

2011 Tuberculosis Statistics For North Carolina

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

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HIGHLIGHTS - North Carolina 2011 Tuberculosis Statistics

While the rate of tuberculosis in the United States decreased from 4.4 to 3.4 per 100,000 population between 2007 and 2011, the North Carolina rate went from 3.8 to 2.5. The 2011 North Carolina rate per 100,000 was an 18 percent drop from 2010, which was greater than expected based on the historical trend. One possible explanation might be the socioeconomic downturn that prevailed in 2011.

Demographics:

- North Carolina ranked 24th for TB case rates by state in the United States in 2011. This can be viewed as significant progress -- in 1980, North Carolina was ranked as the 3rd highest state for case rate.
- The number of reported TB cases in 2011 was 244. Since 1980, TB cases in North Carolina have decreased by about 4 percent per year. As a result, the total number of cases in 2011 was only 23 percent of the total number of cases for 1980 (244 cases compared to 1,066 cases).
- In 2011, 53 percent of all cases were located in eight counties: Mecklenburg (37), Wake (29), Guilford (22), Forsyth (12), Cumberland (11), Durham (9), and Wayne (9). The case rate was higher than the state rate in all of these counties. There were 44 counties with no TB cases in 2011.
- The number of Asians with TB decreased by 21 percent between 2007 and 2011 and the case rate for Asians decreased from 31 to 20.1 per 100,000 population.
- The number of African-Americans with TB decreased by 29 percent from 2007 to 2011. The case rate for African-Americans decreased from 6.6 to 4.5 per 100,000 population.
- The number of Hispanics with TB decreased between 2007 and 2011 from 101 to 47 cases in a year; the rate during this same time period decreased from 15.8 to 5.9 per 100,000 population. Of the 343 total Hispanic cases between 2007 and 2011, 179 (52%) were located in six counties: Wake (54), Mecklenburg (51), Forsyth (25), Buncombe (17), Duplin (17), and Durham (15).
- The number of cases from 2007 to 2011 decreased for every age group with the greatest percentage decrease being in ages 5 – 14 (50% decrease between 2007 and 2011). Rates for both males and females declined about 33 percent during this five year period.

Risk Factors:

- Most (69%) 2011 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 U.S. (“foreign born”); homeless within past year; resident of a long-term care or correctional facility; HIV co-infected; excessive alcohol user; non-injecting or injecting drug user; or health care worker. Twelve percent have two or more of these risk factors.
- The percent of cases that are foreign-born increased from 41 percent to 44 percent between 2007 and 2011. Fifty-six percent of all foreign born cases of TB in 2011 came from six countries: Mexico (21%); Vietnam (9%); Honduras (7%); and India, Guatemala, and the Philippines (6% each). For the five year period from 2007 to 2011, there were a total of 586 foreign-born cases. Of these, 322 cases came from four countries: Mexico (182), Vietnam (54), India (50), and Honduras (36). Of the

total, 355 cases resided in four counties: Wake (108), Mecklenburg (99), Guilford (74), and Forsyth (35). Among 2011 pediatric cases (0 - 14), 33 percent were foreign-born and another 13 percent had one or both parents who were foreign-born.

- TB cases with excessive alcohol use reported increased from 12 percent in 2007 to 13 percent in 2011. Most of the people who reported excessive alcohol use are non-Hispanic U.S. born.
- Homeless cases increased from 4 percent in 2007 to 6 percent in 2011.
- Reporting of HIV status for TB cases has increased significantly from 2000 to 2011. Since November 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, N.C. TB nurse consultants 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. In 2000, there were 133 persons for whom HIV testing was not offered, not known, done but no result, or refused by the patient. In 2011, there were no persons who refused HIV testing and one person (who died two weeks into treatment) that was not offered HIV testing.

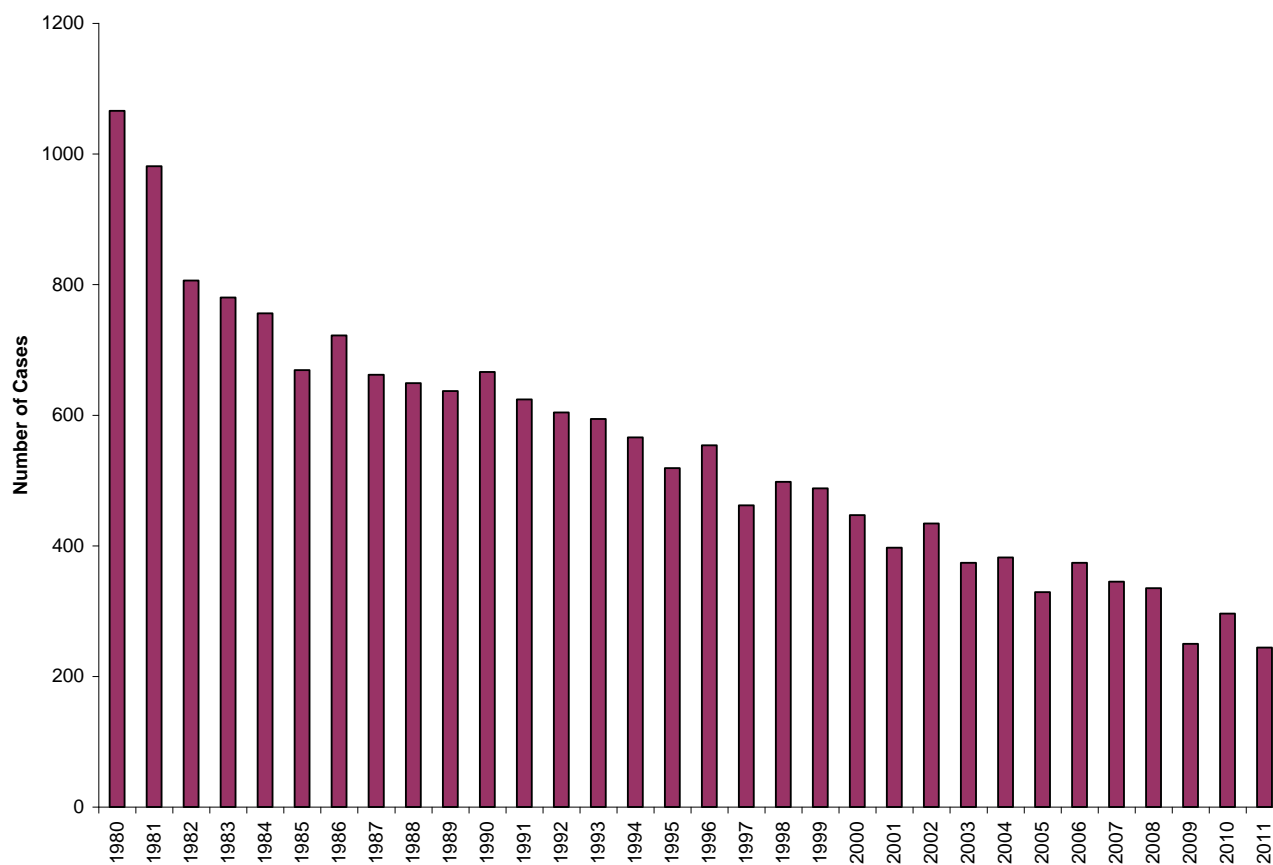
Clinical data:

- Mortality of tuberculosis cases during treatment greatly decreased from 2001 to 2010. The number of cases where death occurred during treatment was 44 in 2001 and 10 by 2010. Additionally, there were nine people dead at diagnosis in 2001 and four in 2010.
- Previous diagnosis of tuberculosis decreased from 24 cases in 2003 to 10 cases in 2011.
- The major site of TB disease cases in 2011 was predominantly pulmonary (171), followed by peritoneal (11), meningeal (10), and pulmonary/pleural (10).
- The number of cases resistant to isoniazid (INH) in North Carolina was 15 in 2010 and 13 in 2011; the percentage of cases increased from 1 percent to 2 percent. Between 2007 and 2011, the number of MDR cases has ranged from 1 to 2 cases per year.
- In 2010, the most recent year for which treatment completion can be assessed, 96.4 percent of all cases were treated under either totally directly observed therapy (DOT) or were directly observed for at least 26 weeks. The percentage of 2010 cases that completed therapy in one year (when expected to complete therapy in one year) was 92.7 percent with another 5.9 percent completing after one year. Only 1.5 percent of these cases have not completed treatment – one moved out of state and was lost to follow-up; three left the country and are lost to follow-up; and one was a child whose parents refused further treatment after 13 weeks on DOT.

DEMOGRAPHICS

DEMOGRAPHIC CHARACTERISTICS

Figure 1. Reported TB Cases in N.C.: 1980 - 2011

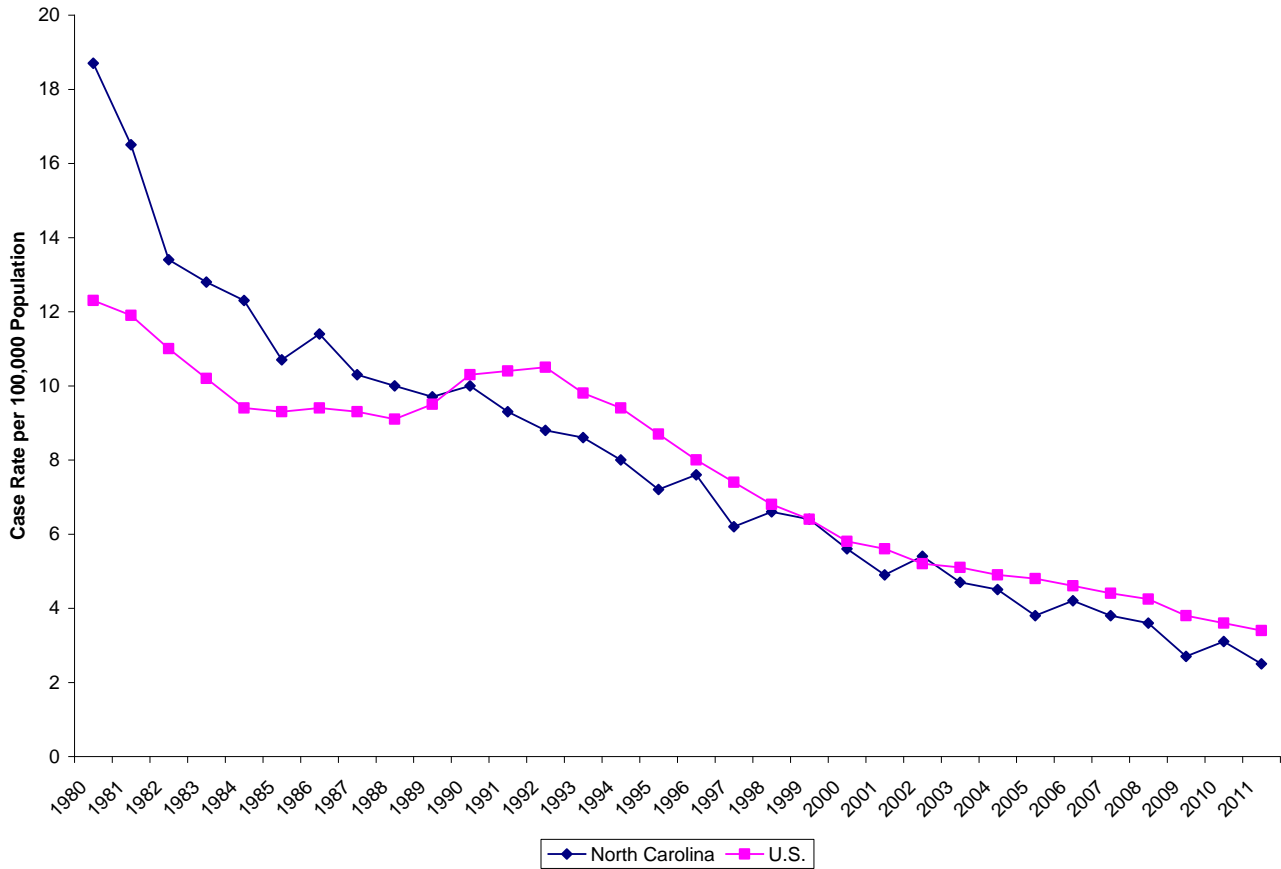


DATA SOURCE: NC Electronic Data Surveillance System (NC EDSS) and TIMS

As can be seen from Figure 1, the total number of cases in North Carolina for 2011 is only 23 percent of the total number of cases in 1980 (that is 244 cases compared to 1066). On average, the numbers have declined about 4 percent per year. TB incidence in North Carolina decreased 29 percent between 2007 and 2011, down from 345 cases to 244 cases. The number of cases reported in North Carolina decreased from 296 to 244 between reporting years 2010 and 2011 – the total number of cases in 2011 was 18 percent lower than the total number of cases in 2010 but only three percent lower than the number of cases in 2009.

