

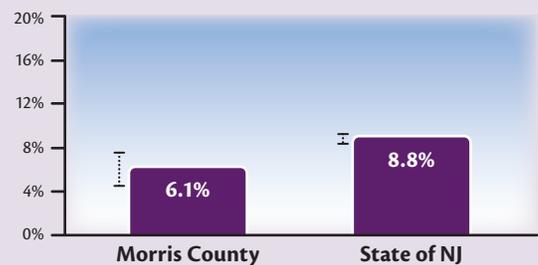
Asthma in New Jersey



Morris County Asthma Profile

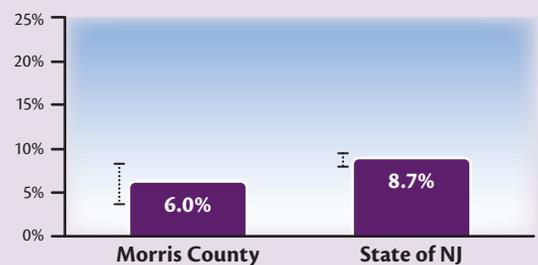
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can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

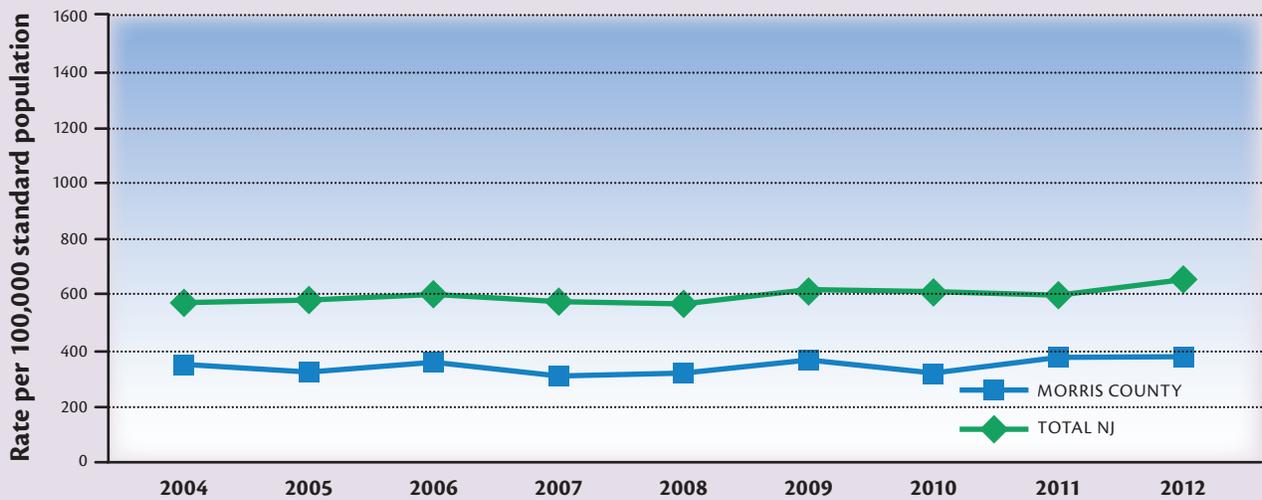


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 22,338 adults (6.1 percent) and 7,544 children (six percent) currently had asthma in Morris 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 in Morris County adults was below the state average but we cannot say that Morris 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 Morris County had 1,716 total asthma ED visits, or 345 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Morris County contains 5.6 percent of the state’s population and accounted for three percent of the

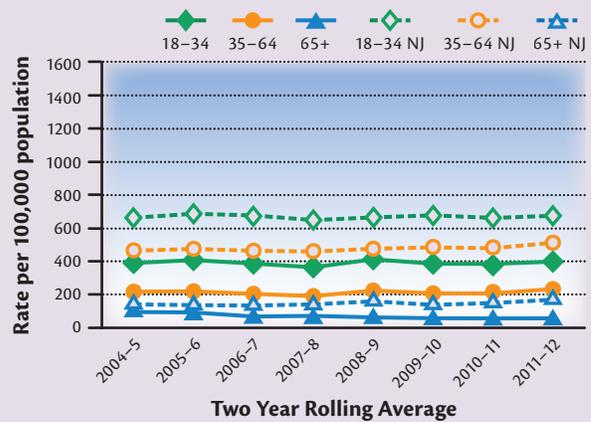
state’s asthma ED visits in 2012. Figure 3 shows Morris County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Morris County’s rate of asthma ED visits was below the state average by an average of 43 percent during the period.

