

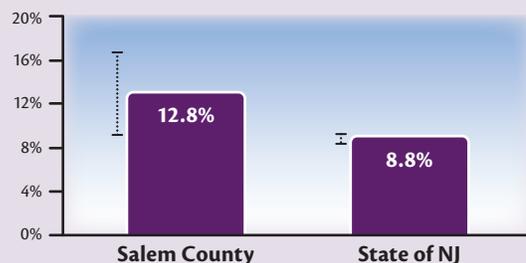
Asthma in New Jersey



● Salem County Asthma Profile

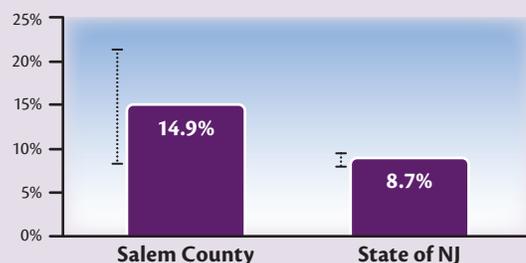
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can 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**

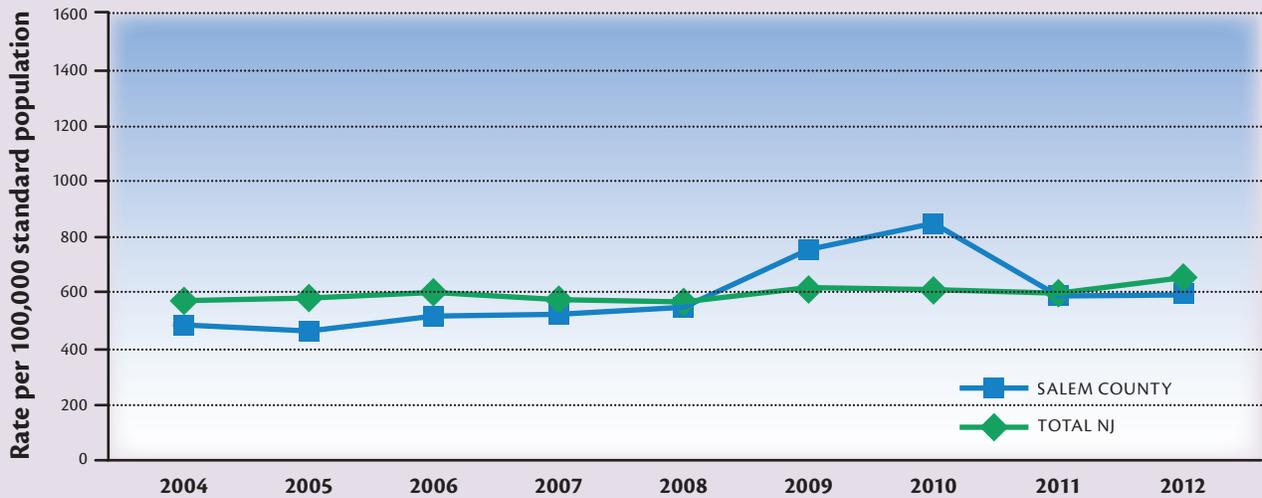


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 6,657 adults (12.8 percent) and 2,530 children (14.9 percent) currently had asthma in Salem 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 Salem 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



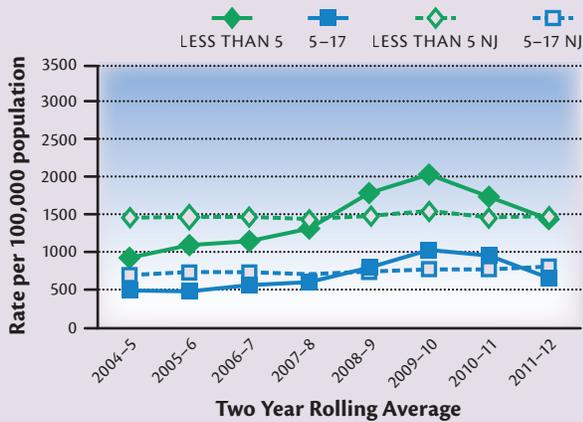
Direct method of age-adjustment using the 2000 U.S. standard population
 Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Emergency Department (ED) Visits¹

