

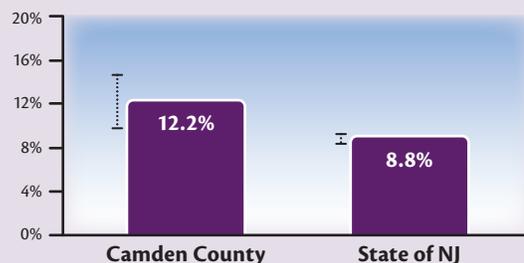
Asthma in New Jersey



Camden County Asthma Profile

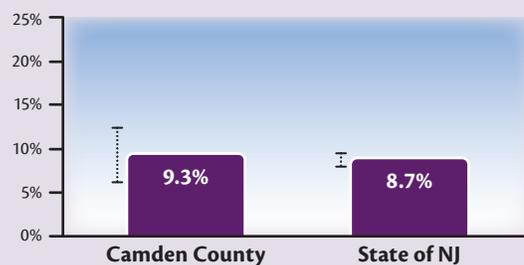
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can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

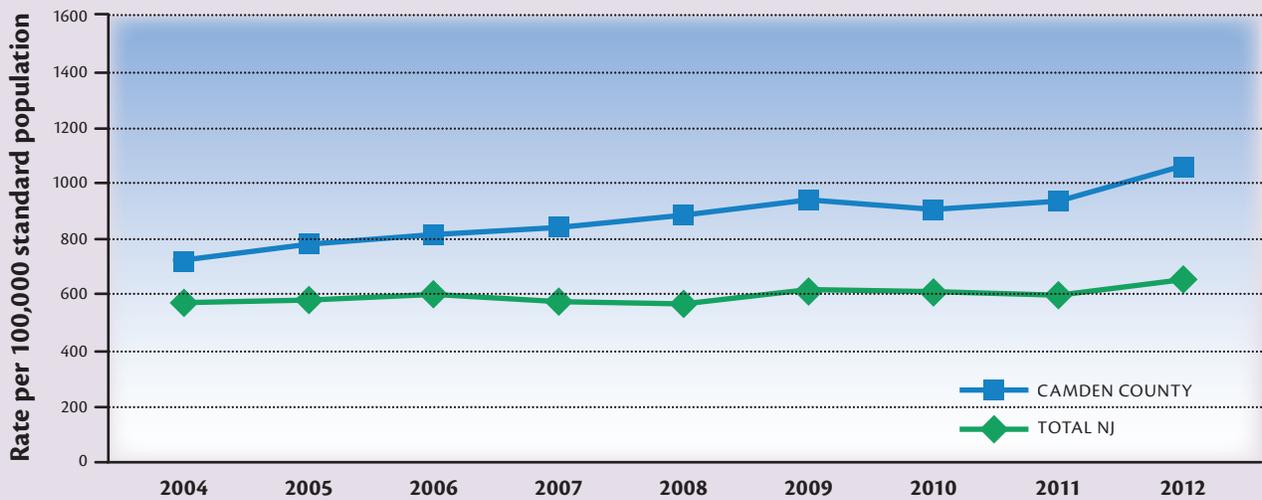


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011-2012, an estimated 46,232 adults (12.2 percent) and 9,860 children (9.3 percent) currently had asthma in Camden 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, the rate of current asthma prevalence among Camden County adults was above the state average, but we cannot say that Camden County's current asthma prevalence among 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 Camden County had 5,156 total asthma ED visits, or 1,004 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Camden County contains 5.8 percent of the state’s population and accounted for 9.1 percent of the state’s asthma ED visits in 2012. Figure 3 shows Camden

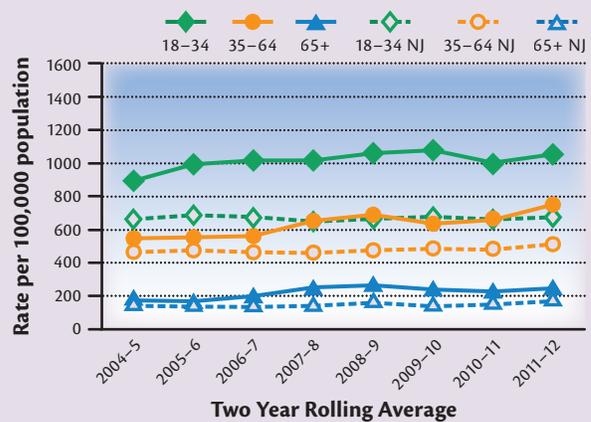
County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Camden County’s rate of asthma ED visits grew by 47 percent over the period (compared with 14 percent growth in the state average). In 2004 it was 23 percent higher than the state average; by 2012, it was 57 percent higher.

