

Asthma is a chronic inflammatory disorder of the airways characterized by episodes of reversible breathing problems due to airways narrowing and obstruction. These episodes can range in severity from mild to life threatening¹.

ASTHMA PREVALENCE^a: (see Table 1)

In 2017, the overall asthma prevalence among adult Georgians (persons age 18 years and older) was 8.4% (Figure 1). Differences in asthma prevalence existed by demographic characteristics.

- Asthma prevalence was significantly higher among females (10.2%) than males (6.4%) (Figure 1)
- There was no significant* difference of asthma prevalence between age-groups, although it was highest among those 18-24 years of age (10.5%) (Figure 2)
- Asthma prevalence was nearly two times higher among White non-Hispanic females than in White non-Hispanic males (Figure 3)
- Asthma prevalence was highest among adults whose annual household income was less than \$15,000 (14.3%) (Figure 4)
- Prevalence was significantly* higher among individuals with less than a high school diploma (10.3%) than among college graduates (5.0%) (Figure 5)
- There was no statistically significant* difference in asthma prevalence between those with or without health insurance coverage (8.7% vs 9.2%) (Figure 6)

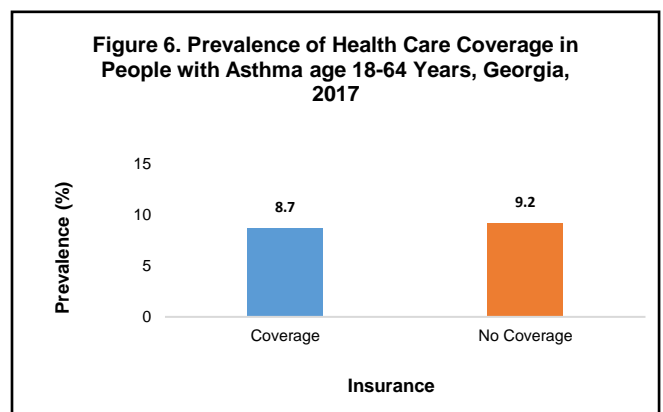
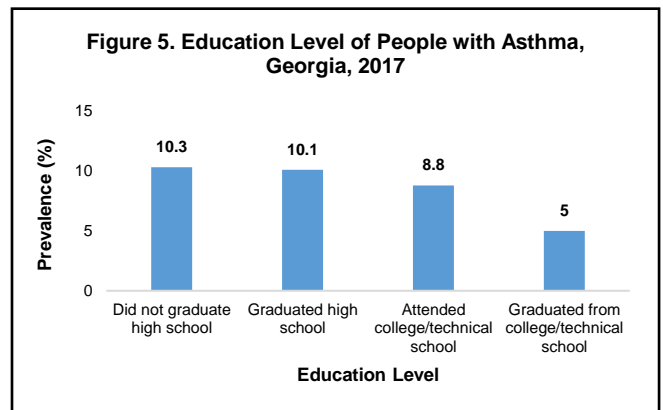
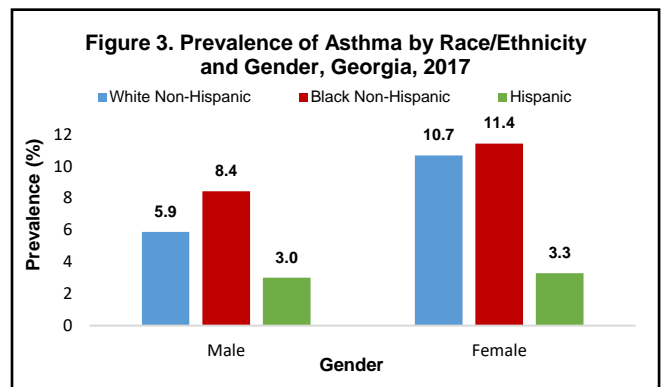
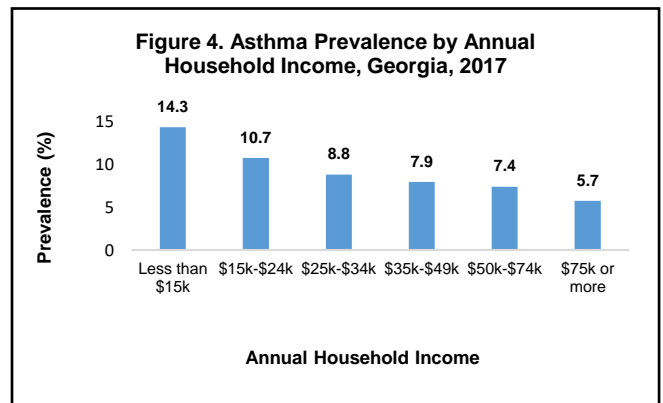
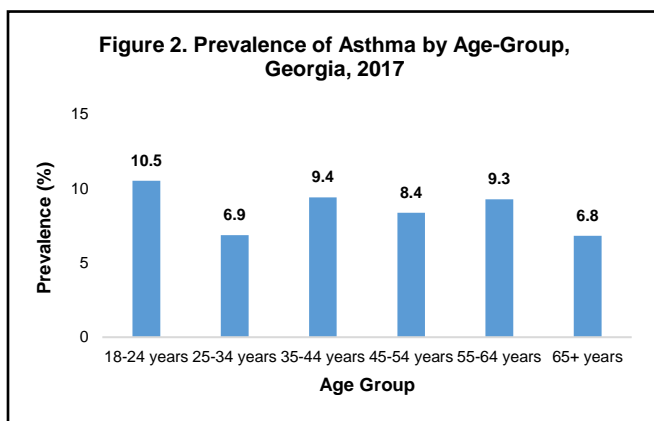
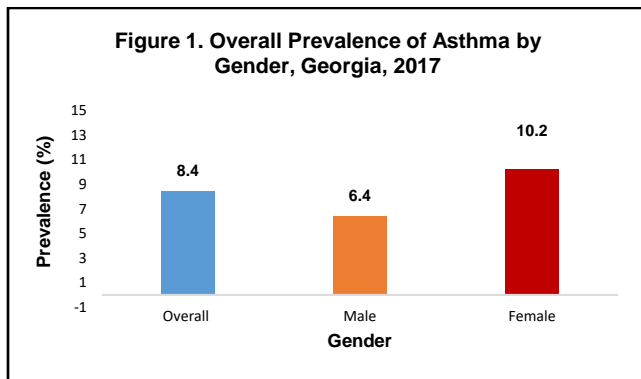


