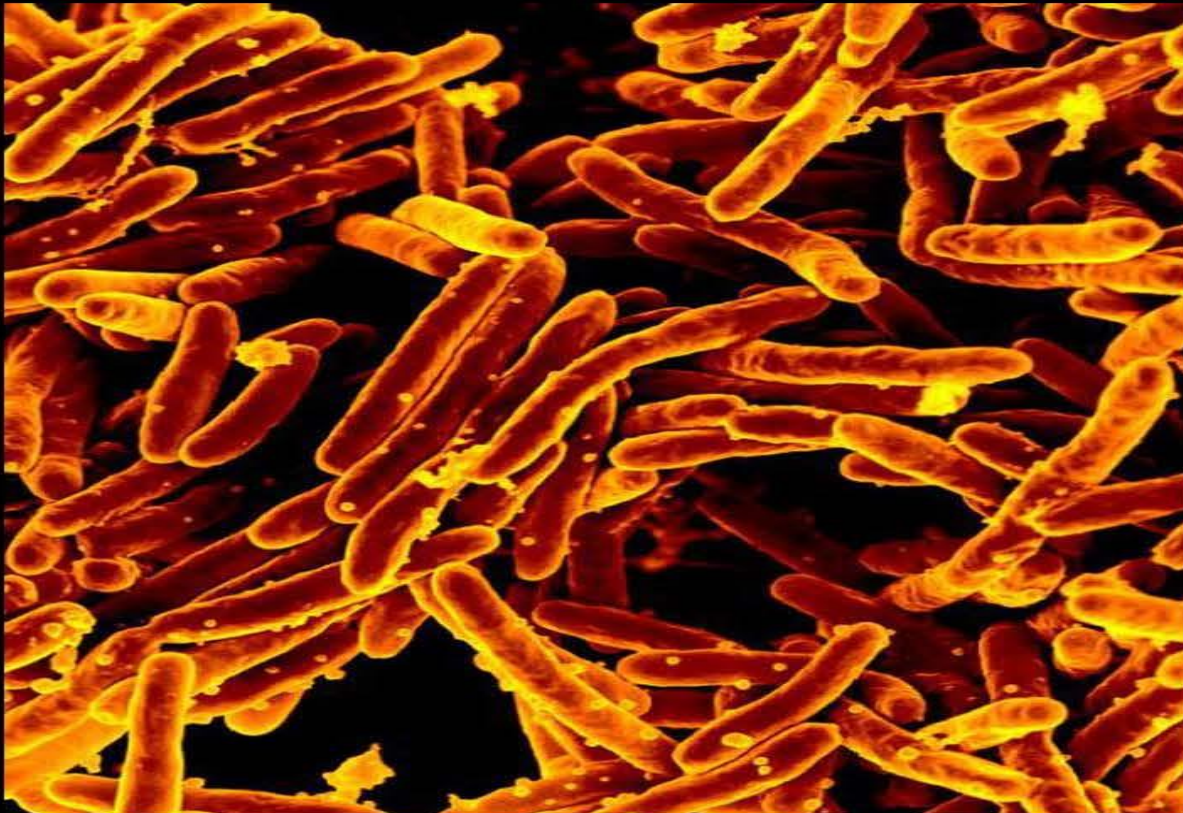


# Tuberculosis in New York State



2013

Annual Statistical Report  
Bureau of Tuberculosis Control



Department  
of Health

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# 2013 Annual Report


|   |    |
|---|----|
| <b>1. Summary</b> .....                                   | 3  |
| <b>2. Tuberculosis (TB) in New York State, 2013</b> ..... | 5  |
| <b>Introduction</b> .....                                 | 7  |
| <b>TB Cases and Rates</b> .....                           | 8  |
| <b>Geographic Distribution</b> .....                      | 11 |
| <b>Demographic Characteristics</b> .....                  | 13 |
| <b>HIV Co-Infection</b> .....                             | 27 |
| <b>Reasons for Evaluation</b> .....                       | 32 |
| <b>Additional Risk Factors</b> .....                      | 33 |
| <b>Drug Resistance</b> .....                              | 34 |
| <b>Genotyping</b> .....                                   | 38 |
| <b>Site of Disease</b> .....                              | 39 |
| <b>Completion of Therapy</b> .....                        | 40 |
| <b>Contacts to Infectious Cases</b> .....                 | 42 |
| <b>Directly Observed Therapy</b> .....                    | 45 |

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## SUMMARY

- Between 2012 and 2013, tuberculosis (TB) morbidity increased in New York State. The 2013 total of 873 cases (656 cases in New York City, 217 cases in the remainder of New York State) represents less than a one percent increase from the 866 cases reported in 2012. The nation as a whole experienced a 3.5 percent decline in morbidity. Since 1992, the recent peak epidemic year with 4,574 cases, New York State has experienced an 80.9 percent decrease compared to a national decline of 62.7 percent.
- In New York State (exclusive of New York City), the number of TB cases increased 0.9 percent from 215 cases in 2012 to 217 cases in 2013. The number of TB cases in New York City increased by 0.8 percent from 651 cases in 2012 to 656 cases in 2013. In 2013, the nation as a whole reported 9,588 TB cases, down from the 9,945 cases reported in 2012.
- New York State ranked sixth nationally for TB morbidity with an incidence rate of 4.5 per 100,000 population in 2013. This rate is influenced by New York City, which had a TB case rate of 8.0/100,000. In contrast, New York State (exclusive of New York City) reported an incidence rate of 1.9/100,000. The national average for 2013 was 3.0/100,000.
- Three counties – Nassau, Suffolk, and Westchester - reported over 40 percent of the TB cases in New York State (exclusive of New York City) in 2013.
- Asians had the highest incidence rate of TB statewide (26.6 per 100,000), whereas white, non-Hispanics had the lowest rate (0.7 per 100,000).
- Among individuals with drug susceptibilities reported in 2013, the number of multidrug-resistant (MDR TB) cases in New York City was 7, a 56.3 percent decrease from the 16 cases seen in 2012. In New York State (exclusive of New York City), the number of MDR TB cases decreased 33.3 percent, from three cases in 2012 to two cases in 2013.
- Statewide, including New York City, the proportion of cases contributed by foreign-born individuals increased slightly from 80.5 percent in 2012 to 82.8 percent (723 cases) in 2013, with people born in China contributing the greatest number of foreign-born TB cases (118). In New York State (exclusive of New York City), people born in India contributed the greatest number of TB cases (15).
- Since 1991, the number of TB cases among the New York State Department of Corrections and Community Supervision (DOCCS) inmate population had been continually declining until there were no cases in 2011 and 2012. However, in 2013, there were 3 DOCCS cases reported.

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# **Tuberculosis in New York State 2013**

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**Introduction**

New York State Public Health Law and the State Sanitary Code require reporting of all suspected and confirmed tuberculosis (TB) cases to the local health unit where a patient resides. All reports received by the local health units are sent to the New York State Department of Health.

In 2013, 873 new cases of tuberculosis were reported among New York State residents (Table 1, page 8). New York City reported 656 new TB cases while the rest of the state had 217.

The overall trend in TB cases has been downward in New York State, including New York City, with an increase in 1975 (the Centers for Disease Control and Prevention [CDC] changed their policy to include reactivated cases as well as new TB cases) and in the early 1990s (period of the most recent TB epidemic).

# Tuberculosis Cases

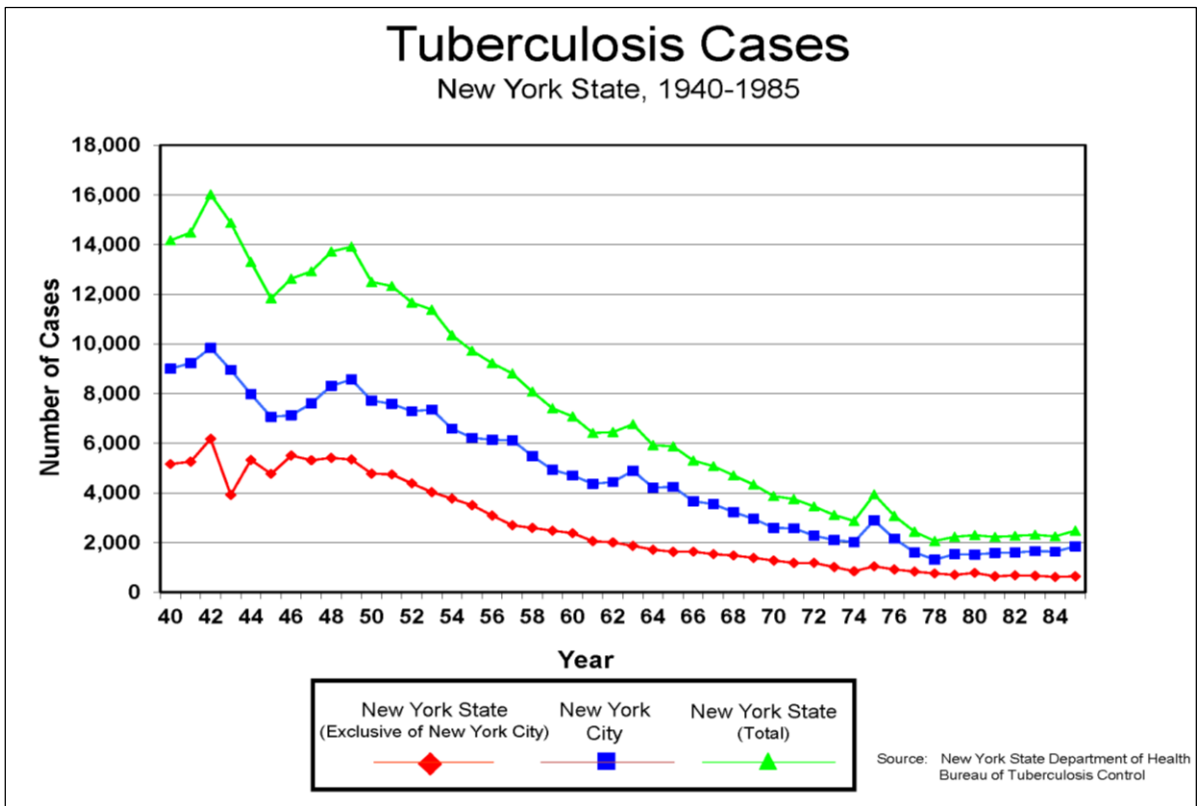
1960-2013

| Year | New York State<br>(Exclusive of New York City) |                     | New York City |                     | New York State<br>(Total) |                     |
|------|--|---------------------|---------------|---------------------|---------------------------|---------------------|
|      | No.  | Rate per<br>100,000 | No.           | Rate per<br>100,000 | No.                       | Rate per<br>100,000 |
| 1960 | 2,376  | 26.4                | 4,699         | 60.4                | 7,075                     | 42.2                |
| 1961 | 2,052  | 22.3                | 4,360         | 56.3                | 6,412                     | 37.8                |
| 1962 | 2,005  | 21.4                | 4,437         | 56.7                | 6,442                     | 37.5                |
| 1963 | 1,865  | 19.6                | 4,891         | 61.7                | 6,756                     | 38.7                |
| 1964 | 1,715  | 17.8                | 4,207         | 52.7                | 5,922                     | 33.6                |
| 1965 | 1,627  | 16.6                | 4,242         | 53.0                | 5,869                     | 33.0                |
| 1966 | 1,633  | 16.5                | 3,663         | 45.7                | 5,296                     | 29.5                |
| 1967 | 1,527  | 15.2                | 3,542         | 44.4                | 5,069                     | 28.1                |
| 1968 | 1,475  | 14.5                | 3,224         | 40.5                | 4,699                     | 25.9                |
| 1969 | 1,384  | 13.5                | 2,951         | 37.4                | 4,335                     | 23.9                |
| 1970 | 1,275  | 12.3                | 2,590         | 32.8                | 3,865                     | 21.2                |
| 1971 | 1,180  | 11.3                | 2,572         | 32.5                | 3,752                     | 20.4                |
| 1972 | 1,176  | 11.2                | 2,275         | 29.0                | 3,451                     | 18.8                |
| 1973 | 1,009  | 9.6                 | 2,101         | 27.4                | 3,110                     | 17.1                |
| 1974 | 844  | 8.1                 | 2,022         | 26.6                | 2,866                     | 15.9                |
| 1975 | 1,041  | 9.9                 | 2,893         | 38.6                | 3,934                     | 21.8                |
| 1976 | 916  | 8.7                 | 2,156         | 29.0                | 3,072                     | 17.1                |
| 1977 | 829  | 7.9                 | 1,605         | 22.0                | 2,434                     | 13.6                |
| 1978 | 753  | 7.1                 | 1,307         | 18.2                | 2,060                     | 11.6                |
| 1979 | 699  | 6.6                 | 1,530         | 21.5                | 2,229                     | 12.6                |
| 1980 | 780  | 7.4                 | 1,514         | 21.4                | 2,294                     | 13.1                |
| 1981 | 641  | 6.1                 | 1,582         | 22.4                | 2,223                     | 12.7                |
| 1982 | 674  | 6.4                 | 1,594         | 22.5                | 2,268                     | 12.9                |
| 1983 | 658  | 6.2                 | 1,651         | 23.1                | 2,309                     | 13.1                |
| 1984 | 616  | 5.8                 | 1,630         | 22.6                | 2,246                     | 12.7                |
| 1985 | 638  | 6.0                 | 1,843         | 25.5                | 2,481                     | 13.9                |
| 1986 | 615  | 5.8                 | 2,223         | 30.6                | 2,838                     | 15.9                |
| 1987 | 615  | 5.8                 | 2,197         | 30.1                | 2,812                     | 15.7                |
| 1988 | 688  | 6.5                 | 2,317         | 31.8                | 3,005                     | 16.8                |
| 1989 | 657  | 6.2                 | 2,545         | 34.8                | 3,202                     | 17.8                |
| 1990 | 656  | 6.1                 | 3,520         | 48.1                | 4,176                     | 23.2                |
| 1991 | 748  | 7.0                 | 3,673         | 50.2                | 4,421                     | 24.6                |
| 1992 | 763  | 7.2                 | 3,811         | 52.0                | 4,574                     | 25.4                |
| 1993 | 717  | 6.7                 | 3,235         | 44.2                | 3,952                     | 22.0                |
| 1994 | 641  | 6.0                 | 2,995         | 40.9                | 3,636                     | 20.2                |
| 1995 | 621  | 5.8                 | 2,445         | 33.4                | 3,066                     | 17.0                |
| 1996 | 535  | 5.0                 | 2,053         | 28.0                | 2,588                     | 14.4                |
| 1997 | 535  | 5.0                 | 1,730         | 23.6                | 2,265                     | 12.6                |
| 1998 | 442  | 4.1                 | 1,558         | 21.3                | 2,000                     | 11.1                |
| 1999 | 377  | 3.5                 | 1,460         | 19.9                | 1,837                     | 10.2                |
| 2000 | 412  | 3.8                 | 1,332         | 16.6                | 1,744                     | 9.2                 |
| 2001 | 415  | 3.8                 | 1,261         | 15.7                | 1,676                     | 8.8                 |
| 2002 | 350  | 3.2                 | 1,084         | 13.5                | 1,434                     | 7.6                 |
| 2003 | 340  | 3.1                 | 1,140         | 14.2                | 1,480                     | 7.8                 |
| 2004 | 324  | 3.0                 | 1,039         | 13.0                | 1,363                     | 7.2                 |
| 2005 | 305  | 2.8                 | 984           | 12.3                | 1,289                     | 6.8                 |
| 2006 | 317  | 2.9                 | 954           | 11.9                | 1,271                     | 6.7                 |
| 2007 | 261  | 2.4                 | 914           | 11.4                | 1,175                     | 6.2                 |
| 2008 | 305  | 2.8                 | 895           | 11.2                | 1,200                     | 6.3                 |
| 2009 | 246  | 2.2                 | 760           | 9.5                 | 1,006                     | 5.3                 |
| 2010 | 243  | 2.2                 | 711           | 8.7                 | 954                       | 4.9                 |
| 2011 | 221  | 2.0                 | 689           | 8.4                 | 910                       | 4.7                 |
| 2012 | 215  | 1.9                 | 651           | 8.0                 | 866                       | 4.5                 |
| 2013 | 217  | 1.9                 | 656           | 8.0                 | 873                       | 4.5                 |

\*Figures after 1974 include reactivated cases

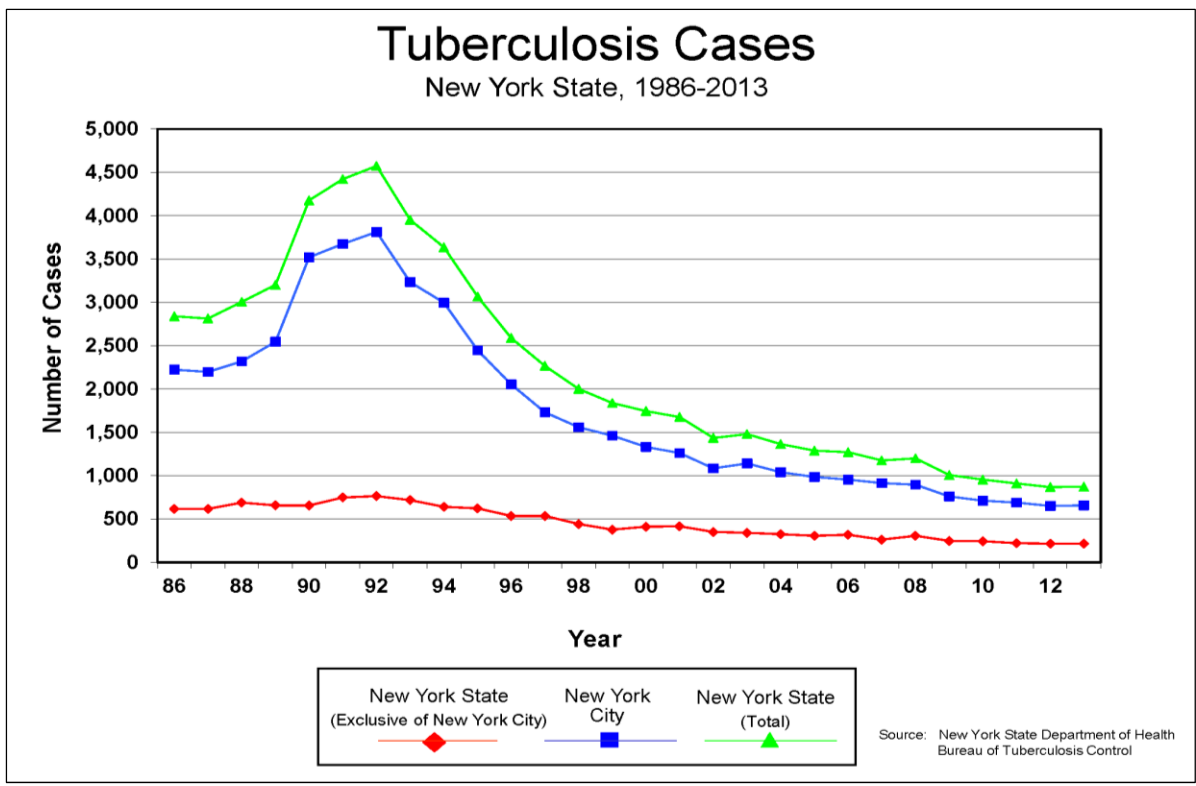
Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 1: Tuberculosis Cases, New York State, 1960-2013**

