

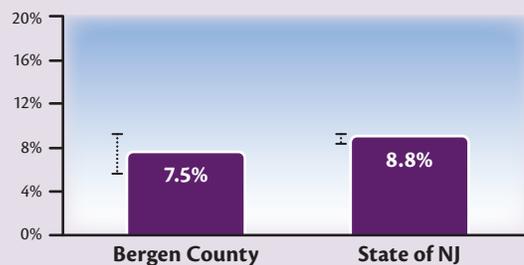
Asthma in New Jersey



Bergen County Asthma Profile

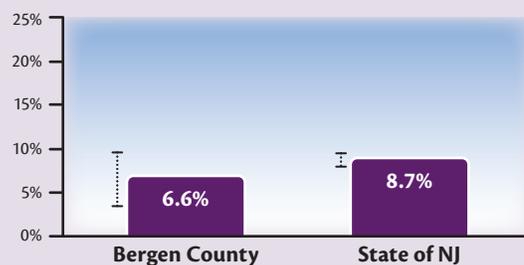
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can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

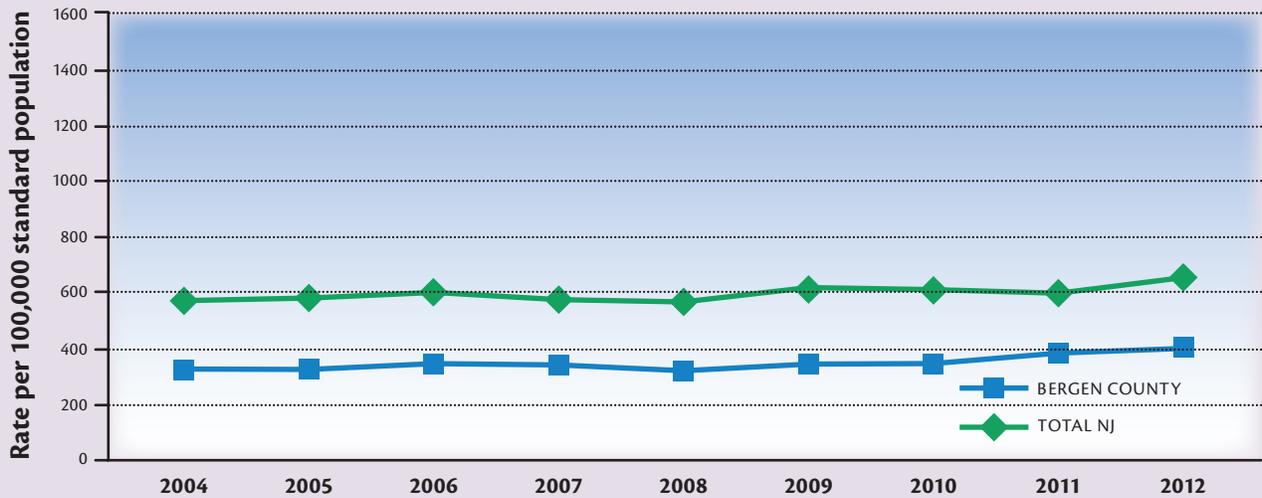


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 46,763 adults (7.5 percent) and 12,850 children (6.6 percent) currently had asthma in Bergen 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 Bergen County's current asthma prevalence among children or adults differed from the state average.

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



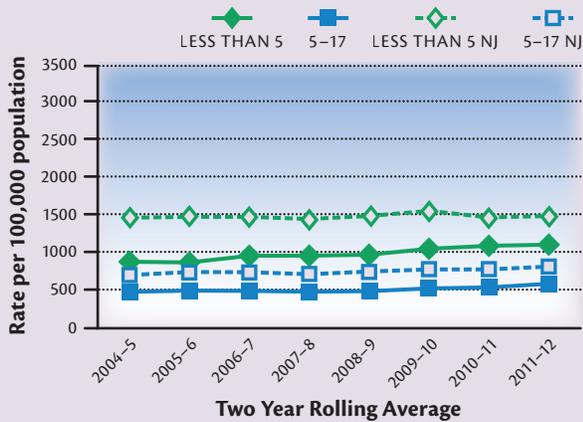
Direct method of age-adjustment using the 2000 U.S. standard population
 Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Emergency Department (ED) Visits¹

