma reported that they were taught what to do during an asthma attack. A little more than half of adults and most youths reported being taught to recognize early symptoms. Less than half of adults and youths reported being taught to use a peak flow meter. Very few adults and youths have ever taken an asthma management course.



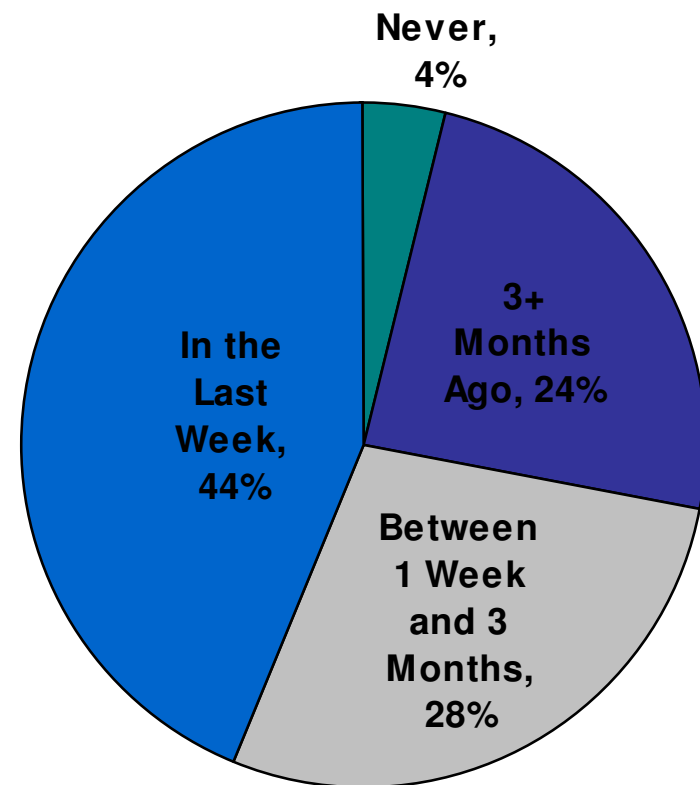
Asthma Management – Adult Medication Use

The majority of adults with asthma have used some type of asthma medication in the last three months (72%).

Inhalers were the most common medication used in the last three months (91%) by adults. Other common medications used in the last three months include pills (16%) and nebulizers (9%).

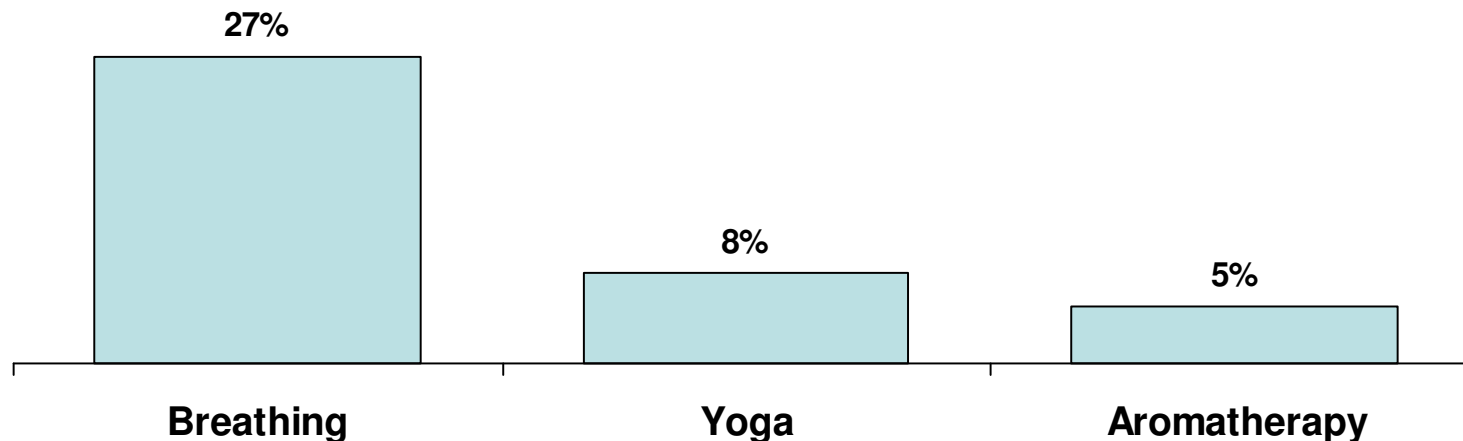
In 2010, 95% of adults with current asthma reported they had, at some point, used a prescription inhaler, while 23% said they had ever used an over-the-counter medication to control their asthma.