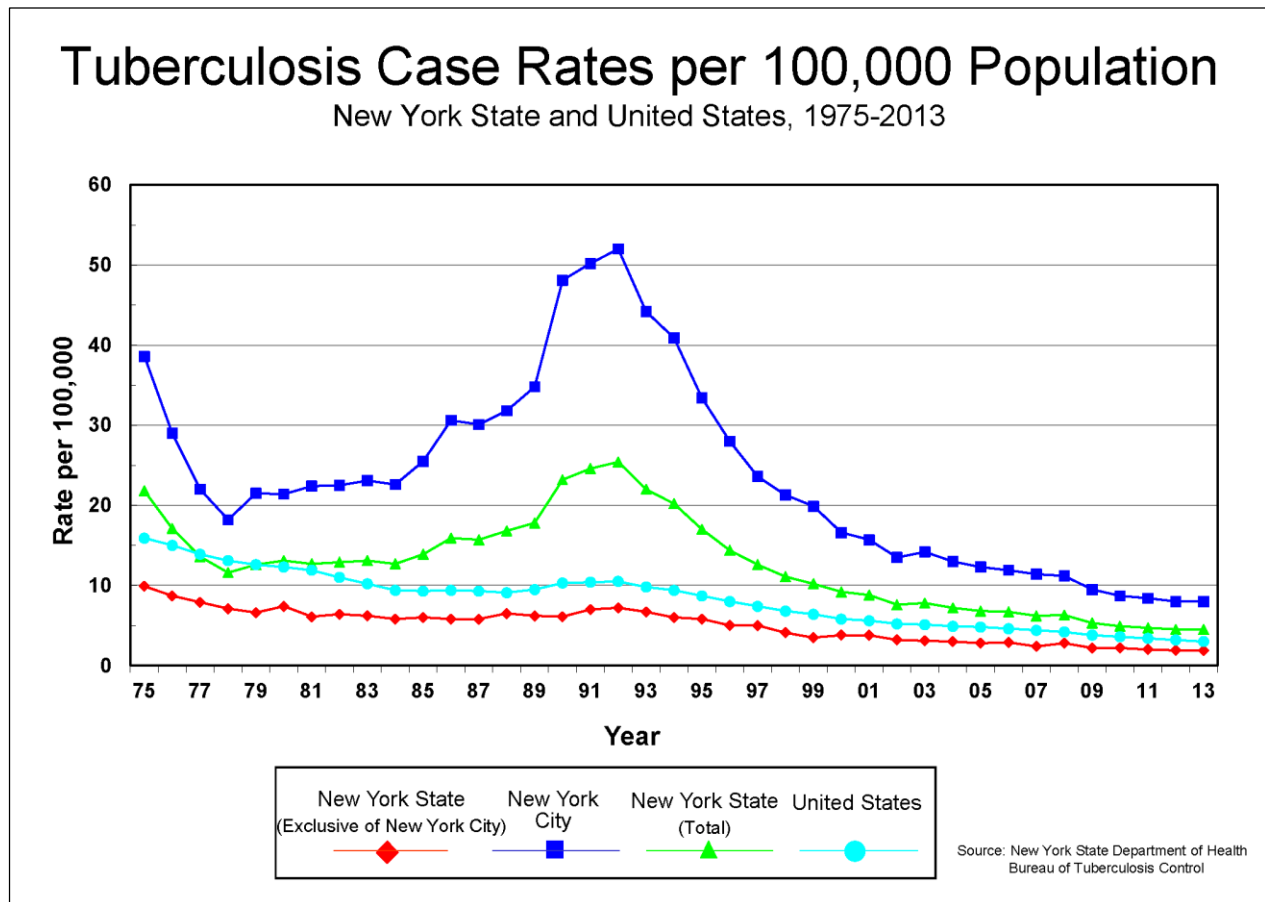


**Figure 1a: Tuberculosis Cases, New York State, 1940-1985**

TB cases in New York State have decreased dramatically since 1940. The increase in 1975 was due to a change in CDC policy to include reactivated cases. The increase in the early 1990s represents the peak of the most recent epidemic.



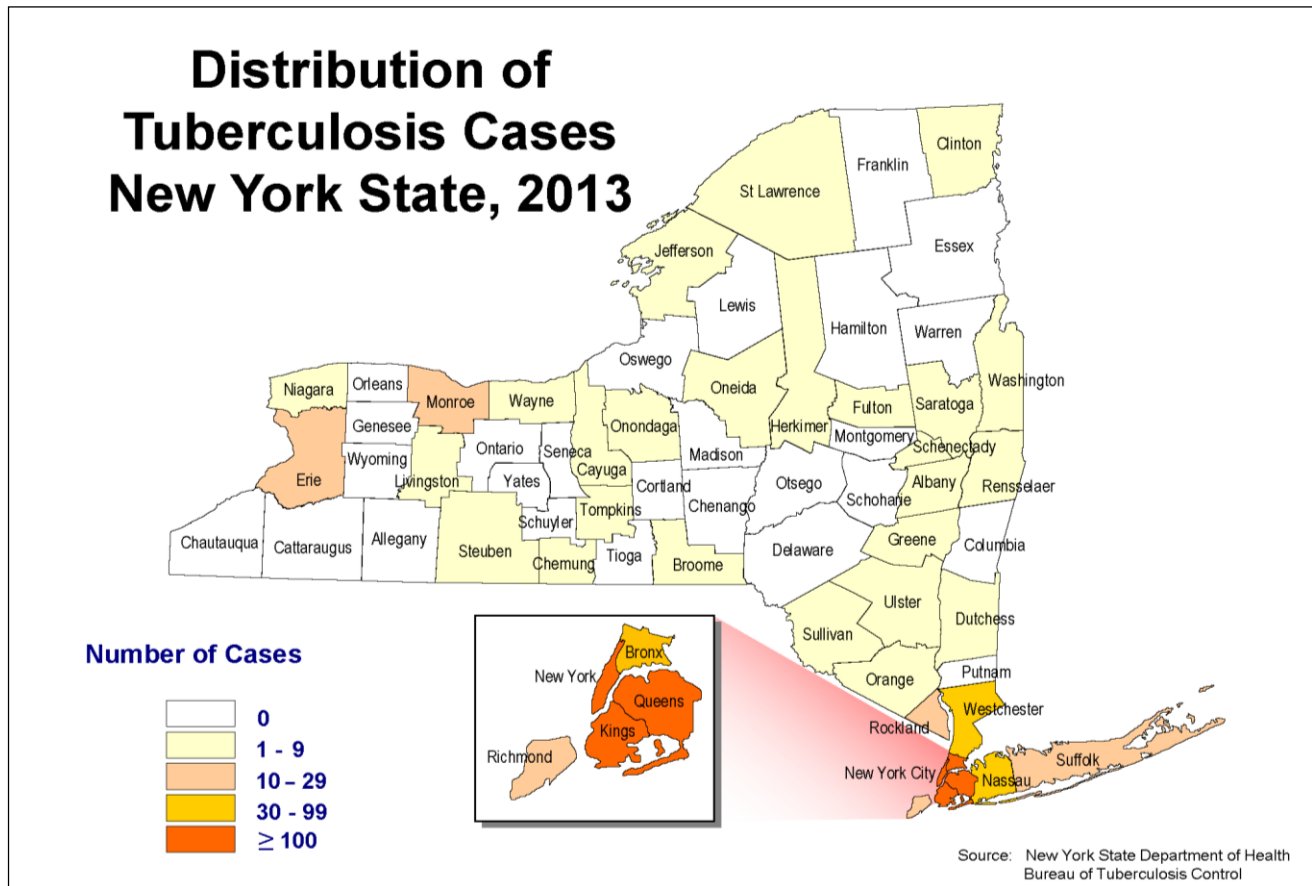
**Figure 1b: Tuberculosis Cases, New York State, 1986-2013**



**Figure 2: Tuberculosis Case Rates per 100,000 Population, New York State, 1975-2013**

Historically, TB case rates in New York State (exclusive of New York City) have been lower than the national average, while TB case rates in New York City have exceeded national rates. The difference was most evident at the peak of the recent epidemic in 1991 and 1992 when New York City's TB incident case rates exceeded 50 per 100,000 compared to the national rate of approximately 10.5 per 100,000.

For New York State as a whole, the 2013 TB case rate was 4.5 per 100,000 population (New York City, 8.0; New York State exclusive of New York City, 1.9). The national rate for 2013 was 3.0 per 100,000.



**Figure 3: Distribution of Tuberculosis Cases, New York State, 2013**

New York City represents 75.1 percent of the State's TB cases despite having only 42.2 percent of the population. In New York State (exclusive of New York City), higher numbers of cases were noted in the major metropolitan areas with three counties – Nassau, Suffolk, and Westchester – accounting for more than 40 percent of the TB cases reported in 2013. Thirty-nine counties either had no cases or only one reported case of TB in 2013. Refer to Table 2, page 12 for case numbers by county and geographic region.

## Tuberculosis Cases and Rates per 100,000 Population by County and Region

New York State, 2008-2013

|  | 2008         |             | 2009         |            | 2010       |            | 2011       |            | 2012       |            | 2013       |            |
|--|--------------|-------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|  | No.          | Rate        | No.          | Rate       | No.        | Rate       | No.        | Rate       | No.        | Rate       | No.        | Rate       |
| Albany   | 4            | 1.4         | 3            | 1.0        | 10         | 3.3        | 8          | 2.6        | 6          | 2.0        | 5          | 1.6        |
| Clinton  | 1            | 1.3         | 1            | 1.3        | 0          | 0.0        | 0          | 0.0        | 2          | 2.4        | 1          | 1.2        |
| Columbia   | 0            | 0.0         | 1            | 1.6        | 1          | 1.6        | 0          | 0.0        | 2          | 3.2        | 0          | 0.0        |
| Delaware   | 1            | 2.1         | 0            | 0.0        | 0          | 0.0        | 1          | 2.1        | 0          | 0.0        | 0          | 0.0        |
| Essex  | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Franklin   | 2            | 3.9         | 1            | 2.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Fulton   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 1          | 1.8        |
| Greene   | 1            | 2.1         | 1            | 2.1        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 3          | 6.1        |
| Hamilton   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Montgomery   | 0            | 0.0         | 1            | 2.0        | 1          | 2.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Otsego   | 1            | 1.6         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Rensselaer   | 0            | 0.0         | 0            | 0.0        | 3          | 1.9        | 2          | 1.3        | 3          | 1.9        | 1          | 0.6        |
| Saratoga   | 0            | 0.0         | 3            | 1.5        | 2          | 0.9        | 0          | 0.0        | 1          | 0.5        | 2          | 0.9        |
| Schenectady  | 0            | 0.0         | 3            | 2.0        | 5          | 3.2        | 3          | 1.9        | 3          | 1.9        | 3          | 1.9        |
| Schoharie  | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Warren   | 1            | 1.6         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Washington   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 1          | 1.6        |
| <b>Albany Regional Total</b>                                 | <b>11</b>    | <b>0.8</b>  | <b>14</b>    | <b>1.0</b> | <b>22</b>  | <b>1.5</b> | <b>14</b>  | <b>0.9</b> | <b>17</b>  | <b>1.1</b> | <b>17</b>  | <b>1.1</b> |
| Allegany   | 1            | 2.0         | 0            | 0.0        | 1          | 2.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Cattaraugus  | 0            | 0.0         | 1            | 1.2        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Chautauqua   | 0            | 0.0         | 1            | 0.7        | 1          | 0.7        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Erie   | 16           | 1.7         | 14           | 1.5        | 11         | 1.2        | 14         | 1.5        | 19         | 2.1        | 21         | 2.3        |
| Genesee  | 1            | 1.7         | 2            | 3.3        | 1          | 1.7        | 2          | 3.3        | 0          | 0.0        | 0          | 0.0        |
| Niagara  | 2            | 0.9         | 2            | 0.9        | 0          | 0.0        | 1          | 0.5        | 2          | 0.9        | 3          | 1.4        |
| Orleans  | 0            | 0.0         | 0            | 0.0        | 1          | 2.3        | 1          | 2.3        | 0          | 0.0        | 0          | 0.0        |
| Wyoming  | 1            | 2.3         | 0            | 0.0        | 1          | 2.4        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| <b>Buffalo Regional Total</b>                                | <b>21</b>    | <b>1.3</b>  | <b>20</b>    | <b>1.3</b> | <b>16</b>  | <b>1.0</b> | <b>18</b>  | <b>1.2</b> | <b>21</b>  | <b>1.4</b> | <b>24</b>  | <b>1.6</b> |
| Chemung  | 2            | 2.2         | 1            | 1.1        | 0          | 0.0        | 0          | 0.0        | 1          | 1.1        | 1          | 1.1        |
| Livingston   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 2          | 3.1        |
| Monroe   | 16           | 2.2         | 18           | 2.4        | 16         | 2.1        | 19         | 2.6        | 14         | 1.9        | 22         | 3.0        |
| Ontario  | 1            | 1.0         | 0            | 0.0        | 1          | 0.9        | 3          | 2.8        | 0          | 0.0        | 0          | 0.0        |
| Schuyler   | 0            | 0.0         | 1            | 5.2        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Seneca   | 0            | 0.0         | 1            | 3.0        | 0          | 0.0        | 0          | 0.0        | 2          | 5.7        | 0          | 0.0        |
| Steuben  | 1            | 1.0         | 0            | 0.0        | 3          | 3.0        | 0          | 0.0        | 0          | 0.0        | 1          | 1.0        |
| Wayne  | 0            | 0.0         | 4            | 4.3        | 1          | 1.1        | 3          | 3.2        | 0          | 0.0        | 1          | 1.1        |
| Yates  | 0            | 0.0         | 0            | 0.0        | 1          | 3.9        | 0          | 0.0        | 2          | 7.9        | 0          | 0.0        |
| <b>Rochester Regional Total</b>                              | <b>20</b>    | <b>1.6</b>  | <b>25</b>    | <b>2.0</b> | <b>22</b>  | <b>1.7</b> | <b>25</b>  | <b>2.0</b> | <b>19</b>  | <b>1.5</b> | <b>27</b>  | <b>2.1</b> |
| Broome   | 5            | 2.5         | 1            | 0.5        | 1          | 0.5        | 1          | 0.5        | 5          | 2.5        | 1          | 0.5        |
| Cayuga   | 1            | 1.2         | 1            | 1.2        | 0          | 0.0        | 1          | 1.2        | 0          | 0.0        | 1          | 1.2        |
| Chenango   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Cortland   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 1          | 2.0        | 0          | 0.0        |
| Herkimer   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 1          | 1.5        |
| Jefferson  | 1            | 0.9         | 1            | 0.9        | 0          | 0.0        | 1          | 0.9        | 0          | 0.0        | 2          | 1.7        |
| Lewis  | 0            | 0.0         | 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          | 0.0        |
| Oneida   | 7            | 3.0         | 5            | 2.1        | 7          | 3.0        | 8          | 3.4        | 5          | 2.1        | 8          | 3.4        |
| Onondaga   | 22           | 4.8         | 19           | 4.1        | 13         | 2.8        | 8          | 1.7        | 11         | 2.4        | 9          | 1.9        |
| Oswego   | 0            | 0.0         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 3          | 2.5        | 0          | 0.0        |
| St. Lawrence   | 2            | 1.8         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 1          | 0.9        | 1          | 0.9        |
| Tioga  | 1            | 1.9         | 0            | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        | 0          | 0.0        |
| Tompkins   | 2            | 2.1         | 5            | 5.2        | 0          | 0.0        | 3          | 3.0        | 4          | 3.9        | 1          | 1.0        |
| <b>Syracuse Regional Total</b>                               | <b>41</b>    | <b>2.4</b>  | <b>32</b>    | <b>1.8</b> | <b>21</b>  | <b>1.2</b> | <b>22</b>  | <b>1.3</b> | <b>30</b>  | <b>1.7</b> | <b>24</b>  | <b>1.4</b> |
| Dutchess   | 7            | 2.5         | 4            | 1.4        | 9          | 3.0        | 3          | 1.0        | 4          | 1.3        | 4          | 1.3        |
| Nassau   | 45           | 3.4         | 38           | 2.8        | 48         | 3.6        | 33         | 2.5        | 36         | 2.7        | 40         | 3.0        |
| Orange   | 8            | 2.3         | 1            | 0.3        | 5          | 1.3        | 9          | 2.4        | 6          | 1.6        | 9          | 2.4        |
| Putnam   | 0            | 0.0         | 1            | 1.0        | 0          | 0.0        | 4          | 4.0        | 0          | 0.0        | 0          | 0.0        |
| Rockland   | 24           | 8.4         | 17           | 5.9        | 21         | 6.7        | 10         | 3.2        | 11         | 3.5        | 15         | 4.8        |
| Suffolk  | 63           | 4.4         | 51           | 3.6        | 40         | 2.7        | 43         | 2.9        | 33         | 2.2        | 22         | 1.5        |
| Sullivan   | 0            | 0.0         | 1            | 1.4        | 1          | 1.3        | 1          | 1.3        | 0          | 0.0        | 1          | 1.3        |
| Ulster   | 3            | 1.7         | 2            | 1.1        | 1          | 0.5        | 1          | 0.5        | 3          | 1.6        | 4          | 2.2        |
| Westchester  | 62           | 6.7         | 40           | 4.3        | 37         | 3.9        | 38         | 4.0        | 35         | 3.7        | 30         | 3.2        |
| <b>New Rochelle Regional Total</b>                           | <b>212</b>   | <b>4.3</b>  | <b>155</b>   | <b>3.1</b> | <b>162</b> | <b>3.2</b> | <b>142</b> | <b>2.8</b> | <b>128</b> | <b>2.5</b> | <b>125</b> | <b>2.4</b> |
| <b>New York State Total<br/>(Exclusive of New York City)</b> | <b>305</b>   | <b>2.8</b>  | <b>246</b>   | <b>2.2</b> | <b>243</b> | <b>2.2</b> | <b>221</b> | <b>2.0</b> | <b>215</b> | <b>1.9</b> | <b>217</b> | <b>1.9</b> |
| Bronx  | 149          | 11.2        | 137          | 10.4       | 116        | 8.4        | 102        | 7.4        | 101        | 7.3        | 91         | 6.6        |
| Kings  | 264          | 10.7        | 208          | 8.4        | 233        | 9.3        | 214        | 8.5        | 190        | 7.6        | 197        | 7.9        |
| New York   | 159          | 10.3        | 121          | 7.9        | 90         | 5.7        | 109        | 6.9        | 93         | 5.9        | 102        | 6.4        |
| Queens   | 300          | 13.5        | 275          | 12.3       | 259        | 11.6       | 250        | 11.2       | 244        | 10.9       | 242        | 10.8       |
| Richmond   | 23           | 5.2         | 18           | 4.1        | 13         | 2.8        | 14         | 3.0        | 23         | 4.9        | 24         | 5.1        |
| <b>New York City Total</b>                                   | <b>895</b>   | <b>11.2</b> | <b>760</b>   | <b>9.5</b> | <b>711</b> | <b>8.7</b> | <b>689</b> | <b>8.4</b> | <b>651</b> | <b>8.0</b> | <b>656</b> | <b>8.0</b> |
| <b>State Total</b>   | <b>1,200</b> | <b>6.3</b>  | <b>1,006</b> | <b>5.3</b> | <b>954</b> | <b>4.9</b> | <b>910</b> | <b>4.7</b> | <b>866</b> | <b>4.5</b> | <b>873</b> | <b>4.5</b> |

