

**2003**

# **Georgia Tuberculosis Report**



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## 2003 Georgia Tuberculosis Report

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## Introduction

The number of tuberculosis (TB) cases rose by an unprecedented 20% from the 1980s to 1990s in the United States. This resurgence was associated with deteriorating public health services for TB, the HIV epidemic, increased immigration from countries where TB is endemic, TB transmission in hospitals, shelters and prisons, and the development of multidrug-resistant TB. TB case numbers are once again declining in the U.S. due to major reinvestments in tuberculosis programs around the country. In 2003, 14,874 TB cases were reported in the U.S.

This annual report describes the distribution of TB cases among the population of Georgia, demographic and clinical characteristics of TB cases, and TB trends over several years from data collected on newly reported cases submitted by 159 county and 19 district health departments across the state. The report also describes the functions, activities, and objectives of the Georgia TB Program.

## TB Epidemiology in Georgia

Georgia ranked ninth in the nation in TB case rates (6.1 per 100,000 persons) in 2003, and continues to have higher case rates than the national average (5.1/100,000). In 2003, 531 TB cases were reported statewide, representing a 42% decrease since 1991 - the peak of the TB resurgence in Georgia when 909 cases were reported. TB case numbers have decreased by an average of 4% annually since then, with sporadic year-to-year increases. The less than 1% decrease in case numbers in 2003 from the year before is the lowest percentage decrease reported since 1991. The metropolitan Atlanta area accounted for 54% of all TB cases reported in Georgia. The five counties reporting the highest number of TB cases were: Fulton (123 cases), DeKalb (83), Gwinnett (37), Cobb (23), and Richmond (21). Of 159 counties statewide, 70 (89%) attained the interim TB elimination goal of  $\leq 3.5$  cases/100,000 population and 52 (33%) did not report a single TB case.

TB cases in Georgia were predominantly male (60%), non-Hispanic black (59%) and U.S.-born (71%). The largest proportion of cases among age groups (38%) occurred in the 25-44 years old age group. TB in young

children indicates recent transmission. The TB case rate in children under 5 years old rose from 3.4/100,000 (23 cases) in 2002 to 5/100,000 (33 cases) in 2003. The proportion of TB cases that are foreign-born, which had been steadily increasing over the past decade, decreased from 32% (172 cases) in 2002 to 29% (156 cases) in 2003. US-born non-Hispanic blacks together with foreign-born cases constituted 80% of all TB cases in Georgia in 2003.

HIV is a major risk factor for TB. TB cases co-infected with HIV decreased from 81 (19%) cases in 2002 to 74 (17%) in 2003. This represents a substantial decline from 1993 when 42% of TB cases with known HIV status were positive for HIV. HIV testing among TB cases has considerably improved over the past five years. Reporting of HIV status increased from 68% in 1999 to 84% in 2003. Among TB cases in adults aged 25-44 years old, 92% had HIV test results reported. In TB cases with information on HIV status, HIV co-infection was predominantly present among African Americans (84%), males (64%), and in adults aged 25-44 (65%).

Multidrug-resistant tuberculosis (MDR-TB, i.e., TB that is resistant to at least isoniazid and rifampin, the two most effective anti-TB drugs) is exceedingly costly and difficult to treat. From 1993-2003, 42 MDR-TB cases were reported, an average of four MDR-TB cases per year. In 2003, two cases of MDR-TB were reported. Most MDR-TB cases were reported in DeKalb District (13 cases) and Cobb District (6 cases). MDR-TB cases in Georgia are four times more likely to have a history of previous TB and nine times more likely to be foreign-born than non-MDR-TB cases.

Twenty cases (5%) of primary resistance to isoniazid were reported in 2003. From 1993 to 2003, a total of 304 primary isoniazid resistant cases were reported in Georgia. The health districts of Fulton (80 cases), DeKalb (49) and Cobb (23) reported the highest number of INH-resistant cases over this eleven-year period.

In 2003, TB cases living in settings where infection is easily transmitted included 34 (6%) homeless persons, 20 (4%) cases from correctional facilities, and 9 (2%)

persons living in long-term care facilities. Ninety (17%) cases reported some form of substance abuse in 2003.

Twenty-five persons died of TB in Georgia in 2002, the year for which the most recent mortality data are available. The age-adjusted TB mortality rate was 0.4 per 100,000 persons in 2002.

### **TB Racial Disparities**

TB disproportionately affects non-Hispanic blacks in Georgia. Non-Hispanic blacks make up 28% of the population in Georgia but accounted for 59% of TB cases in 2003. The TB case rate for non-Hispanic blacks in Georgia (13.7/100,000) was eight times higher than the case rate for non-Hispanic whites (1.7/100,000) in 2002. From 1993 to 2002, the non-Hispanic black TB case rate decreased 55% (from 30.6 to 13.7/100,000) while the non-Hispanic white case rate decreased 54% (from 3.7 to 1.7/100,000). In 2003, non-Hispanic black TB cases were four times more likely to have HIV infection or to be homeless; and twice more likely to be substance abusers or to be unemployed, than cases of another race/ethnicity – indicating that socioeconomic disparities contribute to TB racial disparities.

Fulton County had the highest number and one of the highest proportions of TB cases that were non-Hispanic black compared with other counties in the state. Non-Hispanic blacks represent 45% of Fulton County's population yet accounted for 79% (97/123) of the county's TB cases in 2003. Other Health Districts that reported high numbers of non-Hispanic black TB cases in 2003 include: DeKalb (53 cases, 64% of District cases), Augusta (24, 69%), and Macon (19, 83%).

TB case rates for all racial/ethnic groups have been decreasing since 1993 except among Hispanics (10.1/100,000 in 1993 compared to 14.9/100,000 in 2002). The highest case rate among racial/ethnic groups in 2002 occurred among Asians (23/100,000) though Asians comprised only 8% of TB cases.

