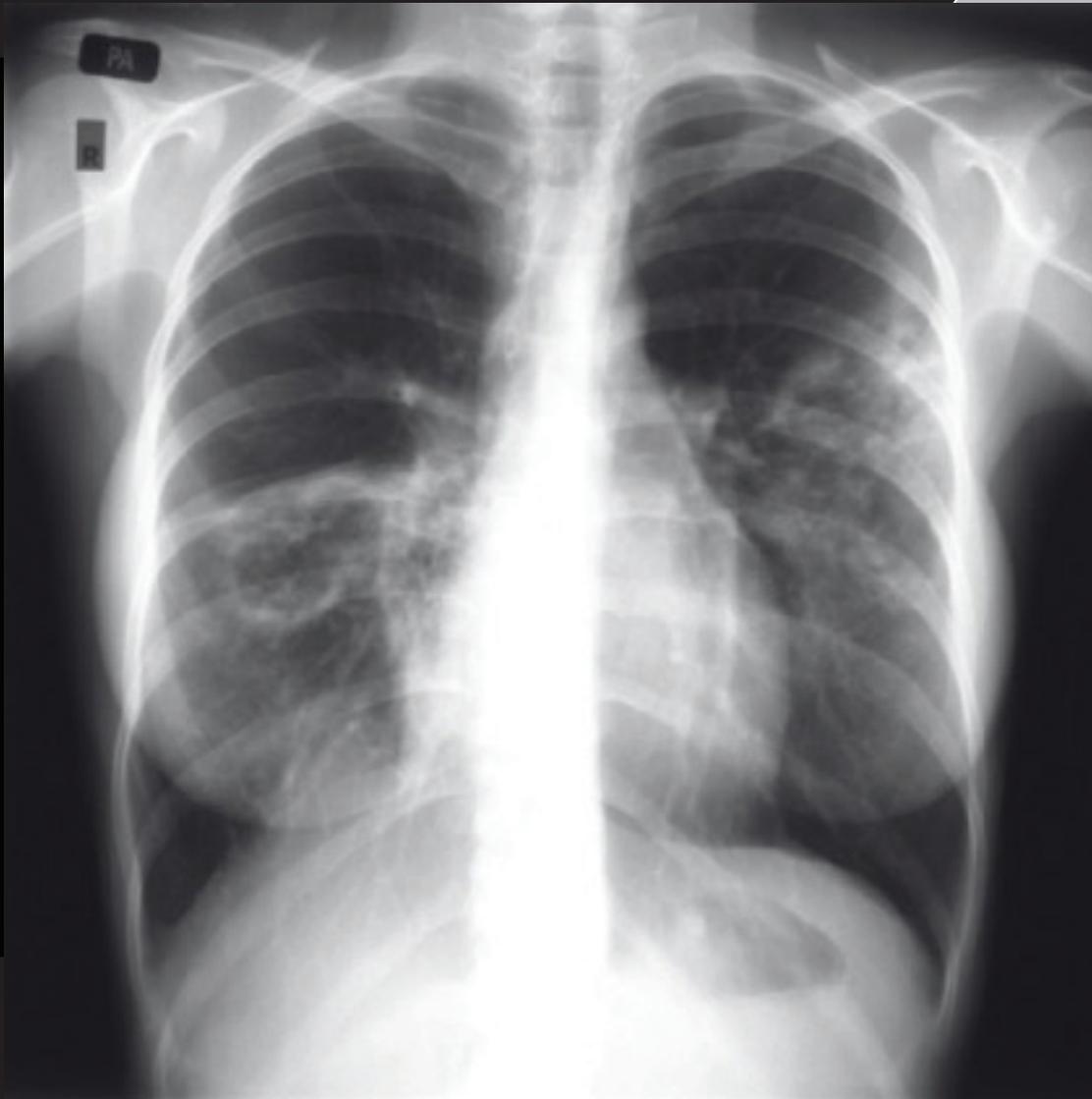


# 2010 Georgia Tuberculosis Report



# 2010 Georgia Tuberculosis Report

Georgia Department of Public Health.....	Brenda Fitzgerald, M.D. Commissioner
Division of Health Protection.....	Pat O'Neal, M.D. Director
Epidemiology Branch.....	Cherie Drenzek, D.V.M., M.S. State Epidemiologist
Tuberculosis Program.....	Dr. Rose-Marie F. Sales Program Director and Epidemiology Section Chief

## Acknowledgments

We thank the County Health Department staff, District Health Office TB coordinators, and state TB surveillance staff that collected and reported the data used in this annual report. Thanks to Jimmy Clanton for the design and graphics of this report.

Further information on this report can be obtained by contacting:

Dr. Rose-Marie F. Sales  
Georgia Department of Public Health  
Tuberculosis Program  
Division of Health Protection  
2 Peachtree St., NW, Atlanta, GA 30303  
Phone: (404) 657-2634  
E-mail: [rfsales@dhr.state.ga.us](mailto:rfsales@dhr.state.ga.us)

Suggested citation: Georgia Department of Public Health, 2010 Georgia Tuberculosis Report, Atlanta, Georgia, July 2012.



# Table of Contents

TB Surveillance in Georgia.....	1
Current Epidemiology of TB in Georgia.....	1
High-Risk Populations.....	3
Drug Resistance.....	4
Indicators of Infectiousness.....	5
Initial Diagnosis, Health Provider Data, And Directly Observed Therapy.....	5
TB Mortality.....	5
TB Contact Investigations and Latent TB Infection.....	6
TB Program Objectives.....	6
<b>Tables:</b> Morbidity Trends and Program Performance Indicators by Health District .....	7
<b>Figures:</b> Descriptive Epidemiology.....	22
<b>Graphs:</b> Tuberculosis Morbidity Trends by Health District, 1995-2010.....	28



## Tuberculosis (TB) Surveillance in Georgia

TB is a reportable disease in Georgia. All Georgia physicians, laboratories and other health care providers are required by law to immediately report clinical and laboratory confirmed TB cases under their care to Georgia public health authorities. TB cases may be directly reported to a County Health Department, a District Health office, or to the state TB Program and TB Epidemiology Section of the Georgia Department of Public Health (DPH), which is responsible for the systematic collection of all reported TB cases in the state. Immediate reporting of TB cases enables appropriate public health follow-up of patients, including administration of directly observed therapy, monitoring TB treatment until completion, evaluating and screening contacts exposed to a TB case, and outbreak investigation and control.

TB cases in Georgia can be reported electronically through the State Electronic Notifiable Disease Surveillance System (SendSS), a secure web-based surveillance software developed by DPH, or by calling, mailing or faxing a report to public health authorities. Hospital infection preventionists as well as public health nurses, outreach staff, epidemiologists, and communicable disease specialists involved in disease surveillance are encouraged to report TB through SendSS and register to become a SendSS user by logging into the system's web site at: <https://sendss.state.ga.us>, then selecting TB from the list of reportable diseases.

Public health authorities collect data on reported TB cases that include demographic, clinical, risk factor, and contact information, which are analyzed to describe the distribution of the disease among Georgia's population, identify high risk groups and TB clusters, describe trends in morbidity, mortality, and drug resistance patterns, treatment outcomes, and infection rates among contacts to TB cases. The data are used at state and local levels to guide policy and decision making, set priorities for program interventions, evaluate program performance for the prevention and control of TB in Georgia, and educate key stakeholders and the general public on TB. Georgia's TB surveillance data are transmitted electronically to the U.S. Centers for Disease Control and Prevention (CDC) and become part of the national TB surveillance database.

## Current Epidemiology of Tuberculosis in Georgia

In 2010, Georgia reported 411 new tuberculosis (TB) cases in 2010., representing This represents a slight a 1% decrease from 415 412 TB cases reported in 2009 (Figure 1), but a 55% decrease since 1992 when the peak of a resurgent period of tuberculosis occurred in Georgia. The TB case rate in Georgia was 4.2 cases per 100,000 population during 2009 and 2010. Georgia had the eleventh highest TB case rate among the 50 states of the United States in 2010.

## **Geographic Distribution**

Among the 159 counties in Georgia, four counties in the metropolitan Atlanta area reported the highest number of TB cases in 2010: DeKalb (86 cases), Gwinnett (56), Fulton (51), and Cobb (26) (Table 1, Figure 2). These four counties accounted for 53% of TB cases reported in Georgia in 2010.

Among Georgia's 18 Health Districts, which have oversight responsibility for public health in the state's 159 counties, DeKalb Health District had the highest TB case rate in 2010 (12.4 per 100,000), followed by Lawrenceville (6.6 per 100,000) and Fulton (5.5 per 100,000).

## **Sex and Age Distribution**

In 2010, TB in Georgia occurred predominantly among males (270 cases, 66%) compared to females (141, 34%), while the highest proportion of TB cases by age group occurred among persons 45-64 years old (143 cases, 35%). Among males, the highest proportion of cases occurred in the 45-64 year old age group (37%) while among females, the highest proportion was in the 25-44 year old age group (39%) (Figure 4). The highest TB case rate by age group was among persons 45-64 years old (5.8 per 100,000) while the lowest was among children 5-14 years old (0.9 per 100,000) (Figure 5). The TB case rate for children younger than 5 years of age, an age group at high risk for developing deadly forms of TB, decreased from 2.3 per 100,000 in 2009 to 2.0 per 100,000 in Georgia during 2010.

## **Race/Ethnicity Distribution and TB Disparities**

TB disproportionately affects racial/ethnic minorities in Georgia. In 2010, non-Hispanic blacks, Asians, and Hispanics, accounted for 51%, 18% and 17% of TB cases in Georgia, respectively, but only represented 33%, 3.5% and 8.8% of Georgia's population, respectively (Figure 6). Non-Hispanic whites constituted 13% of TB cases in 2010. The highest TB case rate among race/ethnic groups was among Asians (24.1 per 100,000), followed by Hispanics (8.2 per 100,000), and non-Hispanic blacks (7.1 per 100,000) (Figure 7). The black non-Hispanic TB case rate in 2010 represents an almost 80% drop from the TB case rate in 1993 (30.6 per 100,000) in this population. The black non-Hispanic TB case rate, however, was still seven times higher than the white non-Hispanic TB case rate (1.0 per 100,000) in Georgia during 2010 (Figure 8).

## High-Risk Populations

### Foreign-Born

TB cases among persons born outside of the United States accounted for 44% of TB cases in Georgia in 2010 compared to 42% in 2009. Most foreign-born cases reported in 2010 came from Mexico (20%), Vietnam (14%), and India (9%) - countries where TB is an endemic disease (Figures 9-10). Among 183 foreign-born cases, 92 (50%) were diagnosed in the first five years of their arrival in the U.S.