Table 1. Demographic Prevalence of People with Asthma in Georgia, 2017

DEMOGRAPHICS	PREVALENCE	CONFIDENCE INTERVALS (CI)
Overall Asthma in Population	8.39	7.51-9.36
Sex		
Male	6.43	5.28-7.80
Female	10.20	8.93-11.64
Race		
White non-Hispanic, male	5.86	4.52-7.56
White non-Hispanic, female	10.66	8.90-12.73
Black non-Hispanic, male	8.41	5.95-11.76
Black non-Hispanic, female	11.40	9.06-14.25
Hispanic, male	3.00	1.47-6.02
Hispanic, female	3.28	1.63-6.48
Age-Group		
18-24	10.51	7.47-14.60
25-34	6.85	4.95-9.40
35-44	9.39	7.16-12.22
45-54	8.35	6.34-10.91
55-64	9.26	7.50-11.37
65+	6.82	5.61-8.28
Income		
<15k	14.30	10.95-18.47
15k-24k	10.70	8.50-13.37
25k-34k	8.77	6.25-12.16
35k-49k	7.93	5.41-11.46
50k-74k	7.36	5.13-10.44
75k+	5.70	4.27-7.56
Insurance Status		
Has Health Insurance Coverage	8.69	7.53-10.00
No Health Insurance Coverage	9.19	6.99-11.99
Education		
Less than High School Graduate	10.30	7.67-13.70
High School Graduate	10.05	8.27-12.15
Some College	8.81	7.22-10.71
College Graduate	5.03	4.06-6.22

ASTHMA AND OTHER CONDITIONS^a: (see **Table 2**)