Both U.S. and N.C. TB Case Rates have dropped significantly since 1980. [Figure 2] With the exception of two years, the N.C. case rate has been lower than the U.S. case rate since 1990. Although the number of cases has declined in North Carolina in the past five years, the state is ranked as 24th highest for case rates in 2011. [Table 1] North Carolina has the tenth largest number of cases among the 50 states.

Figure 2. TB Case Rates for N.C. and the U.S.: 1980 - 2011



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 2007-2011

Year	Case Rate and Rank by Case Rate 2007-2011*		
	Rates		Rank
	United States	North Carolina	
2007	4.4	3.8	22
2008	4.2	3.6	20
2009	3.8	2.7	26
2010	3.6	3.1	19
2011	3.4	2.5	24

DATA SOURCE: Annual surveillance reports published by CDC.

Table 1 provides a statistical overview and Table 2 provides a demographic overview of reported cases and case rates in North Carolina from 2007 – 2011. 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. Figure 3 on the following page is a map of 2011 N.C. cases by county of residence.

Figure 3. North Carolina 2011 Tuberculosis Cases by County

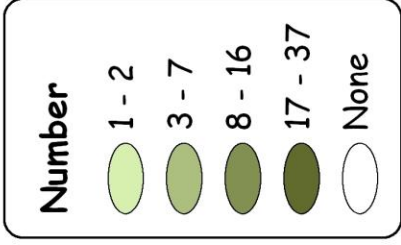
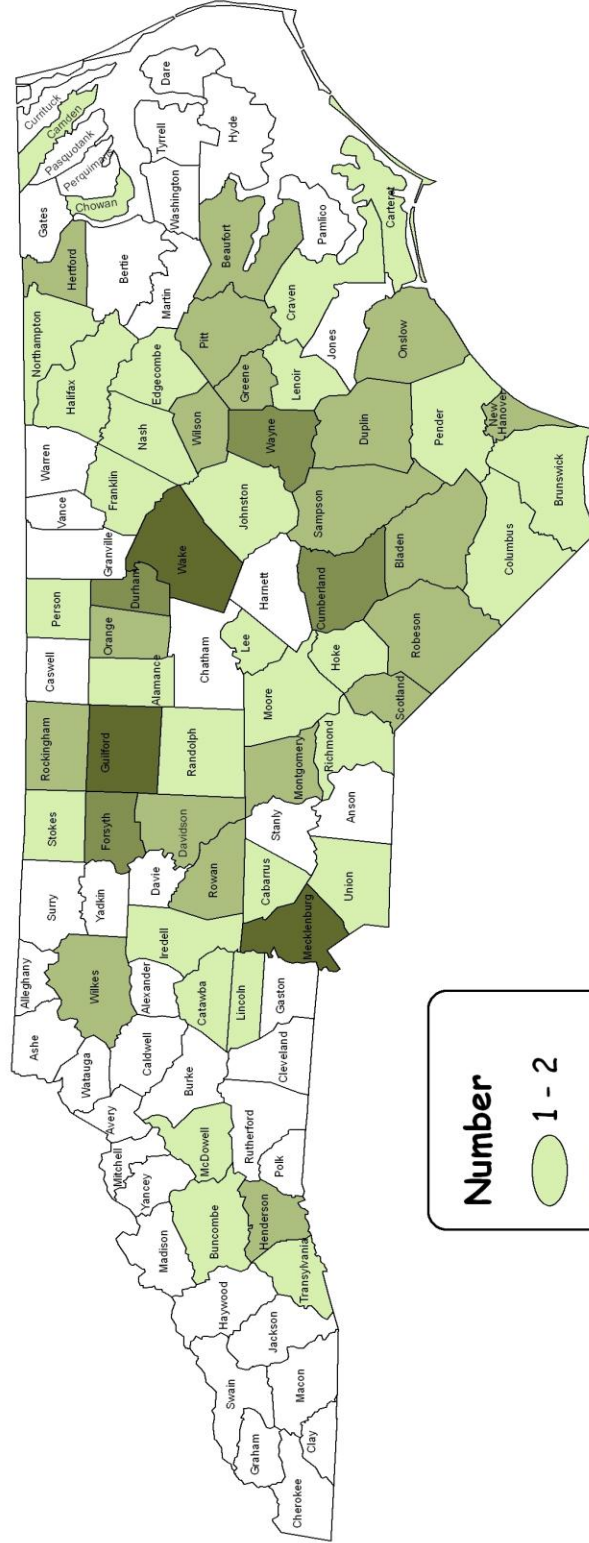


Table 2 provides a demographic overview of reported cases and case rates in North Carolina from 2007 – 2011. Table 9 provides TB incidence and rates by county. Figures 4, 5, and 6 provide information about percent of cases by gender, age, and race/ethnicity. TB cases in North Carolina decreased between 2007 and 2011 from 345 to 244 – a 29 percent decrease. There were 18 percent more cases in 2011 than in 2010. In 2011, the percentage of cases for all racial groups remained fairly consistent with the percentages for 2010 with the exception of whites (increase from 36 to 42 percent). Numbers for all races decreased over the five years with the exception of persons who were Hawaiian/Other Pacific Islander group (5 in 2010 compared with only one for the previous four years combined) and multi-racial which increased from 1 to 13 cases. The decrease in cases was greater for whites (29% fewer cases in 2011 compared with 2007) than for blacks (42% fewer cases in 2011 compared with 2007). The number of cases decreased or remained the same for every age group.

North Carolina rates per 100,000 population decreased by 34 percent from 2007 to 2011 (from 3.8 per 100,000 to 2.5 per 100,000). The incidence rate for Black/African-Americans decreased from 6.6 in 2007 to 4.5 by 2011, which is a 32 percent decrease. While rates for Asians have fluctuated over the five years, rates for Asians decreased from 31.0 in 2007 to 20.1 in 2011. Annual incidence rates among Hispanics decreased from 15.8 in 2007 to 5.9 in 2011. Rates for ages 5-14 decreased from 0.6 to 0.3 resulting in a 50 percent decrease.

Table 2: N.C. TB Case Rates for 2007-2011

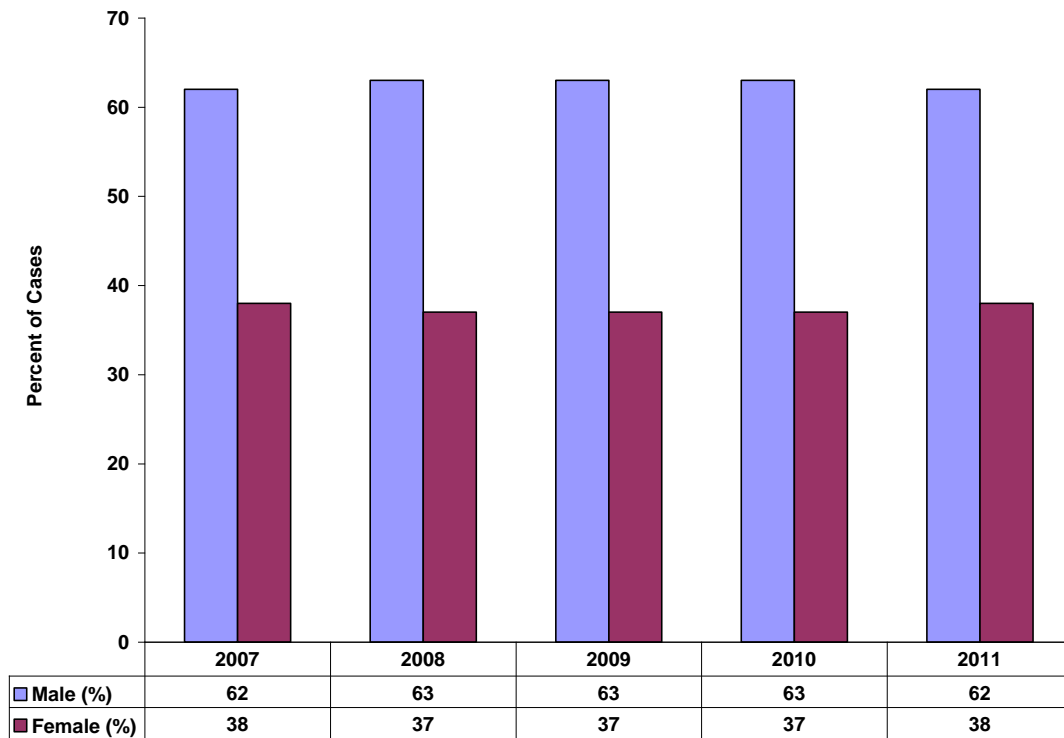
Table 2	NORTH CAROLINA TB CASE RATES FOR 2007-2011*†									
	Year	2007		2008		2009		2010		2011
VARIABLES	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Cases	345	3.8	335	3.6	250	2.7	296	3.1	244	2.5
SEX										
Male	214	4.8	212	4.7	157	3.4	187	4.0	151	3.2
Female	131	2.8	123	2.6	93	1.9	109	2.2	93	1.9
RACE										
White‡	153	2.3	141	2.1	103	1.5	111	1.7	88	1.3
Black/African-American	131	6.6	129	6.4	107	5.3	113	5.5	93	4.5
Asian	53	31.0	43	24.6	29	16.1	55	26.3	42	20.1
Amer. Indian/Alaska Native	7	6.2	9	7.9	6	5.1	5	4.1	7	5.7
Hawaiian/Other Pac. Isl.	0	0.0	0	0	0	0	5	75.7	1	15.1
Multi-Racial	1	1.1	13	12.6	5	4.4	7	3.4	13	6.3
ETHNICITY										
Hispanic	101	15.8	85	13.0	54	7.8	56	7.0	47	5.9
Non-Hispanic	244	2.9	250	2.9	196	2.2	240	2.7	197	2.2
AGE										
0-4	18	1.9	19	2.0	9	1.4	20	3.2	11	1.7
5-14	7	0.6	8	0.6	9	0.7	4	0.3	4	0.3
15-24	45	3.6	30	2.4	30	2.3	36	2.7	25	1.9
25-44	122	4.8	119	4.6	78	3.0	86	3.3	79	3.1
45-64	89	3.8	91	3.8	82	3.4	80	3.2	69	2.8
>65	64	5.8	68	6.0	42	3.6	70	5.7	56	4.5

*Data source: NC EDSS TB Surveillance - Demographic Data Report. Rates are per 100,000.

‡Includes White Hispanic and White Non-Hispanic.