With appropriate management, asthma can be controlled so that most visits to the ED are avoided. In 2012, residents of Salem County had 367 total asthma ED visits, or 558 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Salem County contains 0.7 percent of the state's population and accounted for 0.7 percent of the

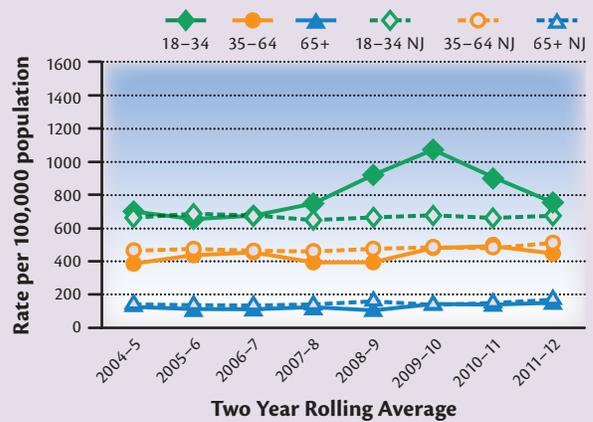
state's asthma ED visits in 2012. Figure 3 shows Salem County's asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Salem County's rate of asthma ED visits was generally below the state average, although it was higher in 2009 and 2010.

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

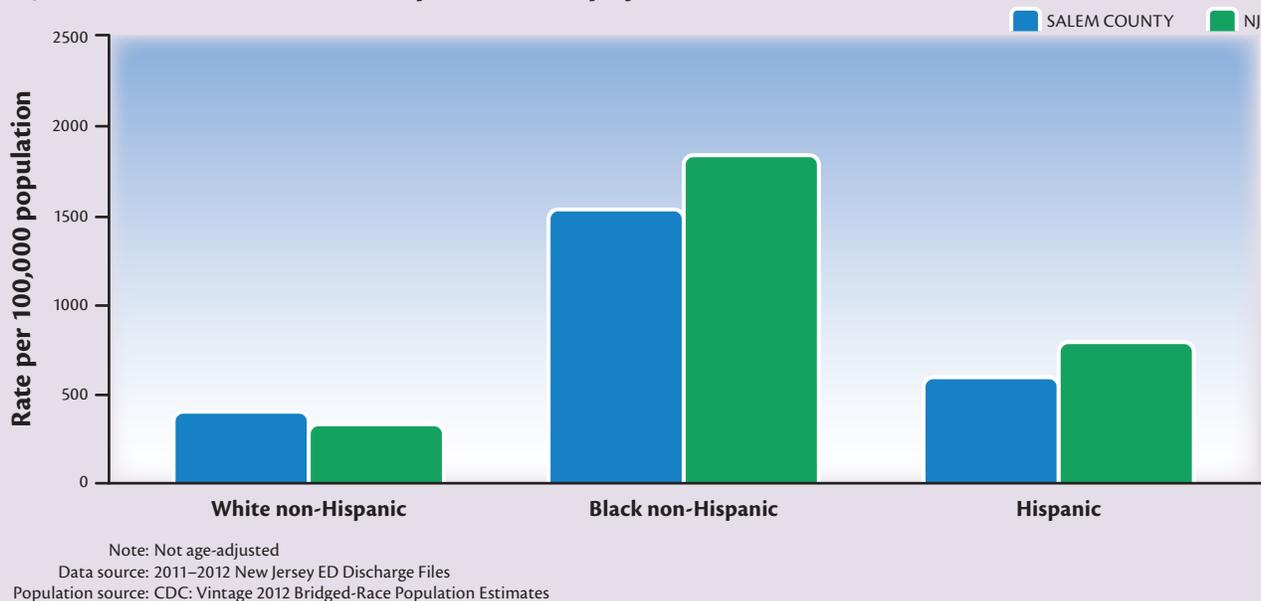


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Salem 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 except adults over 65 grew faster than their

respective state averages, with children under age five growing the most over the period (59 percent, versus no growth in the state average for that group). However, only the 1834 age group was higher than its state average at the end of the period (all age groups except adults over 65 had some points above the state average during the period).

