

# 2013 GEORGIA DATA SUMMARY | ADULT ASTHMA

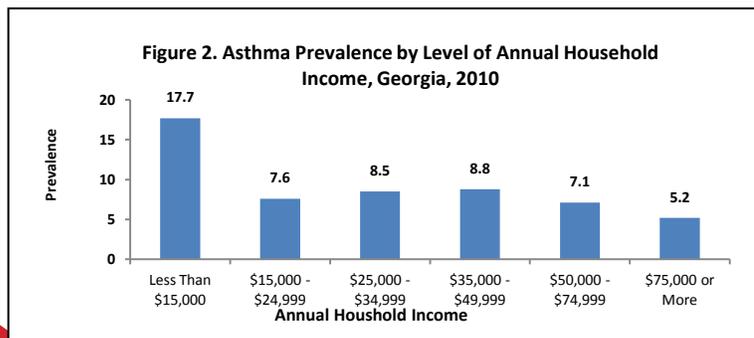
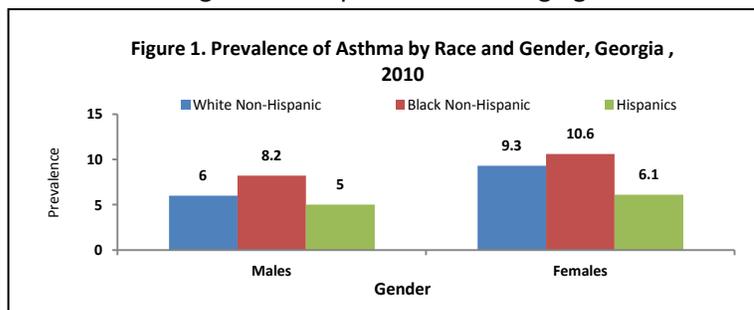
Asthma is a chronic inflammatory disorder of the airways characterized by episodes of reversible breathing problems due to airway narrowing and obstruction. These episodes can range in severity from mild to life threatening. The airway muscles tighten and the airway lining swells, thus making the airways very narrow leading to difficulty in breathing. Asthma symptoms include wheezing, coughing, chest tightness, and shortness of breath<sup>1</sup>.

## ASTHMA PREVALENCE<sup>a</sup>:

In 2010, the overall asthma prevalence among adult Georgians (person aged 18 years and older) was 7.8%.

Differences in asthma prevalence existed by demographics.

- Asthma prevalence was significantly lower among males (5.9%; 95% CI: 4.4-7.7) than females (9.5%; 95% CI: 8.3-10.9).
- Prevalence was higher among non-Hispanic black, especially non-Hispanic black women, than among other racial/ethnic groups (Figure 1).
- There was no significant difference in prevalence by age group.
- Asthma prevalence increased with decreasing annual household income as well as decreasing education. Asthma prevalence was three times as common among adults whose annual household income was less than \$15,000 than among those making \$75,000 or more per year (Figure 2). Prevalence was two times higher among individuals with less than a high school diploma than college graduates.



## ASTHMA AND OTHER CONDITIONS<sup>a</sup>:

Epidemiologic studies suggest an association between obesity and asthma<sup>2</sup> as well as smoking and asthma<sup>3</sup>.

- In Georgia, during 2010, the prevalence of asthma was significantly higher among individuals who were obese (12.0%; 95% CI: 9.8-14.2) than those who were not obese (5.9%; 95% CI 4.8-7.0).
- Asthma prevalence was higher among current smokers (9.8%; 95% CI: 6.6-13.0) than those who were not current smokers (7.3%; 95% CI: 6.3-8.4).

## ASTHMA CONTROL<sup>b</sup>:

The Expert Panel Report 3 (EPR-3) guidelines for the diagnosis and management of asthma recommends assessing asthma control using 3 measures - the number of days in a month that asthma symptoms occurred, number of nighttime awakenings in a month, and the use of short acting beta agonists (SABA).

- In Georgia, about 33% of adults with asthma had their asthma well controlled, 37% had their asthma not well controlled and 30% had their asthma very poorly controlled.
- Only 21% of Georgia adults with asthma had an asthma action plan.

## OCCUPATION AND ASTHMA<sup>b</sup>:

- In 2010, about 40% of Georgia adults with asthma who were employed missed at least one work day in the previous 12 months due to asthma.
- About 14% of adults with asthma indicated their asthma was caused or made worse by their current job.
- About 30% of adults with asthma indicated their asthma was caused or made worse by their previous job.
- About 10% of adults with asthma had been told by a health professional that their asthma was work-related.