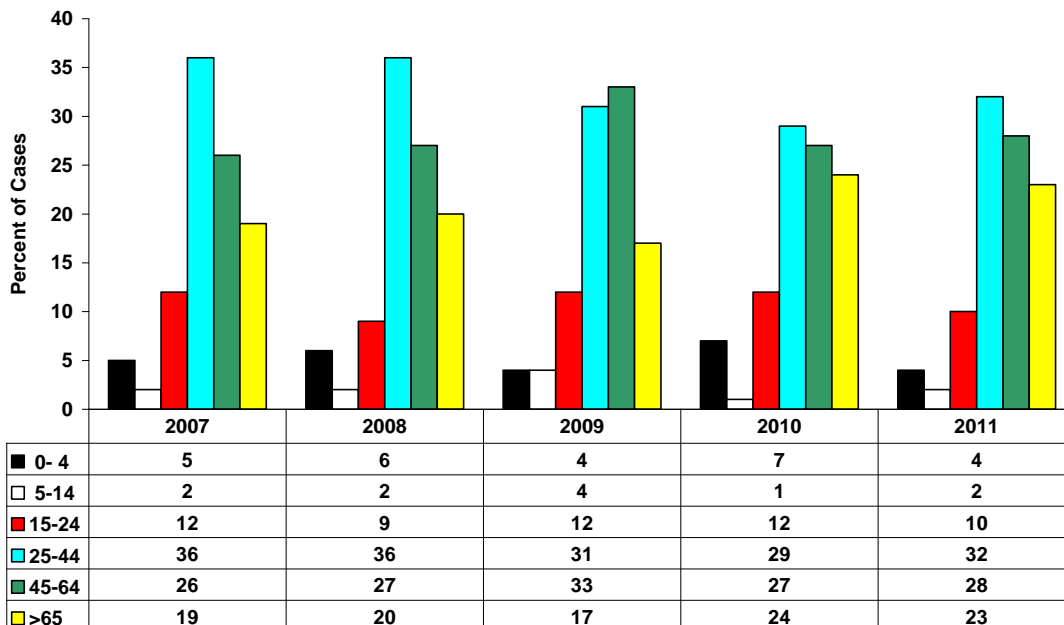
†Denominators for computing rates for the state were obtained from the Annual Estimates of the Population for the United States and Puerto Rico for 2007, 2008, and 2009. For 2010 and 2011, the source is: U.S. Census Bureau, Summary File 1, Table PCT12. 2011 estimates are not yet available so the denominator is the same for 2010 and 2011. 2010 data for age was updated since age data was not available for the 2010 statistical report. The website for this data is: <http://www.census.gov/prod/cen2010/doc/sf1.pdf>

Figure 4. N.C. TB Cases by Gender: 2007 – 2011



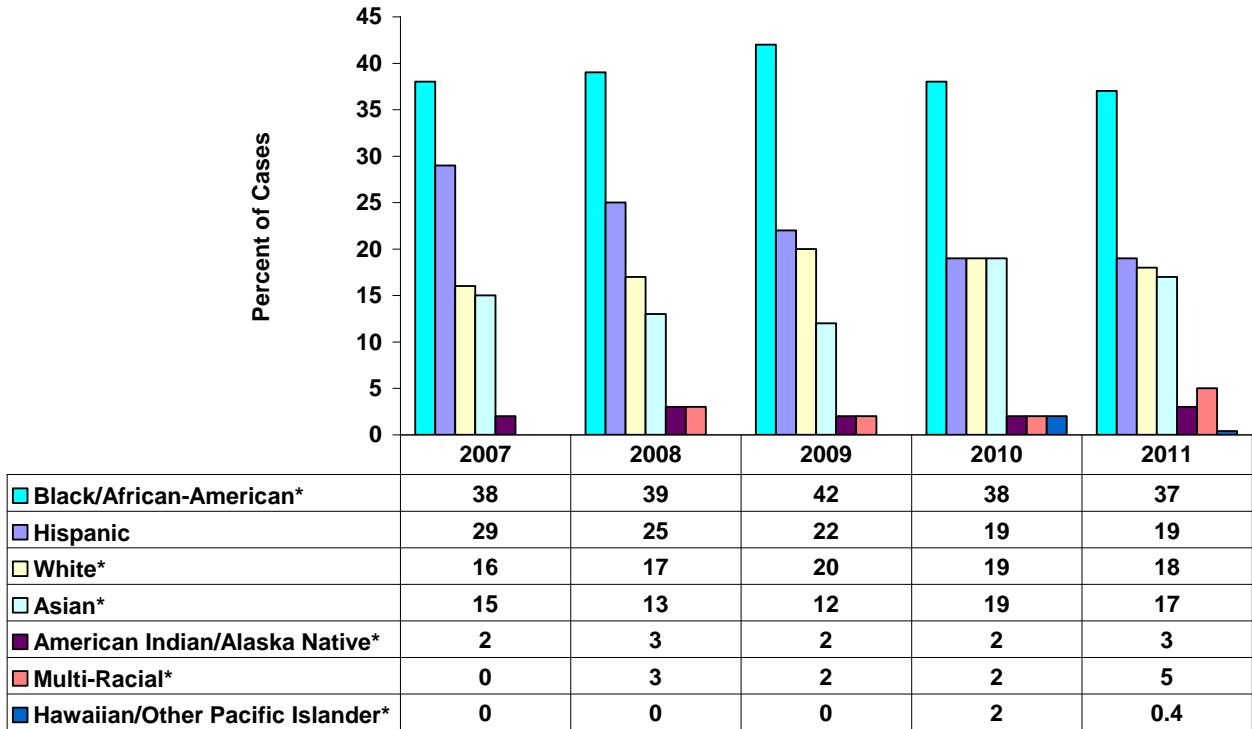
DATA SOURCE: North Carolina Electronic Disease Surveillance System (NC EDSS)

Figure 5. N.C. TB Cases by Age Group: 2007 – 2011



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

Figure 6. N.C. TB Cases by Race and Ethnicity: 2007 – 2011



* Does not include Hispanics

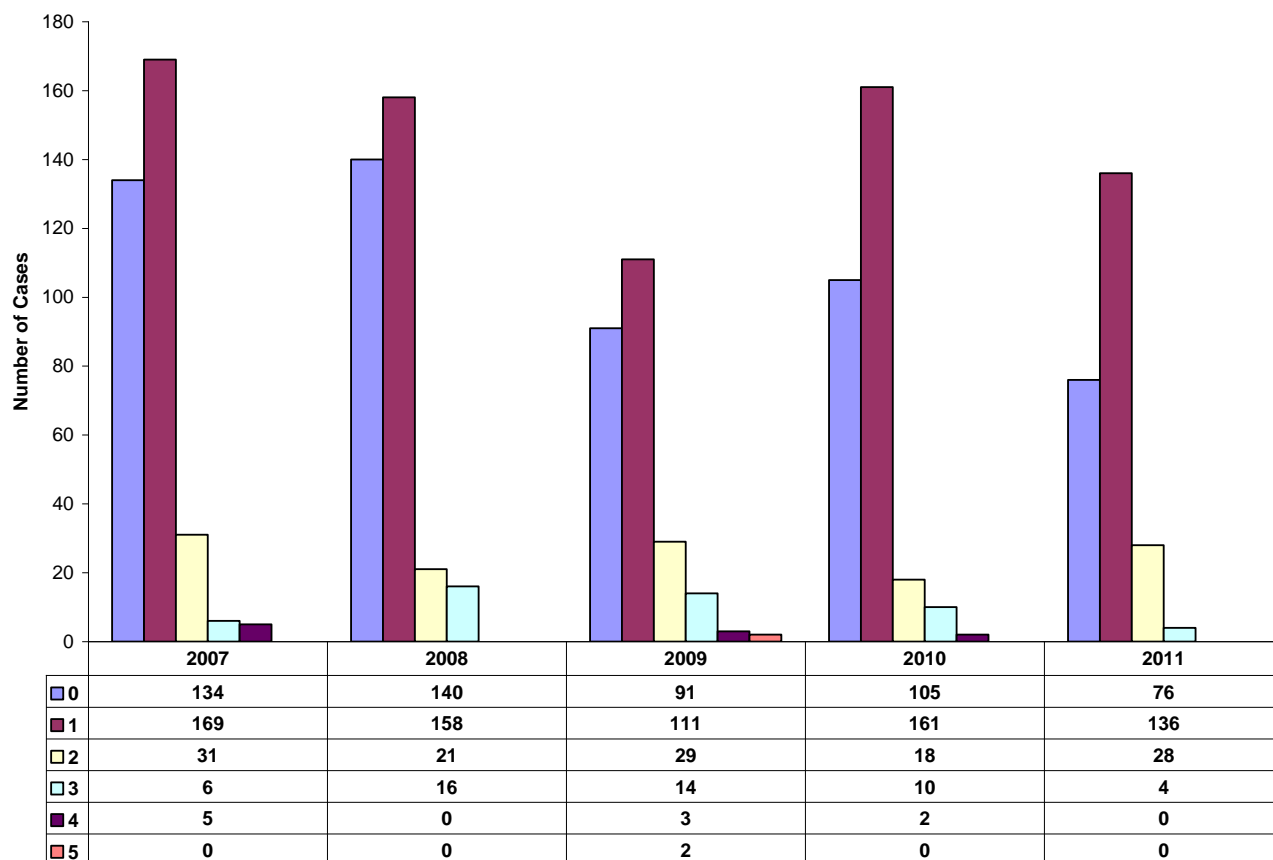
DATA SOURCE: North Carolina Electronic Disease Surveillance System (NC EDSS)

RISK FACTORS

RISK FACTORS FOR TB

There are several risk factors commonly associated with increased incidence of TB. These include: being foreign-born; excessive 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 describes N.C. TB cases regarding these factors. As can be seen from Figure 7, about 69 percent of the 2011 cases have one or more risk factors. In 2011, approximately 13 percent of the cases have two or more risk factors.

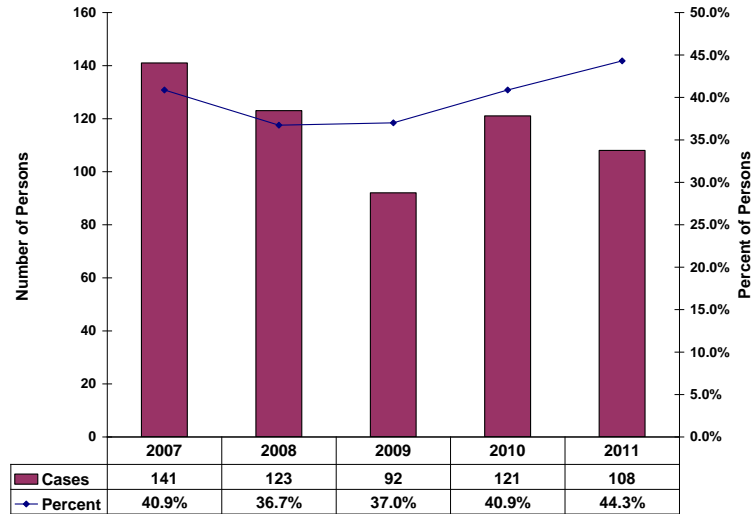
Figure 7. N.C. TB Cases by Number of Risk Factors: 2007 – 2011



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

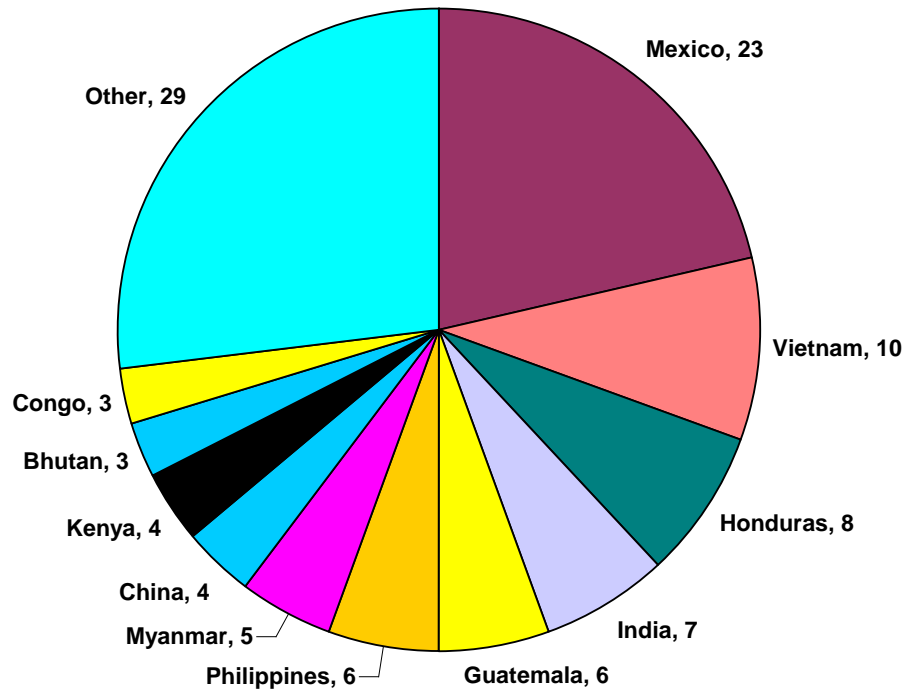
Foreign Born: The number of foreign-born cases in 2011 was 10.8 percent lower than the number in 2010 (121 cases in 2010 and 108 in 2011). [See Figure 8.] North Carolina has a lower percentage of foreign-born in comparison to the U.S. average. The largest percentage of foreign-born cases in 2011 were from Mexico (21%), Vietnam (9%), Honduras (7%), and India (6%) . [See Figure 9.]

