Asthma among Youth in Vermont

November 2025

Asthma is a chronic disease in which the lungs become inflamed, causing the airways to swell and narrow and mucus to build up, leading to a variety of symptoms including shortness of breath, wheezing and chest pain. The ability to manage asthma can depend on many factors, including access to care, medication and environment.

In Vermont, approximately 7,700 children under 18 (7%) have asthma, and nearly half of them have uncontrolled asthma. Youth with asthma may face challenges in managing their asthma due to exposure to allergens and irritants at home and in day care and school, hormonal changes, and the transition to self-management of symptoms as they get older.

This brief aims to highlight patterns in the burden of youth asthma in Vermont, as well as its associated risk and protective factors.

Key Points

- **Asthma prevalence increases significantly in the early adult (18-34) period.**
- **Although they have the lowest prevalence of asthma, children ages 0-4 are at the highest risk for having an emergency department visit or hospitalization due to asthma.**
- **The rates of having three or more asthma triggers and three or more protective factors at home are similar.**

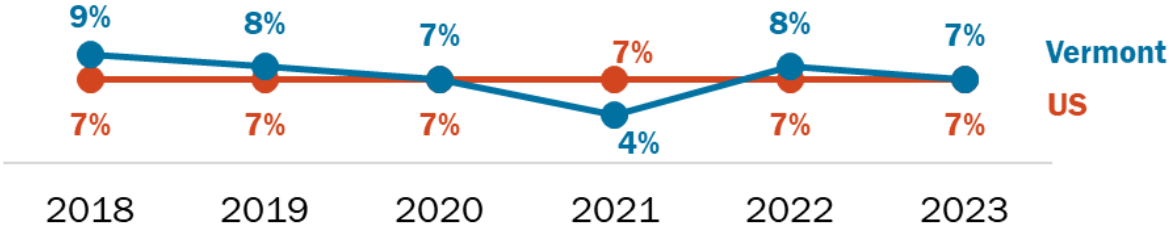
If you need help accessing or understanding this information, contact ahs.vdhhpdpanalytics@vermont.gov.

Burden of Asthma among Vermont Youth

Prevalence of Youth Asthma

- After a dip during the COVID-19 pandemic, youth current asthma in Vermont has risen back to pre-pandemic levels.
- Although the rate of youth asthma is similar to the U.S. rate overall, Vermont has the ninth highest rate of youth asthma out of 26 states and territories surveyed.

Prevalence of Current Youth Asthma in Vermont and the United States



Data Source: BRFSS 2018-2023

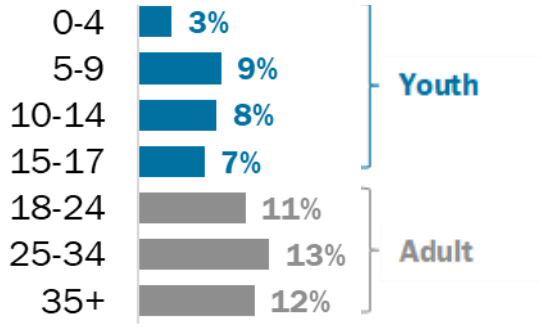
Disparities in Youth Asthma

Certain groups of youth are more likely to have asthma.

- Youth have lower rates of asthma than adults, and the prevalence increases significantly between ages 15-17 and 18-24.
- The average age of asthma diagnosis for youth under 18 is 3.5 years old, and 18% are diagnosed before the age of 1 (data not shown).
- There are no statistically significant differences in youth asthma prevalence between girls and boys in Vermont.
- BIPOC* youth in Vermont have a slightly higher prevalence of asthma than non-Hispanic white youth, although not significantly so.