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

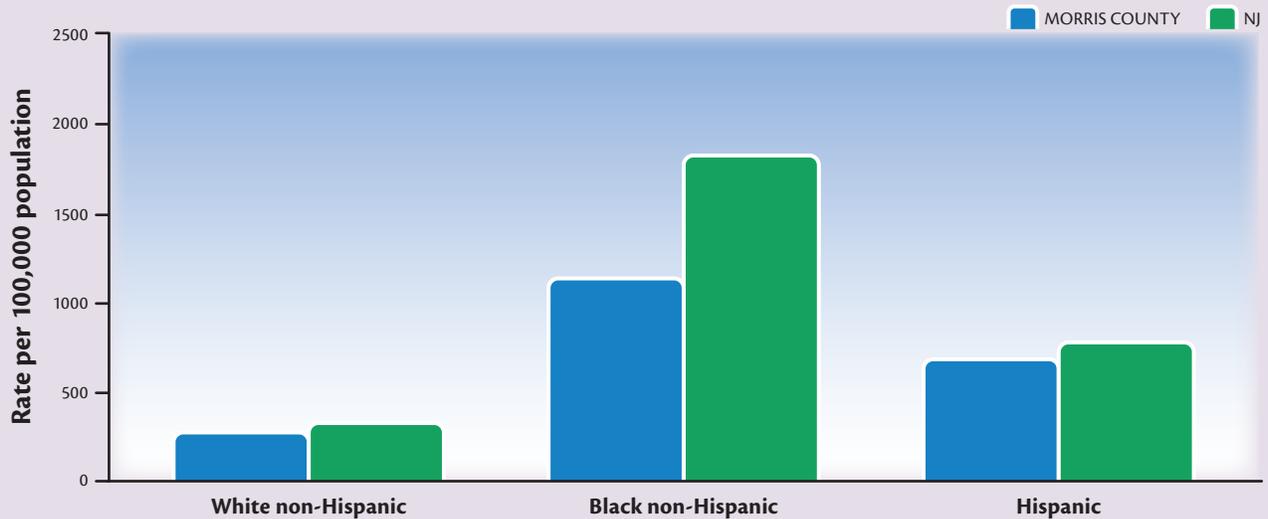


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Morris 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 state averages over the period. However, rates for children increased at a higher rate than the state average—rates for Morris County children under

age five increased 17 percent over the period, compared with no change in the state average; rates for children ages 5–17 increased by 29 percent over the period, compared with an increase of 17 percent in the state average. Increases in rates for adults ages 18–34 (four percent) and 35–64 (ten percent) were similar to changes in the state average for those age groups. Rates for adults ages 65 and over declined by 38 percent over the period, compared with a 16 percent increase in the state average.

