

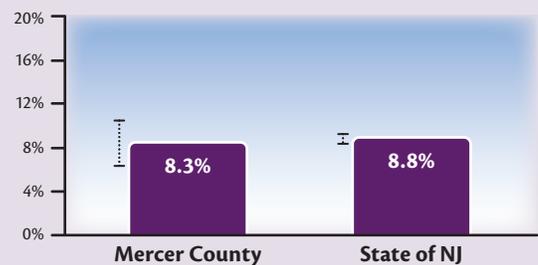
Asthma in New Jersey



● Mercer County Asthma Profile

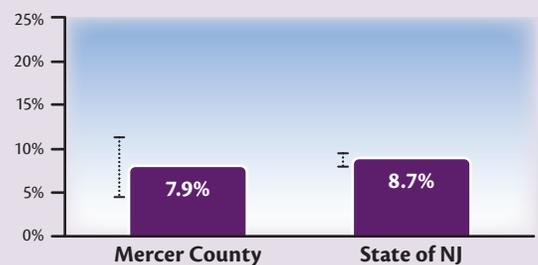
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can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

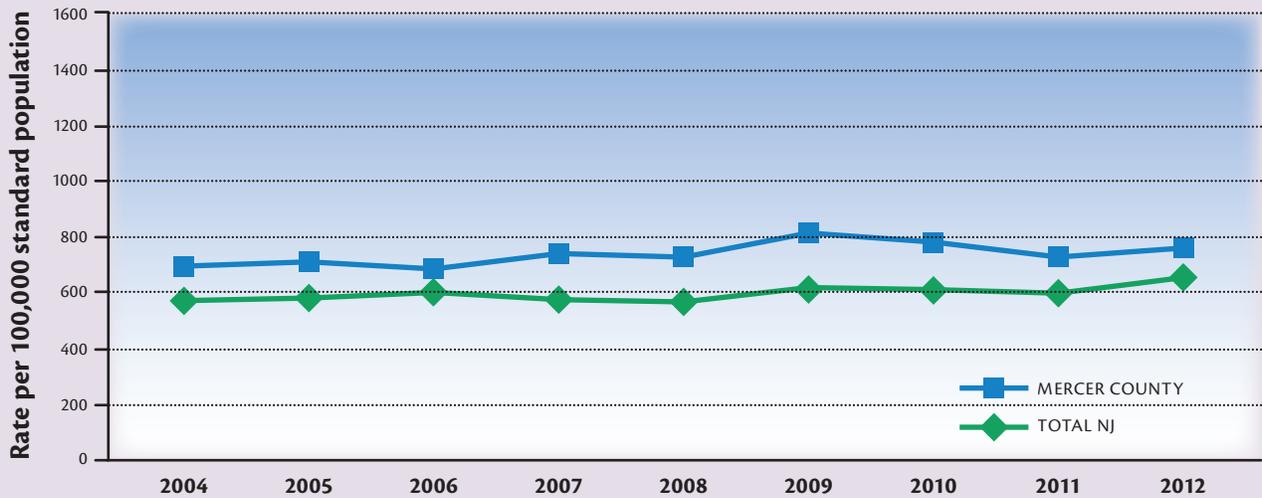


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 22,814 adults (8.3 percent) and 6,524 children (7.9 percent) currently had asthma in Mercer 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 Mercer 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



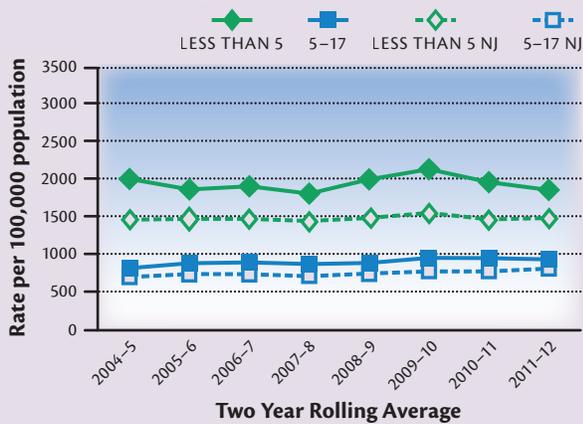
Direct method of age-adjustment using the 2000 U.S. standard population
 Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Emergency Department (ED) Visits¹

