

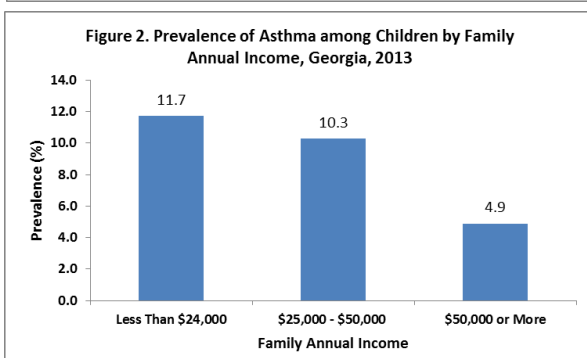
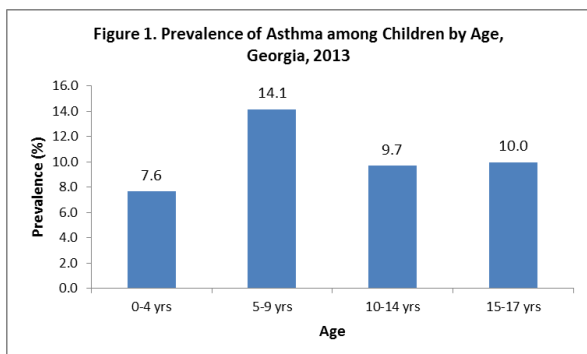
## 2015 GEORGIA DATA SUMMARY | ASTHMA IN CHILDREN

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. During asthma episodes, 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 2013, the overall asthma prevalence among children in Georgia (aged 0-17 years) was 10.8%. About 16.2% of children in Georgia had been told at some point they had asthma. Differences in asthma prevalence existed by demographic characteristics.

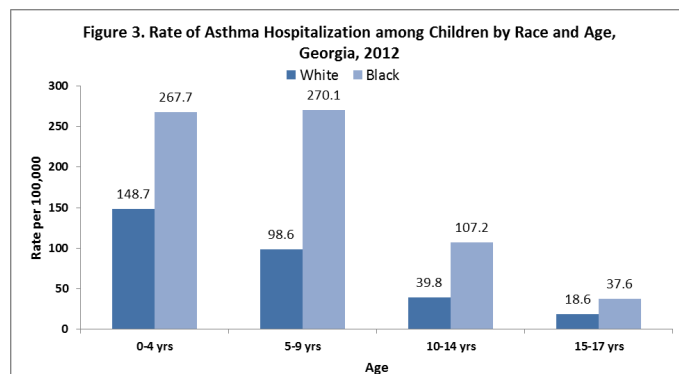
- Asthma prevalence was higher among boys (12.6%; 95% CI: 10.2-15.5) than among girls (8.9%; 95% CI: 6.8-11.5).
- Asthma prevalence was higher among non-Hispanic black children (15.6%) than among non-Hispanic white children (8.2%).
- Asthma prevalence was lower among younger children aged 0-4 years old (7.6%) than among children 5 years and older (11.6%) (Figure 1).
- Asthma prevalence was significantly higher among children whose family annual household income was less than \$25,000 (11.7%; 95% CI: 8.8-15.5) than among children from families making \$75,000 or more per year (4.9%; 95% CI: 3.1-7.5) (Figure 2).



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

In 2012, there were 3,075 asthma-related hospitalizations among children 0-17 years of age in Georgia.

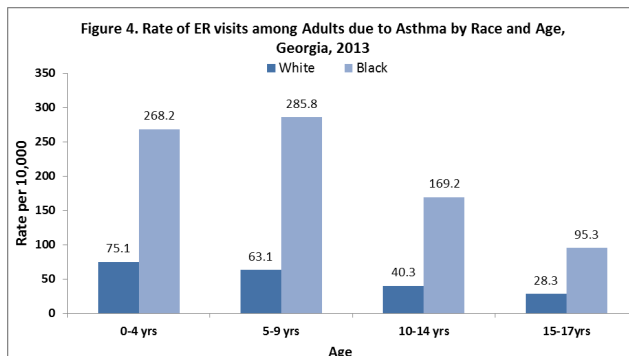
- These hospitalizations represented an overall asthma-related hospitalization rate of 124 per 100,000.
- The total charges for asthma-related hospitalizations among Georgia children amounted to more than \$31.9 million. This is a \$4.1 million increase in total charges (unadjusted) compared to total asthma-related hospital charges in 2010.
- The asthma-related rate of hospitalization among children decreased as age increased. Children aged 0-4 years had the highest hospitalization rate (197 per 100,000). This is in contrast to the lower prevalence of asthma found among children in this age group. The discrepancy between asthma prevalence and hospitalization rates could be due to the difficulty in properly diagnosing asthma among younger children until they are hospitalized or go to the Emergency Room (ER).
- The rate of asthma hospitalization was higher among boys (152/100,000) than girls (94/100,000) 17 years of age and younger.
- The overall asthma hospitalization rate was more than two times higher for black children (182/100,000) than for white children (83/100,000). This trend was consistent across gender and age groups (Figure 3).



