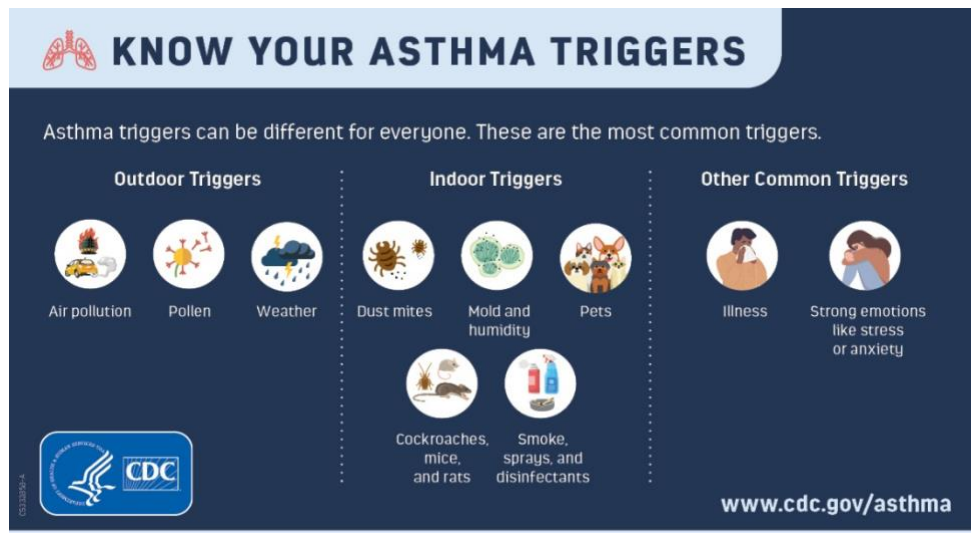


CITY OF WATERBURY DEPARTMENT OF HEALTH
HEALTH PROFILE: CHILDHOOD ASTHMA

Background:

Asthma is a chronic disease that affects 25 million individuals nationally, or 7.8% of the U.S. population [1]. Asthma is the leading chronic condition among children, with a prevalence of 6.5% among individuals under age 18. Data from the Centers for Disease Control and Prevention show that the rate of emergency department visits for asthma among children is 29.8 visits per 100,000 U.S. Census 2020 population, and the rate of in-patient stays for asthma is 2.9 visits per 10,000 population. These rates are higher than their corresponding rates among the adult population [2], highlighting a need to address the issue of childhood asthma in our communities.



Asthma in Connecticut:

In 2020, Connecticut ranked among the top 15 states with the highest percentage of adults living with asthma [3,4]. According to the 2021 Behavioral Risk Factor Surveillance System (BRFSS), an estimated 300,910 adults in the state—approximately 10.5% of the adult population—reported having asthma [4]. CDC PLACES data for 2021–2022 shows an age-adjusted adult asthma prevalence of 13.8% [5]. Among children, an estimated 61,200 (8.9%) had asthma in 2021 [3].

In 2021, the state reported 4.6 asthma-related hospitalizations per 10,000 people and 37.9 asthma-related emergency department (ED) visits per 10,000 people. That same year, the state incurred \$86.2 million in acute care charges where asthma was the primary diagnosis. Notably, Connecticut’s five largest cities—Bridgeport, Hartford, New Haven, Stamford, and Waterbury—accounted for nearly 45% of those costs, despite making up only 18% of the state’s population. This disparity underscores the urgent need for targeted asthma control and prevention programs in these high-burden communities.

Childhood asthma is especially concerning because it can have wide-ranging and long-term impacts on a child's health, development, and quality of life. The data emphasizes the need to prioritize reducing the burden of asthma related morbidity and mortality in Connecticut children. The following table shows the life time prevalence of asthma among Connecticut children (0-17 years of age) from 2020 to 2023.