### **TB in the Foreign-born**

In Georgia, the proportion and number of TB cases that are foreign-born, which had been steadily increasing over the past decade, decreased from 32% (172 cases) in

2002 to 29% (156 cases) in 2003. However, this represents a four-fold increase from 1993, when only 5% (40 cases) of TB cases were foreign-born. Despite the 233% increase in the foreign-born population in Georgia between 1990 and 2000, the foreign-born TB case rate decreased from 51.6/100,000 in 1997 to 26.7/100,000 in 2000.

Two-thirds of foreign-born TB cases in 2003 resided in metropolitan Atlanta counties, mostly in DeKalb (38 cases, 46% of District cases), Lawrenceville (28, 67%), Fulton (21, 17%), and Cobb (17, 68%). Foreign-born cases were primarily seen in persons from Mexico (49 cases), Vietnam (18), India (16), and Ethiopia (10). Foreign-born TB cases came from 36 different countries of origin in 2003.

Thirty-eight percent of foreign-born TB cases were diagnosed within the first two years of their arrival in the U.S.; 63% were diagnosed within 5 years of their arrival. Foreign-born cases are seven times more likely to have MDR-TB than U.S.-born cases.

Of 138 refugees and immigrants who arrived in Georgia with a B1 or B2 TB classification (non-infectious TB conditions diagnosed overseas) in 2003, 60% were diagnosed and treated for latent TB infection. The Lawrenceville, Cobb, and DeKalb districts received most of the B1/B2 notifications in 2003; resettling 31, 15, and 14 refugees or immigrants diagnosed with a B1/B2 classification, respectively.

### **The Georgia TB Program**

The Georgia TB Program is responsible for developing policies and procedures to prevent the spread of TB in Georgia. Its functions include program planning, monitoring and evaluation; medical oversight of TB treatment; TB surveillance, training and education, and technical assistance for outreach activities.

District Public Health Directors are responsible for ensuring that county health departments in their jurisdiction implement standard guidelines for the care of TB patients and their infected contacts as directed by the State TB Program. County Health Departments are responsible for the medical supervision and case management of TB cases, TB suspects, and persons with

latent TB infection that seek care from public health clinics. Physicians, laboratories, and other health care providers are required to report diagnosed and/or suspected TB cases to county, district, or state health authorities.

Social services are a critical component of TB programs. The Georgia TB Program has developed social service initiatives that include: (1) implementing a holistic approach to health care, (2) establishing guidelines for managing social issues of TB patients, (3) establishing access to effective community resources, (4) documenting social services, and (5) maintaining collaborative relationship with community partners.

### **Georgia TB Program Activities**

#### ***(1) Treatment and Case Management of Persons with Active TB***

TB treatment for drug susceptible TB patients lasts for at least six months. Patients with MDR-TB may need to take medications for several years. The Georgia TB Program helps patients adhere to treatment by promoting directly observed therapy (DOT), conducting regular case reviews and patient follow-up, and providing incentives and enablers such as transportation tokens to TB patients. The state TB medical consultant and program manager conduct case reviews in at least one health district every month. Each health district has a TB coordinator who is responsible for implementing TB program standards and recommendations. All health districts have an infectious disease medical specialist or pulmonologist in private practice on contract to provide medical consultation for TB patients being managed by public health clinics. County health departments without in-house physicians manage uncomplicated TB patients by nurse protocols and refer problematic cases to their designated contract physician. County and district TB outreach staff provide TB education and counseling, conduct house visits, send reminder letters, and call patients to follow-up missed appointments or DOT. Case managers coordinate the efforts of the clinical team and outreach workers to help patients keep their medical appointments, refer cases with psychosocial problems to appropriate agencies, identify contacts, perform skin testing in the field, refer infected contacts to clinics, and return missing patients to service. The Georgia Public Health Laboratory

performs smear and culture tests on patient specimens to identify *Mycobacterium tuberculosis* and drug susceptibility tests to identify drug resistance.

#### ***(2) Contact Investigation***

The Georgia TB program institutes policies and procedures to ensure that a thorough medical evaluation of contacts to TB cases or contact investigation is promptly initiated and completed. During a contact investigation, two separate interviews of TB cases are performed to identify the contacts of each TB case. The closest contacts of a person with infectious TB are evaluated first with a Mantoux tuberculin skin test. The skin test is repeated after 3 months if the first test is negative. A chest radiograph is done for persons with a positive skin test. If a high rate of infection is found among a group of close contacts, the next closest circle of contacts is investigated. Contacts evaluated as having latent TB infection (LTBI, i.e., infection with TB bacilli but persons are not sick and not infectious) are treated with preventive medications if indicated. Preventive medication (treatment to prevent LTBI from progressing to active TB disease) usually takes nine months to complete. Since the implementation of a zero tolerance for zero contacts policy in 1999, contact identification has increased from 45% (301 of 670 cases) in 1999 to 92% (494/535) in 2002. The percent of contacts completely evaluated for TB infection or TB disease was 63% in 2002.

In 2002, the year with most complete data on contacts to TB cases, 904 (19%) contacts evaluated had LTBI, 70% of who were started on LTBI treatment. Of 513 infected contacts with available treatment completion data in 2002, only 56% completed LTBI treatment. In 2002, 122 (76%) of contacts less than 15 years of age with LTBI were started on LTBI treatment and 84% completed LTBI treatment.

#### ***(3) TB Surveillance/ Reporting***

The state TB program is responsible for maintaining a registry of TB cases, for collecting and storing complete and reliable data, and protecting the confidentiality of the data. New cases of active TB and latent TB infection in children less than 5 years of age (LTBI<5) are legally mandated notifiable diseases in Georgia. Surveillance data are routinely analyzed to monitor trends among

high-risk populations in Georgia, describe the distribution of TB cases by demographic characteristics and geographic locations, evaluate key TB program performance indicators, and produce statistical and progress reports. Drug resistance levels are monitored to assess the effectiveness of TB control efforts and determine the appropriateness of TB treatment regimens practiced.