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## ASTHMA HOSPITALIZATIONS<sup>6</sup>:

In Georgia during 2010, there were 7,436 asthma related hospitalizations (a rate of 103 per 100,000) among adults 18 years and older<sup>4</sup>.

- In 2010, the direct medical cost of asthma related hospitalization among adults 18 years and older in 2010 totaled \$146.5 million.
- As age increased, the rate of asthma hospitalizations also increased (203 /100,000 for those 65+ years vs. 27/100,000 for those 18-24 years).
- The overall rate of hospitalizations due to asthma was almost three times higher among females (148/100,000) than among males (56/10,000) and this was consistent at each age group.
- Among each age group, the rate of asthma hospitalization was about two times higher for blacks than whites (Figure

## ASTHMA EMERGENCY ROOM (ER) VISITS<sup>d</sup>:

There were 26, 861 ER visits (a rate of 372 per 100,000) due to asthma for adult Georgians 18 years and older in 2010<sup>4</sup>.

- The direct cost of ER visits due to asthma in 2010 among Georgia adults amounted to about \$51.4 million.
- The ER visit rate among adults was higher among females (474/100,000) than among males (262/100,000).
- In contrast to the asthma hospitalization rate, the ER visit rate decreased with increasing age.
- In Georgia during 2010, the overall asthma ER visit rate for blacks was almost four times higher (769/100,000) than for white (204/100,000) and this was consistent at each age level.

Figure 3. Rate of Asthma Hospitalization among Adults by Age and Sex, Georgia, 2010

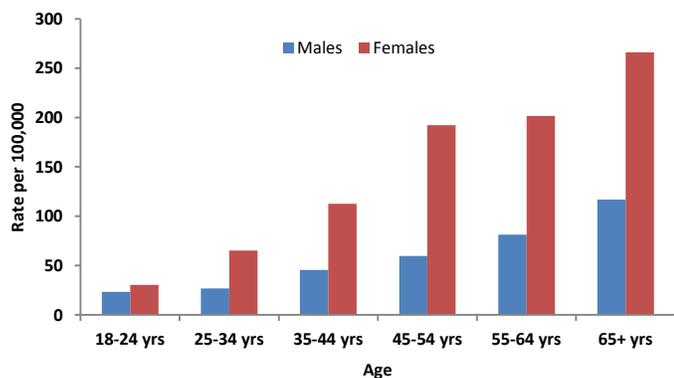


Figure 5. Rate of ER visits among Adults due to Asthma by Sex, Georgia, 2010

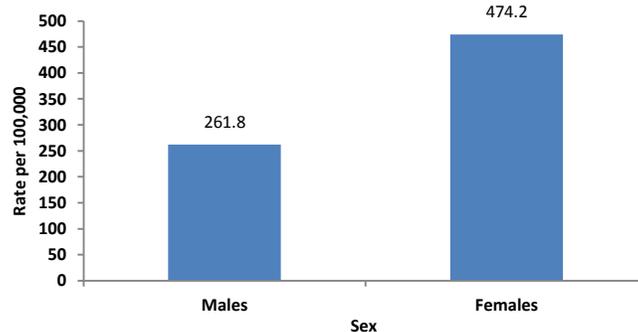


Figure 4. Rate of Asthma Hospitalization among Adults by Race and Age, Georgia, 2010

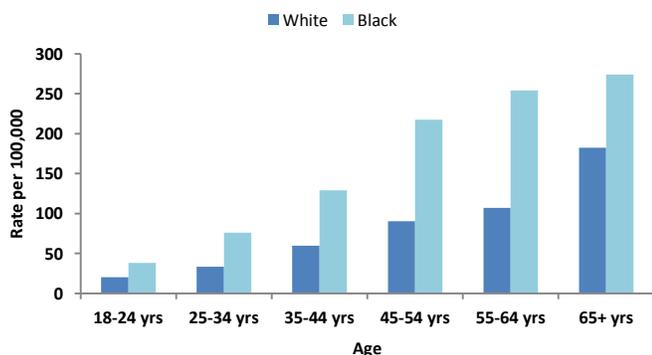
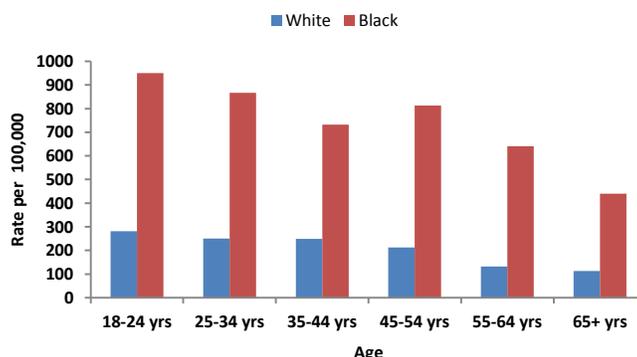


