

Tuberculosis in Fulton County, 2006

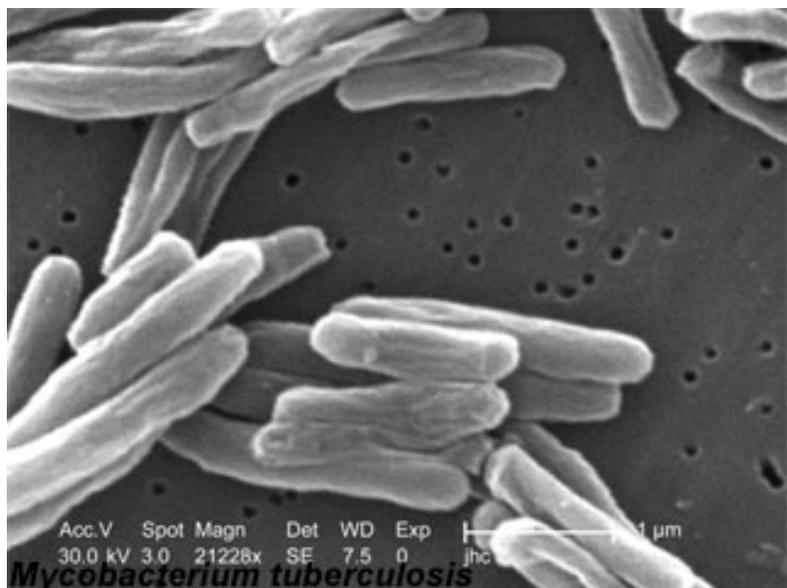
Fulton County Department of Health & Wellness



*To promote,
protect
and assure
the health
and wellness
of the people of
Fulton County.*

Contact Information

Fulton County
Department of
Health and Wellness
Director's Office
99 Jessie Hill, Jr. Drive, SE
Atlanta, GA 30303
404.730.1202



Submitted By:

Dr. Steven R. Katkowsky, District Health Officer
Director, Fulton County Department of Health and Wellness

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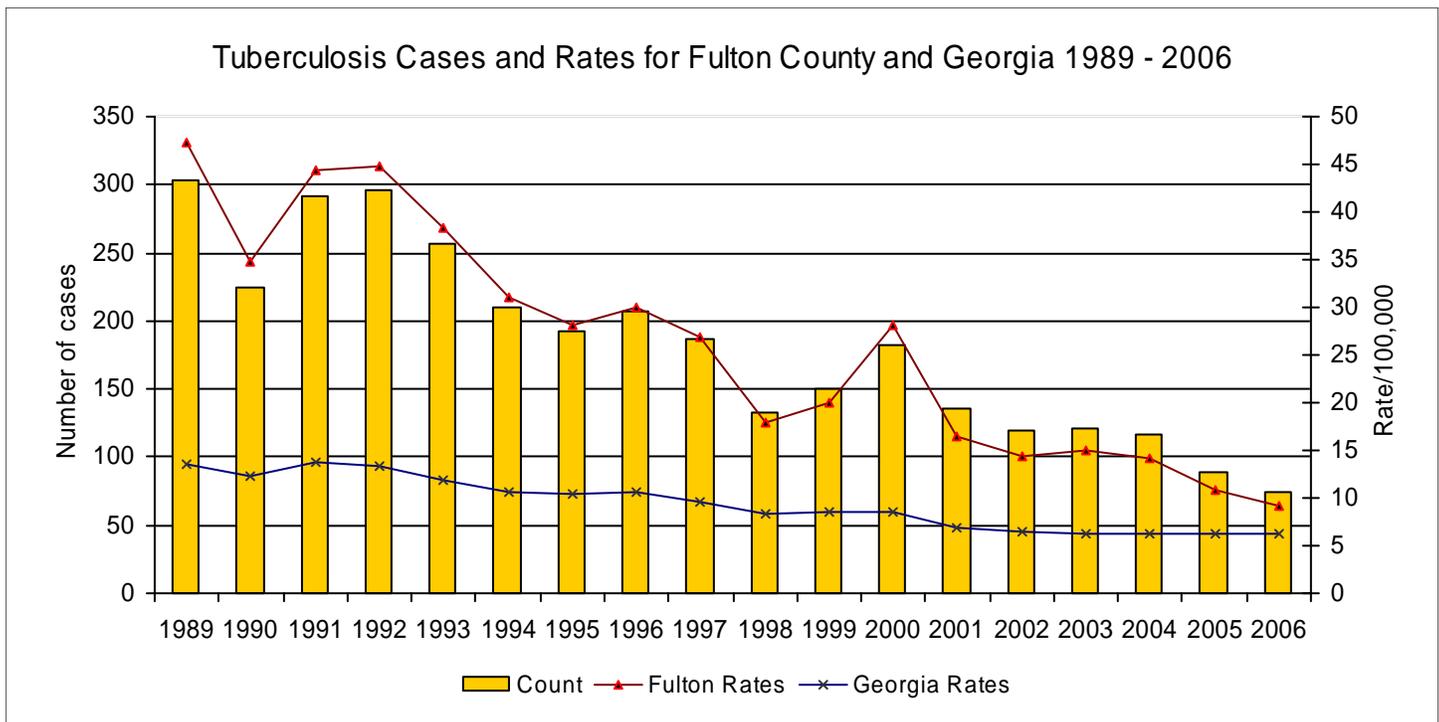
Introduction A case of *Mycobacterium tuberculosis* (TB) is defined as one that is newly reported and confirmed by laboratory testing or clinically confirmed by a qualified Medical Doctor after evaluating a chest X-ray and other tests for evidence of TB disease. Also called "consumption" (because of the weight-loss and wasting) or the "white plague" (because of the loss of skin color experienced by people with the disease), TB was identified as a global health emergency by the World Health Organization more than a decade ago. Tuberculosis remains the world's second leading cause of death in adults due to infectious disease, behind HIV. Approximately two billion people, more than one third of the world's population, are infected with TB. Annually, there are almost 15 million people living with TB, nine million people who develop active tuberculosis and over two million die of the disease.