#### **(4) Training and Education**

An annual TB/HIV Mini-Residency training session is conducted for physicians, nurse practitioners, physician assistants and mid-level clinicians who provide hands-on care to patients with, or at risk for, tuberculosis and/or HIV. An annual Consulting/Private Clinicians' TB Update is conducted to provide clinicians with information on current epidemiological trends, current recommendations for screening and treatment, TB in children and pregnancy, and infection control measures. Training and education needs assessments are conducted in all 19 health districts in Georgia.

Entry-level training courses (TB 101/Update) are provided to community health care providers, outreach workers, health educators and other public and private health care providers. The TB 101 Update curriculum includes topics such as: Epidemiology of TB, Transmission and Pathogenesis, Skin Testing, Diagnosis of TB Infection and Disease, LTBI Therapy, Treatment, Multidrug-Resistant TB, DOT/DOPT, Infection Control, and Contact Investigation. Tuberculin Skin Test Certification Workshops and TB updates are provided to clinicians on an on-going basis and as requested throughout the program year. Contact Investigation courses are conducted during the program year for key personnel involved in the interviewing and contact investigation process. A newly developed Directly Observed Therapy course and a TB Infection Control measures course are also available to health care providers.

#### **TB Program Performance Measures**

**(1) National Objective:** 90% of TB patients will complete a course of curative TB treatment within 12 months of starting treatment.

Since 1995, when DOT became the standard of care in Georgia, overall completion rates for TB treatment have steadily increased - from 83% in 1994 to 92% in 2002 (the year with the most recent data available).

However, timely completion of therapy in 12 months for 2002 was only 78%. Completion of therapy in 12 months was lower than the state average among HIV co-infected cases (63%), substance abusers (70%), and patients exclusively treated by private providers (70%), and homeless persons (76%) in 2002.

**(2) National Objective:** At least 85 percent of persons with latent TB infection (LTBI) and started on treatment for latent TB infection will complete preventive LTBI therapy.

In 2002, 70% of contacts with LTBI were started on LTBI treatment. Of 904 infected contacts started on LTBI treatment in 2002, only 56% completed treatment. Among infected contacts who were children less than 5 years old, 88% were started on LTBI treatment in 2002. Among infected contacts who were children less than 5 years old that started LTBI treatment, 89% completed LTBI treatment.

**(3) National Objective:** Ensure 90 percent of all newly reported culture-positive TB cases will receive drug susceptibility testing and have results reported.

From 1999 to 2003, Georgia has consistently exceeded this national objective. In 2003, 98% of all newly reported culture-positive TB cases received drug susceptibility testing and had results reported. Majority of drug susceptibility testing is performed by the Georgia Public Health Laboratory.

**(4) National Objective:** Ensure HIV status will be reported for at least 75 percent of all newly reported TB cases aged 25-44 years old.

In 2003, Georgia exceeded this national objective - with 92% of newly reported TB cases in the 25-44 years old age group tested for HIV. HIV testing in adult TB cases has steadily increased since 1999.

## **TB Elimination in Georgia**

TB cases are steadily decreasing in Georgia mainly because of a strong public health infrastructure that ensures (1) treatment completion through directly observed therapy and (2) early detection of cases and infected contacts. However, the rate of decline in case numbers has been slowing. Although TB case rates are decreasing in African-American communities, TB racial disparities persist. TB case rates continue to be high among minority populations, and foreign-born persons are a source of newly reported cases each year. Urban counties are compelled to deal with multiple social problems such as homelessness and substance abuse in patients from poor inner city areas. Rural counties have fewer resources to care for patients who are spread over a wide geographic area. Access to health care in urban and rural areas are hampered by lack of transportation, lack of medical insurance, and unemployment. Public hospitals assume huge financial losses for unreimbursed care of severely ill indigent TB patients. A single case of multi-drug resistant TB, the control of a TB outbreak, and mass TB screenings after a school or workplace TB exposure, strain the resources of state and local TB programs. TB does not only affect the poor and disenfranchised. Clusters of TB cases are reported among suburban school children, college students, and in a variety of work places.

Political commitment to support TB program activities is crucial so as not to reverse the gains of the past few years. Recruitment, training, and retention of the public health work force are fundamental prerequisites for delivery of quality TB services. Clinicians and case workers need to be skilled at both clinical management and social service referral. Culturally competent staff are important in order to overcome language and cultural barriers to care. Laboratories must have the equipment, supplies, and personnel that are necessary to support TB diagnosis, detect drug resistance, and identify recent chains of transmission by DNA technology. Information and communication technology are vital for TB surveillance and case management. TB programs need to allocate emergency funds to cover catastrophic events such as costly MDR-TB treatment or outbreaks of TB in HIV/AIDS patients and other vulnerable populations. Non-governmental organizations can help TB programs advocate for additional resources. TB, an age-old infectious air-borne disease, is preventable and curable. Current TB program activities must be sustained and intensified to achieve TB elimination in Georgia.