Table 1. Lifetime Asthma Prevalence Among Connecticut Children (0-17 years old), 2020-2023[6]:

Demographic Characteristics	2020 (n=124,400)		2021 (n=92,500)		2022 (n=103,000)		2023 (n=73,800)	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Overall	18.0	(14.8-21.3)	13.4	(10.9-16.0)	15.2	(12.3-18.0)	11.2	(9.0-13.4)
Gender								
Male	19.2	(14.5-23.9)	15.0	(10.9-19.2)	15.3	(11.7-18.8)	12.1	(9.1-15.1)
Female	16.6	(11.9-21.3)	12.2	(9.0-15.4)	14.5 [†]	(10.1-18.8)	10.5 [†]	(7.1-13.9)
Age								
0-4	16.5 ^{††}	(8.5-24.6)	*		*		3.9 ^{††}	(1.6-6.1)
5-9	16.8 ^{††}	(9.9-23.7)	9.7 ^{††}	(5.5-13.9)	22.3 [†]	(14.7-29.8)	11.1 ^{††}	(6.7-15.5)
10-14	18.7 [†]	(12.5-24.9)	17.6	(12.6-22.6)	20.1 [†]	(14.1-26.1)	17.9 [†]	(12.4-23.5)
15-17	18.6 [†]	(13.1-24.1)	19.5 [†]	(12.5-26.5)	14.6 [†]	(10.2-19.1)	16.9 ^{††}	(9.9-23.9)
Race/Ethnicity								
Non-Hispanic White	15.9	(11.9-19.9)	7.2	(5.2-9.3)	13.2	(9.8-16.6)	10.8	(7.8-13.8)
Non-Hispanic Black	16.3 ^{††}	(8.7-23.9)	15.0 ^{††}	(6.8-23.2)	29.1 ^{††}	(17.3-40.8)	*	
Hispanic	23.9 [†]	(16.0-32.0)	22.2 [†]	(15.6-28.8)	16.6 [†]	(10.9-22.2)	13.2 [†]	(8.3-18.1)
Non-Hispanic Other	19.6 ^{††}	(9.6-29.6)	18.9 ^{††}	(10.3-27.7)	*		*	
Household Income								
Less than \$25,000	23.9 ^{††}	(13.7-34.1)	20.8 ^{††}	(9.5-32.1)	17.8 ^{††}	(9.3-26.2)	19.0 ^{††}	(7.8-30.2)
\$25,000 - \$49,999	21.8 ^{††}	(12.8-30.7)	19.9 [†]	(12.7-27.2)	11.4 ^{††}	(5.7-17.1)	9.8 ^{††}	(5.2-14.5)
\$50,000 - \$74,999	22.7 ^{††}	(12.7-32.7)	19.9 ^{††}	(8.5-31.5)	*		12.9 ^{††}	(5.7-20.0)
\$75,000+	15.5	(11.1-19.9)	9.5 [†]	(6.7-12.3)	16.6	(12.2-20.9)	10.2	(7.4-12.9)
Parental Education								
Less than H.S.	*		*		20.1 ^{††}	(8.4-31.9)	*	
H.S. or G.E.D.	17.3 [†]	(10.9-23.8)	18.9 [†]	(11.9-26.0)	12.3 [†]	(8.0-16.6)	9.3 ^{††}	(4.9-13.6)
Some College or Tech School	15.7 [†]	(10.2-21.2)	16.4 [†]	(10.1-22.6)	12.0 [†]	(7.4-16.7)	15.5 ^{††}	(9.3-21.7)
College Graduate	18.6	(13.6-23.5)	9.1	(6.7-11.5)	16.4	(12.1-20.6)	10.5	(7.7-13.4)

Data source: CT DPH, Child Lifetime Asthma Prevalence Excel datafile 2011- 2023.

