

# 2014 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

**April 2015**

State of North Carolina ◊ Pat McCrory, Governor  
Department of Health and Human Services ◊ Aldona Z. Wos, M.D., Secretary  
Division of Public Health ◊ Megan Davies, M.D., Acting State Health Director

[www.ncdhhs.gov](http://www.ncdhhs.gov)

[www.epi.state.nc.us/epi/tb/](http://www.epi.state.nc.us/epi/tb/)

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While tuberculosis in the United States decreased from 3.8 to 3.0 per 100,000 between 2009 and 2014, the North Carolina rate went from 2.7 to 2, a 26% decline.

North Carolina reported 195 tuberculosis cases in 2014. Since 1980, TB cases in North Carolina have decreased by approximately four percent per year. As a result, the total number of cases in 2014 is only 18 percent of the total number of cases reported in 1980 (195 cases compared to 1066 cases).

<b>Table 1</b>	<b>REPORTED TB CASES FOR NORTH CAROLINA 2010-2014</b>									
<b>Year</b>	<b>2010</b>		<b>2011</b>		<b>2012</b>		<b>2013</b>		<b>2014</b>	
<b>Cases</b>	<b>296</b>		<b>244</b>		<b>211</b>		<b>216</b>		<b>195</b>	
<b>VARIABLES</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
<b>SEX</b>										
<b>Male</b>	187	63	151	62	133	63	136	63	<b>110</b>	<b>56</b>
<b>Female</b>	109	37	93	38	78	37	80	37	<b>85</b>	<b>44</b>
<b>RACE</b>										
<b>White†</b>	111	38	88	36	81	38	64	30	<b>75</b>	<b>38</b>
<b>Black/African-American</b>	113	38	93	38	67	32	84	39	<b>85</b>	<b>44</b>
<b>Asian</b>	55	18	42	17	48	23	49	23	<b>26</b>	<b>13</b>
<b>American Indian/Alaska Native</b>	5	2	7	3	5	2	10	5	<b>5</b>	<b>3</b>
<b>Hawaiian/Other Pacific Islander</b>	5	2	1	<1	0	0	0	0	<b>0</b>	<b>0</b>
<b>Multi-Racial</b>	7	2	13	5	10	5	9	4	<b>4</b>	<b>2</b>
<b>ETHNICITY</b>										
<b>Hispanic</b>	56	19	47	19	42	20	39	18	<b>38</b>	<b>19</b>
<b>Non-Hispanic</b>	240	81	197	81	169	80	177	82	<b>157</b>	<b>81</b>
<b>AGE</b>										
<b>0-4</b>	20	7	11	4	11	5	9	4	<b>4</b>	<b>2</b>
<b>5-14</b>	4	1	4	2	4	2	6	3	<b>7</b>	<b>4</b>
<b>15-24</b>	36	12	25	10	25	12	19	9	<b>16</b>	<b>8</b>
<b>25-44</b>	86	29	79	32	72	34	82	38	<b>70</b>	<b>36</b>
<b>45-64</b>	80	27	69	28	54	26	63	29	<b>60</b>	<b>31</b>
<b>≥65</b>	70	24	56	23	45	21	37	17	<b>38</b>	<b>19</b>
<b>COUNTRY OF ORIGIN</b>										
<b>United States</b>	174	59	136	56	114	56	114	53	<b>110</b>	<b>56</b>
<b>Foreign</b>	122	41	108	44	97	46	102	47	<b>85</b>	<b>44</b>

192 people were alive at diagnosis and began treatment for tuberculosis in 2014, however, 12 people died before completing therapy. Three people diagnosed with tuberculosis were dead at diagnosis and never started treatment.

In 2014, 42% of all cases were located in five counties: Mecklenburg (22), Wake (16), Guilford (20), Robeson (13) and Durham (11). The case rate was higher than the state rate in all of these counties except Wake which was actually lower than the state case rate. There were 51 counties in N.C. with no reported TB cases in 2014.