With appropriate management, asthma can be controlled so that most visits to the ED are avoided. In 2012, residents of Bergen County had 3,384 total asthma ED visits, or 368 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Bergen County contains 10.4 percent of the state’s population and accounted for 6 percent of the

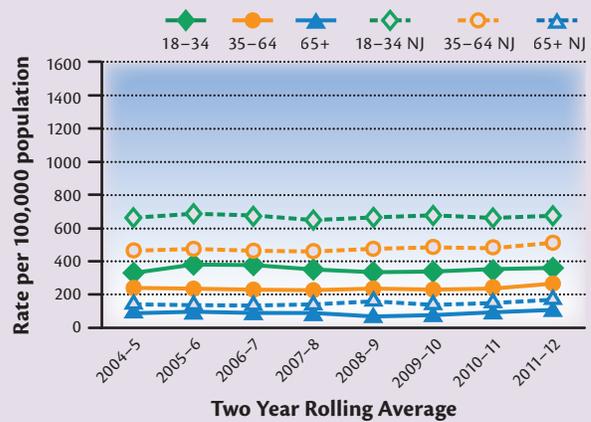
state’s asthma ED visits in 2012. Figure 3 shows Bergen County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Bergen County’s rate of asthma ED visits has been 37 to 45 percent lower than the state average in these years.

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

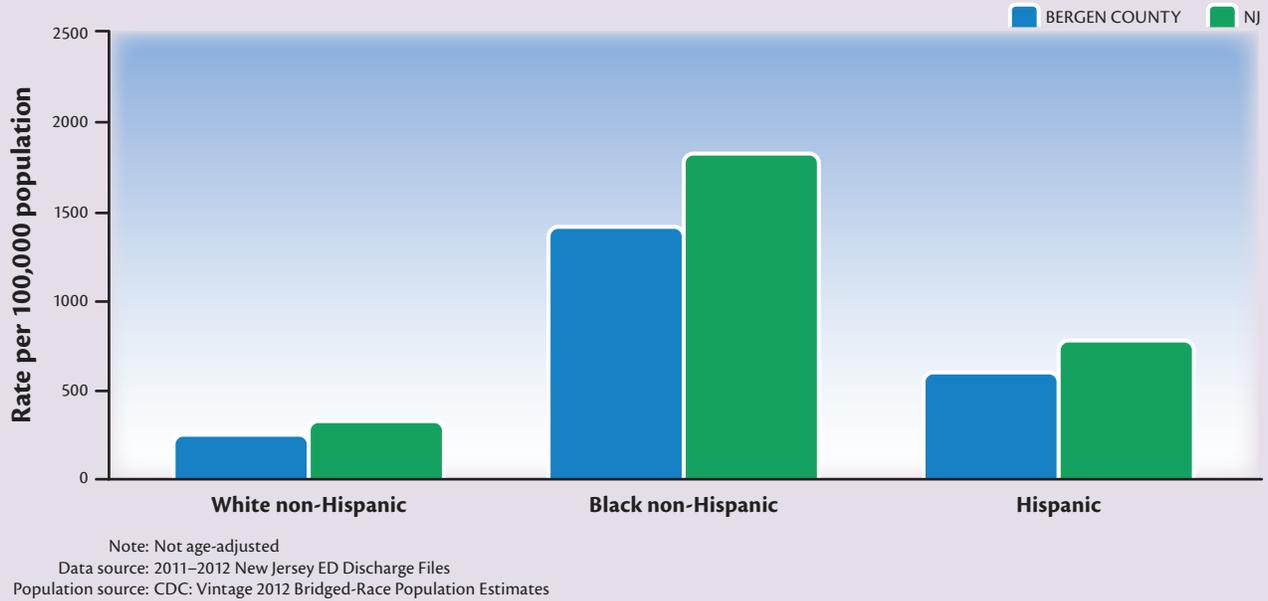


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Bergen County children and adults, and children and adults in the state of New Jersey. For children under age five, Bergen County’s asthma ED visit rate was lower than the state average by 27 to 42 percent 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 children under age five in Bergen County increased by 25 percent over the period while the statewide average held steady. For all other age groups in Bergen County, the asthma ED visit rate was below the state average during the period and had similar trends over the period.

