

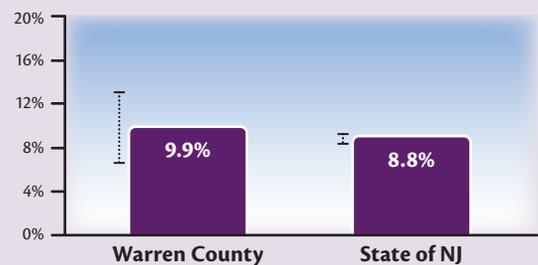
Asthma in New Jersey



Warren County Asthma Profile

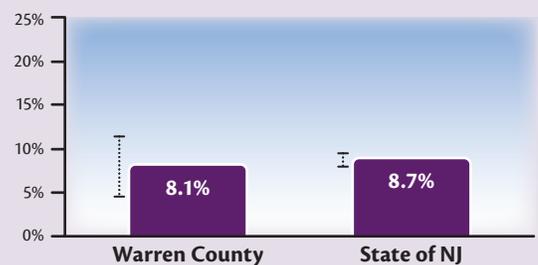
Asthma is a serious chronic disease that is marked by inflammation and bronchoconstriction in the airways. Asthma symptoms can be triggered by many factors and include shortness of breath, coughing, wheezing and chest tightness. Asthma cannot be cured, but it can be controlled. Uncontrolled asthma can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

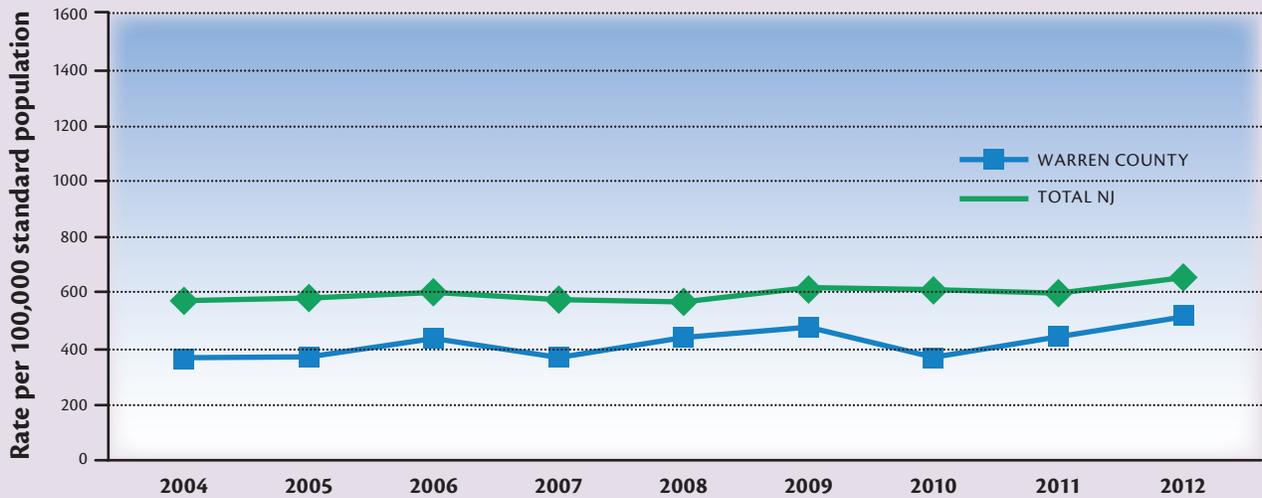


Population Source: NJ Behavioral Risk Factor Survey (Adults are people 18 and over; children are people under 18)

Prevalence

Health survey data show that for 2011–2012, an estimated 8,122 adults (9.9 percent) and 2,416 children (8.1 percent) currently had asthma in Warren 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 Warren 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 Warren County had 508 total asthma ED visits, or 472 per 100,000 residents, compared with the state average of 637 asthma ED visits per 100,000 residents. Warren County contains 1.2 percent of the state’s population and accounted for 0.9 percent of the