In 2010, four Health Districts reported 72% of the total number of foreign-born TB cases in Georgia: DeKalb (52 cases), Lawrenceville (46), Cobb (20) and Fulton (14). Among these Health Districts, foreign-born TB cases accounted for more than half of the TB cases in Lawrenceville (71%), Cobb (69%) and DeKalb (60%). Foreign-born TB cases in the Fulton Health District accounted for 27% of reported TB cases in Fulton.

### HIV Co-Infection

All TB patients need to be tested for HIV infection because TB treatment may change when antiretroviral therapy for HIV is given, and active TB often accelerates the natural progression of HIV infection. Among 380 TB cases in Georgia with known HIV status in 2010, 10% were HIV positive compared to 15% in 2009 (Figure 11). Among 43 HIV co-infected TB cases in 2010, 86% were non-Hispanic blacks, 72% were male and 51% were 25-44 years old.

HIV status was reported in 92% of TB cases in 2010 compared to 91% in 2009. In the high-risk age group of adults 25-44 years of age, the percentage of TB cases for which HIV status was reported slightly decreased from 96% in 2009 to 94% in 2010. Among 31 cases whose HIV status was not reported, HIV testing was not offered to 19 cases (61%), HIV test results were unknown in seven cases (23%), and five (16%) refused testing. Of the 19 TB cases that were not offered the HIV test, the majority was either elderly or very young: six (32%) were 65 years old or older, while four (21%) were younger than five years old.

### Congregate Settings and Substance Abuse

Persons residing in crowded congregate settings such as homeless shelters, prisons, and nursing homes are at risk for acquiring TB. In 2010, 26 (6%) TB cases in Georgia were homeless, 38 (9%) were residents of correctional facilities, and 3 (0.7%) were residents of long-term care facilities. Of the 38 TB cases incarcerated in Substance abuse is the most commonly reported behavioral risk factor among patients with TB in the United States. TB patients who abuse substances often experience treatment failure and remain infectious longer because treatment failure presumably extends periods of infectiousness. In Georgia, abuse of either illicit drugs or alcohol was reported in 72 (18%) TB cases in 2010 (Table 3, Figure 12).

## **Pediatric TB**

TB in children is considered a sentinel public health event because it often indicates recent transmission from an infectious adult case. Additionally, potentially lethal forms of TB such as TB meningitis or disseminated TB can develop in very young children. In 2010, children younger than 15 years old comprised 7% of Georgia TB cases; 14 cases (2.0 per 100,000) were reported in children younger than 5 years old, and 13 cases (0.9 per 100,000) were reported in children 5-14 years old. Two children had TB meningitis.

Latent tuberculosis infection (LTBI) in children younger than five years old is also a reportable disease condition in Georgia. When LTBI in a child less than five years of age is reported, public health personnel will initiate contact investigations to identify the source of the infection, recommend treatment for latent TB infection, follow up with the child to ensure completion of treatment and monitor for development of active TB disease. Early identification of TB infection and treatment in children can prevent progression to active disease and identify a previously undiagnosed and untreated case of active TB.

In 2010, 51 children younger than five years old were reported to have LTBI in Georgia; 38 were identified by TB screening in pediatric clinics and 13 from contact investigations. Public health staff identified the source case of the child's infection in 26 (51%) of these children.

## **Drug Resistance**

Among 303 culturepositive TB cases in Georgia during 2010, 298 (98%) were tested for initial drug susceptibility to the three first-line anti-TB medications: isoniazid (INH), rifampin (RIF), and ethambutol (EMB). Of 279 tested isolates from Georgia cases with no previous history of TB, 20 (7.2%) had primary resistance to INH, 10 (3.6%) to RIF, and 2 (0.8%) to EMB (Table 4). Three (1%) multidrug-resistant TB (MDR-TB, i.e. TB resistant to at least INH and RIF) cases were reported in 2010 among cases tested for drug susceptibility. The percentage of cases with primary INH resistance (INH-R) ranged from 6% to 14% in the past 5 years while an average of two MDR-TB cases per year was reported in Georgia over that same time period (Figure 13).

## Indicators of Infectiousness

Persons with pulmonary or laryngeal TB have the potential to infect others with TB, and infectiousness is higher if their sputum smears are positive for acid-fast bacilli (AFB), sputum cultures are positive for *Mycobacterium tuberculosis*, or cavitory lesions are present on chest radiography. In 2010, 78% of all Georgia TB cases had pulmonary TB, 54% had sputum cultures that were positive for *Mycobacterium tuberculosis*, 34% were sputum AFB smear-positive, and 22% showed cavitory lesions on chest radiography.

## Initial Diagnosis, Health Provider Data, and Directly Observed Therapy

In Georgia, the majority of TB patients are initially diagnosed in a hospital and patients are followed up by county health departments after discharge to continue their TB treatment. In 2010, 241 (59%) of the 411 TB cases in Georgia were reported initially by a hospital. Eight hospitals in the metropolitan Atlanta area reported five or more TB cases in 2010: Grady Memorial Hospital (41 cases), DeKalb Medical Center (11 cases), Northside Hospital (11 cases), Emory University Hospital (9 cases), Gwinnett Medical Center (8 cases), Wellstar Cobb Hospital (8 cases), Atlanta Medical Center (5 cases) and Wellstar Kennestone Hospital (5 cases). Four hospitals outside of the metropolitan Atlanta area reported five or more cases in 2010: Northeast Georgia Medical Center in Gainesville (7 cases), Memorial Health University Medical Center in Savannah (7 cases), Phoebe Putney Memorial Hospital in Albany (6 cases), and Medical Center of Central Georgia in Macon (5 cases). These twelve hospitals accounted for 51% of the patients hospitalized for TB in Georgia in 2010. County health departments provided case management for 90% of all Georgia TB cases, correctional facilities treated 7%, and only 3% of cases were cared for solely by a private physician. County health department staff provides directly observed therapy (DOT) to TB patients, which entails watching a patient swallow every dose of their TB medications for at least 6 months. Among 389 Georgia TB cases reported in 2009 with available case completion data, 76% received TB treatment entirely by DOT, 21% were treated by a combination of DOT and self-administered therapy, and only 3% self-administered their medications for the entire duration of their treatment.

## TB Mortality

Eighteen persons died of TB in Georgia in 2010. The age-adjusted TB mortality rate in 2010 was 0.2 per 100,000. From 2005 to 2010, an average of 17 people died of TB in Georgia each year (range = 14-31).

## **TB Contact Investigations and Latent TB Infection**

Public health authorities routinely conduct a contact investigation among persons exposed to a TB case to identify secondary TB cases and contacts with latent TB infection (LTBI). Index TB cases with positive acid-fast bacillus (AFB) sputum-smear results or pulmonary cavities have the highest priority for investigation. During a contact investigation, public health staff ask recent contacts to a case if they have TB-like symptoms, administer a TB skin test (TST), repeat the TST after 8-10 weeks if the initial TST is negative, and have a chest radiology exam performed if the TST is positive ( $\geq 5$  millimeters induration). Persons with LTBI have a positive TST, but are asymptomatic and have a normal chest radiology exam. They are not contagious but have a 10% chance of developing TB disease later in life if they do not receive treatment for LTBI.

Among 4,449 identified contacts of Georgia TB cases reported in 2009, (the most recent year with completed contact investigation data), 3,701 (83%) were completely evaluated for TB disease and LTBI. Of these evaluated contacts, 50 (1.4%) had TB disease and 803 (22%) had LTBI.

## **TB Program Objectives**

Objective 1: 90% of Georgia TB patients will complete a course of TB treatment within 12 months of starting treatment.

Among 347 TB cases reported in Georgia during 2009 who were eligible to complete TB treatment within 12 months, 320 (92%) completed treatment and 301 (87%) completed treatment within 12 months; 17 (5%) were lost to follow-up, eight (2%) moved out of Georgia and were subsequently lost to follow-up, one (0.3%) was uncooperative and refused treatment, and one (0.3%) had to stop treatment due to adverse side effects to anti-TB medications (Tables 5, 6).

In 2009, Georgia TB cases with HIV, who were foreign-born, or who were correctional facility inmates, had lower rates of timely treatment completion than the over-all average for all TB cases. Interventions need to focus on these populations to improve timely treatment completion. Though this objective was not achieved, timely treatment completion has improved since 1994, when directly observed therapy became the recommended standard of care for TB treatment in Georgia (Figure 14).

Objective 2: 95% of TB cases with sputum smears that are positive for acid-fast bacillus (AFB) will have contacts identified.

In 2009, all 153 Georgia TB cases with positive AFB sputum smears had contacts elicited, exceeding the program target of 95%.

Objective 3: Among infected contacts of AFB sputum smear-positive TB cases in Georgia, at least 70 percent who started therapy for latent TB infection (LTBI) will complete LTBI therapy.

Among 486 infected contacts of 153 AFB sputum smear-positive TB cases in 2009, 300 (62%) were started on LTBI treatment; of 275 infected contacts started on LTBI treatment with treatment completion data available, 180 (66%) completed treatment, 39 (14%) chose to stop treatment on their own, 29 (10%) were lost to follow-up, 16 (6%) moved, six (2%) stopped treatment due to a provider's decision, four (1.5%) stopped treatment due to adverse side effects, and one (0.4%) died (Tables 11, 12).

**Table 1.  
Number of TB Cases and TB Case Rates per 100,000 population by County,  
Georgia, 2009- 2010**

COUNTY	2009		2010	
	Number of cases	Case Rate	Number of cases	Case Rate
Appling	<5	--	<5	--
Atkinson	<5	--	<5	--
Bacon	0	0	0	0
Baker	0	0	<5	--
Baldwin	0	0	<5	--
Banks	0	0	<5	--
Barrow	<5	--	0	0
Bartow	<5	--	<5	--
Ben Hill	0	0	0	0
Berrien	0	0	<5	--
Bibb	5	3.2	7	4.5
Bleckley	0	0	0	0
Brantley	0	0	0	0
Brooks	0	0	0	0
Bryan	0	0	0	0
Bulloch	<5	--	0	0
Burke	0	0	0	0
Butts	<5	--	0	0
Calhoun	0	0	0	0
Camden	<5	--	<5	--
Candler	0	0	0	0
Carroll	<5	--	0	0
Catoosa	<5	--	0	0
Charlton	0	0	0	0