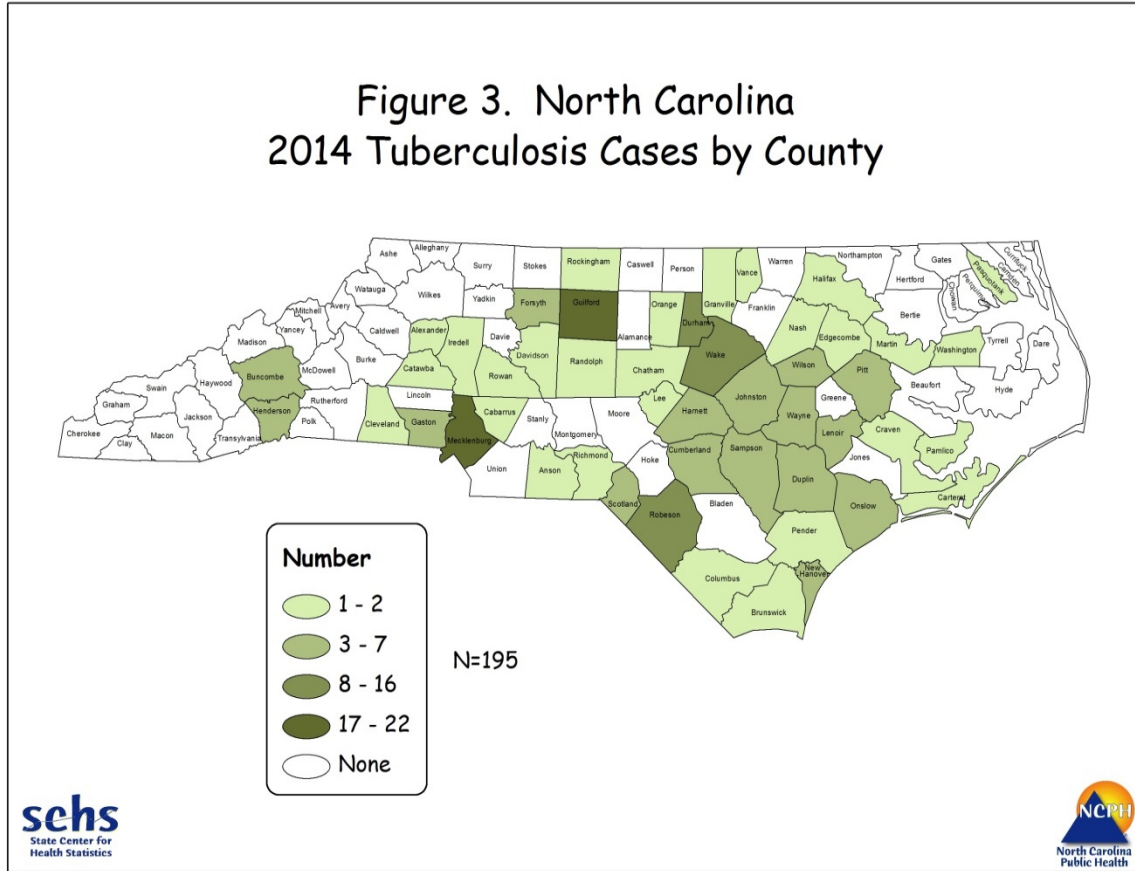
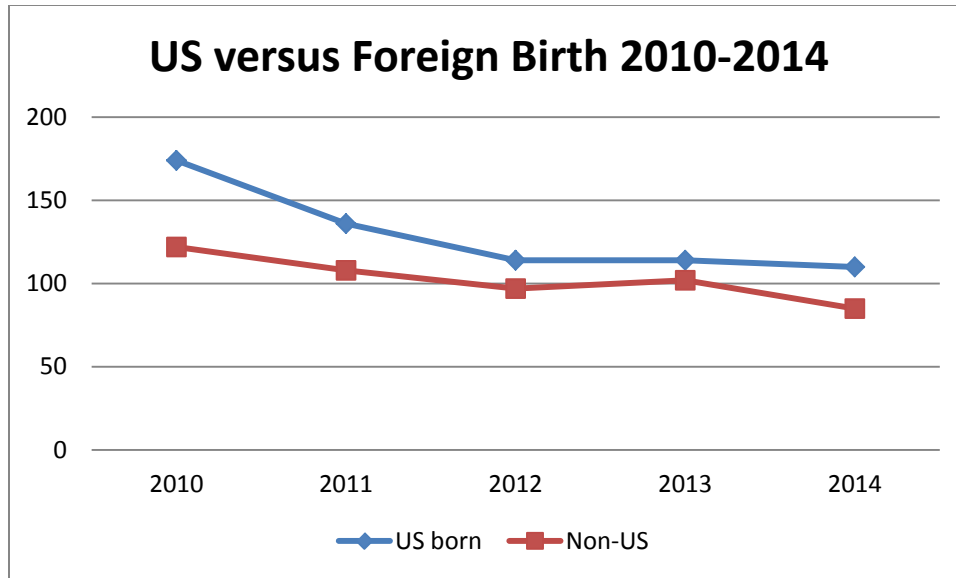


Table 2		NC COUNTY TB CASES AND CASE RATES 2009-2014											
COUNTY	2009		2010		2011		2012		2013		2014		
	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE	CASES	RATE	
Alamance	5	3.3	5	3.3	2	1.3	0	0.0	4	2.6	0	0.0	
Alexander	0	0.0	0	0	0	0.0	0	0.0	0	0.0	2	5.4	
Alleghany	0	0.0	0	0	0	0.0	1	9.2	0	0.0	0	0.0	
Anson	0	0.0	1	3.9	0	0.0	1	3.8	3	11.5	2	7.6	
Ashe	0	0.0	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	0.0	
Beaufort	0	0.0	1	2.1	4	8.4	1	2.1	0	0.0	0	0.0	
Bertie	0	0.0	2	10.0	0	0.0	3	14.5	0	0.0	0	0.0	
Bladen	1	3.1	2	6.0	3	9.0	2	5.7	0	0.0	0	0.0	
Brunswick	5	4.7	0	0	1	0.9	0	0.0	1	0.9	1	0.9	
Buncombe	6	2.6	2	0.8	1	0.4	0	0.0	3	1.2	3	1.2	