- In 2017, the prevalence of obesity (BMI \geq 30) among Georgia adults with asthma (41.2%) was significantly higher than obesity prevalence among those without asthma (30.4%)
- The prevalence of current smokers among Georgia adults with asthma was 24.4%. Smoking prevalence among adults with asthma was significantly higher than those without asthma (16.9%)
- Georgia adults with asthma reported significantly lower prevalence of exercising or physical activity in the last 30 days than those without asthma (58.0% vs 69.9%)
- During 2017, there was no significant difference among Georgia adults with or without asthma receiving a flu vaccine (36.7% vs 36.8%)

Table 2. Prevalence of Health Behaviors of People Living with and without Asthma in Georgia, 2017

HEALTH BEHAVIOR	PREVALENCE (Current Asthma)	CONFIDENCE INTERVALS (CI)	PREVALENCE (No current Asthma)	CONFIDENCE INTERVALS (CI)
Level of Physical Activity				
Exercise/Physical Activity (PA) in last 30 days	58.02	52.15-63.68	69.90	68.25-71.50
No Exercise/Physical Activity (PA) in last 30 days	41.98	36.32-47.85	30.10	28.50-31.25
Health Condition				
Obese	41.19	35.52-47.10	30.35	28.70-32.04
Not obese	58.81	52.90-64.48	69.65	67.96-71.30
Smoking Status				
Smoker	24.38	19.64-29.84	16.88	15.54-18.31
Nonsmoker	75.62	70.16-80.36	83.12	81.69-84.46
Flu Vaccine Status				
Had flu shot/ spray mist in past 12 months	36.66	31.38-42.28	36.75	35.07-38.46
Did not have a flu shot/ spray mist in past 12 months	63.34	57.72-68.62	63.25	61.54-64.93

ASTHMA CONTROL^b: Asthma control questions are part of the Asthma Call Back Survey. These are: 1) the number of days in a month that asthma symptoms occurred; 2) the number of nighttime awakenings in a month; and 3) the use of short acting beta agonists.

- In Georgia and from 2013 to 2015, 31% of adults with active asthma had their asthma well controlled; while 37% do not have their asthma well controlled; and 32% had their asthma very poorly controlled. Definitions for asthma control are described at the end of this document.
- About 25% of adults with active asthma had nine or more nights in the past 30 days when they had difficulty sleeping due to asthma.
- Only 27% of adults with asthma had an asthma action plan.

OCCUPATION AND ASTHMA^b:

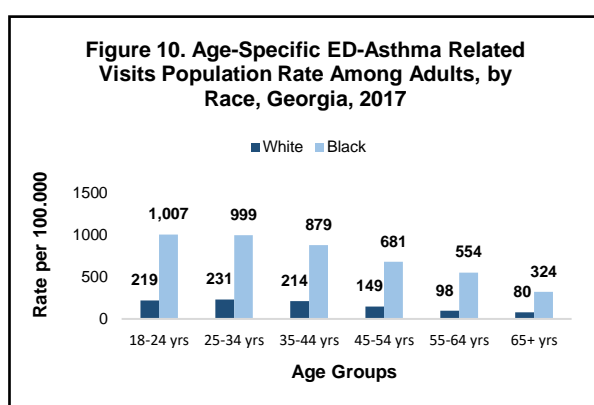
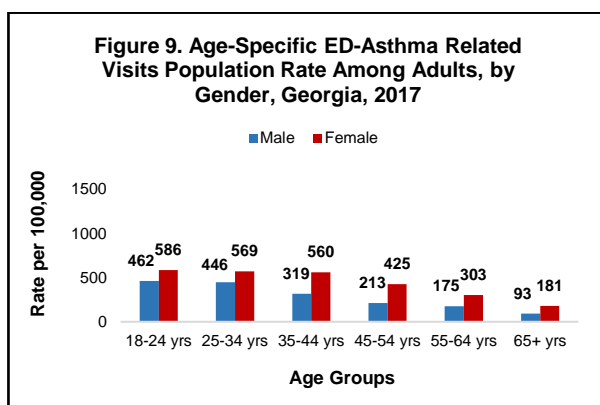
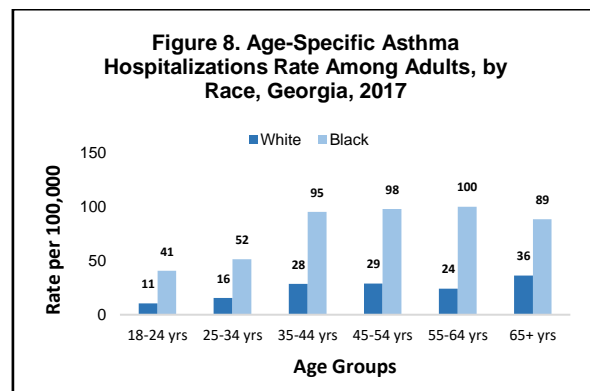
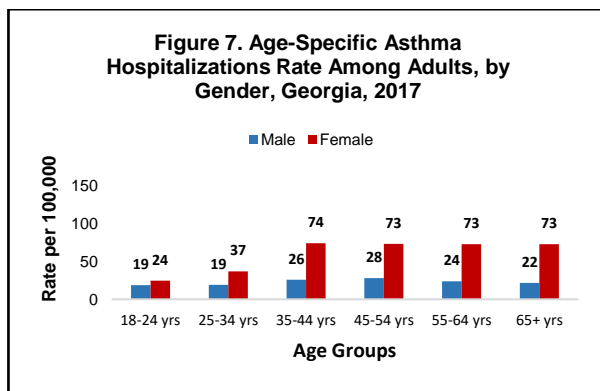
- From 2013-2015, 36% of adults in Georgia with asthma indicated they were unable to work or carry out usual activities on one or more days in the past 12 months due to asthma.
- During the same period, 13% of Georgia adults with asthma had been told by a health professional that their asthma was work-related.

ASTHMA HOSPITALIZATIONS^c: In 2017, there were 3,384 asthma-related hospitalizations among adult Georgians 18 years and older, a rate of 43 per 100,000 population.

- In 2017, the total charges for asthma-related hospitalizations among adults 18 years and older were \$88 million.
- The overall asthma hospitalization rate was more than two times higher among females (61/100,000) than among males (23/100,000).
- As age increased (**Figure 7**), the rate of females' asthma hospitalizations rate increased and peaked at 35-44 years of age (74/100,000).
- For each age-group, the asthma hospitalization rate was more than two times higher for blacks (79/100,000) than whites (25/100,000). (**Figure 8**). As age increased, the asthma hospitalization rate among Blacks increased and peaked at 55-64 years of age (100/100,000).

ASTHMA EMERGENCY DEPARTMENT (ED) VISITS^d: In 2017, about 28,350 ED visits due to asthma for adults, a rate of 358 per 100,000 population.

- In 2017, the total charges for asthma-related ED visits among adults 18 years and older were \$91.1 million.
- The rate of ED visits decreased with increasing age (**Figure 9**), in contrast to the asthma hospitalization rate (**Figure 7**), which shows an increasing trend.
- The ED visits rate among adults was higher among females (426/100,000) than males (284/100,000). (**Figure 9**)
- In 2017, the overall asthma ED visits rate for Blacks was approximately four times higher than Whites (764 vs 159/100,000; **Figure 10**). This is similar to the trend seen in previous years.



REGIONAL DIFFERENCES IN ASTHMA PREVALENCE, HOSPITALIZATION RATES, AND ED VISIT RATES:

In Georgia, adult asthma prevalence, hospitalization rates and ER visit rates differed by region (Public Health District; PHD).

- From 2015-2017, six PHDs with the highest prevalence of adult asthma were North Georgia (1-2), South Central (5-1), North Central (5-2), West Central (7), Southeast (9-2), and Northeast (10) with rates of 10.7%, 9.7%, 10.7%, 10.3%, 10.6% and 10.2% respectively (**Map 1, Table 3**).
- In 2017, five PHDs with the highest asthma hospitalization rates were Cobb/Douglas (3-1), Fulton (3-2), DeKalb (3-5), North Central (5-2), and Southwest (8-2) with rates of 53, 52, 62, 55, and 54 per 100,000 respectively (**Map 2, Table 4**).
- In 2017, five Health PHDs with the highest asthma ED visit rates were Fulton (3-2), Clayton County (3-3), DeKalb (3-5), North Central (5-2), and West Central (7) with rates of 494, 525, 444, 466, and 482 per 100,000 respectively (**Map 3, Table 5**).