* Black, Indigenous, and People of Color

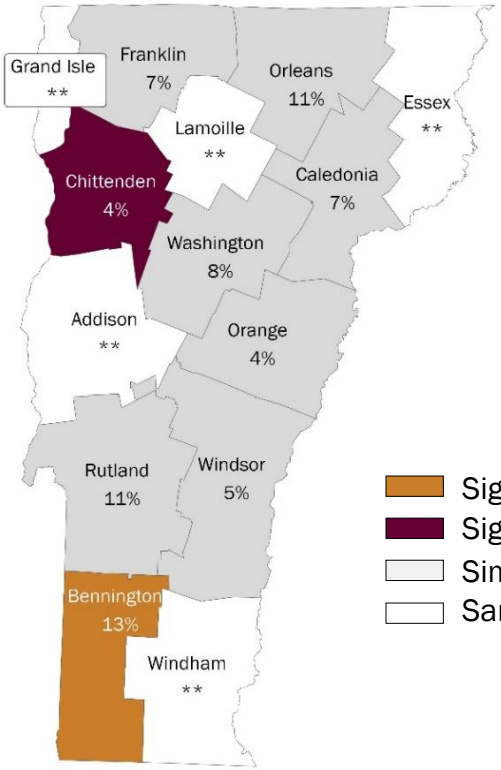
Prevalence of Current Asthma by Age Group



Prevalence of Youth Current Asthma by Race/Ethnicity

Data Source: BRFSS 2021-2023

Prevalence of Youth Current Asthma by County



- Youth in Chittenden County have a significantly lower prevalence of asthma than the state as a whole.
- Youth in Bennington County have a significantly higher prevalence of asthma than Vermont as a whole.

Data Source: BRFSS 2021-2023

Significantly higher than state
Significantly lower than state
Similar to state rate
Sample size too small to report

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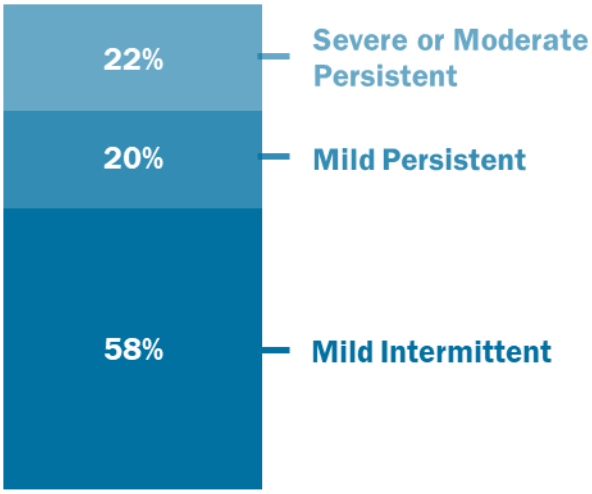
Impacts of Asthma on Youth

Asthma Severity and Control

- More than one in five youth with current asthma have severe or moderate persistent asthma (22%), necessitating multiple emergency room visits and significant impacts to daily living.
- 52% of youth with asthma in Vermont have uncontrolled asthma, defined as having at least one of the following: symptoms 9 or more days per month, nighttime symptoms 3 or more days per month, short-acting beta agonist (SABA) use 2 times per week or more, and activity limitation (data not shown).

Youth Asthma Severity



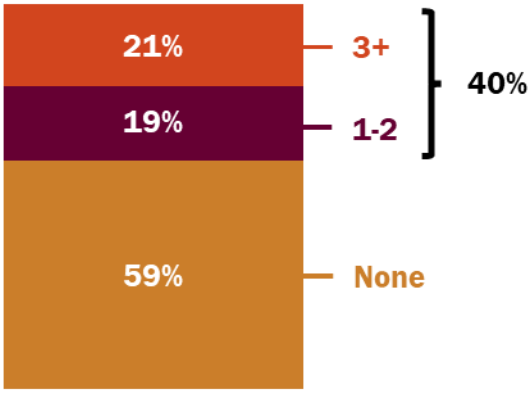
Data Source: ACBS 2021- 2023

Asthma Outcomes

When asthma is poorly controlled, youth experience exacerbations during which constriction of muscles in the airways and increased mucus production produce symptoms such as wheeze, cough, and shortness of breath[1].

- 45% of youth with current asthma in Vermont experienced an exacerbation in the past year.
- Of those, 40% experienced at least one exacerbation in the past three months and 21% had three or more.
- The duration of the most recent exacerbation reported lasted hours or longer for more than half of children (55%) (data not shown).