Burke	2	2.2	1	1.1	0	0.0	7	7.7	2	2.2	0	0.0
Cabarrus	1	0.6	1	0.6	2	1.1	2	1.1	0	0.0	2	1.1
Caldwell	2	2.5	2	2.4	0	0.0	0	0.0	2	2.4	0	0.0
Camden	0	0.0	0	0	1	10.0	0	0.0	0	0.0	0	0.0
Carteret	1	1.6	1	1.5	2	3.0	3	4.4	1	1.5	2	2.9
Caswell	1	4.3	0	0	0	0.0	1	4.3	0	0.0	0	0.0
Catawba	4	2.5	2	1.3	2	1.3	7	4.5	1	0.6	1	0.6
Chatham	2	3.1	1	1.5	0	0.0	1	1.5	1	1.5	2	3.0
Cherokee	0	0.0	1	3.7	0	0.0	1	3.7	0	0.0	0	0.0
Chowan	0	0.0	1	6.6	1	6.6	0	0.0	2	13.6	0	0.0
Clay	0	0.0	0	0	0	0.0	0	0.0	1	9.4	0	0.0
Cleveland	1	1.0	1	1.0	0	0.0	0	0.0	0	0.0	1	1.0
Columbus	2	3.7	1	1.8	1	1.8	0	0.0	3	5.2	1	1.7
Craven	5	5.1	3	3.0	1	1.0	1	1.0	1	1.0	2	1.9
Cumberland	9	2.9	6	1.9	11	3.4	5	1.5	7	2.1	7	2.1
Currituck	0	0.0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
Dare	1	2.9	0	0	0	0.0	0	0.0	1	2.9	0	0.0
Davidson	3	1.9	0	0	3	1.8	0	0.0	4	2.4	1	0.6
Davie	0	0.0	0	0	0	0.0	0	0.0	1	2.4	0	0.0
Duplin	4	7.5	6	11.0	3	5.5	2	3.3	5	8.3	4	6.7
Durham	12	4.4	14	5.2	9	3.4	10	3.6	6	2.1	11	3.8
Edgecombe	2	3.9	2	3.7	1	1.9	3	5.4	1	1.8	1	1.8
Forsyth	8	2.2	11	3.1	12	3.4	6	1.7	6	1.7	7	1.9
Franklin	1	1.7	2	3.2	1	1.6	0	0.0	0	0.0	0	0.0
Gaston	1	0.5	2	1.0	0	0.0	3	1.4	4	1.9	6	2.9
Gates	0	0.0	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	0.0	0	0.0
Granville	0	0.0	1	1.7	0	0.0	1	1.7	2	3.4	2	3.4
Greene	2	9.7	6	28.2	3	14.1	2	9.3	2	9.4	0	0.0
Guilford	21	4.4	31	6.3	22	4.5	17	3.4	19	3.8	20	3.9
Halifax	2	3.7	5	8.9	1	1.8	4	7.4	1	1.9	1	1.9
Harnett	3	2.6	5	4.2	0	0.0	0	0.0	3	2.4	4	3.2
Haywood	1	1.8	1	1.7	0	0.0	0	0.0	2	3.4	0	0.0
Henderson	3	2.9	10	9.4	3	2.8	1	0.9	2	1.8	3	2.7
Hertford	1	4.3	2	8.3	3	12.5	1	4.1	0	0.0	0	0.0
Hoke	3	6.6	1	2.2	1	2.2	1	2.0	1	1.9	0	0.0
Hyde	1	19.2	0	0	0	0.0	0	0.0	0	0.0	0	0.0
Iredell	1	0.6	0	0	1	0.6	2	1.2	2	1.2	1	0.6
Jackson	2	5.4	1	2.6	0	0.0	2	4.9	0	0.0	0	0.0
Johnston	7	4.2	5	3.0	1	0.6	4	2.3	3	1.7	6	3.4
Jones	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
Lee	1	1.7	4	6.4	2	3.2	0	0.0	1	1.7	2	3.3
Lenoir	2	3.5	6	10.3	2	3.4	8	13.5	5	8.5	6	10.2
Lincoln	0	0	0	0	1	1.3	1	1.3	1	1.3	0	0.0
Macon	1	3.0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
Madison	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0

