2008 TUBERCULOSIS

Statistics for North Carolina

April 2009

State of North Carolina | Department of Health and Human Services | Division of Public Health
Communicable Disease Branch | Tuberculosis Control Program

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State of North Carolina • Beverly Eaves Perdue, Governor
Department of Health and Human Services •Lanier M. Cansler, Secretary
Division of Public Health •Jeffrey P. Engel, State Health Director
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HIGHLIGHTS

Demographics:

- North Carolina is ranked as the 22nd highest state for case rates in the United States in 2008. This can be viewed as significant progress – in 1980, North Carolina was ranked as the 3rd highest state for case rate.

- The number of TB cases in 2008 was 335. Since 1980, TB cases in North Carolina have decreased by approximately four percent per year. As a result, the number of cases in 2008 was approximately 31% the number of cases in 1980.

- In 2008, one-half of all cases were located in seven counties: Mecklenburg (44), Wake (40), Guilford (21), Robeson (20), Forsyth (16), Durham (15), and Johnston (10). The case rate was higher in all seven of these counties than the state rate. There were 38 counties with no TB cases in 2008.

- While the number of Asians with TB increased by 2% between 2004 and 2008, the case rate for Asians decreased from 30.1 to 24.6 per 100,000 population.

- The number of African-Americans with TB decreased by 21.5% from 2004 to 2008. The rate for African-Americans decreased from 9.6 to 6.4 per 100,000 population.

- The number of Hispanics with TB decreased by 6.6% from 2004 to 2008; the rate during this same time period only decreased from 18 to 13 per 100,000 population. Of the 422 total Hispanic cases between 2004 and 2008, 173 (41%) were located in four counties: Wake (65), Mecklenburg (58), Forsyth (27), and Durham (23).

- With the exception of ages 5 – 14, the number of cases decreased for every age group with the greatest percentage decrease being in ages 15 – 24 (28.6% decrease between 2004 and 2008). The numbers and rates for specific age groups can be found on page 5.

Risk Factors:

- Most (58%) 2008 TB cases in North Carolina have at least one of these risk factors: being born in a country with a higher TB incidence than the US ("foreign born"), homeless within past year, resident of a long-term care or correctional facility, HIV co-infected, excessive alcohol user, or non-injecting or injecting drug user. Eleven percent have two or more of these risk factors

- The percent of cases that are foreign-born decreased from 41% to 37% between 2007 and 2008. Sixty percent of all foreign born cases of TB in 2008 came from four countries: Mexico (33%); India (9%); Honduras (9%); and Vietnam (9%). For the five year period from 2004 to 2008, there were a total of 647 cases that were foreign born. Of these, 413 cases came from five countries: Mexico (237), Vietnam (56), India (55), Honduras (38), and the Philippines (27). Of the total, 387 cases located in five counties: Wake (135), Mecklenburg (111), Guilford (67), Durham (38), and Forsyth (36). Thirty percent of children (0-14) were foreign-born.

- TB cases with excessive alcohol use reported decreased from 18% in 2004 to 12% in 2008. Most of the persons with excessive alcohol use are US born. In 2004, US-born, black non-Hispanics were 62% of the total excessive alcohol use cases but by 2008 they were only 47% of the total. This

decrease in excess alcohol use in this group accounted for almost all of the decrease in numbers of excess alcohol use cases from 2004 to 2008.

- Homeless cases remained fairly stable – 6% in 2004 and 5% in 2008.

- Co-morbidity of TB cases with HIV was 8% in 2008.

- HIV reporting for TB cases has increased significantly from 1998 to 2008. Since November of 2007, the standard of care has been to offer HIV testing as part of routine screening. Patients are informed that HIV testing is part of the screening and may decide to "opt-out" of that test. Before this standard of care was official, NC TB nurse consultants had spent a lot of time training in local health departments to encourage HIV testing for TB suspects/cases. Consequently, the number of cases where HIV status is unknown has decreased greatly over the past 10 years. In 1998, there were 207 persons (42%) for whom HIV testing was not offered, not known, or refused by patient. In 2008, there were 17 persons (5%) for whom HIV testing was not offered, not known or refused by patient.

Clinical data:

- Mortality of tuberculosis cases during treatment greatly decreased from 2003 to 2007. The number of cases where death occurred during treatment was 39 in 2003 and 18 by 2007. Additionally, there were nine persons dead at diagnosis in 2003 and eight in 2007.

- Previous diagnosis of tuberculosis decreased from 23 in 2004 to 11 in 2008.

- The major site of disease for TB cases in 2008 was predominately pulmonary (257), followed by lymphatic: cervical (15) and pleural (13).

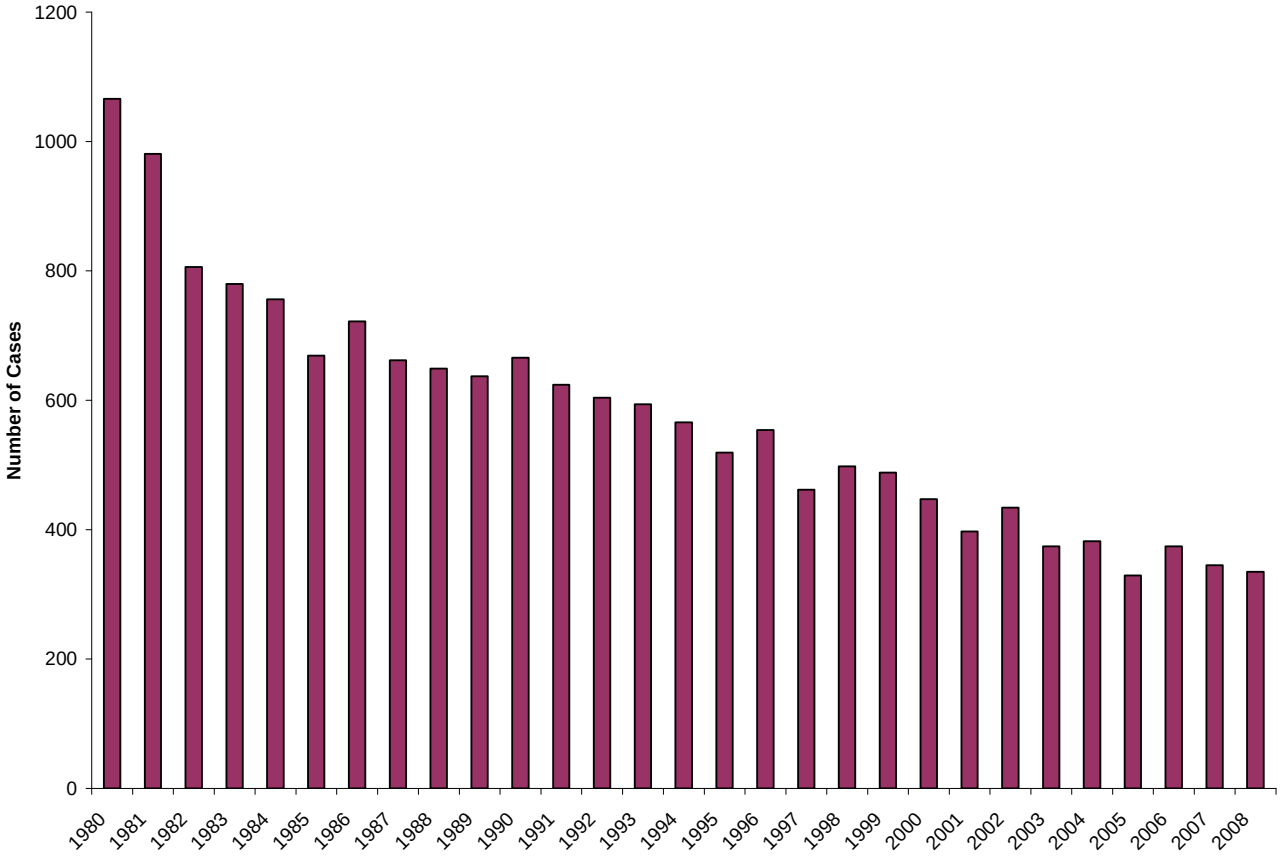
- Drug resistance to INH in North Carolina (NC) decreased from 19 cases (6%) in 2004 to 14 cases (6%) in 2008. Between 2004 and 2008 the number of MDR cases has ranged from one to three cases per year.

- In 2007, 99.4% of all cases were totally directly observed. The percentage of 2007 cases that completed therapy in one year increased to 91.4% with another 6.4% completing after one year. Only 2.2% did not complete – three were lost to follow-up and three moved.

DEMOGRAPHICS

DEMOGRAPHIC CHARACTERISTICS

Figure 1. Reported TB Cases in N.C.: 1980 - 2008

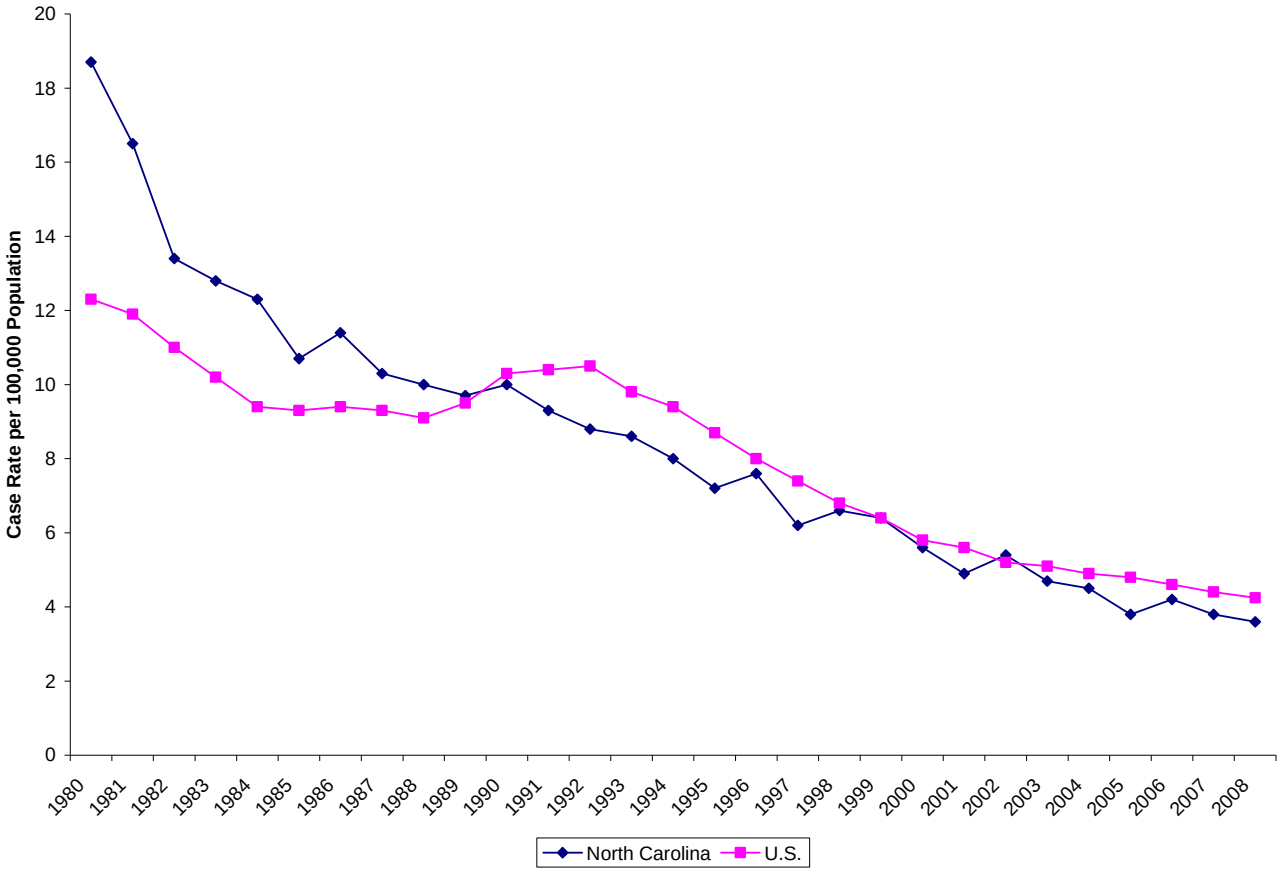


DATA SOURCE: CaroTIMS.