On average, 1 in 10 people infected with TB will become sick with active TB, the infectious form of the disease, in their lifetime. People with HIV are at much greater risk of become infected and are at greater risk of dying from the disease. Each year, nearly 9 million people develop active, infectious TB disease, with the largest burden of disease occurring in Asia and Africa. In addition, there are nearly 2 million TB-related deaths each year.

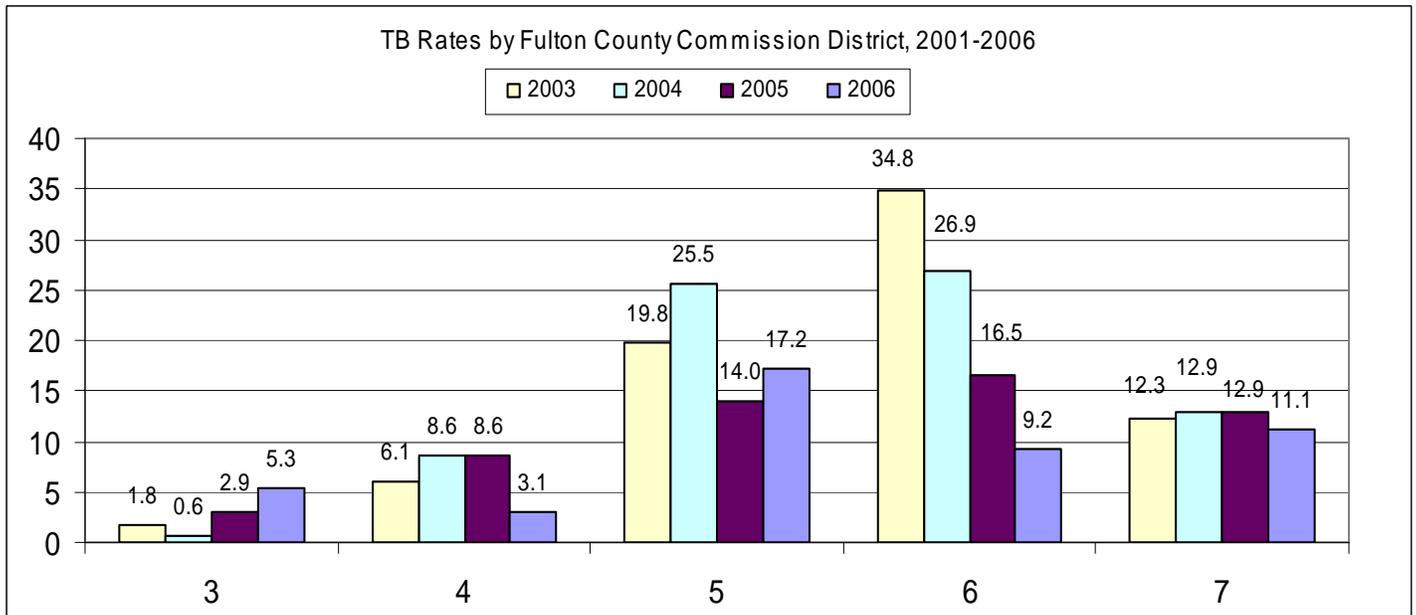
Epidemiology TB rates continued to decline in Fulton County through 2006 with the number of newly reported cases remaining below 100 at 74 reported cases, which equates to a case rate of 9.1 cases per 100,000 people. This rate is still substantially higher than the national rate of 4.6 and the U.S. Department of Health and Human Services *Healthy People 2010* goal of 1 case per 100,000 people. During 2006, two of the 74 (2.7%) Fulton County residents diagnosed with TB died before completing treatment.