<b>Martin</b>	1	4.3	0	0	0	0.0	1	4.2	0	0.0	2	9.5
<b>McDowell</b>	0	0	1	2.2	2	4.4	1	2.2	1	2.2	0	0.0
<b>Mecklenburg</b>	33	3.6	40	4.3	37	4.0	30	3.1	41	4.1	22	2.2
<b>Mitchell</b>	0	0	0	0	0	0.0	1	6.5	0	0.0	0	0.0
<b>Montgomery</b>	1	3.6	3	10.5	5	17.5	1	3.6	0	0.0	0	0.0
<b>Moore</b>	2	2.3	3	3.3	2	2.2	0	0.0	0	0.0	0	0.0
<b>Nash</b>	0	0	1	1.0	1	1.0	3	3.1	4	4.2	2	2.1
<b>New Hanover</b>	3	1.5	4	2.0	5	2.5	1	0.5	4	1.9	3	1.4
<b>Northampton</b>	0	0	0	0	1	4.8	4	18.7	3	14.4	0	0.0
<b>Onslow</b>	4	2.3	3	1.7	3	1.7	1	0.5	0	0.0	3	1.6
<b>Orange</b>	1	0.8	3	2.3	3	2.3	2	1.4	2	1.4	1	0.7
<b>Pamlico</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	1	7.7
<b>Pasquotank</b>	0	0	1	2.3	0	0.0	0	0.0	0	0.0	2	5.0
<b>Pender</b>	2	3.8	0	0	1	1.9	2	3.7	0	0.0	1	1.8
<b>Perquimans</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Person</b>	1	2.7	0	0	1	2.6	1	2.5	0	0.0	0	0.0
<b>Pitt</b>	6	3.8	6	3.6	7	4.2	5	2.9	3	1.7	7	4.0
<b>Polk</b>	2	10.4	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Randolph</b>	0	0	1	0.7	1	0.7	2	1.4	1	0.7	2	1.4
<b>Richmond</b>	1	2.2	3	6.3	1	2.1	0	0.0	3	6.5	2	4.3
<b>Robeson</b>	16	12.3	12	9.0	7	5.2	13	9.6	14	10.4	13	9.6
<b>Rockingham</b>	1	1.1	2	2.1	3	3.2	0	0.0	0	0.0	1	1.1
<b>Rowan</b>	3	2.1	2	1.4	3	2.2	3	2.2	0	0.0	1	0.7
<b>Rutherford</b>	1	1.6	0	0	0	0.0	0	0.0	1	1.5	0	0.0
<b>Sampson</b>	5	7.8	6	9.1	6	9.1	4	6.3	3	4.7	3	4.7
<b>Scotland</b>	0	0	0	0	5	13.4	0	0.0	0	0.0	3	8.3
<b>Stanly</b>	1	1.7	2	3.2	0	0.0	0	0.0	0	0.0	0	0.0
<b>Stokes</b>	0	0	0	0	1	2.1	0	0.0	0	0.0	0	0.0
<b>Surry</b>	0	0	1	1.3	0	0.0	2	2.7	0	0.0	0	0.0
<b>Swain</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Transylvania</b>	0	0	1	3.2	1	3.2	0	0.0	0	0.0	0	0.0
<b>Tyrrell</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Union</b>	1	0.5	0	0	2	1.0	1	0.5	0	0.0	0	0.0
<b>Vance</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	1	2.2
<b>Wake</b>	22	2.5	37	4.1	29	3.2	16	1.7	26	2.7	16	1.6
<b>Warren</b>	0	0	1	5.0	0	0.0	1	4.9	0	0.0	0	0.0
<b>Washington</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	1	7.9
<b>Watauga</b>	1	2.2	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Wayne</b>	8	7.0	8	6.8	9	7.7	7	5.6	2	1.6	3	2.4
<b>Wilkes</b>	1	1.5	1	1.5	3	4.4	1	1.4	0	0.0	0	0.0
<b>Wilson</b>	3	3.8	5	6.2	4	5.0	1	1.2	4	4.9	4	4.9
<b>Yadkin</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Yancey</b>	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
<b>North Carolina</b>	<b>250</b>	<b>2.7</b>	<b>296</b>	<b>3.1</b>	<b>244</b>	<b>2.5</b>	<b>211</b>	<b>2.2</b>	<b>216</b>	<b>2.2</b>	<b>195</b>	<b>2.0</b>