**Recent Use of
Asthma Medication**



Asthma Management - Complementary and Alternative Medicine

People with asthma can use methods other than prescription medications to help treat or control their asthma. These methods are referred to as complementary or alternative medicine (CAM) therapy. In 2010, the most commonly used CAM therapies were breathing, yoga, and aromatherapy.



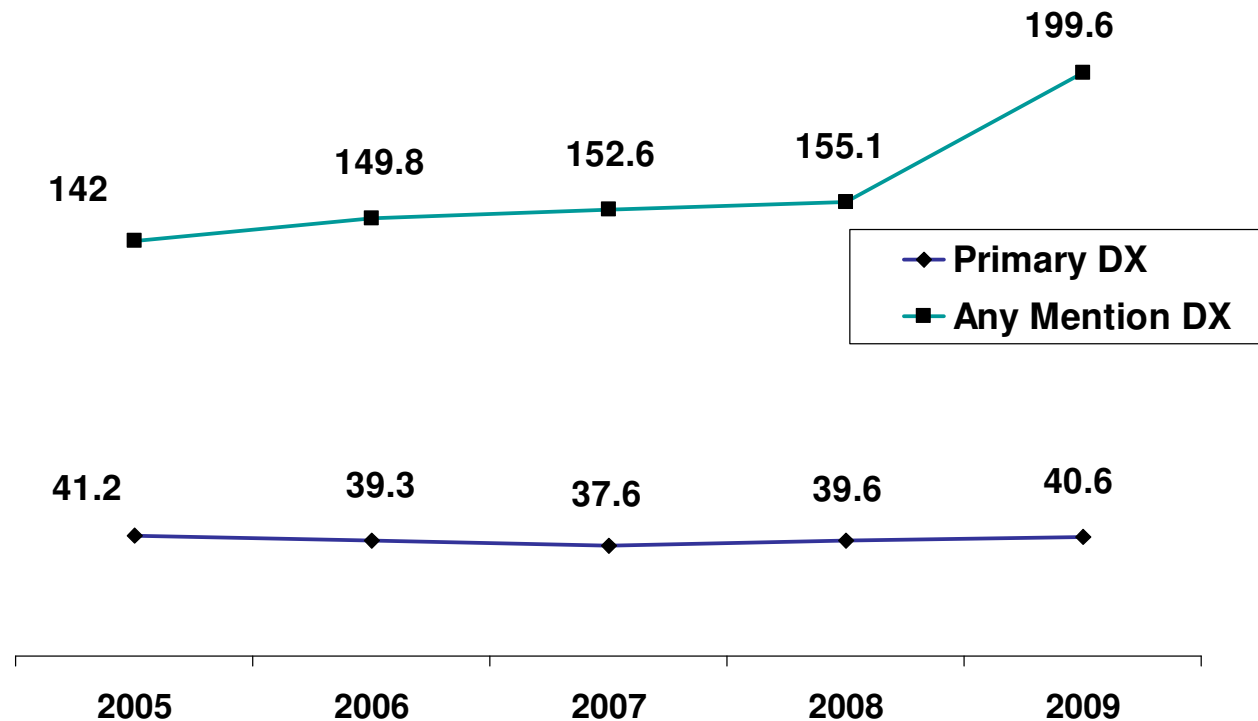
Indications of Poor Asthma Management

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Emergency Department Visits

In 2009, among Vermont residents, there were 2,538 emergency department visits with a primary diagnosis of asthma, a rate of 40.6 ED visits per 10,000 Vermonters. Asthma was listed as a contributing factor in 12,473 ED visits, a rate of 199.6 per 10,000 Vermonters. This represents a significant increase in ED visits where there was any mention of asthma from 2008 (155.1 per 10,000) to 2009 (199.6 per 10,000).