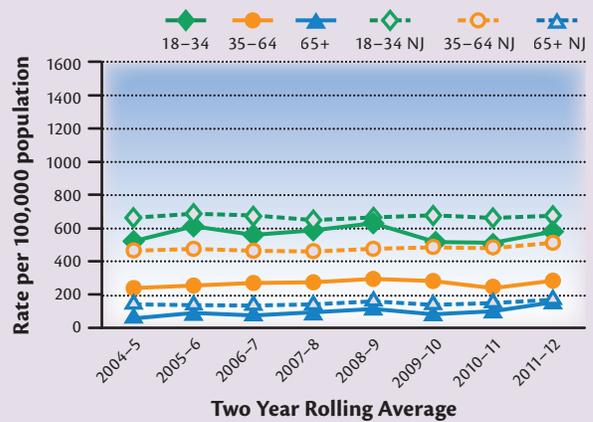
state’s asthma ED visits in 2012. Figure 3 shows Warren County’s asthma ED visit rates compared with the overall rate in the state of New Jersey for the years 2004–2012 (adjusted to standardize for age differences in the population). Warren County’s rate of asthma ED visits was below the state average by an average of 32 percent during the period.

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

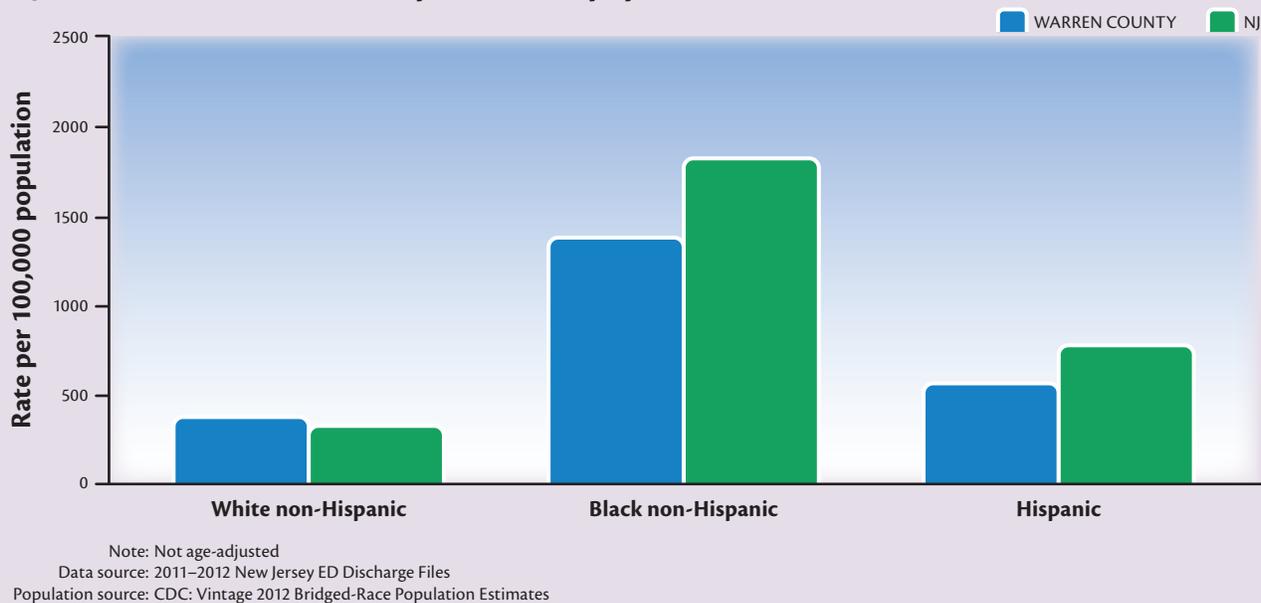


Data source: 2004–2012 New Jersey ED Discharge Files
 Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

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 Warren 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, they also all grew faster than the state average over the period. The largest increase was in rates for children under age five, which increased by 103 percent over the period (the increase is reduced to 25 percent if measured between 2005–2006 and 2010–2011), compared with a one percent decrease in the state average for that age group.