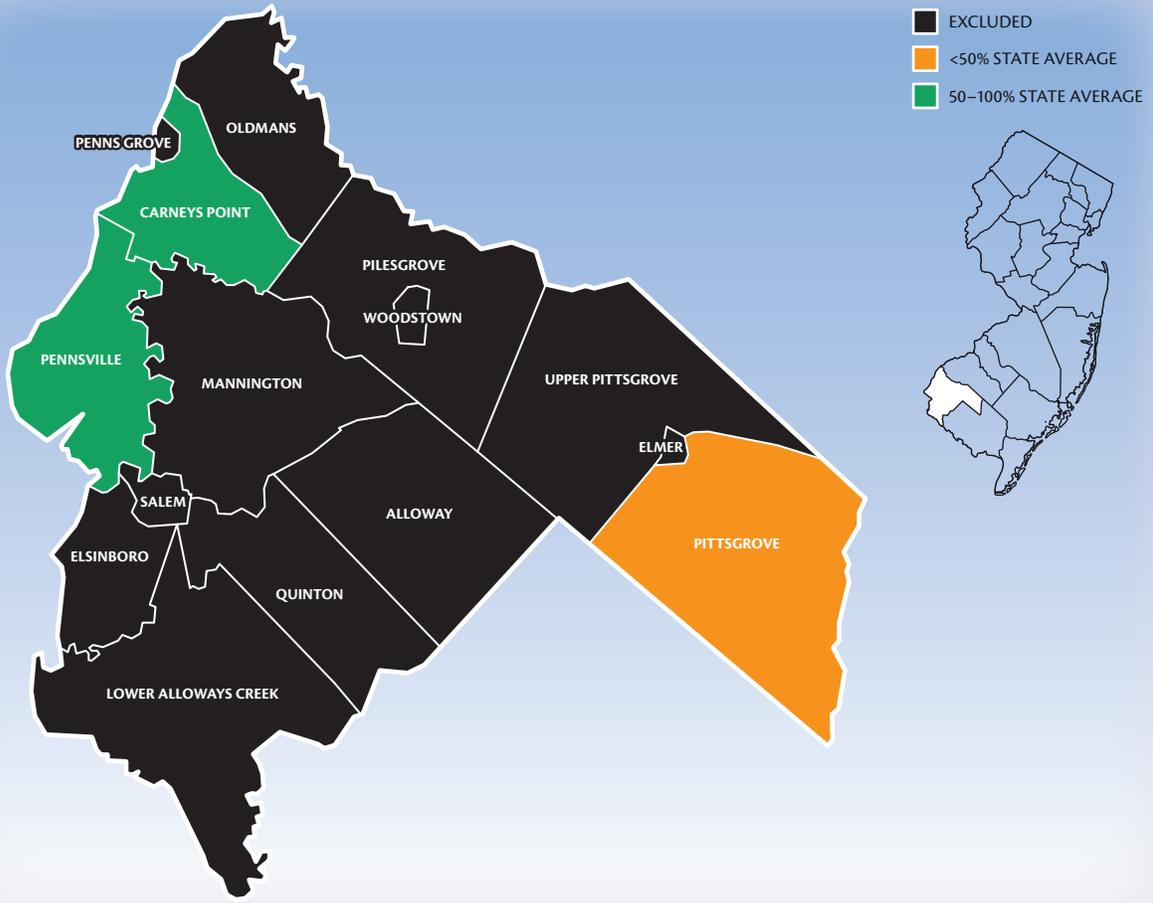
Figure 6 | Asthma ED visit rate per 100,000 population, 2011–2012



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 Salem County and the state of New Jersey for 2011–2012.² The highest rate was for non-Hispanic black residents of Salem County, at four times the rate for non-Hispanic white residents and 2.6 times the rate for Hispanic residents. The asthma ED visit rate for Hispanic residents was 1.5 times the rate for non-Hispanic white residents. When comparing Salem County racial and ethnic groups to their state averages, the rate for Hispanic residents was 25 percent below the state average for Hispanic people, and the rate for non-Hispanic black residents was 17 percent below their state average. The rate for non-Hispanic white residents was 21 percent above their state average.

The following map and table show the asthma ED visit rate by municipality of residence in Salem County (only municipalities with a population of 5,500 or greater are shown). The smaller municipalities accounted for 80 percent of asthma ED visits for the county, while only constituting 54 percent of the population. None of the larger municipalities were above the state average, and Pittsgrove township was less than half of the state average.