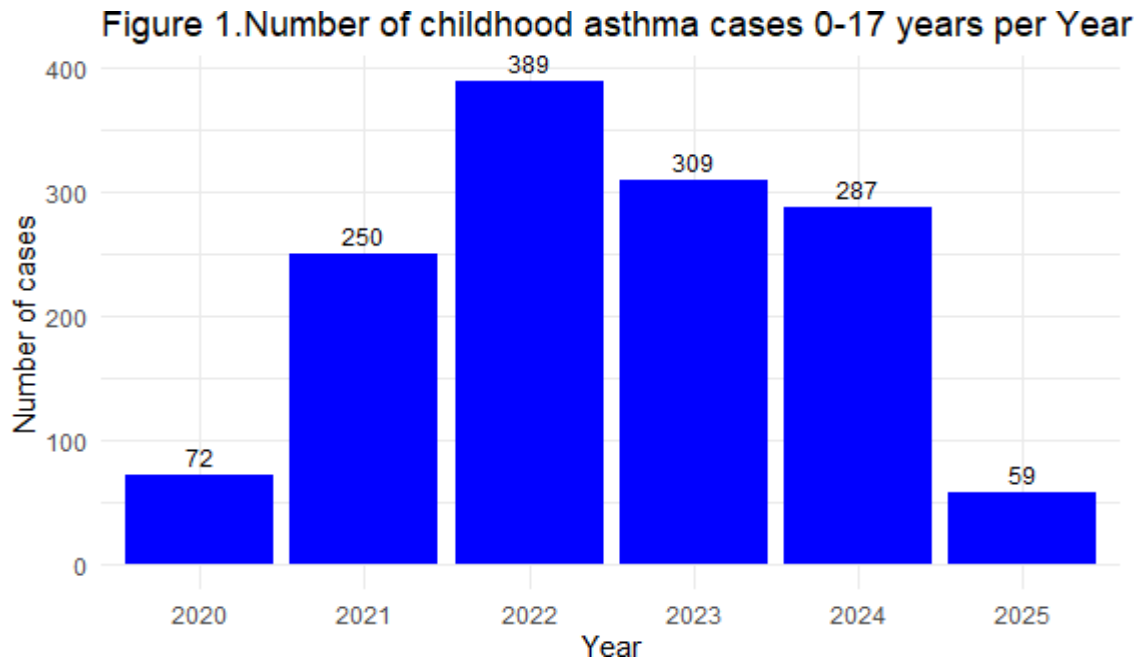
[†]Estimates may be of limited statistical reliability due to a high coefficient of variation (CV), 15.0% < CV < 20.0%.

^{††}Estimates have low statistical reliability (20.0% < CV < 30.0%) and caution should be exercised when interpreting these estimates.

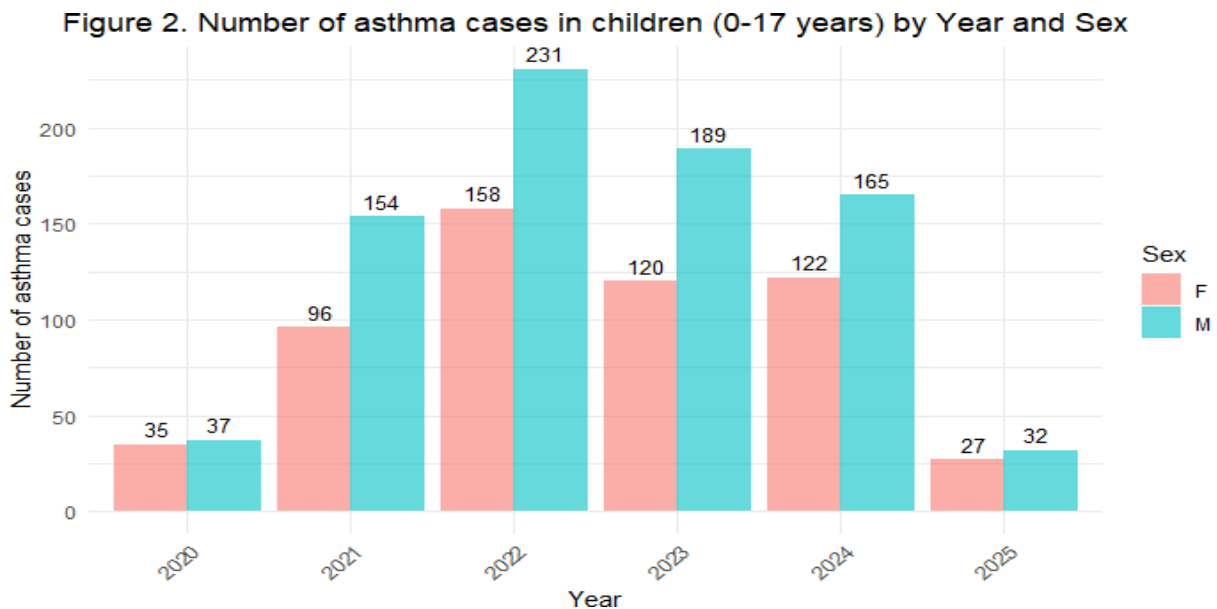
*Prevalence estimates with a CV greater than 30% or a sample size less than 50 are suppressed due to statistical unreliability.