With appropriate management, asthma can be controlled so that most visits to the ED are avoided. In 2012, residents of Mercer County had 2,677 total asthma ED visits, or 727 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Mercer County contains 4.2 percent of the state’s population and accounted for 4.7 percent of the

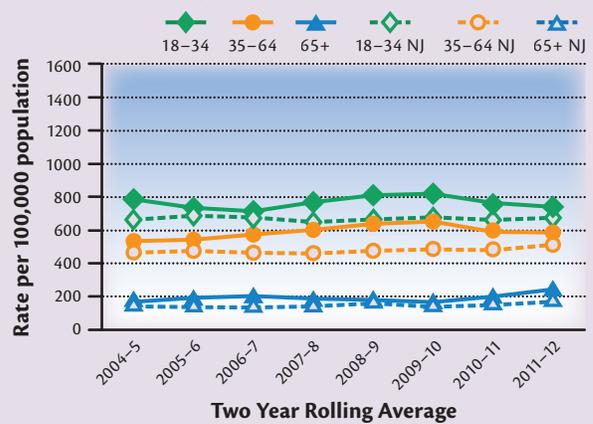
state’s asthma ED visits in 2012. Figure 3 shows Mercer County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Mercer County’s rate of asthma ED visits was above the state average by an average of 21 percent during the period.

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

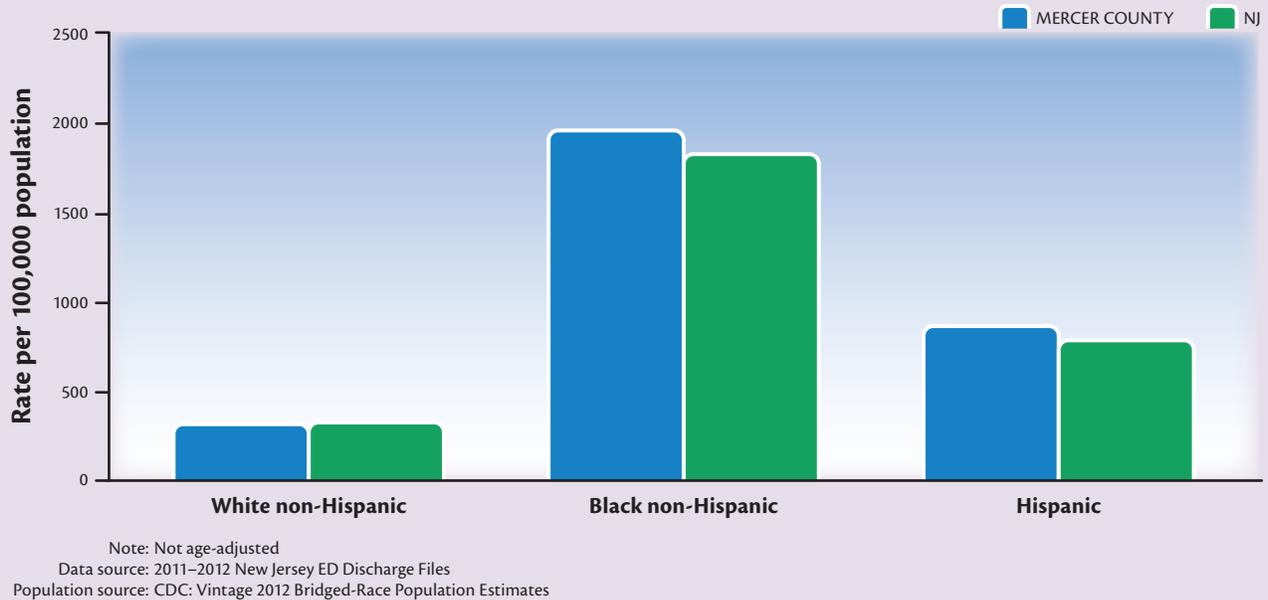


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Mercer 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 above their state averages over the

period. The largest differences were in rates for children under age five, which averaged 33 percent above the state average for that age group over the period, and rates for adults ages 65 and over, which averaged 26 percent above their state average. The smallest difference was in rates for adults ages 35–64, which averaged 13 percent above their state average.