TB Case Counts and Rates per 100,000 for 2006

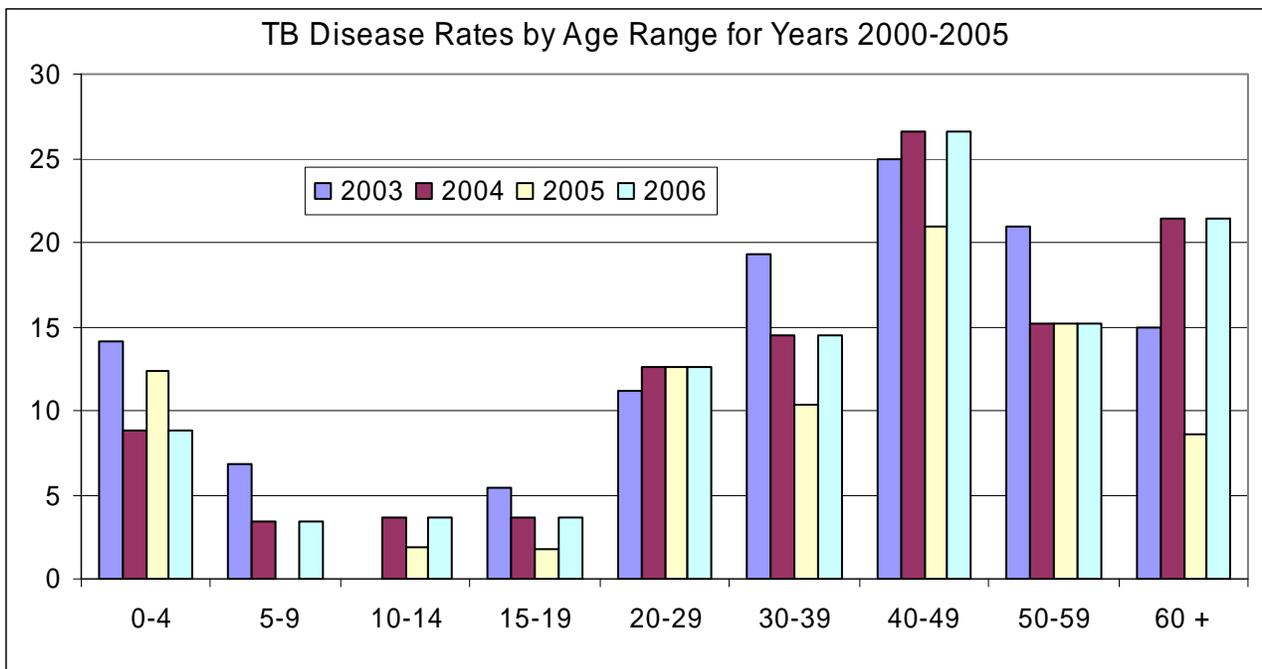
	Count	Rate
United States	13,767	4.6
Georgia	504	6.2
Fulton County	74	9.1



