BUREAU BRIEF SERIES ON WORCESTER COUNTY INSIGHTS

The Research Bureau

Greater Worcester Community Foundation

INSIGHTS INSIDER

FEBRUARY 2025

COMMUNITY HEALTH: ASTHMA

INTRODUCTION

Drawing a complete picture of community health requires researchers to aggregate a lot of data, from many disparate sources. While focusing on one metric can be limiting, it still provides a foundation for beginning a story about communities—and is, thus, a way for Worcester County Insights to be informative.

ASTHMA

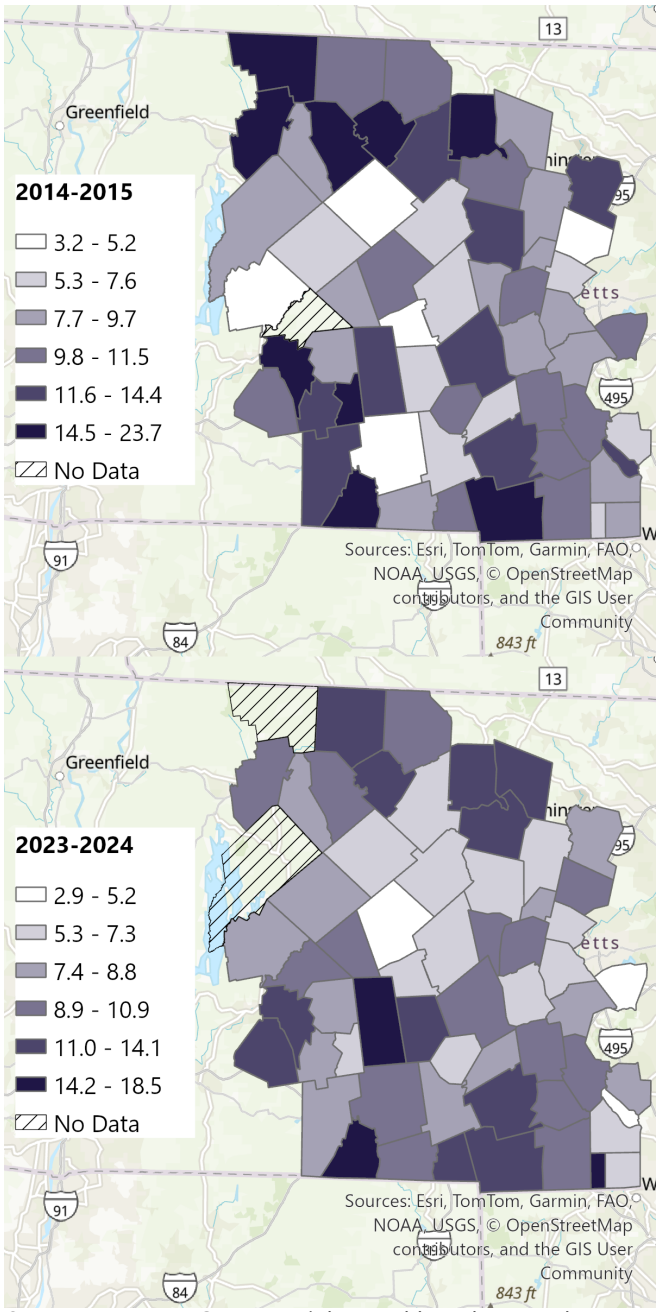
The prevalence of asthma in children is a key community health indicator. Asthma is a **chronic respiratory illness**, most often affecting children, that is characterized by periods of impaired breathing, known as "asthma attacks." According to the Massachusetts Department of Public Health, the **complete causes of asthma are not known**, but environmental factors, access to medical care, and other demographic and economic characteristics may play a role. **What is well known, however, are attack triggers**: allergens, stress, physical activity, infections, and air quality, among others.

In Massachusetts, **schools collect data on whether children in Kindergarten through Eighth Grade have asthma**. Data is organized by school year. Worcester County Insights includes this data for all communities in Worcester County, including the number of total children as well as the prevalence of asthma—i.e., the number of children with asthma out of every 100. It should be noted that differing environmental, demographic, and economic factors across geographies can play an important role in the presence of asthma among children.

HOW IS WORCESTER COUNTY DOING?

The two maps on the right show the prevalence of asthma in children in grades K-8 over a ten year period in Worcester County. Overall, **prevalence decreased from 11.2 per 100 in 2014-2015 to 9.5 in 2023-2024**. Out of 60 municipalities, 36 were lower in 23-24 than in 14-15. While many of these communities have lower overall K-8 student enrollment, **more data post-pandemic is needed to understand these patterns and changes.**

Prevalence of Children, Grades K-8, with Asthma



Source: Worcester County Insights Dashboard; Massachusetts Department of Public Health

In 2023-2024, **Worcester County had the second highest asthma case count among Massachusetts counties**. Chart 1 shows the percent change in Worcester County from year to year. Across Massachusetts, case counts have declined (Table 1). A map of Massachusetts' counties shows the differences in prevalence across the Commonwealth.