Number of Exacerbations in the Past Three Months



Data Source: ACBS 2021- 2023

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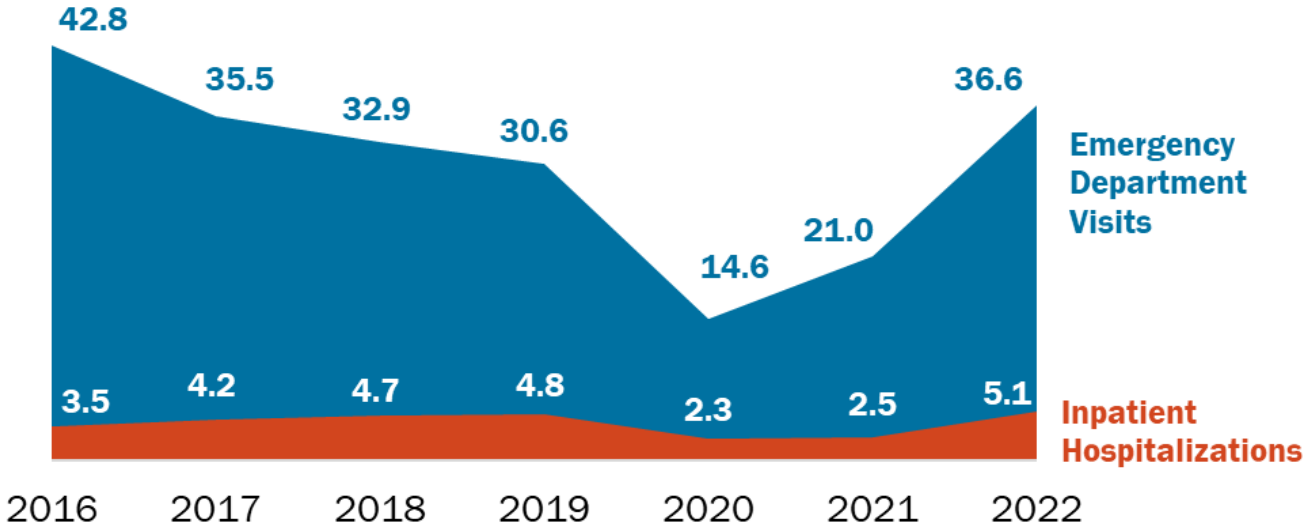
Health Care Utilization

After a significant decrease during 2020, likely due to an overall drop in utilization of health care services during the COVID-19 pandemic, rates of emergency department visits and inpatient hospitalizations for a primary cause of asthma among youth in Vermont are similar in 2022 to rates prior to the pandemic.

Rate of Emergency Department Visits and Inpatient Hospitalizations for a Primary Cause of Asthma among Youth

Rate per 10,000 Vermont Youth Under the Age of 18

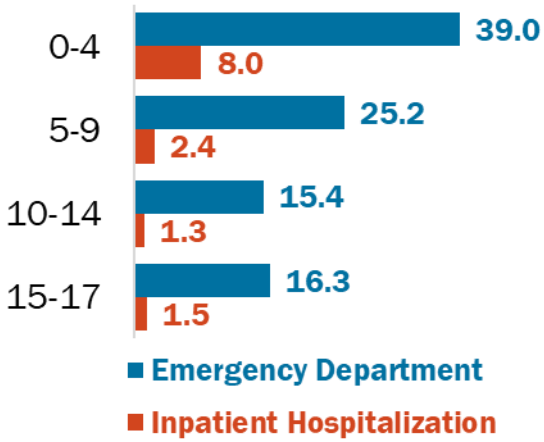


Data Source: VUHDDS 2016-2022

- There were **420 emergency department visits** and **58 hospitalizations** among Vermonters under the age of 18 in 2022.
- The risk of admission to the emergency department or hospital for a primary cause of asthma is highest among those aged 0-4.
- Although youth ages 0-4 have the lowest overall prevalence of asthma among those under 18 in Vermont, their higher risk of admission to the emergency department emphasizes the need for early diagnosis and management of youth asthma.