**Table 1.  
Number of TB Cases and TB Case Rates per 100,000 population by County,  
Georgia, 2009- 2010**

Chatham	11	4.3	10	3.8
Chattahoochee	0	0	0	0
Chattooga	0	0	<5	--
Cherokee	<5	--	<5	--
Clarke	<5	--	<5	--
Clay	0	0	0	0
Clayton	11	4.0	8	3.1
Clinch	0	0	<5	--
Cobb	18	2.5	26	3.8
Coffee	0	0	0	0
Colquitt	<5	--	0	0
Columbia	5	4.4	7	5.6
Augusta State Med. Prison (ASMP)	9	n/a	18	n/a
Cook	0	0	0	0
Coweta	0	0	<5	--
Crawford	0	0	0	0
Crisp	<5	--	<5	--
Dade	0	0	0	0
Dawson	0	0	0	0
Decatur	<5	--	<5	--
DeKalb	63	8.4	86	12.4
Dodge	<5	--	0	0
Dooly	<5	--	<5	--
Dougherty	5	5.2	6	6.3
Douglas	<5	--	<5	--
<b>COUNTY</b>	<b>2009</b>		<b>2010</b>	
	Number of cases	Case Rate	Number of cases	Case Rate
Early	0	0	0	0
Echols	0	0	0	0
Effingham	0	0	<5	--
Elbert	<5	--	<5	--
Emanuel	0	0	0	0
Evans	0	0	0	0
Fannin	<5	--	<5	--
Fayette	<5	--	<5	--

Floyd	<5	--	0	0
Forsyth	<5	--	0	0
Franklin	0	0	0	0
Fulton	82	7.9	51	5.5
Gilmer	<5	--	<5	--
Glascocock	<5	--	0	0
Glynn	0	0	<5	--
Gordon	0	0	<5	--
Grady	5	19.9	<5	--
Greene	<5	--	0	0
Gwinnett	54	6.7	56	7.0
Habersham	0	0	<5	--
Hall	8	4.3	6	3.3
Hancock	0	0	0	0
Haralson	0	0	0	0
Harris	0	0	0	0
Hart	0	0	0	0
Heard	0	0	0	0
Henry	0	0	<5	--
Houston	5	3.8	6	4.3
Irwin	0	0	<5	--
Jackson	0	0	0	0
Jasper	<5	--	0	0
Jeff Davis	0	0	0	0
Jefferson	0	0	<5	--
Jenkins	0	0	0	0
Johnson	0	0	<5	--
Jones	0	0	0	0
Lamar	0	0	0	0
Lanier	0	0	0	0
Laurens	0	0	0	0
Lee	0	0	0	0
Liberty	6	9.6	0	0
Lincoln	0	0	0	0
Long	<5	--	0	0
Lowndes	<5	--	<5	--
Lumpkin	<5	--	0	0
Macon	<5	--	0	0
Madison	0	0	0	0
Marion	0	0	0	0

McDuffie	0	0	<5	--
McIntosh	0	0	<5	--
Meriwether	0	0	0	0
COUNTY	2009		2010	
	Number of cases	Case Rate	Number of cases	Case Rate
Miller	<5	--	0	0
Mitchell	<5	--	<5	--
Monroe	0	0	0	0
Montgomery	0	0	0	0
Morgan	0	0	0	0
Murray	<5	--	0	0
Muscogee	13	6.8	8	4.2
Newton	<5	--	5	5.0
Oconee	0	0	0	0
Oglethorpe	0	0	0	0
Paulding	<5	--	<5	--
Peach	0	0	<5	--
Pickens	0	0	0	0
Pierce	0	0	0	0
Pike	0	0	0	0
Polk	<5	--	0	0
Pulaski	0	0	0	0
Putnam	0	0	0	0
Quitman	0	0	<5	--
Rabun	0	0	0	0
Randolph	0	0	0	0
Richmond	10	5.0	8	4.0
Rockdale	<5	--	<5	--
Schley	0	0	0	0
Screven	<5	--	<5	--
Seminole	0	0	0	0
Spalding	<5	--	<5	--
Stephens	0	0	<5	--
Stewart (excludes Immigration and Customs Enforcement (ICE) cases)	0	0	0	0
ICE Detention Center	5	n/a	6	n/a
Sumter	<5	--	<5	--
Talbot	0	0	0	0

Taliaferro	0	0	0	0
Tattnall	0	0	0	0
Taylor	0	0	0	0
Telfair	<5	--	0	0
Terrell	0	0	<5	--
Thomas	<5	--	<5	--
Tift	<5	--	<5	--
Toombs	0	0	<5	--
Towns	0	0	0	0
Treutlen	0	0	0	0
Troup	6	9.3	5	7.5
Turner	<5	--	<5	--
Twiggs	0	0	0	0
Union	0	0	<5	--
Upson	0	0	<5	--
Walker	5	7.7	<5	--
Walton	0	0	0	0
Ware	<5	--	<5	--
<b>COUNTY</b>	<b>2009</b>		<b>2010</b>	
	<b>Number of cases</b>	<b>Case Rate</b>	<b>Number of cases</b>	<b>Case Rate</b>
Warren	0	0	0	0
Washington	0	0	0	0
Wayne	0	0	0	0
Webster	0	0	0	0
Wheeler	<5	--	0	0
White	0	0	0	0
Whitfield	<5	--	<5	--
Wilcox	0	0	<5	--
Wilkes	0	0	0	0
Wilkinson	0	0	0	0
Worth	0	0	<5	--
<b>Georgia Total</b>	<b>412</b>	<b>4.2</b>	<b>411</b>	<b>4.2</b>

\* In counties where one to four cases were reported, "< 5" is used to represent the number of reported cases, and the case rate is not calculated.

**Table 2.  
Number of TB Cases and TB Case Rates per 100,000 population by Health District,  
Georgia, 2009-2010**

HEALTH DISTRICT	2009		2010	
	Number of Cases	Case rate	Number of Cases	Case rate
1.1 Rome	16	2.6	11	1.7
1.2 Dalton	10	2.3	10	2.3
2.0 Gainesville	14	5.0	10	1.7
3.1 Cobb	21	2.5	29	3.5
3.2 Fulton	82	7.9	51	5.5
3.3 Clayton	11	4.0	8	3.1
3.4 Lawrenceville	59	5.9	65	6.6
3.5 DeKalb	63	8.4	86	12.4
4.0 LaGrange	12	1.5	13	1.6
5.1 Dublin	3	2.1	2	1.3
5.2 Macon	11	2.1	16	3.1
6.0 Augusta	20	4.5	20	4.3
ASMP	9	na	18	na
7.0 Columbus	23	6.4	12	2.9
ICE Detention Ctr.	5	na	6	na
8.1 Valdosta	5	2.0	10	4.0
8.2 Albany	17	4.6	15	4.2
9.1 Coastal	21	3.8	18	3.2
9.2 Waycross	5	1.4	7	1.9
10 Athens	5	1.1	4	0.9
<b>Georgia Total</b>	<b>412</b>	<b>4.2</b>	<b>411</b>	<b>4.2</b>

**Table 3.  
Percentage of TB Cases with Risk Factors for TB by Health District, Georgia, 2010**

HEALTH DISTRICT	Foreign-born %	HIV Infected %	Homeless %	Inmate %	Nursing Home %	Substance Abuse %
1.1 Rome	18	0	0	0	0	9
1.2 Dalton	60	0	0	0	0	20
2.0 Gainesville	40	0	0	30	0	0
3.1 Cobb	71	4	7	0	0	4
3.2 Fulton	28	29	20	4	0	33
3.3 Clayton	38	12	0	0	0	12
3.4 Lawrenceville	71	2	2	2	3	6
3.5 DeKalb	60	16	7	1	0	9
4.0 La-Grange	23	18	0	0	0	8
5.1 Dublin	50	50	0	0	0	0
5.2 Macon	12	12	0	0	6	12
6.0 Augusta	26	17	5	0	0	10
ASMP	2	11	17	100	0	61
7.0 Columbus	25	0	0	0	0	42
ICE Detention	32	16	18	100	0	34
8.1 Valdosta	20	0	0	0	0	30
8.2 Albany	7	0	7	0	0	40
9.1 Coastal	33	12	6	33	0	22
9.2 Waycross	43	0	0	14	0	29
10 Athens	50	0	0	0	0	0
<b>Georgia Total</b>	<b>45</b>	<b>11</b>	<b>6</b>	<b>9</b>	<b>1</b>	<b>17</b>

**Table 4.  
Primary Resistance to First-line Anti-TB  
Medications by Health District, Georgia, 2010**

TB Drug HEALTH DISTRICT	Isoniazid		Rifampin		Ethambutol	
	No.	%	No.	%	No.	%
1.1 Rome	0	0	0	0	0	0
1.2 Dalton	0	20	0	0	0	0
2.0 Gainesville	2	11	0	0	0	0
3.1 Cobb	4	21	1	5	1	5
3.2 Fulton	4	10	1	2	0	0
3.3 Clayton	1	17	0	0	0	0
3.4 Lawrenceville	3	9	1	3	0	0
3.5 DeKalb	2	4	1	2	0	0
4.0 LaGrange	1	8	0	0	0	0
5.1 Dublin	0	0	0	0	0	0
5.2 Macon	1	8	2	15	0	0
6.0 Augusta & ASMP	3	7	4	14	0	0
7.0 Columbus & ICE	0	0	0	0	0	0
8.1 Valdosta	0	0	0	0	0	0
8.2 Albany	1	9	0	0	0	0
9.1 Coastal	0	0	0	0	0	0
9.2 Waycross	0	0	0	0	0	0
10 Athens	0	0	0	0	0	0
<b>Georgia Total</b>	<b>20</b>	<b>7</b>	<b>10</b>	<b>4</b>	<b>1</b>	<b>0.4</b>

**Table 5.  
Completion of TB Treatment by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	No. Cases Completed Tx in 12 months / No. Started Tx	%	No. Cases Completed Tx in 12 months / No. Started Tx	%
1.1 Rome	9/9	100	11/12	92
1.2 Dalton	15/16	94	10/10	100
2.0 Gainesville	9/10	90	12/12	100
3.1 Cobb	22/22	100	20/21	95
3.2 Fulton	64/66	97	68/70	97
3.3 Clayton	10/11	91	11/11	100
3.4 Lawrenceville	61/69	88	47/57	82
3.5 DeKalb	66/68	97	47/60	78
4.0 LaGrange	7/8	88	11/12	92
5.1 Dublin	7/7	100	3/3	100
5.2 Macon	16/16	100	10/10	52
6.0 Augusta ASMP	11/12 11/11	92 100	16/17 9/10	94 90
7.0 Columbus	12/12	100	15/16	94
ICE Detention	0/5	0	4/5	80
8.1 Valdosta	13/13	100	5/5	100
8.2 Albany	19/22	86	15/16	94
9.1 Coastal	19/21	90	18/18	100
9.2 Waycross	4/6	67	5/5	100
10 Athens	6/6	100	4/4	100
<b>Georgia Total</b>	<b>981/410</b>	<b>93</b>	<b>337/374</b>	<b>90</b>

