

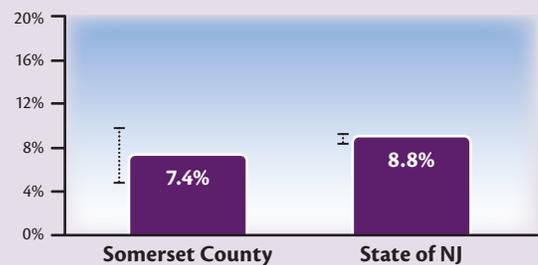
Asthma in New Jersey



Somerset County Asthma Profile

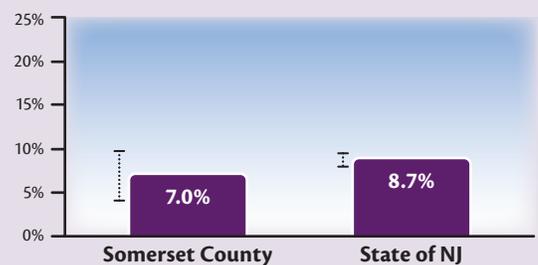
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can lead to emergency department visits, hospitalization and even death. This series of profiles is designed to give an overview of the prevalence of asthma and hospital utilization due to asthma (emergency department and inpatient admissions) in each New Jersey county. The purpose is to inform community based organizations, health care organizations, program planners, and policy makers about geographic areas and demographic groups most affected by asthma for application in effective targeting of asthma interventions.

Figure 1 | **Estimated Percent of Adults with Current Asthma**



Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Figure 2 | **Estimated Percent of Children with Current Asthma**

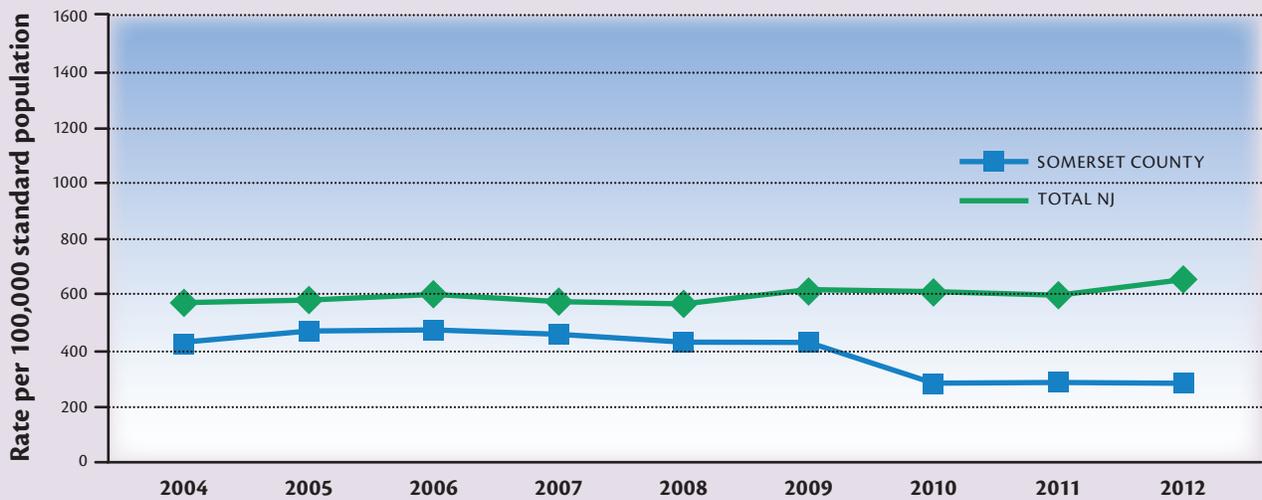


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 17,901 adults (7.4 percent) and 5,730 children (7 percent) currently had asthma in Somerset County. This compares with an estimated 8.8 percent of adults and 8.7 percent of children in the state. Figures 1 and 2 show the 95 percent confidence intervals for the survey measurements. Taking into account measurement error, we cannot say that Somerset County's current asthma prevalence among adults or children differed from the state average.