Rate of Emergency Department Visits and Inpatient Hospitalizations for a Primary Cause of Asthma by Age, 2020-2022

Rate per 10,000 Vermont Youth Under 18



Data Source: VUHDDS 2020-2022

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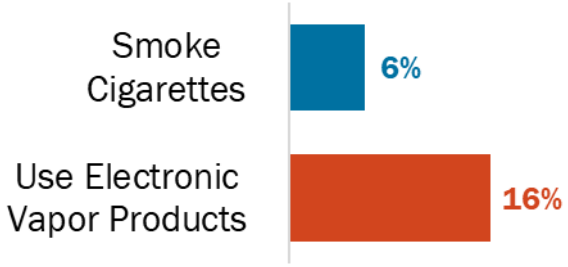
Risk and Protective Factors for Youth Asthma

There are certain factors in a young person's environment that can improve or worsen their asthma symptoms and quality of life, including tobacco product use and secondhand smoke exposure, environmental exposures, and medical management.

Tobacco

- The prevalence of cigarette smoking among high school youth in Vermont has decreased in recent years although 6% report currently smoking. The prevalence of electronic vapor product (EVP) use is more than twice as high (16%) and represents an ongoing area of concern given the lack of information on the long-term effects for youth with asthma.
- 12% of youth may also be exposed to secondhand smoke in their homes, a known major risk factor for asthma exacerbation.[2]

Prevalence of Tobacco Product Use among Vermont High Schoolers

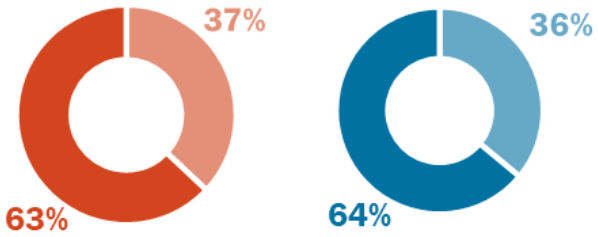


Data Source: YRBS 2023

Environmental Exposures

- Exposures to indoor environmental triggers, such as woodstoves, carpets, dust and pets can raise the risk of asthma exacerbation. Conversely, protective measures, such as using fans and mattress covers, can reduce this risk.
- 64% of youth with current asthma in Vermont have at least three protective measures in their home.
- Almost two thirds (63%) of youth are exposed to three or more asthma triggers in their homes.
- With nearly two-thirds of Vermont youth having 3+ asthma triggers in their home and a third with fewer than 3 protective measures, there remains work to be done in reducing exposure to household triggers.

A similar percent of youth in Vermont have 3+ asthma triggers as have 3+ protective measures in their homes



Data Source: ACBS 2021-2023

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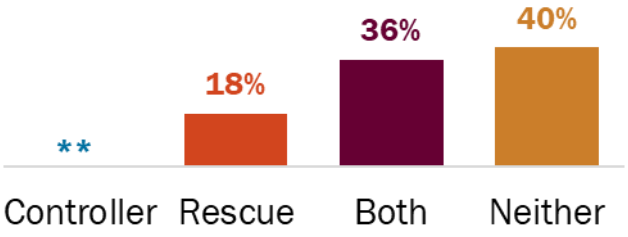
Medical Management

Proper use of medication to manage asthma symptoms and prevent exacerbations is critical, particularly for youth. Depending on the level of asthma severity, youth with asthma may be prescribed a controller medication to routinely manage their condition, a quick-relief rescue medication as needed when symptoms arise, or both.

- More than a third (36%) of youth in Vermont use both controller and rescue medications, and 18% use only rescue medication.
- 40% of Vermont youth with current asthma do not use any medication at all. For those with persistent asthma, this could put them at heightened risk for asthma exacerbations.

Percentage of Youth Using Controller and Rescue Medications



** Data suppressed due to small numbers
Data Source: ACBS 2021-2023

Data Sources

ACBS: Asthma Callback Survey

BRFSS: Behavioral Risk Factor Surveillance System

VUHDDS: Green Mountain Care Board (GMCB) Vermont Uniform Hospital Discharge Dataset
Note: All analyses, conclusions, and recommendations provided here from VUHDDS are solely those of the Department of Health and not necessarily those of the GMCB.

YRBS: Youth Risk Behavior Surveillance System

References

[1]*Asthma and Adolescents*. (n.d.). American Academy of Allergy Asthma & Immunology. Retrieved September 23, 2025, from www.aaaai.org/tools-for-the-public/conditions-library/asthma/adolescents

[2]CDC. (2025, January 31). Health Problems Caused by Secondhand Smoke. Smoking and Tobacco Use www.cdc.gov/tobacco/secondhand-smoke/health.html

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