Map 1. Asthma Prevalence, Adults 18 Years and Older, by PHD, Georgia, 2015-2017

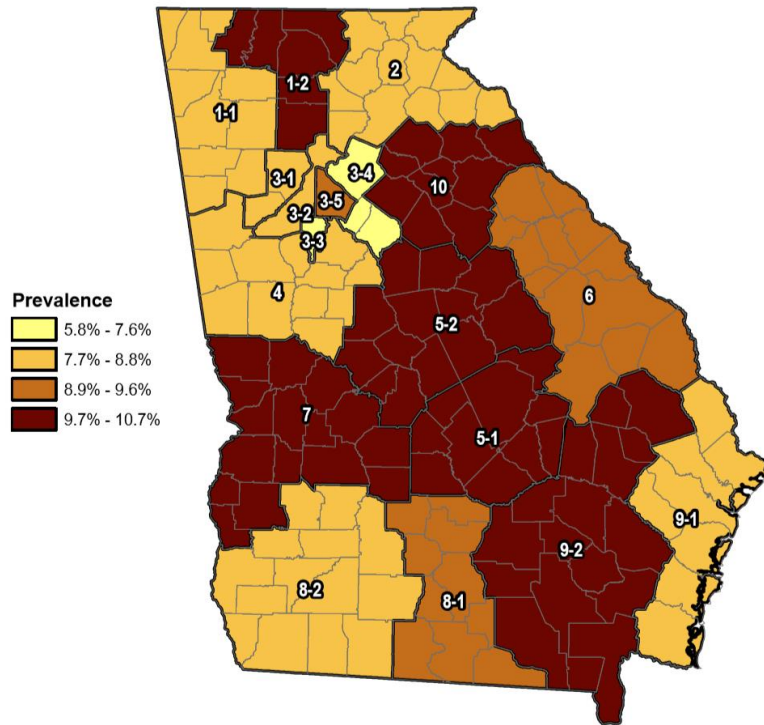


Table 3. Asthma Prevalence among adults by Public Health Districts from 2015 to 2017

DISTRICT NAME	COUNTY	PREVALENCE
1-1 Northwest (Rome)	Bartow, Catoosa, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, Walker	7.7%
1-2 North Georgia (Dalton)	Cherokee, Fannin, Gilmer, Murray, Pickens, Whitefield	10.7%
2 North (Gainesville)	Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, White	8.6%
3-1 Cobb/Douglas	Cobb, Douglas	8.8%
3-2 Fulton	Fulton	8.6%
3-3 Clayton County (Jonesboro)	Clayton	7.2%
3-4 East Metro (Lawrenceville)	Gwinnett, Newton, Rockdale	5.8%
3-5 DeKalb	DeKalb	8.9%
4 LaGrange	Butts, Carroll, Coweta, Fayette, Henry, Lamar, Meriwether, Pike, Spalding, Troup, Upson	8.8%
5-1 South Central (Dublin)	Bleckley, Dodge, Johnson, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, Wilcox	9.7%
5-2 North Central (Macon)	Baldwin, Bibb, Crawford, Hancock, Houston, Jasper, Jones, Monroe, Peach, Putnam, Twiggs, Washington, Wilkinson	10.7%
6 East Central (Augusta)	Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, Wilkes	8.9%
7 West Central (Columbus)	Chattahoochee, Clay, Crisp, Dooly, Harris, Macon, Marion, Muscogee, Quitman, Randolph, Schley, Stewart, Sumter, Talbot, Taylor, Webster	10.3%
8-1 South (Valdosta)	Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, Turner	8.9%
8-2 Southwest (Albany)	Baker, Calhoun, Colquitt, Decatur, Dougherty, Early, Grady, Lee, Miller, Mitchell, Seminole, Terrell, Thomas, Worth	7.7%
9-1 Coastal (Savannah)	Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh	8.3%
9-2 Southeast (Waycross)	Appling, Atkinson, Bacon, Brantley, Bulloch, Candler, Charlton, Clinch, Coffee, Evans, Jeff Davis, Pierce, Tattnall, Toombs, Ware, Wayne	10.6%
10 Northeast	Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconee, Oglethorpe, Walton	10.2%