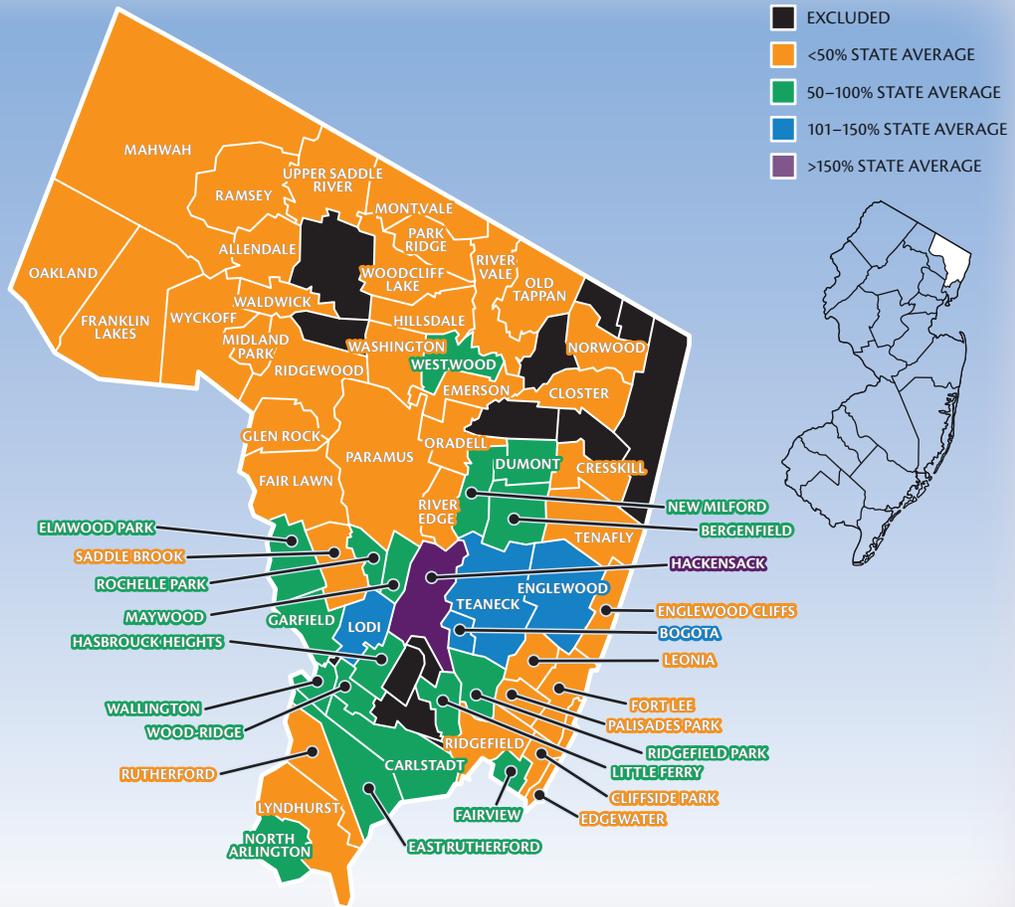
Figure 6 | Asthma ED visit rate per 100,000 population, 2011–2012



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 Bergen County and the state of New Jersey for 2011–2012.² All groups were below their respective state averages for the period (by 27 percent for non-Hispanic white residents, 23 percent for non-Hispanic black residents, and 24 percent for Hispanic residents). Non-Hispanic black residents of Bergen County had the highest rate of asthma ED visits, well above both Hispanic residents (by 2.4 times) and non-Hispanic white residents (by 6.1 times). The rate of asthma ED visits among Hispanic residents from Bergen County was 2.6 times the rate for non-Hispanic white residents.

Asthma ED visit rates also vary quite a bit among municipalities. The following map and table show the asthma ED visit rate by municipality of residence in Bergen County (only municipalities with a population of 5,500 or greater are shown). Hackensack’s age-adjusted ED visit rate was almost 1.6 times the state average. Four nearby municipalities—Englewood, Bogota, Teaneck and Lodi—were also above the state average. Together they accounted for 36 percent of Bergen County’s asthma ED visits from 2008–2012 (while only constituting 16 percent of Bergen County’s population). Seventeen municipalities were within one-half of the state average, and another 37 had asthma ED visit rates that were less than half the state average.