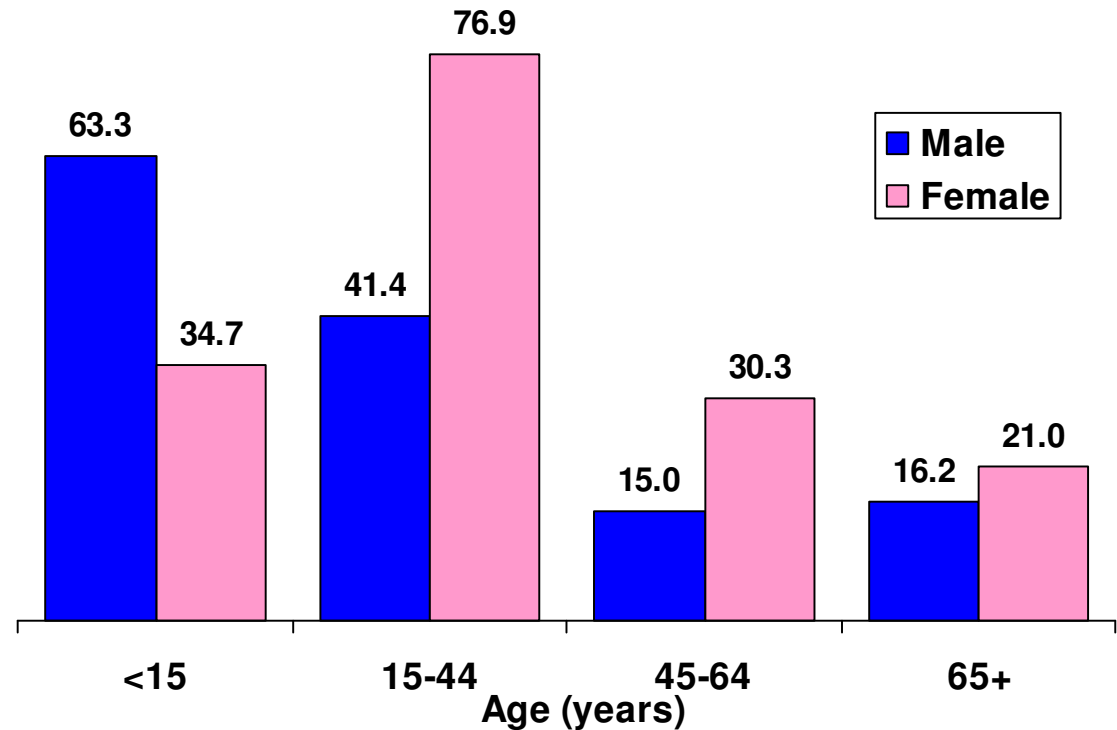
ED Visit with an Asthma Diagnosis (rate per 10,000) 2005-2009



Emergency Department Visits

In 2009, females entered the emergency department with a primary diagnosis of asthma at a rate of 47.1 per 10,000, whereas males entered at a rate of 33.9 per 10,000. When examined by age, the highest rates of primary asthma diagnoses were seen among females 15-44 years of age, and males under the age of 15.