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



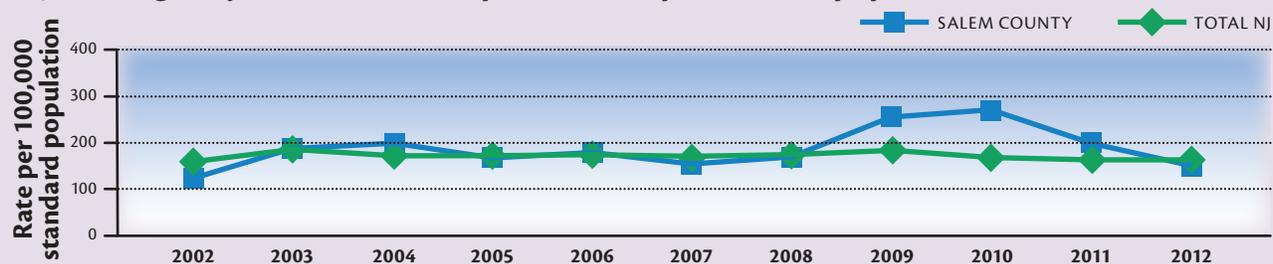
Municipality	Average population, 2008–2012	Asthma ED visits, 2008–2012	Percent of County ED visits	Percent of County Population	Asthma ED visit rate per 100,000 residents, 2008–2012	Age-adjusted* asthma ED visit rate per 100,000 residents, 2008–2012
Carneys Point township	8,017	160	7.7%	12.1%	399	460
Pennsville township	13,325	219	10.6%	20.2%	329	361
Pittsgrove township	9,398	41	2.0%	14.2%	87	96
Municipalities below 5,500 population	35,344	1,646	79.7%	53.5%	931	n/a
Salem County	66,083	2,066			625	673
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

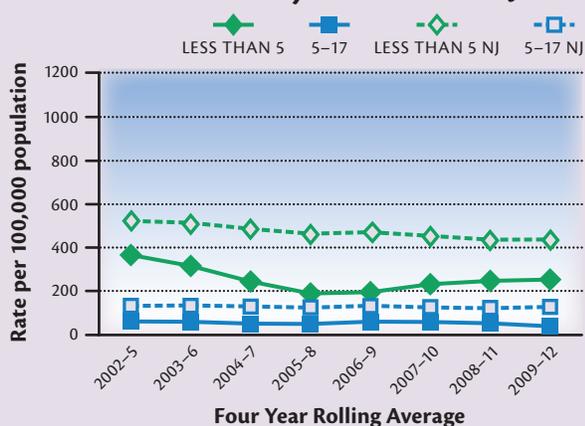
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Salem County had 109 total asthma hospitalizations, or 166 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Salem County contains 0.7 percent of the state’s population and accounted for 0.7 percent of the state’s asthma hospitalizations in 2012. Figure 8 shows Salem

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). Salem County’s rate of asthma hospitalizations grew by 20 percent over the period (compared with 4 percent growth in the state average), but it varies quite a bit from year to year, making trends difficult to assess.

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

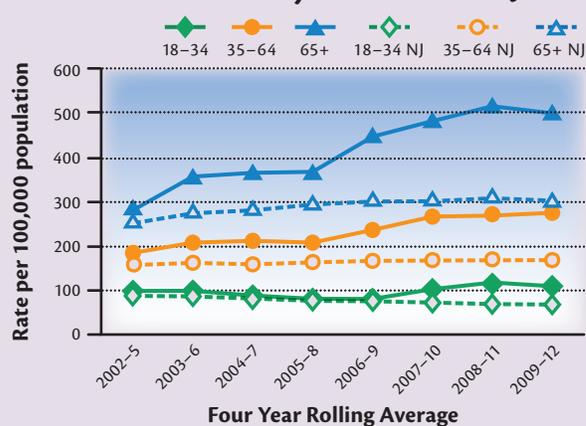


Data source: 2002–2012 New Jersey Hospital Discharge Files

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 Salem County children and adults, and children and adults in the state of New Jersey. Rates for children decreased from 2002–2012 and were below the state average for comparable age groups throughout the period, while rates for adults increased and were higher than the state average