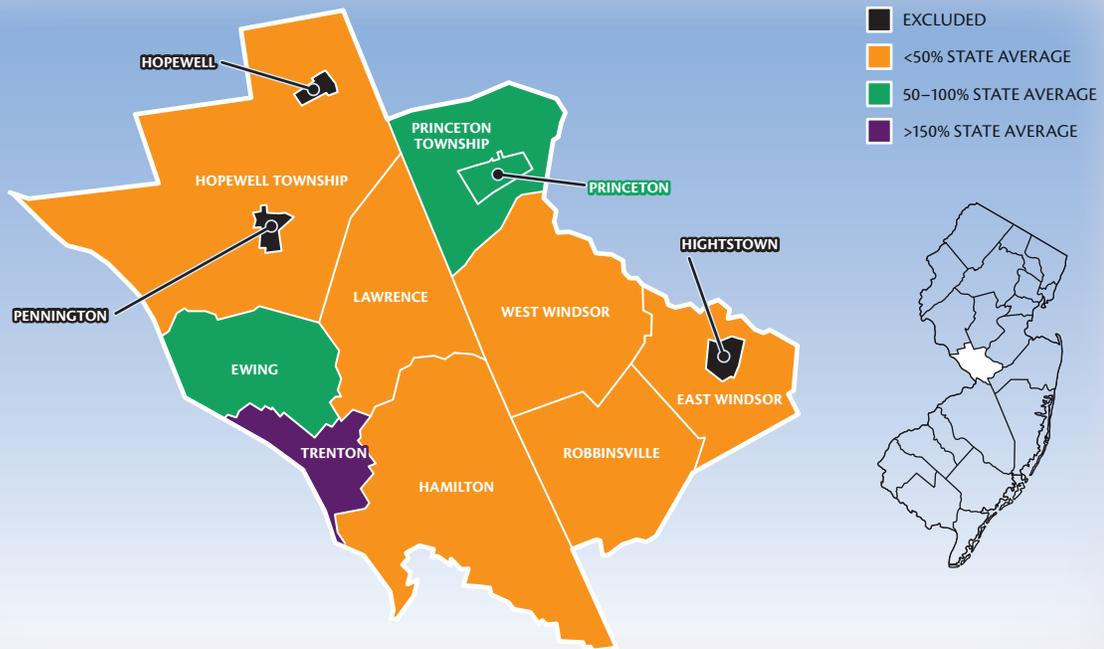
Figure 6 | Asthma ED visit rate per 100,000 population, 2011–2012



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 Mercer County and the state of New Jersey for 2011–2012.² The highest rate was for non-Hispanic black residents of Mercer County, at 6.6 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 2.8 times the rate for non-Hispanic white residents. When comparing Mercer County racial and ethnic groups to their state averages, the rate for Hispanic residents was ten percent above the state average for Hispanic people, and the rate for non-Hispanic black residents was above their state average by seven percent. The rate for non-Hispanic white residents was below their state average by five percent.

The following map and table show the asthma ED visit rate by municipality of residence in Mercer County from 2008–2012 (only municipalities with a population of 5,500 or greater are shown). Trenton’s rate was 3.8 times the state average and accounted for 76 percent of Mercer County’s asthma ED visits while only holding 23 percent of the county’s population. All other municipalities were below the state average, most by less than half.