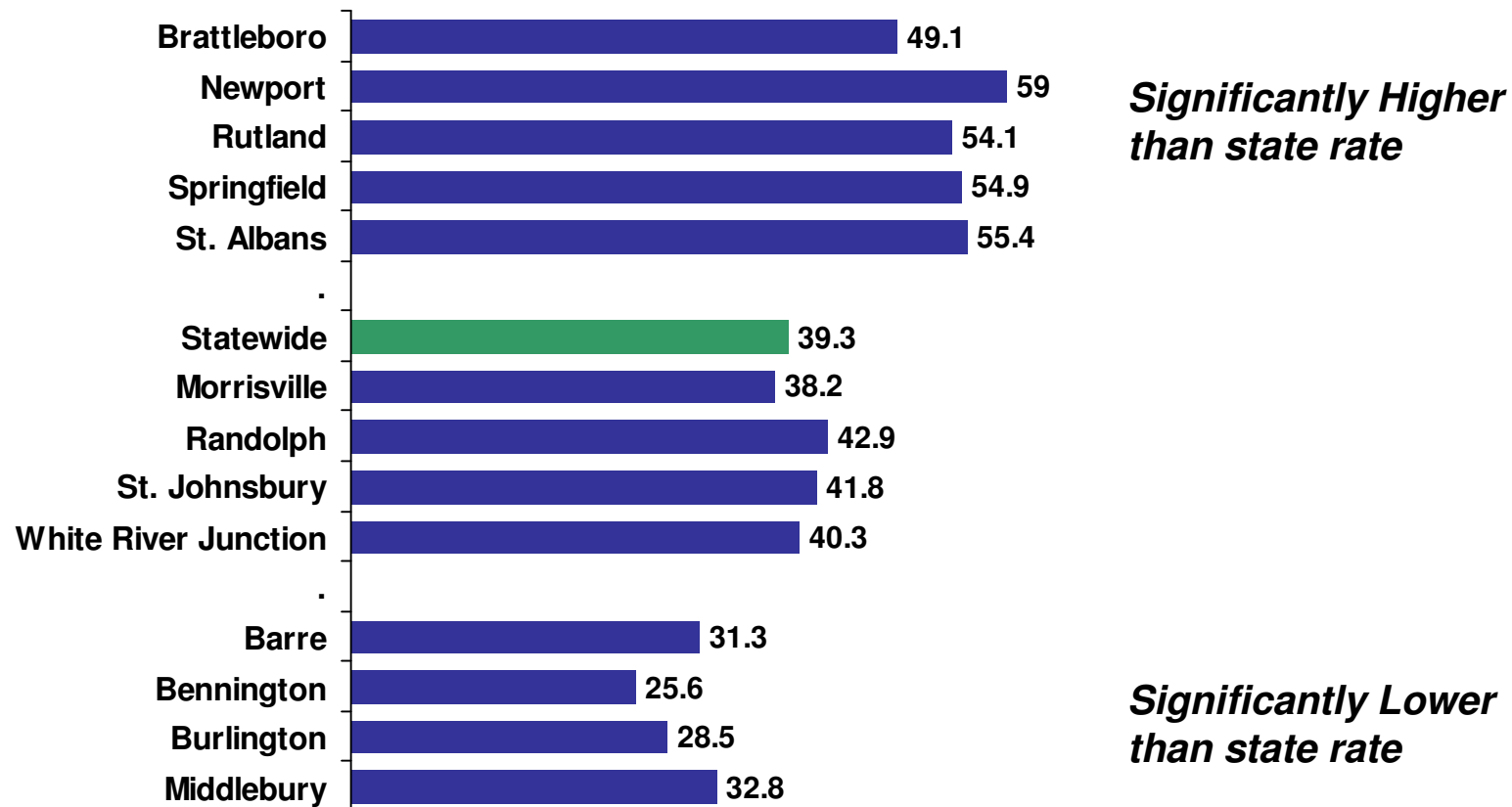
Primary Asthma Diagnosis (rate per 10,000), 2009



Emergency Department Visits by Hospital Service Area

Emergency department visits with a primary diagnosis of asthma varied significantly by hospital service area. The Brattleboro, Newport, Rutland, Springfield, and St. Albans HSAs had significantly higher ED visit rates, while the Barre, Bennington, Burlington, and Middlebury HSAs had significantly lower rates of ED visits per 10,000.