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 2: Tuberculosis Cases and Rates per 100,000 Population by County and Region, New York State, 2008-2013**

## Tuberculosis Cases and Rates per 100,000 Population By Age and Gender New York State, 2013

| Age<br>(in years) | New York State<br>(Exclusive of New York City) |      |        |                  |      |        | New York City   |      |        |                  |      |        | New York State<br>(Total) |      |        |                  |      |        |
|-------------------|--|------|--------|------------------|------|--------|-----------------|------|--------|------------------|------|--------|---------------------------|------|--------|------------------|------|--------|
|                   | Number of Cases                                |      |        | Rate per 100,000 |      |        | Number of Cases |      |        | Rate per 100,000 |      |        | Number of Cases           |      |        | Rate per 100,000 |      |        |
|                   | Total  | Male | Female | Total            | Male | Female | Total           | Male | Female | Total            | Male | Female | Total                     | Male | Female | Total            | Male | Female |
| All Ages          | 217  | 121  | 96     | 1.9              | 2.2  | 1.7    | 656             | 391  | 265    | 8.0              | 10.1 | 6.2    | 873                       | 512  | 361    | 4.5              | 5.5  | 3.6    |
| Under 5           | 6  | 1    | 5      | 0.9              | 0.3  | 1.6    | 5               | 0    | 5      | 1.0              | 0.0  | 2.0    | 11                        | 1    | 10     | 1.0              | 0.2  | 1.8    |
| 5-9               | 1  | 1    | 0      | 0.1              | 0.3  | 0.0    | 3               | 1    | 2      | 0.6              | 0.4  | 0.9    | 4                         | 2    | 2      | 0.3              | 0.3  | 0.4    |
| 10-14             | 0  | 0    | 0      | 0.0              | 0.0  | 0.0    | 7               | 1    | 6      | 1.5              | 0.4  | 2.6    | 7                         | 1    | 6      | 0.6              | 0.2  | 1.0    |
| 15-19             | 4  | 1    | 3      | 0.5              | 0.2  | 0.7    | 24              | 16   | 8      | 4.5              | 5.9  | 3.0    | 28                        | 17   | 11     | 2.0              | 2.4  | 1.6    |
| 20-24             | 19   | 11   | 8      | 2.5              | 2.8  | 2.2    | 47              | 20   | 27     | 7.3              | 6.4  | 8.2    | 66                        | 31   | 35     | 4.7              | 4.4  | 5.0    |
| 25-34             | 39   | 23   | 16     | 3.1              | 3.6  | 2.6    | 137             | 82   | 55     | 9.8              | 12.3 | 7.6    | 176                       | 105  | 71     | 6.6              | 8.0  | 5.3    |
| 35-44             | 39   | 25   | 14     | 2.7              | 3.5  | 1.9    | 114             | 65   | 49     | 9.9              | 11.6 | 8.2    | 153                       | 90   | 63     | 5.9              | 7.0  | 4.7    |
| 45-54             | 30   | 19   | 11     | 1.7              | 2.2  | 1.2    | 82              | 51   | 31     | 7.4              | 9.7  | 5.3    | 112                       | 70   | 42     | 3.9              | 5.0  | 2.8    |
| 55-64             | 29   | 14   | 15     | 2.1              | 2.0  | 2.1    | 102             | 70   | 32     | 11.5             | 17.3 | 6.6    | 131                       | 84   | 47     | 5.7              | 7.7  | 3.9    |
| 65+               | 50   | 26   | 24     | 3.1              | 3.8  | 2.6    | 135             | 85   | 50     | 13.6             | 21.5 | 8.4    | 185                       | 111  | 74     | 7.1              | 10.2 | 4.8    |

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 3: Tuberculosis Cases and Rates per 100,000 Population, By Age and Gender, New York State, 2013**

Eleven children under the age of five were diagnosed with active TB in 2013 in New York State, an increase of 22.2 percent from 2012 (N=9). New York City's number of cases in this age group was the same as that identified in 2012 (N=5), but for the rest of the state, the number of cases in this age group increased 50.0 percent, from four to six.

The highest incidence rate in New York City, as well as statewide, occurred in the 65 years and older age group (13.6 per 100,000 and 7.1 per 100,000, respectively). In New York State (exclusive of New York City), the 25-34 and 65 years and older age groups both had the largest rates (3.1 per 100,000).

Statewide, the tuberculosis incidence rate among males was 1.5 times the female rate (5.5 compared to 3.6 per 100,000). The largest disparity by gender occurred among those under the age of five where the female rate was 9.0 times the male rate (1.8 compared to 0.2).

### Tuberculosis Cases and Rates by Gender, Age\*, and Race/Ethnicity\*\*

New York State, 2013

|                       | New York State<br>(Exclusive of New York City) |                       | New York City |                       | New York State<br>(Total) |                       |
|-----------------------|--|-----------------------|---------------|-----------------------|---------------------------|-----------------------|
|                       | No.  | Rate<br>(per 100,000) | No.           | Rate<br>(per 100,000) | No.                       | Rate<br>(per 100,000) |
| <b>GENDER</b>         |  |                       |               |                       |                           |                       |
| Male                  | 121  | 2.2                   | 391           | 10.1                  | 512                       | 5.5                   |
| Female                | 96   | 1.7                   | 265           | 6.2                   | 361                       | 3.6                   |
| <b>AGE</b>            |  |                       |               |                       |                           |                       |
| Under 5 years         | 6  | 0.9                   | 5             | 1.0                   | 11                        | 1.0                   |
| 5-9                   | 1  | 0.1                   | 3             | 0.6                   | 4                         | 0.3                   |
| 10-14                 | 0  | 0.0                   | 7             | 1.5                   | 7                         | 0.6                   |
| 15-19                 | 4  | 0.5                   | 24            | 4.5                   | 28                        | 2.0                   |
| 20-24                 | 19   | 2.5                   | 47            | 7.3                   | 66                        | 4.7                   |
| 25-34                 | 39   | 3.1                   | 137           | 9.8                   | 176                       | 6.6                   |
| 35-44                 | 39   | 2.7                   | 114           | 9.9                   | 153                       | 5.9                   |
| 45-54                 | 30   | 1.7                   | 82            | 7.4                   | 112                       | 3.9                   |
| 55-64                 | 29   | 2.1                   | 102           | 11.5                  | 131                       | 5.7                   |
| 65+                   | 50   | 3.1                   | 135           | 13.6                  | 185                       | 7.1                   |
| <b>RACE/ETHNICITY</b> |  |                       |               |                       |                           |                       |
| White, non-Hispanic   | 36   | 0.4                   | 44            | 1.6                   | 80                        | 0.7                   |
| Black, non-Hispanic   | 43   | 4.7                   | 135           | 7.3                   | 178                       | 6.4                   |
| Hispanic              | 61   | 5.6                   | 165           | 7.1                   | 226                       | 7.2                   |
| Asian                 | 71   | 18.8                  | 303           | 29.5                  | 374                       | 26.6                  |
| Native American       | 2  | 5.5                   | 0             | 0.0                   | 2                         | 3.7                   |
| Pacific Islander      | 0  | 0.0                   | 1             | 35.8                  | 1                         | 18.8                  |
| Multiple Races        | 1  | 0.6                   | 7             | 4.7                   | 8                         | 2.5                   |
| Other/Unknown         | 3  | 12.6                  | 1             | 1.7                   | 4                         | 4.9                   |
| <b>TOTAL</b>          | <b>217</b>                                     | <b>1.9</b>            | <b>656</b>    | <b>8.0</b>            | <b>873</b>                | <b>4.5</b>            |

\*Age calculation based on date of birth and report date.

\*\* Rate Calculations based on 2010 Census.

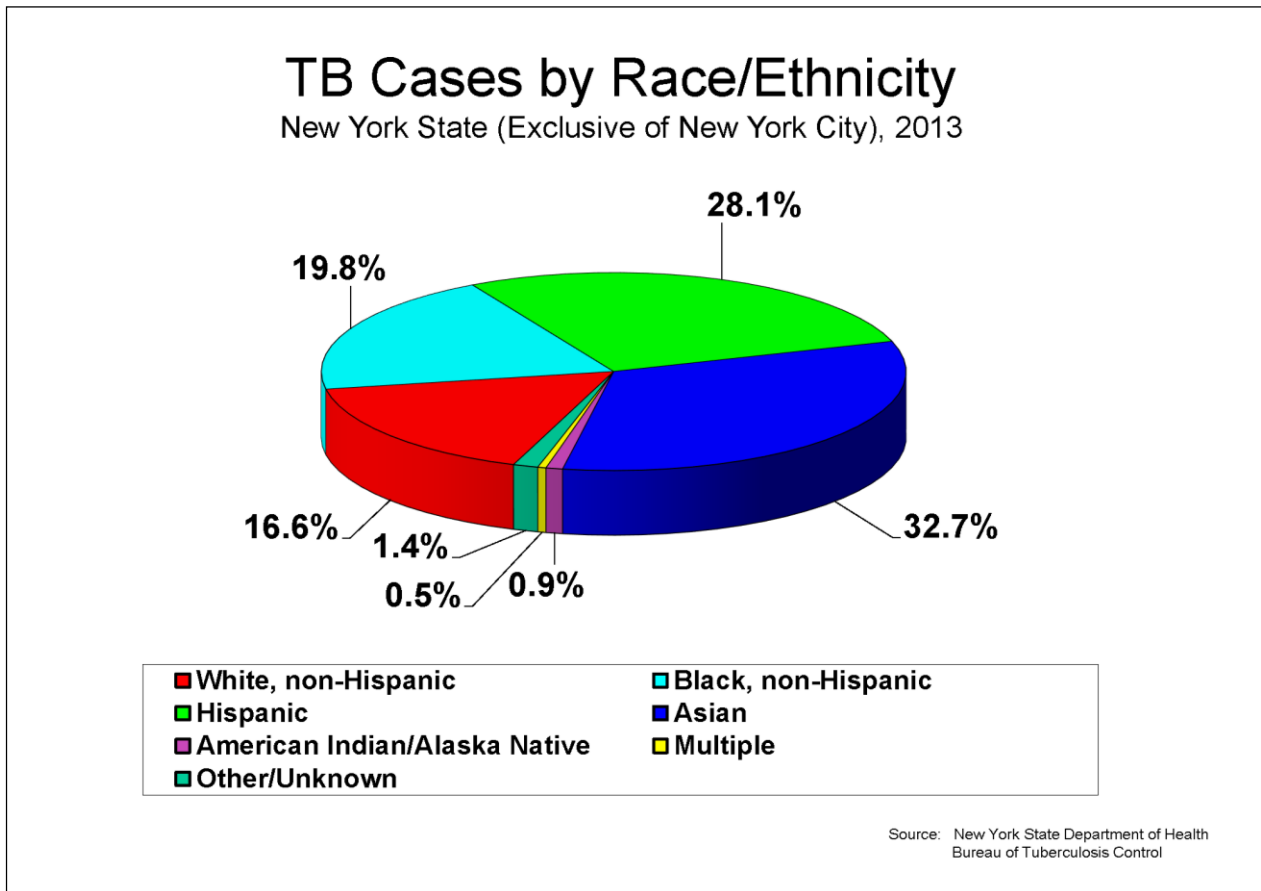
Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 4: Tuberculosis Cases and Rates by Gender, Age, and Race/Ethnicity, New York State, 2013**

Males accounted for 58.6 percent of TB cases reported statewide in 2013. The case rate for males in New York City was 4.5 times that of males in the rest of the state (10.1 compared to 2.2 per 100,000 for males). For females, the case rate in New York City was 3.5 times greater than in the rest of the state (6.2 compared to 1.7 per 100,000 for females).

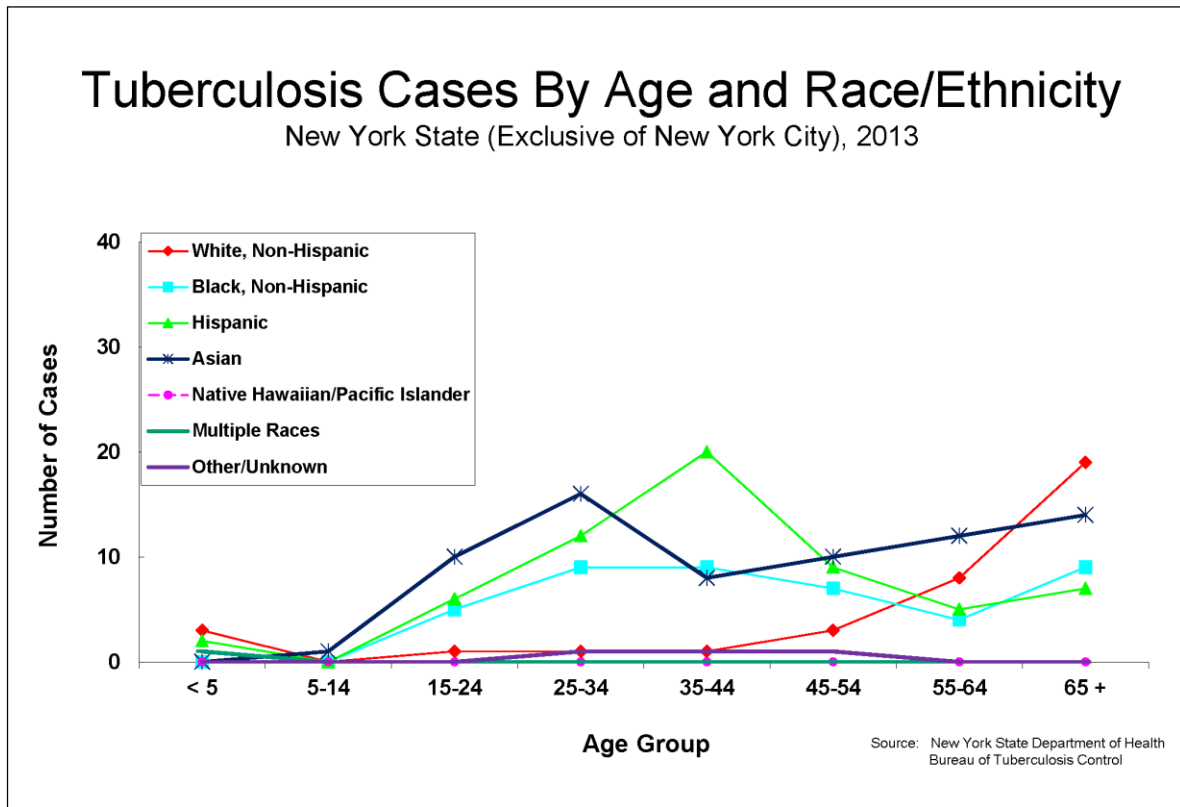
The highest case rate statewide was found among Asians (26.6 per 100,000). White, non-Hispanics had the lowest rate (0.7 per 100,000). Hispanics and black, non-Hispanics had similar case rates across the whole state (7.2 per 100,000 and 6.4 per 100,000, respectively).





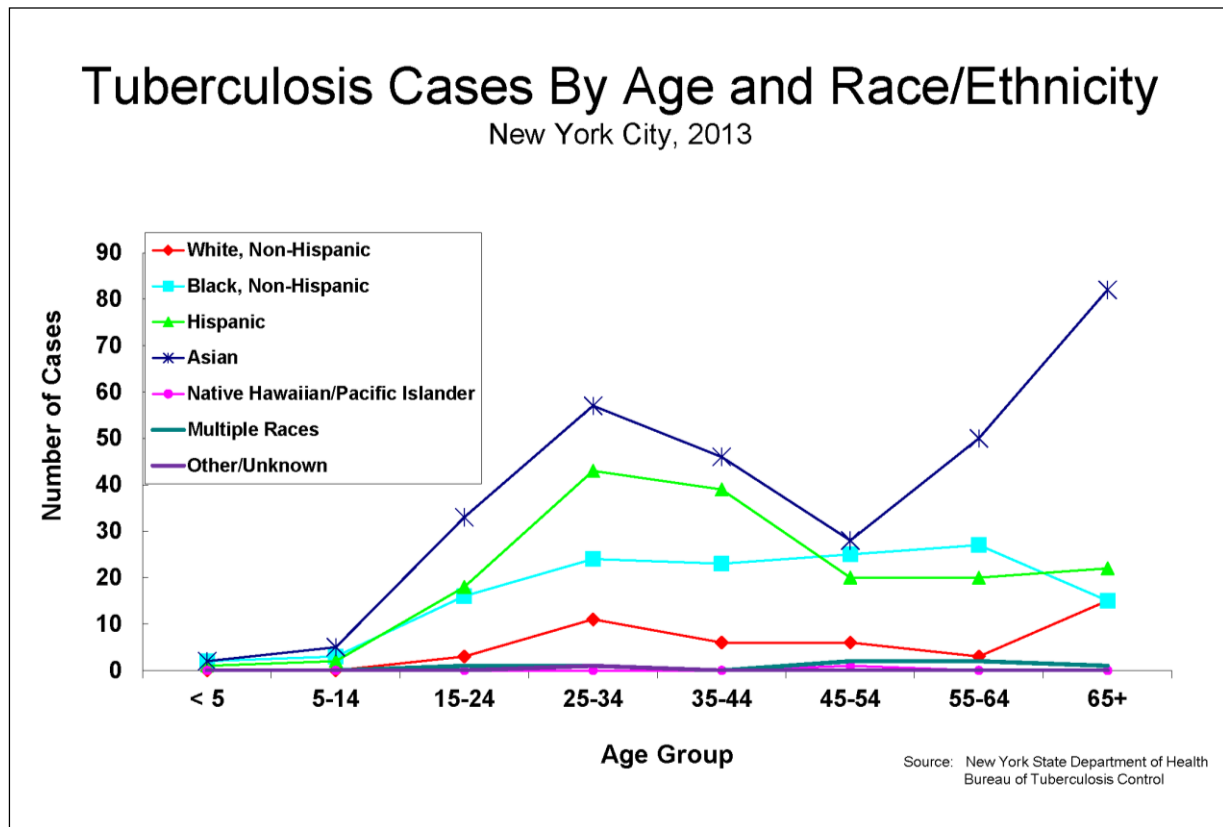
**Figure 4: Tuberculosis Cases By Race/Ethnicity, New York State (Exclusive of New York City), 2013**

In New York State (exclusive of New York City), Asians represented the largest (32.7%) proportion of TB cases in 2013. Following Asians, Hispanics represented 28.1 percent. White, non-Hispanics and black, non-Hispanics together contributed slightly more than one-third of TB cases reported.