**Table 1. Number of TB Cases and Case Rates (per 100,000) by County**  
Georgia, 2002-2003

COUNTY	2002		2003	
	Number of cases	Case rate	Number of cases	Case rate
Appling	0	0	<5	5.6
Atkinson	0	0	<5	12.7
Bacon	0	0	0	0
Baker	0	0	0	0
Baldwin	<5	4.5	<5	2.2
Banks	0	0	0	0
Barrow	0	0	<5	7.5
Bartow	<5	2.4	5	5.9
Ben Hill	0	0	<5	17.4
Berrien	0	0	0	0
Bibb	6	3.9	7	4.5
Bleckley	<5	16.9	<5	8.4
Brantley	<5	6.6	0	0
Brooks	0	0	0	0
Bryan	0	0	0	0
Bulloch	<5	1.7	0	0
Burke	<5	8.8	<5	8.7
Butts	0	0	0	0
Calhoun	0	0	0	0
Camden	<5	2.2	0	0
Candler	<5	10.2	<5	30.0
Carroll	<5	2.1	<5	4.1
Catoosa	<5	1.8	<5	3.4
Charlton	0	0	0	0
Chatham	15	6.4	17	7.2
Chattahoochee	0	0	0	0
Chattooga	5	19.1	5	18.9
Cherokee	<5	0.6	<5	0.6
Clarke	5	4.9	5	4.8
Clay	0	0	0	0
Clayton	18	7.1	14	5.4
Clinch	<5	14.5	0	0
Cobb	33	5.1	23	3.5
Coffee	1	2.6	<5	7.7
Colquitt	7	16.4	5	11.6
Columbia	16	16.8	5	5.1
Cook	0	0	<5	6.3
Coweta	<5	3.1	<5	3.9
Crawford	0	0	0	0
Crisp	9	40.9	0	0
Dade	<5	12.8	<5	6.3
Dawson	<5	0	0	0
Decatur	<5	7.1	<5	3.5
DeKalb	88	13.0	83	12.3
Dodge	0	0	<5	5.2
Dooly	<5	8.7	0	0
Dougherty	6	6.3	7	7.3
Douglas	<5	3.0	<5	2.0
Early	0	0	0	0
Echols	0	0	0	0
Effingham	<5	4.9	0	0
Elbert	<5	9.7	<5	4.8
Emanuel	<5	4.5	5	22.8
Evans	0	0	0	0
Fannin	<5	4.8	<5	4.7

**Table 1. Number of TB Cases and Case Rates (per 100,000) by County**  
Georgia, 2002-2003

COUNTY	2002		2003	
	Number of cases	Case rate	Number of cases	Case rate
Fayette	<5	1.0	<5	1.0
Floyd	8	8.6	7	7.5
Forsyth	0	0	0	0
Franklin	<5	4.8	0	0
Fulton	119	14.4	123	15.0
Gilmer	<5	7.9	<5	3.8
Glascocock	0	0	<5	37.9
Glynn	<5	2.9	0	0
Gordon	<5	2.2	0	0
Grady	0	0	<5	4.1
Greene	<5	13.2	0	0
Gwinnett	32	4.9	37	5.5
Habersham	0	0	0	0
Hall	6	4.0	7	4.5
Hancock	0	0	0	0
Haralson	0	0	<5	7.3
Harris	0	0	0	0
Hart	<5	4.3	<5	4.3
Heard	0	0	<5	26.9
Henry	<5	1.4	<5	1.3
Houston	9	7.7	9	7.5
Irwin	0	0	0	0
Jackson	<5	6.6	0	0
Jasper	0	0	0	0
Jeff Davis	0	0	<5	7.8
Jefferson	0	0	0	0
Jenkins	0	0	0	0
Johnson	0	0	0	0
Jones	0	0	<5	3.9
Lamar	0	0	0	0
Lanier	0	0	0	0
Laurens	<5	6.5	<5	4.3
Lee	0	0	<5	3.5
Liberty	<5	3.2	<5	3.4
Lincoln	0	0	0	0
Long	0	0	<5	9.3
Lowndes	0	0	<5	2.1
Lumpkin	0	0	0	0
Macon	<5	7.1	<5	7.1
Madison	<5	3.7	<5	3.7
Marion	0	0	<5	14.0
McDuffie	0	0	0	0
McIntosh	<5	9.0	0	0
Meriwether	0	0	<5	8.8
Miller	0	0	0	0
Mitchell	0	0	<5	12.6
Monroe	0	0	0	0
Montgomery	<5	11.9	0	0
Morgan	<5	12.3	0	0
Murray	<5	2.6	<5	5.1
Muscogee	20	10.8	12	6.5
Newton	0	0	<5	3.9
Oconee	0	0	0	0
Oglethorpe	0	0	0	0
Paulding	<5	4.2	<5	1.0

**Table 1. Number of TB Cases and Case Rates (per 100,000) by County**  
Georgia, 2002-2003

COUNTY	2002		2003	
	Number of cases	Case rate	Number of cases	Case rate
Peach	<5	4.1	<5	8.2
Pickens	0	0	0	0
Pierce	<5	6.3	0	0
Pike	0	0	<5	6.7
Polk	<5	7.6	<5	2.5
Pulaski	<5	10.3	0	0
Putnam	0	0	0	0
Quitman	0	0	<5	121.0
Rabun	<5	6.4	0	0
Randolph	<5	13.2	0	0
Richmond	15	7.6	21	10.6
Rockdale	<5	2.7	<5	2.7
Schley	0	0	0	0
Screven	0	0	<5	6.5
Seminole	<5	21.5	<5	21.6
Spalding	<5	1.7	<5	6.6
Stephens	0	0	<5	11.9
Stewart	<5	19.8	0	0
Sumter	<5	6.0	<5	3.0
Talbot	0	0	0	0
Taliaferro	0	0	0	0
Tattnall	0	0	5	22
Taylor	<5	11.2	0	0
Telfair	<5	8.5	0	0
Terrell	0	0	<5	9.2
Thomas	<5	2.3	<5	2.3
Tift	<5	5.1	0	0
Toombs	<5	3.8	5	18.9
Towns	<5	10.2	0	0
Treutlen	0	0	0	0
Troup	7	11.7	<5	5.0
Turner	0	0	<5	10.4
Twiggs	0	0	<5	19.1
Union	0	0	0	0
Upson	0	0	<5	3.6
Walker	5	8.1	6	9.6
Walton	<5	1.5	0	0
Ware	5	14.1	<5	5.6
Warren	0	0	0	0
Washington	<5	9.6	<5	4.8
Wayne	<5	3.7	<5	14.5
Webster	0	0	0	0
Wheeler	<5	16.2	0	0
White	0	0	<5	8.8
Whitfield	<5	3.4	5	5.7
Wilcox	0	0	0	0
Wilkes	0	0	0	0
Wilkinson	0	0	0	0
Worth	0	0	<5	4.6