Figure 4 | Asthma ED visits per 100,000 population for children, Camden 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

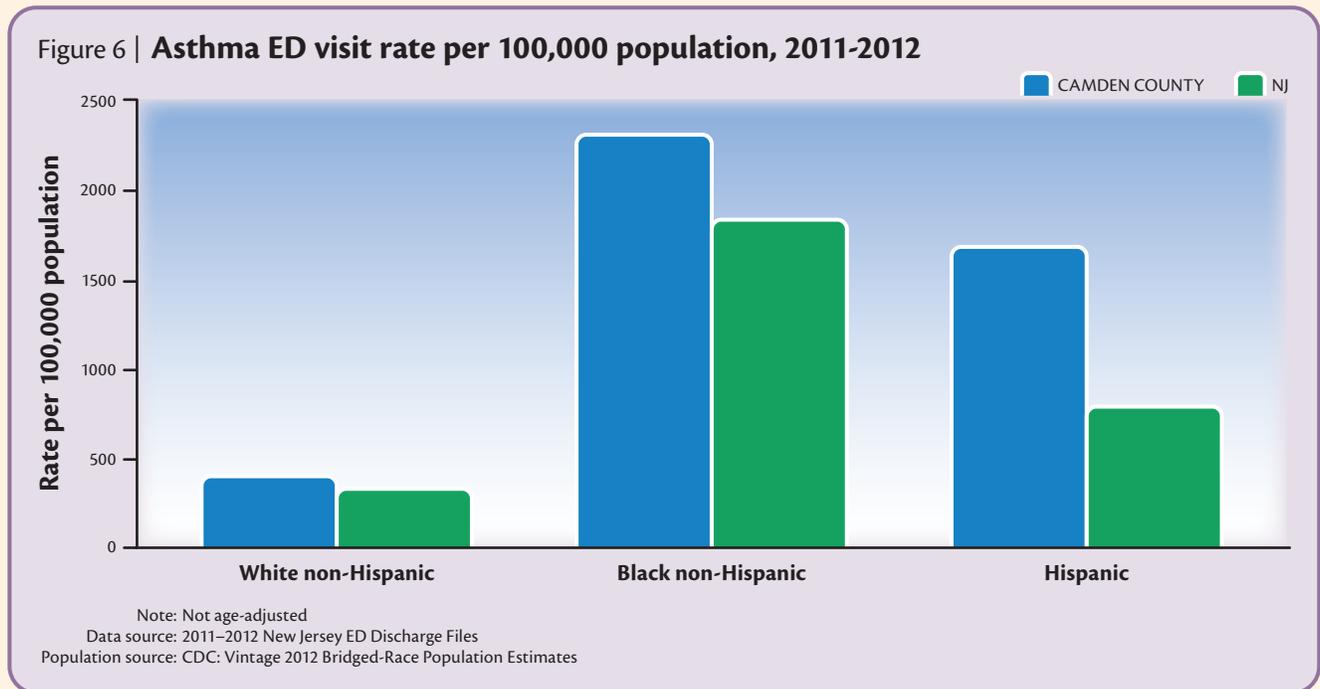
Figure 5 | Asthma ED visits per 100,000 population for adults, Camden County and State of NJ



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 Camden County children and adults, and children and adults in the state of New Jersey. In each age group, Camden County's asthma ED visit rate is higher than the state average for 2004–2012 (rolling averages are used for