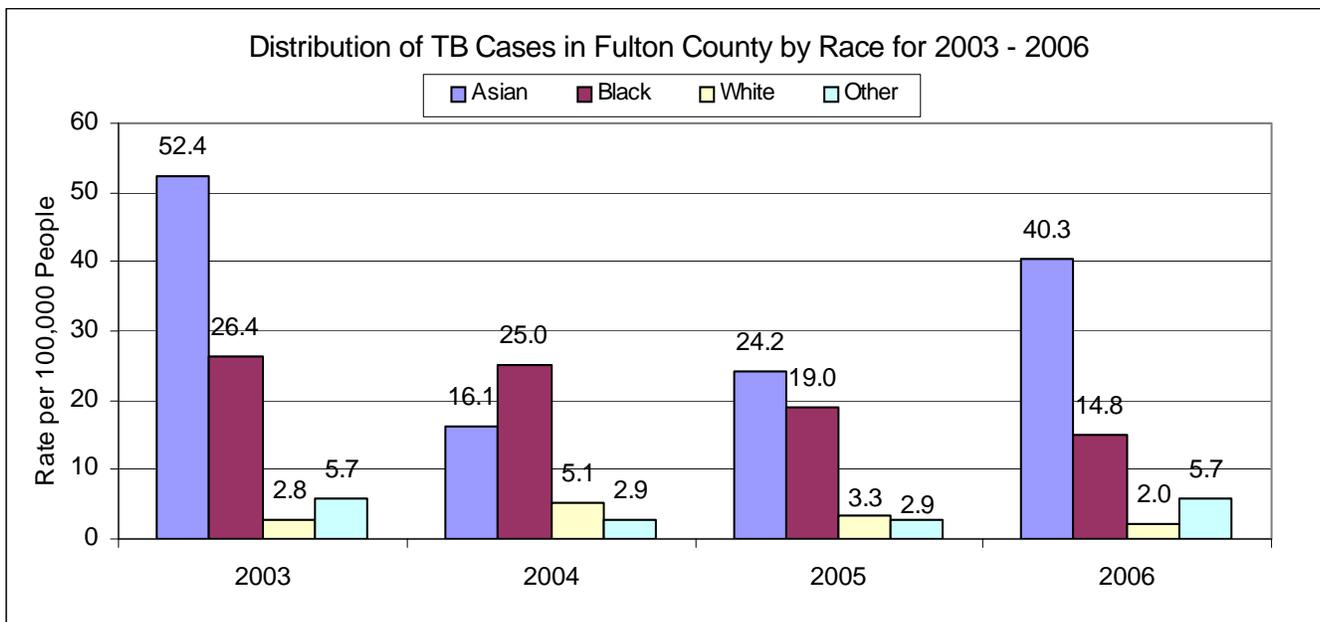
County Commission District There were variations in TB rate trends across Commission Districts within a 4-year period. TB rates generally increased in Commission Districts 3 and 5, while TB rates decreased in Commission Districts 4, 6, and 7. The single greatest decrease in TB rates was measured in District 6 for the second year in a row. This decrease is due, in large part, to the efforts of staff who conduct directly observed therapy (DOT), where patients are observed taking all TB medications.