As can be seen from Figure 1, the number of cases in North Carolina for 2008 is approximately 31% the number of cases in 1980. The numbers have declined, on average, about 4% per year. TB incidence in North Carolina decreased 12% between 2004 and 2008, down from 382 cases to 335 cases. The number of cases reported in North Carolina decreased from 345 to 335 between reporting years 2007 and 2008 which is a 3% decrease in overall cases.

Both U.S. and N.C. TB Case Rates have dropped significantly since 1980. (See Figure 2.) Although the number of cases has declined in North Carolina in the past five years, the state is ranked as 22nd highest for case rates in 2008. [See Table 1.]

Figure 2. TB Case Rates for N.C. and the U.S.: 1980 - 2008



DATA SOURCE: Annual surveillance reports published by CDC.

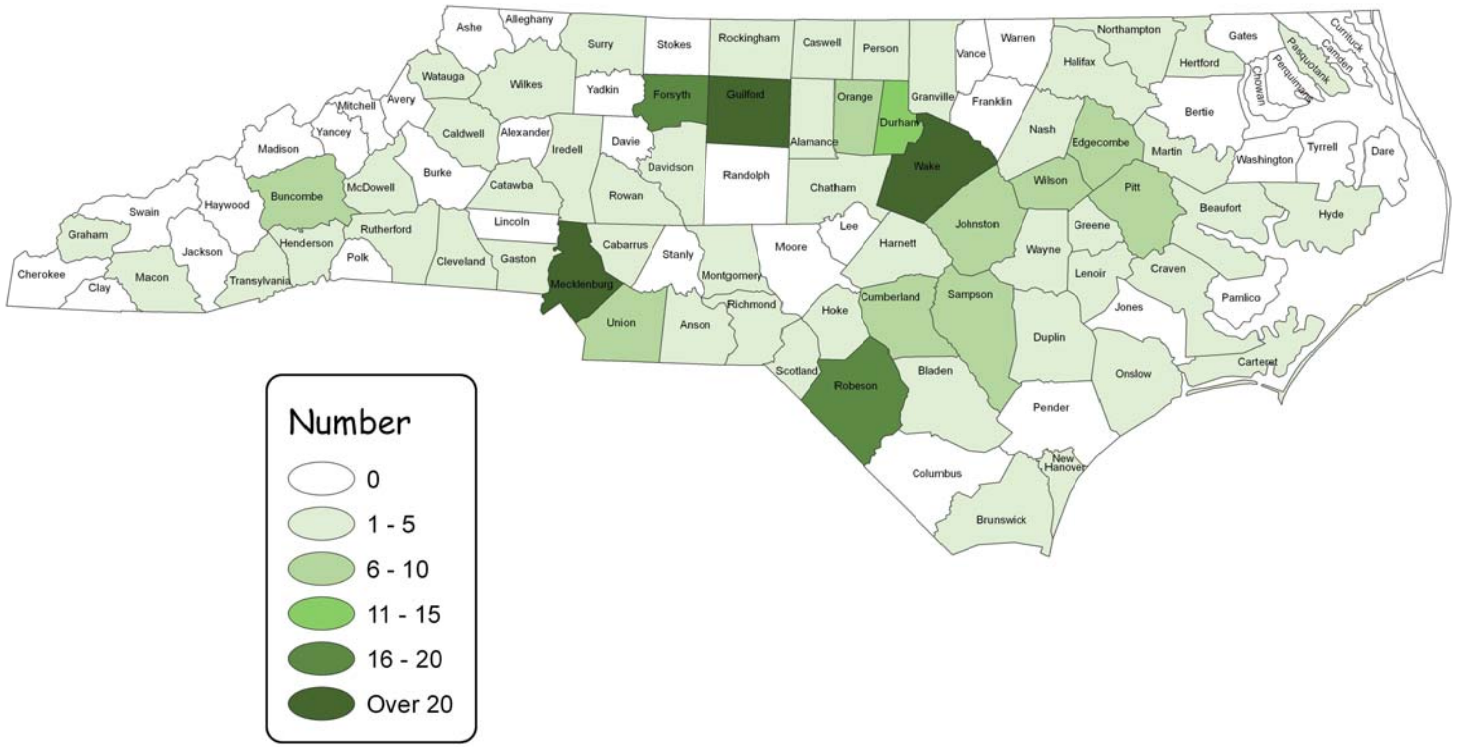
Table 1: N.C. and U.S. Case Rate and N.C. Ranking in U.S. by Case Rate 2004-2008

	Rates		North Carolina Case Rate Rank	North Carolina Number of Cases Rank
Year	**USA Rates**	**North Carolina Rates**		
2004	4.9	4.5	19	8
2005	4.8	3.8	25	9
2006	4.6	4.2	18	8
2007	4.4	3.8	22	8
2008	4.2	3.6	22	9

DATA SOURCE: Annual surveillance reports published by CDC.

Figure 3 on the following page is a map of 2008 cases in N.C. by county of residence.

Figure 3. North Carolina 2008 Tuberculosis Cases



NC State Center for Health Statistics

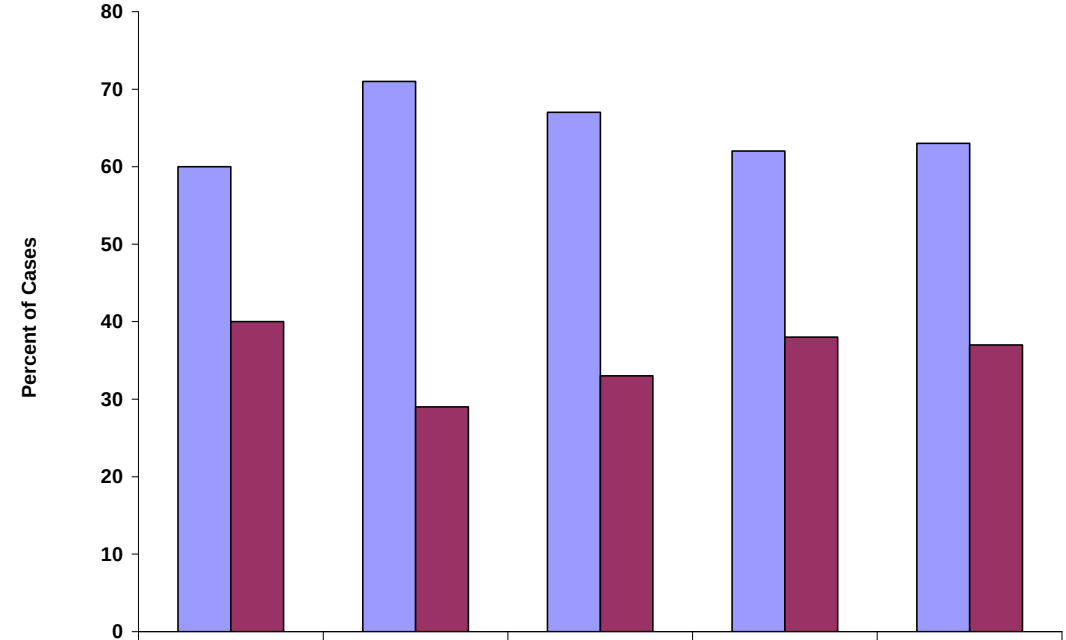
Table 2 provides a demographic overview of reported cases and case rates in N.C. from 2004 – 2008. Table 9 provides TB incidence and rates by county. Figures 4, 5, and 6 provide information about percent of cases by gender, age, and race/ethnicity. The number of cases for Asians decreased almost 19% between 2007 and 2008. Numbers for all races decreased over the five years with the exception of American Indian/Alaskan Native. The percent decrease was greatest for blacks (21.5% decrease between 2004 and 2008). The number of cases decreased for every age group with the exception of ages 5 – 14 with the greatest percentage decrease being in ages 15 – 24 (28.6% decrease between 2004 and 2008). Rates per 100,000 for Black/African-Americans decreased from 9.6 in 2004 to 6.4 by 2008. While rates for Asians have fluctuated over the five years, rates for Asians decreased from 30.1 in 2004 to 24.6 in 2008. Hispanic rates decreased from 18.0 in 2004 to13.0 in 2008. Rates for cases ages 0 to 4 decreased from 4.2 to 2.0 between 2004 and 2008 and rates for those 5 – 14 remained approximately the same (0.5 in 2004 and 0.6 in 2008). The five-year state rate (2003 – 2007) for those 0 – 4 was 2.57 compared with a rate of 2.49 for the United States and the five-year state rate (2003 – 2007) for those 5 – 14 was 0.55 compared with a rate of 0.88 for the United States. The Division of Public Health contracts with a pediatric expert in the field of tuberculosis who reviews each pediatric case which helps to assure that these rates remain low.