COMPARISONS ACROSS GEOGRAPHIES

Despite the fact that asthma cases have decreased across Massachusetts, it is difficult to compare across geographies. While the causes of asthma are not entirely clear, it is well established that a variety of environmental and other factors each have a role to play in triggering asthma attacks, and these may differ across geography. For example, lack of access to medical care could make asthma attacks, and other health issues, harder for children and their parents to manage. Heavy air pollution, or even the presence of many allergens, can influence the incidence of attacks. **Therefore, children living in rural versus urban communities may have very different relationships with asthma; children living in different rural areas may themselves have differing rates of asthma**. Even within Worcester County itself it is plain that children in different municipalities have diverse experiences. **In the 2023-2024 school year, for example, Spencer had the highest prevalence of asthma among children, at 18.5 out of 100, while Hopedale had the lowest at 2.9 out of 100**. In the 14-15 school year, however, Spencer was ranked 16th in the County (12.2) and Hopedale was 12th (13).

WORCESTER COUNTY INSIGHTS AS A TOOL FOR UNDERSTANDING COMMUNITY HEALTH

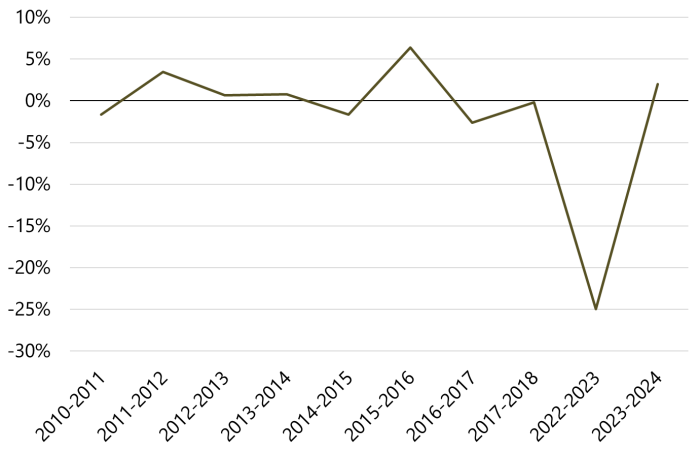
Worcester County Insights includes many indicators, about health and the many determinants of it, that can help provide a fuller picture of the health of our communities. For example, it includes data about children with elevated blood lead levels, a key concern in places with older homes that used lead paint. Diabetes incidence among adults is another health indicator included on the dashboard; and, incidentally, diabetes and asthma often occur together for many of the same reasons, such as lack of access of medical care. Other health indicators can be found at worcestercountyinsights.org/health-and-wellbeing. Other social determinants of health, such as economic mobility indicators like poverty, can be found as well at worcestercountyinsights.org.

Table 1: % Change, 2014-2015 to 2023-2024

County	Case Count	K-8 Enrollment
Barnstable	-22.03%	-15.13%
Berkshire	-38.91%	-14.27%
Bristol	-19.21%	-6.92%
Dukes	7.63%	-0.56%
Essex	-31.54%	-6.67%
Franklin	-32.45%	-12.74%
Hampden	-26.38%	-10.45%
Hampshire	-27.22%	-15.79%
Middlesex	-28.51%	-2.99%
Nantucket	-50.00%	20.89%
Norfolk	-28.32%	-7.76%
Plymouth	-27.23%	-9.55%
Suffolk	-35.38%	-11.98%
Worcester	-20.85%	-6.98%

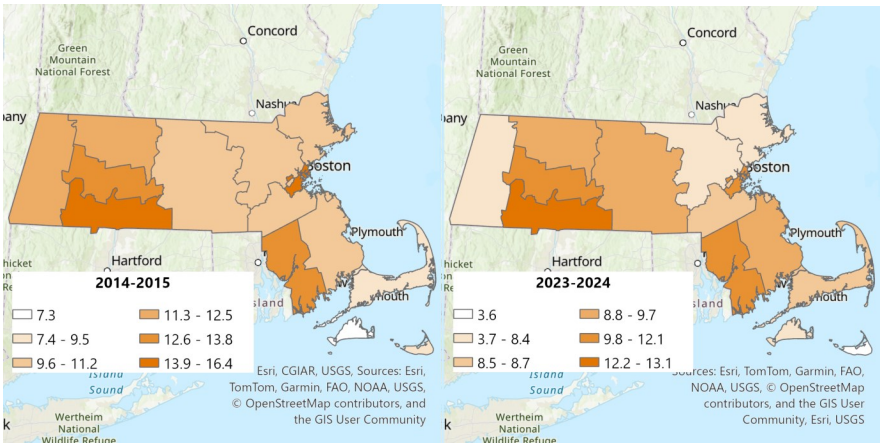
Source: Massachusetts Department of Public Health

Chart 1: % Change from Year Before in Asthma Case Count, Worcester County Only



*Source: Worcester County Insights Dashboard, 2025; Massachusetts Department of Public Health. Note: **2022-2023 is compared to 2017-2018**. Data from the 18-19, 19-20, 20-21, and 21-22 school years is not available; such data may show a very different trend.*

Prevalence of Children, Grades K-8, with Asthma (within Counties)



Source: Worcester County Insights Dashboard, 2025; Massachusetts Department of Public Health