As of February 16, 2015 <http://factfinder.census.gov/>

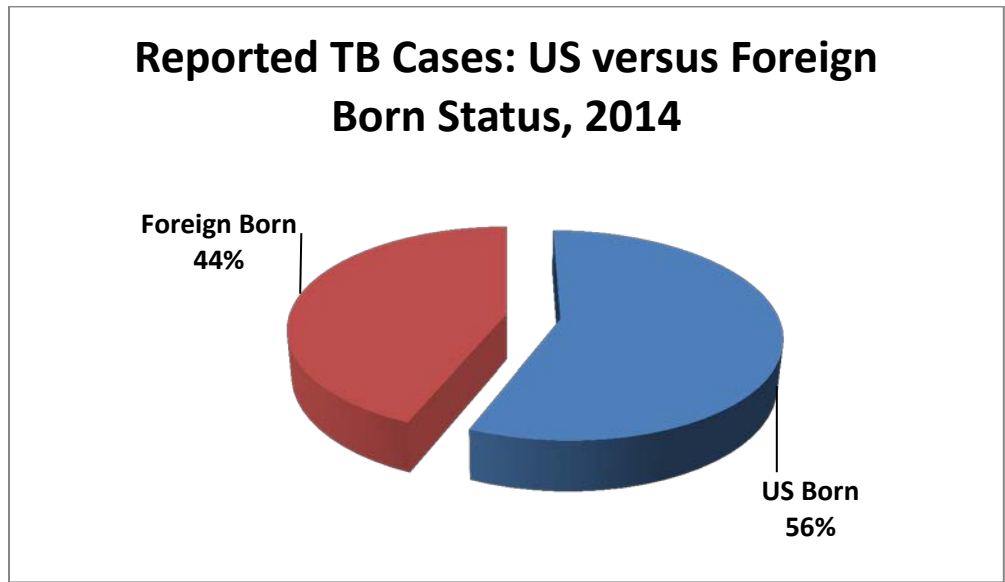


Year	2009	2010	2011	2012	2013	2014	Total Cases 2009 – 2014
Afghanistan	0	0	1	1	0	0	2
Albania	0	0	0	0	0	1	1
Angola	0	0	0	0	1	0	1
Bangladesh	0	0	1	0	1	1	3
Bhutan	0	5	3	6	3	1	18
Bosnia & Herzegovina	0	1	0	0	0	0	1
Cambodia	3	3	1	1	0	0	8
Cameroon	0	0	0	0	1	0	1
China	1	1	4	1	0	0	7
Colombia	1	2	1	0	1	1	6
Congo	0	0	3	1	3	2	9
Cote d'Ivoire	0	0	1	0	0	0	1
Denmark	0	1	0	0	0	1	2
Dominican Republic	0	0	0	0	1	0	1
Ecuador	0	0	1	2	1	0	4
Egypt	0	0	0	1	0	0	1
El Salvador	2	4	1	1	2	3	13
Eritrea	0	0	2	0	2	4	8
Ethiopia	1	2	2	2	4	2	13
Faeroe Islands	0	0	1	0	0	0	1
Germany	0	0	0	0	1	1	2
Ghana	1	0	0	0	0	1	2
Grenada	0	1	0	0	0	0	1
Guatemala	7	1	6	5	5	0	24

Guinea	0	1	0	0	0	0	1
Guyana	0	0	0	0	1	0	1
Haiti	1	1	2	2	0	2	8
Honduras	2	7	8	4	6	5	32
Hong Kong (China)	0	1	0	0	0	0	1
India	6	12	7	9	14	4	52
Indonesia	0	0	1	0	0	0	1
Iran	1	0	0	0	0	0	1
Jamaica	0	1	0	2	0	1	4
Japan	0	0	0	0	0	1	1
Jordan	1	0	0	0	0	0	1
Kenya	2	1	4	3	0	5	15
Korea, Republic of	1	2	1	0	0	0	4
Kuwait	1	0	0	0	0	0	1
Laos	2	4	1	3	1	0	11
Latvia	0	0	0	0	1	0	1
Liberia	0	1	2	1	0	2	6
Malaysia	1	0	0	0	0	0	1
Mexico	33	31	23	21	15	20	143
Micronesia, Federated States of	0	2	1	0	0		3
Mongolia	0	0	0	0	0	1	1
Morocco	1	0	0	0	0	0	1
Myanmar	0	5	5	4	2	4	20
Nepal	0	1	0	1	1	2	5
Netherlands	1	0	0	0	0	0	1
Niger	0	1	0	0	0	0	1
Nigeria	3	0	0	2	2	1	8
Pakistan	1	0	1	1	2	4	9
Peru	1	0	2	0	1	2	6
Philippines	4	10	6	5	9	5	39
Puerto Rico	1	0	0	0	0	1	2
Russian Federation	0	0	2	0	0	0	2
Rwanda	0	0	0	1	0	0	1
Senegal	1	1	0	0	0	0	2
Sierra Leone	0	0	0	0	3	1	4
Somalia	0	2	0	1	1	0	4
Spain	0	1	0	0	0	0	1
Sri Lanka	0	0	0	0	1	0	1
Sudan	1	0	2	0	1	0	4
Switzerland	0	0	0	0	0	1	1
Syria Arab Republic	0	0	0	1	0	0	1
Togo	0	0	0	0	0	1	1
Tanzania	0	0	1	0	0	0	1

<b>Thailand</b>	0	1	0	1	0	0	2
<b>Turkmenistan</b>	0	0	0	0	0	0	0
<b>Uganda</b>	0	0	0	0	1	0	1
<b>Vietnam</b>	10	14	10	13	13	4	64
<b>Yemen</b>	0	0	0	1	0	0	1
<b>Zimbabwe</b>	1	0	0	0	0	0	1
<b>Total</b>	<b>92</b>	<b>121</b>	<b>107</b>	<b>97</b>	<b>101</b>	<b>85</b>	<b>603</b>

**Source:** NC EDSS as of February 13, 2015



44% (85 of 195) of TB cases reported by N.C. in 2014 were foreign born. Of all reported cases, 38 people (19.5%) identified themselves as Hispanic ethnicity.

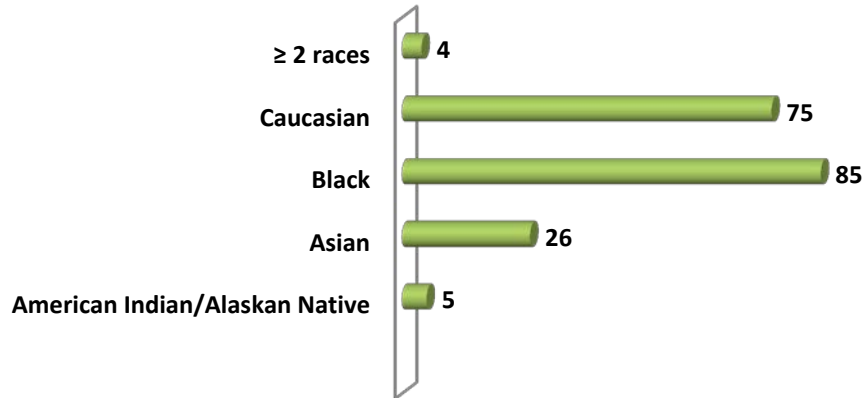
<b>Race &amp; Hispanic Ethnicity, 2014</b>		
	Hispanic	Non-Hispanic
<b>White</b>	37	38
<b>Black</b>	1	84