Table 2: N.C. TB Case Rates for 2004-2008

	NORTH CAROLINA TB CASE RATES FOR 2004-2008*†									
Year	2004		2005		2006		2007		2008	
VARIABLES	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Cases	382	4.5	329	3.8	374	4.2	345	3.8	335	3.6
SEX										
Male	231	5.7	233	5.7	252	6.1	214	4.8	212	4.7
Female	151	3.6	96	2.2	122	2.8	131	2.8	123	2.6
RACE										
White‡	167	2.8	132	2.2	141	2.3	153	2.3	141	2.1
Black/African-American	168	9.6	159	9.0	166	9.4	131	6.6	129	6.4
Asian	42	30.1	28	19.1	57	38.8	53	31.0	43	24.6
Amer. Indian/Alaska Native	5	5.8	9	8.4	8	7.5	7	6.2	9	7.9
Hawaiian/Other Pac. Isl.	0	0	1	29.9	0	0	0	0.0	0	0
Multi-Racial	0	0	0	0	2	1.6	1	1.1	13	12.6
ETHNICITY										
Hispanic	91	18.0	72	13.5	75	14.1	101	15.8	85	13.0
Non-Hispanic	291	3.7	257	3.3	299	3.8	244	2.9	250	2.9
AGE										
0- 4	25	4.2	13	2.2	10	1.7	18	2.8	19	2.9
5-14	6	0.5	7	0.6	7	0.6	7	0.6	8	0.6
15-24	42	4.1	28	2.6	52	4.9	45	3.6	30	2.4
25-44	125	5.0	105	4.2	132	5.3	122	4.8	119	4.6
45-64	96	4.8	106	5.1	100	4.8	89	3.8	91	3.8
>65	88	9.1	70	7.1	73	7.4	64	5.8	68	6.0

***Data source: NC EDSS TB Surveillance - Demographic Data Report. Rates are per 100,000.**
‡Includes White Hispanic and White Non-Hispanic.
†Denominators for computing rates for the state were obtained from the Annual Estimates of the Population for the United States and Puerto Rico. 2008 Rates were calculated based on the 2007 population estimates with the strata inflated to reflect the 2.0% increase of the total NC population from 2007 to 2008. 2007 rates were updated to be calculated on the actual 2007 Annual Estimates for North Carolina.

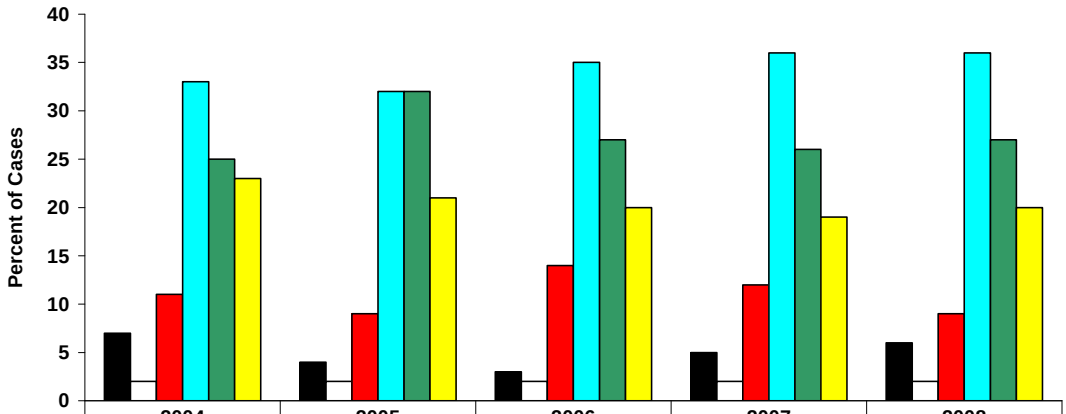
Figure 4. N.C. TB Cases by Gender: 2004 – 2008



	2004	2005	2006	2007	2008
Male (%)	60	71	67	62	63
Female (%)	40	29	33	38	37

DATA SOURCE: North Carolina Electronic Disease Surveillance System (NC EDSS)

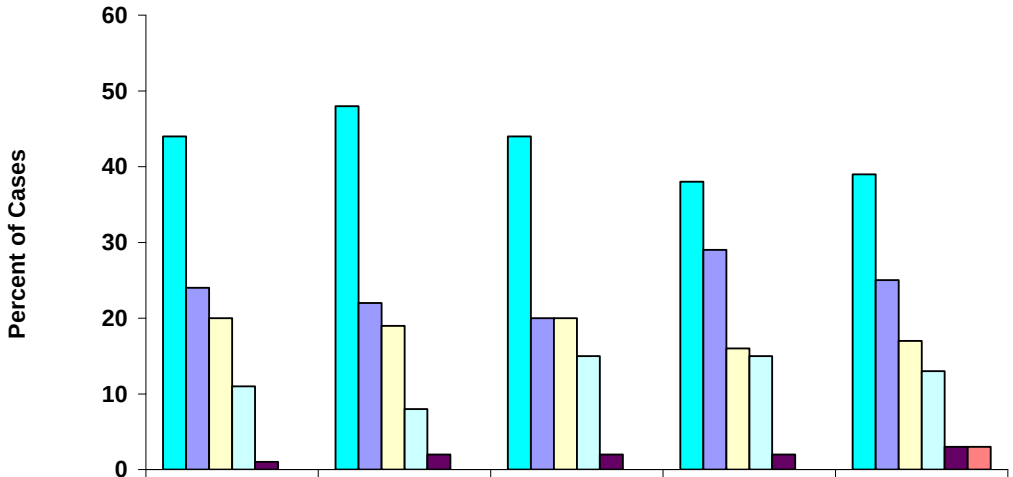
Figure 5. N.C. TB Cases by Age Group: 2004 – 2008



	2004	2005	2006	2007	2008
0- 4	7	4	3	5	6
5-14	2	2	2	2	2
15-24	11	9	14	12	9
25-44	33	32	35	36	36
45-64	25	32	27	26	27
>65	23	21	20	19	20

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Figure 6. N.C. TB Cases by Race and Ethnicity: 2004 – 2008



	2004	2005	2006	2007	2008
Black/African-American*	44	48	44	38	39
Hispanic	24	22	20	29	25
White*	20	19	20	16	17
Asian*	11	8	15	15	13
American Indian/Alaska Native*	1	2	2	2	3
Multi-Racial*	0	0	0	0	3

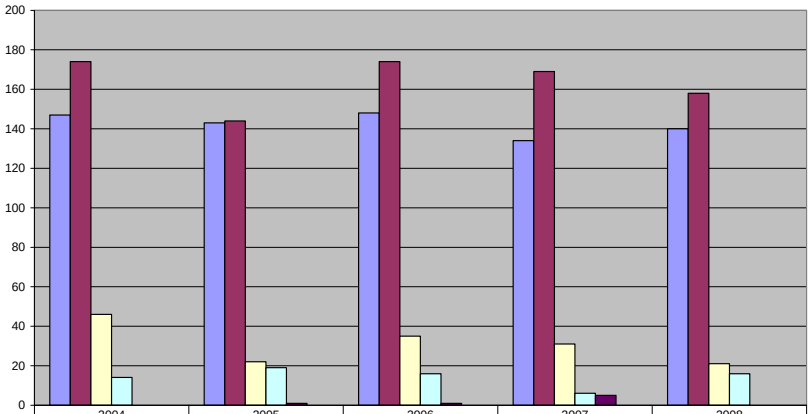
* Does not include Hispanics
DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

RISK FACTORS

RISK FACTORS FOR TB

There are several risk factors commonly associated with increased incidence of TB. These include: being foreign-born; excess alcohol use; non-injecting and/or injecting drug use; being homeless; being a resident of a long-term care facility or a correctional facility; being co-infected with HIV; and being a health-care worker. This section of this report describes our TB cases for these factors. As can be seen from Figure 7, most people have at least one risk factor and approximately 11% of the 2008 cases have two or more risk factors.

Figure 7. N.C. TB Cases by Number of Risk Factors: 2004 – 2008

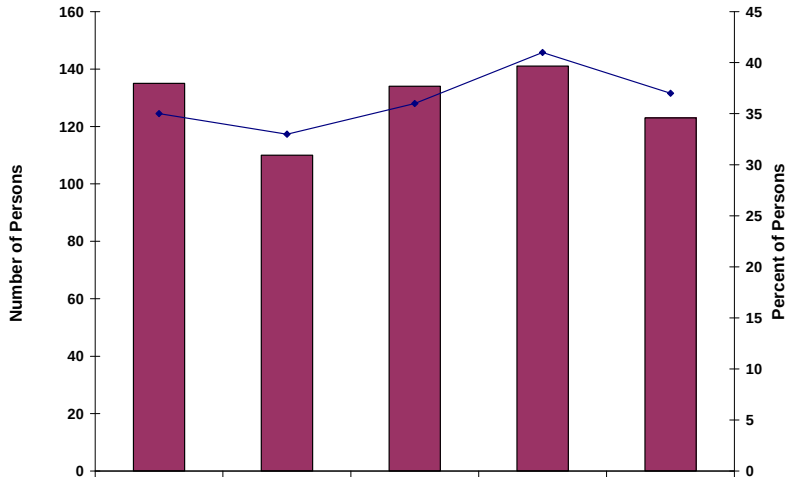


	2004	2005	2006	2007	2008
0	147	143	148	134	140
1	174	144	174	169	158
2	46	22	35	31	21
3	14	19	16	6	16
4	0	1	1	5	0
5	0	0	0	0	0

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Foreign Born: Between the reporting years 2007 and 2008 there was a 12.8% decrease in the number of foreign born TB cases (141 and 123 respectively). [See Figure 9.] N.C. has a lower percentage of foreign-born in comparison to the U.S. average. The largest percentage of foreign-born cases in 2008 was from Mexico (34%), Honduras (11%), India (11%) and Vietnam (11%). [See Figure 10.]

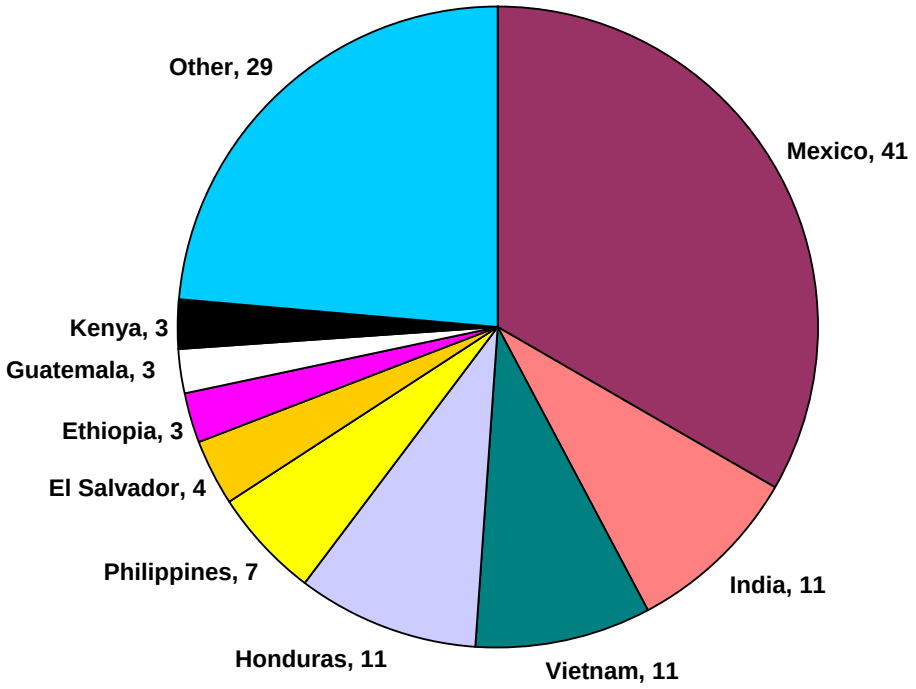
Figure 8. N.C. Foreign-Born TB Cases: 2004 – 2008



	2004	2005	2006	2007	2008
Cases	135	110	134	141	123
Percent	35	33	36	41	37

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Figure 9. Countries of Birth for 2008 Foreign-born TB Cases in N.C.*



DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Pediatric Cases by Foreign-Born Status: An examination of 2008 pediatric cases by country of origin indicates that 30% are foreign born. Since the total number of pediatric cases is small (ranging from 16 to 30 between 2004 and 2008), the percentage that are foreign-born fluctuates quite a bit from year to year. The percentage of foreign-born pediatric cases ranged from a low of 6.7% in 2004 to a high of 31.2% in 2006. The average over the five-year period is 22%. The average percentage of foreign-born in total tuberculosis cases over this five-year period is 36% and the percentage of foreign-born pediatric cases was lower every year than the percentage of foreign-born cases for all ages. However, this does not necessarily provide a total picture of pediatric risk factors by foreign-born status; children may be U.S. born while their parents are foreign-born**.** Beginning in 2009, we will be collecting information on children who are U.S. born with foreign-born parents.