Figure 8. NC Foreign-Born TB Cases: 2007 – 2011



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

Figure 9. Countries of Origin for 2011 Foreign-born TB Cases in N.C.



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

2011 Tuberculosis Statistics for North Carolina, Tuberculosis Control Program, NC Division of Public Health April 2012

Pediatric Cases by Foreign-Born Status: An examination of 2011 pediatric cases by country of origin indicates that 33.3 percent are foreign born. This is higher than the 2010 cases. Of those who were U.S. born, two of those under 5 had foreign born parents (referred to in the table below as foreign-born associated) for a total of 27 percent either foreign-born or with foreign-born parents. Of those 5-14 years old, 100 percent were foreign-born.

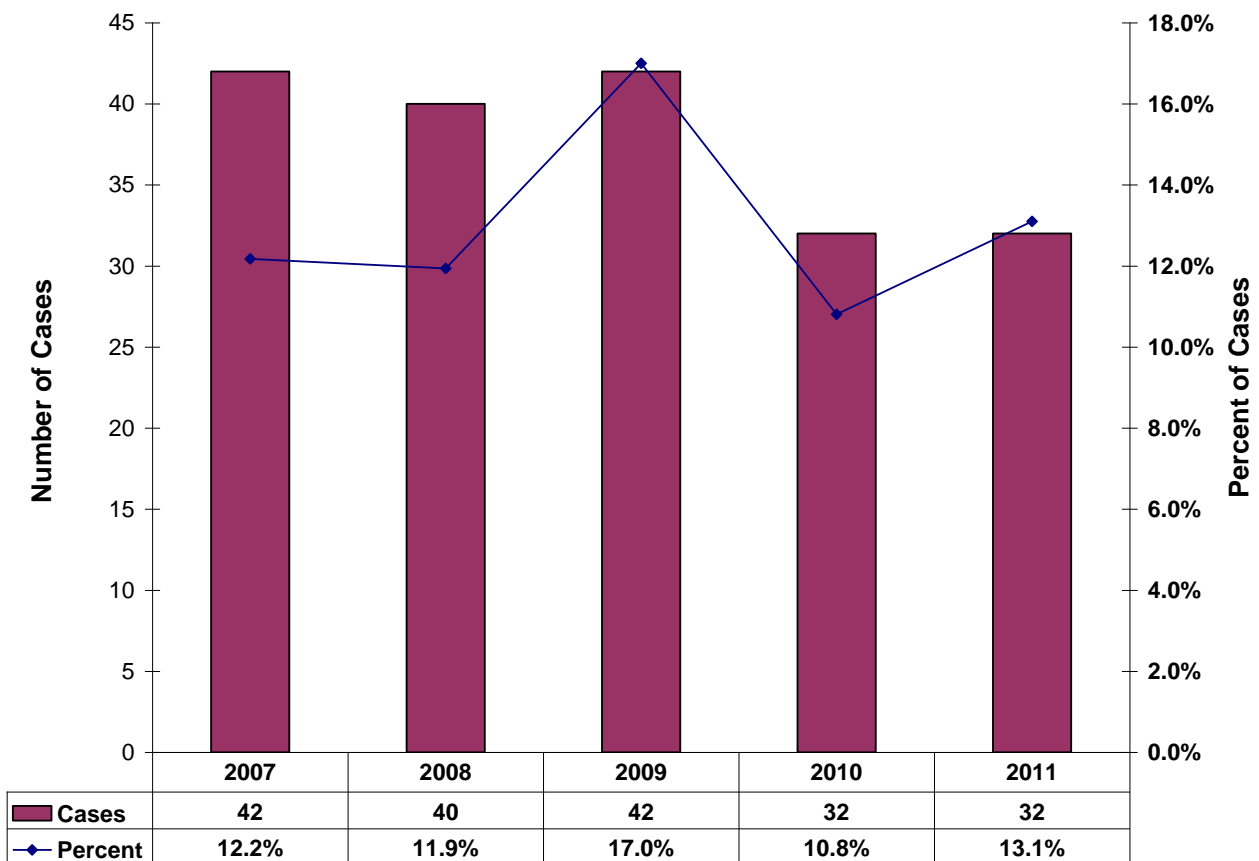
Table 3: Pediatric Cases by Foreign-Born Status

TABLE 3	2010			2011		
	U.S.	FOREIGN BORN ASSOCIATED	FOREIGN BORN	U.S.	FOREIGN BORN ASSOCIATED	FOREIGN BORN
0 – 4 YEARS	7	2	0	8	2	1
5 – 14 YEARS	4	3	2	0	0	4
TOTAL	11	5	2	8	2	5

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

Excessive Alcohol Use: The number of TB cases with reported excessive alcohol use between 2007 and 2011 decreased by 24 percent. [See Figure 10.] In 2010, 75 percent of this group were U.S. born (or children of US citizens), 19 percent were foreign-born Hispanics, and 6 percent were foreign-born non-Hispanics. [See Table 4.]

Figure 10. NC TB Cases with Excess Alcohol Use: 2007 - 2011



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

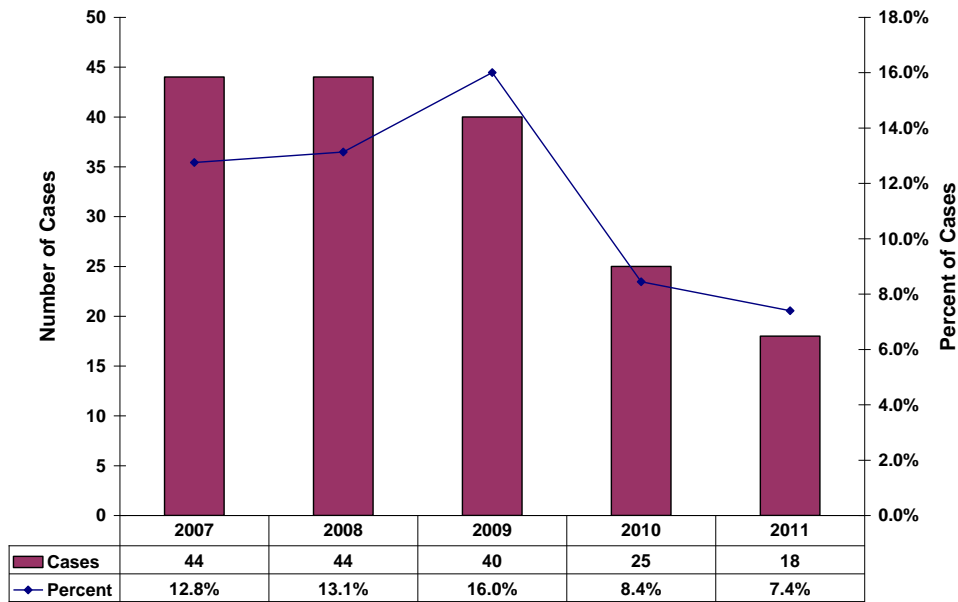
Table 4: Alcohol Use by Ethnicity and Foreign Born Status 2007-2011

Year	2007		2008		2009		2010		2011	
	Foreign Born	US Born	Foreign Born	US Born	Foreign Born	US Born	Foreign Born	US Born	Foreign Born	US Born
Hispanic	6	2	7	3	3	2	4	0	6	0
Not Hispanic	2	29	0	30	5	32	1	27	2	24
Ethnicity Unknown	0	3	0	0	0	0	0	0	0	0
TOTAL	64		42		40		42		32	

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

Non-Injecting Drug Use: Non-injecting drug use has been reported for approximately 12 – 14 percent of N.C. TB patients for several years. That percentage decreased below 10 percent for 2010 and 2011. [See Figure 11.]

Figure 11. N.C. TB Cases with Known Non-Injecting Drug Use: 2007 – 2011



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

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

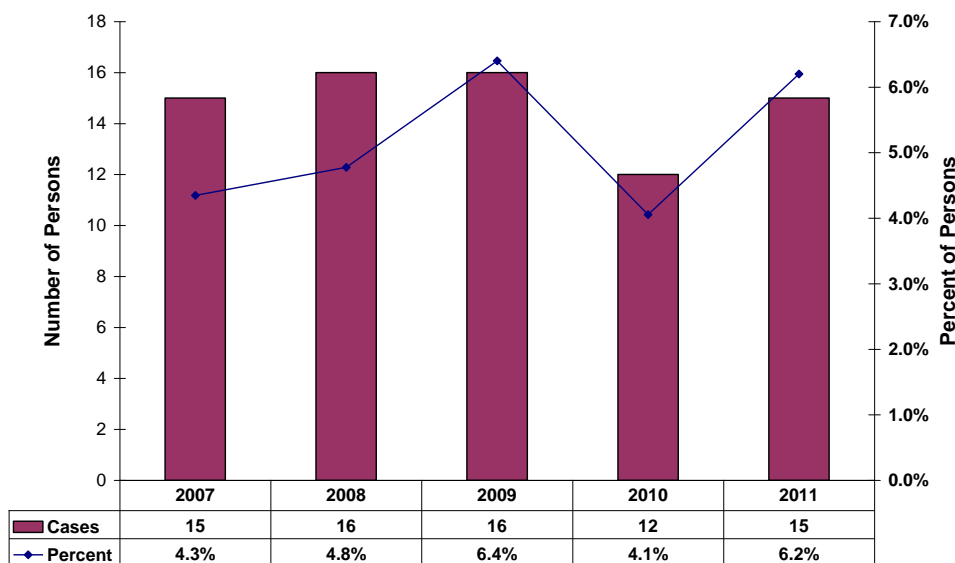
Figure 12. N.C. TB Cases with Known Injecting Drug Use: 2007 – 2011



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

Homeless: The number of reported homeless TB cases increased from 2010 to 2011. The percentage is generally between 4 and 6 percent. [See Figure 13.]

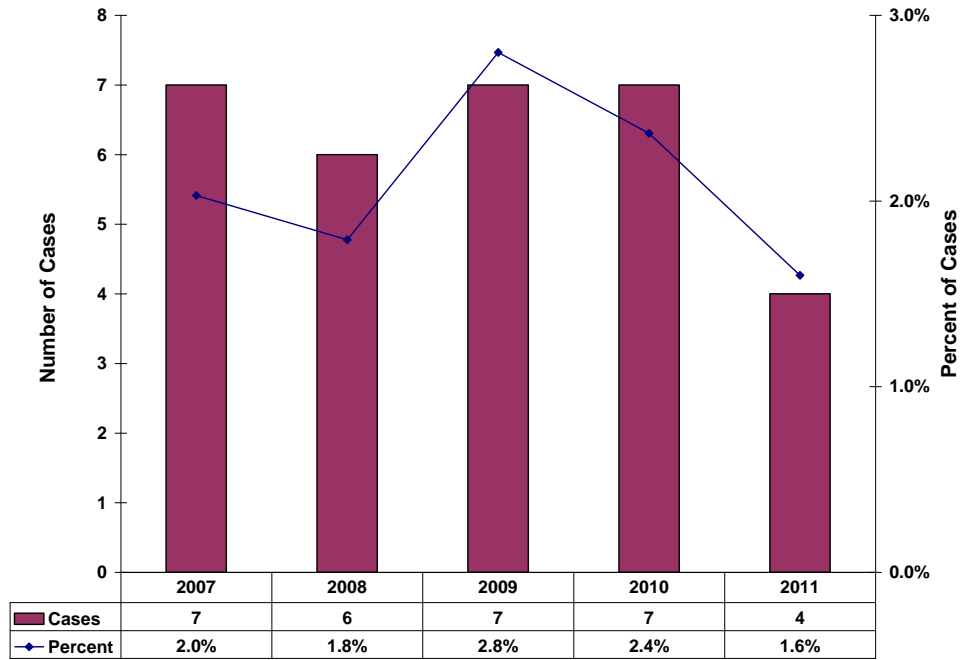
Figure 13. N.C. TB Cases Homeless in Year Prior to Diagnosis: 2007 - 2011



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 from 2007 to 2011 remained fairly constant. [See Figure 14.]