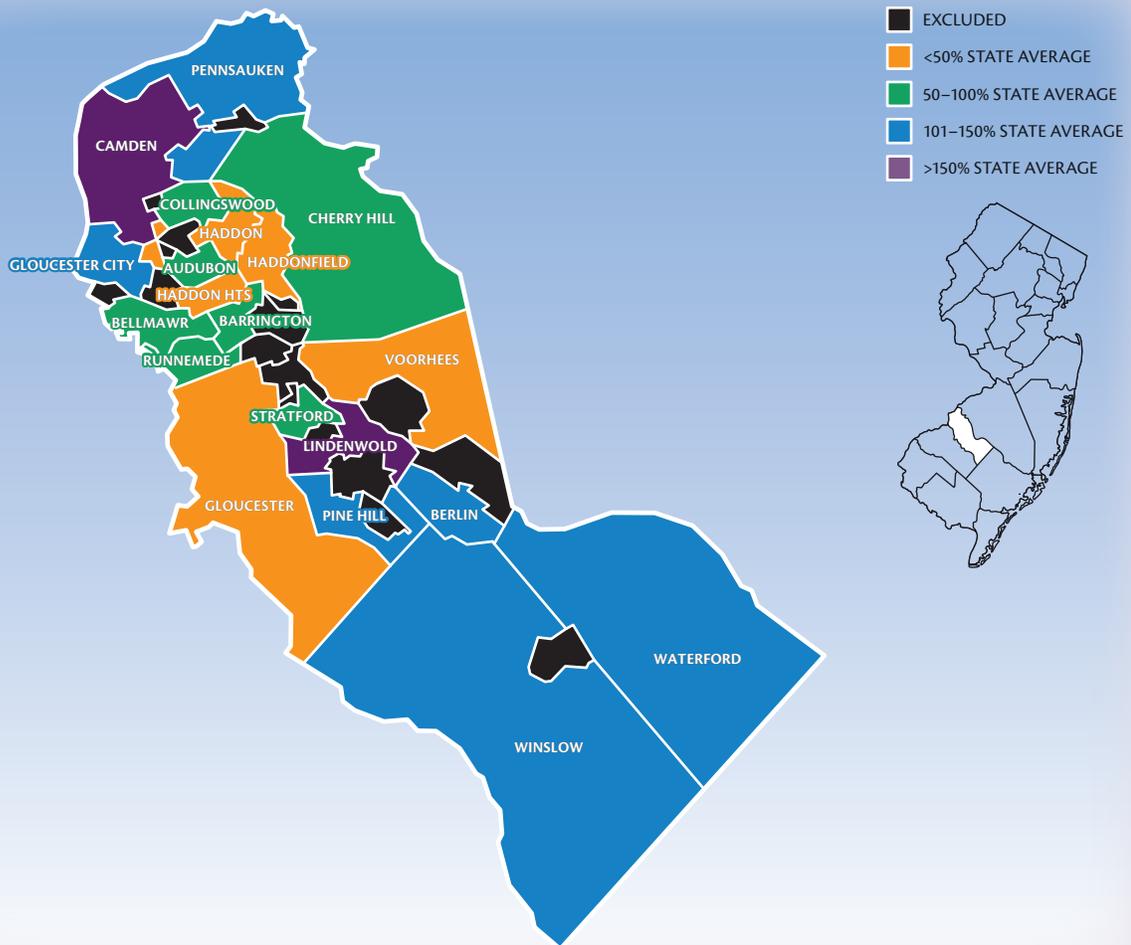
comparability because of low numbers in some age groups in some counties). The asthma ED visit rate for most age groups in Camden County increased faster than the state averages for the same age groups, but the asthma ED visit rate for adults 65 and over grew at about the same rate.



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 Camden County and the state of New Jersey for 2011–2012.² The asthma ED visit rate in Camden County was above the state average for all groups shown (by 20 percent for non-Hispanic white people, 26 percent non-Hispanic black people and 117 percent for Hispanic people). The asthma ED visit rate for non-Hispanic black residents of Camden County was six times the rate for non-Hispanic white residents, and 1.4 times the rate for Hispanic residents. The asthma ED visit rate for Hispanic residents was 4.4 times the rate for non-Hispanic white residents.

The following map and table show the asthma ED visit rate by municipality of residence in Camden County (only municipalities with a population of 5,500 or greater are shown). The City of Camden accounted for 49 percent of asthma ED visits for the county, while only constituting 15 percent of the population. Residents of Lindenwold Borough and all the smaller municipalities together also had asthma ED visit rates each more than 1.5 times the state average. Winslow Township, Gloucester Township, Pennsauken Township, Berlin Borough, Pine Hill Borough and Waterford Township were above the state average.