Figure 6. Rate of ER visits among Adults due to Asthma by Age and Race, Georgia, 2010



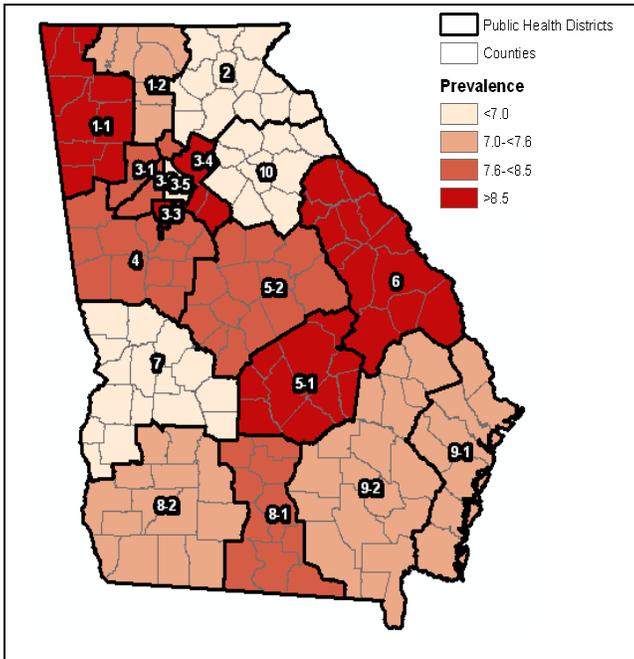
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## REGIONAL DIFFERENCES IN ASTHMA PREVALENCE, HOSPITALIZATION RATE AND ER VISIT RATE<sup>a-d</sup>:

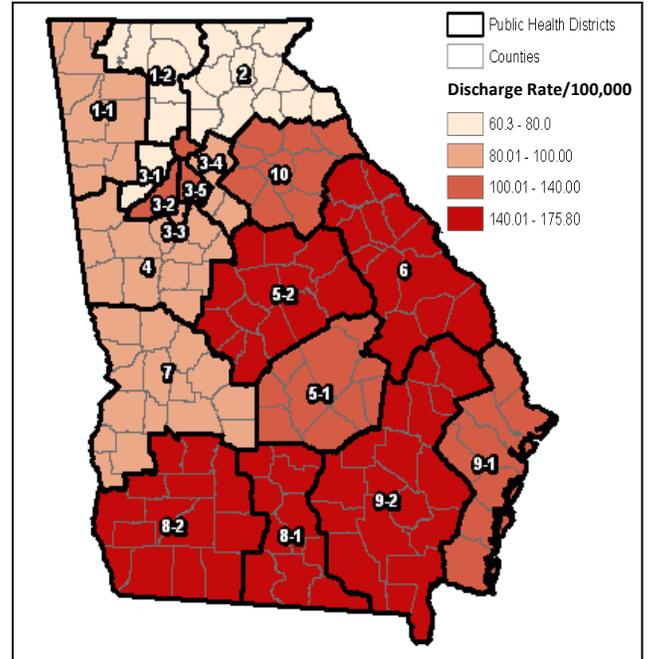
In Georgia during 2010, adult asthma prevalence, hospitalizations and ER visit rates differed by region (Public Health District).

- Five Health Districts with the highest prevalence of adult asthma were Dublin, Rome, Jonesboro, Lawrenceville, and Augusta (Map 1).
- Five Health Districts with the highest asthma hospitalization rates were Dublin, Valdosta, Albany, Waycross and Augusta (Map 2).
- Five Health Districts with highest asthma ER visit rates were Augusta, Fulton, Jonesboro, DeKalb and Albany (Map 3).

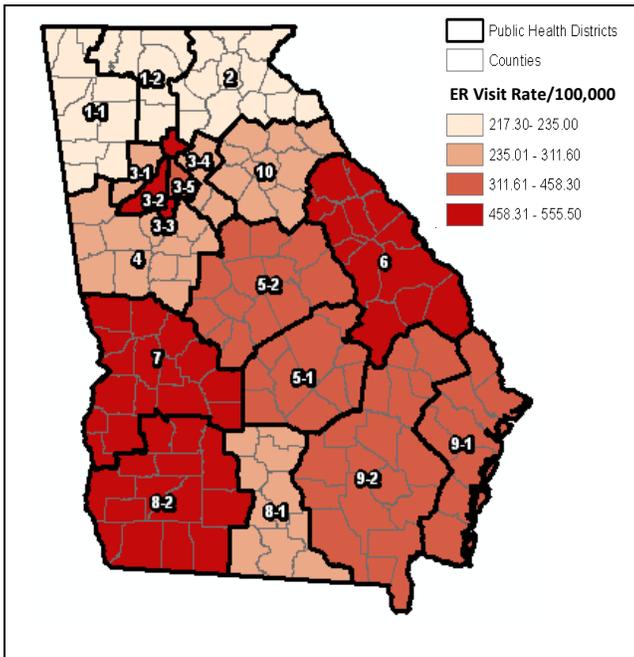
Map 1. Asthma Prevalence, by Health District, Georgia, 2010