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

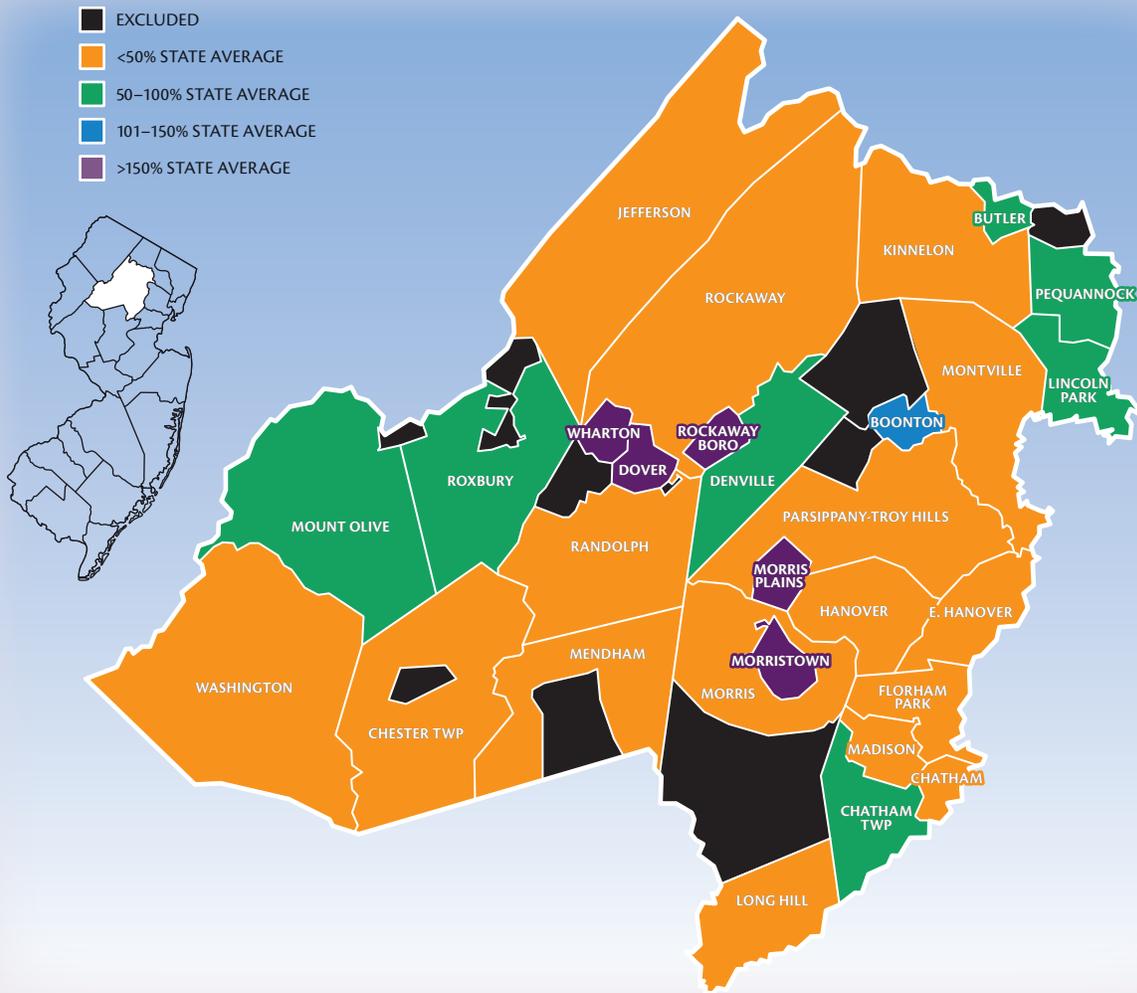


Note: Not age-adjusted
 Data source: 2011–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates

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 Morris County and the state of New Jersey for 2011–2012.² The highest rate was for non-Hispanic black residents of Morris County, at 4.3 times the rate for non-Hispanic white residents and 1.7 times the rate for Hispanic residents. The asthma ED visit rate for Hispanic residents was 2.6 times the rate for non-Hispanic white residents. When comparing Morris County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was below the state average for non-Hispanic black people by 39 percent, the rate for non-Hispanic white residents was below their state average by 18 percent, and the rate for Hispanic residents was 13 percent below their state average.

The following map and table show the asthma ED visit rate by municipality of residence in Morris County from 2008–2012 (only municipalities with a population of 5,500 or greater are shown). Rockaway Borough, Dover Town, Wharton Borough, Morristown Town and Morris Plains Borough had rates more than 1.5 times the state average. Boonton Town was above the state average. Altogether, these municipalities accounted for 44 percent of Morris County’s asthma ED visits while only holding 13 percent of the county’s population.

Figure 7 | Asthma Emergency Department Visits for Morris 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
Boonton town	8,444	350	4.4%	1.7%	829	884
Butler borough	7,794	138	1.7%	1.6%	354	409
Chatham borough	8,705	18	0.2%	1.8%	41	40
Chatham township	10,405	183	2.3%	2.1%	352	386
Chester township	7,843	†	0.0%	1.6%	†	†
Denville township	16,633	275	3.4%	3.4%	331	379
Dover town	18,092	1,160	14.4%	3.7%	1,282	1,325
East Hanover township	11,311	99	1.2%	2.3%	175	208
Florham Park borough	12,027	93	1.2%	2.4%	155	184
Hanover township	13,773	117	1.5%	2.8%	170	213
Jefferson township	21,492	†	0.0%	4.4%	†	†
Kinnelon borough	10,041	62	0.8%	2.0%	123	139
Lincoln Park borough	10,568	170	2.1%	2.1%	322	391
Long Hill township	8,699	77	1.0%	1.8%	177	199
Madison borough	15,896	161	2.0%	3.2%	203	217
Mendham township	5,733	†	0.0%	1.2%	†	†
Montville township	21,414	203	2.5%	4.3%	190	203
Morris Plains borough	5,725	258	3.2%	1.2%	901	1,021
Morris township	21,988	27	0.3%	4.5%	25	26
Morristown town	18,642	982	12.2%	3.8%	1,054	1,231
Mount Olive township	27,403	517	6.4%	5.6%	377	369
Parsippany-Troy Hills township	52,305	565	7.0%	10.6%	216	232
Pequannock township	16,133	206	2.6%	3.3%	255	316
Randolph township	25,579	319	4.0%	5.2%	249	259
Rockaway borough	6,384	419	5.2%	1.3%	1,313	1,434
Rockaway township	24,727	92	1.1%	5.0%	74	85
Roxbury township	23,382	545	6.8%	4.7%	466	504
Washington township	18,550	95	1.2%	3.8%	102	111
Wharton borough	6,368	396	4.9%	1.3%	1,244	1,265
Municipalities below 5,500 population	36,404	505	6.3%	7.4%	277	n/a
Morris County	492,461	8,043			327	354
State of NJ	8,774,778	261,822			597	622