Asthma in Waterbury:

Asthma case data reported from the hospitals and urgent care clinics in Waterbury was retrieved from the Connecticut Department of Public Health Epicenter syndromic surveillance system. The dataset was analyzed to get counts of asthma cases. The following bar graphs show number of asthma cases in Waterbury children (0-17 years) from 2020 to 2025. The total number of cases for this age group is 1366.



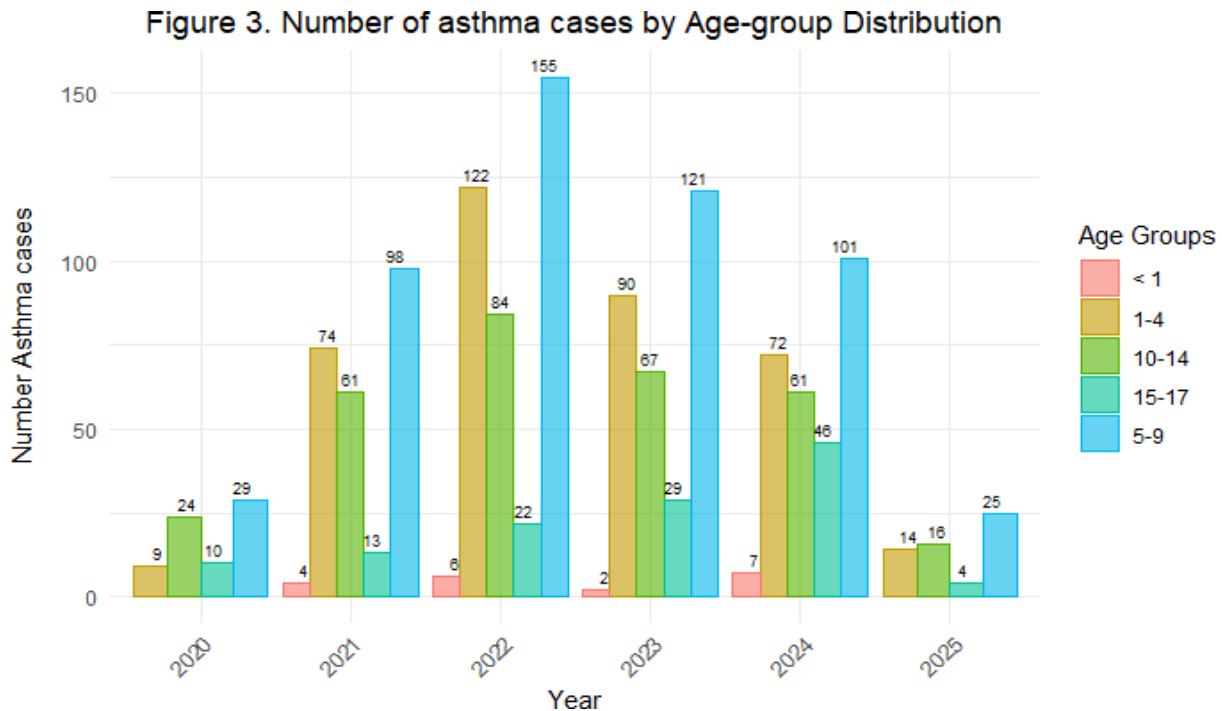
Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.



Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.

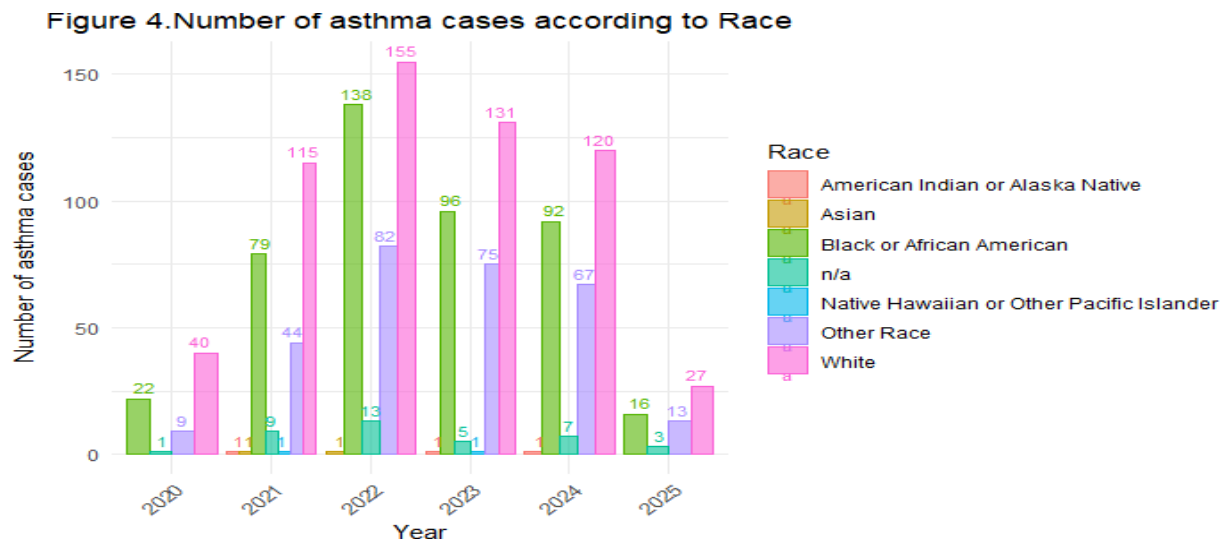
Figure 2. shows the number of asthma cases (0-17 years old) reported by the hospitals and urgent care clinics by sex. The data shows that males consistently experience more asthma compared to females.

Figure 3. below shows that the highest number of asthma cases among children in Waterbury are reported among the 5-9-year age group, which represents the school age children who are more predisposed to allergens and asthma triggers at the school environment.