**Table 2. Number of TB Cases and Case Rates (per 100,000) by Health District, 2002-2003**

HEATH DISTRICT	2002		2003	
	Number of cases	Case rate	Number of cases	Case rate
1-1 Rome	32	5.9	30	5.4
1-2 Dalton	8	2.2	10	2.7
2 Gainesville	10	2.0	13	2.5
3-1 Cobb	36	4.8	25	3.3
3-2 Fulton	119	14.4	123	15.0
3-3 Clayton	18	7.1	14	5.4
3-4 Lawrenceville	34	4.3	42	5.1
3-5 DeKalb	88	13.0	83	12.3
4 LaGrange	16	2.4	25	3.6
5-1 Dublin	9	6.6	4	2.9
5-2 Macon	21	4.3	23	4.7
6 Augusta	20	4.6	32	7.4
ASMP	14		3	
7 Columbus	36	10.1	18	5.0
8-1 Valdosta	2	0.9	7	3.0
8-2 Albany	17	4.8	23	6.4
9-1 Savannah	17	6.2	17	6.1
9-2 Waycross	16	4.9	25	7.6
9-3 Brunswick	6	2.7	3	1.3
10 Athens	16	4.1	11	2.8
Total	535	6.2	531	6.1

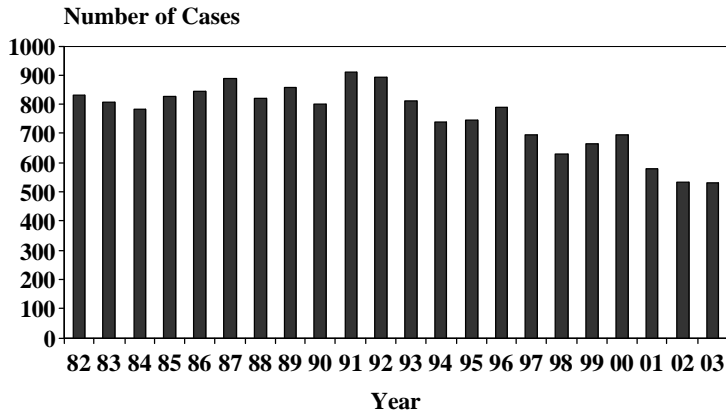
**Table 3. TB Cases by Race/Ethnicity and Health District, Georgia, 2003**

Health District	White		Black		Hispanic		Asian	
	N	%	N	%	N	%	N	%
1-1 Rome	16	55	7	24	4	13	2	7
1-2 Dalton	5	50	1	10	4	40	0	0
2 Gainesville	3	31	4	31	3	23	2	15
3-1 Cobb	2	8	10	40	11	44	2	8
3-2 Fulton	7	6	97	80	12	10	5	4
3-3 Clayton	1	8	3	23	0	0	7	54
3-4 Lawrenceville	5	12	16	38	11	26	9	21
3-5 DeKalb	3	4	53	64	14	17	12	14
4 LaGrange	11	44	9	36	2	8	2	8
5-1 Dublin	1	25	3	75	0	0	0	0
5-2 Macon	2	9	19	83	1	4	1	4
6 Augusta	4	11	24	69	6	17	1	3
7 Columbus	1	6	14	78	2	11	1	6
8-1 Valdosta	3	43	3	43	0	0	0	0
8-2 Albany	3	13	17	74	3	13	0	0
9-1 Savannah	1	6	12	71	1	6	3	18
9-2 Waycross	4	16	14	56	6	24	1	4
9-3 Brunswick	1	33	1	33	1	33	0	0
10 Athens	6	54	3	27	1	9	1	9
Total	80	15	310	59	82	16	49	9

**Table 4. TB Cases by Country of Birth and Health District, Georgia, 2003**

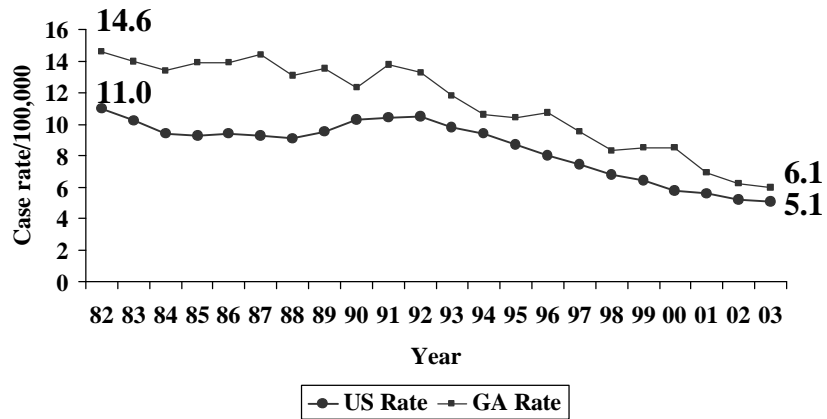
HEALTH DISTRICT	U.S.		Foreign-born	
	N	%	N	%
1-1 Rome	25	83	5	17
1-2 Dalton	5	50	5	50
2 Gainesville	9	69	4	31
3-1 Cobb	8	32	17	68
3-2 Fulton	102	83	21	17
3-3 Clayton	4	29	10	71
3-4 Lawrenceville	14	33	28	67
3-5 DeKalb	45	54	38	46
4 LaGrange	21	84	4	16
5-1 Dublin	4	100	0	0
5-2 Macon	21	91	2	9
6 Augusta	30	86	5	14
7 Columbus	16	89	2	11
8-1 Valdosta	6	86	1	14
8-2 Albany	20	87	3	13
9-1 Savannah	14	82	3	18
9-2 Waycross	20	80	5	20
9-3 Brunswick	2	67	1	33
10 Athens	9	82	2	18
Total	375	71	156	29%