Figure 3 | Age-adjusted asthma ED visits per 100,000 population



Direct method of age-adjustment using the 2000 U.S. standard population
 Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Emergency Department (ED) Visits¹

With appropriate management, asthma can be controlled so that most visits to the ED are avoided. In 2012, residents of Somerset County had 868 total asthma ED visits, or 265 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Somerset County contains 3.7 percent of the state’s population and accounted for 1.5 percent of the state’s asthma ED visits in 2012. Figure 3 shows Somerset

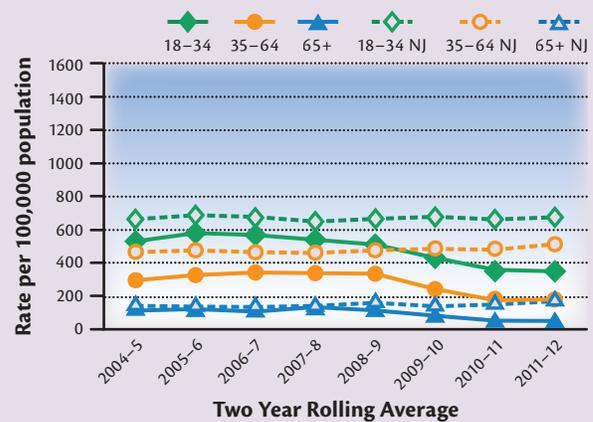
County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Somerset County’s rate of asthma ED visits was below the state average by 22 to 58 percent during the period, and declined by 33 percent while the state average increased 14 percent.

Figure 4 | Asthma ED visits per 100,000 population for children, Somerset County and State of NJ



Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Figure 5 | Asthma ED visits per 100,000 population for adults, Somerset County and State of NJ

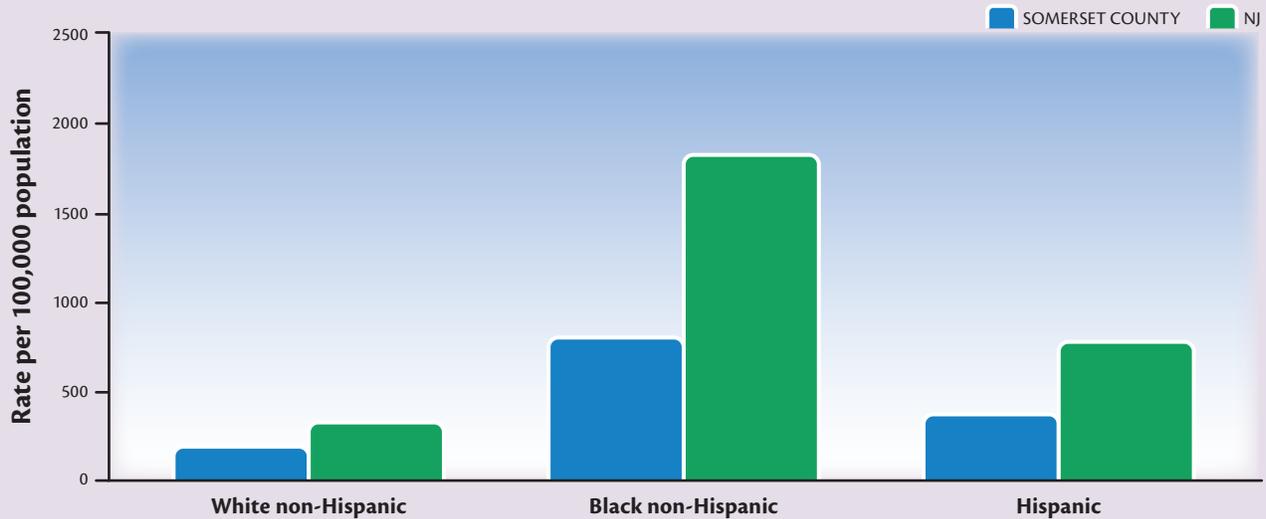


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Asthma ED visits tend to vary by age, with children having higher visit rates than adults. Figures 4 and 5 show asthma ED visit rates per 100,000 population for Somerset County children and adults, and children and adults in the state of New Jersey from 2004–2012 (rolling averages are used for comparability because

of low numbers in some age groups in some counties). Rates for all age groups were below their respective state averages over the period, and all declined more than their state averages as well. The largest decline was in asthma ED visit rates for adults over 65 (59 percent, versus an 18 percent increase in the state average).