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

In 2012, there were 29,035 asthma-related ER visits among children 0-17 years of age in Georgia.

- This represents an overall asthma-related ER visit rate of 1164 per 100,000.
- The total charges for asthma-related ER visits among children amounted to more than \$44.2 million. This was a \$11.4 million higher in total charges (unadjusted) compared to total asthma-related ER charges in 2010.
- The asthma-related ER visits among children decreased as age increased. Children 0-4 years had the highest asthma ER visit rate (1486/100,000).
- The ER visit rate was higher among males (1423/100,000) than among females (894/100,000).
- The overall asthma ER visit rate was almost four times higher for black children (2142/100,000) than for white children (544/100,000). This trend was consistent across genders and age groups (Figure 4).



## REGIONAL DIFFERENCES IN ASTHMA PREVALENCE, HOSPITALIZATIONS, AND ER VISITS<sup>a-c</sup>:

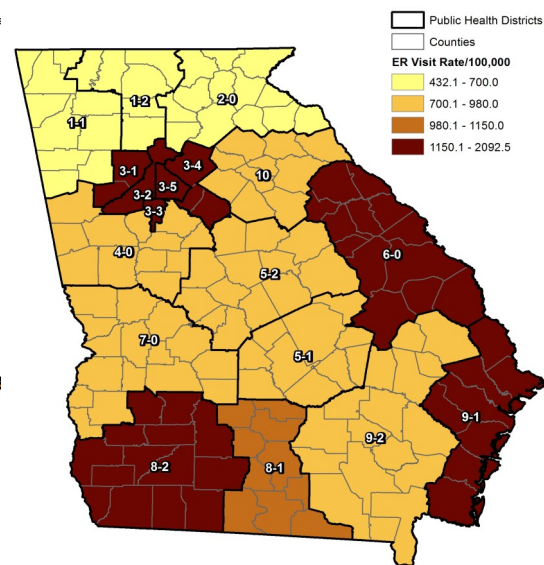
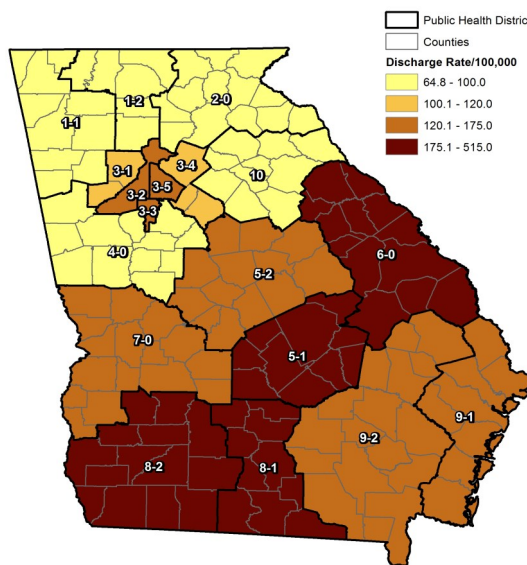
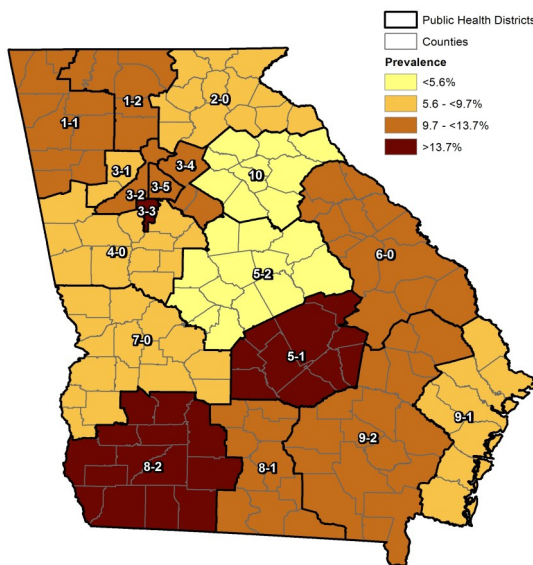
The rates of child asthma prevalence, asthma-related hospitalizations, and ER visits differed by region in Georgia (PHDs).