Figure 7 | Asthma Emergency Department Visits for Bergen 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
Allendale borough	6,594	52	0.3%	0.7%	158	186
Bergenfield borough	26,374	679	4.5%	2.9%	515	527
Bogota borough	8,102	306	2.0%	0.9%	755	775
Carlstadt borough	6,152	91	0.6%	0.7%	296	337
Cliffside Park borough	23,405	260	1.7%	2.6%	222	247
Closter borough	8,531	46	0.3%	0.9%	108	141
Cresskill borough	8,601	63	0.4%	1.0%	146	143
Dumont borough	17,323	261	1.7%	1.9%	301	327
East Rutherford borough	8,872	142	0.9%	1.0%	320	351
Edgewater borough	10,875	138	0.9%	1.2%	254	281
Elmwood Park borough	19,211	465	3.1%	2.1%	484	539
Emerson borough	7,486	75	0.5%	0.8%	200	227
Englewood city	28,130	1,086	7.1%	3.1%	772	840
Englewood Cliffs borough	5,521	27	0.2%	0.6%	98	109
Fair Lawn borough	31,796	396	2.6%	3.5%	249	276
Fairview borough	13,825	257	1.7%	1.5%	372	381
Fort Lee borough	35,821	290	1.9%	4.0%	162	197

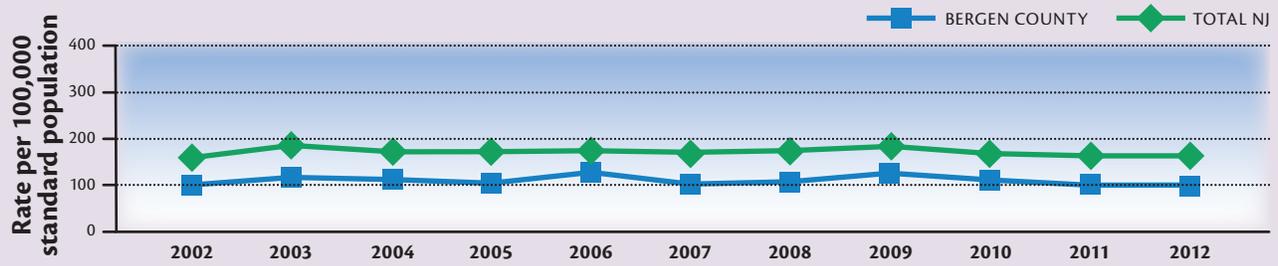
Municipality	Average population, 2008–2012	Asthma ED visits, 2008–2012	Percent of County ED visits	Percent of County Population	Asthma ED visit rate per 100,000 residents, 2008–2012	Age-adjusted* asthma ED visit rate per 100,000 residents, 2008–2012
Franklin Lakes borough	11,024	95	0.6%	1.2%	172	204
Garfield city	29,991	892	5.9%	3.3%	595	593
Glen Rock borough	11,467	85	0.6%	1.3%	148	153
Hackensack city	43,126	1,920	12.6%	4.8%	890	991
Hasbrouck Heights borough	11,702	184	1.2%	1.3%	314	338
Hillsdale borough	10,112	100	0.7%	1.1%	198	210
Leonia borough	8,828	122	0.8%	1.0%	276	304
Little Ferry borough	10,598	218	1.4%	1.2%	411	454
Lodi borough	24,056	731	4.8%	2.7%	608	654
Lyndhurst township	20,200	236	1.5%	2.2%	234	268
Mahwah township	25,283	197	1.3%	2.8%	156	182
Maywood borough	9,393	178	1.2%	1.0%	379	428
Midland Park borough	7,007	92	0.6%	0.8%	263	277
Montvale borough	7,780	61	0.4%	0.9%	157	162
New Milford borough	16,229	299	2.0%	1.8%	368	401
North Arlington borough	15,151	200	1.3%	1.7%	264	321
Norwood borough	5,940	35	0.2%	0.7%	118	158
Oakland borough	13,002	150	1.0%	1.4%	231	270
Old Tappan borough	5,889	32	0.2%	0.7%	109	136
Oradell borough	7,934	58	0.4%	0.9%	146	149
Palisades Park borough	19,612	192	1.3%	2.2%	196	221
Paramus borough	26,301	246	1.6%	2.9%	187	221
Park Ridge borough	8,809	78	0.5%	1.0%	177	186
Ramsey borough	14,622	99	0.6%	1.6%	135	146
Ridgefield borough	11,032	149	1.0%	1.2%	270	282
Ridgefield Park village	12,633	360	2.4%	1.4%	570	605
Ridgewood village	24,720	274	1.8%	2.7%	222	222
River Edge borough	11,113	126	0.8%	1.2%	227	236
River Vale township	9,696	28	0.2%	1.1%	58	65
Rochelle Park township	5,756	86	0.6%	0.6%	299	363
Rutherford borough	17,864	164	1.1%	2.0%	184	208
Saddle Brook township	13,922	163	1.1%	1.5%	234	266
Teaneck township	39,414	1,391	9.1%	4.4%	706	730
Tenaflly borough	14,603	81	0.5%	1.6%	111	123
Upper Saddle River borough	8,330	12	0.1%	0.9%	29	30
Waldwick borough	9,672	93	0.6%	1.1%	192	197
Wallington borough	11,405	174	1.1%	1.3%	305	368
Washington township	9,307	117	0.8%	1.0%	251	300
Westwood borough	10,856	172	1.1%	1.2%	317	336
Woodcliff Lake borough	5,847	28	0.2%	0.6%	96	121
Wood-Ridge borough	7,843	149	1.0%	0.9%	380	368
Wyckoff township	16,820	120	0.8%	1.9%	143	154
Municipalities below 5,500 population	33,177	410	2.7%	3.7%	247	n/a
Bergen County	904,685	15,231			337	363
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