Figure 6 | Asthma ED visit rate per 100,000 population, 2011–2012

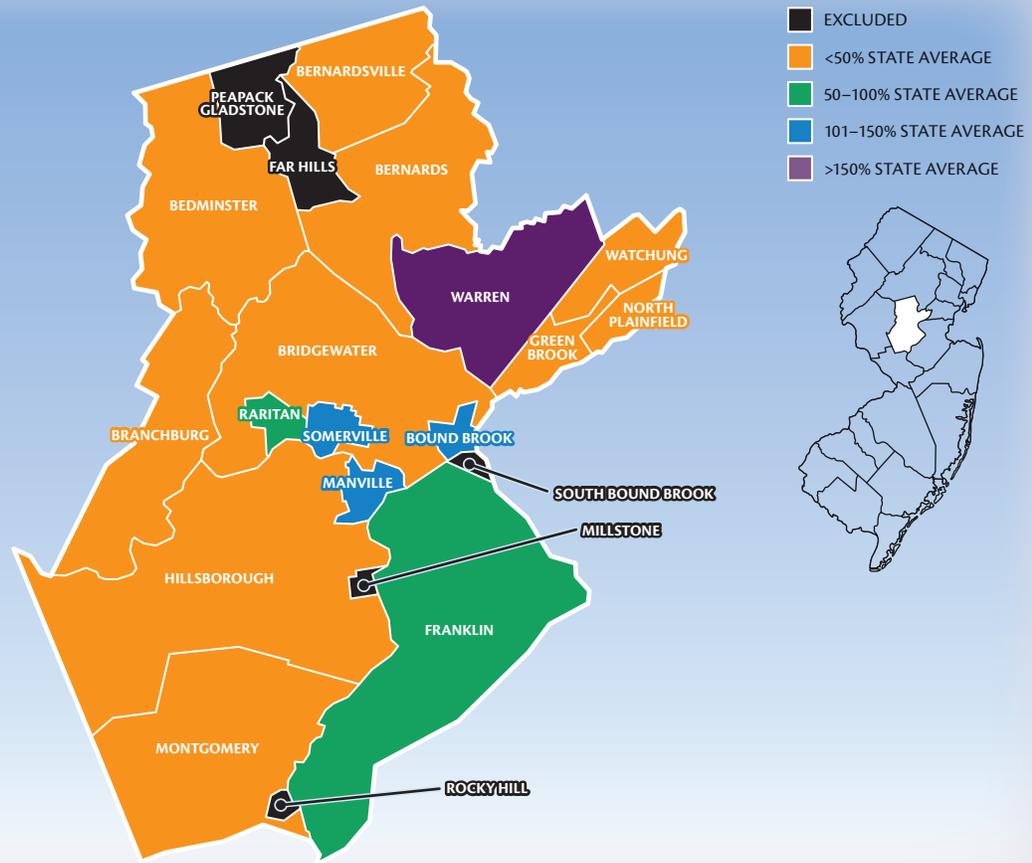


Note: Not age-adjusted
 Data source: 2011–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates

Asthma ED visits also vary quite a bit among racial and ethnic groups. Figure 6 shows asthma ED visit rates per 100,000 population for select racial/ethnic groups in Somerset County and the state of New Jersey for 2011–2012.² The highest rate was for non-Hispanic black residents of Somerset County, at 4.4 times the rate for non-Hispanic white residents, and 2.3 times the rate for Hispanic residents. The asthma ED visit rate for Hispanic residents was 1.9 times the rate for non-Hispanic white residents. When comparing Somerset County racial and ethnic groups to their state averages, rates for all groups were below their respective state averages (by 42 percent for non-Hispanic white residents, by 57 percent for non-Hispanic black residents and by 55 percent for Hispanic residents).