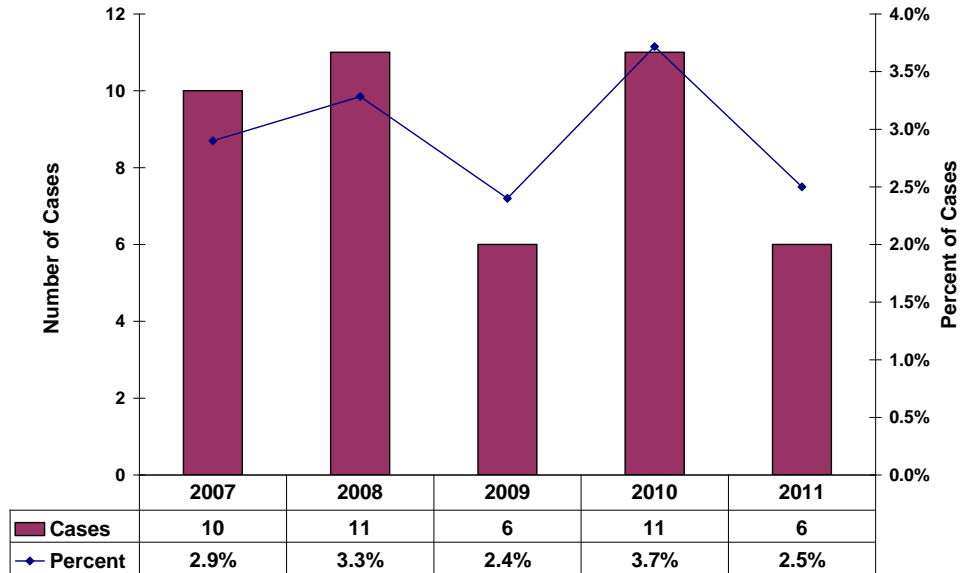
Figure 14. N.C. TB Cases That Were Residents of a Long-Term Care Facility at Time of Diagnosis: 2007 – 2011



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

Correctional Facilities: The percentage of cases diagnosed in correctional facilities is usually around 2 to 4 percent of the total cases. [See Figure 15.]

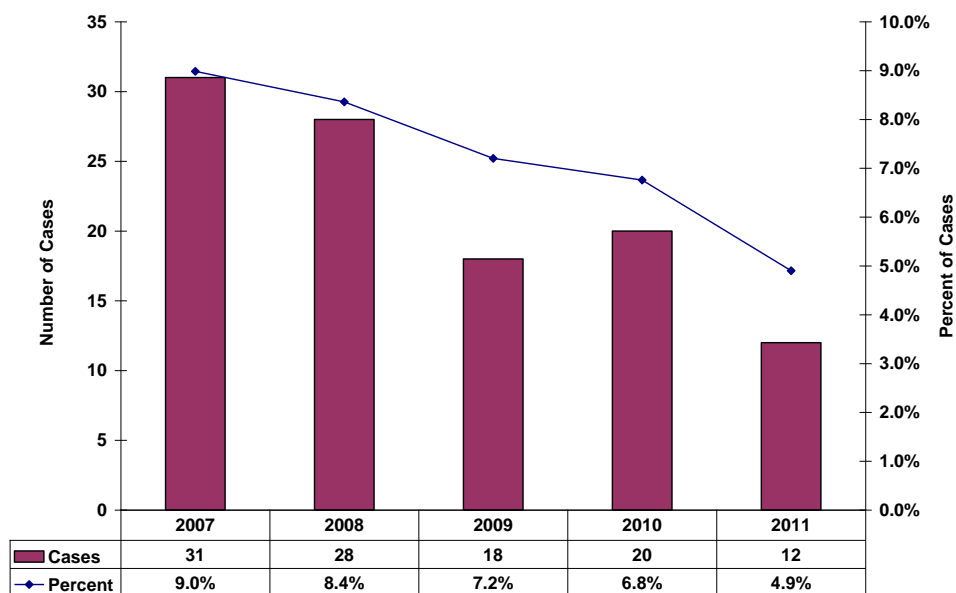
Figure 15. N.C. TB Cases Residing in Correctional Facility at Time of Diagnosis: 2007 - 2011



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

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. In 2011, all co-infected cases were between the ages of 25 and 64.

Figure 16. N.C. TB Cases with HIV Infection: 2007 – 2011



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

Table 5: TB Cases with HIV Infection by Age Group 2007 - 2011

Table 5	TB Cases with HIV Infection by Age Group 2007 - 2011*				
Age Group	2007	2008	2009	2010	2011
0-4	0	0	0	0	0
5-14	0	1	0	0	0
15-24	1	2	0	0	0
25-44	14	17	8	12	5
45-64	15	7	10	7	7
≥65	1	1	0	1	0

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

Table 6 and Figure 17 show the progress that has been made in North Carolina with respect to standard of care and HIV status—almost all cases are offered HIV testing and are accepting the offered HIV test. Since November 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 practice went into effect, N.C. TB nurse consultants 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 18.1 percent in 2000 to none refusing in 2011) and there are fewer patients who are not being

offered testing (down from 10.7 percent in 2000 to less than 1 percent in 2011). The patient not offered testing in 2011 died two weeks into treatment and there was not an opportunity to offer HIV testing.

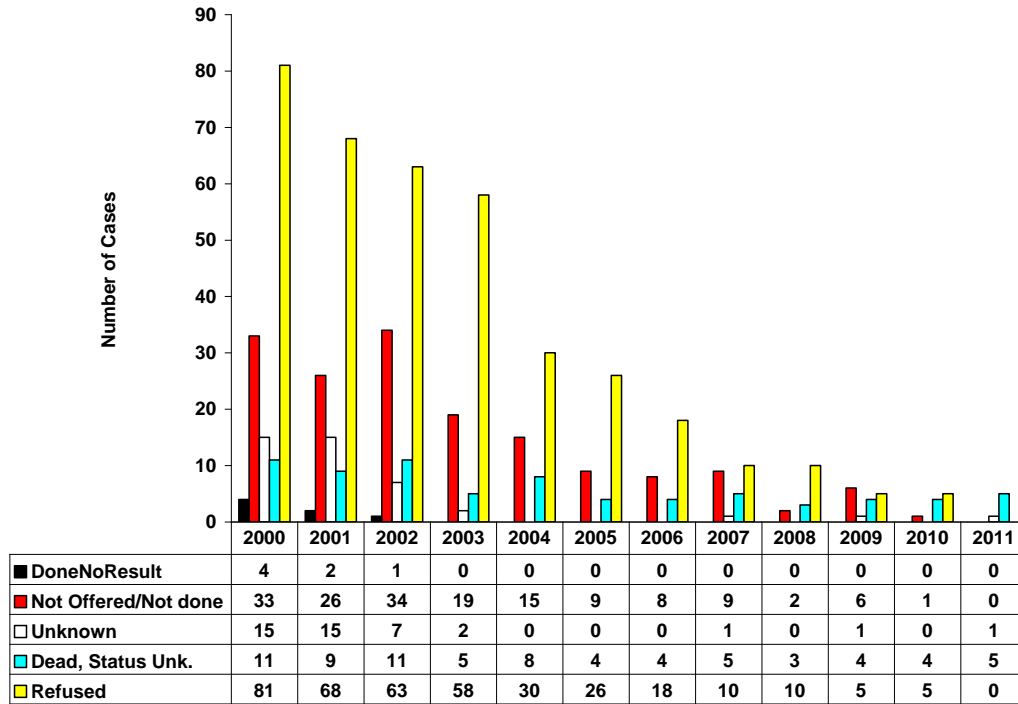
Table 6: Reported HIV Results 2007 – 2011

Table 6	Reported HIV Results 2007 – 2011				
Status	2007	2008	2009	2010	2011
Negative	289	290	217	266	226
Positive	31	28	18	20	12
Refused	10	11	5	5	0
Not Offered	10	3	6	1*	0
Tested No Result	0	0	0	0	0
Unknown	0	0	1	0	1*
Dead and Status Unknown	5	3	4	4	5

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

- These patients died shortly after starting treatment and there was not an opportunity to offer HIV testing.

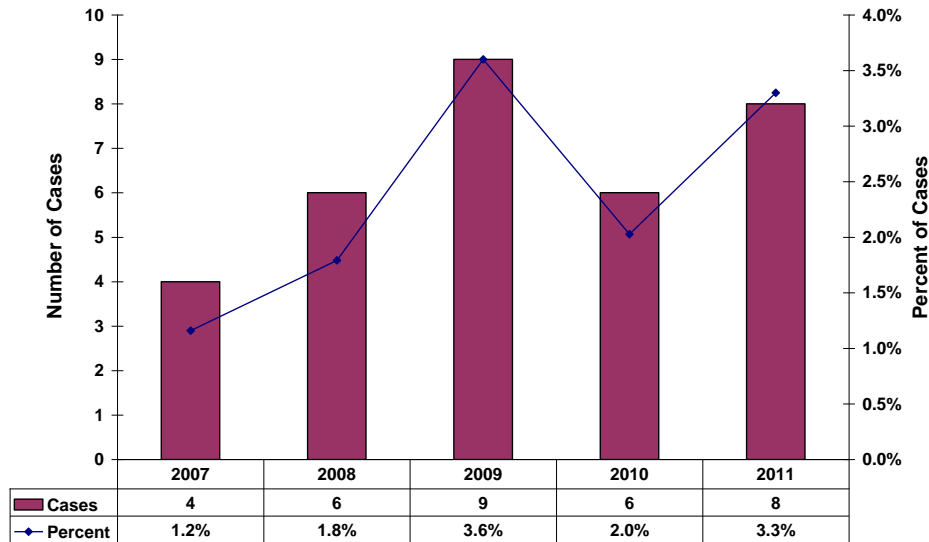
Figure 17: N.C. TB Cases with Unknown HIV Status: 2000 - 2011



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

Occupation: The occurrence of TB in persons identified as healthcare 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 an indication of cases among those who could expose others or be exposed to TB. The percent of cases is generally around 2 percent.

