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Promoting and Protecting the Health of Delaware County

DELAWARE COUNTY, PENNSYLVANIA COMMUNITY HEALTH ASSESSMENT ASTHMA ADDENDUM MARCH 2026

Executive Summary

This addendum to Delaware County Pennsylvania's 2024 Community Health Assessment (CHA) expands on asthma data in response to community partner feedback. Asthma is both a chronic condition and a marker of environmental and health inequities. While adult asthma prevalence has remained stable at around 7% across Delaware County, significant disparities exist among children. In 2022–2023, student asthma prevalence ranged from 3% to nearly 18% across Delaware County's school districts. These findings highlight the importance of addressing environmental health, housing conditions, and equitable access to care. Asthma has been incorporated into the Prevent Chronic Diseases priority area of the current Community Health Improvement Plan (CHIP).

Asthma Addendum

Following the completion of Delaware County's 2024 Community Health Assessment (CHA), community partners identified a need for more detailed information on asthma. This addendum responds to that request and aligns with the CHA's final recommendations to further explore health outcomes associated with air quality, particularly in Chester and other municipalities. To better understand the impact of asthma on the community, more data is required, as access to current data is limited. Asthma is both a chronic condition and an indicator of environmental, housing, and health access inequities, making it a critical area of focus for community health improvement.

Key Findings

- Adult asthma prevalence in Delaware County remained stable between 2017 and 2022, with approximately 7% of adults (18-44 years of age) reporting a current diagnosis of asthma.
- Children experience a disproportionate asthma burden, with significant variation by school district. The overall percentage of students reporting use of a metered-dose inhaler for respiratory therapy decreased from 11.1% (range: 3.3% - 17.9%) in 2018–2019 to 8.5% (Range: 2.0%-26.1%) in 2022–2023, though disparities persist across Delaware County school districts.
- Asthma prevalence is higher among some school districts with fewer nearby permitted air emissions sources, suggesting that multiple factors, including housing conditions and access to care, play a role.
- Geographic and racial/ethnic disparities in asthma rates align with broader health inequities identified in the CHA. Black, non-Hispanic residents, and those with an income less than $25,000 are a priority for health improvement strategies.

Adult Asthma (BRFSS Data)

Data from the Pennsylvania Department of Health's Behavioral Risk Factor Surveillance System (BRFSS) show that adult asthma prevalence in Delaware County remained consistent before and during the COVID-19 pandemic. Between 2017 and 2022, approximately 7% of adults reported currently having

asthma, with no statistically significant changes. This rate is lower than that of Pennsylvania (10%) during the same time period. BRFSS data are not available for individuals under 18 at the county level.

Childhood Asthma (School District Data)

Self-reported school district data from the Pennsylvania Department of Health provides insights into asthma prevalence among children. In 2018-2019, 11.1% of students countywide reported using a metered-dose inhaler for respiratory therapy. In 2022–2023, this decreased to 8.5%. The highest prevalence in 2022-2023 was 17.9% in one Delaware County school district, followed by 14.6%; school districts with the lowest rates were around 3%. These data highlight significant disparities across districts, with some showing more than a fivefold difference in prevalence. It should be noted that school district data is currently self-reported and reflects student use of metered-dose inhalers (MDI) for respiratory conditions that include but are not limited to asthma, rather than confirmed medical diagnoses of asthma. Further, there is variability in the quantity and quality of school district reporting of this information. These data were obtained through protected access from the Pennsylvania Department of Health; DCHD does not have permission to share school district-level data publicly without the express permission of PADOH and individual school districts.

Hospital Admissions for Asthma

According to a research brief published by the Pennsylvania Health Care Cost Containment Council (PHC4), there were 928 hospital admissions with a diagnosis of asthma among Delaware County residents in federal fiscal year 2023-2024, resulting in a rate of 16.1 per 10,000 residents. This exceeded the Pennsylvania rate of 12.1 per 10,000 residents but was less than half the rate of Philadelphia County at 33.9 per 10,000 residents.

PHC4 found that in federal fiscal year 2023, readmission rates varied across patient characteristics. By category, the highest rates of readmission for asthma were among:

- Patients age 40-64
- Female patients
- Black, non-Hispanic patients, especially those less than 18 years old
- Patients who live in areas with a poverty rate of 25% or higher
- Patients who have Medicaid as their primary insurance
- Patients who live in urban counties

Asthma and Environmental Context

Maps overlaying school district asthma prevalence with the location of permitted air emissions sources suggest a complex picture. Districts with more permitted emissions sources did not always have the highest asthma prevalence. Some of the districts with the highest asthma prevalence were in areas with fewer permitted emissions sources. There are limitations in school district asthma reporting as well as in our understanding of the entire picture of a child's environmental exposures. However, this may indicate that environmental exposures (at least from large industrial sources) are not the sole cause of asthma disparities in Delaware County. Housing conditions, healthcare access, smoking (tobacco and vape use), other air quality exposures (e.g., from transportation sources) and other social determinants are likely contributing factors and should be prioritized.