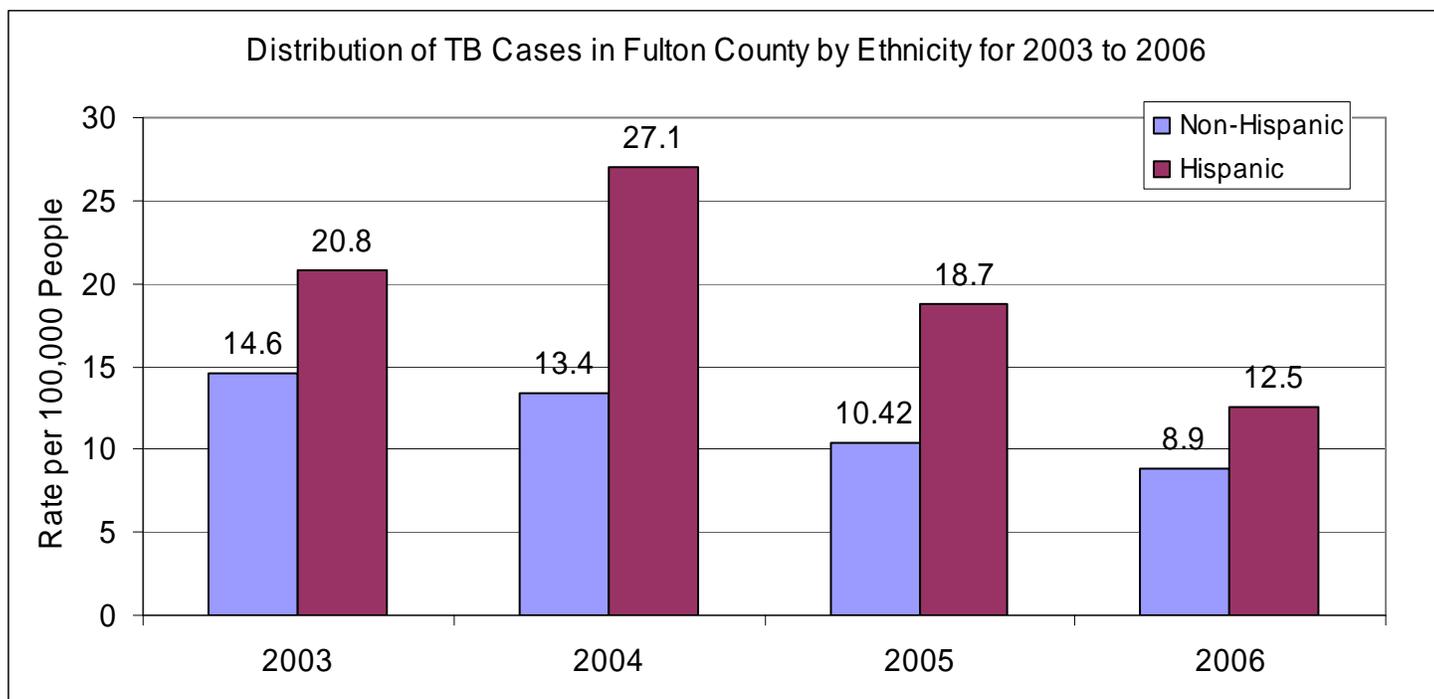
Age The age group most affected by TB continues to be adults in their mid-forties to the mid-fifties. The average new case of TB in 2006 was 44 years old; the youngest case was one year old, the oldest was 83 years. There was a continued overall decrease in the number of TB cases in children under ten years of age from seven cases in 2005 to two cases in 2006. However, the number of cases and the case rates in patients aged 60 years and older increased from 8.55 per 100,000 (N=8) in 2005 to the 2006 case rate of 13.87 per 100,000 (N=13).