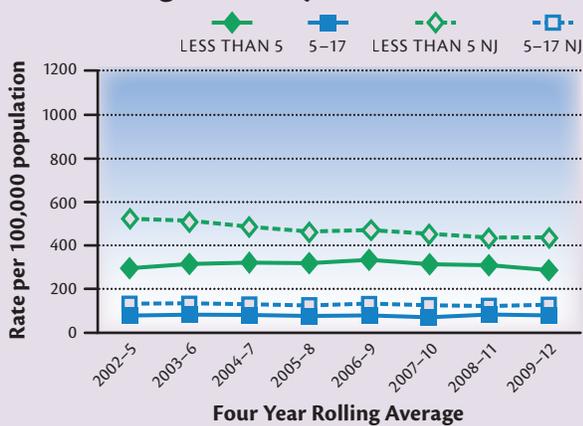
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Bergen County had 955 total asthma hospitalizations, or 104 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Bergen County contains 10.4 percent of the state’s population and accounted for 6.4 percent

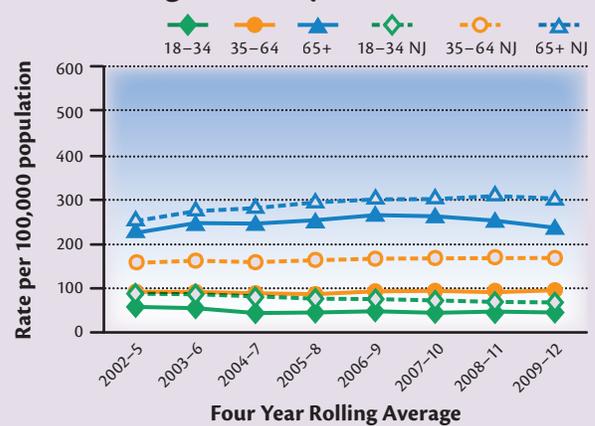
of the state’s asthma hospitalizations in 2012. Figure 8 shows Bergen County’s asthma hospitalization rates compared with the overall rate in the state of New Jersey for the years 2002–2012 (adjusted to standardize for age differences in the population). Bergen County’s rate of asthma hospitalizations has been from 27 to 40 percent lower than the state average in these years.