Conclusion

Asthma remains a persistent and inequitable health concern in Delaware County. While overall student asthma prevalence appears to have declined, the condition disproportionately affects certain school districts and communities, reflecting the broader disparities documented in the 2024 CHA. These findings underscore the importance of including asthma within the Prevent Chronic Diseases priority of the Community Health Improvement Plan (CHIP), exploring municipal-level asthma rates, strengthening collaborations with schools and healthcare providers, and incorporating asthma into broader environmental health and equity strategies. It is important to note that school-reported asthma data is based on MDI usage, which can reflect treatment for respiratory conditions other than asthma. This should be considered when interpreting prevalence rates and addressed to improve data collection and validation efforts. Asthma is both preventable and manageable, and addressing it requires coordinated efforts integrating data monitoring, environmental health improvements, and equitable access to care.

DELAWARE COUNTY ASTHMA DATA VISUALS

Table 1. Student Asthma Prevalence for All School Districts, Delaware County

	2018-2019 %	2022-2023 %
Average	11.1	8.5
Minimum	2.0	3.3
Maximum	26.1	17.9

Source: Pennsylvania Department of Health School Health Data, 2018-2019 and 2022-2023. Note, based on school district self-reporting of student use of metered-dose inhalers (MDI).

Figure 1. Comparing Adult Asthma Rates and Air Emission Plants in Delaware County, 2021
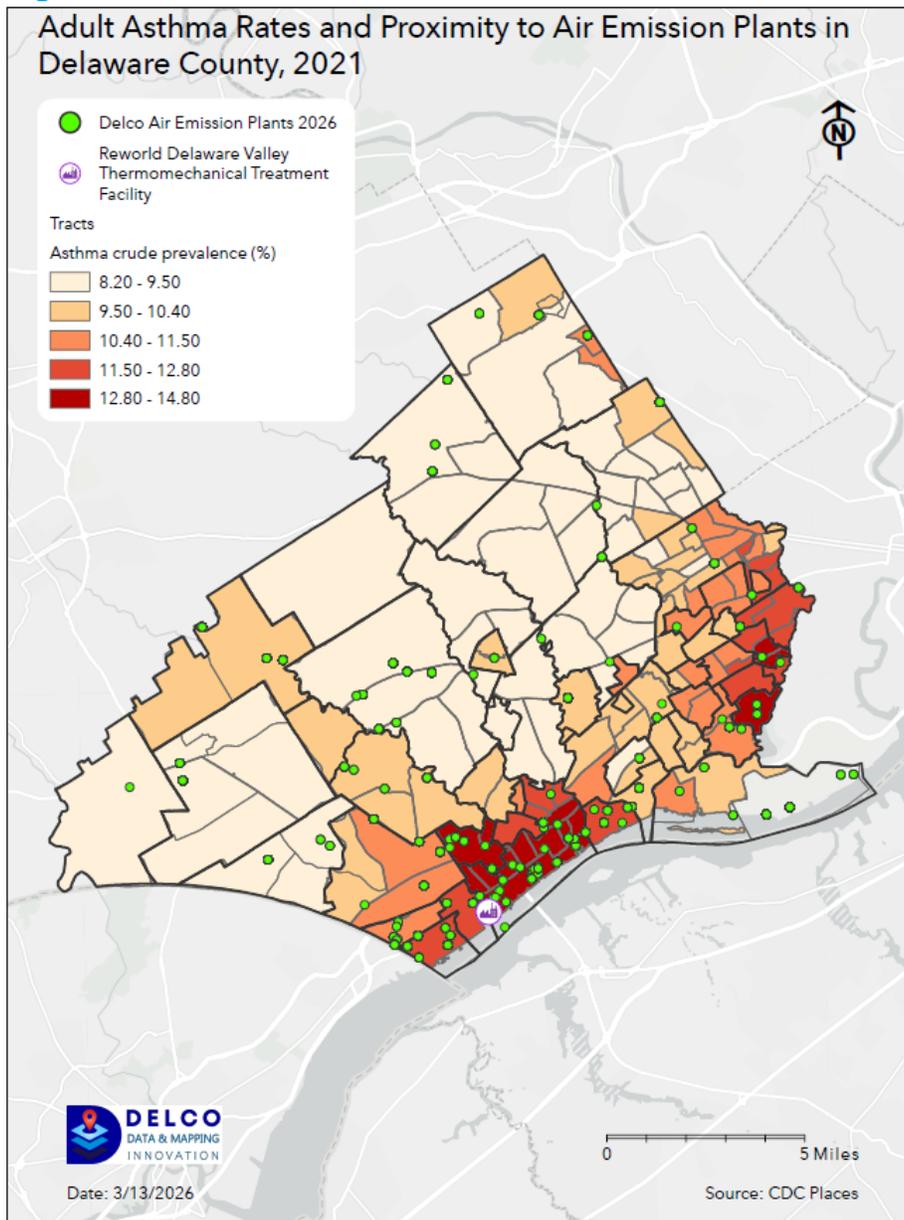
Sources: CDC PLACES; Delaware County Office of Data and Mapping Innovation (ODMI); PADEP Air Emissions Plants, 2026
Note: School district boundaries are included for reference (bold, black lines)

Air Emissions Plants are defined as the "exact location or structure from which all other air emission plant sub-facilities exhaust their emissions. Examples may include a steel or masonry smokestack; however, a point of air emission may also represent fugitive emissions that escaped from other points of a facility." (PADEP, 2026)

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