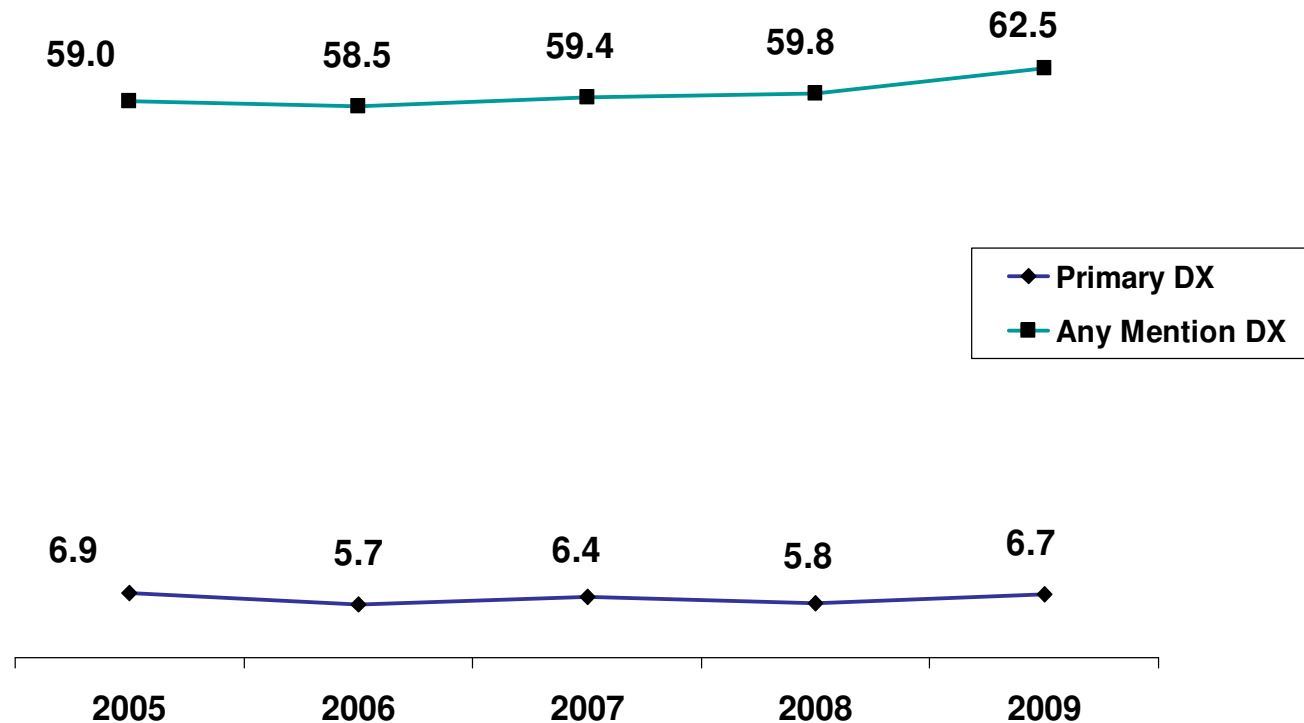
ED Visits with a Primary Asthma Diagnosis by HSA (rate per 10,000) , 2007-2009



Hospitalizations

In 2009, 420 Vermonters were admitted to the hospital with a primary diagnosis of asthma (6.7 per 10,000 Vermonters). In 2009, there were 3,903 hospitalizations with any mention of asthma (62.5 per 10,000 Vermonters). The rate of hospitalizations with a primary diagnosis or any mention of asthma have remained relatively steady over the past six years.