Figure 7 | Asthma Emergency Department Visits for Mercer 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
East Windsor township	27,135	233	1.7%	7.4%	172	172
Ewing township	36,130	512	3.8%	9.9%	283	355
Hamilton township	89,364	1,233	9.2%	24.4%	276	310
Hopewell township	17,483	32	0.2%	4.8%	37	38
Lawrence township	32,636	316	2.4%	8.9%	194	202
Princeton borough†	12,735	169	1.3%	3.5%	265	401
Princeton township†	16,731	261	2.0%	4.6%	312	359
Trenton city	84,038	10,209	76.4%	22.9%	2,430	2,350
Robbinsville township	13,163	79	0.6%	3.6%	120	117
West Windsor township	27,275	98	0.7%	7.4%	72	71
Municipalities below 5,500 population	10,008	224	1.7%	2.7%	448	n/a
Mercer County	366,699	13,366			729	763
State of NJ	8,774,778	261,822			597	622

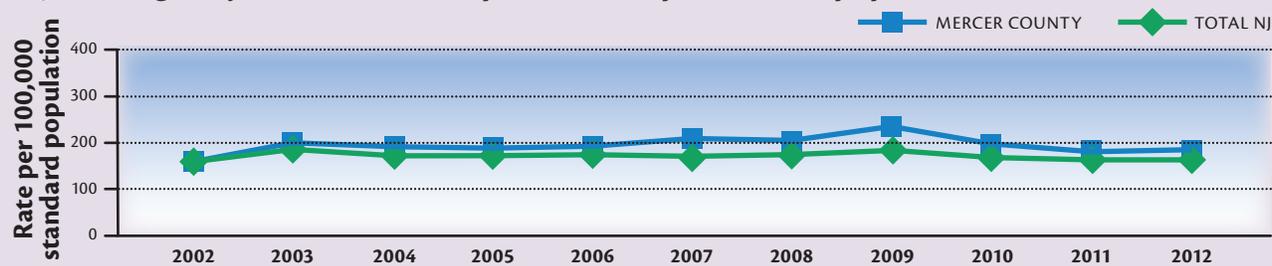
* Direct method of age-adjustment using the 2000 U.S. standard population

† Merged effective 2013

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



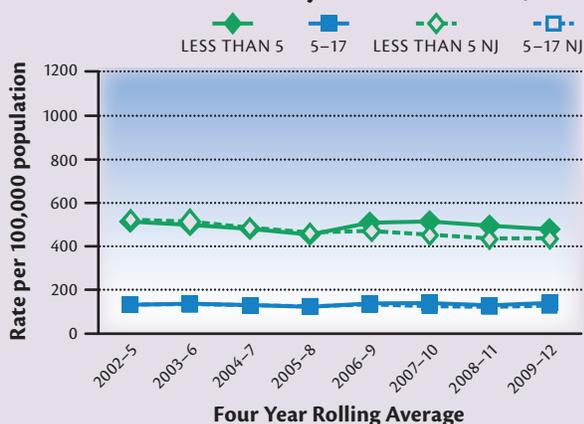
Direct method of age-adjustment using the 2000 U.S. standard population
 Data source: 2002–2012 New Jersey Hospital Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Mercer County had 668 total asthma hospitalizations, or 181 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Mercer County contains 4.2 percent of the state’s population and accounted for 4.5 percent of

the state’s asthma hospitalizations in 2012. Figure 8 shows Mercer 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). Mercer County’s rate was above the state average by an average of 13 percent during the period.

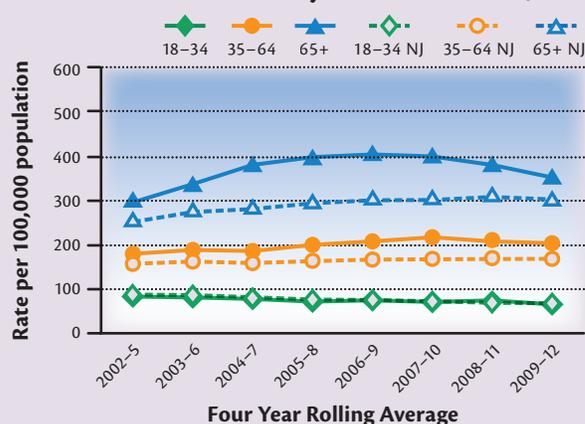
Figure 9 | Asthma hospitalizations per 100,000 population for children, Mercer County and State of NJ



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 Mercer 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 above their state averages, on average, over