\*Denominator does not include TB patients who died while on TB treatment

**Table 6.  
Timely Completion of TB Treatment (Tx) by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008		2009	
	No. Cases that Completed Treatment (Tx) / No. Cases Started on Treatment	%	No. Cases that Completed Tx/ No. Cases Started on Tx	%
1.1 Rome	7/9	78	9/12	75
1.2 Dalton	14/16	88	10/10	100
2.0 Gainesville	7/10	70	12/12	100
3.1 Cobb	10/22	45	18/20	90
3.2 Fulton	60/64	94	60/65	92
3.3 Clayton	10/11	91	11/11	100
3.4 Lawrenceville	54/69	78	41/56	73
3.5 DeKalb	60/68	88	40/58	69
4.0 LaGrange	7/8	88	11/12	92
5.1 Dublin	7/7	100	3/3	100
5.2 Macon	14/16	88	9/9	100
6.0 Augusta ASMP	11/12	92	123/17	123/17
	11/11	73	98/109	98/109
7.0 Columbus	10/12	100	14/15	93
ICE Detention	0/5	0	0	0/5
8.1 Valdosta	13/13	100	5/5	100
8.2 Albany	19/22	86	15/16	94
9.1 Coastal	18/21	86	17/17	100
9.2 Waycross	4/6	67	5/5	100
10 Athens	6/6	100	3/4	75
<b>Georgia Total</b>	<b>349/410</b>	<b>85</b>	<b>304/362</b>	<b>84</b>

**Table 7.  
Sputum Smear Positive (SSP) Cases with Contacts  
Identified by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008		2009	
	No. SSP Cases with Contacts Identified /	%	No. SSP Cases with Contacts Identified /	%
1.1 Rome	4/4	100	5/5	100
1.2 Dalton	1/1	100	7/7	100
2.0 Gainesville	1/1	100	5/5	100
3.1 Cobb	3/3	100	6/6	100
3.2 Fulton	25/25	100	37/37	100
3.3 Clayton	3/3	100	3/3	100
3.4 Lawrenceville	10/10	100	18/18	100
3.5 DeKalb	22/22	100	14/14	100
4.0 LaGrange	0/0	--	7/7	100
5.1 Dublin	0/0	--	3/3	100
5.2 Macon	7/7	100	2/2	100
6.0 Augusta	6/6	100	11/11	100
7.0 Columbus	3/3	100	11/11	100
8.1 Valdosta	0/0	--	1/1	100
8.2 Albany	10/10	100	9/9	100
9.1 Coastal	10/10	100	10/10	100
9.2 Waycross	2/2	100	3/3	100
10 Athens	4/4	100	1/1	100
<b>Georgia Total</b>	<b>110/110</b>	<b>100</b>	<b>153/153</b>	<b>100</b>

**Table 8.  
Completely Evaluated Contacts of SSP Cases by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008		2009	
	No. Contacts that were Completely Evaluated / No. Contacts Identified	%	No. Contacts that were Completely Evaluated / No. Contacts Identified	%
1.1 Rome	28/28	100	47/54	87
1.2 Dalton	7/7	100	85/92	92
2.0 Gainesville	9/9	100	14/21	67
3.1 Cobb	20/21	95	43/50	86
3.2 Fulton	371/427	87	532/638	83
3.3 Clayton	5/6	83	590/658	90
3.4 Lawrenceville	53/54	98	97/175	55
3.5 DeKalb	321/359	89	84/110	76
4.0 LaGrange	0/0	--	54/73	74
5.1 Dublin	0/0	--	44/49	90
5.2 Macon	59/65	91	1/7	14
6.0 Augusta	167/179	93	205/262	78
7.0 Columbus	6/6	100	149/198	75
8.1 Valdosta	0/0	--	5/5	100
8.2 Albany	284/338	84	251/380	66
9.1 Coastal	48/49	98	42/61	69
9.2 Waycross	6/6	100	20/20	100
10 Athens	21/21	100	5/8	62
<b>Georgia Total</b>	<b>1405/1575</b>	<b>89</b>	<b>2268/2861</b>	<b>79</b>

**Table 9.  
Contacts with Latent TB Infection (LTBI) exposed to Sputum Smear  
Positive (SSP) Cases by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008		2009	
	No. Contacts with LTBI/ No. Contacts Completely Evaluated	%	No. Contacts with LTBI/ No. Contacts Completely Evaluated	%
1.1 Rome	6/28	21	13/47	28
1.2 Dalton	5/7	71	41/85	48
2.0 Gainesville	1/9	11	7/14	50
3.1 Cobb	4/20	20	18/43	42
3.2 Fulton	163/371	44	83/532	16
3.3 Clayton	2/5	40	40/590	7
3.4 Lawrenceville	17/53	32	60/97	62
3.5 DeKalb	40/320	12	37/84	44
4.0 LaGrange	--	--	13/54	24
5.1 Dublin	--	--	13/44	30
5.2 Macon	11/59	19	1/1	100
6.0 Augusta	48/167	29	31/205	15
7.0 Columbus	1/6	17	35/149	24
8.1 Valdosta	--	--	1/5	20
8.2 Albany	77/284	27	68/251	27
9.1 Coastal	18/48	38	18/42	43
9.2 Waycross	4/6	67	6/20	30
10 Athens	2/21	10	2/5	40
<b>Georgia Total</b>	<b>399/1404</b>	<b>28</b>	<b>486/2268</b>	<b>21</b>

**Table 10.  
Contacts with LTBI exposed to SSP Cases started on LTBI Treatment  
by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008		2009	
	No. Infected Con- tacts on LTBI Treat- ment / No. Infected Contacts	%	No. Infected Contacts on LTBI Treatment / No. Infected Contacts	%
1.1 Rome	5/6	83	5/13	38
1.2 Dalton	4/5	80	32/41	78
2.0 Gainesville	1/1	100	7/7	100
3.1 Cobb	3/4	75	13/18	72
3.2 Fulton	106/163	65	42/83	51
3.3 Clayton	2/2	100	21/40	52
3.4 Lawrenceville	9/17	53	39/60	65
3.5 DeKalb	28/40	70	26/37	70
4.0 LaGrange	--	--	13/13	100
5.1 Dublin	--	--	8/13	62
5.2 Macon	8/11	73	0/1	0
6.0 Augusta	23/48	48	10/31	32
7.0 Columbus	1/1	100	20/35	57
8.1 Valdosta	--	--	1/1	100
8.2 Albany	48/77	62	49/68	72
9.1 Coastal	13/18	72	9/18	50
9.2 Waycross	0/4	0	5/6	83
10 Athens	2/2	100	0/2	0
<b>Georgia Total</b>	<b>253/399</b>	<b>63</b>	<b>300/486</b>	<b>62</b>

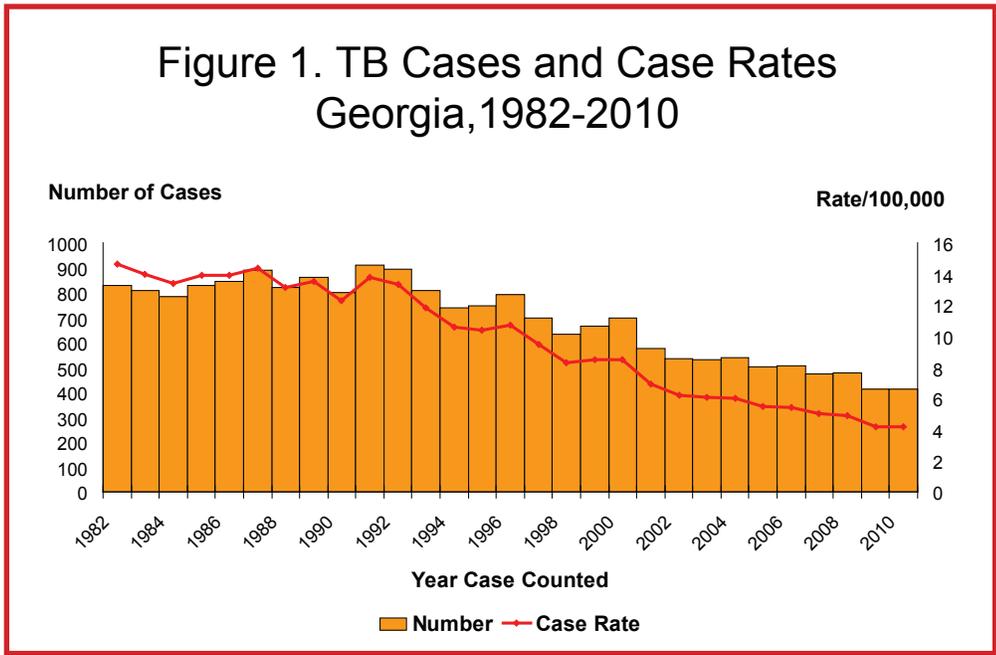
**Table 11**  
**LTBI Treatment Completion by Infected Contacts exposed to SSP Cases**  
**by Health District, Georgia, 2008-2009**

HEALTH DISTRICT	2008			2009		
	No. Contacts that Completed LTBI Treatment /Contacts Treated	%	No. Contacts with Missing Tx data	No. Contacts that Completed LTBI Treatment / Contacts Treated	%	No. Contacts with Missing Tx data
1.1 Rome	4/5	80	0	2/5	40	0
1.2 Dalton	3/4	75	0	24/32	75	0
2.0 Gainesville	1/1	100	0	4/7	57	0
3.1 Cobb	1/3	33	0	10/13	77	0
3.2 Fulton	80/104	77	2	29/40	72	2
3.3 Clayton	1/2	50	0	6/7	86	14
3.4 Lawrenceville	3/9	33	0	21/38	55	1
3.5 DeKalb	16/28	57	0	14/19	74	7
4.0 La-Grange	--	--	0	4/13	31	0
5.1 Dublin	--	--	0	2/8	25	0
5.2 Macon	3/8	38	0	--	--	0
6.0 Augusta	5/21	24	2	7/10	70	0
7.0 Columbus	0/1	0	0	12/20	60	0
8.1 Valdosta	--	--	0	--	--	1
8.2 Albany	29/42	69	6	36/49	74	0
9.1 Coastal	12/13	92	0	5/9	56	0
9.2 Waycross	--	--	0	4/5	80	0
10 Athens	1/2	50	0	--	--	0
<b>Georgia Total</b>	<b>159/243</b>	<b>67</b>	<b>10</b>	<b>180/275</b>	<b>66</b>	<b>25</b>