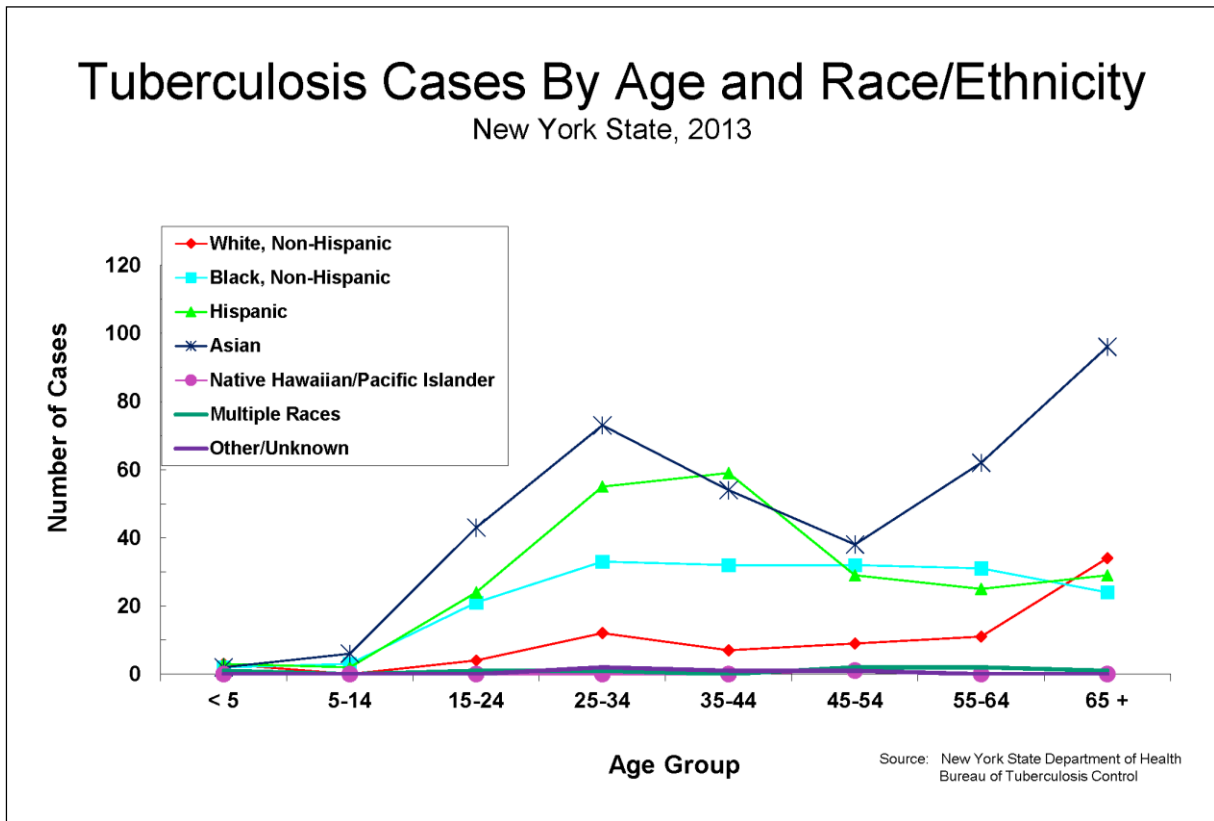
**Figure 5: Tuberculosis Cases By Age and Race/Ethnicity, New York State (Exclusive of New York City), 2013**

The number of TB cases among Asians in New York State (exclusive of New York City) peaked in the 25-34 age group (N=16), with a slightly lower peak in the over 65 year age group (N=14). The largest number of cases in the 65 years and older age group was found among white, non-Hispanic cases (N=19). The greatest morbidity among Hispanics was in the 35-44 year age group (N=20).



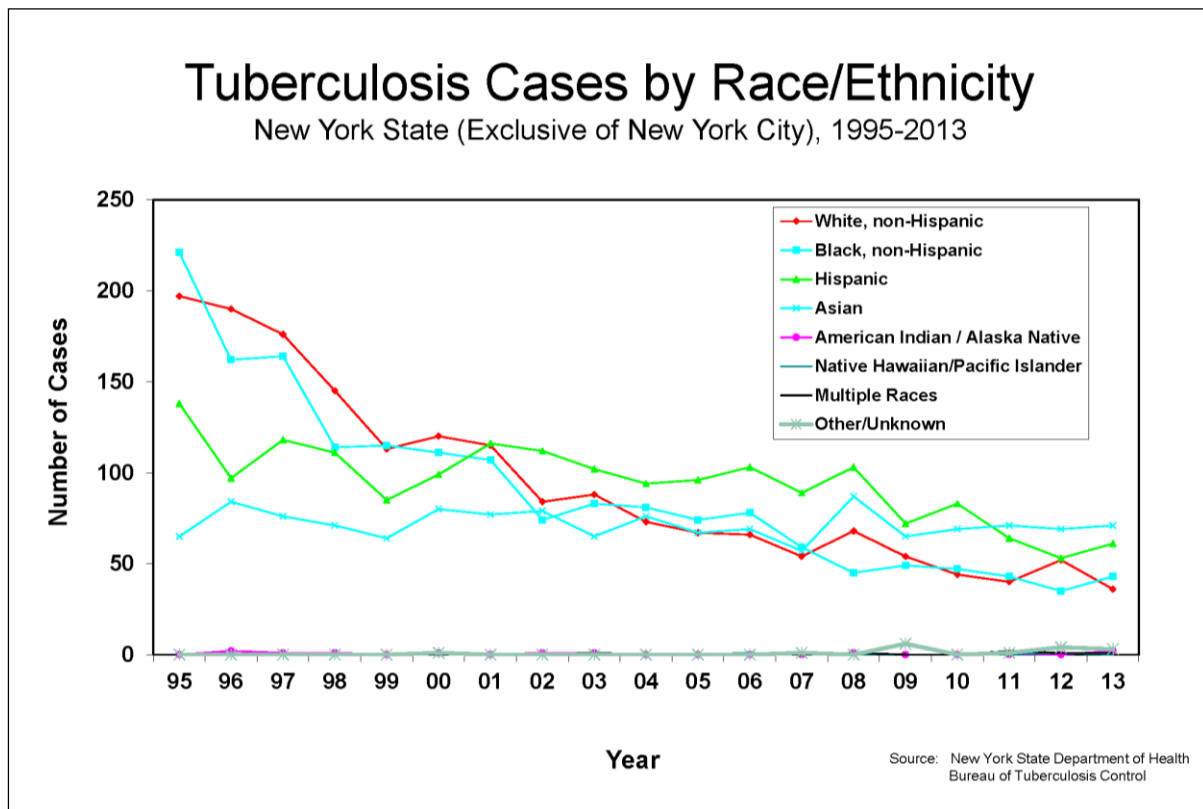
**Figure 6: Tuberculosis Cases By Age and Race/Ethnicity, New York City, 2013**

The number of TB cases among Asians in New York City peaked in the 65 and older age group (N=82). The second highest number of cases occurred in the 25-34 year age group (N=57). Among Hispanics the greatest morbidity was seen in the 25-34 year age group (N=43). The largest number of white, non-Hispanic cases occurred in those 65 years of age and older (N=15).



**Figure 7: Tuberculosis Cases By Age and Race/Ethnicity, New York State, 2013**

Statewide the largest number of cases was seen among Asians in the 65 years and older age group (N=96) followed by the 25-34 year age group (N=73). Among Hispanics, the highest morbidity was seen in the 35-44 and 25-34 year age groups (N=59 and N=55, respectively).



**Figure 8: Tuberculosis Cases By Race/Ethnicity, New York State (Exclusive of New York City), 1995-2013**

The number of TB cases among white and black, non-Hispanics in New York State (exclusive of New York City) has decreased considerably over the last 19 years. Since 1995, the number of white, non-Hispanics has decreased 81.7 percent from 197 cases to 36 cases and black, non-Hispanics decreased 80.5 percent from 221 cases to 43.

Over the last year, the number of TB cases increased across almost all racial/ethnic groups. Black, non-Hispanics experienced the largest increase in case numbers, from 35 in 2012 to 43 in 2013 (18.6%). However, white, non-Hispanics decreased 30.8 percent (N=52 in 2012 and N=36 in 2013).

## Tuberculosis Cases by U.S.-Born and Foreign-Born\*

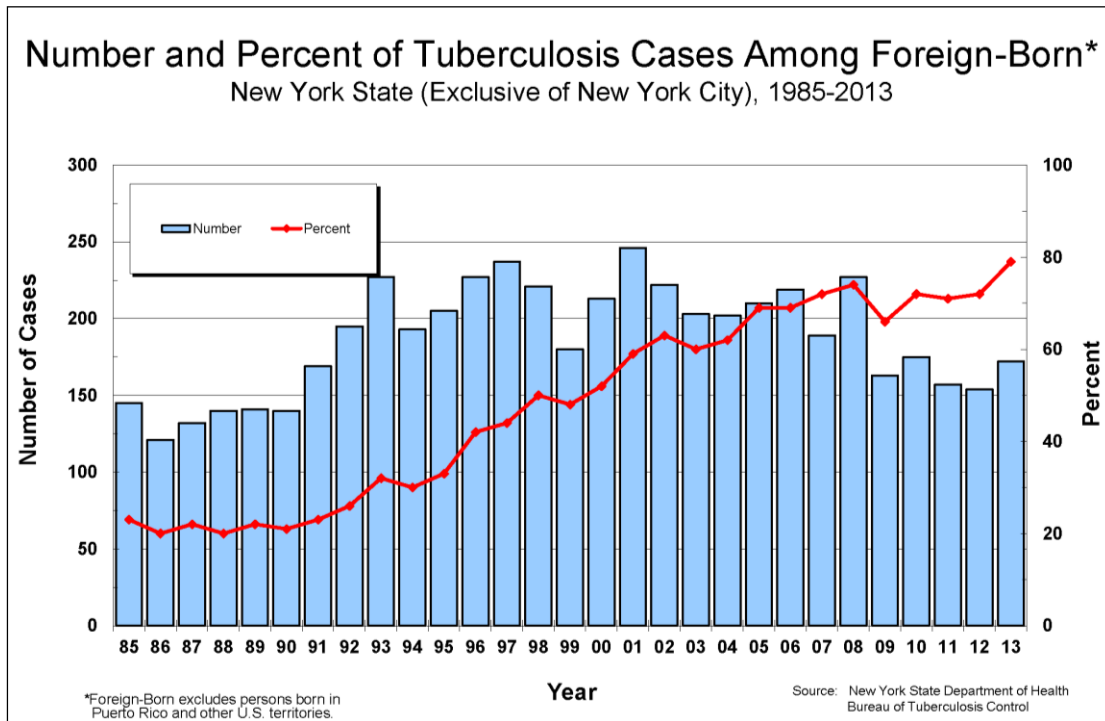
Total Number; Number of U.S.-Born; Number and Percent of Foreign-Born  
New York State Counties (Exclusive of New York City), 2013

| County       | Total<br>Number | US-Born<br>Number | Foreign-Born<br>Number | Foreign-Born<br>Percent |
|--------------|-----------------|-------------------|------------------------|-------------------------|
| Albany       | 5               | 0                 | 5                      | 100.0                   |
| Allegany     | 0               | 0                 | 0                      | 0.0                     |
| Broome       | 1               | 0                 | 1                      | 100.0                   |
| Cattaraugus  | 0               | 0                 | 0                      | 0.0                     |
| Cayuga       | 1               | 1                 | 0                      | 0.0                     |
| Chautauqua   | 0               | 0                 | 0                      | 0.0                     |
| Chemung      | 1               | 0                 | 1                      | 100.0                   |
| Chenango     | 0               | 0                 | 0                      | 0.0                     |
| Clinton      | 1               | 0                 | 1                      | 100.0                   |
| Columbia     | 0               | 0                 | 0                      | 0.0                     |
| Cortland     | 0               | 0                 | 0                      | 0.0                     |
| Delaware     | 0               | 0                 | 0                      | 0.0                     |
| Dutchess     | 4               | 1                 | 3                      | 75.0                    |
| Erie         | 21              | 5                 | 16                     | 76.2                    |
| Essex        | 0               | 0                 | 0                      | 0.0                     |
| Franklin     | 0               | 0                 | 0                      | 0.0                     |
| Fulton       | 1               | 1                 | 0                      | 0.0                     |
| Genesee      | 0               | 0                 | 0                      | 0.0                     |
| Greene       | 3               | 2                 | 1                      | 33.3                    |
| Hamilton     | 0               | 0                 | 0                      | 0.0                     |
| Herkimer     | 1               | 0                 | 1                      | 100.0                   |
| Jefferson    | 2               | 0                 | 2                      | 100.0                   |
| Lewis        | 0               | 0                 | 0                      | 0.0                     |
| Livingston   | 2               | 2                 | 0                      | 0.0                     |
| Madison      | 0               | 0                 | 0                      | 0.0                     |
| Monroe       | 22              | 5                 | 17                     | 77.3                    |
| Montgomery   | 0               | 0                 | 0                      | 0.0                     |
| Nassau       | 40              | 4                 | 36                     | 90.0                    |
| Niagara      | 3               | 2                 | 1                      | 33.3                    |
| Oneida       | 8               | 1                 | 7                      | 87.5                    |
| Onondaga     | 9               | 1                 | 8                      | 88.9                    |
| Ontario      | 0               | 0                 | 0                      | 0.0                     |
| Orange       | 9               | 3                 | 6                      | 66.7                    |
| Orleans      | 0               | 0                 | 0                      | 0.0                     |
| Oswego       | 0               | 0                 | 0                      | 0.0                     |
| Otsego       | 0               | 0                 | 0                      | 0.0                     |
| Putnam       | 0               | 0                 | 0                      | 0.0                     |
| Rensselaer   | 1               | 0                 | 1                      | 100.0                   |
| Rockland     | 15              | 0                 | 15                     | 100.0                   |
| St. Lawrence | 1               | 0                 | 1                      | 100.0                   |
| Saratoga     | 2               | 0                 | 2                      | 100.0                   |
| Schenectady  | 3               | 1                 | 2                      | 66.7                    |
| Schoharie    | 0               | 0                 | 0                      | 0.0                     |
| Schuyler     | 0               | 0                 | 0                      | 0.0                     |
| Seneca       | 0               | 0                 | 0                      | 0.0                     |
| Steuben      | 1               | 1                 | 0                      | 0.0                     |
| Suffolk      | 22              | 7                 | 15                     | 68.2                    |
| Sullivan     | 1               | 0                 | 1                      | 100.0                   |
| Tioga        | 0               | 0                 | 0                      | 0.0                     |
| Tompkins     | 1               | 1                 | 0                      | 0.0                     |
| Ulster       | 4               | 2                 | 2                      | 50.0                    |
| Warren       | 0               | 0                 | 0                      | 0.0                     |
| Washington   | 1               | 1                 | 0                      | 0.0                     |
| Wayne        | 1               | 0                 | 1                      | 100.0                   |
| Westchester  | 30              | 4                 | 26                     | 86.7                    |
| Wyoming      | 0               | 0                 | 0                      | 0.0                     |
| Yates        | 0               | 0                 | 0                      | 0.0                     |
| <b>TOTAL</b> | <b>217</b>      | <b>45</b>         | <b>172</b>             | <b>79.3</b>             |

\*Foreign-Born excludes persons born in Puerto Rico and other U.S. Territories.

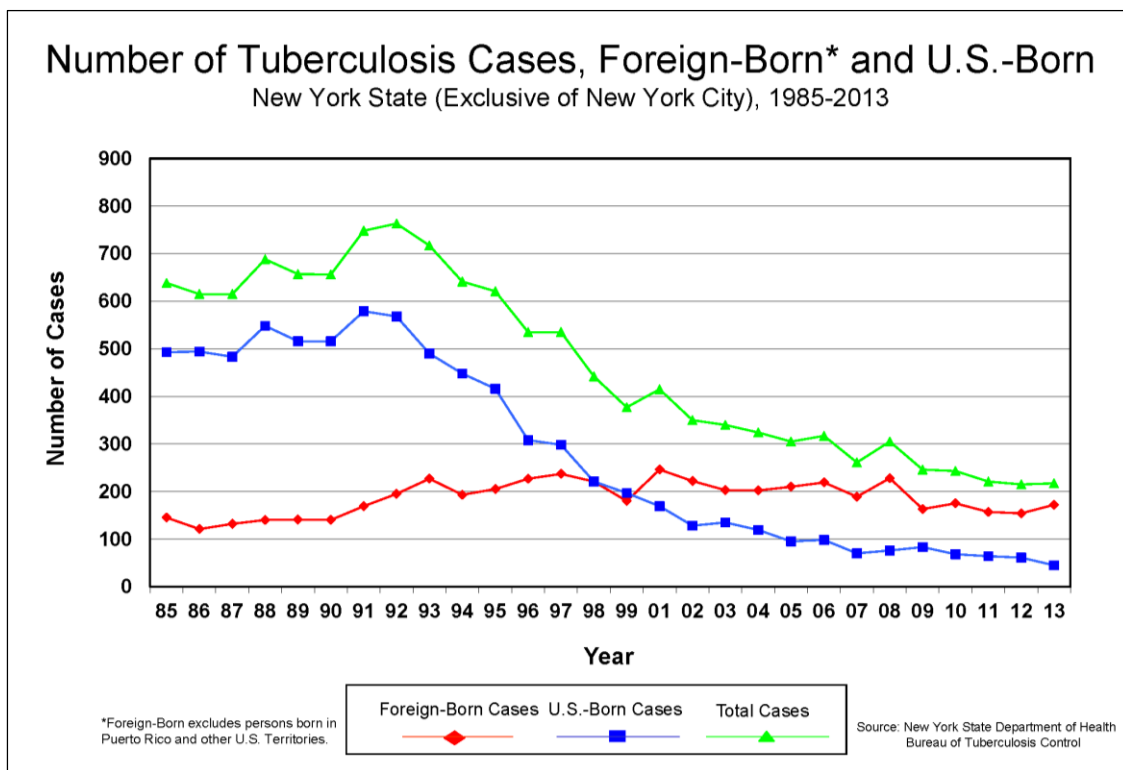
Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 5: Tuberculosis Cases by U.S.-Born and Foreign-Born, New York State  
(Exclusive of New York City), 2013**

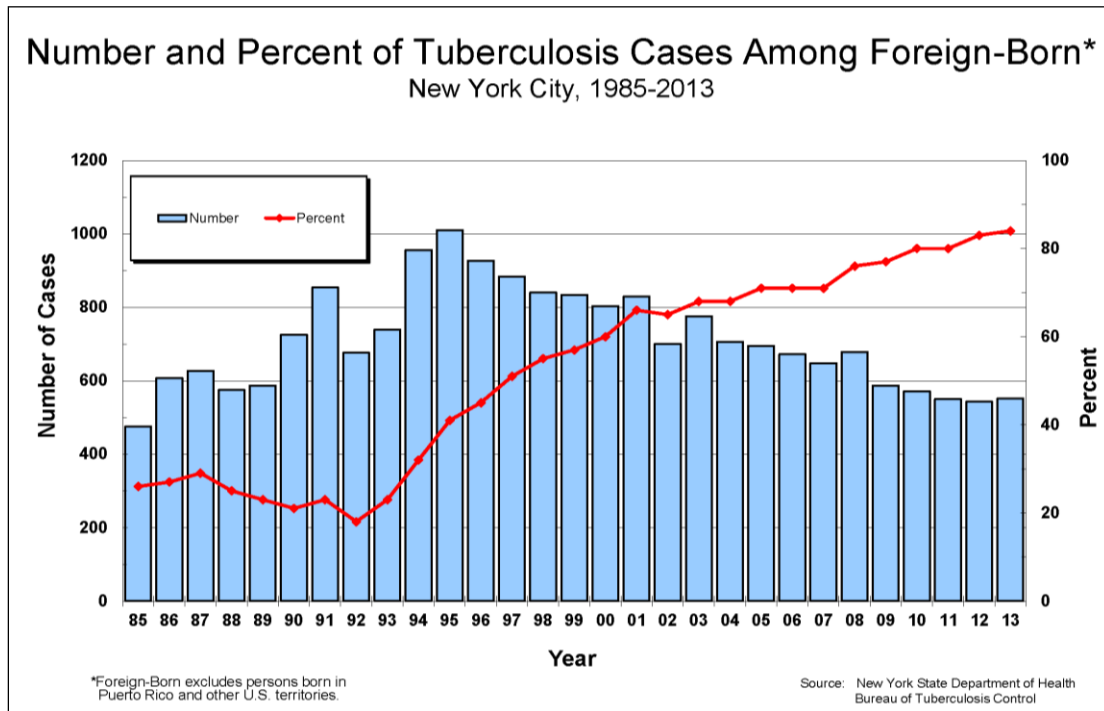


**Figure 9: Number and Percent of Tuberculosis Cases Among Foreign-Born, New York State (Exclusive of New York City), 1985-2013**

The overall number of foreign-born TB cases in New York State (exclusive of New York City) increased from 154 in 2012 to 172 in 2013. The percent of TB cases reported among the foreign-born also increased from 71.6 percent in 2012 to 79.3 in 2013.