Map 2. Asthma Hospitalization, Adults 18 Years and Older, by PHD, Georgia, 2017.

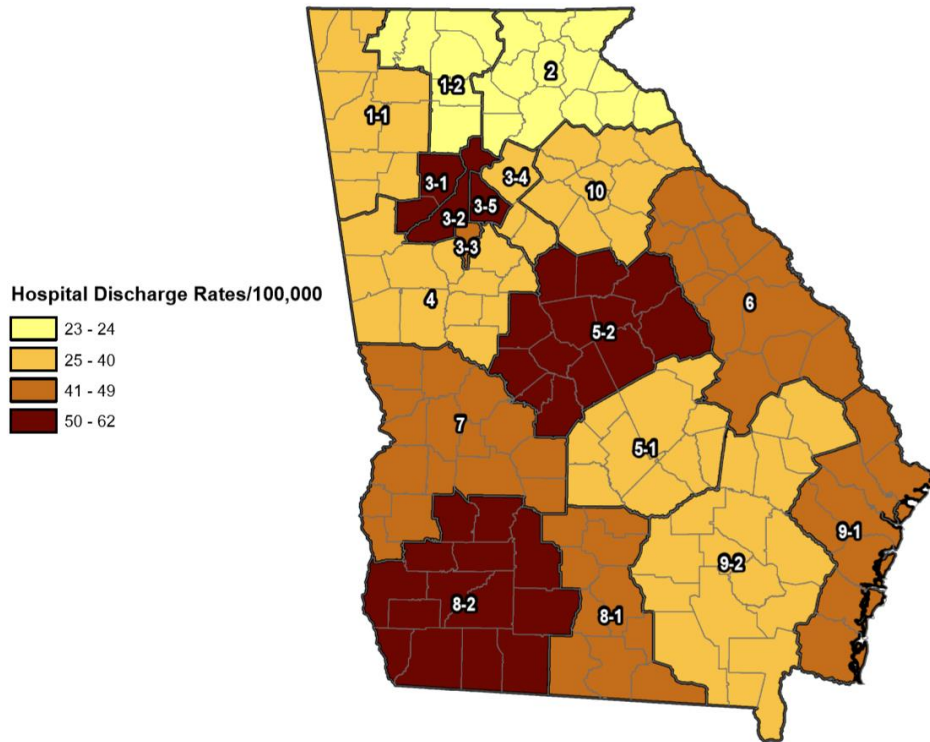


Table 4. Asthma Hospitalization among adults by Public Health Districts in 2017

DISTRICT NAME	COUNTY	HOSPITALIZATION RATE (PER 100,000)	TOTAL NUMBERS
1-1 Northwest (Rome)	Bartow, Catoosa, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, Walker	37	188
1-2 North Georgia (Dalton)	Cherokee, Fannin, Gilmer, Murray, Pickens, Whitefield	23	84
2 North (Gainesville)	Banks, Dowson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, White	24	128
3-1 Cobb/Douglas	Cobb, Douglas	53	358
3-2 Fulton	Fulton	52	422
3-3 Clayton County (Jonesboro)	Clayton	47	97
3-4 East Metro (Lawrenceville)	Gwinnett, Newton, Rockdale	36	295
3-5 DeKalb	DeKalb	62	359
4 LaGrange	Butts, Carroll, Coweta, Fayette, Henry, Lamar, Meriwether, Pike, Spalding, Troup, Upson	30	196
5-1 South Central (Dublin)	Bleckley, Dodge, Johnson, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, Wilcox	34	40
5-2 North Central (Macon)	Baldwin, Bibb, Crawford, Hancock, Houston, Jasper, Jones, Monroe, Peach, Putnam, Twiggs, Washington, Wilkinson	55	221
6 East Central (Augusta)	Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, Wilkes	49	181
7 West Central (Columbus)	Chattahoochee, Clay, Crisp, Dooly, Harris, Macon, Marion, Muscogee, Quitman, Randolph, Schley, Stewart, Sumter, Talbot, Taylor, Webster	46	129
8-1 South (Valdosta)	Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, Turner	48	93
8-2 Southwest (Albany)	Baker, Calhoun, Colquitt, Decatur, Dougherty, Early, Grady, Lee, Miller, Mitchell, Seminole, Terrell, Thomas, Worth	54	142
9-1 Coastal (Savannah)	Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh	43	205
9-2 Southeast (Waycross)	Appling, Atkinson, Bacon, Brantley, Bulloch, Candler, Charlton, Clinch, Coffee, Evans, Jeff Davis, Pierce, Tattnall, Toombs, Ware, Wayne	40	112
10 Northeast	Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconee, Oglethorpe, Walton	35	134