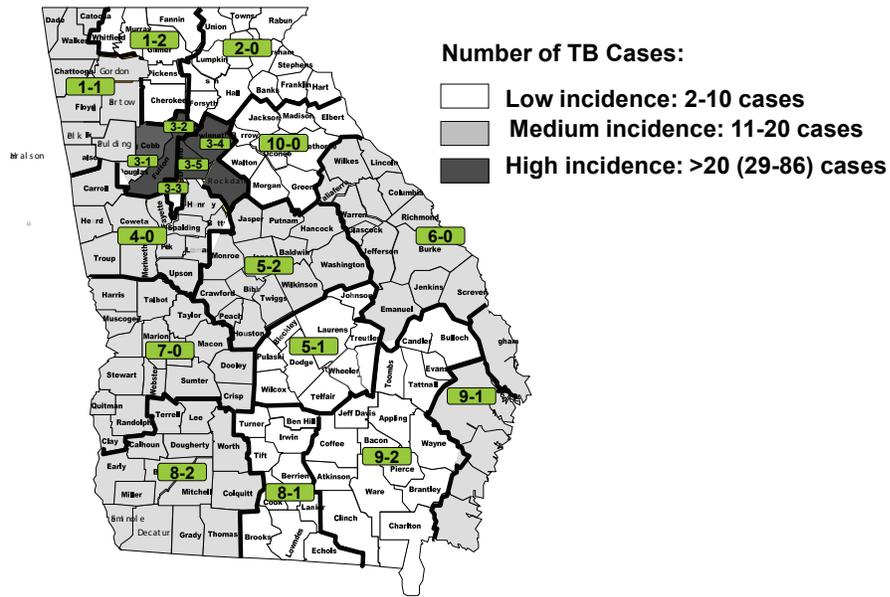
**Table 12.**  
**Reasons Why Infected Contacts of SSP cases Stopped LTBI Treatment, Georgia, 2008-2009**

Reasons for Stopping LTBI Therapy	2008 N=243		2009 N= 275	
	No.	%	No.	%
Completed Therapy	159	65	180	66
Chose to Stop	29	12	39	14
Lost to Follow-Up	29	12	29	10
Provider Decision	7	3	6	2
Moved	10	4	16	6
Adverse Reactions	6	2	4	2
Active TB Developed	1	0.4	0	0
Death	2	0.8	1	0.4

**Figure 1. TB Cases and Case Rates  
 Georgia, 1982-2010**



**Figure 2. Number of TB Cases by Health Districts, Georgia, 2010**



**Figure 3. TB Case Rates by Health Districts, Georgia, 2010**

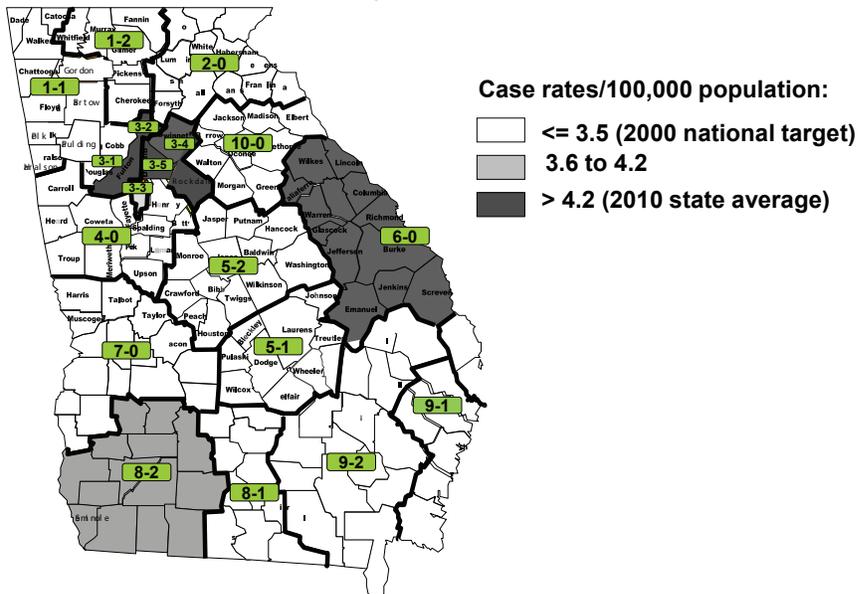


Figure 4. TB Cases by Age Group and Sex, Georgia, 2010

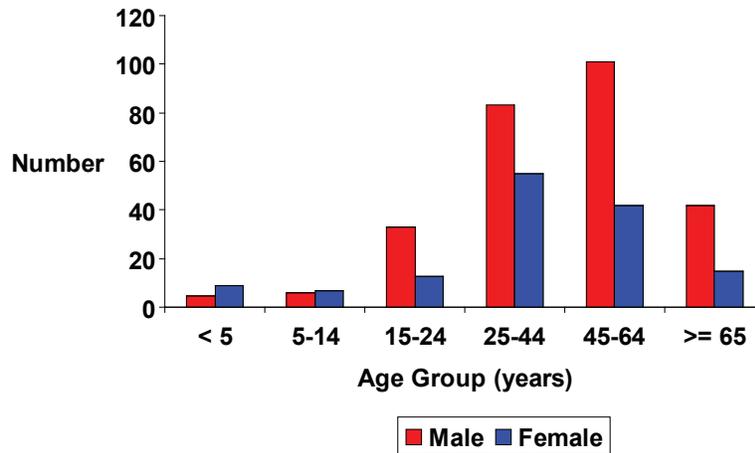


Figure 5. TB Case Rates\* by Age Group, 2006-2010, Georgia

Age Group	2006	2007	2008	2009	2010
< 5 yrs.	4.1	3.5	4.5	2.3	2.0
5-14 yrs.	0.8	0.8	0.6	0.5	0.9
15-24 yrs.	5.1	4.3	3.9	4.1	3.3
25-44 yrs.	6.9	6.0	6.3	5.1	5.0
45-64 yrs.	6.6	6.0	6.6	5.4	5.8
65+ yrs.	6.1	7.4	5.4	5.7	5.5

\*Rates are per 100,000 population

Figure 6. TB Cases by Race/Ethnicity, Georgia, 2000 and 2010

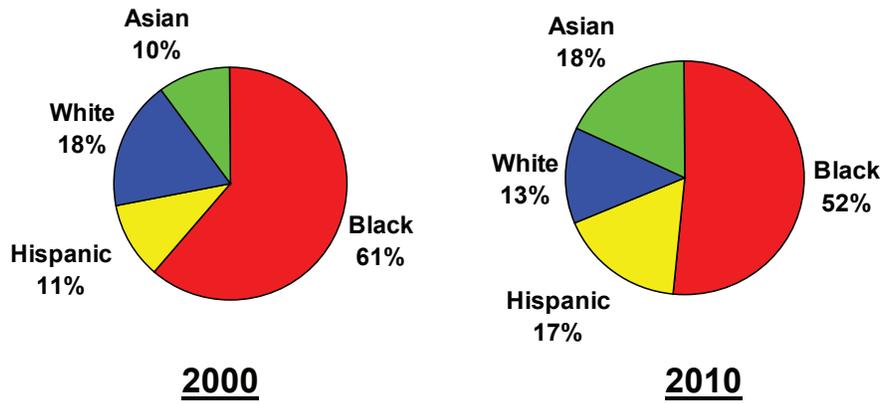


Figure 7. TB Case Rates\* by Race/Ethnicity Georgia, 2006-2010

Race/ Ethnicity	2006	2007	2008	2009	2010
Asian, non-Hispanic	26.4	21.5	27.2	29.7	24.1
Hispanic, All races	16.5	12.9	11.8	11.2	8.2
Black, non-Hispanic	9.0	8.3	7.8	6.2	7.1
White, non-Hispanic	1.3	1.2	1.2	1.2	1.0

\*Rates are per 100,000 population

Figure 8. TB Case Rates in non-Hispanic Blacks and Whites, Georgia, 1993-2010

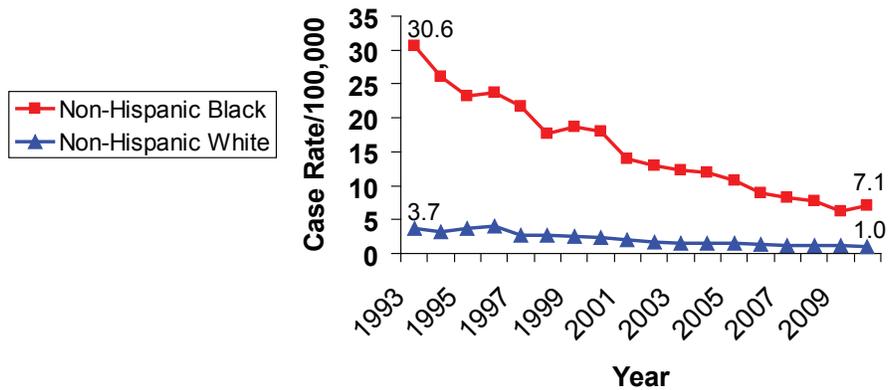


Figure 9. US-born and Foreign-born TB Cases, Georgia, 1993-2010

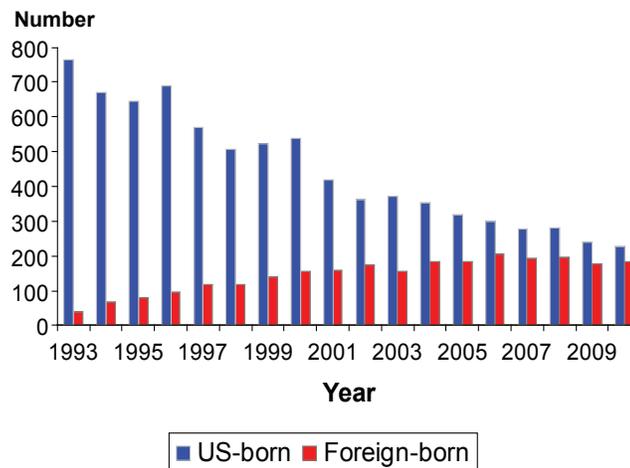


Figure 10. Percent of Foreign-born TB Cases (n=183) by Country of Origin, Georgia, 2010