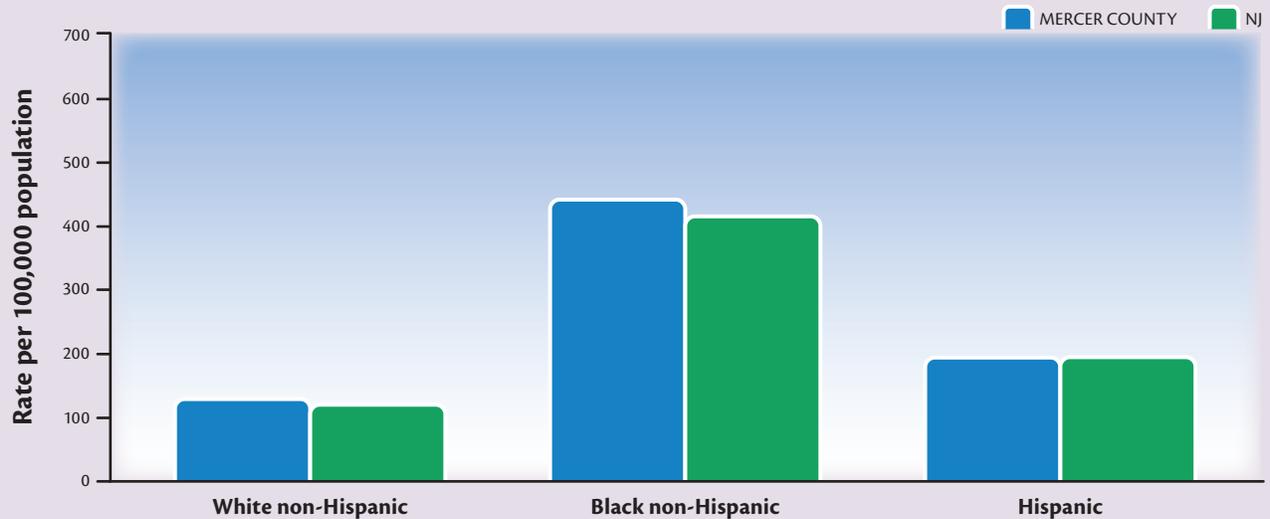
Figure 10 | Asthma hospitalizations per 100,000 population for adults, Mercer County and State of NJ



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

the period. The average difference in rates for children and young adults when compared with the state averages for the same age groups over the period was less than five percent; for older adults, the average difference was higher (23 percent higher on average for adults ages 35–64 and 27 percent higher on average for adults ages 65 and over).

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 Mercer County and the state of New Jersey from 2009–2012.² Non-Hispanic black residents of Mercer County had the highest asthma hospitalization rate—3.4 times the rate for non-Hispanic white residents and 2.3 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents was 1.5 times the rate

for non-Hispanic white residents. When comparing Mercer County racial and ethnic groups to their state averages, rates for non-Hispanic black residents were six percent above the state average for non-Hispanic black people, those for non-Hispanic white residents were also six percent above their state average. Rates for Hispanic residents were less than one percent above their state average.

Summary

Mercer 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 in the past decade were above the state average by 21 percent, on average. Rates of asthma-related hospitalizations were above the state average by 13 percent, on average, in the past decade.

Asthma ED visit rates for all Mercer County age groups were above their respective state averages from 2004–2012. The largest differences were in rates for children under age five and rates for adults ages 65 and over.

Average asthma hospitalization rates for all Mercer County age groups were above their respective state averages from 2002–2012. The largest differences were in rates for adults ages 65 and over and adults ages 35–64.

Non-Hispanic black residents of Mercer 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 6.6 times the rate for non-Hispanic white residents and the asthma hospitalization rate was 3.4 times as high. The asthma ED visit rate for Hispanic residents was 2.8 times the rate for non-Hispanic white residents, and the asthma hospitalization rate for Hispanic residents was 1.5 times the rate for non-Hispanic white residents.

An analysis of asthma-related ED visits by municipality from 2008–2012 showed that Trenton's rate was 3.8 times the state average and accounted for 76 percent of Mercer County's asthma ED visits while only holding 23 percent of the county's population. All other municipalities were below the state average, most by less than half.

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, 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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