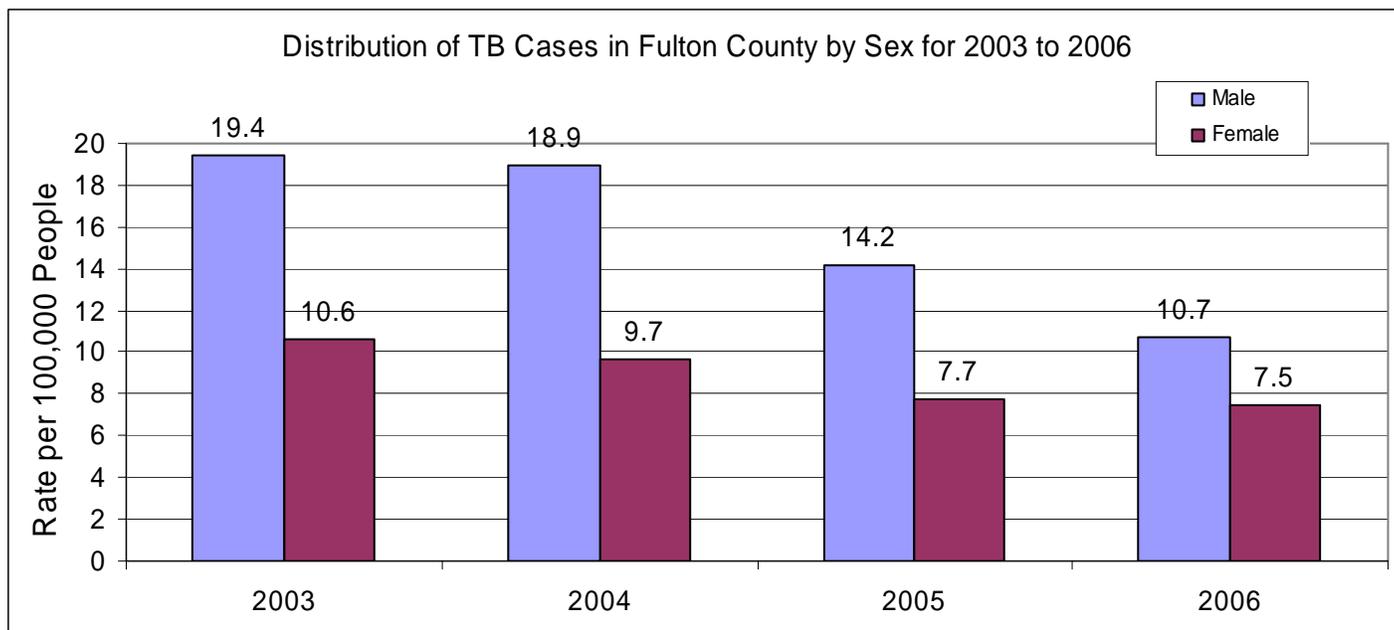
Race African-Americans are disproportionately affected by TB, both locally in Fulton County and nationally. African-Americans account for approximately 45% of Fulton County's population according to the US Census Bureau. However, in 2006 African-Americans accounted for 72% of the TB disease cases, with a case rate of 14.8 per 100,000, (N=54). In 2005, there were six Asian cases (case rate of 24.2 per 100,000) and in 2006 there were ten Asian cases (case rate of 40.3 per 100,000).