The following map and table show the asthma ED visit rate by municipality of residence in Somerset County from 2008–2012 (only municipalities with a population of 5,500 or greater are shown). Warren Township had a rate that was 2.6 times the state average, accounting for 19 percent of asthma ED visits for the county while only holding five percent of the population. Somerville, Manville and Bound Brook were also above the state average and accounted for 23 percent of asthma ED visits, but only held ten percent of the county’s population.

Figure 7 | Asthma Emergency Department Visits for Somerset County Residents, 2008–2012



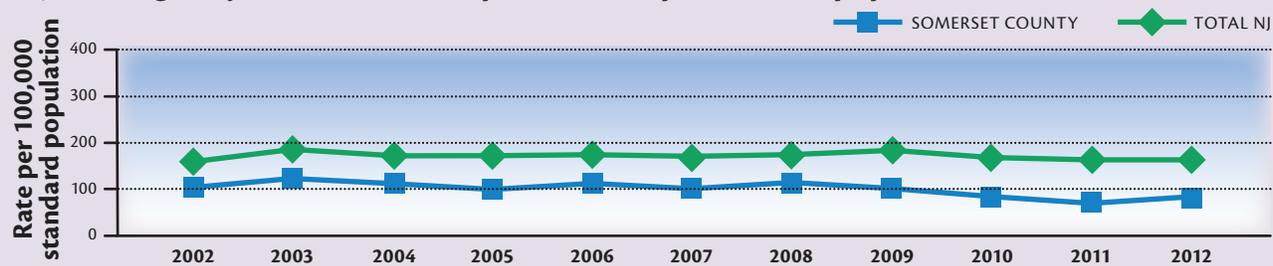
Municipality	Average population, 2008–2012	Asthma ED visits, 2008–2012	Percent of County ED visits	Percent of County Population	Asthma ED visit rate per 100,000 residents, 2008–2012	Age-adjusted* asthma ED visit rate per 100,000 residents, 2008–2012
Bedminster township	8,254	76	1.4%	2.5%	184	231
Bernards township	26,673	127	2.4%	8.2%	95	108
Bernardsville borough	7,741	60	1.1%	2.4%	155	167
Bound Brook borough	10,489	351	6.7%	3.2%	669	679
Branchburg township	14,713	84	1.6%	4.5%	114	132
Bridgewater township	44,563	441	8.4%	13.7%	198	221
Franklin township	61,634	1,081	20.5%	18.9%	351	375
Green Brook township	7,091	30	0.6%	2.2%	85	87
Hillsborough township	38,839	497	9.4%	11.9%	256	252
Manville borough	10,553	329	6.2%	3.2%	624	684
Montgomery township	22,615	70	1.3%	6.9%	62	65
North Plainfield borough	21,659	197	3.7%	6.7%	182	176
Raritan borough	7,161	150	2.8%	2.2%	419	467
Somerville borough	12,345	516	9.8%	3.8%	836	894
Warren township	15,713	1,001	19.0%	4.8%	1274	1587
Watchung borough	6,091	50	0.9%	1.9%	164	209
Municipalities below 5,500 population	9,440	210	4.0%	2.9%	445	n/a
Somerset County	325,572	5,270			324	342
State of NJ	8,774,778	261,822			597	622

*Direct method of age-adjustment using the 2000 U.S. standard population

Data source: 2008–2012 New Jersey ED Discharge Files

Population sources: NJ Department of Labor and Workforce Development: Municipal Estimates; US Bureau of the Census, 2010 Census Summary File 2 (QT-P2)