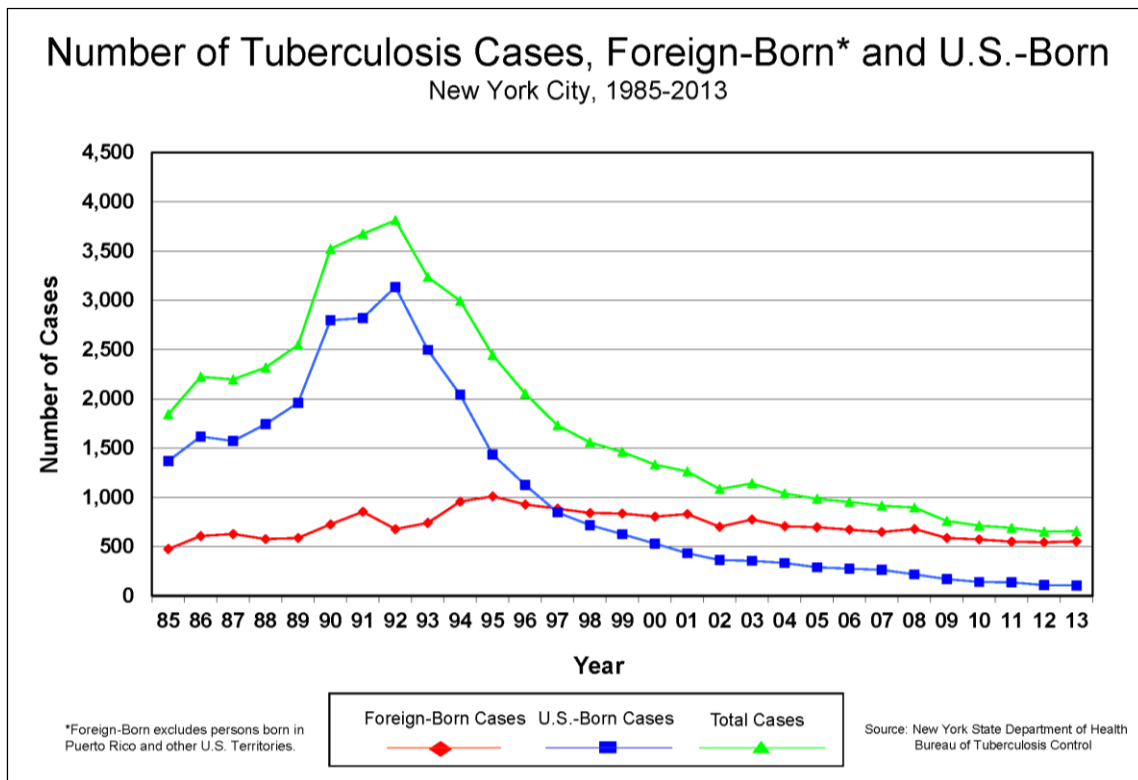


**Figure 10: Number of Tuberculosis Cases, Foreign-Born and U.S.-Born, New York State (Exclusive of New York City), 1985-2013**



**Figure 11: Number and Percent of Tuberculosis Cases Among Foreign-Born, New York City, 1985-2013**

The number of TB cases reported among the foreign-born increased from 543 in 2012 to 551 in 2013 in New York City. The percentage of foreign-born cases also increased slightly from 83.4 percent in 2012 to 84.0 in 2013.



**Figure 12: Number of Tuberculosis Cases, Foreign-Born and U.S.-Born, New York City, 1985-2013**



## Tuberculosis Cases by Country of Origin\*

### New York State, 2013

|                    | New York State<br>(Exclusive of New York City) | New York City | New York State<br>(Total) |
|--------------------|--|---------------|---------------------------|
| United States      | 44   | 94            | 138                       |
| China              | 8  | 110           | 118                       |
| Philippines        | 12   | 43            | 55                        |
| Mexico             | 10   | 37            | 47                        |
| Bangladesh         | 1  | 41            | 42                        |
| Haiti              | 12   | 30            | 42                        |
| Ecuador            | 14   | 26            | 40                        |
| India              | 15   | 22            | 37                        |
| Dominican Republic | 4  | 30            | 34                        |
| Pakistan           | 8  | 19            | 27                        |
| Nepal              | 1  | 19            | 20                        |
| Guatemala          | 6  | 12            | 18                        |
| Peru               | 6  | 7             | 13                        |
| Puerto Rico        | 4  | 9             | 13                        |
| Vietnam            | 7  | 6             | 13                        |
| Burma              | 4  | 8             | 12                        |
| Korea, Republic of | 1  | 10            | 11                        |
| Guyana             | 2  | 8             | 10                        |
| Colombia           | 2  | 7             | 9                         |
| Honduras           | 6  | 3             | 9                         |
| Hong Kong          | 0  | 8             | 8                         |
| Ghana              | 0  | 7             | 7                         |
| Jamaica            | 2  | 5             | 7                         |
| Yemen              | 2  | 5             | 7                         |
| Bhutan             | 6  | 0             | 6                         |
| El Salvador        | 3  | 3             | 6                         |
| Ethiopia           | 3  | 3             | 6                         |
| Brazil             | 0  | 5             | 5                         |
| Russia             | 1  | 4             | 5                         |
| Somalia            | 4  | 1             | 5                         |
| Other Countries    | 29   | 73            | 102                       |
| Unknown            | 0  | 1             | 1                         |
| <b>Total</b>       | <b>217</b>                                     | <b>656</b>    | <b>873</b>                |

\* Only countries representing  $\geq 5$  TB cases statewide are named.

\*\*Puerto Rico and other U.S. Territories are considered separately for the purpose of this table.

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 6: Tuberculosis Cases by Country of Birth, New York State, 2013**

### Tuberculosis Cases by World Region of Origin

New York State (Exclusive of New York City), 2008-2013

| REGION                                     | 2008       | 2009       | 2010       | 2011       | 2012       | 2013       |
|--|------------|------------|------------|------------|------------|------------|
| Africa                                     | 17         | 13         | 13         | 13         | 16         | 15         |
| East Asia                                  | 48         | 35         | 37         | 41         | 30         | 37         |
| Caribbean/South and Central America/Mexico | 101        | 69         | 81         | 62         | 54         | 69         |
| Europe                                     | 19         | 13         | 11         | 6          | 11         | 12         |
| India/Pakistan/Middle East                 | 42         | 33         | 29         | 34         | 39         | 35         |
| United States/Canada*                      | 77         | 83         | 72         | 65         | 65         | 49         |
| <b>TOTAL</b>                               | <b>304</b> | <b>246</b> | <b>243</b> | <b>221</b> | <b>215</b> | <b>217</b> |

\*United States/Canada includes Puerto Rico and other U.S. Territories.

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 7: Tuberculosis Cases by World Region of Origin, New York State (Exclusive of New York City), 2008-2013**

In New York State (exclusive of New York City), the TB cases originating from the United States or Canada reached their lowest numbers in the past six years, declining 24.6 percent over the last year (N=65 in 2012 and N=49 in 2013). The cases from the Caribbean, South and Central America or Mexico experienced an increase of 27.8 percent since last year (N=54 in 2012 and N=69 in 2013).

## Tuberculosis Cases and Rates per 100,000 Population

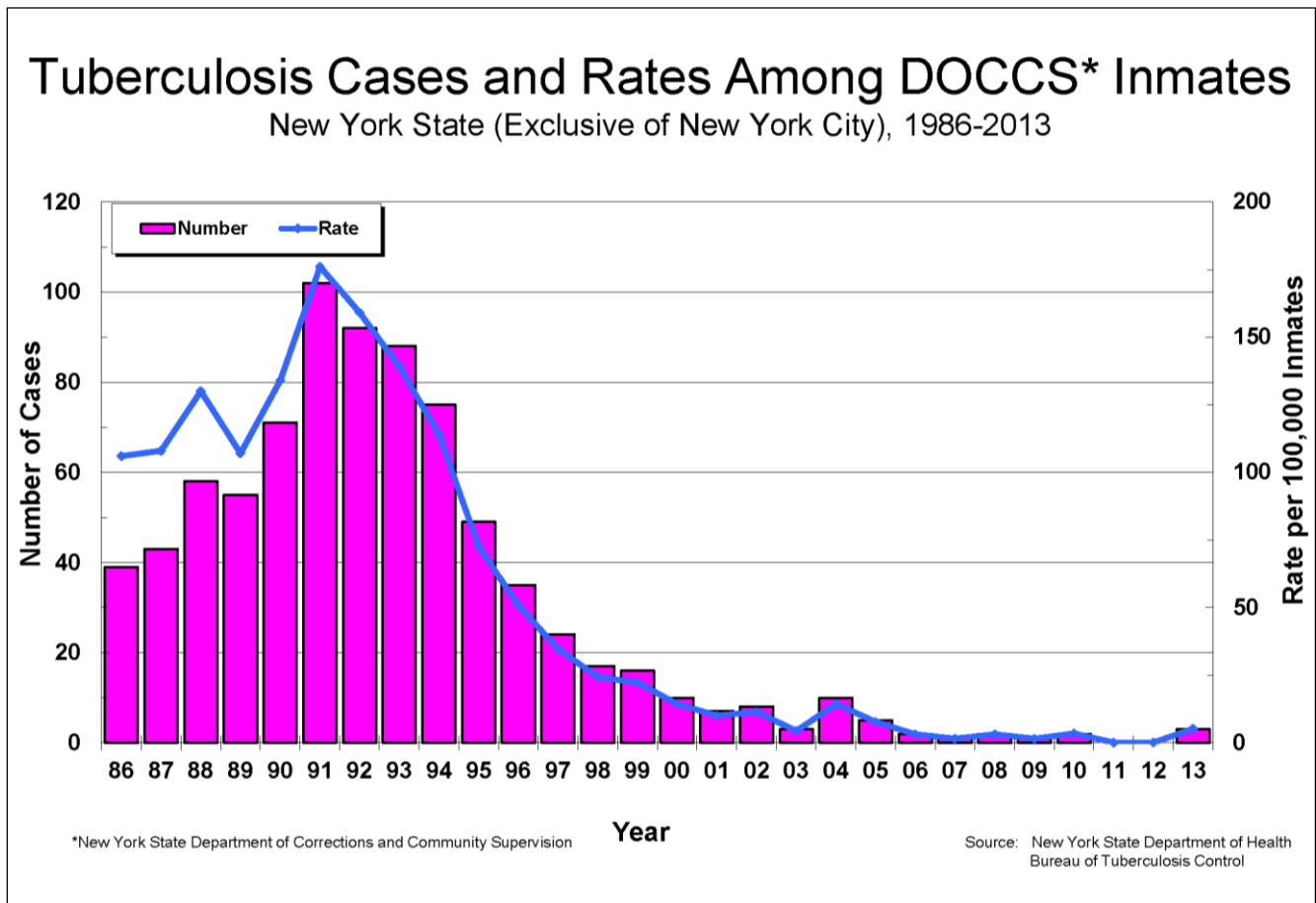
Total Number and Rate; Number and Rate in General Population; Number of DOCCS\* Inmates  
New York State Counties (Exclusive of New York City), 2013

| County       | 2010<br>Population | Total<br>Number | Rate per<br>100,000 | General Pop.<br>Number | General<br>Pop. Rate | Inmate<br>Number |
|--------------|--------------------|-----------------|---------------------|------------------------|----------------------|------------------|
| Albany       | 304,204            | 5               | 1.6                 | 5                      | 1.6                  | 0                |
| Allegany     | 48,946             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Broome       | 200,600            | 1               | 0.5                 | 1                      | 0.5                  | 0                |
| Cattaraugus  | 80,317             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Cayuga       | 80,026             | 1               | 1.2                 | 1                      | 1.2                  | 0                |
| Chautauqua   | 134,905            | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Chemung      | 88,830             | 1               | 1.1                 | 1                      | 1.1                  | 0                |
| Chenango     | 50,477             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Clinton      | 82,128             | 1               | 1.2                 | 1                      | 1.2                  | 0                |
| Columbia     | 63,096             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Cortland     | 49,336             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Delaware     | 47,980             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Dutchess     | 297,488            | 4               | 1.3                 | 4                      | 1.3                  | 0                |
| Erie         | 919,040            | 21              | 2.3                 | 21                     | 2.3                  | 0                |
| Essex        | 39,370             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Franklin     | 51,599             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Fulton       | 55,531             | 1               | 1.8                 | 1                      | 1.8                  | 0                |
| Genesee      | 60,079             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Greene       | 49,221             | 3               | 6.1                 | 2                      | 4.1                  | 1                |
| Hamilton     | 4,836              | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Herkimer     | 64,519             | 1               | 1.5                 | 1                      | 1.5                  | 0                |
| Jefferson    | 116,229            | 2               | 1.7                 | 2                      | 1.7                  | 0                |
| Lewis        | 27,087             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Livingston   | 65,393             | 2               | 3.1                 | 2                      | 3.1                  | 0                |
| Madison      | 73,442             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Monroe       | 744,344            | 22              | 3.0                 | 22                     | 3.0                  | 0                |
| Montgomery   | 50,219             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Nassau       | 1,339,532          | 40              | 3.0                 | 40                     | 3.0                  | 0                |
| Niagara      | 216,469            | 3               | 1.4                 | 3                      | 1.4                  | 0                |
| Oneida       | 234,878            | 8               | 3.4                 | 8                      | 3.4                  | 0                |
| Onondaga     | 467,026            | 9               | 1.9                 | 9                      | 1.9                  | 0                |
| Ontario      | 107,931            | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Orange       | 372,813            | 9               | 2.4                 | 9                      | 2.4                  | 0                |
| Orleans      | 42,883             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Oswego       | 122,109            | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Otsego       | 62,259             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Putnam       | 99,710             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Rensselaer   | 159,429            | 1               | 0.6                 | 1                      | 0.6                  | 0                |
| Rockland     | 311,687            | 15              | 4.8                 | 15                     | 4.8                  | 0                |
| St. Lawrence | 111,944            | 1               | 0.9                 | 0                      | 0.0                  | 1                |
| Saratoga     | 219,607            | 2               | 0.9                 | 2                      | 0.9                  | 0                |
| Schenectady  | 154,727            | 3               | 1.9                 | 3                      | 1.9                  | 0                |
| Schoharie    | 32,749             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Schuyler     | 18,343             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Seneca       | 35,251             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Steuben      | 98,990             | 1               | 1.0                 | 1                      | 1.0                  | 0                |
| Suffolk      | 1,493,350          | 22              | 1.5                 | 22                     | 1.5                  | 0                |
| Sullivan     | 77,547             | 1               | 1.3                 | 1                      | 1.3                  | 0                |
| Tioga        | 51,125             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Tompkins     | 101,564            | 1               | 1.0                 | 1                      | 1.0                  | 0                |
| Ulster       | 182,493            | 4               | 2.2                 | 4                      | 2.2                  | 0                |
| Warren       | 65,707             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Washington   | 63,216             | 1               | 1.6                 | 1                      | 1.6                  | 0                |
| Wayne        | 93,772             | 1               | 1.1                 | 1                      | 1.1                  | 0                |
| Westchester  | 949,113            | 30              | 3.2                 | 29                     | 3.1                  | 1                |
| Wyoming      | 42,155             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| Yates        | 25,348             | 0               | 0.0                 | 0                      | 0.0                  | 0                |
| <b>TOTAL</b> | <b>11,202,969</b>  | <b>217</b>      | <b>1.9</b>          | <b>214</b>             | <b>1.9</b>           | <b>3</b>         |

\*New York State Department of Corrections and Community Supervision

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 8: Tuberculosis Cases and Rates per 100,000 Population, New York State  
(Exclusive of New York City), 2013**