- In 2012-2013, three of 18 Public Health Districts (PHD) had child asthma prevalences above 13.7%. The three PHDs with the highest prevalence were Jonesboro (3-3), Dublin (5-1), and Albany (8-2). (Map 1<sup>\*</sup>).
- In 2012, four of 18 PHDs had asthma-related hospitalization rates among children that exceeded 175 per 100,000, compared to five PHDs that exceed that same rate in 2010. The four PHDs in 2012 with the highest asthma hospitalization rates were Dublin (5-1), Albany (8-2), Valdosta (8-1), and Augusta (6-0). (Map 2).
- In 2012, eight of 18 PHDs had asthma-related ER visits rates among children that exceeded 1150 per 100,000, compared to five PHDs that exceeded that same rate in 2010. The eight PHDs in 2012 with the highest asthma ER visit rates were DeKalb (3-5), Fulton (3-2), Savannah (9-1), Jonesboro (3-3), Augusta (6-0), Cobb (3-1), Albany (8-2), and Lawrenceville (3-4). (Map 3).

**Map 1. Asthma Prevalence among Children 0-17 Years, by Health District, Georgia, 2012-2013**

**Map 2. Rate of Asthma Hospitalization among Children 0-17 Years, by Health District, Georgia, 2012**

**Map 3. Rate of Asthma ER Visits among Children 0-17 Years, by Health District, Georgia, 2012**



Definitions for Public Health Districts are available on the reference page.

## ASTHMA PREVENTION AND MANAGEMENT – WHAT TO KNOW

### **1. Does my child have allergies?**

*What to look for:*

- Allergic rhinitis: stuffiness, itching of the nose
- Allergic conjunctivitis: red, itchy, watery eyes
- Food allergies
- Atopic dermatitis: Red, itchy, dry skin

#### ***Recommendations:***

Many children with asthma also have allergies. Asthma symptoms can be triggered by these allergies.

- Be evaluated by an allergist
- Take an allergy test

### **2. Does my child have exercise-induced asthma?**

*What to look for during exercise/physical activity:*

- Shortness of breath
- Wheezing/ Coughing
- Chest tightness or pain
- Fatigue

#### ***Recommendations:***

- Use asthma reliever medication right before exercise
- Seek immediate medical treatment if child has worsening symptoms after exercise

### **3. Does my child have an Asthma Action Plan?**

*What is an asthma action plan?:*

This is a document that provides instruction for managing asthma, including information about medications to use and how to manage an asthma episode.

#### ***Recommendation:***

Ask your child's healthcare provider for one if your child with asthma does not have this document

### **4. What are the types of asthma medications?**

*Information about asthma medications:*

There are two types of asthma medications:

#### **Controller Medications**

- Taken daily to reduce the swelling and mucus in the airways
- Taken by those diagnosed with persistent asthma

#### **Reliever Medications**

- Taken when experiencing asthma symptoms (asthma flare up)
  - It relaxes muscles around the airway
  - It may be used before exercise to keep airways relaxed
- All children with asthma should have this type of medication
- Using more than 2 times per week may mean that asthma is not under control. Immediate physician follow-up is required.

#### ***Recommendation:***

In the asthma action plan provided by your child's healthcare provider, the medicines your child needs to take and when he/she needs to take them are described.

### **5. Do you know your child's asthma triggers and symptoms?**

**Common Triggers:**

- Smoke
- Weather changes
- Cockroaches
- Food allergies

**Common Symptoms:**

- Coughing
- Wheezing
- Shortness of breath
- Tiredness

#### ***Recommendations:***

Reducing exposure to triggers can prevent asthma episodes in your child.

- Do not allow smoking in your home
- Fix leaky faucets to prevent uncontrolled leaks and excess moisture that may promote mold growth.
- Use a damp cloth to wipe away dust from surfaces
- Respond to all asthma symptoms seriously because they differ from one child to the next.

## Data Sources:

### a. 2013 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. 2012 Georgia Hospital Inpatient Discharge Data

Hospitalization data are from 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.

### c. 2012 Georgia Emergency Room Visit 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.

## Additional Definitions:

**Statistical Significance:** In this report, estimates were considered statistically significantly different if their 95% confidence intervals did not overlap.

**\***: Prevalence data selected based on meeting Relative Standard Error (RSE) estimates. Estimates considered acceptable if RSE is below 30%. Calculated by taking the standard error, divided by the point estimate, multiplied by 100.

## 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/>

## Health Districts in 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)         |