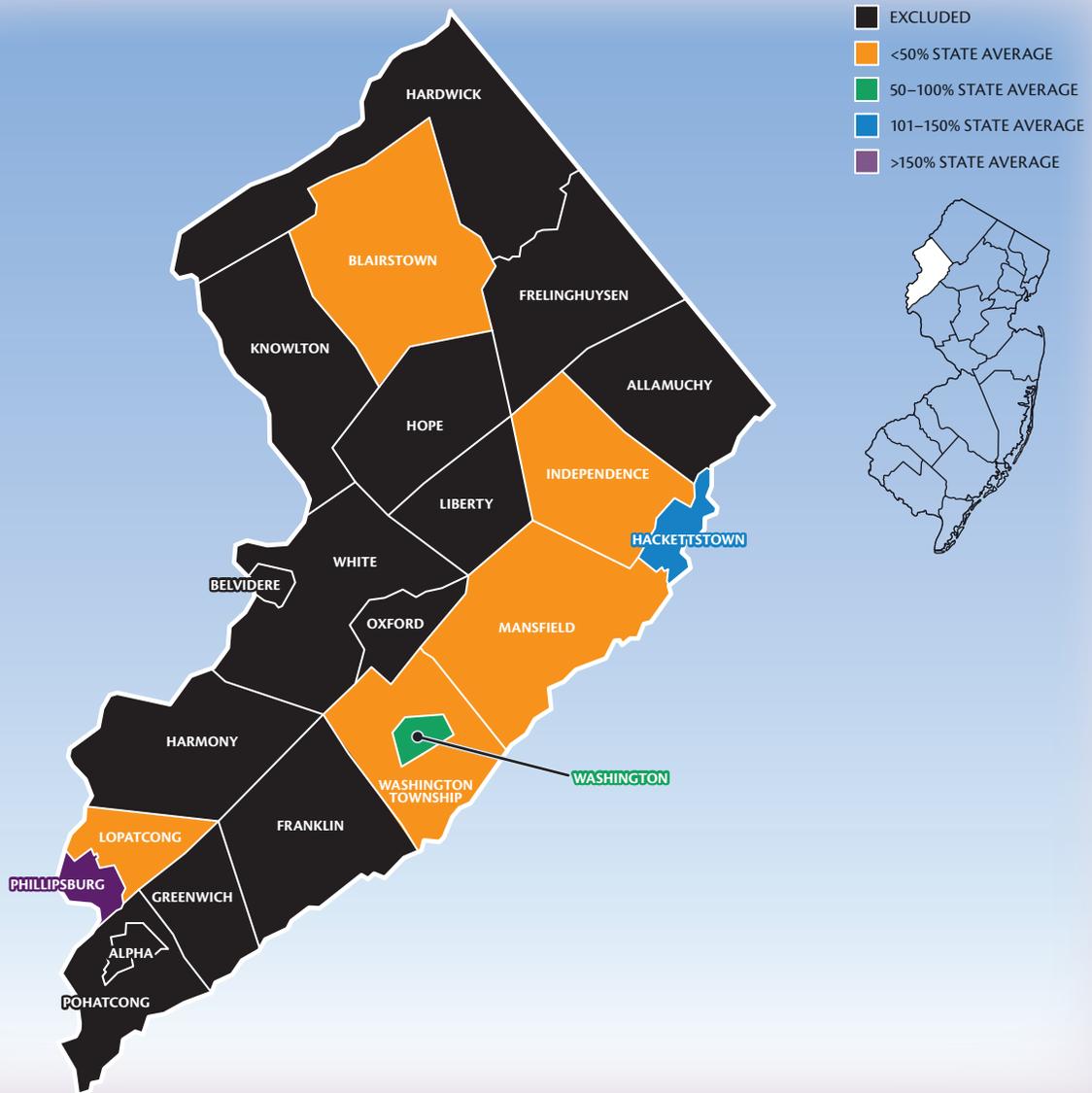
Figure 6 | Asthma ED visit rate per 100,000 population, 2011–2012



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 Warren County and the state of New Jersey for 2011–2012.² The highest rate was for non-Hispanic black residents of Warren County, at 3.7 times the rate for non-Hispanic white residents and 2.4 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 Warren County racial and ethnic groups to their state averages, the rate for Hispanic residents was 26 percent below the state average for Hispanic people, and the rate for non-Hispanic black residents was below their state average by 24 percent. The rate for non-Hispanic white residents was above their state average by 18 percent.

The following map and table show the asthma ED visit rate by municipality of residence in Warren County³ from 2008–2012 (only municipalities with a population of 5,500 or greater are shown). Phillipsburg had a rate more than 1.5 times the state average and Hackettstown’s rate was above the state average. Together, they accounted for 58 percent of Warren County’s asthma ED visits while only holding 22 percent of the population.