Map 3. Asthma ED Visits, Adults 18 Years and older, by PHD, Georgia, 2017

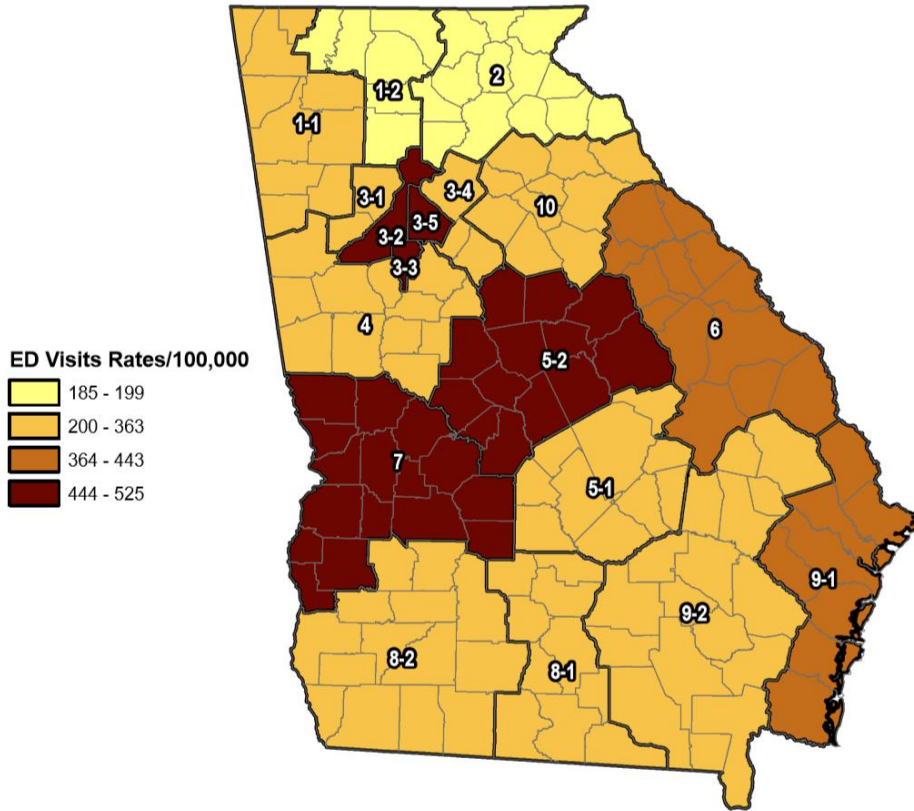


Table 5. Asthma ED visits rate among adults by Public Health Districts in 2017

District Name	County	ED Visit Rate (per 100,000)	Total Numbers
1-1 Northwest (Rome)	Bartow, Catoosa, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, Walker	283	1432
1-2 North Georgia (Dalton)	Cherokee, Fannin, Gilmer, Murray, Pickens, Whitefield	185	673
2 North (Gainesville)	Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, White	199	1059
3-1 Cobb/Douglas	Cobb, Douglas	308	2094
3-2 Fulton	Fulton	494	3999
3-3 Clayton County (Jonesboro)	Clayton	525	1080
3-4 East Metro (Lawrenceville)	Gwinnett, Newton, Rockdale	293	2398
3-5 DeKalb	DeKalb	444	2572
4 LaGrange	Butts, Carroll, Coweta, Fayette, Henry, Lamar, Meriwether, Pike, Spalding, Troup, Upson	310	2005
5-1 South Central (Dublin)	Bleckley, Dodge, Johnson, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, Wilcox	311	370
5-2 North Central (Macon)	Baldwin, Bibb, Crawford, Hancock, Houston, Jasper, Jones, Monroe, Peach, Putnam, Twiggs, Washington, Wilkinson	466	1887
6 East Central (Augusta)	Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, Wilkes	427	1580
7 West Central (Columbus)	Chattahoochee, Clay, Crisp, Dooly, Harris, Macon, Marion, Muscogee, Quitman, Randolph, Schley, Stewart, Sumter, Talbot, Taylor, Webster	482	1361
8-1 South (Valdosta)	Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, Turner	331	646
8-2 Southwest (Albany)	Baker, Calhoun, Colquitt, Decatur, Dougherty, Early, Grady, Lee, Miller, Mitchell, Seminole, Terrell, Thomas, Worth	363	955
9-1 Coastal (Savannah)	Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh	412	1954
9-2 Southeast (Waycross)	Appling, Atkinson, Bacon, Brantley, Bulloch, Candler, Charlton, Clinch, Coffee, Evans, Jeff Davis, Pierce, Tattnall, Toombs, Ware, Wayne	339	959
10 Northeast	Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconee, Oglethorpe, Walton	343	1332

Data Sources

a. 2015-2017 Georgia Behavioral Risk Factor Surveillance System (GA-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 collaboration with the Centers for Disease Control and Prevention (CDC).

b. 2013-2015 Georgia Asthma Call Back Survey (ACBS).

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