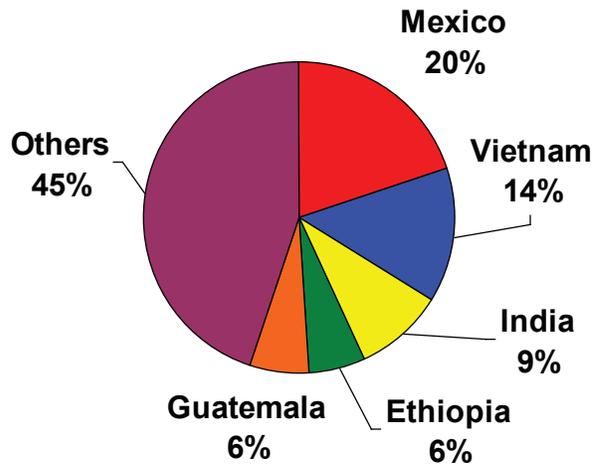


Figure 11. HIV Status of TB Cases, Georgia, 1993-2010

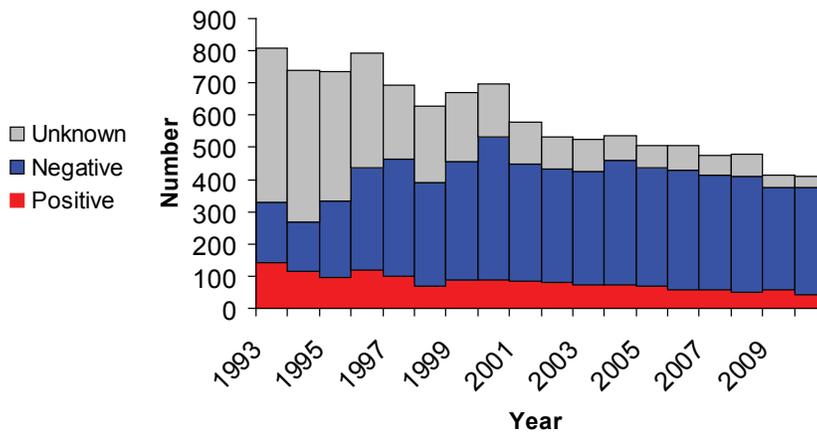


Figure 12. TB in Other High-Risk Populations, Georgia, 2006-2010

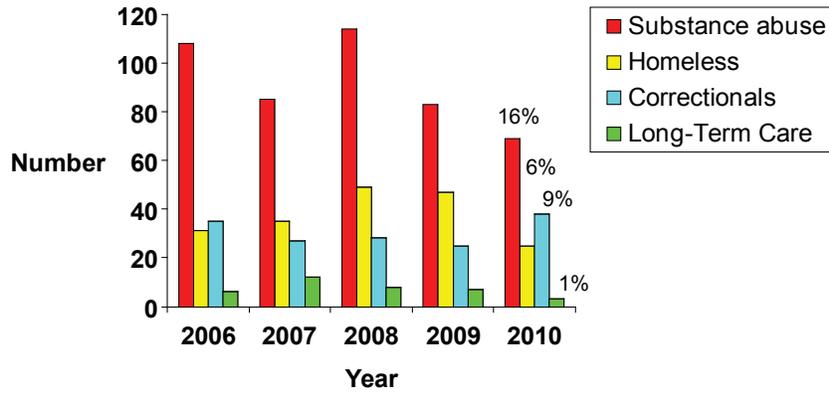


Figure 13. Drug Resistance and MDR-TB Georgia, 2006-2010

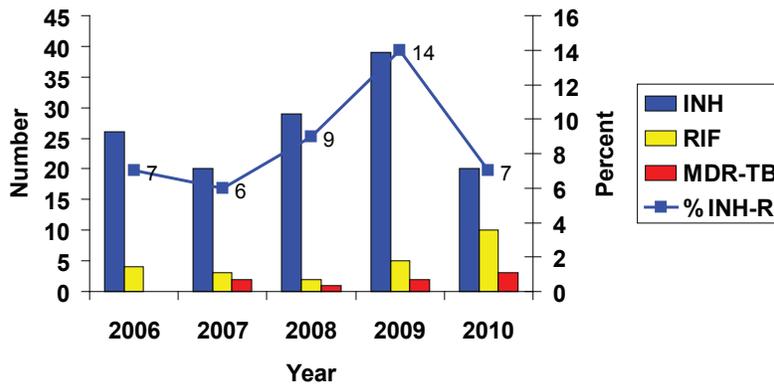


Figure 14. Timely TB Treatment Completion and Directly Observed Therapy (DOT) Georgia, 1993-2009

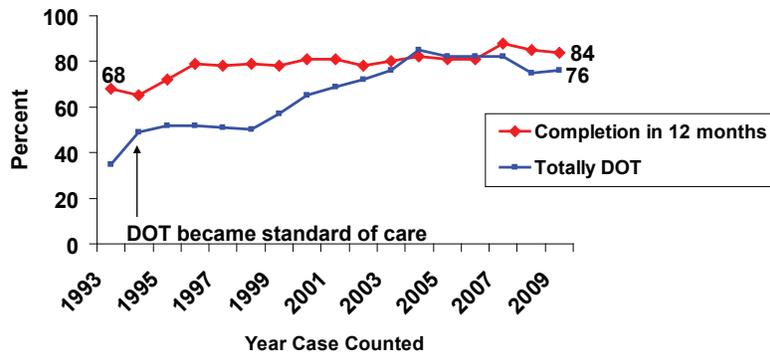
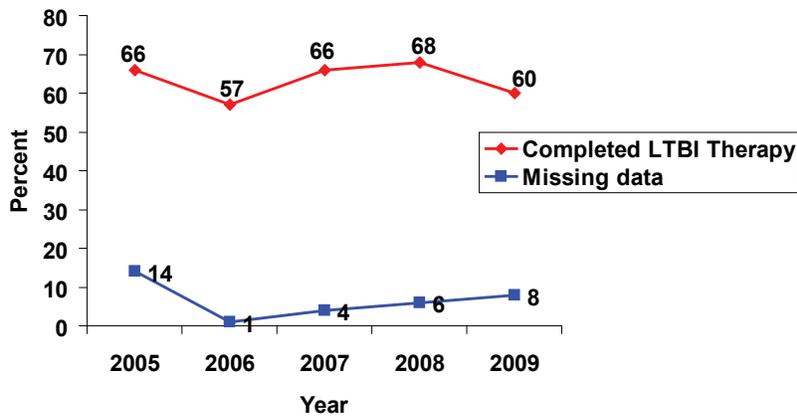
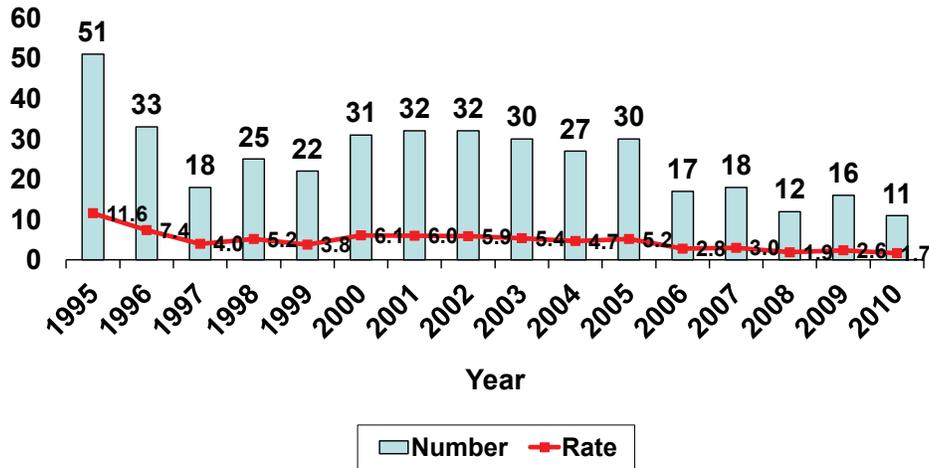


Figure 15. Completion of Latent TB Infection (LTBI) Therapy among all contacts of TB cases, Georgia, 2005-2009





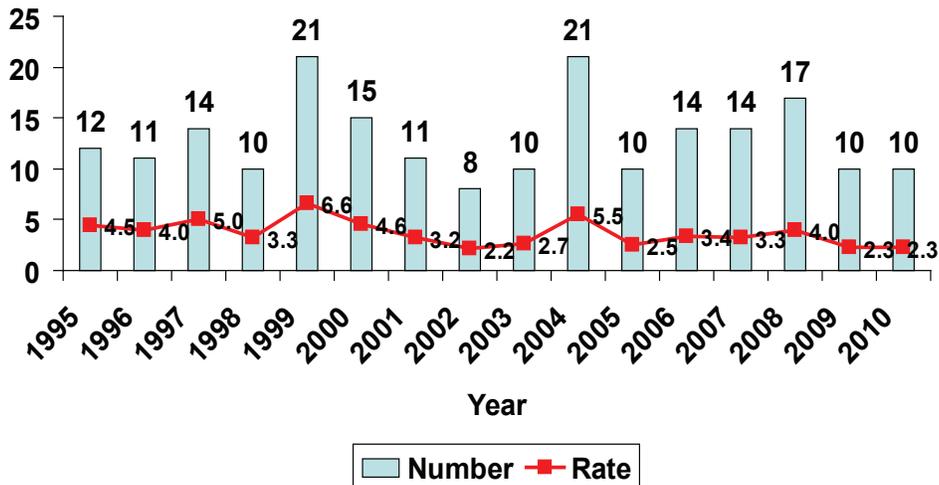
## TB Case Numbers and Rates District 1-1 (Rome), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



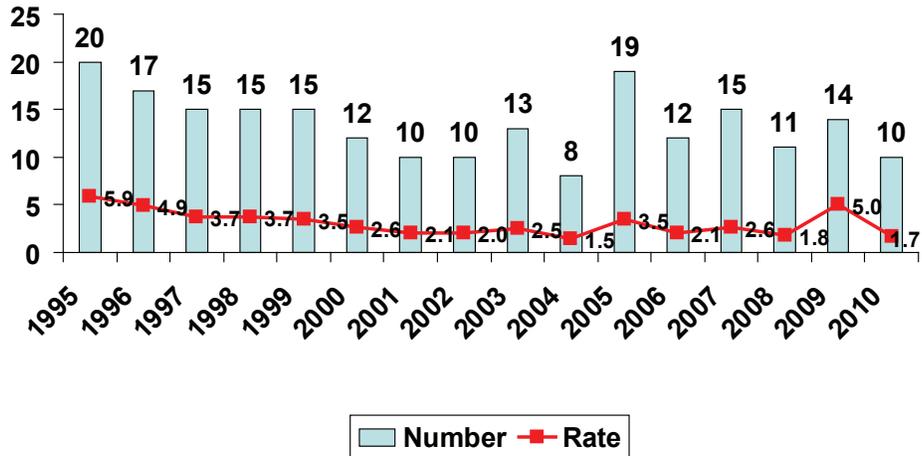
## TB Case Numbers and Rates District 1-2 (Dalton), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



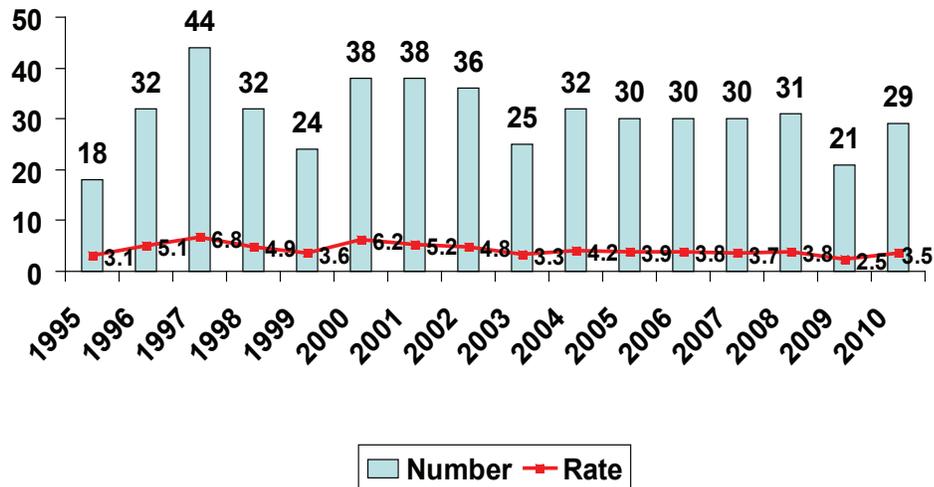
## TB Case Numbers and Rates District 2 (Gainesville), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