<b>Age, Race &amp; Hispanic Ethnicity, 2014</b>				
Age	White, Hispanic	White, Non-Hispanic	Multi-Racial, Non-Hispanic	Black, Non-Hispanic
<b>0 – 5 years</b>	2	0	0	2
<b>6 – 14 years</b>	1	1	1	4

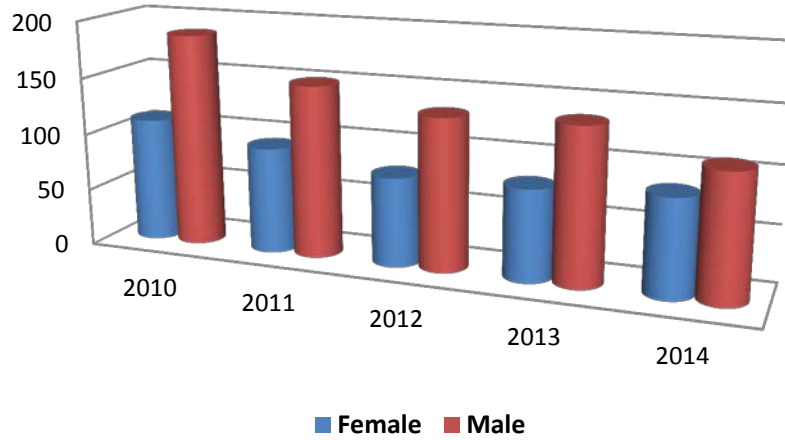
North Carolina reported only 11 cases of pediatric TB (age less than 15 years at diagnosis) in 2014 accounting for just 5.6% of the total cases reported. Only 1 pediatric case was foreign born, while 4 others reported at least one parent who was foreign born.