Table 3: Pediatric Cases by Foreign-Born Status

	2004		2005		2006		2007		2008	
	U.S. BORN	FOREIGN BORN	U.S. BORN	FOREIGN BORN	U.S. BORN	FOREIGN BORN	U.S. BORN	FOREIGN BORN	U.S. BORN	FOREIGN BORN
0 – 4 YEARS	23	1	10	3	8	2	17	1	16	3
5 – 14 YEARS	5	1	4	3	3	3	5	2	3	5
TOTAL	28	2	14	6	11	5	22	3	19	8

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Excess Alcohol Use: The overall trend for number of excess alcohol use cases from 2004 to 2008 is downward. [See Figure 10.] The percentage of all cases identified as excess alcohol use cases declined from 18% to 12% during this period of time. Looking at Table 4, the main group that has contributed to this decrease is US-born, Black, non-Hispanics. While this group was 39% of the total TB cases in 2004, they were 68% of the excess alcohol use cases. By 2008, this group was 34% of the total TB cases and 48% of the excess alcohol use cases. Thus, the absolute decrease in number of US-born, black, non-Hispanics with excess alcohol use was 23 cases from 2004 to 2008.

Figure 10. N.C. TB Cases With Excessive Alcohol Use: 2004 - 2008

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Table 4: Percent of Excess Alcohol Use Cases by US Citizen, Race and Ethnicity: 2004 – 2008

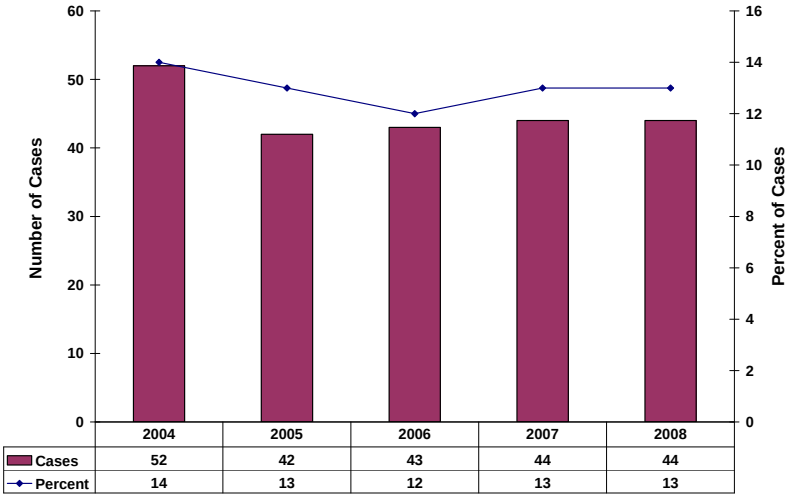
	2004	2005	2006	2007	2008
US-born, Black, NH	62	69	63	47	47
US Born, White, NH	19	20	22	24	25
US Born, Other*	2	2	4	10	10
FB, Hispanic	17	9	11	14	18
FB, Asian	0	0	0	5	0
	100	100	100	100	100

* This group includes US-born Am. Ind.; US-White Hispanic; US-born black, ethnicity unknown; and US-born white, ethnicity unknown .

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Non-Injecting Drug Use: Non-injecting drug use has been a problem for approximately 12 – 14% of NC TB patients for several years. The figures do not indicate any change. [See Figure 11.]

Figure 11. N.C. TB Cases with Known Non-Injecting Drug Use: 2004 – 2008

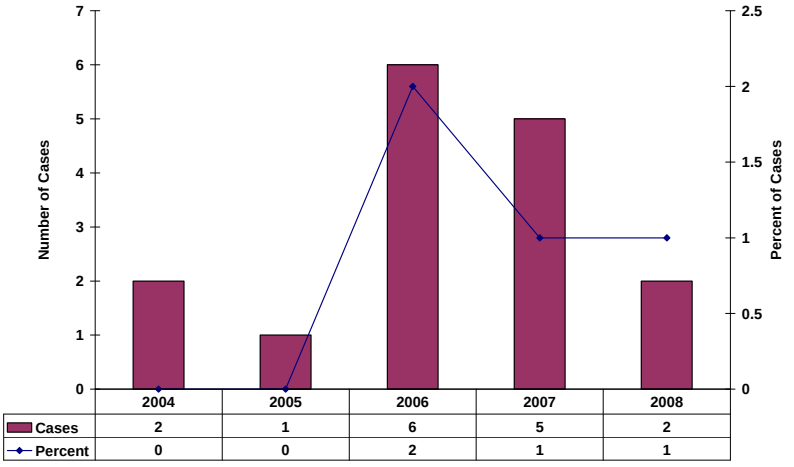


	2004	2005	2006	2007	2008
Cases	52	42	43	44	44
Percent	14	13	12	13	13

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Injecting Drug Use: IDU is not a significant problem for our TB cases in N.C. It has been reported in only 0 – 2% of our TB cases during any reporting year. [See Figure 12.]

Figure 12. N.C. TB Cases with Known Injecting Drug Use: 2004 – 2008

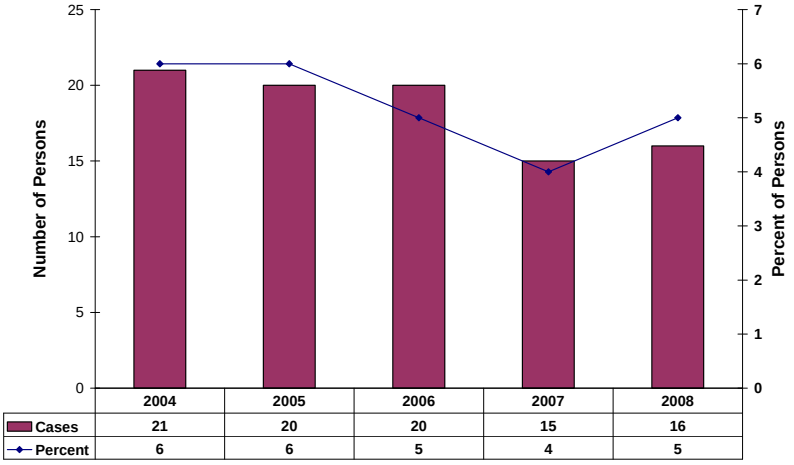


	2004	2005	2006	2007	2008
Cases	2	1	6	5	2
Percent	0	0	2	1	1

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Homeless: The number and percent of reported homeless TB cases increased slightly from 2007 to 2008. [See Figure 13.]

Figure 13. N.C. TB Cases Homeless in Year Prior to Diagnosis: 2004 - 2008

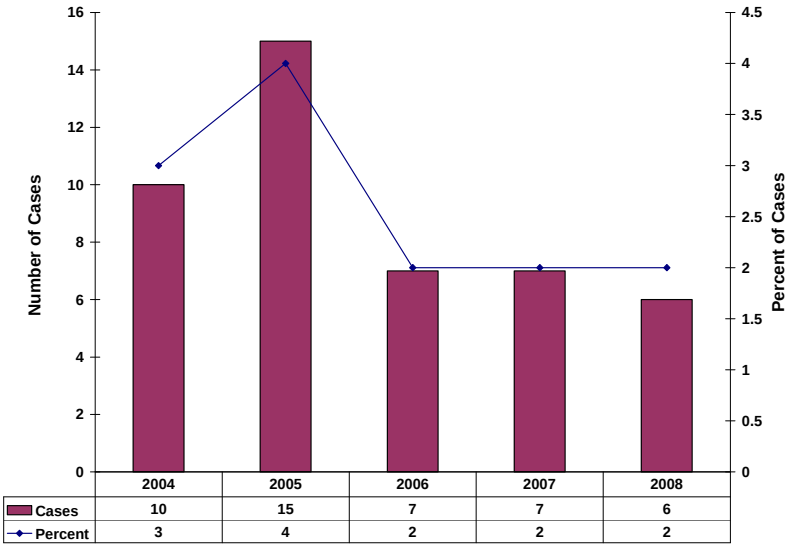


	2004	2005	2006	2007	2008
Cases	21	20	20	15	16
Percent	6	6	5	4	5

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Long Term Care Facilities: The number of TB cases diagnosed in long term care facilities during reporting years 2007 and 2008 decreased from 7 to 6. [See Figure 14.]

Figure 14. N.C. TB Cases That Were Residents of a Long-Term Care Facility at Time of Diagnosis: 2004 – 2008

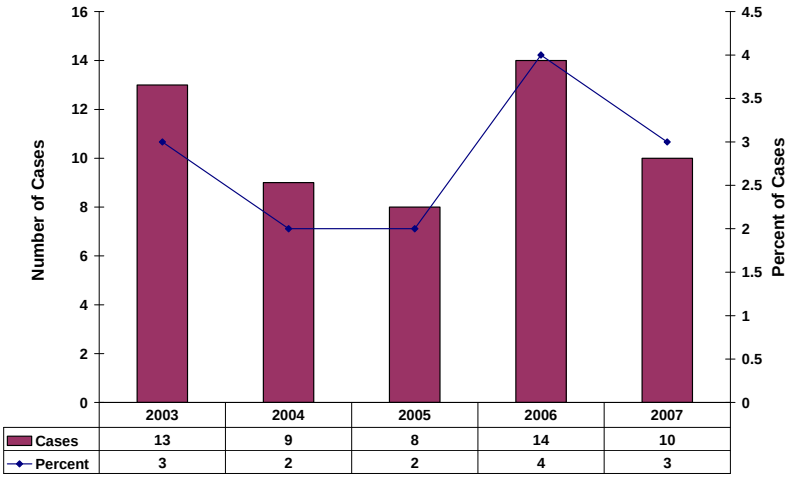


	2004	2005	2006	2007	2008
Cases	10	15	7	7	6
Percent	3	4	2	2	2

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Correctional Facilities: The case rate for the state correction population is 18.8 per 100,000 for the year 2008. (State Department of Correction average daily inmate population for 2008 was 39,746, and the average local jail population statewide was 18,702 for the month of January 2009.) [See Figure 15.]