Figure 7 | Asthma Emergency Department Visits for Camden 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
Audubon borough	8,834	146	0.6%	1.7%	331	337
Barrington borough	6,938	120	0.5%	1.3%	346	381
Bellmawr borough	11,419	274	1.2%	2.2%	480	542
Berlin borough	7,734	243	1.0%	1.5%	628	704
Camden city	78,110	11,361	48.8%	15.2%	2,909	2,871
Cherry Hill township	70,860	1,040	4.5%	13.8%	294	335
Collingswood borough	13,874	346	1.5%	2.7%	499	540
Gloucester City	11,486	457	2.0%	2.2%	796	847
Gloucester township	64,604	942	4.0%	12.5%	292	302
Haddon Heights borough	7,582	84	0.4%	1.5%	222	260
Haddon township	14,566	100	0.4%	2.8%	137	149
Haddonfield borough	11,532	127	0.5%	2.2%	220	250
Lindenwold borough	17,666	891	3.8%	3.4%	1,009	1,013
Pennsauken township	35,488	1,288	5.5%	6.9%	726	747
Pine Hill borough	10,737	332	1.4%	2.1%	618	655
Runnemede borough	8,441	175	0.8%	1.6%	415	456

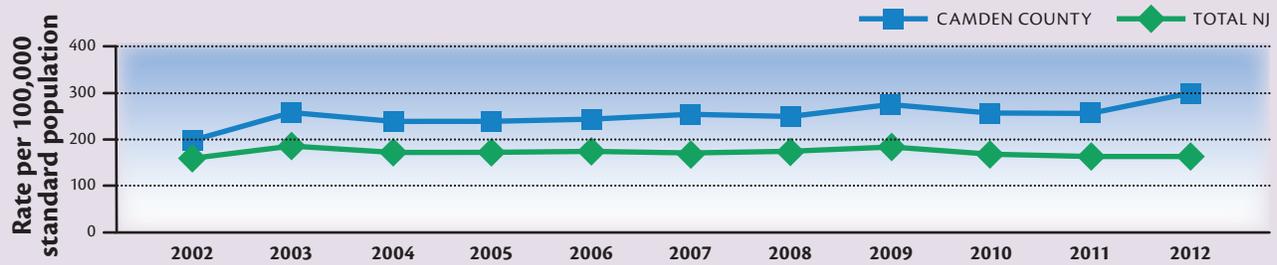
Municipality	Average population, 2008–2012	Asthma ED visits, 2008–2012	Percent of County ED visits	Percent of County Population	Asthma ED visit rate per 100,000 residents, 2008–2012	Age-adjusted* asthma ED visit rate per 100,000 residents, 2008–2012
Stratford borough	7,026	156	0.7%	1.4%	444	463
Voorhees township	30,221	355	1.5%	5.9%	235	282
Waterford township	10,678	318	1.4%	2.1%	596	628
Winslow township	39,393	1,746	7.5%	7.6%	886	901
Municipalities below 5,500 population	48,090	2,793	12.0%	9.3%	1,162	n/a
Total - Camden County	515,279	23,294			904	942
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

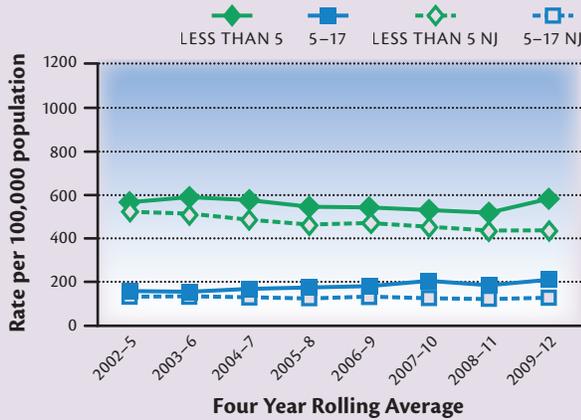
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Camden County had 1,554 total asthma hospitalizations, or 303 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Camden County contains 5.8 percent of the state’s population and accounted for 10.4 percent of the state’s asthma hospitalizations in 2012. Figure 8

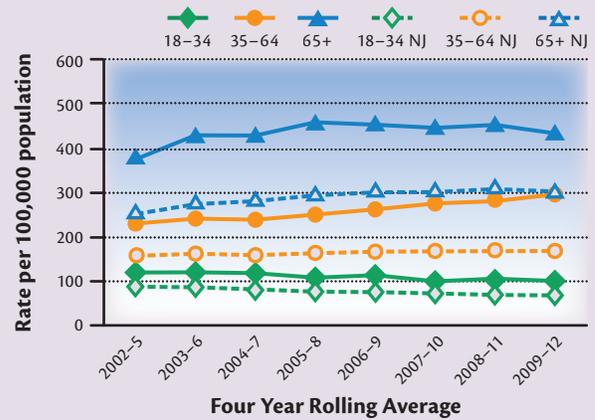
shows Camden County’s asthma hospitalization rates compared with the overall rate in the state of New Jersey for the years 2002–2012 (adjusted to standardize for age differences in the population). Camden County’s rate of asthma hospitalizations grew by 51 percent over the period (compared with 4 percent growth in the state average). In 2002 Camden County’s rate was 25 percent higher than the state average; by 2012, it was 81 percent higher.