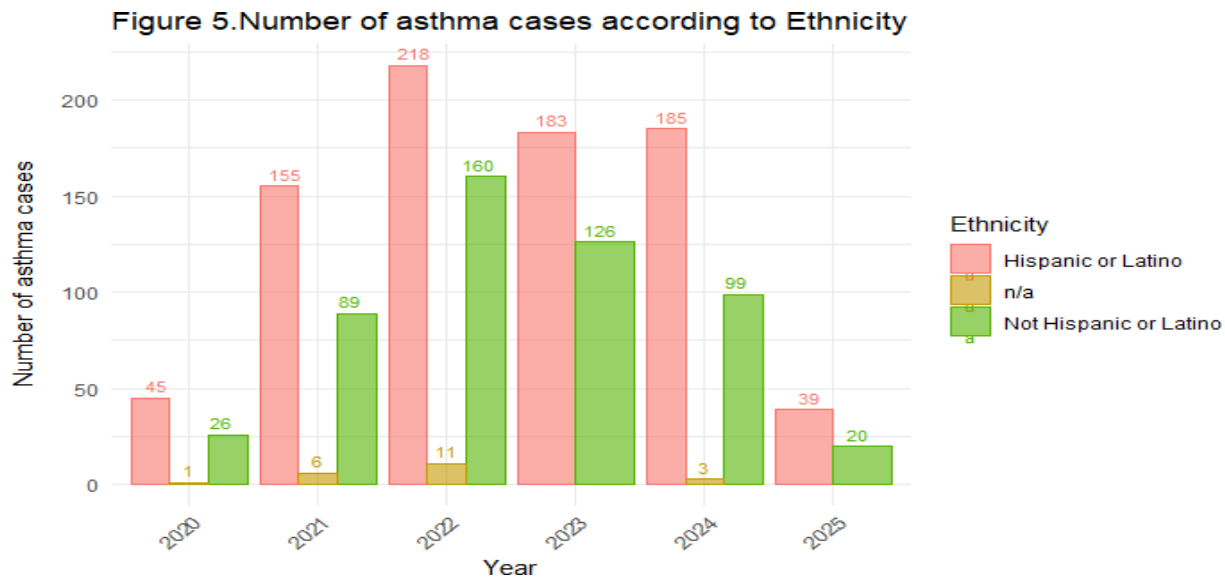
Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.

Figure 4 shows the distribution of asthma cases among 0-17-year old's according to racial groups. The highest number of asthma cases among White individuals, followed by African American individuals.