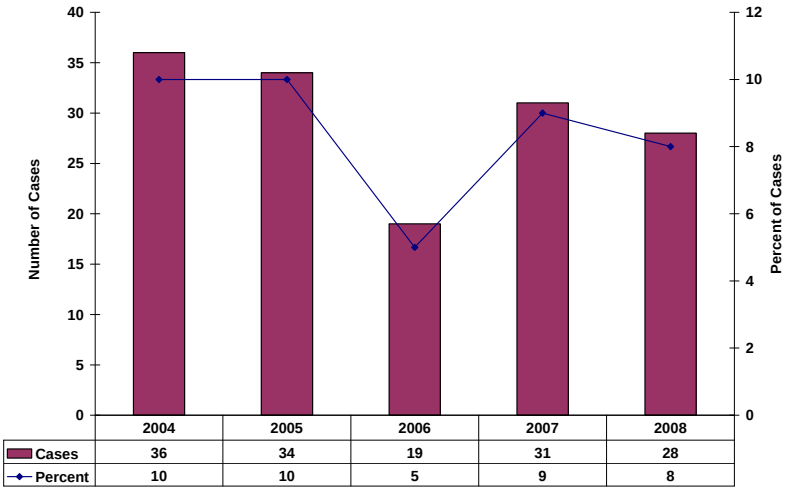
Figure 15. N.C. TB Cases Residing in Correctional Facility at Time of Diagnosis: 2004 - 2008



DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS); N.C. Department of Correction and DHHS Division of Facility Services, Jails and Detention January 2009 average daily population report.**

HIV Status: Worldwide, co-morbidity of HIV and TB is the single largest contributor to mortality where TB disease is a factor. Figure 16 shows the number and percentage of cases that had HIV infection. Table 5 presents the distribution of HIV and TB co-morbidity by age.

Figure 16. N.C. TB Cases with HIV Infection: 2004 – 2008



DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Table 5: TB Cases with HIV Infection by Age Group 2003 - 2008

	TB Cases with HIV Infection by Age Group 2003 - 2008					
Age Group	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
0-4	**1**	**0**	**0**	**0**	**0**	**0**
5-14	**0**	**0**	**0**	**0**	**0**	**1**
15-24	**2**	**2**	**0**	**1**	**1**	**1**
25-44	**31**	**20**	**21**	**14**	**14**	**18**
45-64	**14**	**14**	**13**	**2**	**15**	**7**
≥65	**0**	**0**	**0**	**2**	**1**	**1**

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

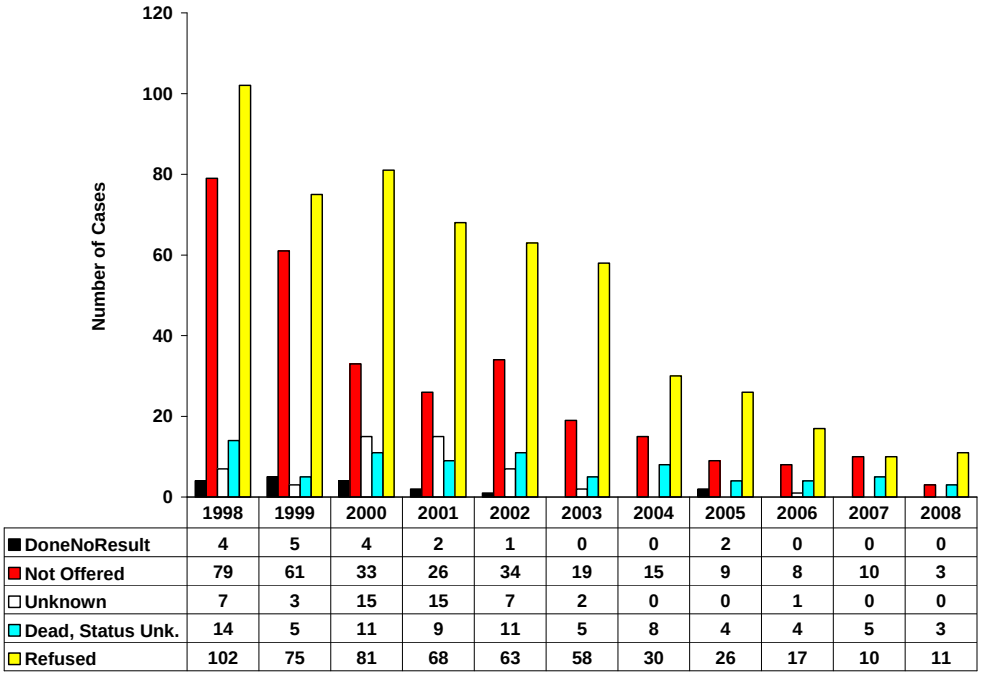
Table 6 and Figure 17 show the progress that has been made in N.C. with respect to standard of care and HIV status—namely, very few cases are not offered HIV testing, and an increasing number of TB cases are accepting the offered HIV test. Since November of 2007, the standard of care has been to offer HIV testing as part of routine screening. Patients are informed that HIV testing is part of the screening and may decide to "opt-out" of that test. Before this went into effect, NC TB nurse consultants had spent a lot of time training in local health departments to encourage HIV testing. Consequently, the number of cases where HIV status is unknown has decreased greatly over the past 10 years. Fewer patients refuse testing (down from 20.5% in 1998 to 3.3% in 2008) and there are fewer patients who are not being offered testing (down from 15.9% in 1997 to 0.9% in 2008).

Table 6: Reported HIV Results 2003 – 2008

	Reported HIV Results 2003 – 2008					
Status	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Negative	**242**	**292**	**254**	**324**	**289**	**290**
Positive	**48**	**36**	**34**	**19**	**31**	**28**
Refused	**58**	**30**	**26**	**17**	**10**	**11**
Not Offered	**19**	**15**	**9**	**8**	**10**	**3**
Tested No Result	**0**	**0**	**2**	**1**	**0**	**0**
Unknown	**2**	**0**	**0**	**1**	**0**	**0**
Dead and Status Unknown	**5**	**8**	**4**	**4**	**5**	**3**
Missing	**0**	**0**	**0**	**0**	**0**	**0**

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Figure 17: N.C. TB Cases With Unknown HIV Status: 1998 - 2008

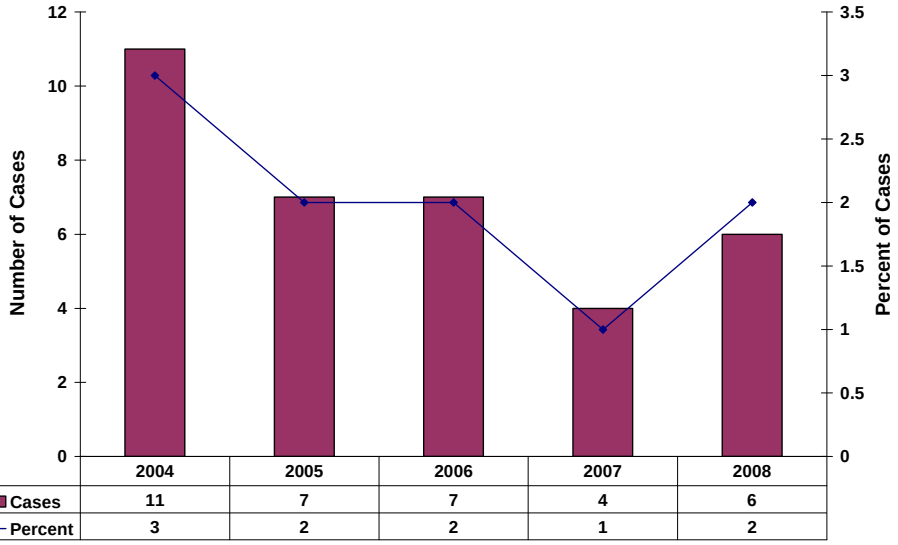


	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
DoneNoResult	4	5	4	2	1	0	0	2	0	0	0
Not Offered	79	61	33	26	34	19	15	9	8	10	3
Unknown	7	3	15	15	7	2	0	0	1	0	0
Dead, Status Unk.	14	5	11	9	11	5	8	4	4	5	3
Refused	102	75	81	68	63	58	30	26	17	10	11

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Occupation: The occurrence of TB in persons identified as health care workers remains an area that receives close scrutiny and intensive investigation. Figure 18 does NOT indicate TB exposure in health care settings, but rather provides indication that there is not an overall increase in cases among those who could expose others, or be exposed to, TB.

Figure 18. N.C. Health Care Workers with TB Disease: 2004 - 2008



	2004	2005	2006	2007	2008
Cases	11	7	7	4	6
Percent	3	2	2	1	2

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

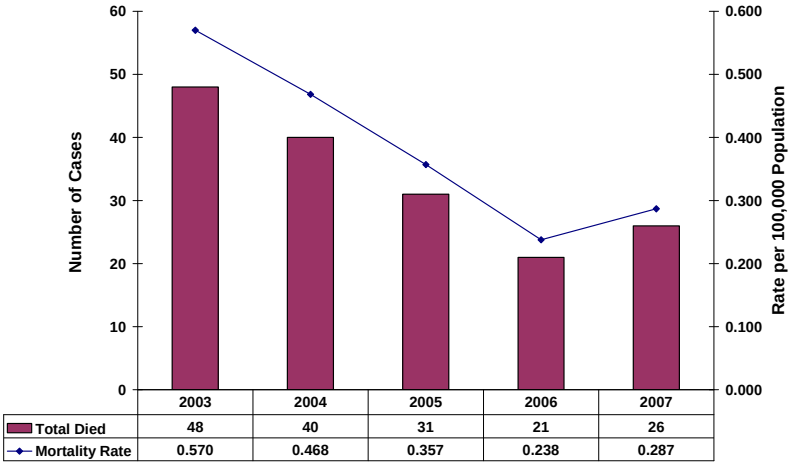
CLINICAL DATA

CLINICAL DATA FOR N.C.

Mortality of TB Cases in N.C.

As can be seen from Figures 19 and 20, mortality of TB cases from diagnosis to treatment completion has decreased over the past five years. In 2003, there were 48 deaths (nine dead at diagnosis and 39 who died before completion of treatment); by 2007, there were 26 deaths (eight dead at diagnosis and 18 who died before completion of treatment). Prompt diagnosis and treatment is the key to reducing the "dead at diagnosis" category, and close coordination with primary care physicians to address co-morbidities may decrease the number who die before the end of treatment, though more research is needed to better understand the characteristics of those in the two categories.