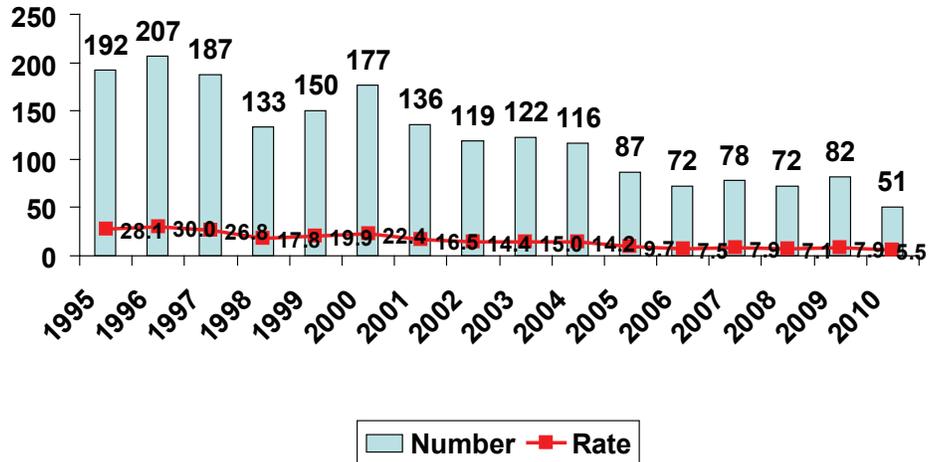
## TB Case Numbers and Rates District 3-1 (Cobb), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



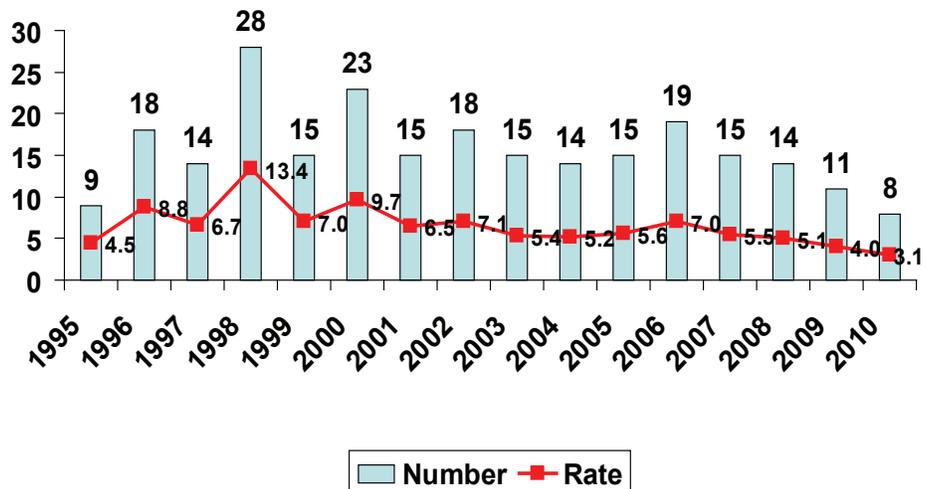
## TB Case Numbers and Rates District 3-2 (Fulton), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



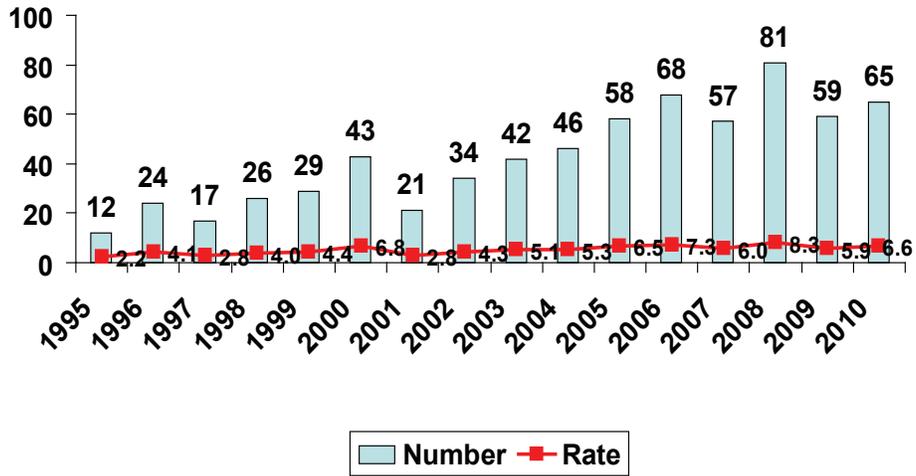
## TB Case Numbers and Rates District 3-3 (Clayton), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



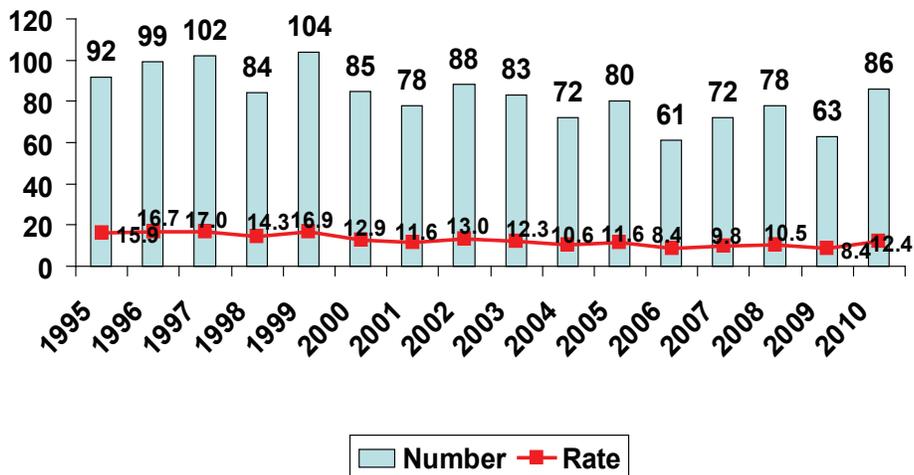
## TB Case Numbers and Rates District 3-4 (Lawrenceville), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



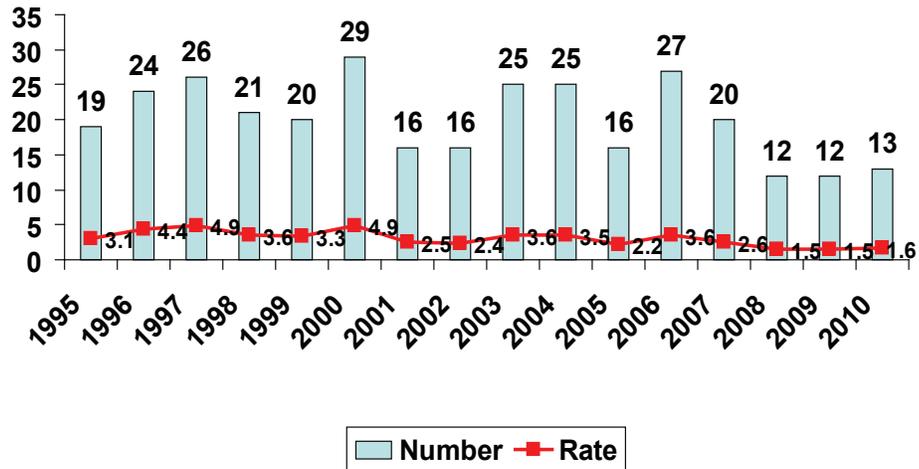
## TB Case Numbers and Rates District 3-5 (DeKalb), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



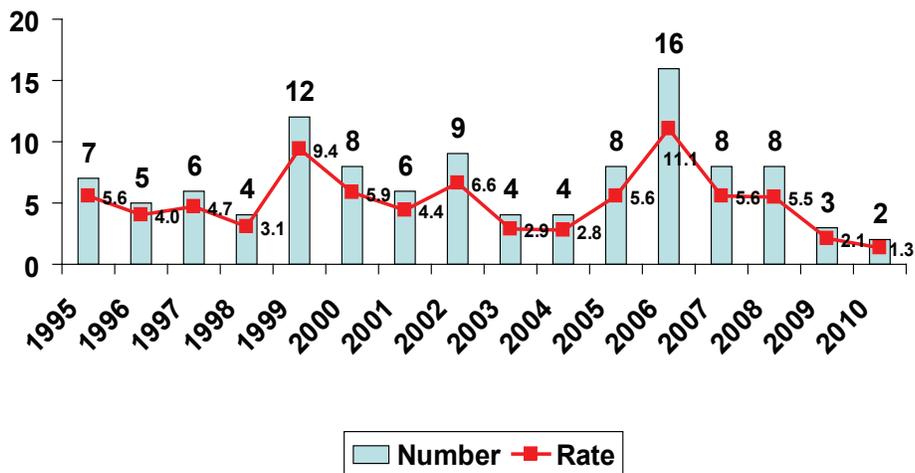
## TB Case Numbers and Rates District 4 (LaGrange), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



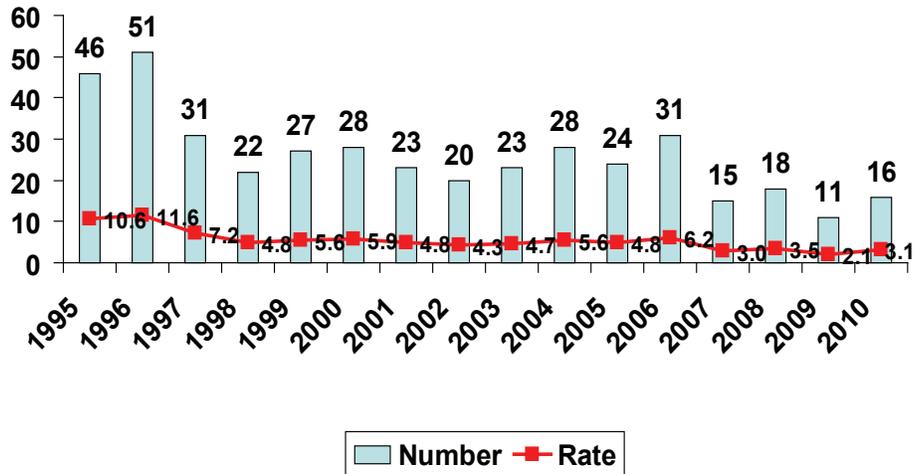
## TB Case Numbers and Rates District 5-1 (Dublin), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