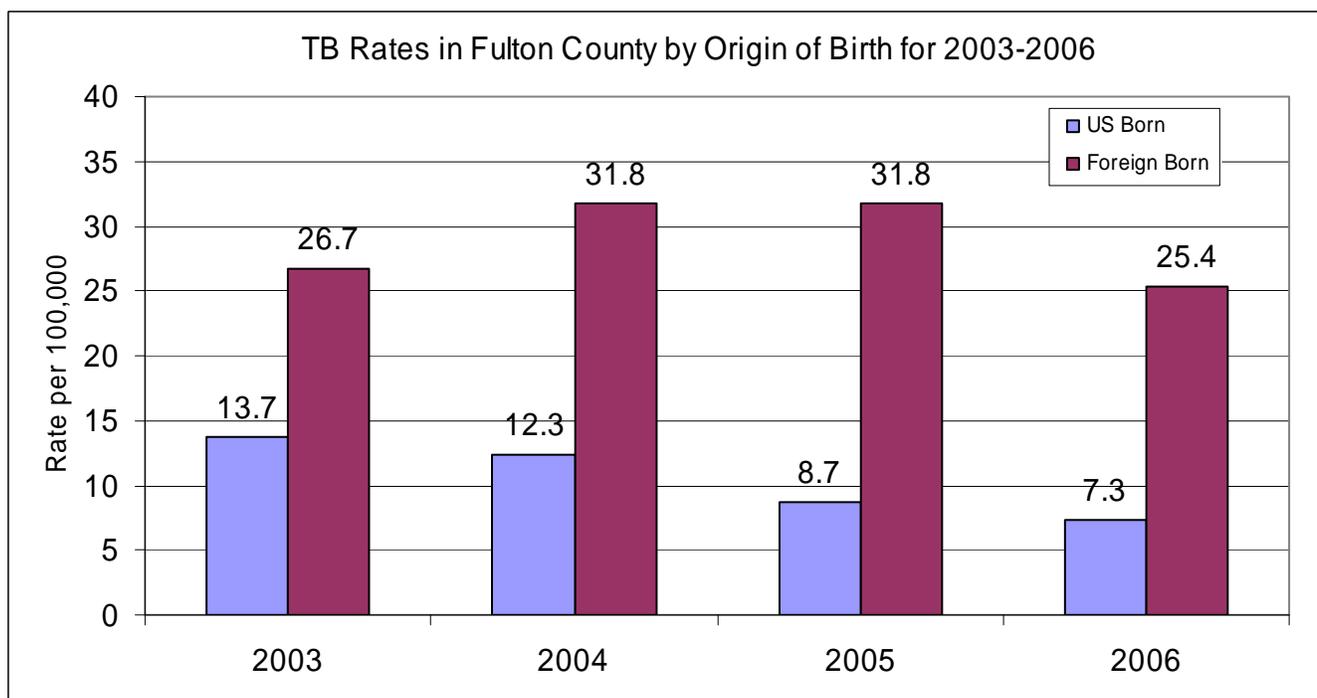
Ethnicity Tuberculosis rates remained higher in the Hispanic population (12.5 per 100,000) when compared to the non- Hispanic population (8.9 per 100,000) for 2006 in Fulton County. The 2005 case rate in the Hispanic population was 18.7 per 100,000 and 10.4 per 100,000 in the non-Hispanic population.



Sex TB disease has been diagnosed more in males than females; with a case rate of 10.7 per 100,000 males (N=43) versus a case rate of 7.5 per 100,000 females (N=31). The average age of the male patient was 47 years and the average age of the female patient was 40 years.



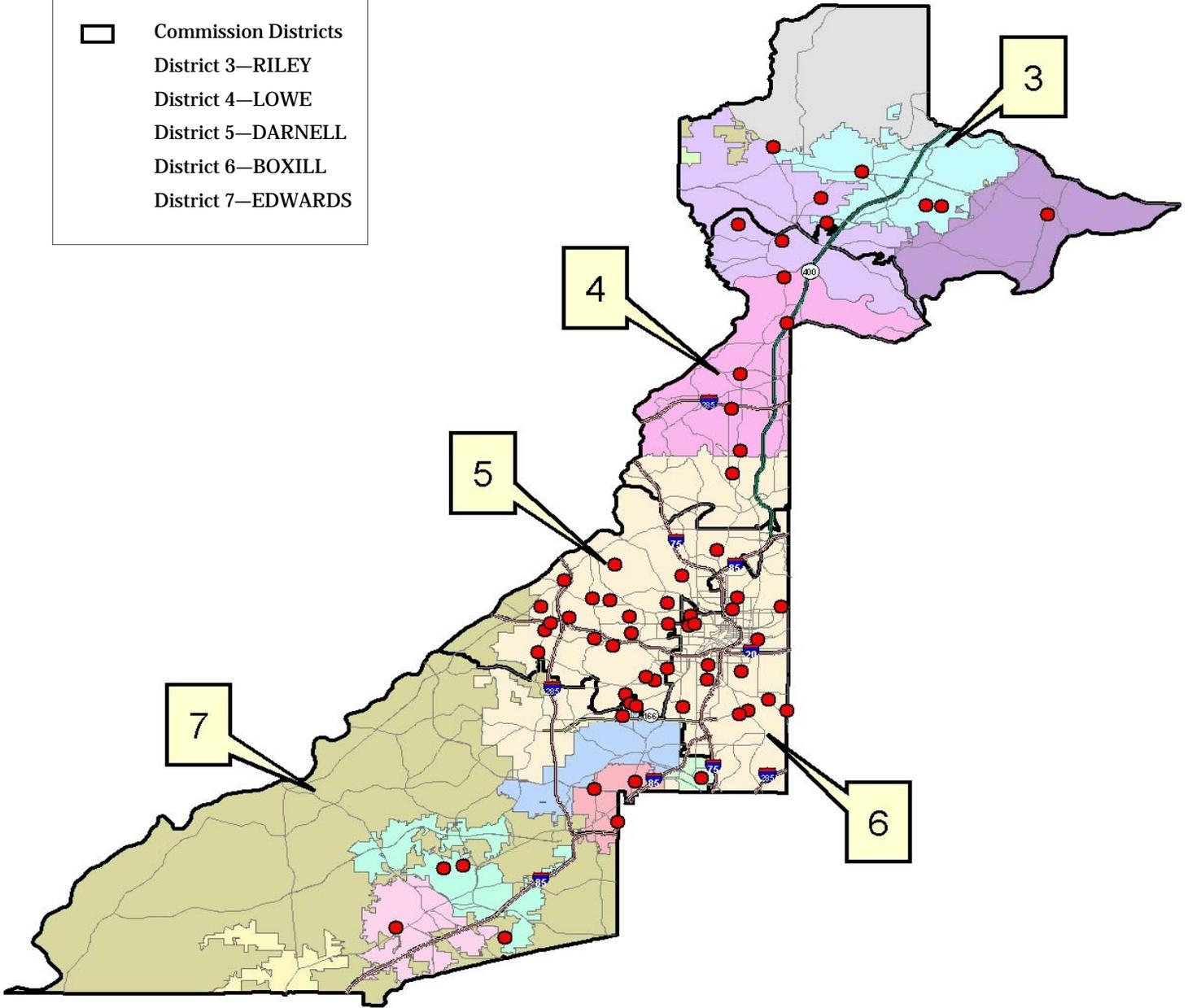
Origin of Birth The proportion of TB cases among the foreign-born population has increased nationally each year since 1993. In Fulton County, the case rates for both US-born and foreign-born persons decreased from 2005 to 2006.