**Figure 13: Tuberculosis Cases and Rates Among DOCCS Inmates, New York State (Exclusive of New York City), 1986-2013**

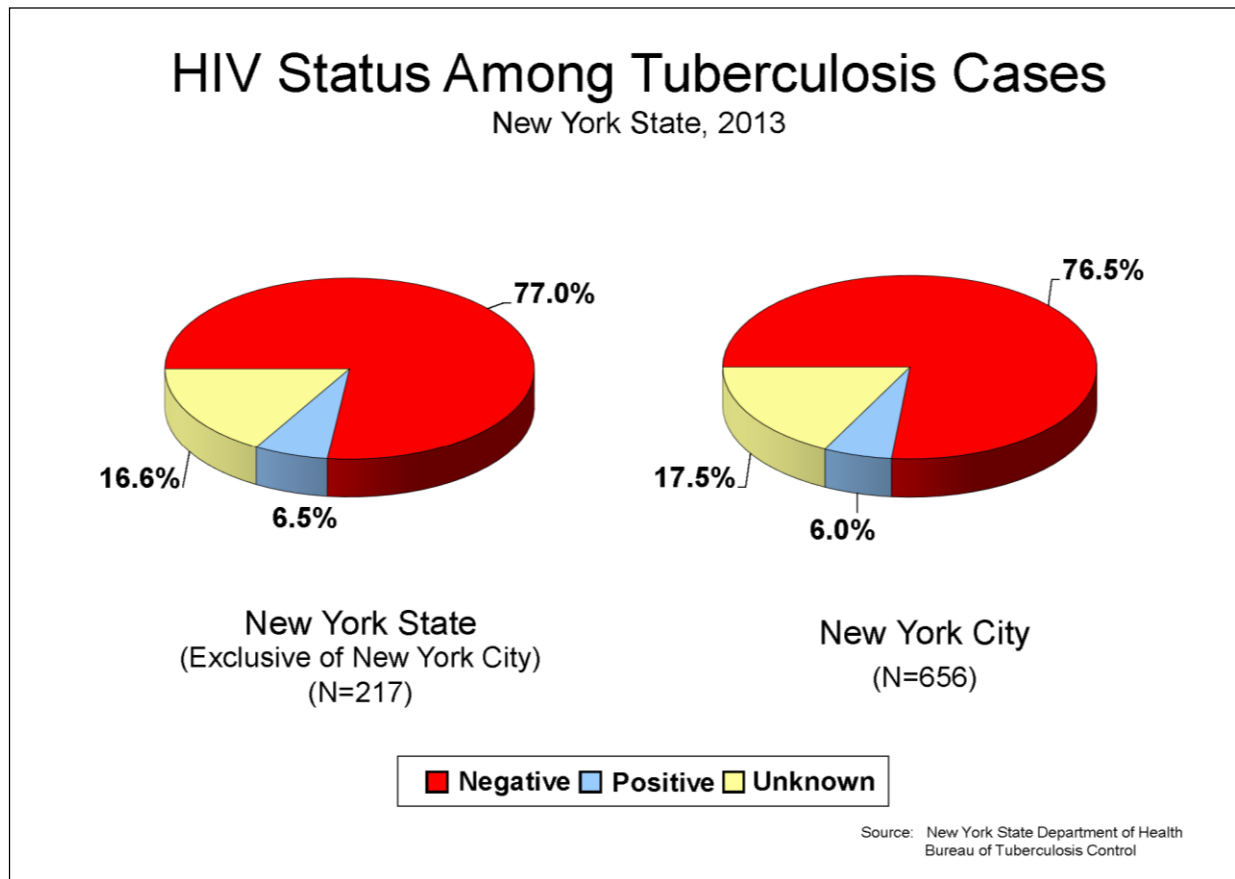
During the late 1980s and early 1990s, a substantial proportion of TB cases reported by New York State (exclusive of New York City) were in the New York State Department of Corrections and Community Supervision (DOCCS) inmate population. Among the DOCCS inmate population, there has been a notable decline in cases since 1991 when 102 new cases (176 per 100,000 inmates) were reported. In 2011 and 2012 no new cases were reported, but in 2013 there were three new cases, representing a rate of 5.2 per 100,000 inmates.

| <b>HIV Status Among Tuberculosis Patients</b>          |             |         |             |         |             |         |             |         |             |         |             |         |
|--|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|
| New York State (Exclusive of New York City), 2008-2013 |             |         |             |         |             |         |             |         |             |         |             |         |
| <b>HIV STATUS</b>                                      | <b>2008</b> |         | <b>2009</b> |         | <b>2010</b> |         | <b>2011</b> |         | <b>2012</b> |         | <b>2013</b> |         |
|  | No.         | (%)     | No.         | (%)     | No.         | (%)     | No.         | (%)     | No.         | (%)     | No.         | (%)     |
| <b>Negative</b>  | 222         | (72.8)  | 163         | (66.3)  | 178         | (73.3)  | 165         | (74.7)  | 154         | (71.6)  | 167         | (77.0)  |
| <b>Positive</b>  | 19          | (6.2)   | 11          | (4.5)   | 16          | (6.6)   | 11          | (5.0)   | 6           | (2.8)   | 14          | (6.5)   |
| <b>Unknown</b>   | 64          | (21.0)  | 72          | (29.3)  | 49          | (20.2)  | 45          | (20.4)  | 55          | (25.6)  | 36          | (16.6)  |
| <b>TOTAL</b>   | 305         | (100.0) | 246         | (100.0) | 243         | (100.0) | 221         | (100.0) | 215         | (100.0) | 217         | (100.0) |

Source: New York State Department of Health  
Bureau of Tuberculosis Control

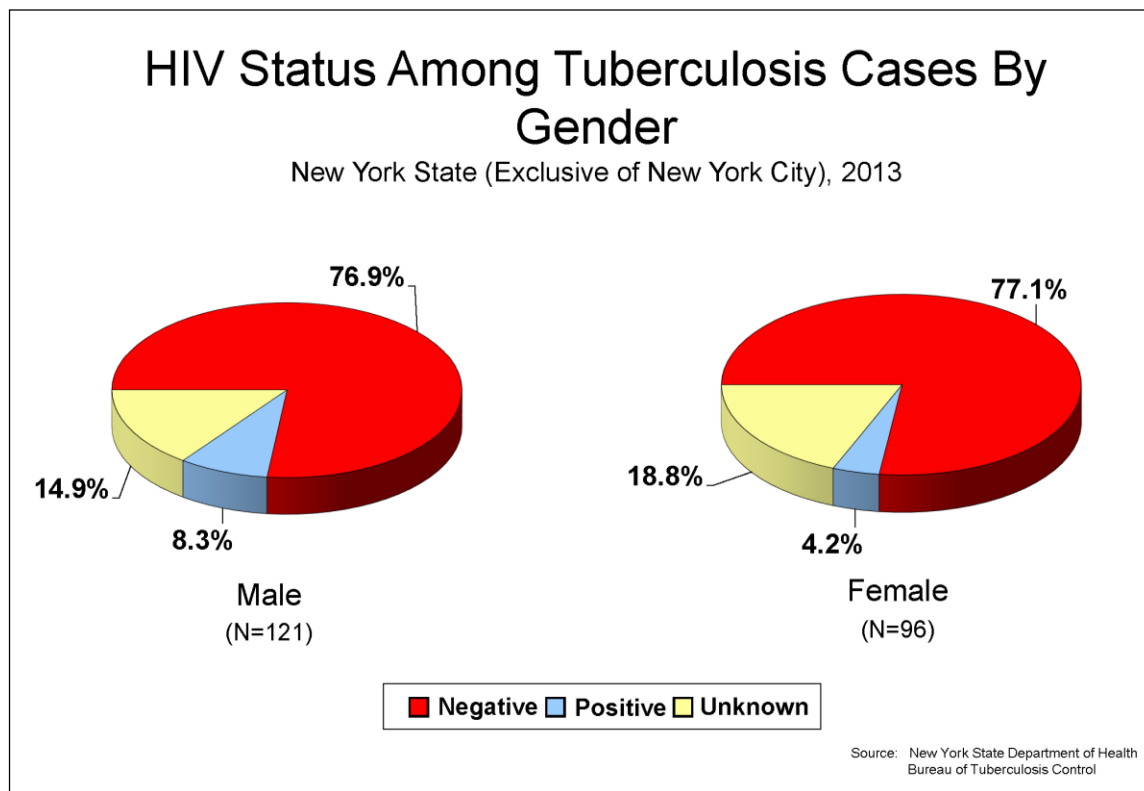
**Table 9: HIV Status Among Tuberculosis Patients, New York State (Exclusive of New York City), 2008-2013**

Knowledge of HIV status is essential for the proper treatment of patients with active TB. Previous comparisons between the HIV and TB registries suggest the percentage of individuals with unknown HIV status was due to a lack of HIV testing of individuals with TB, and not under reporting of HIV results to the TB registry. Of the 217 TB cases in 2013, 14 (6.5%) had a positive HIV status, a substantial increase from the six (2.8%) identified in 2012.



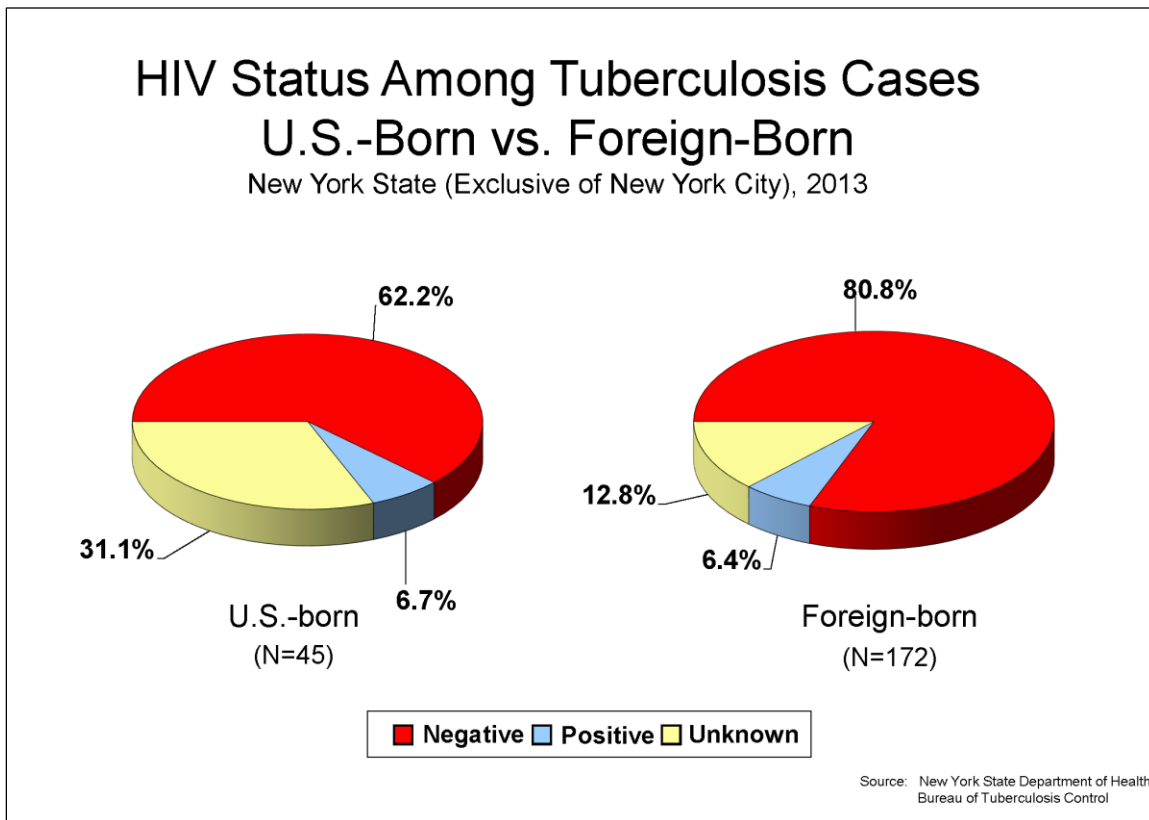
**Figure 14: HIV Status Among Tuberculosis Cases, New York State, 2013**

In 2013, the percentage of TB cases with a known HIV status was similar in New York City and New York State (exclusive of New York City) (82.5% and 83.4%, respectively). The percentage with a negative result as well as the percentage of cases co-infected with HIV were also comparable.



**Figure 15: HIV Status Among Tuberculosis Cases By Gender, New York State (Exclusive of New York City), 2013**

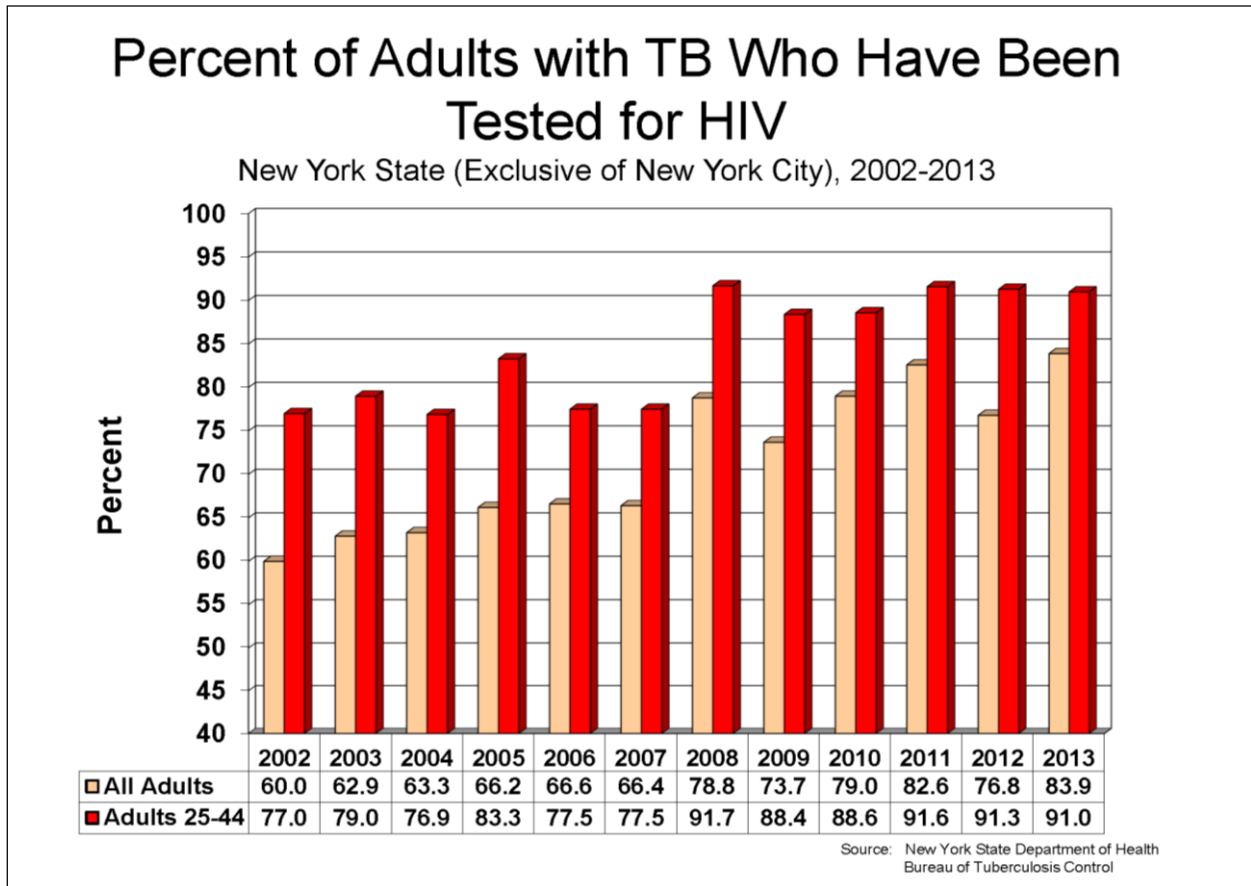
In 2013, 18.8 percent (N=18) of female TB cases and 14.9 percent (N=18) of males in New York State (exclusive of New York City) had an unknown HIV status. The percentage of cases with a negative HIV result was nearly the same for males and females (76.9%, N=93 for males and 77.1%, N=74 for females). There were over twice as many male TB cases co-infected with HIV compared to females cases (N=10 and N = 4, respectively).



**Figure 16: HIV Status Among Tuberculosis Cases, U.S.-Born vs. Foreign-Born, New York State (Exclusive of New York City), 2013**

In New York State (exclusive of New York City), a greater percentage of foreign-born TB cases (87.2%, N=150) reported a known HIV status, than U.S.-born (68.9%, N=31) in 2013. Although there were over three times as many foreign-born cases co-infected with HIV, the percentage of co-infection was similar among both groups (6.4%, N=11 for foreign-born cases and 6.7%, N=3 for U.S.-born cases).





**Figure 17: Percent of Adults with TB Who Have Been Tested for HIV, New York State (Exclusive of New York City), 2002-2013**

Due to the high degree of co-infection with HIV and TB it has become increasingly important to assess the HIV status of all TB patients. In 2013, 85.5 percent of all adults with TB had a known HIV status. In the subgroup of TB cases between the ages of 25 and 44, the percentage with a known HIV status was even higher (91.0%).

### Primary Reason For Evaluation of Tuberculosis Cases

New York State (Exclusive of New York City), 2013

| PRIMARY REASON FOR EVALUATION     | Non-MDR    |                | MDR      |                |
|-----------------------------------|------------|----------------|----------|----------------|
|                                   | No.        | (%)            | No.      | (%)            |
| TB Symptoms                       | 110        | (51.2)         | 1        | (50.0)         |
| Abnormal Chest Radiograph         | 47         | (21.9)         | 1        | (50.0)         |
| Incidental Lab Result             | 35         | (16.3)         | 0        | (0.0)          |
| Immigration Medical Exam          | 6          | (2.8)          | 0        | (0.0)          |
| Contact Investigation             | 6          | (2.8)          | 0        | (0.0)          |
| Employment/Administrative Testing | 2          | (0.9)          | 0        | (0.0)          |
| Health Care Worker                | 0          | (0.0)          | 0        | (0.0)          |
| Targeted Testing                  | 1          | (0.5)          | 0        | (0.0)          |
| Unknown                           | 8          | (3.7)          | 0        | (0.0)          |
| <b>TOTAL</b>                      | <b>215</b> | <b>(100.0)</b> | <b>2</b> | <b>(100.0)</b> |

MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 10. Primary Reason for Evaluation of Tuberculosis Cases, New York State (Exclusive of New York City), 2013**

In 2013, the multidrug-resistant (MDR TB) (isolates resistant to at least isoniazid and rifampin) cases underwent evaluation based on having an abnormal chest radiograph and identification of TB symptoms.

Of the 215 non-MDR TB cases, slightly over half (51.2%) were evaluated as a result of presenting with TB symptoms. Other common reasons for evaluation included an abnormal chest radiograph (N=47, 21.9%) and an incidental lab result (N=35, 16.3%).

### Additional Risk Factors Among Tuberculosis Cases by Gender

New York State (Exclusive of New York City), 2013

| ADDITIONAL RISK FACTOR               | Male       |               | Female     |               | Total      |                |
|--------------------------------------|------------|---------------|------------|---------------|------------|----------------|
|                                      | No.        | (%)           | No.        | (%)           | No.        | (%)            |
| None                                 | 89         | (71.8)        | 59         | (59.0)        | 148        | (66.1)         |
| Diabetes Mellitus                    | 11         | (8.9)         | 13         | (13.0)        | 24         | (10.7)         |
| Immunosuppression (not HIV/AIDS)     | 5          | (4.0)         | 4          | (4.0)         | 9          | (4.0)          |
| Incomplete LTBI Therapy              | 4          | (3.2)         | 5          | (5.0)         | 9          | (4.0)          |
| Contact of an Infectious TB Patient* | 3          | (2.4)         | 10         | (10.0)        | 13         | (5.8)          |
| TNF-alpha Antagonist Therapy         | 1          | (0.8)         | 1          | (1.0)         | 2          | (0.9)          |
| End-Stage Renal Disease              | 2          | (1.6)         | 2          | (2.0)         | 4          | (1.8)          |
| Post-organ Transplantation           | 0          | (0.0)         | 0          | (0.0)         | 0          | (0.0)          |
| Contact of an MDR TB Patient*        | 0          | (0.0)         | 0          | (0.0)         | 0          | (0.0)          |
| Missed Contact*                      | 0          | (0.0)         | 0          | (0.0)         | 0          | (0.0)          |
| Other                                | 9          | (7.3)         | 6          | (6.0)         | 15         | (6.7)          |
| <b>Total</b>                         | <b>124</b> | <b>(55.4)</b> | <b>100</b> | <b>(44.6)</b> | <b>224</b> | <b>(100.0)</b> |

\*Within the past 2 years  
LTBI = Latent Tuberculosis Infection

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 11: Additional Risk Factors Among Tuberculosis Cases by Gender, New York State (Exclusive of New York City), 2013**

Aside from the commonly collected risk factors (i.e. HIV status, drug/alcohol usage, occupation, country of birth), 31.8 percent (N=69) of TB cases in New York State (exclusive of New York City) reported that they had at least one other known risk factor for TB disease in 2013. Overall, the most commonly reported factors were diabetes (N=24, 10.7%), being a contact to an infectious TB patient (N=13, 5.8%), having some form of immunosuppression (not HIV/AIDS) (N=9, 4.0%), and incomplete LTBI therapy (N=9, 4.0%).