## Number of Reported TB Cases Georgia, 1982-2003



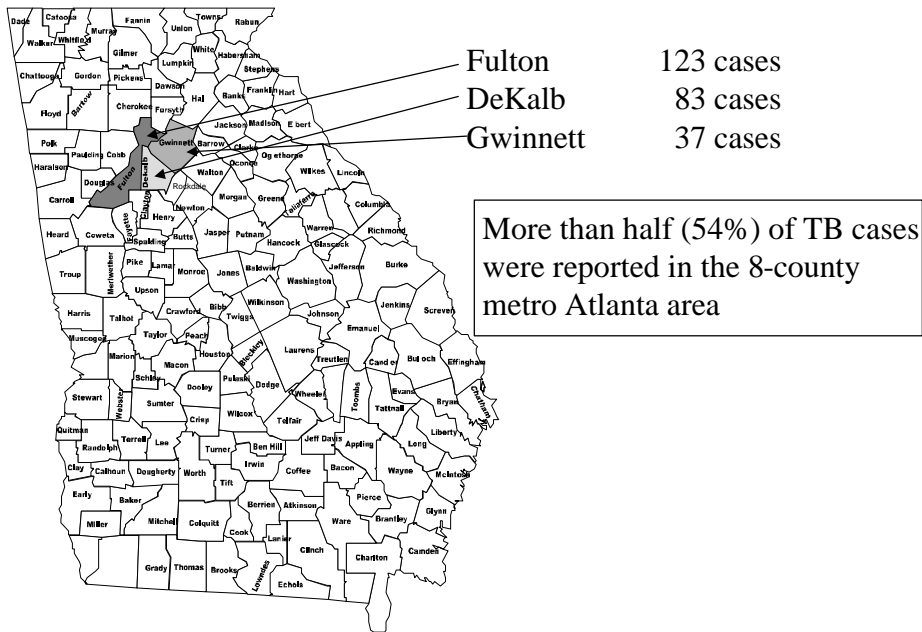
In 2003, 531 cases were reported in Georgia - a <1% decrease from 2002

## TB Case Rates U.S. and Georgia, 1982-2003

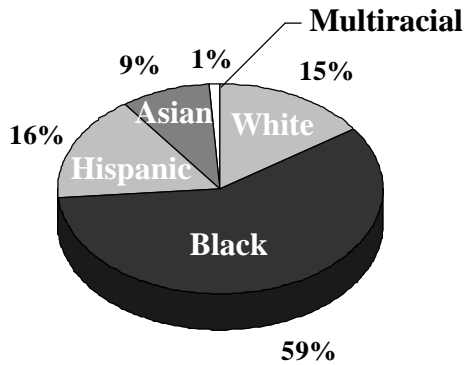


Georgia's TB case rates are historically higher than U.S. rates

# Georgia High-Incidence Counties, 2003

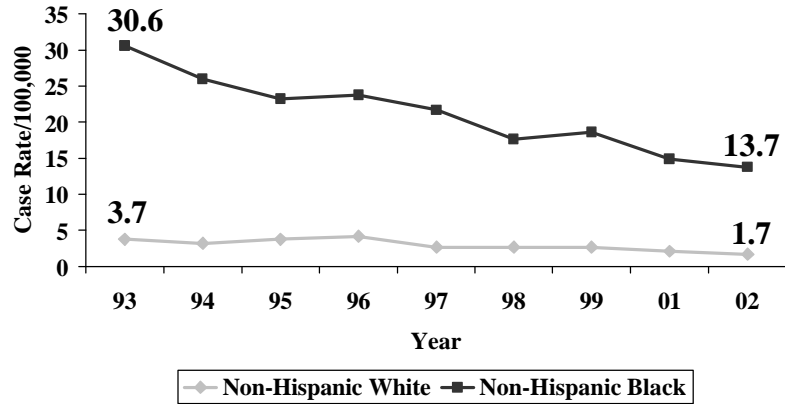


## TB Cases by Race/Ethnicity Georgia, 2003



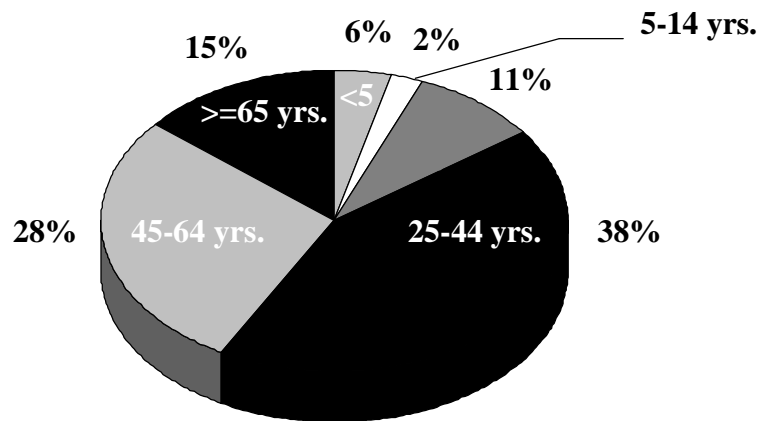
TB disproportionately affects minorities.