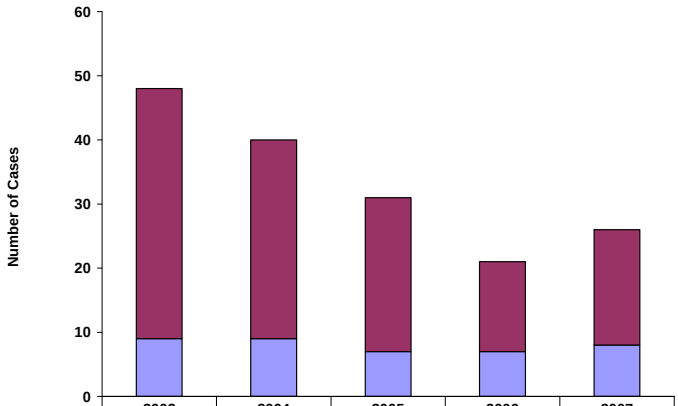
Figure 19. N.C. TB Case Mortality and Rates: 2003 – 2007



	2003	2004	2005	2006	2007
Total Died	48	40	31	21	26
Mortality Rate	0.570	0.468	0.357	0.238	0.287

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Figure 20. Timing of Death Among TB Cases in N.C.: 2003 – 2007

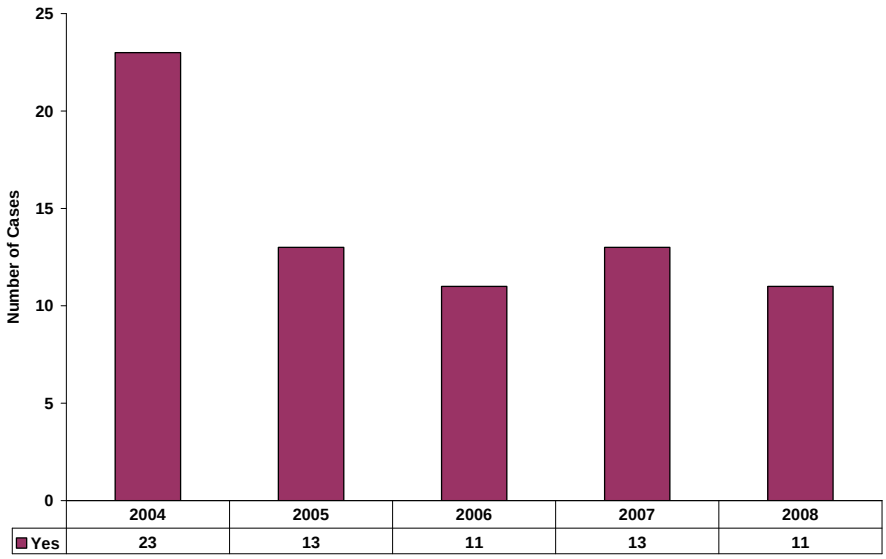


	2003	2004	2005	2006	2007
Died Before Tx Completion	39	31	24	14	18
Dead at Diagnosis	9	9	7	7	8

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Previous Diagnosis of TB: Only a few (11) TB patients in 2008 had a previous diagnosis of TB. However, there were three patients for whom this data was not available. (Two were dead at diagnosis and the third was foreign-born and was unable to provide that information.) This is down from 23 cases in 2004 that had a previous diagnosis of TB. Again, this may be related to greater assurance of completion of therapy with directly observed therapy.

Figure 21. Previous Diagnosis of TB for TB Patients in N.C.: 2004 - 2008

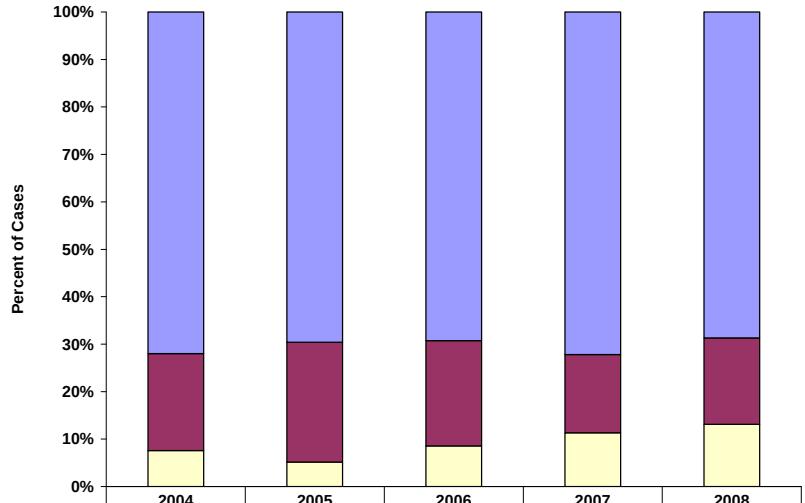


	2004	2005	2006	2007	2008
Yes	23	13	11	13	11

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Site of TB Disease: Figure 22 shows the number and percentage of Pulmonary, Extra-pulmonary and combinations of both Pulmonary and Extra-pulmonary sites of TB Disease for years 2004 – 2008. There was been no significant change from the numbers and percentages reported for years 2007 and 2008. Table 7 provides a more detailed breakout for the major disease sites.

Figure 22. Major Site of Disease for TB Patients in N.C.: 2004 -2008



	2004	2005	2006	2007	2008
Pulmonary	275	229	259	249	230
Extra-Pulmonary	78	83	83	57	61
Both	29	17	32	39	44

DATA SOURCE: North Carolina Electronic Disease Surveillance System (NC EDSS)

Table 7. Major Site of Disease for N.C. TB Patients: 2004 - 2008

Site	2004	2005	2006	2007	2008
Bone/Joint	12	16	10	7	12
Genitourinary	2	8	4	2	2
Lymphatic: Cervical	21	15	18	10	15
Lymphatic: Intrathoracic	5	5	4	4	2
Lymphatic: Other	4	1	8	5	7
Meningeal	7	5	4	5	4
Miliary	13	13	13	17	11
Other	1	6	7	4	11
Peritoneal	9	2	4	1	1
Pleural	16	14	25	19	13
Pulmonary	291	244	277	271	257

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

TB Drug Susceptibility/Resistance Testing: Drug susceptibility testing is routinely performed on newly reported, culture-positive TB cases. In any given year, only 0 – 3 cases are reported without associated susceptibility testing. In 2008, all 249 culture-proven cases of TB had drug susceptibility reports available. Drug resistance to INH in North Carolina (NC) decreased from 19 cases (6%) in 2004 to 14 cases (6%) in 2008. Between 2004 and 2008 the number of MDR cases has ranged from 1 to 3 cases per year. In 2007, U.S. had 98 cases (1.1%). The U.S. and N.C. have similar case percentages for both INH and MDR resistance.

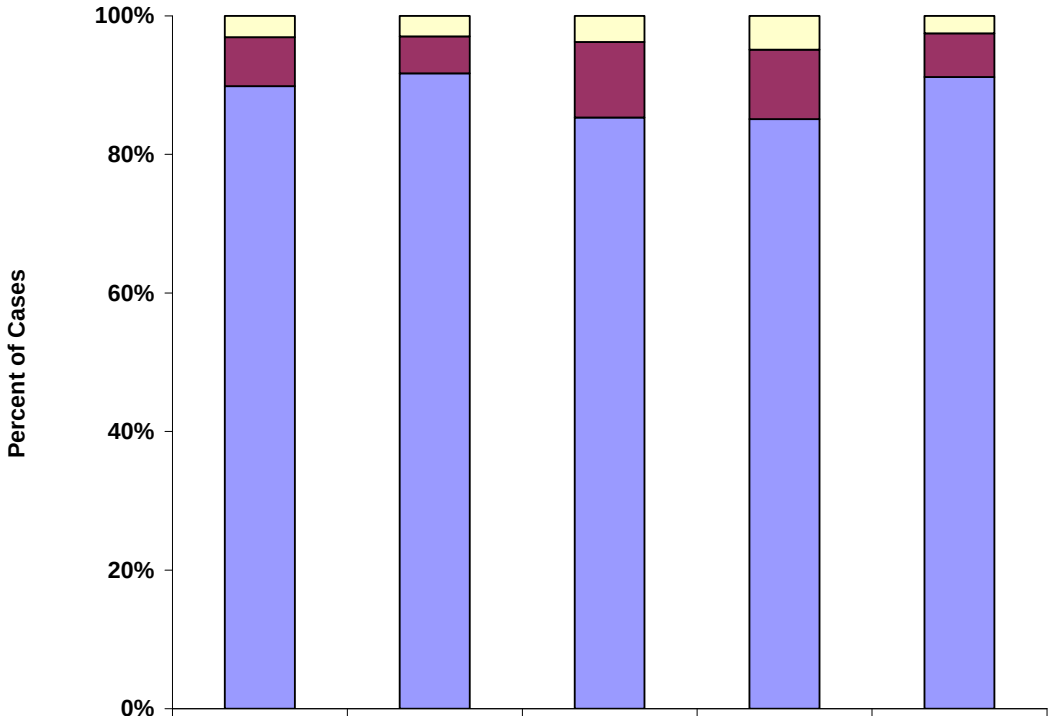
Table 8. First-Line Primary TB Drug Resistance in N.C. Patients: 2004-2008

Table 16	First-Line Primary TB Drug Resistance Over Time 2004-2008*									
Year	2004		2005		2006		2007		2008	
	#	%	#	%	#	%	#	%	#	%
INH[1]	19	6	20	7	23	8	10	4	14	6
MDR (I NH & RIF)[2]	1	0	3	1	1	0	2	1	2	1
**Total Positive Cultures	289		271		302		274		249	

DATA SOURCE: CaroTIMS.
****Total positive cultures with susceptibility results known.**
[1]**Includes INH and any other drugs except RIF. Resistance may have been found at either initial or final testing.**
[2]**Includes INH, RIF and any other drugs. Resistance may have been found at either initial or final testing.**

Completion of Therapy: Completion of therapy within one year remained between 90% and 92% between 2002 and 2004; however, in 2005 AND 2006, there was a drop to 86%. In 2006, N.C. passed legislation requiring all TB cases be placed on DOT. This is expected to increase the percentage of cases completing therapy within one year. In 2006, 96.4% of cases were totally directly observed and 2.2% were both directly observed and self- administered. In 2007, 99.4% of all cases were totally directly observed. The percentage of 2007 cases that completed therapy in one year increased to 91.2% with another 6.3% completing after one year. Only 2.5% have not completed treatment – four were lost to follow-up, three moved, and one had non-PZA related hepatotoxicity.

Figure 23. Patients Completing Therapy in N.C.: 2003 – 2007



	2003	2004	2005	2006	2007
Did Not Complete Therapy	10	10	11	17	8
Completed Therapy in >1 Year	23	18	32	35	20
Completed Therapy in <1 Year	292	309	250	297	289

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

This includes all patients who were alive at diagnosis, did not die during treatment and who were not Rifampin resistant.