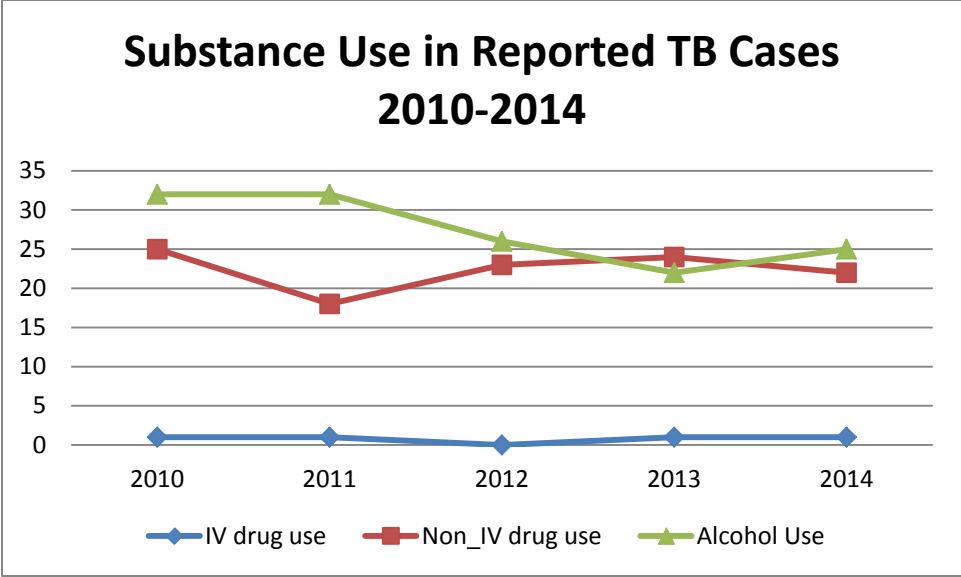


### Reported TB Cases by Race, 2014

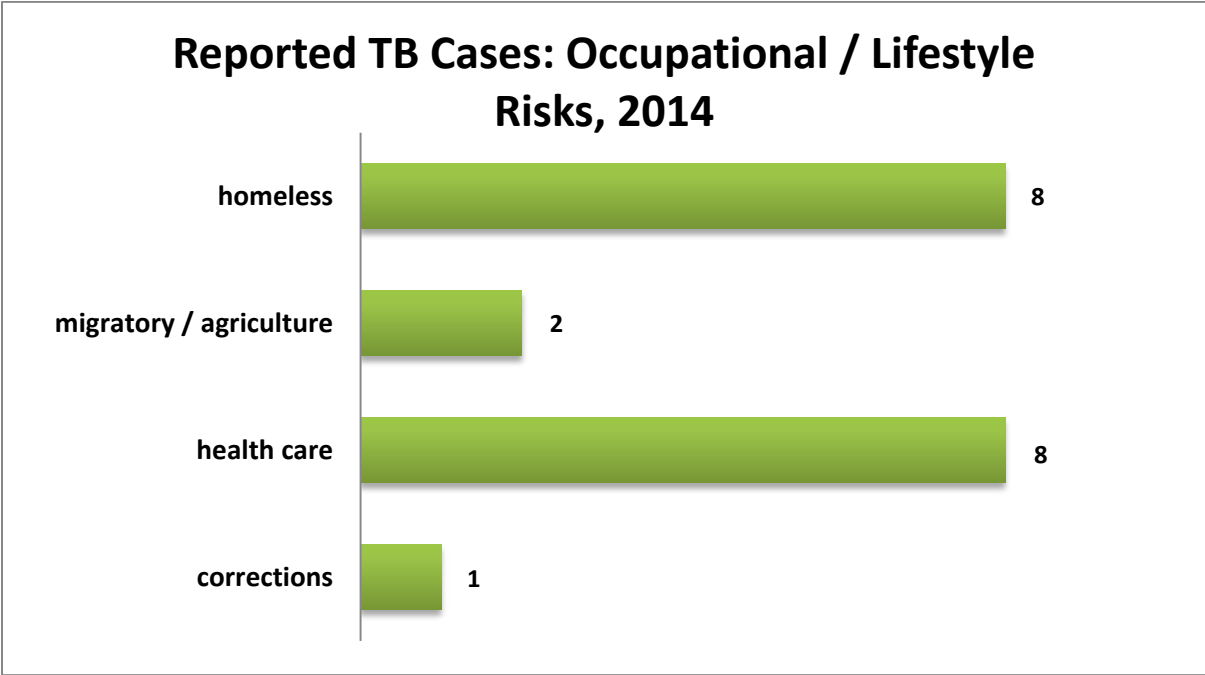


### Reported TB Cases by Gender 2010-2014

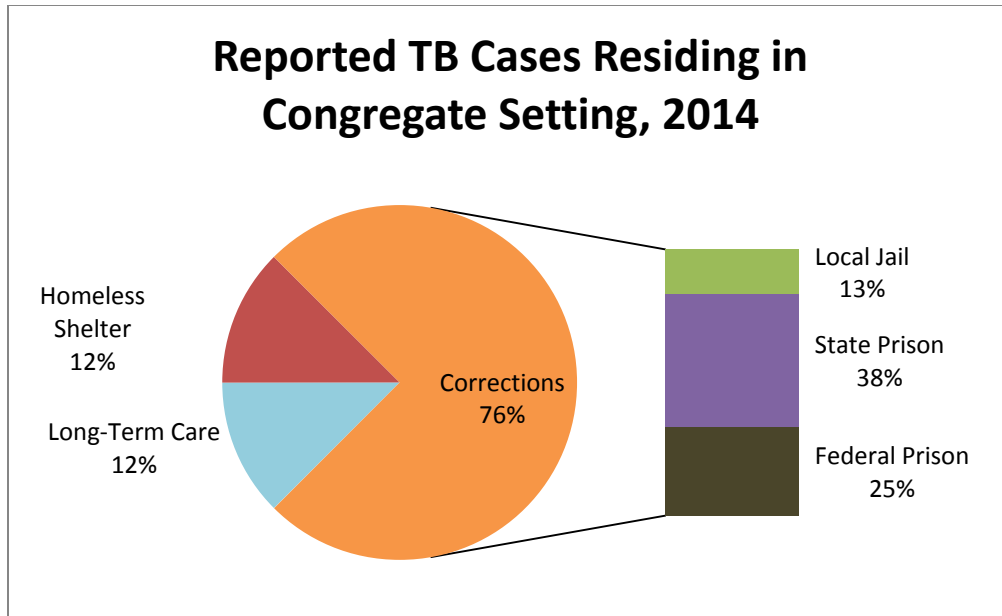




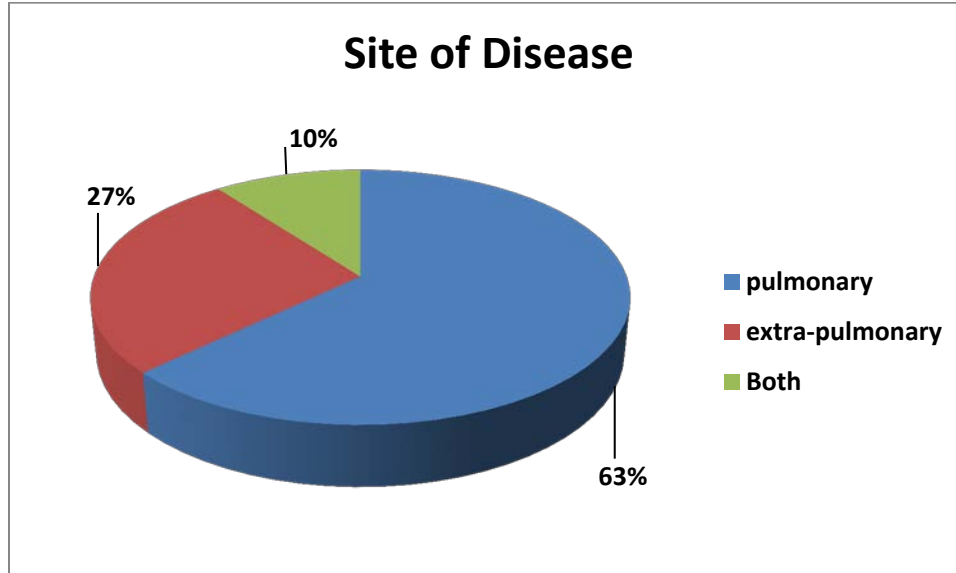
Use of illicit drugs and/or excessive alcohol is a critical risk factor for progression to tuberculosis disease in people with infection. Substance use is documented in 19 % of the 2014 TB cases.



19 cases of tuberculosis reported homelessness or employment as a migratory farm worker, correctional staff or health care worker.