Figure 18. N.C. Health Care Workers with TB Disease: 2007 - 2011



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

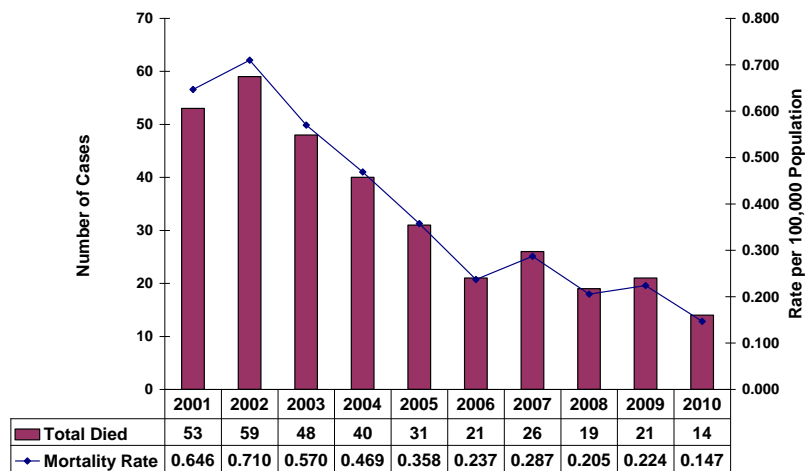
CLINICAL DATA

CLINICAL DATA FOR NORTH CAROLINA

Mortality of TB Cases in NC

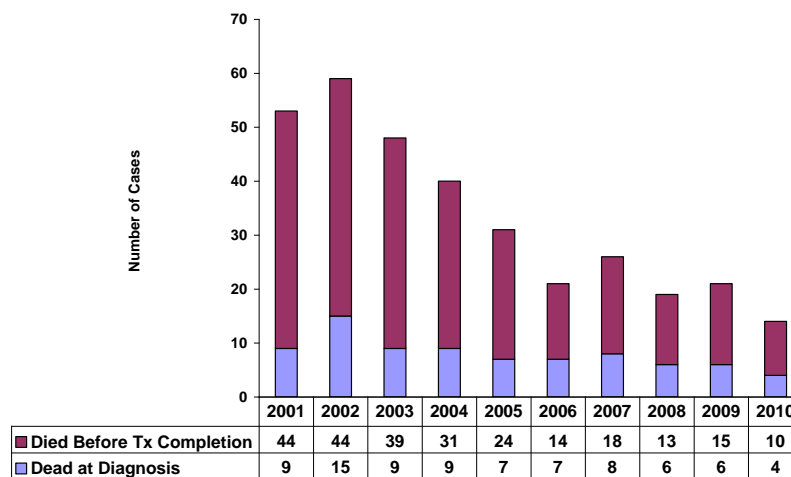
As can be seen from Figures 19 and 20, mortality of TB cases from diagnosis to treatment completion has decreased over the past several years. In 2002, there were 59 deaths (15 dead at diagnosis and 44 who died before completion of treatment); for cases reported in 2010, the last year for which treatment completion can be assessed, there were 14 deaths (four dead at diagnosis and 10 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. Both categories have decreased over time.

Figure 19. N.C. TB Case Mortality and Rates: 2001 – 2010



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

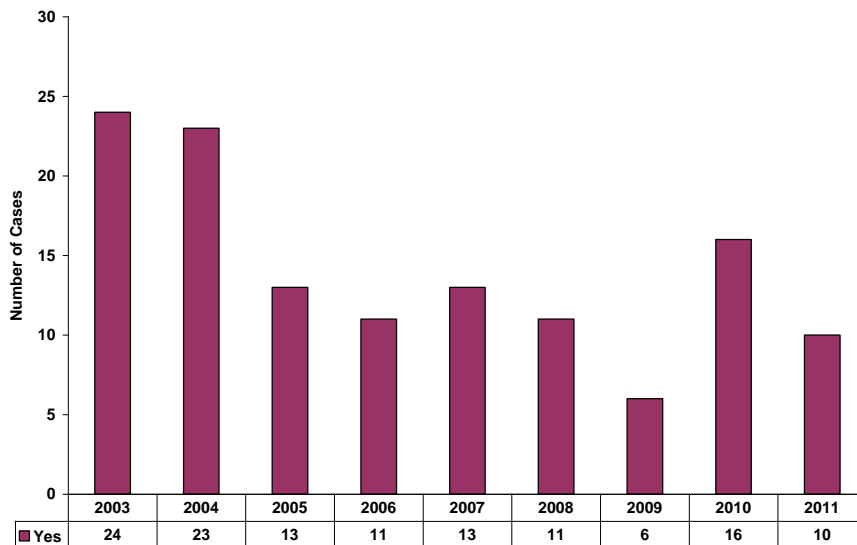
Figure 20. Timing of Death among TB Cases in N.C.: 2001 – 2010



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

Previous Diagnosis of TB: Ten TB patients in 2011 had a previous diagnosis of TB. The number is down from 24 cases in 2003 that had a previous diagnosis of TB.

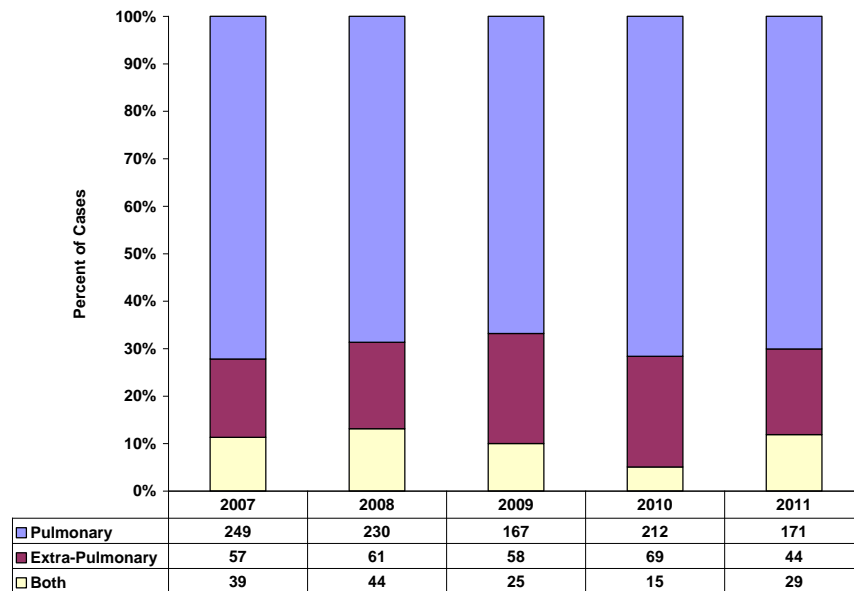
Figure 21. Previous Diagnosis of TB for TB Patients in N.C.: 2003 - 2011



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 2007 – 2011. These percentages have remaining very similar during this time period. Table 7 provides a more detailed breakout for the major disease sites.

Figure 22. Major Site of TB Disease for TB Patients in N.C.: 2007 -2011



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

Table 7. Site of TB Disease for N.C. TB Patients: 2007 - 2011

Site	2007	2008	2009	2010	2011
Bone/Joint	7	13	4	10	2
Bone/Joint, Other	N/A	N/A	0	0	1
Genitourinary	2	2	5	2	2
Genitourinary, Meningeal	N/A	N/A	0	0	1
Lymphatic: Axillary	N/A	N/A	0	0	3
Lymphatic: Cervical	10	15	14	12	5
Lymphatic: Intrathoracic	4	2	0	0	1
Lymphatic: Intrathoracic, Meningeal	N/A	N/A	0	0	1
Lymphatic: Intrathoracic, Other	N/A	N/A	0	1	0
Lymphatic: Other	5	7	2	11	2
Lymphatic: Other, Peritoneal	N/A	N/A	1	0	0
Meningeal	5	5	2	5	10
Meningeal, Other	N/A	N/A	0	1	0
Miliary	17	11	N/A	N/A	N/A
Other	4	11	7	11	2
Peritoneal	1	1	3	2	11
Pleural	19	13	13	11	1
Pleural, Bone and/or joint	N/A	N/A	0	1	1
Pleural, Lymphatic: cervical	N/A	N/A	0	1	0
Pleural, Other	N/A	N/A	2	1	0
Pleural, Peritoneal	N/A	N/A	1	0	0
Pulmonary	271	255	178	212	171
Pulmonary, Bone and/or Joint	N/A	N/A	3	0	2
Pulmonary, Bone and/or Joint, Meningeal, Other	N/A	N/A	1	0	0
Pulmonary, Genitourinary	N/A	N/A	1	1	0
Pulmonary, Lymphatic: axillary	N/A	N/A	0	0	1
Pulmonary, Lymphatic: cervical	N/A	N/A	4	2	4
Pulmonary, Lymphatic: cervical, Bone and/or joint	N/A	N/A	0	1	0
Pulmonary, Lymphatic: cervical, Genitourinary, Other	N/A	N/A	0	1	0
Pulmonary, Lymphatic: intrathoracic	N/A	N/A	0	1	1
Pulmonary, Lymphatic: other	N/A	N/A	1	1	3
Pulmonary, Lymphatic: unknown	N/A	N/A	0	0	1
Pulmonary, Meningeal	N/A	N/A	1	2	0
Pulmonary, Meningeal, Other	N/A	N/A	0	0	2
Pulmonary, Other	N/A	N/A	4	1	4
Pulmonary, Peritoneal	N/A	N/A	1	1	0
Pulmonary, Pleural	N/A	N/A	2	4	10
Pulmonary, Pleural, Lymphatic: intrathoracic	N/A	N/A	0	0	1

DATA SOURCE: North Carolina Electronic Disease Surveillance System (NC EDSS). Due to a change in data collection methods, the 2009, 2010 and 2011 data are more detailed than the 2007 – 2008 data. The 2007 – 2008 data include only one site and the 2009 – 2012 data include multiple sites. Also, miliary is not included as a site beginning in 2009.

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 2011, 180 of 183 culture-proven cases of TB have drug susceptibility results or pending results. Drug resistance to INH in North Carolina increased from 7 cases (2%) in 2007 to 13 cases (7%) in 2011. Between 2007 and 2011 the number of MDR cases has ranged from 1 to 2 cases per year. In 2011, there were 88 MDR cases (1.2%) in the U.S. The U.S. and North Carolina have similar case percentages for both INH and MDR resistance although NC percentages are generally lower.

Table 8. First-Line Primary TB Drug Resistance in N.C. Patients: 2007-2011

Table 8 Year	First-Line Primary TB Drug Resistance Over Time 2007-2011*									
	2007		2008		2009		2010		2011	
	#	%	#	%	#	%	#	%	#	%
INH ¹	7	2	13	5	12	6	15	5	13	7
MDR (INH & RIF) ³	2	1	2	1	1	0	1	0	2	1
**Total Positive Cultures	274		249		197		216		183	

DATA SOURCE: NC EDSS.

**Total positive cultures with susceptibility results known.

¹Includes INH and any other drugs except RIF. Resistance may have been found at either initial or final testing.

²Includes INH, RIF and any other drugs. Resistance may have been found at either initial or final testing.

A closer look at drug resistance by foreign-born status reveals that there are differences in the two groups. While over the period 2007-2011 the percentage of foreign-born persons with drug resistance is higher overall than for U.S. citizens (10.4% v. 8.3%), the difference in rates of MDR in North Carolina is even greater, four times as high in foreign born cases as compared with U.S. born persons or children born to U.S. citizens (1.2 v. 0.3).

Table 9. Comparison of Drug Resistance in U.S. and Foreign Born Patients: 2007 – 2011 (Years Combined)

Table 9	Drug Resistance by US and Foreign-born – 2007 – 2011 (years combined)			
	Foreign born		US	
	#	%	#	%
INH ¹	23	3.9	36	4.1
INH & SM ²	7	1.2	6	0.7
MDR (INH & RIF) ³	7	1.2	3	0.3
Any Other Drug Resistance	24	4.1	28	3.2
Total Drug Resistance	61	10.4	73	8.3
No Drug Resistance	522	89.6	814	91.7

*Data source: NC EDSS.