SUPPLEMENTAL TABLES

Table 9: TB Cases and Case Rates by County 2004-2008

	2004		2005		2006		2007		2008	
COUNTY	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
Alamance	3	2.2	3	2.2	3	2.3	3	2.1	4	2.7
Alexander	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Alleghany	2	18.4	0	0.0	0	0.0	0	0.0	0	0.0
Anson	1	3.9	1	3.9	1	3.9	2	7.7	3	11.6
Ashe	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Avery	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Beaufort	0	0.0	3	6.5	6	13.3	2	4.2	2	4.3
Bertie	7	35.6	0	0.0	0	0.0	3	15.4	0	0.0
Bladen	1	3.0	3	9.1	1	3.1	0	0.0	1	3.0
Brunswick	1	1.2	2	2.2	1	1.4	2	2.1	3	3.0
Buncombe	3	1.4	4	1.8	2	1.0	13	5.7	7	3.0
Burke	6	6.8	4	4.5	2	2.2	0	0.0	0	0.0
Cabarrus	8	5.5	3	2.0	4	3.0	1	0.6	4	2.4
Caldwell	1	1.3	2	2.5	1	1.3	6	7.3	2	2.5
Camden	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Carteret	0	0.0	0	0.0	2	3.4	1	1.5	3	4.6
Caswell	0	0.0	0	0.0	0	0.0	2	8.3	1	4.2
Catawba	1	0.7	3	2.0	1	0.7	4	2.5	1	0.6
Chatham	0	0.0	3	5.3	2	4.0	0	0.0	2	3.3
Cherokee	1	3.9	0	0.0	1	4.1	0	0.0	0	0.0
Chowan	4	27.7	1	6.9	2	14.1	0	0.0	0	0.0
Clay	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cleveland	0	0.0	2	2.1	4	4.1	3	3.0	1	1.0
Columbus	7	12.8	5	9.2	2	3.7	5	8.9	0	0.0
Craven	1	1.1	0	0.0	1	1.1	6	6.2	4	4.1
Cumberland	8	2.6	6	2.0	9	3.0	7	2.3	8	2.5
Currituck	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Dare	0	0.0	4	11.5	0	0.0	1	2.9	0	0.0
Davidson	3	2.0	3	1.9	6	4.1	8	5.0	3	1.9
Davie	3	7.9	0	0.0	0	0.0	0	0.0	0	0.0
Duplin	3	5.8	6	11.6	5	10.2	6	11.1	4	7.4
Durham	27	11.3	21	8.7	12	5.3	8	3.2	15	5.8
Edgecombe	1	1.9	3	5.7	4	7.2	3	5.4	6	11.4
Forsyth	12	3.7	13	4.0	14	4.6	11	3.2	16	4.6
Franklin	2	3.8	2	3.7	0	0.0	2	3.5	0	0.0
Gaston	5	2.6	1	0.5	2	1.0	4	2.0	4	2.0
Gates	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Graham	0	0.0	0	0.0	0	0.0	0	0.0	1	12.0
Granville	1	1.9	1	1.9	1	2.0	1	1.8	1	1.8
Greene	2	10.0	0	0.0	0	0.0	0	0.0	4	18.6
Guilford	27	6.2	32	7.2	38	9.0	27	5.8	21	4.5

	2004		2005		2006		2007		2008	
COUNTY	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
Halifax	3	5.3	2	3.6	5	8.7	3	5.3	4	7.1
Harnett	4	4.0	3	3.0	4	4.4	3	2.8	4	3.7
Haywood	1	1.8	0	0.0	1	1.8	2	3.5	0	0.0
Henderson	5	5.2	2	2.0	2	2.2	0	0.0	4	3.8
Hertford	3	12.6	1	4.2	2	8.7	1	4.1	1	4.1
Hoke	0	0.0	5	12.3	4	11.8	1	2.3	2	4.6
Hyde	1	17.8	0	0.0	1	17.1	0	0.0	1	18.0
Iredell	2	1.5	2	1.4	2	1.6	3	2.0	2	1.3
Jackson	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Johnston	9	6.4	4	2.7	4	3.2	8	5.1	10	6.2
Jones	0	0.0	0	0.0	1	9.6	0	0.0	0	0.0
Lee	4	7.6	1	1.9	1	2.0	3	5.2	0	0.0
Lenoir	3	5.1	3	5.1	7	11.8	4	6.8	4	6.8
Lincoln	2	2.9	0	0.0	1	1.6	0	0.0	0	0.0
Macon	1	3.1	1	3.1	0	0.0	0	0.0	1	2.9
Madison	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0
Martin	1	4.0	1	4.1	2	7.8	1	4.8	2	8.2
McDowell	0	0.0	1	2.3	0	0.0	0	0.0	1	2.2
Mecklenburg	53	6.9	48	6.0	55	7.9	34	4.0	44	5.0
Mitchell	0	0.0	0	0.0	0	0.0	1	6.2	0	0.0
Montgomery	2	7.4	11	40.2	16	59.6	4	14.1	3	10.7
Moore	4	5.0	3	3.7	1	1.3	1	1.2	0	0.0
Nash	6	6.6	7	7.6	6	6.9	4	4.2	3	3.2
New Hanover	6	3.4	5	2.8	10	6.2	6	3.2	4	2.1
Northampton	2	9.3	2	9.3	1	4.5	2	9.2	1	4.6
Onslow	2	1.3	0	0.0	3	2.0	3	1.9	3	1.7
Orange	3	2.5	1	0.8	2	1.7	9	7.3	7	5.4
Pamlico	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pasquotank	1	2.7	1	2.6	1	2.9	1	2.5	1	2.4
Pender	5	11.1	2	4.3	1	2.4	3	6.0	0	0.0
Perquimans	0	0.0	1	8.2	1	8.8	0	0.0	0	0.0
Person	0	0.0	1	2.7	3	8.4	0	0.0	2	5.2
Pitt	7	5.0	5	3.5	5	3.7	11	7.4	6	3.9
Polk	0	0.0	1	5.3	0	0.0	0	0.0	0	0.0
Randolph	1	0.7	0	0.0	1	0.8	1	0.7	0	0.0
Richmond	3	6.5	0	0.0	1	2.1	0	0.0	3	6.3
Robeson	6	4.7	14	11.0	14	11.3	17	12.9	20	15.1
Rockingham	0	0.0	0	0.0	3	3.3	3	3.2	3	3.2
Rowan	7	5.3	0	0.0	5	3.8	2	1.4	3	2.2
Rutherford	1	1.6	0	0.0	0	0.0	0	0.0	1	1.6
Sampson	11	17.6	4	6.3	2	3.3	1	1.5	7	10.6
Scotland	1	2.7	1	2.7	3	8.3	5	13.2	4	10.6

	2004		2005		2006		2007		2008	
COUNTY	**CASES**	**RATE**	**CASES**	**RATE**	**CASES**	**RATE**	**CASES**	**RATE**	**CASES**	**RATE**
Stanly	**5**	**8.5**	**2**	**3.4**	**2**	**3.4**	**1**	**1.6**	**0**	**0.0**
Stokes	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
Surry	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**2**	**2.7**
Swain	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
Transylvania	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**1**	**3.3**	**1**	**3.2**
Tyrrell	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
Union	**2**	**1.3**	**2**	**1.2**	**0**	**0.0**	**3**	**1.7**	**7**	**3.8**
Vance	**0**	**0.0**	**1**	**2.3**	**0**	**0.0**	**2**	**4.5**	**0**	**0.0**
Wake	**53**	**7.3**	**34**	**4.5**	**52**	**8.2**	**54**	**6.7**	**40**	**4.7**
Warren	**1**	**5.0**	**2**	**9.9**	**0**	**0.0**	**2**	**10.0**	**0**	**0.0**
Washington	**1**	**7.4**	**1**	**7.5**	**4**	**29.2**	**0**	**0.0**	**0**	**0.0**
Watauga	**0**	**0.0**	**1**	**2.3**	**0**	**0.0**	**0**	**0.0**	**1**	**2.2**
Wayne	**9**	**7.8**	**16**	**13.8**	**8**	**7.1**	**9**	**7.7**	**3**	**2.6**
Wilkes	**1**	**1.5**	**1**	**1.5**	**2**	**3.0**	**1**	**1.5**	**2**	**2.9**
Wilson	**8**	**10.5**	**4**	**5.2**	**7**	**9.5**	**4**	**5.1**	**7**	**8.8**
Yadkin	**0**	**0.0**	**0**	**0.0**	**1**	**2.7**	**0**	**0.0**	**0**	**0.0**
Yancey	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
North Carolina	**382**	**4.5**	**329**	**3.8**	**374**	**4.6**	**345**	**3.8**	**335**	**3.6**

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

†Denominators for computing rates for the state were obtained from the Annual Estimates of the Population for the United States and States, and for Puerto Rico. County case rates were calculated using the population estimates/projections (as of July 1) for the corresponding year as provided by the NC State Data Center. 2008 Rates for counties were calculated based on the 2007 population estimates with the strata inflated to reflect the 2% increase of the total NC population from 2007 to 2008.

Table 10: Foreign-Born TB Cases by County 2004-2008

Foreign-Born TB Cases by County 2004-2008						
County	2004	2005	2006	2007	2008	Total Cases 2004 - 2008
Alamance	0	0	0	1	1	2
Alexander	0	0	0	0	0	0
Alleghany	0	0	0	0	0	0
Anson	0	0	0	0	0	0
Ashe	0	0	0	0	0	0
Avery	0	0	0	0	0	0
Beaufort	0	0	1	1	0	2
Bertie	1	0	0	0	0	1
Bladen	0	0	1	0	0	1
Brunswick	0	1	0	1	0	2
Buncombe	0	3	1	6	3	13
Burke	2	2	1	0	0	5
Cabarrus	3	3	1	1	3	11
Caldwell	0	0	0	0	0	0
Camden	0	0	0	0	0	0
Carteret	0	0	0	0	0	0
Caswell	0	0	0	0	0	0
Catawba	0	1	1	3	1	6
Chatham	0	1	1	0	2	4
Cherokee	0	0	1	0	0	1
Chowan	0	0	2	0	0	2
Clay	0	0	0	0	0	0
Cleveland	0	0	0	0	1	1
Columbus	2	1	0	1	0	4
Craven	0	0	0	2	0	2
Cumberland	2	1	1	0	1	5
Currituck	0	0	0	0	0	0
Dare	0	2	0	0	0	2
Davidson	0	1	4	6	2	13
Davie	3	0	0	0	0	3
Duplin	1	2	0	5	2	10
Durham	13	7	5	3	10	38
Edgecombe	0	0	0	0	1	1
Forsyth	4	7	8	8	9	36
Franklin	0	1	0	2	0	3
Gaston	1	1	0	2	3	7
Gates	0	0	0	0	0	0
Graham	0	0	0	0	0	0
Granville	1	0	1	0	0	2
Greene	0	0	0	0	0	0
Guilford	7	13	22	14	11	67
Halifax	0	0	0	0	0	0