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

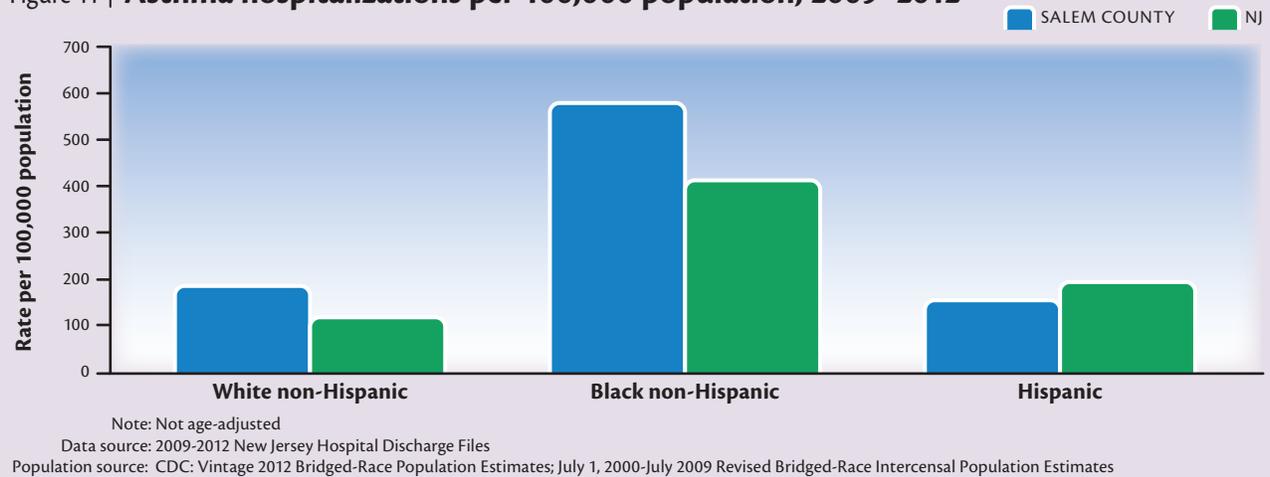


Data source: 2002–2012 New Jersey Hospital Discharge Files

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

for comparable age groups throughout the period (rolling averages are used for comparability because of low numbers in some age groups in some counties). The largest increase in the rate of asthma hospitalization was for Salem County adults over 65 (a 73 percent increase, compared with an 18 percent increase in the state average for this group).

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 Salem County and the state of New Jersey from 2009–2012.² Non-Hispanic black residents of Salem County had the highest asthma hospitalization rate—3.1 times the rate for non-Hispanic white residents and 3.7 times the rate for Hispanic residents. The asthma hospitalization

rate for Hispanic residents was 0.84 times (16 percent below) the rate for non-Hispanic white residents. When comparing Salem County racial and ethnic groups to their state averages, the rate for Hispanic residents was 28 percent below the state average for Hispanic people. The rate for non-Hispanic black residents was 41 percent above their state average and the rate for non-Hispanic white residents was 54 percent above their state average.

Summary

Salem County's asthma prevalence in 2011–2012 does not differ significantly from the state average when looking at current asthma among adults and children.

Salem County was generally below the state average for asthma-related emergency department (ED) visits from 2004–2012, though asthma ED visit rates for all age groups except adults over age 65 grew faster than their respective state averages.

Asthma hospitalization rates for Salem County children decreased from 2002–2012 and were below the state average for comparable age groups throughout the period, while rates for adults increased and were higher than the state average for comparable age groups throughout the period. Among different age groups, the largest increase in the rate of asthma hospitalization was for Salem County adults over 65.

Non-Hispanic black residents of Salem County had the highest rates of both asthma ED visit rates (2011–2012) and asthma hospitalizations (2009–2012) compared with non-Hispanic white and Hispanic residents. The asthma ED visit rate for non-Hispanic black residents was four times the rate for non-Hispanic white residents and the asthma hospitalization rate was 3.1 times as high. The asthma ED visit rate for Hispanic residents was 1.5 times the rate for non-Hispanic white residents, but the asthma hospitalization rate for Hispanic residents was 0.84 times (16 percent below) the rate for non-Hispanic white residents.

An analysis of asthma-related ED visits by municipality from 2008–2012 showed that municipalities with populations under 5,500 made up 80 percent of asthma ED visits for Salem County in 2008–2012, while only constituting 54 percent of the population. None of the larger municipalities were above the state average.

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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