Figure 8 | **Age-adjusted asthma hospitalizations per 100,000 population**



Direct method of age-adjustment using the 2000 U.S. standard population

Data source: 2002–2012 New Jersey Hospital Discharge Files

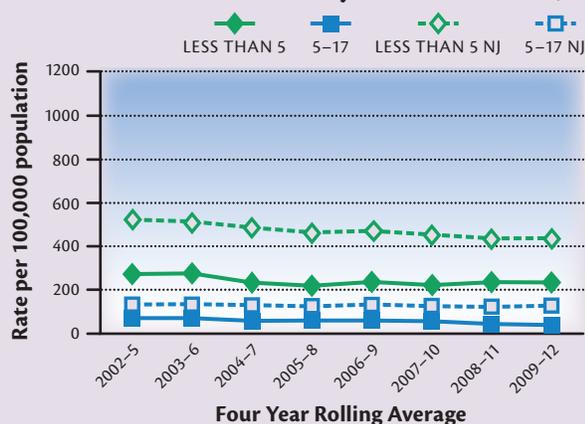
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Somerset County had 276 total asthma hospitalizations, or 84 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Somerset County contains 3.7 percent of the state’s population and accounted for 1.9 percent of the state’s asthma hospitalizations in 2012. Figure 8 shows Somerset

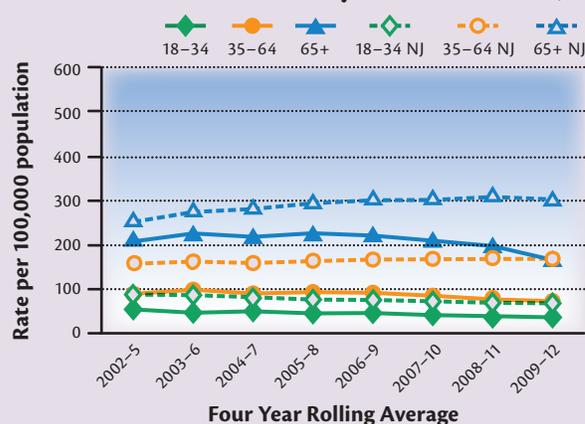
County’s asthma hospitalization rates compared with the overall rate in the state of New Jersey for the years 2002–2012 (adjusted to standardize for age differences in the population). Somerset County’s rate of asthma hospitalizations was consistently below the state average by 42 percent, on average, and declined by 22 percent over the period (compared with 4 percent growth in the state average).

Figure 9 | **Asthma hospitalizations per 100,000 population for children, Somerset County and State of NJ**



Data source: 2002–2012 New Jersey Hospital Discharge Files
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Figure 10 | **Asthma hospitalizations per 100,000 population for adults, Somerset County and State of NJ**

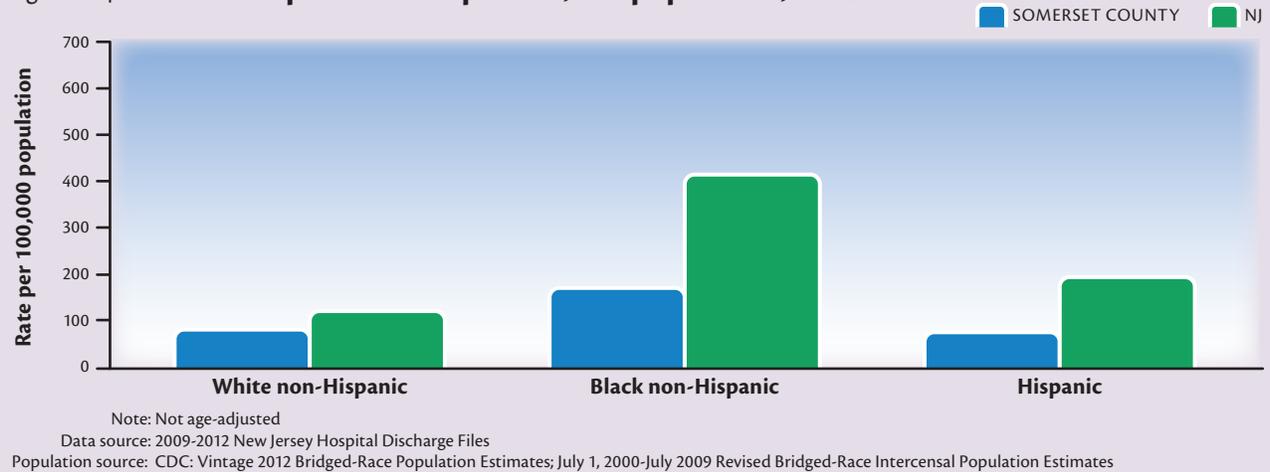


Data source: 2002–2012 New Jersey Hospital Discharge Files
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Asthma hospitalizations tend to be highest among the youngest and oldest residents. Figures 9 and 10 show asthma hospitalization rates per 100,000 population for Somerset County children and adults, and children and adults in the state of New Jersey from 2002–2012 (rolling averages are used for comparability because of low numbers in some age groups in some counties). Rates for all age groups were below their respective state averages over the period, and nearly all declined more than their state averages over