Foreign-Born TB Cases by County 2004-2008						
County	2004	2005	2006	2007	2008	Total Cases 2004 - 2008
Harnett	0	1	1	1	1	4
Haywood	0	0	0	0	0	0
Henderson	3	1	1	0	0	5
Hertford	0	0	0	0	0	0
Hoke	0	1	1	0	0	2
Hyde	1	0	0	0	0	1
Iredell	1	0	1	1	1	4
Jackson	0	0	0	0	0	0
Johnston	2	0	1	2	3	8
Jones	0	0	0	0	0	0
Lee	1	0	1	2	0	4
Lenoir	0	0	1	0	1	1
Lincoln	0	0	1	0	0	1
Macon	1	0	0	0	1	2
Madison	0	1	0	0	0	1
Martin	0	0	0	0	0	0
McDowell	0	0	0	0	0	0
Mecklenburg	23	25	27	21	15	111
Mitchell	0	0	0	0	0	0
Montgomery	0	1	0	1	0	2
Moore	2	1	0	1	0	4
Nash	4	2	2	0	0	8
New Hanover	1	2	5	1	3	12
Northampton	0	0	0	0	0	0
Onslow	1	0	1	2	2	6
Orange	1	1	0	6	5	13
Pamlico	0	0	0	0	0	0
Pasquotank	1	0	0	1	0	2
Pender	1	1	1	1	0	4
Perquimans	0	0	0	0	0	0
Person	0	0	3	0	2	5
Pitt	1	0	1	1	0	3
Polk	0	1	0	0	0	1
Randolph	1	0	0	0	0	1
Richmond	1	0	1	0	0	2
Robeson	0	2	0	1	2	5
Rockingham	0	0	0	2	1	3
Rowan	4	0	1	1	2	8
Rutherford	0	0	0	0	1	1
Sampson	7	0	2	0	4	13
Scotland	0	0	0	0	0	0
Stanly	1	0	0	0	0	1
Stokes	0	0	0	0	0	0

Foreign-Born TB Cases by County 2004-2008						
County	**2004**	**2005**	**2006**	**2007**	**2008**	**Total Cases 2004 - 2008**
Surry	**0**	**0**	**0**	**0**	**1**	**1**
Swain	**0**	**0**	**0**	**0**	**0**	**0**
Transylvania	**0**	**0**	**0**	**1**	**0**	**1**
Tyrrell	**0**	**0**	**0**	**0**	**0**	**0**
Union	**1**	**1**	**0**	**2**	**3**	**7**
Vance	**0**	**0**	**0**	**0**	**0**	**0**
Wake	**30**	**17**	**31**	**35**	**22**	**135**
Warren	**0**	**0**	**0**	**0**	**0**	**0**
Washington	**0**	**0**	**1**	**0**	**0**	**1**
Watauga	**0**	**1**	**0**	**0**	**0**	**1**
Wayne	**5**	**4**	**0**	**2**	**0**	**11**
Wilkes	**1**	**0**	**1**	**1**	**0**	**3**
Wilson	**0**	**0**	**1**	**0**	**3**	**4**
Yadkin	**0**	**0**	**0**	**0**	**0**	**0**
Yancey	**0**	**0**	**0**	**0**	**0**	**0**
N.C.	**135**	**110**	**137**	**142**	**123**	**647**

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Table 11: Foreign-Born Cases by Country of Origin 2004-2008

Year	2004	2005	2006	2007	2008	Total Cases 2004 – 2008
Albania	0	0	1	1	0	2
Algeria	0	1	1	0	0	2
Argentina	2	0	0	0	1	3
Azerbaijan	0	1	0	0	0	1
Bangladesh	0	1	0	0	0	1
Belarus	0	1	0	0	0	1
Bhutan	0	0	0	0	1	1
Bosnia & Herzegovina	0	1	0	0	0	1
Brazil	0	0	1	0	0	1
British Virgin Islands	0	0	0	1	0	1
Burma	0	0	1	1	2	4
Cambodia	0	2	9	4	1	16
China	2	1	3	4	2	12
Colombia	0	1	2	1	0	4
Congo	1	3	1	0	1	6
Costa Rica	0	0	0	0	1	1
Cuba	0	0	1	0	0	1
Dominican Republic	0	0	1	0	0	1
Ecuador	2	0	1	2	0	5
El Salvador	1	2	3	6	4	16
Ethiopia	5	3	5	3	3	19
France	1	0	0	0	0	1
Gambia	1	1	0	0	0	2
Ghana	0	0	0	1	2	3
Guadeloupe	1	0	0	0	0	1
Guatemala	5	2	3	3	3	16
Haiti	0	0	0	1	2	3
Honduras	7	6	6	8	11	38
India	7	7	14	16	11	55
Indonesia	1	1	1	3	1	7
Iran	1	0	0	0	0	1
Ireland	1	0	0	0	0	1
Ivory Coast	0	0	1	0	0	1
Japan	1	0	0	0	0	1
Kazakhstan	0	0	1	0	0	1
Kenya	4	0	2	3	3	12
Korea Democratic Peoples Rep.	1	0	1	1	0	3
Korea Republic of	3	1	0	2	3	9
Kuwait	1	0	0	0	0	1
Laos	2	1	1	4	0	8

Table 11: Foreign-Born Cases by Country of Origin 2004-2008 (continued)						
Year	2004	2005	2006	2007	2008	Total Cases 2004 – 2008
Liberia	0	4	2	2	0	8
Malaysia	0	0	0	1	0	1
Mexico	54	44	44	54	41	237
Morocco	0	0	0	2	0	2
Nepal	1	1	2	1	0	5
Nicaragua	0	1	0	0	0	1
Niger	0	1	1	0	0	2
Nigeria	0	1	0	0	0	1
Pakistan	0	0	2	0	2	4
Peru	1	2	1	1	1	6
Philippines	7	4	3	6	7	27
Romania	0	0	1	0	0	1
Senegal	1	1	0	0	1	3
Somalia	1	1	1	0	1	4
South Africa	0	1	0	0	0	1
Soviet Union	1	1	0	0	0	2
Sudan	1	0	0	0	1	2
Taiwan	0	1	0	0	1	2
Thailand	1	0	1	0	1	3
Turkey	0	0	1	0	0	1
Turkmenistan	0	0	0	0	1	1
Ukraine	0	1	0	0	2	3
Uruguay	0	0	1	0	0	1
Vietnam	12	8	16	9	11	56
Zaire	1	0	0	0	0	1
Total	135	110	137	142	123	647

***Does not include persons born in US territories.**

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**

Table 12: Hispanic TB Cases by County 2004-2008

Hispanic TB Cases by County 2004-2008						
County	2004	2005	2006	2007	2008	Total Cases 2004 - 2008
Alamance	0	0	1	2	3	6
Alexander	0	0	0	0	0	0
Alleghany	0	0	0	0	0	0
Anson	0	0	0	0	0	0
Ashe	0	0	0	0	0	0
Avery	0	0	0	0	0	0
Beaufort	0	0	0	1	0	1
Bertie	1	0	0	0	0	1
Bladen	0	0	1	0	0	1
Brunswick	0	0	0	0	0	0
Buncombe	1	3	1	13	2	20
Burke	2	2	1	0	0	5
Cabarrus	2	2	1	0	3	8
Caldwell	0	0	0	0	0	0
Camden	0	0	0	0	0	0
Carteret	0	0	0	0	0	0
Caswell	0	0	0	0	0	0
Catawba	0	2	1	2	1	6
Chatham	0	1	1	0	1	3
Cherokee	0	0	1	0	0	1
Chowan	0	0	2	0	0	2
Clay	0	0	0	0	0	0
Cleveland	0	0	0	0	0	0
Columbus	2	1	0	2	0	5
Craven	0	0	0	2	0	2
Cumberland	0	1	1	0	1	3
Currituck	0	0	0	0	0	0
Dare	0	2	0	0	0	2
Davidson	0	0	3	3	1	7
Davie	3	0	0	0	0	3
Duplin	1	3	1	6	2	13
Durham	8	7	2	2	4	23
Edgecombe	0	0	0	0	1	1
Forsyth	2	3	8	5	9	27
Franklin	0	1	0	2	0	3
Gaston	0	0	0	1	1	2
Gates	0	0	0	0	0	0
Graham	0	0	0	0	0	0

Hispanic TB Cases by County 2004-2008						
County	2004	2005	2006	2007	2008	Total Cases 2004 - 2008
Granville	1	0	0	0	0	1
Greene	0	0	0	0	0	0
Guilford	1	3	5	5	1	15
Halifax	0	0	0	0	0	0
Harnett	0	1	0	1	2	4
Haywood	0	0	0	0	0	0
Henderson	3	1	0	0	0	4
Hertford	0	0	0	0	0	0
Hoke	0	1	1	0	0	2
Hyde	1	0	1	0	0	2
Iredell	0	2	0	1	1	4
Jackson	0	0	0	0	0	0
Johnston	1	1	1	3	4	10
Jones	0	0	0	0	0	0
Lee	1	0	1	2	0	4
Lenoir	0	0	1	0	1	2
Lincoln	0	0	1	0	0	1
Macon	1	0	0	0	1	2
Madison	0	1	0	0	0	1
Martin	0	0	0	0	0	0
McDowell	0	0	0	0	1	0
Mecklenburg	11	13	10	12	12	58
Mitchell	0	0	0	0	0	0
Montgomery	0	1	1	1	0	3
Moore	1	1	0	0	0	2
Nash	3	2	2	0	0	7
New Hanover	0	2	5	1	2	10
Northampton	0	0	0	0	0	0
Onslow	0	0	1	0	1	2
Orange	0	1	1	5	4	11
Pamlico	0	0	0	0	0	0
Pasquotank	1	0	0	0	0	1
Pender	1	1	1	2	0	5
Perquimans	0	0	0	0	0	0
Person	0	0	3	0	2	5
Pitt	1	0	0	1	0	2
Polk	0	0	0	0	0	1
Randolph	0	0	0	0	0	4
Richmond	1	0	1	0	0	2

Hispanic TB Cases by County 2004-2008						
County	2004	2005	2006	2007	2008	Total Cases 2004 - 2008
Robeson	0	1	0	1	0	2
Rockingham	0	0	0	1	0	1
Rowan	4	0	1	0	2	7
Rutherford	0	0	0	0	0	0
Sampson	7	1	2	0	4	14
Scotland	0	0	0	0	0	0
Stanly	1	0	1	0	0	2
Stokes	0	0	0	0	0	0
Surry	0	0	0	0	0	0
Swain	0	0	0	0	0	0
Transylvania	0	0	0	1	0	1
Tyrrell	0	0	0	0	0	0
Union	1	2	0	2	1	6
Vance	0	0	0	0	0	0
Wake	21	5	8	18	14	66
Warren	0	0	0	0	0	0
Washington	0	0	1	0	0	1
Watauga	0	1	0	0	0	1
Wayne	5	3	0	3	0	11
Wilkes	1	0	1	0	0	2
Wilson	0	0	1	0	3	4
Yadkin	0	0	0	0	0	0
Yancey	0	0	0	0	0	0
N.C.	91	72	75	101	85	422

DATA SOURCE: **North Carolina Electronic Disease Surveillance System (NC EDSS)**