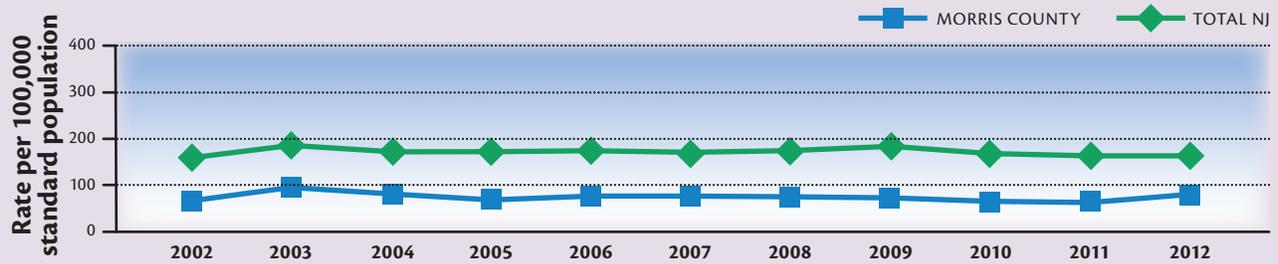
* Direct method of age-adjustment using the 2000 U.S. standard population

† Not included because number of visits was below confidentiality reporting threshold

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

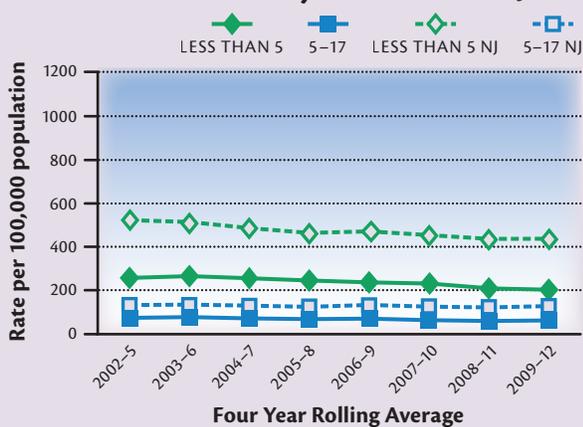
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Morris County had 378 total asthma hospitalizations, or 76 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Morris County contains 5.6 percent of the state’s population and accounted for 2.5 percent of

the state’s asthma hospitalizations in 2012. Figure 8 shows Morris 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). Morris County’s rate was below the state average by an average of 57 percent during the period.

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

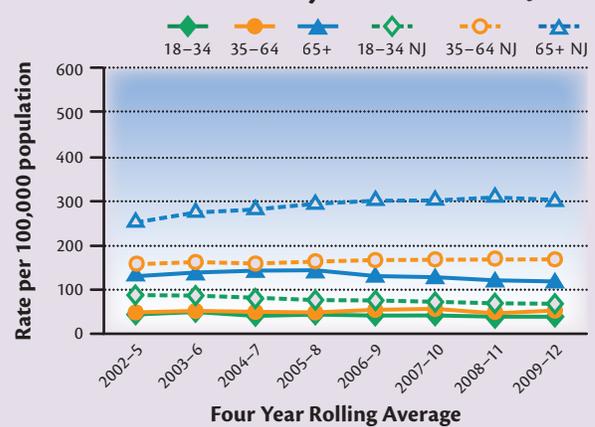


Data source: 2002–2012 New Jersey Hospital Discharge Files

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 Morris 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 state