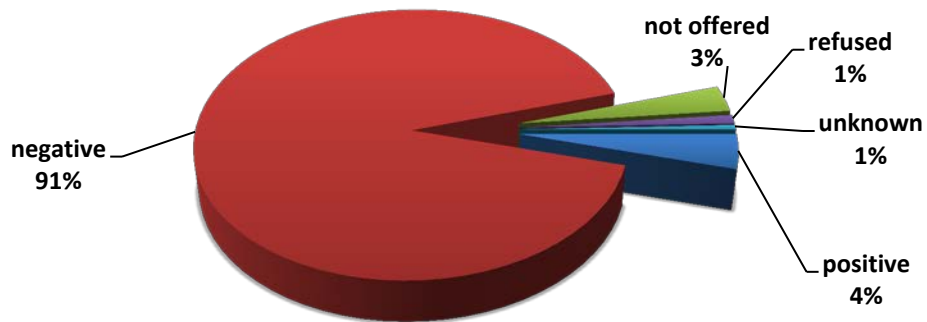


People who reside in congregate settings such as nursing homes or prisons may have an increased risk of exposure to tuberculosis if an infected person also works or resides in that setting. Statewide in 2014, 8 cases of tuberculosis were diagnosed in people residing in a congregate living facility: 3, state prison; 2, federal prison; and 1 each in a local jail, nursing home and homeless shelter.



Of all people diagnosed with pulmonary tuberculosis in 2014, 84 tested positive for acid fast Bacillus (AFB) in their sputum (43%). Positive sputum smears are a measure of infectiousness and people found to be “AFB smear positive” remain on home-isolation until they are no longer infectious to decrease transmission in the community.

## HIV Status in Reported TB cases, 2014



Since North Carolina began Opt-out testing for HIV, the program has seen an increase in the number of people accepting HIV testing. A person with TB who also has HIV is at increased risk of death due to both diseases. However, with appropriate drug treatment TB can be cured and HIV can be controlled, improving the quality of life and preventing premature death and disability.

HIV Status in Reported TB Cases: 2010-2014					
	2010	2011	2012	2013	2014
Positive	20	12	13	13	8
Negative	266	222	188	196	178
Refused	5	0	2	0	2
Not Offered	5	8	6	4	6
Not Done	0	0	0	0	0
Unknown	0	2	2	3	1

### Drug-Resistant Tuberculosis Cases, North Carolina 2014

County	INH Resistance	INH & RIF Resistance
Alamance	0	0
Alexander	0	0
Alleghany	0	0
Anson	0	0
Ashe	0	0
Avery	0	0
Beaufort	0	0
Bertie	0	0
Bladen	0	0
Brunswick	0	0

Buncombe	0	0
Burke	0	0
Cabarrus	0	0
Caldwell	0	0
Camden	0	0
Carteret	1	0
Caswell	0	0
Catawba	0	0
Chatham	0	0
Cherokee	0	0
Chowan	0	0
Clay	0	0
Cleveland	0	0
Columbus	0	0
Craven	1	0
Cumberland	0	0
Currituck	0	0
Dare	0	0
Davidson	0	0
Davie	0	0
Duplin	0	0
Durham	1	0
Edgecombe	0	0
Forsyth	0	0
Franklin	0	0
Gaston	0	0
Gates	0	0
Graham	0	0
Granville	0	0
Greene	0	0
Guilford	0	1
Halifax	0	0
Harnett	0	0
Haywood	0	0
Henderson	1	0
Herford	0	0
Hoke	0	0
Hyde	0	0
Iredell	0	0
Jackson	0	0
Johnston	0	0
Jones	0	0
Lee	0	0
Lenoir	1	0
Lincoln	0	0
Macon	0	0
Madison	0	0

Martin	0	0
McDowell	0	0
Mecklenburg	2	0
Mitchell	0	0
Montgomery	0	0
Moore	0	0
Nash	0	0
New Hanover	0	0
Northampton	0	0
Onslow	0	0
Orange	0	0
Pamlico	0	0
Pasquotank	0	0
Pender	0	0
Perquimans	0	0
Person	0	0
Pitt	1	0
Polk	0	0
Randolph	0	0
Richmond	0	0
Robeson	0	0
Rockingham	0	0
Rowan	0	0
Rutherford	0	0
Sampson	0	0
Scotland	0	0
Stanly	0	0
Stokes	0	0
Surry	0	0
Swain	0	0
Transylvania	0	0
Tyrrell	0	0
Union	0	0
Vance	0	0
Wake	0	0
Warren	0	0
Washington	0	0
Watagua	0	0
Wayne	1	0
Wilkes	0	0
Wilson	0	0
Yadkin	0	0
Yancey	0	0
<b>North Carolina</b>	<b>9</b>	<b>1</b>

**INH resistance:** The TB bacteria are resistant to isoniazid (INH) rendering INH no longer effective for treatment. INH resistance may include resistance to additional drugs, but excludes resistance to RIF. Resistance may have been found at either initial or final testing.

**INH & RIF resistance:** Also called "MDR", the TB bacteria has become resistant to both INH & RIF rendering neither drug effective for treatment. By definition MDR includes resistance to INH and RIF and possibly to other TB drugs. Resistance may have been found at either initial or final testing.

**Source:** NC TB Control Program  
As of February 13, 2015