## TB Case Rates by Race/Ethnicity Georgia, 1993-2002



Case rates in blacks decreased 55% since 1993, whites decreased 54%.

## TB Cases by Age Group Georgia, 2003



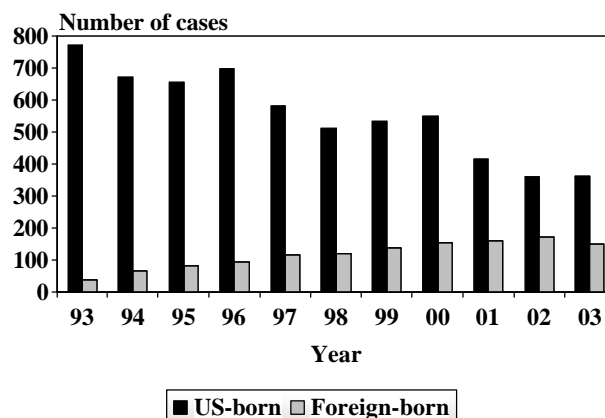
Largest proportion (38%) by age group is in 25-44 yr. old age group

## TB Case Rates by Age Group Georgia, 1999-2003

Age Group	1999	2000	2001	2002	2003
< 5	6.6	4.2	3.4	3.4	5.0
5-14	2	0.2	0.7	0.7	n/a
15-24	6	3.8	4.5	4.4	n/a
25-44	9.9	8.8	8.9	8.7	n/a
45-64	11.6	10.5	8.3	8.0	n/a
65 +	12.5	11	9.7	9.7	9.7

Case rate for children < 5 years old increased in 2003.

## US-born and Foreign-born TB Cases Georgia, 1993-2003

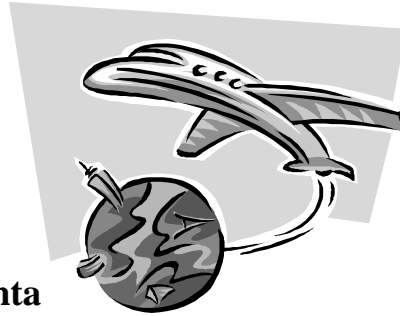


In 2003, 156 (29%) cases were foreign-born compared to 40 (5%) in 1993.

## Foreign-born TB Cases

- **Countries of Origin:**

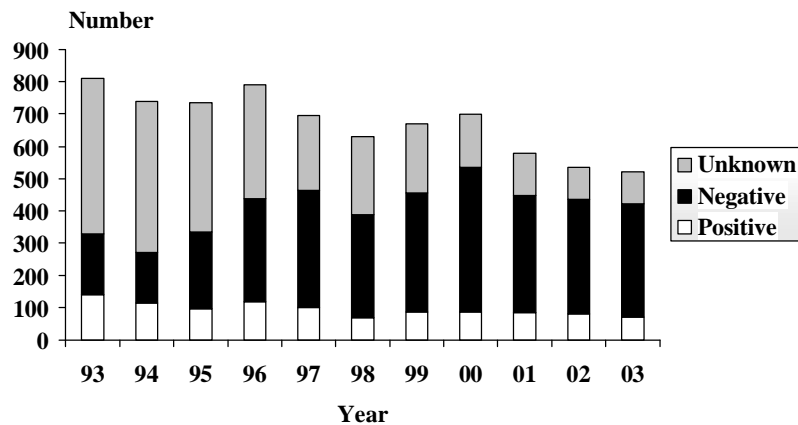
- Latin America: 41%
- Africa: 24%
- Western Pacific: 21%
- South East Asia: 10%



- **73% reported in Metro Atlanta**

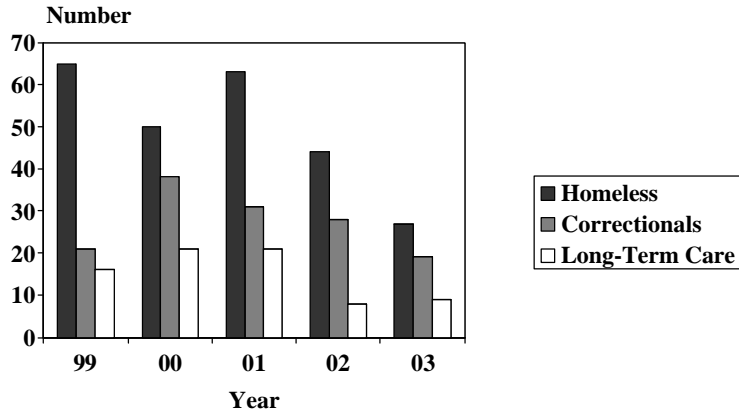
- **63% were diagnosed within 5<sup>th</sup> year of arrival in the U.S.**

## HIV Status of TB Cases Georgia, 1993-2003



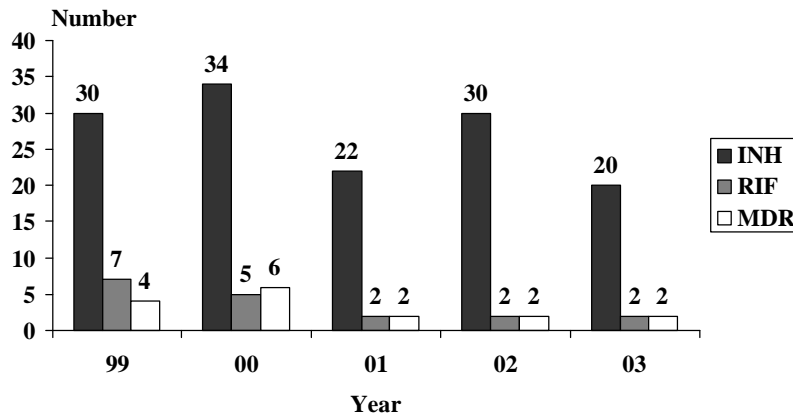
TB cases with HIV decreased to 74 (17%) in 2003 from 140 (42%) in 1993.