For male and female TB cases, diabetes was cited as the most common additional risk factor (N=11, 8.9% for males N=13, 13.0% for females). Over twice as many females were a contact to an infectious TB patient compared to males (N=10, 10.0%, N=3, 2.4%, respectively). Most other factors were similar between males and females.

### Drug Susceptibility Test Results MDR TB

New York State (Exclusive of New York City), 2008-2013

|   | 2008        | 2009        | 2010        | 2011        | 2012        | 2013        |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Culture Positive</b>                   | 229         | 182         | 170         | 172         | 161         | 157         |
| <b>Susceptibility Test Reported</b>       | 227         | 181         | 169         | 169         | 158         | 157         |
| <b>Resistant to INH and RIF (MDR TB)*</b> | 1<br>(0.4%) | 5<br>(2.8%) | 3<br>(1.8%) | 6<br>(3.6%) | 3<br>(1.9%) | 2<br>(1.3%) |

\*Among those with susceptibility tests reported.  
INH = Isoniazid; RIF = Rifampin; MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 12: Drug Susceptibility Test Results, MDR TB, New York State (Exclusive of New York City), 2008-2013**

In New York State (exclusive of New York City), susceptibility results were reported for 100.0 percent (N=157/157) of culture-positive cases in 2013. There were two MDR TB cases identified, a decrease from the three cases reported in 2012.

**Drug Susceptibility Test Results  
Among Culture Confirmed Tuberculosis Cases  
General Population vs State Inmates  
New York State (Exclusive of New York City), 2011-2013**

|  | 2011                          |                              |                             | 2012                          |                              |                             | 2013                          |                              |                             |
|--|-------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------|------------------------------|-----------------------------|
|  | General Population<br>No. (%) | Inmate Population<br>No. (%) | Total Population<br>No. (%) | General Population<br>No. (%) | Inmate Population<br>No. (%) | Total Population<br>No. (%) | General Population<br>No. (%) | Inmate Population<br>No. (%) | Total Population<br>No. (%) |
| Susceptibility test reported                         | 169                           | 0                            | 169                         | 158                           | 0                            | 158                         | 155                           | 2                            | 157                         |
| Susceptible to all first-line drugs                  | 136 (80.5)                    | 0 (0.0)                      | 136 (80.5)                  | 132 (83.5)                    | 0 (0.0)                      | 132 (83.5)                  | 133 (85.8)                    | 1 (50.0)                     | 134 (85.4)                  |
| Resistant to INH and RIF (MDR TB)                    | 6 (3.6)                       | 0 (0.0)                      | 6 (3.6)                     | 3 (1.9)                       | 0 (0.0)                      | 3 (1.9)                     | 2 (1.3)                       | 0 (0.0)                      | 2 (1.3)                     |
| INH resistant and RIF susceptible                    | 12 (7.1)                      | 0 (0.0)                      | 12 (7.1)                    | 11 (7.0)                      | 0 (0.0)                      | 11 (7.0)                    | 6 (3.9)                       | 0 (0.0)                      | 6 (3.8)                     |
| RIF resistant and INH susceptible                    | 1 (0.6)                       | 0 (0.0)                      | 1 (0.6)                     | 0 (0.0)                       | 0 (0.0)                      | 0 (0.0)                     | 1 (0.6)                       | 0 (0.0)                      | 1 (0.6)                     |
| Resistant to first-line drugs other than INH and RIF | 14 (8.3)                      | 0 (0.0)                      | 14 (8.3)                    | 11 (7.0)                      | 0 (0.0)                      | 11 (7.0)                    | 13 (8.4)                      | 1 (50.0)                     | 14 (8.9)                    |

INH = Isoniazid; RIF = Rifampin; MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 13: Drug Susceptibility Test Results Among Culture Confirmed Tuberculosis Cases, General Population vs State Inmates, New York State (Exclusive of New York City), 2011-2013**

In 2013, drug susceptibility tests were performed on 100.0 percent (N=157/157) of culture-positive TB cases in New York State (exclusive of New York City). Aside from the two MDR TB cases, an additional six culture-positive cases were resistant to isoniazid (INH). Of the two inmates with positive cultures, one was susceptible to all first-line drugs and the other had resistance to a first-line drug other than INH or RIF.

**Drug Susceptibility Test Results  
Among Culture Confirmed Tuberculosis Cases  
U.S.-Born vs Foreign-Born\***

New York State (Exclusive of New York City), 2011-2013

|  | 2011                 |           |                  | 2012                 |           |                  | 2013                 |            |                  |
|--|----------------------|-----------|------------------|----------------------|-----------|------------------|----------------------|------------|------------------|
|  | U.S.-Born Population |           | Total Population | U.S.-Born Population |           | Total Population | U.S.-Born Population |            | Total Population |
|  | No.                  | (%)       |                  | No.                  | (%)       |                  | No.                  | (%)        |                  |
| Susceptibility test reported                         | 50                   | 119       | 169              | 43                   | 115       | 158              | 30                   | 127        | 157              |
| Susceptible to all first-line drugs                  | 43 (86.0)            | 93 (78.2) | 136 (80.5)       | 36 (83.7)            | 96 (83.5) | 132 (83.5)       | 28 (93.3)            | 106 (83.5) | 134 (85.4)       |
| Resistant to INH and RIF (MDR TB)                    | 0 (0.0)              | 6 (5.0)   | 6 (3.6)          | 2 (4.7)              | 1 (0.9)   | 3 (1.9)          | 0 (0.0)              | 2 (1.6)    | 2 (1.3)          |
| INH resistant and RIF susceptible                    | 5 (10.0)             | 7 (5.9)   | 12 (7.1)         | 2 (4.7)              | 9 (7.8)   | 11 (7.0)         | 0 (0.0)              | 6 (4.8)    | 6 (3.8)          |
| RIF resistant and INH susceptible                    | 0 (0.0)              | 1 (0.8)   | 1 (0.6)          | 0 (0.0)              | 0 (0.0)   | 0 (0.0)          | 0 (0.0)              | 1 (0.8)    | 1 (0.6)          |
| Resistant to first-line drugs other than INH and RIF | 2 (4.0)              | 12 (10.1) | 14 (8.3)         | 3 (7.0)              | 8 (7.0)   | 11 (7.0)         | 2 (6.7)              | 12 (9.4)   | 14 (8.9)         |

\*For whom country of origin information has been obtained.  
INH = Isoniazid; RIF = Rifampin; MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 14: Drug Susceptibility Test Results Among Culture Confirmed Tuberculosis Cases, U.S.-Born vs. Foreign-Born, New York State (Exclusive of New York City), 2011-2013**

In 2013, 93.3 percent of U.S.-born cases were susceptible to all first line drugs, compared to 83.5 percent of foreign-born cases. All of the patients with resistance to RIF or INH were foreign-born, including the two MDR TB cases in New York State (exclusive of New York City).

### Drug Susceptibility Test Results MDR TB

New York City, 2008-2013

|   | 2008                 | 2009                | 2010                 | 2011                 | 2012                 | 2013                |
|---|----------------------|---------------------|----------------------|----------------------|----------------------|---------------------|
| <b>Culture Positive</b>                   | <b>688</b>           | <b>539</b>          | <b>512</b>           | <b>501</b>           | <b>494</b>           | <b>476</b>          |
| <b>Susceptibility Test Reported</b>       | <b>680</b>           | <b>534</b>          | <b>505</b>           | <b>490</b>           | <b>486</b>           | <b>461</b>          |
| <b>Resistant to INH and RIF (MDR TB)*</b> | <b>11<br/>(2.0%)</b> | <b>9<br/>(1.7%)</b> | <b>11<br/>(2.2%)</b> | <b>16<br/>(3.3%)</b> | <b>16<br/>(3.3%)</b> | <b>7<br/>(1.5%)</b> |

\*Among those with susceptibility tests reported.  
INH = Isoniazid; RIF = Rifampin; MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 15: Drug Susceptibility Test Results, MDR TB, New York City, 2008-2013**

In New York City in 2013, susceptibility results were reported for 96.8 percent (N=461/476) of culture-positive TB cases. The number of MDR TB cases decreased 56.3 percent, from 16 in 2012 to seven in 2013.

## Tuberculosis Genotyping Summary by Year

New York State (Exclusive of New York City), 2011-2013

|                                  | 2011 |        | 2012 |        | 2013 |        |
|----------------------------------|------|--------|------|--------|------|--------|
|                                  | N    | (%)    | N    | (%)    | N    | (%)    |
| <b>Initial Positive Cultures</b> | 177  |        | 163  |        | 161  |        |
| <b>False Positives</b>           | 5    | (2.8)  | 2    | (1.2)  | 3    | (1.9)  |
| Control Strain                   | 0    | (0.0)  | 0    | (0.0)  | 0    | (0.0)  |
| Contamination                    | 2    | (1.1)  | 1    | (0.6)  | 0    | (0.0)  |
| M. bovis BCG                     | 3    | (1.7)  | 1    | (0.6)  | 3    | (0.6)  |
| <b>True Positives</b>            | 172  |        | 161  |        | 158  |        |
| <b>Isolates Available</b>        | 172  |        | 155  |        | 158  |        |
| Complete Genotype*               | 155  | (90.1) | 142  | (91.6) | 126  | (79.7) |
| Partial Genotype                 | 167  | (97.1) | 154  | (99.4) | 151  | (95.6) |
| No Result                        | 5    | (2.9)  | 1    | (0.6)  | 6    | (3.8)  |

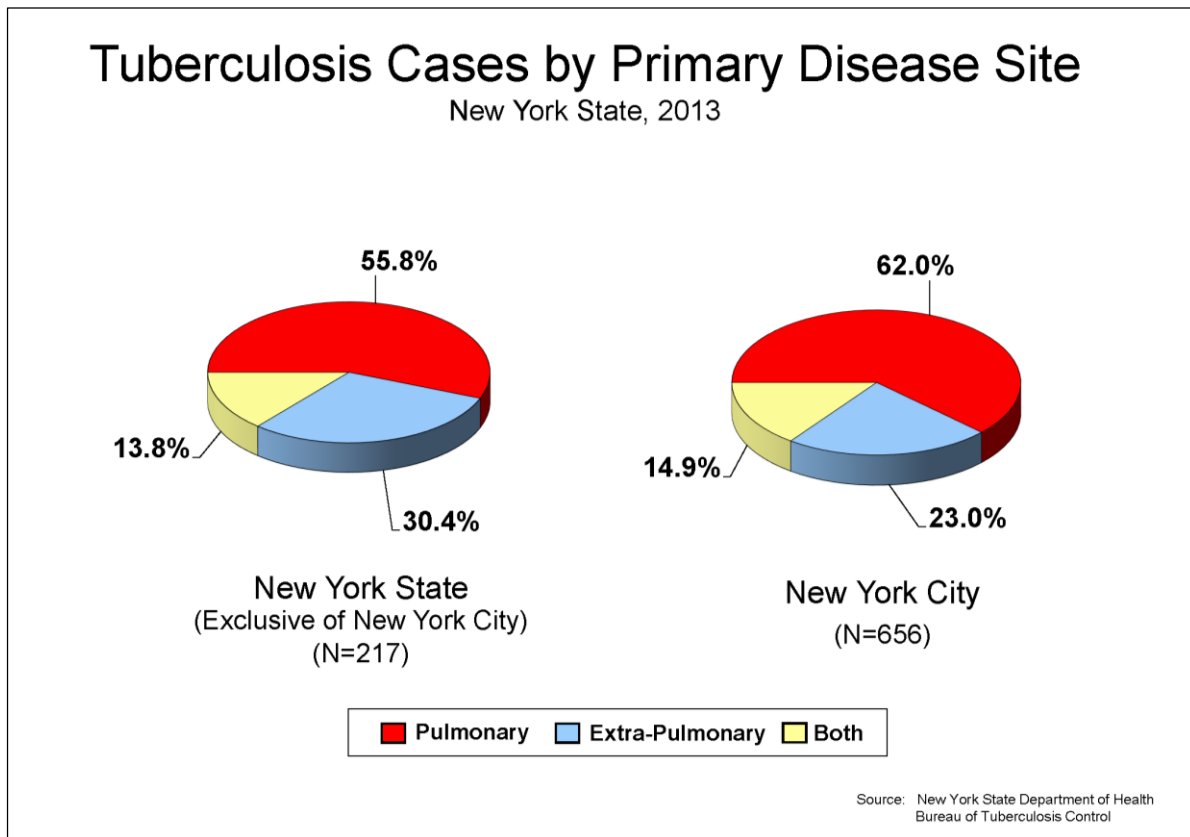
\*Definition of complete genotyping was revised in 2009 to agree with the CDC-sponsored National Tuberculosis Genotyping program. A complete genotype is defined as having a spoligotype and MIRU result.

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 16: Tuberculosis Genotyping Summary by Year, New York State  
(Exclusive of New York City), 2011-2013**

New York State requires that all initial positive cultures be submitted for genotyping. Beginning in 2004, real time spoligotyping and subsequent restriction fragment length polymorphism (RFLP) testing were performed at the Department's Wadsworth Center for Laboratories and Research. In addition, the CDC-sponsored National Tuberculosis Genotyping regional lab in Michigan performed mycobacterial interspersed repetitive unit (MIRU) and spoligotyping. In 2013, 100.0 percent (N=158/158) of isolates in New York State (exclusive of New York City) were available for genotyping. A spoligotype and MIRU result were available for 79.7 percent of these isolates (N=126/158). Since 2009, due to diminishing resources, RFLP has no longer been performed on all specimens.





**Figure 18: Tuberculosis Cases by Primary Disease Site, New York State, 2013**

Pulmonary TB was the primary site of disease in 60.5 percent (N=528) of cases reported in New York State in 2013. Compared to 2012 (N=539), this was 2.0 percent fewer pulmonary TB cases.

Seventy percent (N=151) of TB cases in New York State (exclusive of New York City) were reported to have pulmonary TB in 2013. In New York City, 77.0 percent (N=505) of TB cases were identified as pulmonary.

Of the TB cases in New York State (exclusive of New York City) with extra-pulmonary TB disease (30.4%, N=66), the most common sites of disease were lymphatic (43.1%, N=24), bone (13.6%, N=9) and pleural (13.6%, N=9). The most frequently reported extra-pulmonary sites in New York City were lymphatic (47.0%, N=71), pleural (15.2%, N=23), and bone (11.3%, N=17).

**Treatment Status of Tuberculosis Cases Reported in 2012\***  
New York State (Exclusive of New York City)

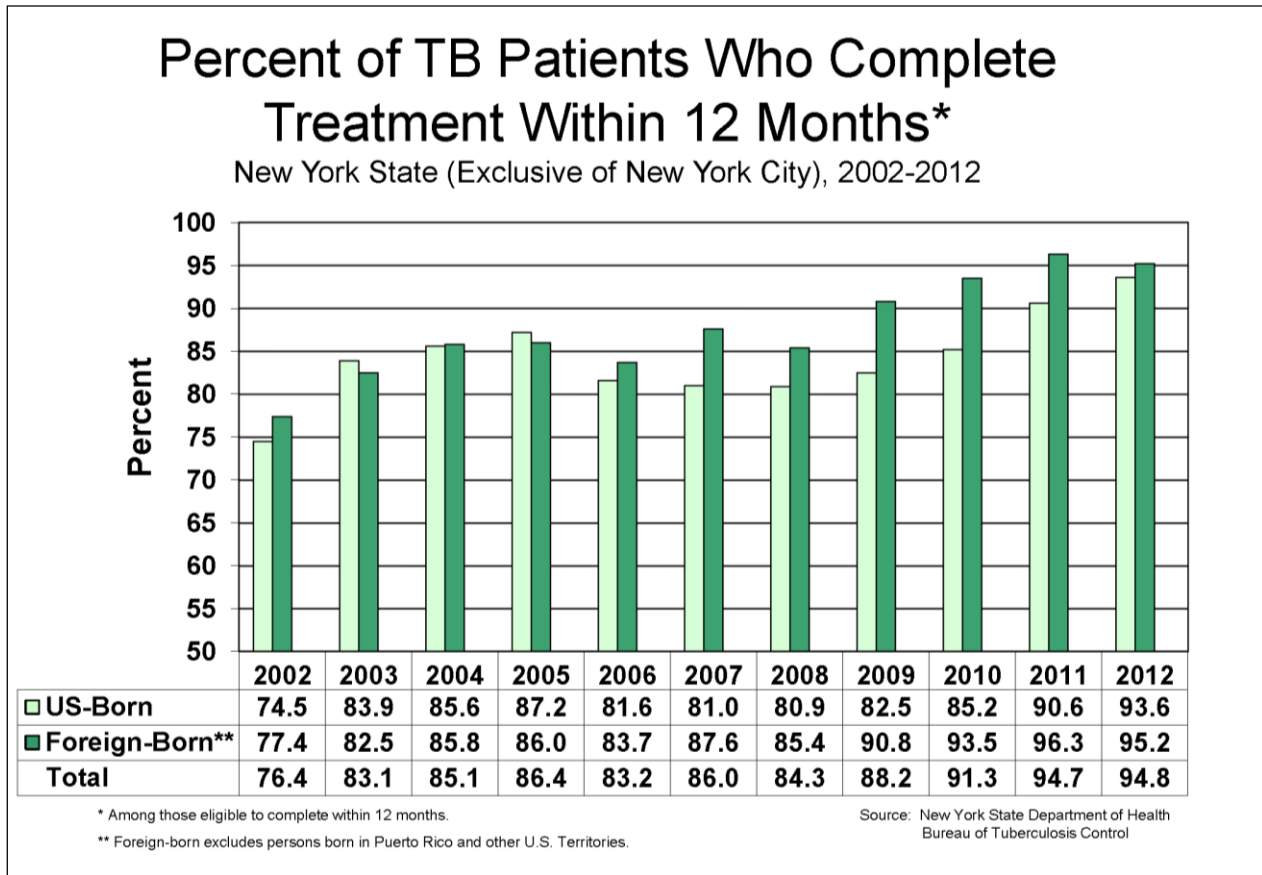
| TREATMENT STATUS        | Non-MDR    |                | MDR      |                |
|-------------------------|------------|----------------|----------|----------------|
|                         | No.        | (%)            | No.      | (%)            |
| Completed               | 187        | (91.2)         | 2        | (66.7)         |
| Prolonged Therapy       | 0          | (0.0)          | 0        | (0.0)          |
| Died                    | 8          | (3.9)          | 0        | (0.0)          |
| Uncooperative/Refused   | 0          | (0.0)          | 0        | (0.0)          |
| Lost                    | 1          | (0.5)          | 0        | (0.0)          |
| Adverse Treatment Event | 2          | (1.0)          | 0        | (0.0)          |
| Other                   | 7          | (3.4)          | 1        | (33.3)         |
| <b>TOTAL</b>            | <b>205</b> | <b>(100.0)</b> | <b>3</b> | <b>(100.0)</b> |

\*Excludes patients found not to have TB, those who were reported at death and those who never started treatment.  
MDR TB = Multidrug-resistant TB

Source: New York State Department of Health  
Bureau of Tuberculosis Control

**Table 17: Treatment Status of Tuberculosis Cases Reported in 2012, New York State (Exclusive of New York City)**

Of the 205 non-MDR TB cases in New York State (exclusive of New York City) who were alive at diagnosis in 2012 (the most recent year for which complete information is available), 91.2 percent completed a full course of therapy with a completion index of 98.4 (completion index = number completed / [number alive at diagnosis - number died on treatment - number moved out of jurisdiction]\*100).