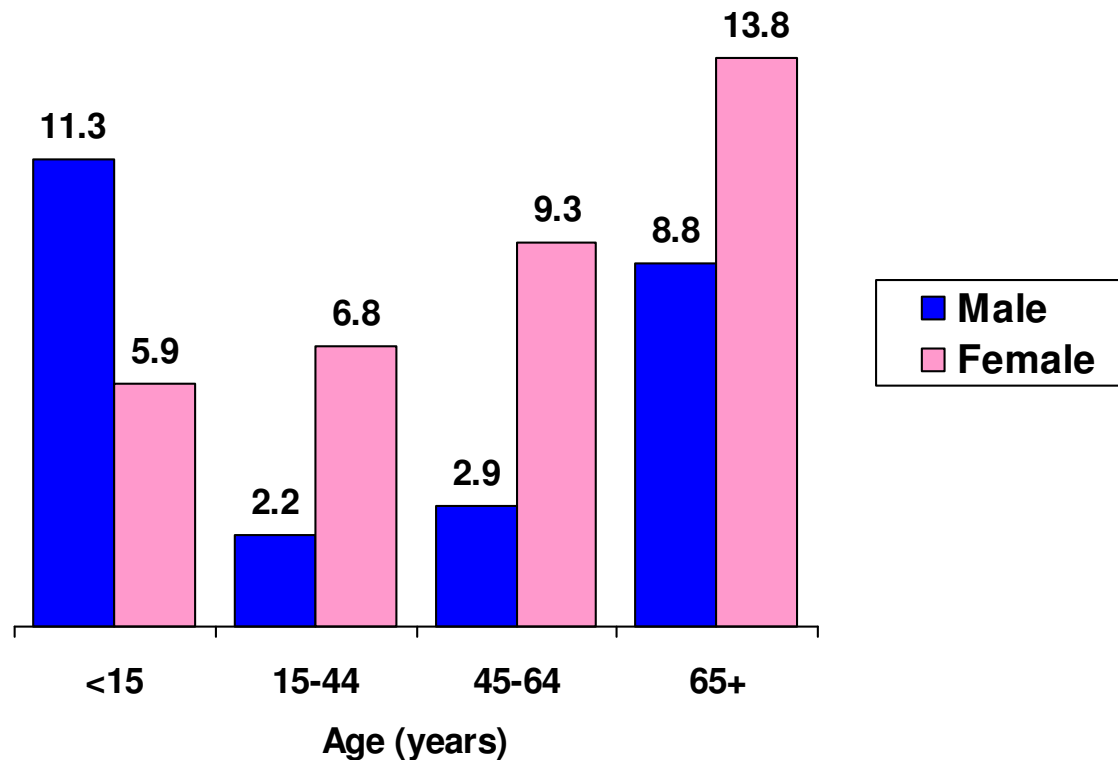
Hospital Admission with an Asthma Diagnosis (rate per 10,000) 2005-2009



Hospitalizations

As with ED visits, females overall had a higher rate of hospitalizations than males (8.5 versus 4.9 per 10,000). The highest rate of hospitalizations with a primary diagnosis of asthma was seen among females 65 years and older and males under the age of 15.