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

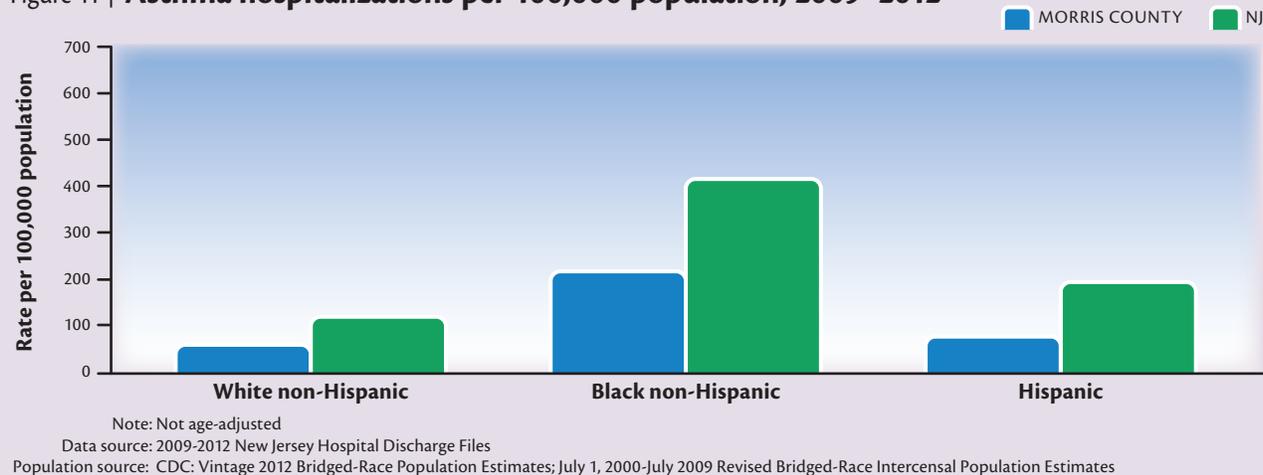


Data source: 2002–2012 New Jersey Hospital Discharge Files

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

averages over the period, and rates for children and adults ages 65 and over increased their distance below their respective state averages. The largest relative decrease was for adults ages 65 and over, where rates decreased by ten percent compared with an 18 percent increase in the state average. Rates for Morris County children declined around 20 percent, while the state averages for children declined by a smaller amount.

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 Morris County and the state of New Jersey from 2009–2012.² Non-Hispanic black residents of Morris County had the highest asthma hospitalization rate—3.6 times the rate for non-Hispanic white residents and 2.8 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.3 times the rate

for non-Hispanic white residents. When comparing Morris County racial and ethnic groups to their state averages, the rate for Hispanic residents was 59 percent below the state average for Hispanic people, the rate for non-Hispanic white residents was 50 percent below their state average and the rate for non-Hispanic black residents was 48 percent below their state average.

Summary

Morris County’s asthma prevalence in 2011–2012 did not differ significantly from the state average when looking at current asthma among children, but rates for adults were below the state average. Rates of asthma-related emergency department (ED) visits in the past decade were below the state average by 43 percent, on average. Rates of asthma-related hospitalizations were below the state average by 57 percent, on average, in the past decade.

Asthma ED visit rates for all Morris County age groups were below their respective state averages from 2004–2012. Rates for adults ages 65 and over declined by 38 percent while the state average increased 16 percent. However, rates for children increased at a higher rate than the state average over the period.

Average asthma hospitalization rates for all Morris County age groups were below their respective state averages from 2002–2012. The largest relative decrease over the period was in rates for adults ages 65 and over (a ten percent decline, compared with an increase of 18 percent in the state average).

Non-Hispanic black residents of Morris 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 4.3 times the rate for non-Hispanic white residents and the asthma hospitalization rate was 3.6 times as high. The asthma ED visit rate for Hispanic residents was 2.6 times the rate for non-Hispanic white residents, and the asthma hospitalization rate for Hispanic residents was 1.3 times the rate for non-Hispanic white residents.

An analysis of asthma-related ED visits by municipality from 2008–2012 showed that Rockaway Borough, Dover Town, Wharton Borough, Morristown Town and Morris Plains Borough had rates more than 1.5 times the state average. Boonton Town was above the state average. Altogether, these municipalities accounted for 44 percent of Morris County’s asthma ED visits while only holding 13 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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