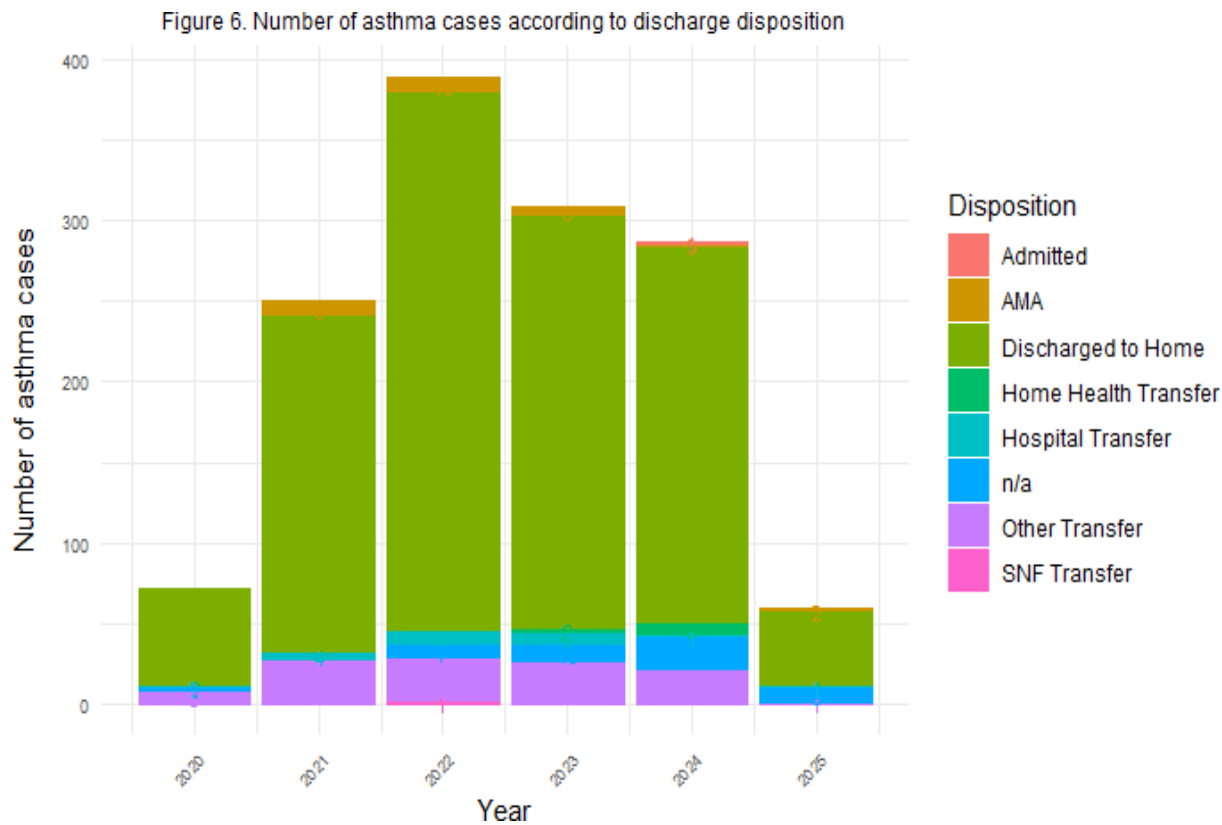


Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.

Figure 5. shows that asthma cases are higher among Hispanic/Latino ethnicity.



Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.



Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.

Figure 6 above shows the discharge status of the asthma cases among the 0-17 years age group in Waterbury. The data highlights that majority of the cases were discharged to home.

The table below shows the number of asthma cases among 0-17-year olds by zip code, from 2020 to 2025:

2020		2021		2022		2023		2024		2025	
Zip code	Count	Zip code	Count	Zip code	Count	Zip code	Count	Zip code	Count	Zip code	Count
6702	3	6702	21	6701	2	6702	11	6701	3	6702	1
6704	17	6704	68	6702	23	6704	83	6702	12	6704	14
6705	9	6705	53	6704	104	6705	67	6704	81	6705	11
6706	21	6706	34	6705	69	6706	58	6705	53	6706	4
6708	12	6708	31	6706	74	6708	53	6706	51	6708	15
6710	10	6710	43	6708	69	6710	37	6708	54	6710	13
				6710	47			6710	33		
				6720	1						

Data Source: CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.

Proposed strategies to promote asthma control in Waterbury:

Approaches aimed at reducing asthma morbidity and asthma-triggered health care use and improving asthma-related quality of life by increasing asthma self-management skills and reducing exposure to asthma triggers are needed in Waterbury. Examples of evidence-based strategies that have been implemented in other states include:

1. **Strategy 1:** Provide home visits for low-income children with asthma and conduct home environmental assessments to identify asthma triggers that can be removed or mitigated.
2. **Strategy 2:** Assess caretaker's knowledge and management of asthma and
3. **Strategy 3:** Supporting families in reducing triggers and improving asthma self-management through follow up visits, provide allergen control resources.
4. **Strategy 4:** Making referrals to additional resources

References:

1. Seattle-King County Healthy Homes Project. [Seattle-King County Healthy Homes Project | Home Visiting Evidence of Effectiveness](#)
2. CDC. Asthma. https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm
3. Connecticut State Department of Public Health. Asthma Program. <https://portal.ct.gov/dph/health-education-management--surveillance/asthma/asthma-program>
4. CDC Asthma. Most Recent State or Territory Asthma Data. https://www.cdc.gov/asthma/most_recent_data_states.htm
5. CDC Places. Waterbury, Connecticut, 2021-2022 Health Profile data file.
6. Data source: CT DPH, Child Lifetime Asthma Prevalence Excel datafile 2011- 2023. <https://portal.ct.gov/dph/health-education-management--surveillance/asthma/asthma-statistics>
7. CT DPH Epicenter Syndromic surveillance, Childhood asthma cases (Waterbury), 2020- 2025 dataset.
8. Better Home Visits for Asthma Lessons Learned from the Seattle–King County Asthma Program James. W. Krieger, MD, MPH, Miriam L. Philby, MA, Marissa Z. Brooks, MPH <https://doi.org/10.1016/j.amepre.2011.05.010>