c. 2017 Georgia Hospital Inpatient Discharge 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. In October of 2015, medical coding for inpatient hospital discharges changed from ICD-9 CM to ICD-10 CM. The ICD-10 code: J45 was used to select hospitalizations, based on the Division of Environmental Health Science and Practice, Centers for Disease Control and Prevention (CDC) definition.

d. 2017 Georgia Emergency Department Visit Data.

Emergency department (ED) visit data are from Georgia residents who were seen in the emergency department of non-federal acute care hospitals in Georgia with asthma as the primary diagnosis. In October of 2015, medical coding for inpatient hospital discharges changed from ICD-9 CM to ICD-10 CM. The ICD-10 code: J45 was used to select hospitalizations, based on the Division of Environmental Health Science and Practice, Centers for Disease Control and Prevention (CDC) definition.

Definitions

Well controlled asthma – Had asthma symptoms ≤ 8 days in the past 30 days, or ≤ 2 days of nighttime awakening in past 30 days, or an average of ≤ 0.29 uses of a short acting beta-agonist (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 between 3 and 12 days of nighttime awakening in past 30 days, or an average of 0.29 to 1.99 uses of a SABA per day.

Very poorly controlled asthma – Had asthma symptoms daily in the past 30 days and throughout the day, or ≥ 13 days of nighttime awakening in the past 30 days or ≥ 2 use of a SABA per day.

Note: These definitions are based on the Expert Panel Report (EPR-3) recommendations by the National Asthma Education and Prevention Program (NAEPP).

Statistical Significance: In this report, estimates were considered statistically significantly different if the chi-square test p-value was less than 0.05.

Obesity: The proportion of adults whose BMI was greater than or equal to 30.0 kg/m².

Note: Body mass index, BMI, is defined as weight (kg) divided by height (m) squared.

Physical Activity: The proportion of adults who reported participating in any leisure time physical activities or exercises during the past month.

Current Smokers: The proportion of adults who reported that they had smoked at least 100 cigarettes (5 packs) in their life and they currently smoke cigarettes, either every day or on some days.

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>.