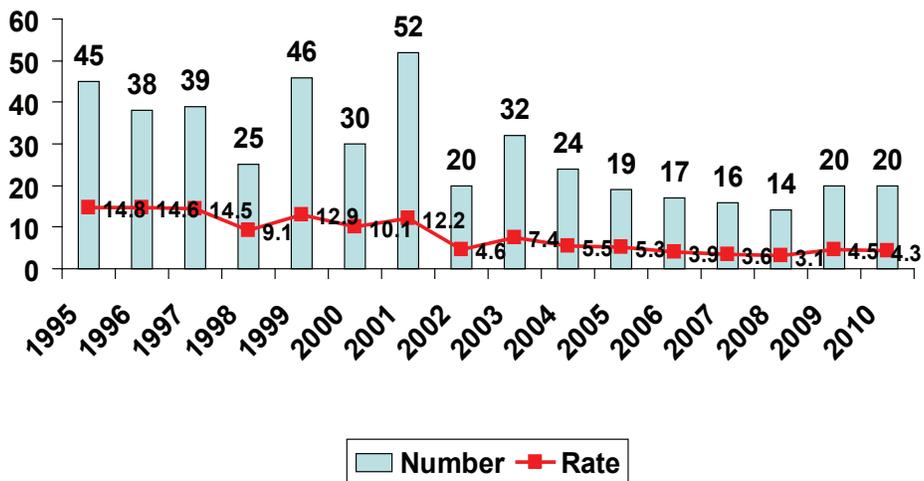
## TB Case Numbers and Rates District 5-2 (Macon), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



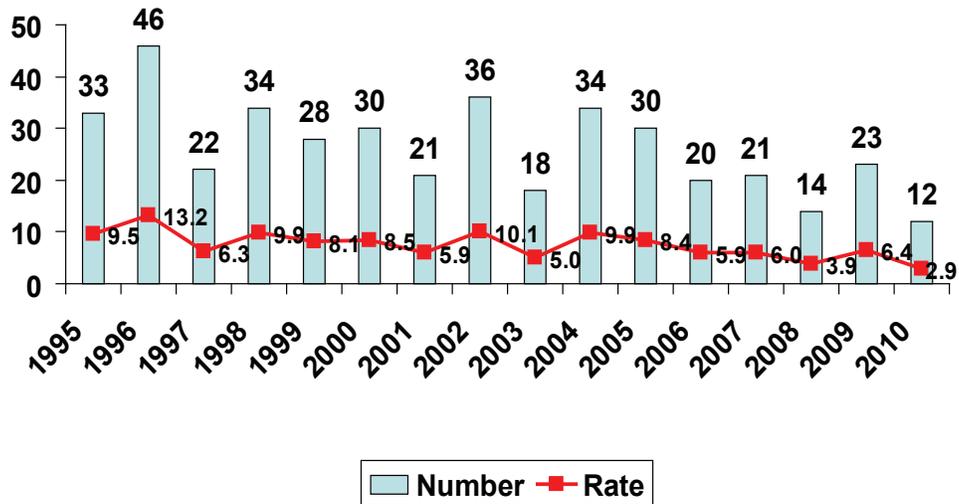
## TB Case Numbers and Rates District 6 (Augusta), 1995-2010



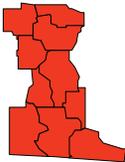
Rates are per 100,000 population  
Source: GA TB surveillance database



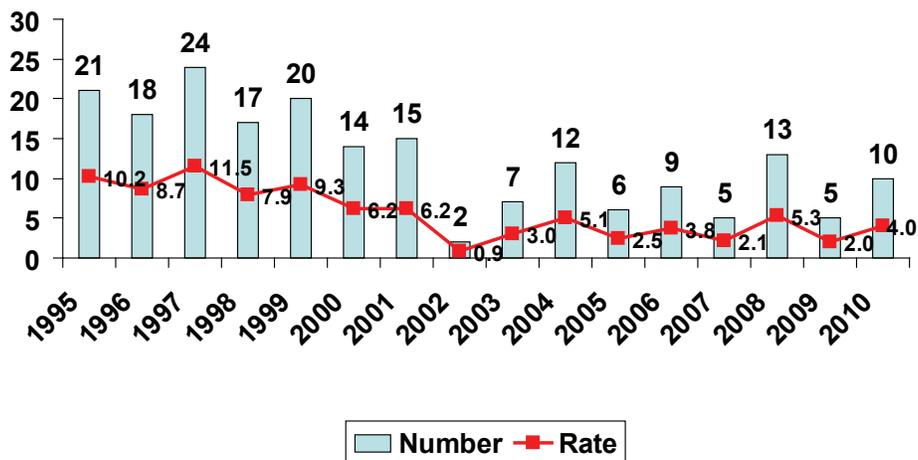
## TB Case Numbers and Rates District 7 (Columbus), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



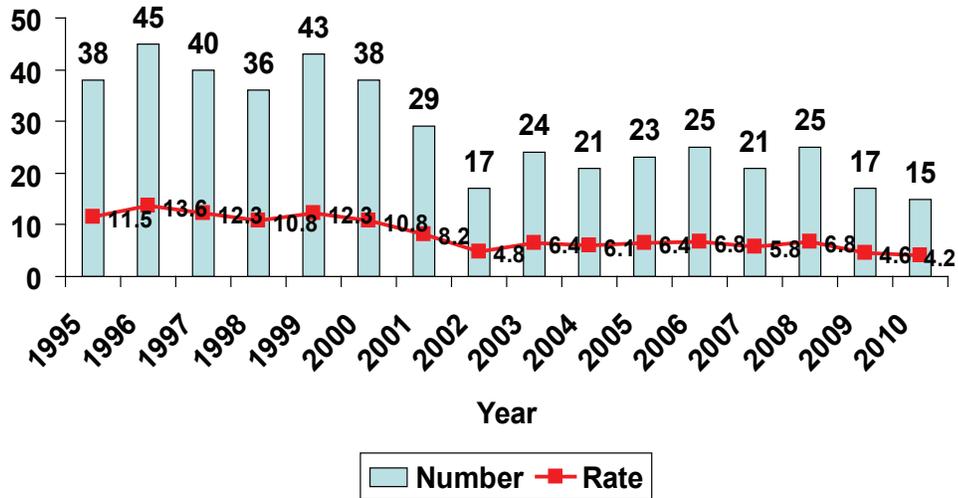
## TB Case Numbers and Rates District 8-1 (Valdosta), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



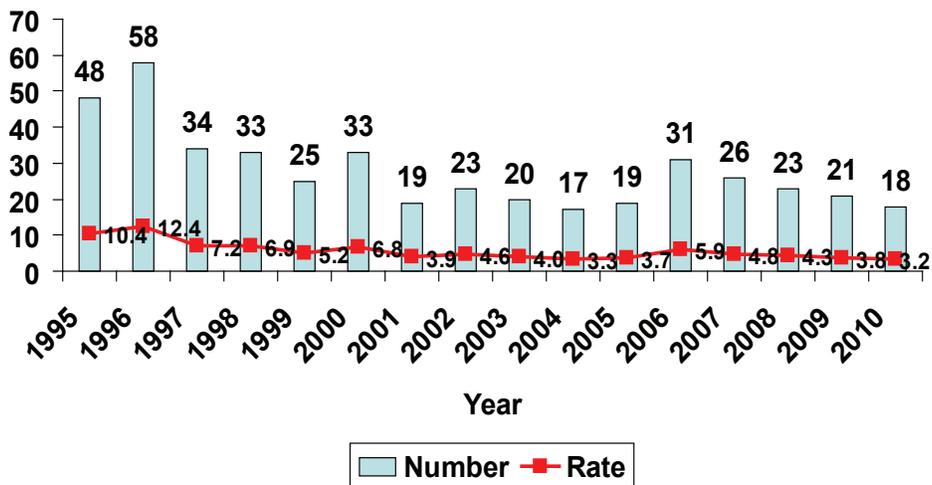
## TB Case Numbers and Rates District 8-2 (Albany), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



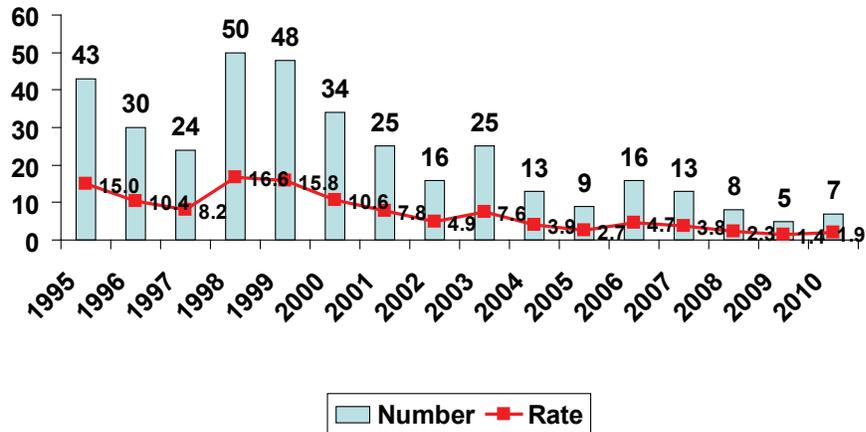
## TB Case Numbers and Rates District 9-1 (Coastal), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



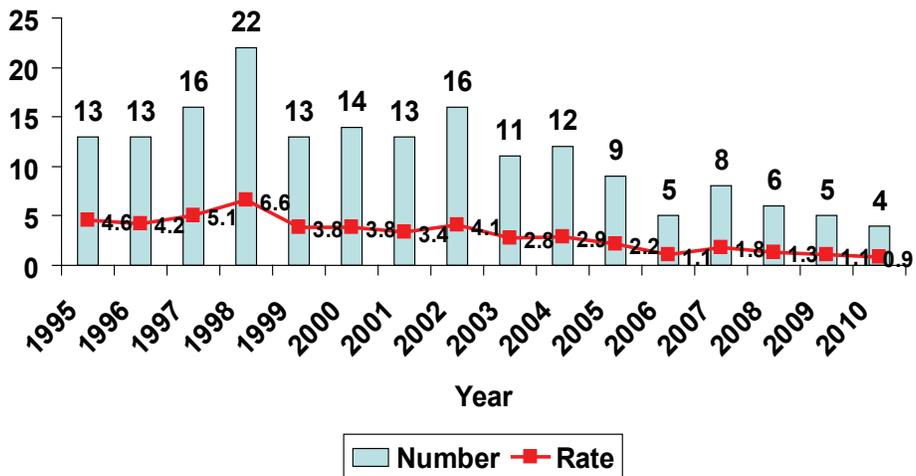
## TB Case Numbers and Rates District 9-2 (Waycross), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database



## TB Case Numbers and Rates District 10 (Athens), 1995-2010



Rates are per 100,000 population  
Source: GA TB surveillance database