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

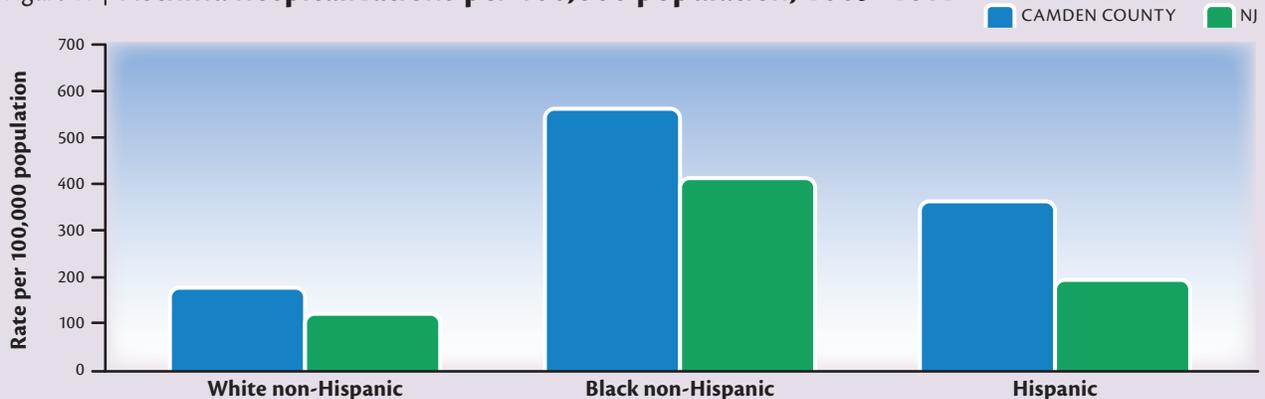


Data source: 2002–2012 New Jersey Hospital Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Camden County children and adults, and children and adults in the state of New Jersey. In each age group, Camden County’s asthma hospitalization rate is higher than the state average for 2002–2012 (rolling averages are used for comparability because of low numbers in some age groups in some

counties). Hospitalization rates for most age groups in Camden County increased over the period, and most were further above the state average at the end of the period than at the beginning. The rate for young adults ages 18-34 declined, though not by as much as the state average. The rate for older adults age 65 and over increased more slowly than the state average for that age group.

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



Note: Not age-adjusted
 Data source: 2009–2012 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 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 Camden County and the state of New Jersey for 2009–2012.² For all racial and ethnic groups examined, Camden County is above the state average for similar groups—by 36 percent for non-Hispanic black

residents, 46 percent for non-Hispanic white residents, and 89 percent for Hispanic residents. The asthma hospitalization rate for non-Hispanic black residents of Camden County was 3.2 times the rate for non-Hispanic white residents and 1.5 times higher than the rate for Hispanic residents. The rate for Hispanic residents was twice the rate for non-Hispanic white residents.

Summary

Camden County's current asthma prevalence among adults in 2011-2012 was higher than the state average, but the prevalence for children did not differ significantly. Camden County is above the state average on all measures of asthma-related emergency department (ED) visits and asthma-related hospitalizations throughout the past decade, and rates for most age and racial/ethnic groups increased faster than the state average over the last decade.

Hospital utilization rates have differed by race within the county throughout the past decade, with non-Hispanic black residents having higher rates of both asthma-related ED visits and asthma-related hospitalizations than either non-Hispanic white or Hispanic residents. Rates for Hispanic

residents fell in the middle. When comparing rates for each group to their respective state averages, Hispanic residents had the largest difference—more than twice the state average for Hispanic people in NJ for asthma ED visits and almost twice the average for hospitalizations.

An analysis of asthma-related ED visits by municipality of residence for the years 2008–2012 shows that 49 percent of asthma ED visits for the county during the period were from City of Camden residents, who constituted only 15 percent of the county's population. Several other municipalities, including the smaller municipalities under 5,500 population, had rates higher than 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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