Map 2. Asthma Hospitalization Rates, by Health District, Georgia, 2010



Map 3. Asthma ER Visit Rates, by Health District, Georgia, 2010



### Health Districts, Georgia

- 1-1 Northwest (Rome)
- 1-2 North Georgia (Dalton)
- 2 North (Gainesville)
- 3-1 Cobb/Douglas
- 3-2 Fulton
- 3-3 Clayton County (Jonesboro)
- 3-4 East Metro (Lawrenceville)
- 3-5 DeKalb
- 4 LaGrange
- 5-1 South Central (Dublin)
- 5-2 North Central (Macon)
- 6 East Central (Augusta)
- 7 West Central (Columbus)
- 8-1 South (Valdosta)
- 8-2 Southwest (Albany)
- 9-1 Coastal (Savannah)
- 9-2 Southeast (Waycross)
- 10 Northeast (Athens)

## Data Sources:

### a. 2010 Georgia Behavioral Risk Factor Surveillance Survey (BRFSS)

The BRFSS is a stratified random-digit dial telephone interview conducted among Georgia non-institutionalized residents 18 years and older to ascertain their health conditions, behaviors, and the use of preventive services. The survey is conducted in conjunction with the Centers for Disease Control and Prevention (CDC).

### b. 2006-2010 Georgia Asthma Call Back Survey (ACBS)

This survey is conducted approximately two weeks after the BRFSS. BRFSS respondents who report ever being diagnosed with asthma are eligible to participate in the asthma call-back. However, call back is made only to individuals who consented to be called back for this special survey.

### c. 2010 Georgia Hospital Inpatient Discharge Data

Emergency room (ER) visit data are based on Georgia residents who were seen in the ER of non-federal acute care hospitals in Georgia with asthma as the primary diagnosis. The ICD-9 codes (493.0-493.9) were used to select ER visits. Rates were age-adjusted to the 2000 US standard population via the direct method.

### d. 2010 Georgia Emergency Room Visit Data

Hospitalization data are based on hospital discharge data for Georgia residents who were hospitalized in non-federal acute care hospitals with asthma as the primary diagnosis. The ICD-9 codes (493.0-493.9) were used to select hospitalizations. Rates were age-adjusted to the 2000 US standard population via the direct method.

## Some Definitions

**Well controlled asthma** – Had asthma symptoms  $\leq 8$  days in past 30 days, or  $\leq 2$  days of nighttime awakening in past 30 days or  $\leq 0.29$  use of SABA per day.

**Not well controlled asthma** – Had asthma symptoms more than 8 days in the past 30 days but not throughout the day, or  $\geq 3$  and  $\leq 12$  days of nighttime awakening in past 30 days or  $> 0.29$  and  $< 2.0$  use of SABA per day.

**Very poorly controlled asthma** – Had asthma symptoms everyday in the past 30 days and throughout the day, or  $\geq 13$  days of nighttime awakening in the past 30 days or  $\geq 2$  use of SABA per day.

**Note:** These definitions are based on the EPR-3 recommendations

**Statistical Significance:** Results considered statistically significant if there was no overlap in the 95% confidence intervals (95% CI) of the percentages being compared

## References:

1. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Respiratory Diseases. Healthy People 2020. Washington, DC. Accessed on 2/9/2013. Available at <http://www.health.state.ga.us/pdfs/epi/cdiee/2012%20Asthma%20Surveillance%20Report.pdf>.
2. Ford ES. The epidemiology of obesity and asthma. *J Allergy Clin Immunol* 2005; 115:897–909.
3. Stapleton M, Howard-Thompson A, George C, Hoover RM, Self TH. Smoking and asthma. *J Am Board Fam Med*. 2011; 24(3):323-22.
4. Online Analytical Statistical Information System (OASIS) Georgia Department of Public Health, Office of Health Indicators for Planning (OHIP). (January 2013) <http://oasis.state.ga.us/>