Map of TB Case Locations by Residence

LEGEND

- TB case
- Commission Districts
 - District 3—RILEY
 - District 4—LOWE
 - District 5—DARNELL
 - District 6—BOXILL
 - District 7—EDWARDS



HIV and TB The percentage of patients with both active TB disease and HIV infection decreased slightly from 2005 to 2006, but was still increased over 2004 numbers. During 2004, 25.8% (30/116) were co-infected with HIV and TB compared to 29.5% (26/88) in 2005 and 27.4% (20/73) in 2006.

Multi-Drug Resistant Tuberculosis Anti-tuberculosis (TB) drug resistance is a major public health problem that threatens the success of tuberculosis control worldwide. Multidrug-resistant TB (MDR TB) is TB that is resistant to at least two of the best anti-TB drugs, isoniazid and rifampicin. These drugs are considered first-line drugs and are used to treat all persons with TB disease. Extensively drug-resistant TB (XDR TB) is TB resistant to at least isoniazid and rifampin among the first-line anti-TB drugs and, among second-line drugs, is resistant to any fluoroquinolone and at least one of three available injectable drugs.

Resistance to one or several forms of treatment occurs when the bacterium develops the ability to survive the antibiotic attack and passes on that ability to newly produced bacteria. MDR TB presents difficult treatment problems as treatment must be individualized and based on the patient's medication history and drug susceptibility study results. The recent worldwide emergence of XDR TB is a greater threat to public health and TB control, raising concerns of a possible future epidemic of this virtually untreatable form of TB. The Centers for Disease Control and the World Health Organization have documented the occurrence of XDR TB globally, as well as here in the United States. Patients with XDR TB are 64% more likely to die during treatment than patients with multidrug-resistant (MDR) TB.

Hospitalization TB infection is commonly discovered during hospitalization. When hospitalization is necessary for acute care of a TB patient, the Georgia Department of Human Resources has contracts with public and private hospitals to provide care. Grady hospital, which reports the highest number of TB cases in the greater Atlanta area, has 73 isolation beds for patients who have infectious tuberculosis or who are suspected of having infectious TB.