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



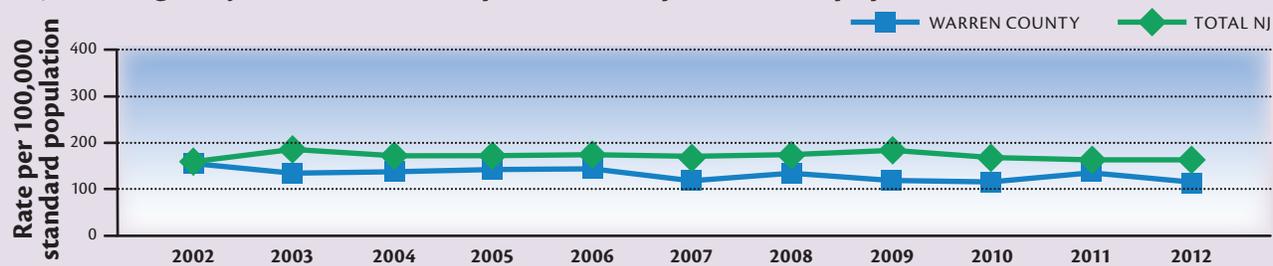
Municipality	Average population, 2008–2012	Asthma ED visits, 2008–2012	Percent of County ED visits	Percent of County Population	Asthma ED visit rate per 100,000 residents, 2008–2012	Age-adjusted* asthma ED visit rate per 100,000 residents, 2008–2012
Blairstown township	5,925	75	3.4%	5.4%	253	286
Hackettstown town	9,666	417	18.8%	8.9%	863	915
Independence township	5,660	11	0.5%	5.2%	39	39
Lopatcong township	8,171	70	3.2%	7.5%	171	194
Mansfield township	7,836	27	1.2%	7.2%	69	74
Phillipsburg town	14,691	871	39.3%	13.5%	1,186	1,199
Washington borough	6,534	172	7.8%	6.0%	526	546
Washington township	6,694	61	2.8%	6.2%	182	189
Municipalities below 5,500 population	43,627	514	23.2%	40.1%	236	n/a
Warren County	108,804	2,218			408	448
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

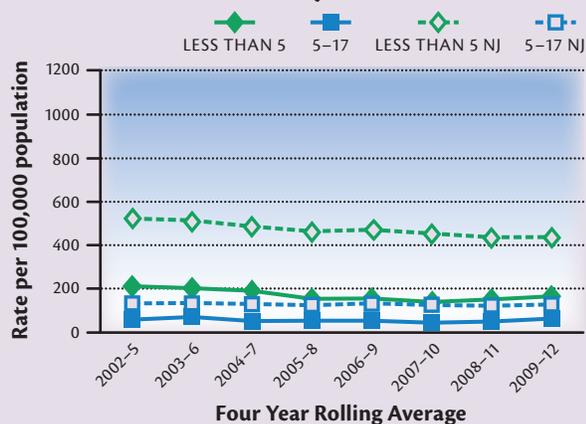
Population source: CDC: Vintage 2012 Bridged-Race Population Estimates; July 1, 2000–July 2009 Revised Bridged-Race Intercensal Population Estimates

Hospitalizations¹

As with ED visits, most asthma-related hospitalizations can be avoided through appropriate management. In 2012, residents of Warren County had 133 total asthma hospitalizations, or 124 per 100,000 residents, compared with the state average of 168 asthma hospitalizations per 100,000 residents. Warren County contains 1.2 percent of the state’s population and accounted for 0.9 percent of

the state’s asthma hospitalizations in 2012. Figure 8 shows Warren 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). Warren County’s rate was below the state average by an average of 23 percent during the period.

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

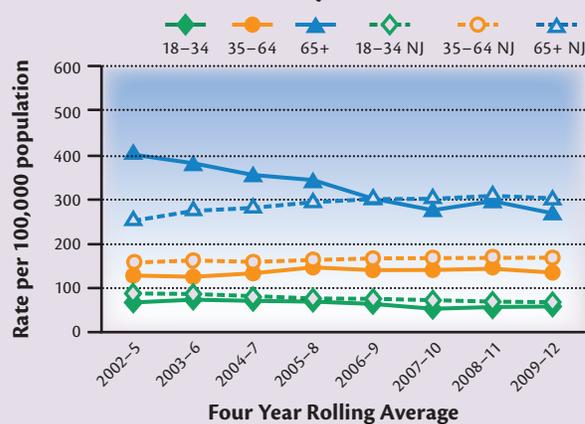


Data source: 2002–2012 New Jersey Hospital Discharge Files

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 Warren 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). Throughout the period rates for all age groups except adults over age 65 (and by the end of the period for that group) were below their state averages. Rates for all age groups declined or increased less than