## TB in High-Risk Populations Georgia, 1999-2003



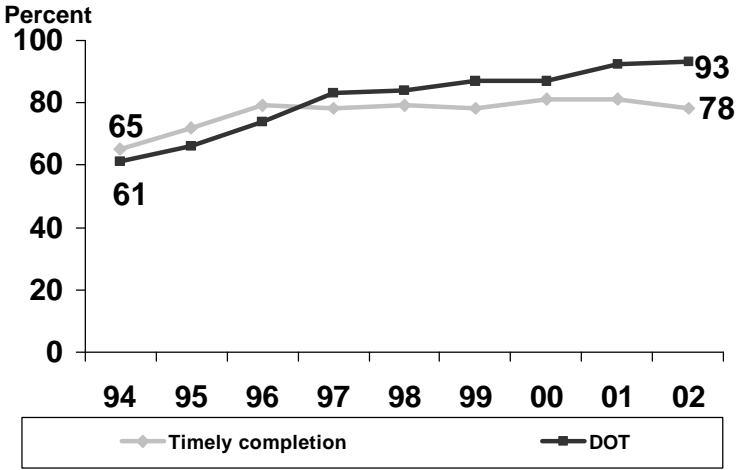
Homeless persons, prisoners, and nursing home residents were 6%, 4%, and 2% of TB cases in 2003, respectively.

## Primary Drug Resistance and MDR-TB Georgia, 1999-2003



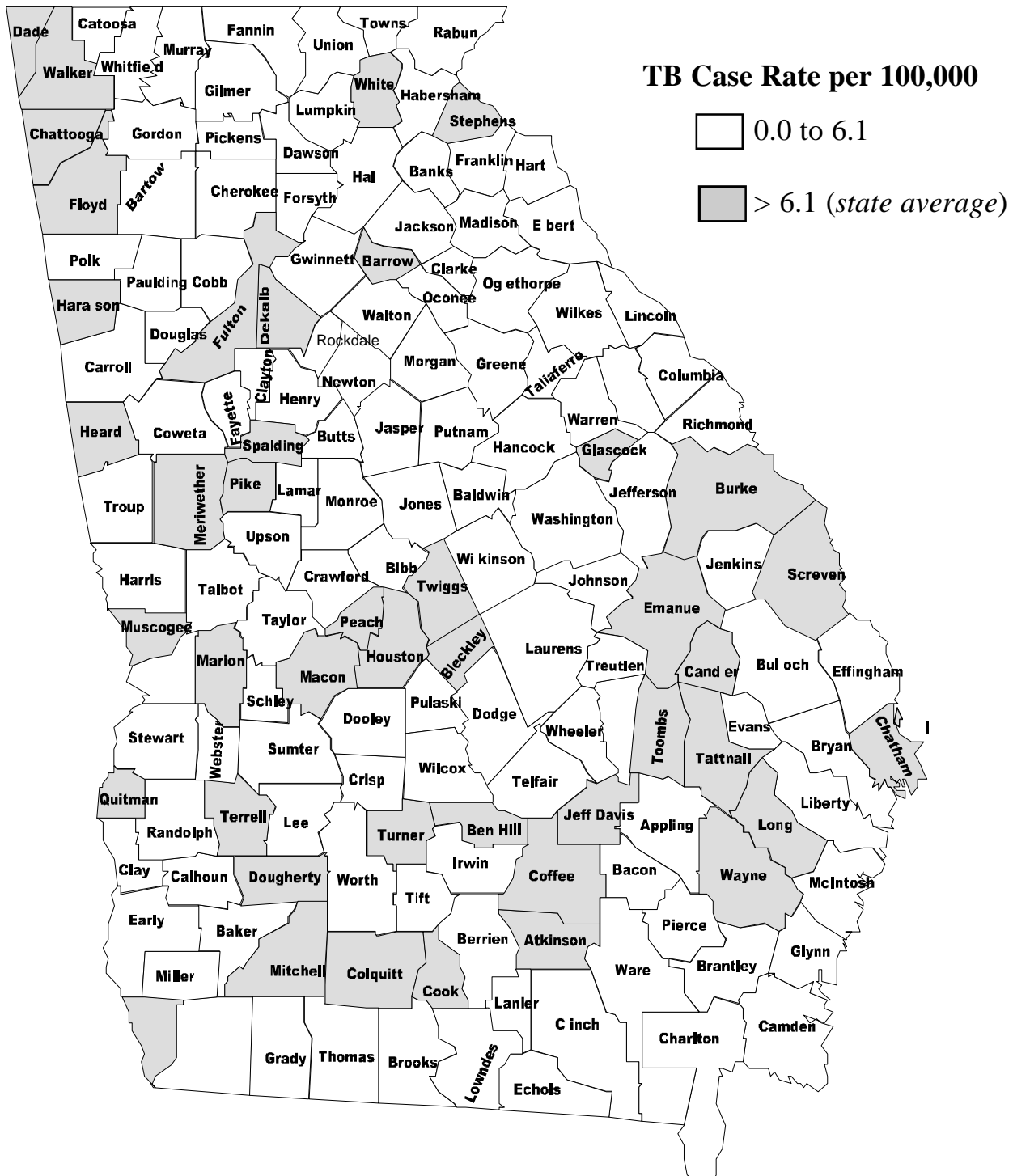
In 2003, 5% of culture positive cases with no previous TB history had primary INH resistance. Two MDR-TB cases were reported.

# Timely Treatment Completion and DOT Georgia, 1994-2002



In 2002, 78% completed treatment in <= 1 year and 93% received DOT.

# TB Case Rates by County, Georgia, 2003



# TB Case Rates by Health District, Georgia, 2003