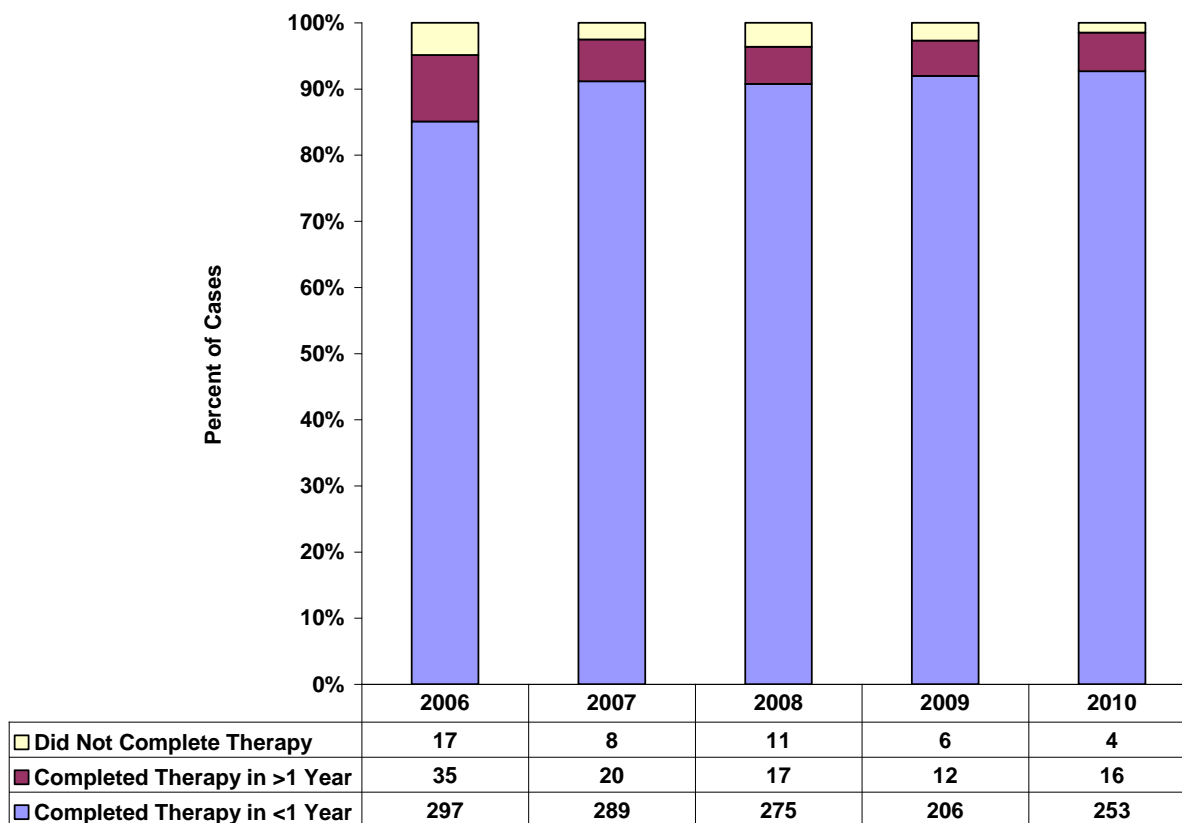
¹Includes INH and any other drugs except SM or RIF. Resistance may have been found at either initial or final testing.

²Includes INH, SM and any other drugs except RIF. Resistance may have been found at either initial or final testing.

³Includes INH, RIF and any other drugs including SM. 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 percent between 2002 and 2004; however, in 2005 and 2006, there was a drop to 85 percent. In 2006, North Carolina passed legislation requiring all TB cases be placed on DOT. This was expected to increase the percentage of cases completing therapy within one year. Although some of our cases are not total DOT, if they were on DOT for more than 26 weeks that is considered to meet the criteria for having total DOT. If the number on DOT plus the number on DOT 26 weeks or more are added together and divided by the total cases (minus any that were dead at diagnosis, died before completion of 26 weeks of DOT treatment, or that are currently on treatment), the percentage on DOT was 96.4 in 2010. The percentage of 2010 cases that completed therapy in one year was 93 percent, with another 6 percent completing after one year. In 2010, the last year for which completion of treatment can be assessed, for cases taking longer than 12 months to complete, one or more of the following reasons were provided: non-adherent, doses added to regimen (4); RIF or Rifabutin not tolerated (2); cavitary disease (2); other hepatotoxicity issues (2); other intolerance (2); treatment deviation (1); culture converted after two months (2); lost to follow-up (2); slow response (2); bone or joint disease (2); PZA not tolerated other than hepatotoxicity (1). Only 1.4 percent have not completed treatment – one moved out of state and is lost to follow-up, three left the country and are lost to follow-up, one was a child whose parents refused further treatment after 13 weeks on DOT.

Figure 23. Patients Completing Therapy in N.C.: 2006 -- 2010



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

This includes all patients alive at diagnosis and who did not die during treatment. Patients with any rifampin-resistant TB or meningeal TB, and children aged 14 or younger with disseminated TB are excluded.

SUPPLEMENTAL TABLES

Table 10: TB Cases and Case Rates by County 2007-2011*

COUNTY	2007		2008		2009		2010		2011	
	CASES	RATE**	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE
Alamance	3	2.1	4	2.7	5	3.3	5	3.3	2	1.3
Alexander	0	0	0	0	0	0.0	0	0	0	0.0
Alleghany	0	0	0	0	0	0.0	0	0	0	0.0
Anson	2	7.7	3	11.6	0	0.0	1	3.9	0	0.0
Ashe	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
Beaufort	2	4.2	2	4.3	0	0.0	1	2.1	4	8.4
Bertie	3	15.4	0	0	0	0.0	2	10.0	0	0.0
Bladen	0	0	1	3	1	3.1	2	6.0	3	9.0
Brunswick	2	2.1	3	3	5	4.7	0	0	1	0.9
Buncombe	13	5.7	7	3	6	2.6	2	0.8	1	0.4
Burke	0	0	0	0	2	2.2	1	1.1	0	0.0
Cabarrus	1	0.6	4	2.4	1	0.6	1	0.6	2	1.1
Caldwell	6	7.3	2	2.5	2	2.5	2	2.4	0	0.0
Camden	0	0	0	0	0	0.0	0	0	1	10.0
Carteret	1	1.5	3	4.6	1	1.6	1	1.5	2	3.0
Caswell	2	8.3	1	4.2	1	4.3	0	0	0	0.0
Catawba	4	2.5	1	0.6	4	2.5	2	1.3	2	1.3
Chatham	0	0	2	3.3	2	3.1	1	1.5	0	0.0
Cherokee	0	0	0	0	0	0.0	1	3.7	0	0.0
Chowan	0	0	0	0	0	0.0	1	6.6	1	6.6
Clay	0	0	0	0	0	0.0	0	0	0	0.0
Cleveland	3	3	1	1	1	1.0	1	1.0	0	0.0
Columbus	5	8.9	0	0	2	3.7	1	1.8	1	1.8
Craven	6	6.2	4	4.1	5	5.1	3	3.0	1	1.0
Cumberland	7	2.3	8	2.5	9	2.9	6	1.9	11	3.4
Currituck	0	0	0	0	0	0.0	0	0	0	0.0
Dare	1	2.9	0	0	1	2.9	0	0	0	0.0
Davidson	8	5	3	1.9	3	1.9	0	0	3	1.8
Davie	0	0	0	0	0	0.0	0	0	0	0.0
Duplin	6	11.1	4	7.4	4	7.5	6	11.0	3	5.5
Durham	8	3.2	15	5.8	12	4.4	14	5.2	9	3.4
Edgecombe	3	5.4	6	11.4	2	3.9	2	3.7	1	1.9
Forsyth	11	3.2	16	4.6	8	2.2	11	3.1	12	3.4
Franklin	2	3.5	0	0	1	1.7	2	3.2	1	1.6
Gaston	4	2	4	2	1	0.5	2	1.0	0	0.0
Gates	0	0	0	0	0	0.0	0	0	0	0.0
Graham	0	0	1	12	0	0.0	0	0	0	0.0
Granville	1	1.8	1	1.8	0	0.0	1	1.7	0	0.0
Greene	0	0	4	18.6	2	9.7	6	28.2	3	14.1
Guilford	27	5.8	21	4.5	21	4.4	31	6.3	22	4.5
Halifax	3	5.3	4	7.1	2	3.7	5	8.9	1	1.8
Harnett	3	2.8	4	3.7	3	2.6	5	4.2	0	0.0

Haywood	2	3.5	0	0	1	1.8	1	1.7	0	0.0
Henderson	0	0	4	3.8	3	2.9	10	9.4	3	2.8
Hertford	1	4.1	1	4.1	1	4.3	2	8.3	3	12.5
Hoke	1	2.3	2	4.6	3	6.6	1	2.2	1	2.2
Hyde	0	0	1	18	1	19.2	0	0	0	0.0
Iredell	3	2	2	1.3	1	0.6	0	0	1	0.6
Jackson	0	0	0	0	2	5.4	1	2.6	0	0.0
Johnston	8	5.1	10	6.2	7	4.2	5	3.0	1	0.6
Jones	0	0	0	0	0	0	0	0	0	0.0
Lee	3	5.2	0	0	1	1.7	4	6.4	2	3.2
Lenoir	4	6.8	4	6.8	2	3.5	6	10.3	2	3.4
Lincoln	0	0	0	0	0	0	0	0	1	1.3
Macon	0	0	1	2.9	1	3.0	0	0	0	0.0
Madison	0	0	0	0	0	0	0	0	0	0.0
Martin	1	4.8	2	8.2	1	4.3	0	0	0	0.0
McDowell	0	0	1	2.2	0	0	1	2.2	2	4.4
Mecklenburg	34	4	44	5	33	3.6	40	4.3	37	4.0
Mitchell	1	6.2	0	0	0	0	0	0	0	0.0
Montgomery	4	14.1	3	10.7	1	3.6	3	10.5	5	17.5
Moore	1	1.2	0	0	2	2.3	3	3.3	2	2.2
Nash	4	4.2	3	3.2	0	0	1	1.0	1	1.0
New Hanover	6	3.2	4	2.1	3	1.5	4	2.0	5	2.5
Northampton	2	9.2	1	4.6	0	0	0	0	1	4.8
Onslow	3	1.9	3	1.7	4	2.3	3	1.7	3	1.7
Orange	9	7.3	7	5.4	1	0.8	3	2.3	3	2.3
Pamlico	0	0	0	0	0	0	0	0	0	0.0
Pasquotank	1	2.5	1	2.4	0	0	1	2.3	0	0.0
Pender	3	6	0	0	2	3.8	0	0	1	1.9
Perquimans	0	0	0	0	0	0	0	0	0	0.0
Person	0	0	2	5.2	1	2.7	0	0	1	2.6
Pitt	11	7.4	6	3.9	6	3.8	6	3.6	7	4.2
Polk	0	0	0	0	2	10.4	0	0	0	0.0
Randolph	1	0.7	0	0	0	0	1	0.7	1	0.7
Richmond	0	0	3	6.3	1	2.2	3	6.3	1	2.1
Robeson	17	12.9	20	15.1	16	12.3	12	9.0	7	5.2
Rockingham	3	3.2	3	3.2	1	1.1	2	2.1	3	3.2
Rowan	2	1.4	3	2.2	3	2.1	2	1.4	3	2.2
Rutherford	0	0	1	1.6	1	1.6	0	0	0	0.0
Sampson	1	1.5	7	10.6	5	7.8	6	9.1	6	9.1
Scotland	5	13.2	4	10.6	0	0	0	0	5	13.4
Stanly	1	1.6	0	0	1	1.7	2	3.2	0	0.0
Stokes	0	0	0	0	0	0	0	0	1	2.1
Surry	0	0	2	2.7	0	0	1	1.3	0	0.0
Swain	0	0	0	0	0	0	0	0	0	0.0
Transylvania	1	3.3	1	3.2	0	0	1	3.2	1	3.2
Tyrrell	0	0	0	0	0	0	0	0	0	0.0
Union	3	1.7	7	3.8	1	0.5	0	0	2	1.0
Vance	2	4.5	0	0	0	0	0	0	0	0.0

Wake	54	6.7	40	4.7	22	2.5	37	4.1	29	3.2
Warren	2	10	0	0	0	0	1	5.0	0	0.0
Washington	0	0	0	0	0	0	0	0	0	0.0
Watauga	0	0	1	2.2	1	2.2	0	0	0	0.0
Wayne	9	7.7	3	2.6	8	7.0	8	6.8	9	7.7
Wilkes	1	1.5	2	2.9	1	1.5	1	1.5	3	4.4
Wilson	4	5.1	7	8.8	3	3.8	5	6.2	4	5.0
Yadkin	0	0	0	0	0	0	0	0	0	0.0
Yancey	0	0	0	0	0	0	0	0	0	0.0
North Carolina	345	3.8	335	3.6	250	2.7	296	3.1	244	2.5

*Data source: NC EDSS TB Surveillance - Demographic Data Report. Rates are per 100,000.