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

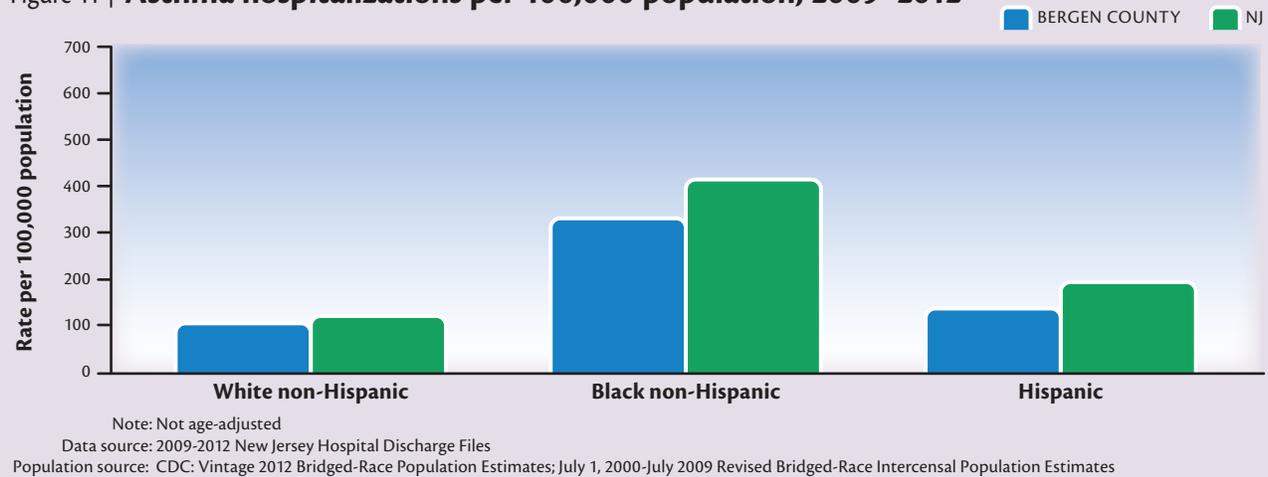


Data source: 2002–2012 New Jersey Hospital Discharge Files
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Bergen County children and adults, and children and adults in the state of New Jersey. For children under age five, Bergen County’s asthma hospitalization rate held steady over the period, and was always at least 30 percent lower than the state average for 2002–2012 (rolling averages are used for comparability because of low numbers in some age groups in some counties). The state average asthma hospitalization rate

for children under five declined by 16 percent. For children aged 5 to 17 years, Bergen County’s asthma hospitalization rate was 40 percent below the statewide average, on average, over the period, but increased by 13 percent while the state average decreased by three percent. For young and middle-aged adults, Bergen County’s asthma hospitalization rate was 33 to 46 percent below the state average during 2002–2012. Adults 65 and over in Bergen County increased their distance below the state average from 10 percent to 21 percent over the period.

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 Bergen County and the state of New Jersey for 2009–2012.² As with rates of asthma ED visits, Bergen County’s rate of asthma hospitalizations was highest for non-Hispanic black residents (3.2

times the rate for non-Hispanic white residents and 2.5 times the rate for Hispanic residents). The rates of asthma hospitalization for residents of all racial and ethnic groups were below their state averages (15 percent below for non-Hispanic white residents, 20 percent below for non-Hispanic black residents, and 30 percent below for Hispanic residents).

Summary

Bergen County’s asthma prevalence in 2011–2012 did not differ significantly from the state average when looking at current asthma among adults and children. Overall, Bergen County was below the state average for asthma emergency department (ED) visits and hospitalizations. All age groups were consistently below the state average from 2004–2012. Bergen County had significant racial disparities in asthma ED visits with the average for non-Hispanic black residents at 6.1 times the rate for non-Hispanic white residents from 2011–2012 (and 2.4 times the rate for Hispanic residents). Asthma ED visit rates for Hispanic residents were 2.6 times the rate for non-Hispanic white residents in 2011–2012. There was quite a bit of variation in asthma ED visit rates

from 2008–2012 among Bergen County municipalities—Hackensack and several nearby towns accounted for 36 percent of asthma ED visits for the county but accounted for only 16 percent of the population.

Asthma hospitalization rates for 2002–2012 for all age groups in Bergen County were below the state average, but the rates for children grew closer to their state averages, while adults over 65 increased their distance below their state average. Racial disparities in asthma hospitalization rates in 2009–2012 were similar, but less pronounced than for asthma ED visits. Asthma hospitalization rates for all racial and ethnic groups were less than their respective state averages.

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.

Funding for this effort was provided by the CDC Cooperative Agreement entitled *Addressing Asthma from a Public Health Perspective* (5U59EH000491-05). The contents are solely the responsibility of the authors and do not necessarily represent the official view of the CDC.