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

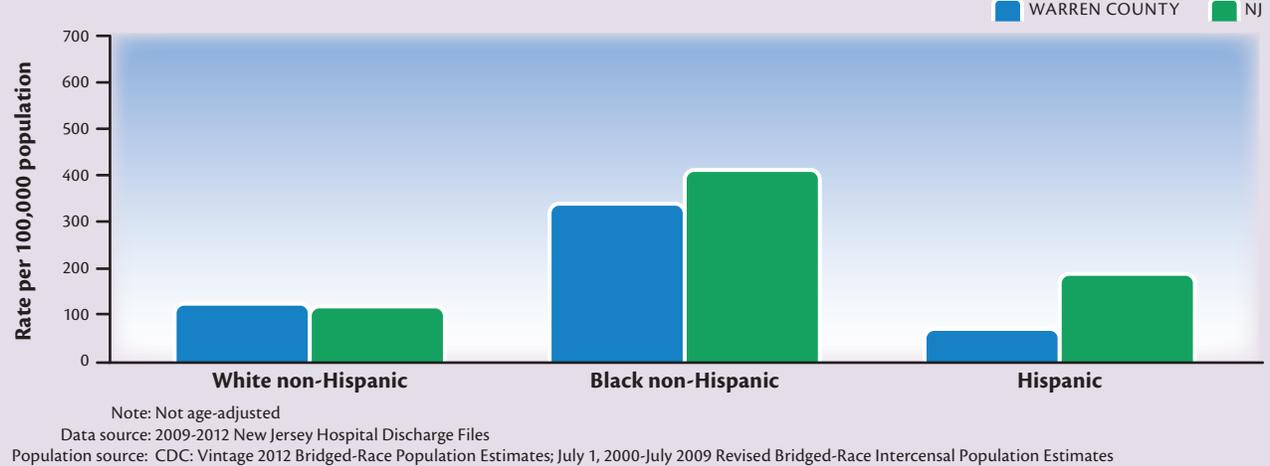


Data source: 2002–2012 New Jersey Hospital Discharge Files

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

their state averages. Rates for adults over age 65 showed the largest decline (44 percent over the period, compared with an 18 percent increase in the state average)—in 2002–2005, asthma hospitalization rates for Warren County adults ages 65 and older were 1.6 times the state average for people that age; by 2009–2012, they were 11 percent below the state average. Rates for Warren County children under age five declined by 23 percent over the period, compared with a 16 percent decline in the state average.

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 Warren County and the state of New Jersey from 2009–2012.² Non-Hispanic black residents of Warren County had the highest asthma hospitalization rate—2.7 times the rate for non-Hispanic white residents and 4.9 times the rate for Hispanic residents. The asthma hospitalization rate for Hispanic residents

was 0.55 times (45 percent below) the rate for non-Hispanic white residents. When comparing Warren County racial and ethnic groups to their state averages, the rate for non-Hispanic black residents was 17 percent below the state average for non-Hispanic black people, and the rate for Hispanic residents was 63 percent below their state average. The rate for non-Hispanic white residents was five percent above their state average.

Summary

Warren 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 below the state average by 32 percent, on average. Rates of asthma-related hospitalizations were below the state average by 23 percent, on average, in the past decade.

Asthma ED visit rates for all Warren County age groups were below their respective state averages from 2004–2012, but they also all grew faster than their state averages over the period—the largest growth was in rates for Warren County children.

Asthma hospitalization rates for all Warren County age groups except adults 65 and over were below their respective state averages from 2002–2012 (adults 65 and over were below their state average from 2007–2012), and all age groups declined relative to their state averages. The largest declines were for adults ages 65 and over and children under age five.

Non-Hispanic black residents of Warren 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 3.7 times the rate for non-Hispanic white residents and the asthma hospitalization rate was 2.7 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 0.55 times (45 percent below) the rate for non-Hispanic white residents.

An analysis of asthma-related ED visits by municipality³ from 2008–2012 showed that Phillipsburg had a rate more than 1.5 times the state average and Hackettstown’s rate was above the state average. Together, they accounted for 58 percent of Warren County’s asthma ED visits while only holding 22 percent of the 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.

³ Readers may be interested in a June, 2005 report on areas in Warren County by Weisel and Weiss: "Final Report: Epidemiologic Asthma Study in the Belvidere/White Township Area." Available at [http://dsmcap.com/seps/Final Warren County Report June 2005.pdf](http://dsmcap.com/seps/Final%20Warren%20County%20Report%20June%202005.pdf)

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