**Denominators for computing rates for the state were obtained from the Annual Estimates of the Population for the United States and Puerto Rico for 2007, 2008, and 2009. For 2010 and 2011, the source is: U.S. Census Bureau, Summary File 1, Table PCT12. 2011 estimates are not yet available so the denominator is the same for 2010 and 2011.

Table 11: Foreign-Born TB Cases by County 2007-2011

Foreign-Born TB Cases by County 2007-2011						
County	2007	2008	2009	2010	2011	Total Cases 2007 - 2011
Alamance	1	1	2	1	2	7
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	1	0	0	0	1	2
Bertie	0	0	0	1	0	1
Bladen	0	0	1	0	1	2
Brunswick	1	0	2	0	1	4
Buncombe	6	3	2	1	0	12
Burke	0	0	0	1	0	1
Cabarrus	1	3	0	0	2	6
Caldwell	0	0	1	0	0	1
Camden	0	0	0	0	0	0
Carteret	0	0	1	0	0	1
Caswell	0	0	0	0	0	0
Catawba	3	1	0	2	1	7
Chatham	0	2	1	0	0	3
Cherokee	0	0	0	0	0	0
Chowan	0	0	0	0	0	0
Clay	0	0	0	0	0	0
Cleveland	0	1	0	0	0	1
Columbus	1	0	0	0	0	1
Craven	2	0	2	1	1	6
Cumberland	0	1	0	2	3	6
Currituck	0	0	0	0	0	0
Dare	0	0	1	0	0	1
Davidson	6	2	2	0	1	12
Davie	0	0	0	0	0	0
Duplin	5	2	2	3	2	14
Durham	3	10	7	7	6	33
Edgecombe	0	1	0	0	0	1
Forsyth	8	9	7	7	4	35
Franklin	2	0	0	0	0	2
Gaston	2	3	0	1	0	6
Gates	0	0	0	0	0	0
Graham	0	0	0	0	0	0

Granville	0	0	0	1	0	1
Greene	0	0	0	0	0	0
Guilford	14	11	15	18	16	74
Halifax	0	0	0	1	0	1
Harnett	1	1	1	1	0	4
Haywood	0	0	0	0	0	0
Henderson	0	0	0	4	2	6
Hertford	0	0	0	0	0	0
Hoke	0	0	0	0	0	0
Hyde	0	0	1	0	0	1
Iredell	1	1	0	0	1	3
Jackson	0	0	1	1	0	2
Johnston	2	3	2	2	0	9
Jones	0	0	0	0	0	0
Lee	2	0	1	3	1	7
Lenoir	0	1	0	0	0	1
Lincoln	0	0	0	0	1	1
Macon	0	1	0	0	0	1
Madison	0	0	0	0	0	0
Martin	0	0	0	0	0	0
McDowell	0	0	0	1	2	3
Mecklenburg	21	15	14	26	23	99
Mitchell	0	0	0	0	0	0
Montgomery	1	0	0	1	2	3
Moore	1	0	1	0	0	2
Nash	0	0	0	1	0	1
New Hanover	1	3	0	0	4	8
Northampton	0	0	0	0	0	0
Onslow	2	2	1	3	1	9
Orange	6	5	1	2	1	15
Pamlico	0	0	0	0	0	0
Pasquotank	1	0	0	0	0	1
Pender	1	0	1	0	1	3
Perquimans	0	0	0	0	0	0
Person	0	2	0	0	1	3
Pitt	1	0	1	3	0	5
Polk	0	0	1	0	0	1
Randolph	0	0	0	1	1	2
Richmond	0	0	0	1	1	2
Robeson	1	2	1	2	0	6
Rockingham	2	1	0	1	0	4
Rowan	1	2	1	1	1	6
Rutherford	0	1	0	0	0	1
Sampson	0	4	1	1	2	8

Scotland	0	0	0	0	0	0
Stanly	0	0	0	0	0	0
Stokes	0	0	0	0	0	0
Surry	0	1	0	0	0	1
Swain	0	0	0	0	0	0
Transylvania	1	0	0	0	0	1
Tyrrell	0	0	0	0	0	0
Union	2	3	0	0	1	6
Vance	0	0	0	0	0	0
Wake	35	22	15	17	19	108
Warren	0	0	0	0	0	0
Washington	0	0	1	0	0	1
Watauga	0	0	0	0	0	0
Wayne	2	0	0	0	0	2
Wilkes	1	0	0	0	0	1
Wilson	0	3	1	2	2	8
Yadkin	0	0	0	0	0	0
Yancey	0	0	0	0	0	0
North Carolina	142	123	92	121	108	586

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

Table 12: Foreign-Born Cases by Country of Origin 2007-2011

Foreign-Born Cases by Country of Origin 2007-2011

Year	2007	2008	2009	2010	2011	Total Cases 2007 – 2011
Afghanistan	0	0	0	0	2	2
Albania	1	0	0	0	0	1
Argentina	0	1	0	0	0	1
Bangladesh	0	0	0	0	1	1
Bhutan	0	1	0	5	3	9
Bosnia & Herzegovina	0	0	0	1	0	1
British Virgin Islands	1	0	0	0	0	1
Cambodia	4	1	3	3	1	12
China	4	2	1	1	4	12
Colombia	1	0	1	2	1	5
Congo	0	1	0	0	3	4
Costa Rica	0	1	0	0	0	1
Cote d'Ivoire	0	0	0	0	1	1
Denmark	0	0	0	1	0	1
Dominican Republic	0	0	0	0	0	1
Ecuador	2	0	0	0	1	3
El Salvador	6	4	2	4	1	17
Eritrea	0	0	0	0	2	2
Ethiopia	3	3	1	2	2	11
Faeroe Islands	0	0	0	0	1	1
Ghana	1	2	1	0	0	4
Grenada	0	0	0	1	0	1
Guatemala	3	3	7	1	6	20
Guinea	0	0	0	1	0	1
Haiti	1	2	1	1	2	7
Honduras	8	11	2	7	8	36
Hong Kong (China)	0	0	0	1	0	1
India	16	11	6	12	7	50
Indonesia	3	1	0	0	1	5
Iran	0	0	1	0	0	1
Jamaica	0	0	0	1	0	1
Jordan	0	0	1	0	0	1
Kenya	3	3	2	1	4	13
Korea Democratic Peoples Rep.	1	0	0	0	0	1
Korea Republic of	2	3	1	2	1	9
Kuwait	0	0	1	0	0	1
Laos	4	0	2	4	1	11

Liberia	2	0	0	1	2	5
Malaysia	1	0	1	0	0	2
Mexico	54	41	33	31	23	182
Micronesia, Federated States of	0	0	0	2	1	3
Morocco	2	0	1	0	0	3
Myanmar	1	2	0	5	5	13
Nepal	1	0	0	1	0	4
Netherlands	0	0	1	0	0	1
Niger	0	0	0	1	0	2
Nigeria	0	0	3	0	0	3
Pakistan	0	2	1	0	1	4
Peru	1	1	1	0	2	5
Philippines	6	7	4	10	6	33
Puerto Rico	0	0	1	0	0	1
Russian Federation	0	0	0	0	2	2
Senegal	0	1	1	1	0	3
Somalia	0	1	0	2	0	3
Spain	0	0	0	1	0	1
Sudan	0	1	1	0	2	4
Taiwan	0	1	0	0	0	1
Tanzania	0	0	0	0	1	1
Thailand	0	1	0	1	0	2
Turkmenistan	0	1	0	0	0	1
Ukraine	0	2	0	0	0	2
Vietnam	9	11	10	14	10	54
Zimbabwe	0	0	1	0	0	1
Total	141	122	92	121	108	586

***Does not include persons born in U.S. territories.**

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

Table 13: Hispanic TB Cases by County 2007-2011

Hispanic TB Cases by County 2007-2011						
County	2007	2008	2009	2010	2011	Total Cases 2007 - 2011
Alamance	2	3	2	2	2	11
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	1	0	0	0	0	1
Bertie	0	0	0	1	0	1
Bladen	0	0	1	0	1	2
Brunswick	0	0	2	0	0	2
Buncombe	13	2	2	0	0	17
Burke	0	0	0	0	0	0
Cabarrus	0	3	0	0	1	4
Caldwell	0	0	2	0	0	2
Camden	0	0	0	0	0	0
Carteret	0	0	0	0	0	0
Caswell	0	0	0	0	0	0
Catawba	2	1	0	1	1	5
Chatham	0	1	1	0	0	2
Cherokee	0	0	0	0	0	0
Chowan	0	0	0	0	0	0
Clay	0	0	0	0	0	0
Cleveland	0	0	0	0	0	0
Columbus	2	0	0	0	0	2
Craven	2	0	1	0	0	3
Cumberland	0	1	1	0	0	2
Currituck	0	0	0	0	0	0
Dare	0	0	0	0	0	0
Davidson	3	1	2	0	1	7
Davie	0	0	0	0	0	0
Duplin	6	2	3	4	2	17
Durham	2	4	2	3	4	15
Edgecombe	0	1	0	0	0	1
Forsyth	5	9	4	5	2	25
Franklin	2	0	0	0	0	2

Gaston	1	1	0	0	0	2
Gates	0	0	0	0	0	0
Graham	0	0	0	0	0	0
Granville	0	0	0	1	0	1
Greene	0	0	0	0	0	0
Guilford	5	1	3	2	2	13
Halifax	0	0	0	0	0	0
Harnett	1	2	1	0	0	4
Haywood	0	0	0	0	0	0
Henderson	0	0	0	2	1	3
Hertford	0	0	0	0	0	0
Hoke	0	0	0	0	0	0
Hyde	0	0	1	0	0	1
Iredell	1	1	0	0	0	2
Jackson	0	0	1	1	0	2
Johnston	3	4	1	1	0	9
Jones	0	0	0	0	0	0
Lee	2	0	1	2	1	6
Lenoir	0	1	0	0	1	2
Lincoln	0	0	0	0	0	0
Macon	0	1	0	0	0	1
Madison	0	0	0	0	0	0
Martin	0	0	0	0	0	0
McDowell	0	1	0	0	1	2
Mecklenburg	12	12	5	11	11	51
Mitchell	0	0	0	0	0	0
Montgomery	1	0	0	1	2	4
Moore	0	0	1	0	0	1
Nash	0	0	0	0	0	0
New Hanover	1	2	1	0	2	6
Northampton	0	0	0	0	0	0
Onslow	0	1	0	0	0	1
Orange	5	4	0	0	0	9
Pamlico	0	0	0	0	0	0
Pasquotank	0	0	0	0	0	0
Pender	2	0	1	0	1	4
Perquimans	0	0	0	0	0	0
Person	0	2	0	0	1	3
Pitt	1	0	1	2	0	4
Polk	0	0	1	0	0	1
Randolph	0	0	0	0	1	1

Richmond	0	0	0	0	1	1
Robeson	1	0	1	2	0	4
Rockingham	1	0	0	1	0	2
Rowan	0	2	1	1	1	5
Rutherford	0	0	0	0	0	0
Sampson	0	4	1	0	2	7
Scotland	0	0	0	0	0	0
Stanly	0	0	0	0	0	0
Stokes	0	0	0	0	0	0
Surry	0	0	0	0	0	0
Swain	0	0	0	0	0	0
Transylvania	1	0	0	0	0	1
Tyrrell	0	0	0	0	0	0
Union	2	1	0	0	0	3
Vance	0	0	0	0	0	0
Wake	18	14	8	11	3	54
Warren	0	0	0	0	0	0
Washington	0	0	1	0	0	1
Watauga	0	0	0	0	0	0
Wayne	3	0	0	0	0	3
Wilkes	0	0	0	0	0	0
Wilson	0	3	1	2	2	8
Yadkin	0	0	0	0	0	0
Yancey	0	0	0	0	0	0
North Carolina	101	85	54	56	47	343

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