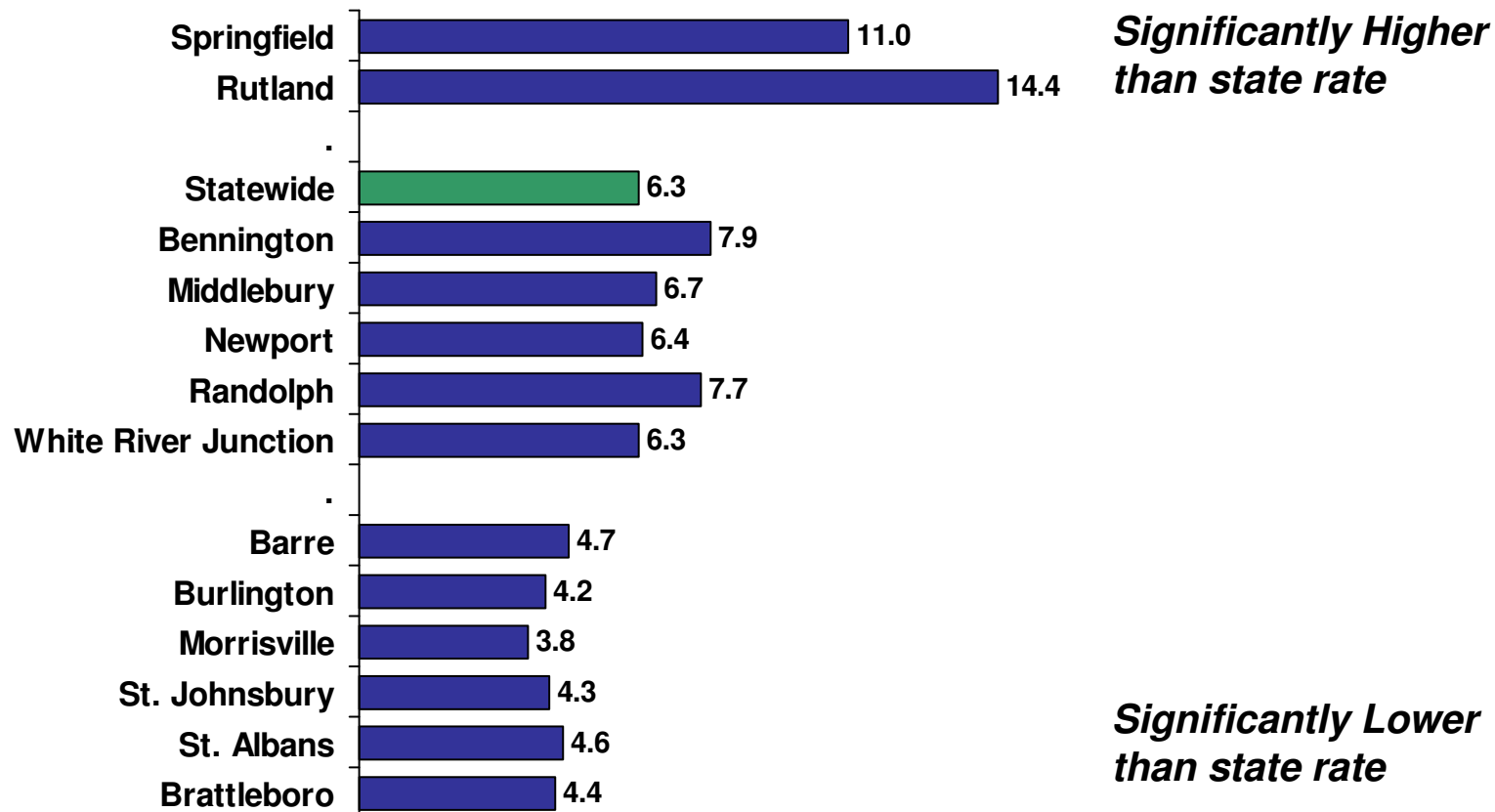
Primary Asthma Diagnosis (rate per 10,000), 2009



Hospitalizations by Hospital Service Area

There were some clear variations in hospitalizations with a primary diagnosis of asthma when looked at by hospital service area. The Rutland and Springfield HSAs had significantly higher hospitalizations rates, while the Barre, Burlington, Morrisville, and St. Albans HSAs had significantly lower rates of hospitalizations per 10,000.

Hospitalizations with a Primary Asthma Diagnosis by HSA (rate per 10,000) , 2007-2009



Costs of Poor Asthma Management

Death

In the past ten years, 75 Vermonters died because of their asthma. In 2009, there were 8 deaths attributed to asthma. Between 2005 and 2009, there have been between 7 and 9 deaths per year due to asthma.

Health Care Cost

In addition to the negative health outcomes associated with poor asthma management, there are also financial costs. In 2009, hospitalizations and emergency department visits alone cost approximately \$7.2 million dollars, an increase over previous years. In 2009, 420 Vermonters were hospitalized with a primary diagnosis of asthma, resulting in close to \$5 million in charges. This averages out to \$11,000 per patient. In 2008, there were 360 hospitalizations with a primary diagnosis of asthma (~\$10,000 per patient). Comparatively, 2,537 Vermonters visited the emergency room for asthma in 2009, costing roughly \$2.5 million (~\$950 per patient).