the period (with one exception: rates for children under age five in Somerset County declined by 14 percent while the state average declined by 16 percent). The largest drops relative to their state averages were the asthma hospitalization rates for children aged 5 to 17 years, which declined by 33 percent (versus a state average decline of three percent for that age group) and rates for adults over age 65 years, which declined by 18 percent (versus an increase of 18 percent in the state average).

Figure 11 | **Asthma hospitalizations per 100,000 population, 2009–2012**



Asthma hospitalizations also vary quite a bit among racial and ethnic groups. Figure 11 shows asthma hospitalization rates per 100,000 population for select racial/ethnic groups in Somerset County and the state of New Jersey from 2009–2012.² Non-Hispanic black residents of Somerset County had the highest asthma hospitalization rate—2.1 times the rate for non-Hispanic white residents and 2.2 times the rate for Hispanic

residents. The asthma hospitalization rate for Hispanic residents was 0.98 times (two percent below) the rate for non-Hispanic white residents. When comparing Somerset County racial and ethnic groups to their state averages, rates for all groups were below their state averages (non-Hispanic black residents by 58 percent, Hispanic residents by 59 percent and non-Hispanic white residents by 33 percent).

Summary

Somerset County's asthma prevalence in 2011–2012 does not differ significantly from the state average when looking at current asthma among adults and children. Rates of asthma-related emergency department (ED) visits and asthma-related hospitalizations were consistently below the state average and declined relative to the state average over the past decade. These trends held across nearly all age groups over the period (one exception: asthma hospitalization rates for Somerset County children under age five declined by a little less than the state average for 2002–2012).

Non-Hispanic black residents of Somerset County had the highest rates of both asthma ED visit rates and asthma hospitalizations compared with non-Hispanic white and Hispanic residents. The asthma ED visit rate for non-Hispanic black residents was 4.4 times the rate for non-

Hispanic white residents and the asthma hospitalization rate was 2.1 times as high. The asthma ED visit rate for Hispanic residents was 1.9 times the rate for non-Hispanic white residents, but the asthma hospitalization rate for Hispanic residents was 0.98 times (two percent below) the rate for non-Hispanic white residents. All groups were below their respective state averages for both asthma ED visits and hospitalizations by 33 percent or more.

An analysis of asthma-related ED visits by municipality showed that Warren Township had a rate 2.6 times the state average in 2008–2012, accounting for 19 percent of asthma ED visits for the county while only holding five percent of the population. Somerville, Manville and Bound Brook were also above the state average and accounted for 23 percent of asthma ED visits, but only held ten percent of the county's population.

For more information:

New Jersey Asthma Awareness and Education Program: www.nj.gov/health/asthma

For asthma resources and tools:

Pediatric Adult Asthma Coalition of New Jersey (PACNJ): www.pacnj.org

Notes:

¹ Data on asthma-related ED visits and hospitalizations are derived from hospital uniform billing (UB) information, which is used to submit claims for health care. Some variables are not required for claim processing (such as race, ethnicity, and municipality of residence), and should be interpreted with caution. Our figures also use population estimates, which are subject to measurement error that may differ across population subgroups (for example, people who are homeless, move frequently or lack legal documentation for residence may be more difficult to measure).

² There are many racial and ethnic groups in addition to the three shown in the figure. However, not all groups are adequately captured in the uniform billing data over time, and many groups do not have sufficient numbers across all counties to allow for a standard presentation. In addition, data on Hispanic ethnicity should be interpreted with caution as it may conceal important differences among sub-groups.

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