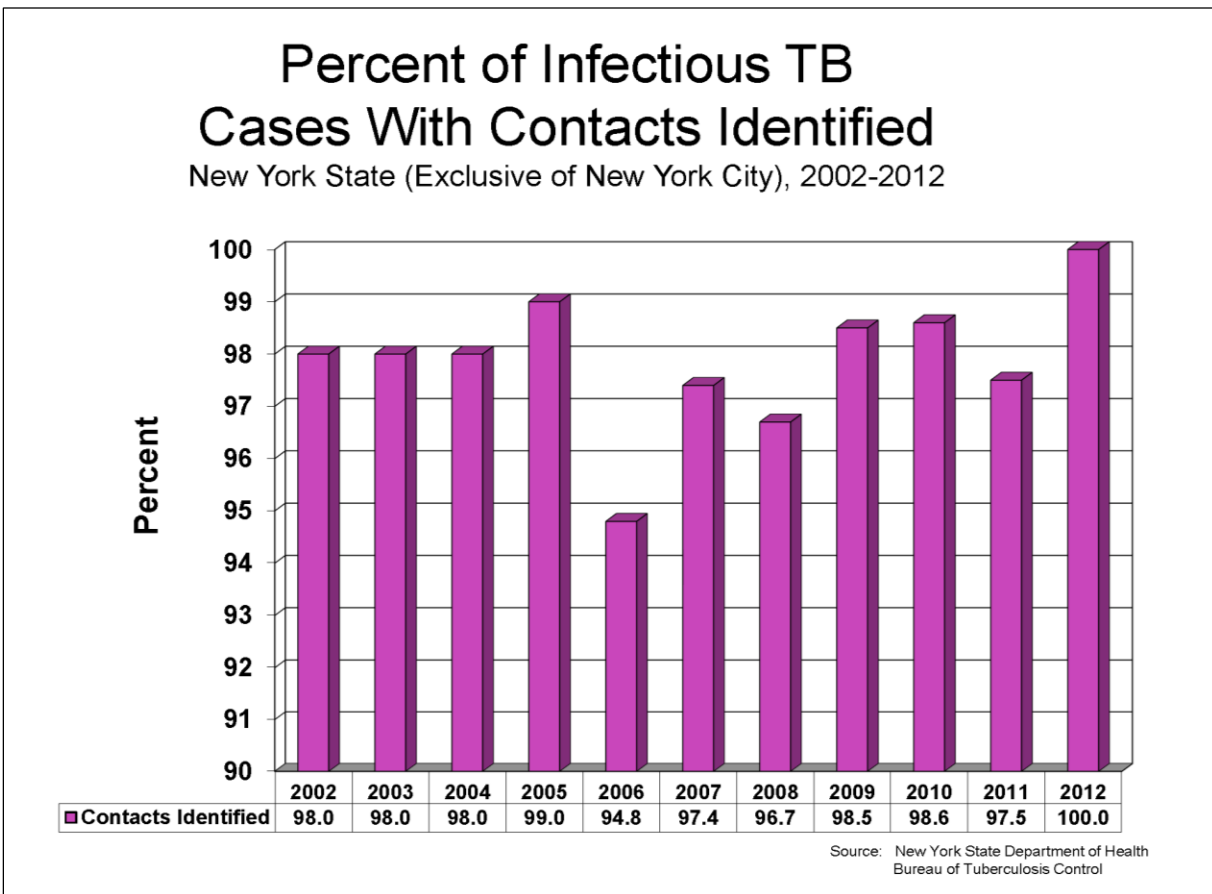
**Figure 19: Percent of Tuberculosis Patients Who Complete Treatment Within 12 Months, New York State (Exclusive of New York City), 2002-2012**

For 2012 (the most recent year for which complete information is available), 94.8 percent (N=164/173) of patients in New York State (exclusive of New York City) eligible\*\*\* to complete treatment within 12 months, did so. An additional 4.0 percent (N=7/173) of patients completed treatment in more than 12 months, for an overall completion rate of 98.8 percent.

A larger percentage of foreign-born patients completed therapy within 12 months than U.S.-born in 2012 (95.2% and 93.6%, respectively).

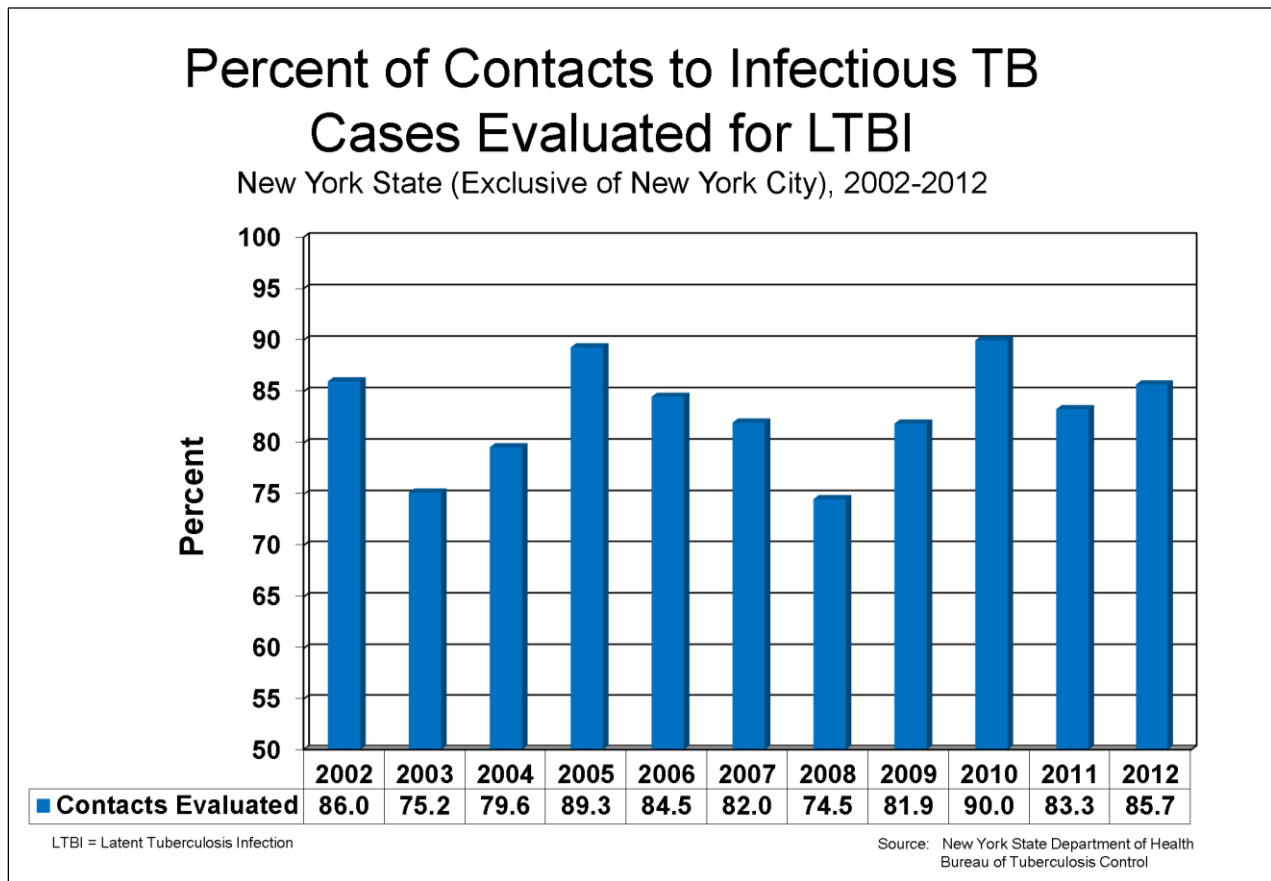
Feedback from New York State county health departments has revealed that most patients not completing therapy within 12 months suffer from significant co-morbidities or adverse drug reactions which result in lengthened treatment regimens.

\*\*\*Patients with Rifampin resistance, those with meningeal TB and children under 15 who have disseminated TB (miliary TB or evidence of miliary TB on chest radiograph, or a positive blood culture) are excluded along with those who were never started on treatment, were dead at diagnosis or who died while on treatment. Effective January 2009, the CDC revised the definition of who is eligible to complete treatment to also exclude those patients who moved out of the country while on treatment.



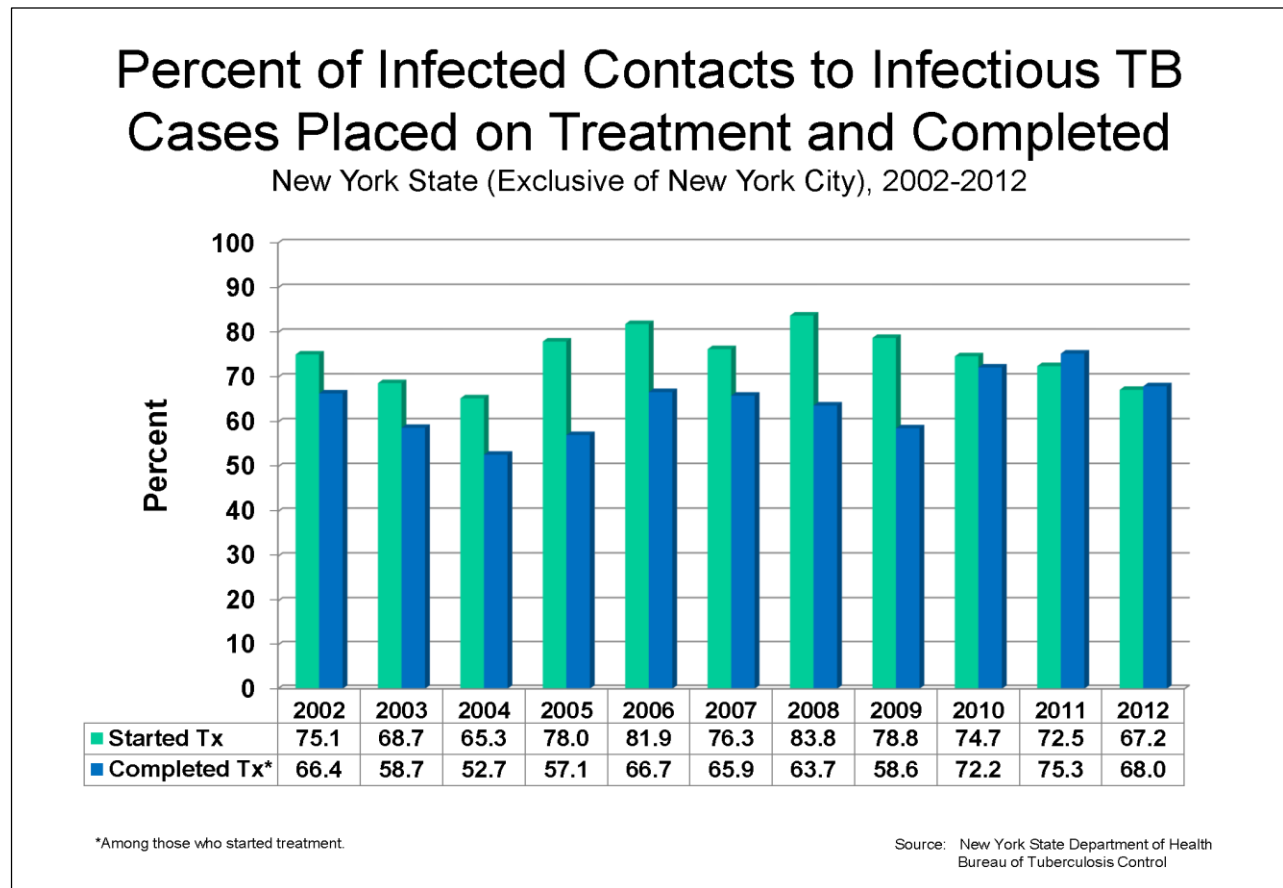
**Figure 20: Percent of Infectious Tuberculosis Cases with Contacts Identified, New York State (Exclusive of New York City), 2002-2012**

In 2012 (the most recent year for which complete information is available), 100.0 percent (N=75/75) of infectious (sputum smear positive) TB cases in New York State (exclusive of New York City) had contacts identified. This surpasses the state objective of 95.5 percent.



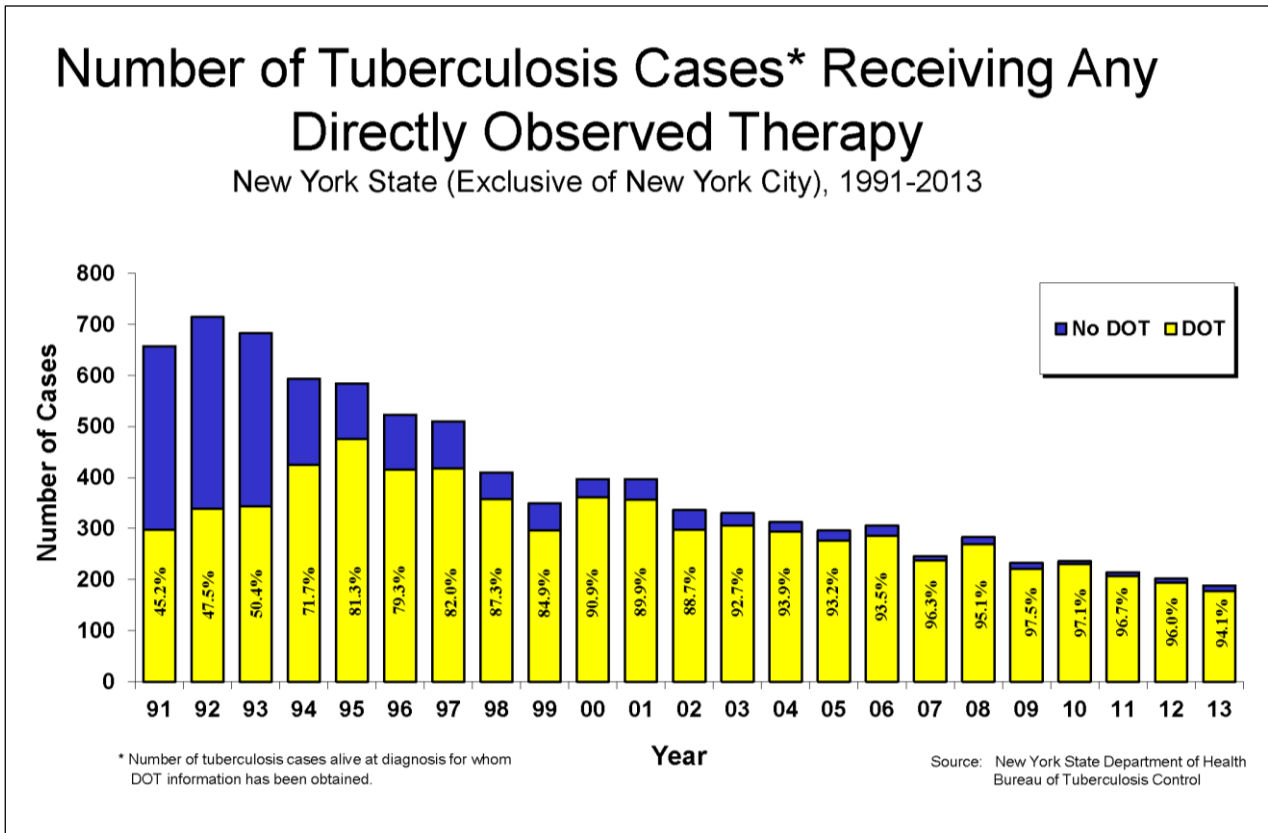
**Figure 21: Percent of Contacts to Infectious Tuberculosis Cases Evaluated for LTBI, New York State (Exclusive of New York City), 2002-2012**

Eighty-six percent (N=1,587) of contacts to infectious (sputum smear positive) TB cases in New York State (exclusive of New York City) were evaluated for latent tuberculosis infection (LTBI) in 2012 (the most recent year for which complete information is available). This is a slight increase from the 83.3 percent (N=3,049) evaluated in 2011 and still meets our state objective of 83.0 percent.



**Figure 22: Percent of Infected Contacts to Infectious Tuberculosis Cases Placed on Treatment and Completed, New York State (Exclusive of New York City), 2002-2012**

Sixty-seven percent of infected contacts to infectious (sputum smear positive) TB cases in New York State (exclusive of New York City) were placed on treatment in 2012 (the most recent year for which complete information is available), a decrease from 72.5 percent in 2011. Sixty-eight percent of those starting treatment actually completed the prescribed regimen, a decrease from 2011 when 75.3 percent completed treatment.



**Figure 23: Number and Percentage of Tuberculosis Cases Receiving Any Directly Observed Therapy, New York State (Exclusive of New York City), 1991-2013**

In New York State (exclusive of New York City) the proportion of TB cases receiving Directly Observed Therapy (DOT) has been increasing since the early 1990s when it was first actively promoted by the New York State Department of Health, local health units, and others. In 1991, 297 cases or 45.2 percent of confirmed TB cases on TB medications received at least part of their therapy as DOT. The proportion of all cases receiving a portion of their treatment as DOT has more than doubled over the intervening years to 94.1 percent in 2013.

Additional New York City tuberculosis data may be obtained by contacting the New York City Department of Health Surveillance Office at (347) 396 – 7400 or via the Internet at:

<http://www.nyc.gov/html/doh/html/data/tb-reports.shtml>

For questions relating to tuberculosis in New York State or a PowerPoint version of the figures in this report, contact the Bureau of TB Control, New York State Department of Health, at:

[tbcontrol@health.ny.gov](mailto:tbcontrol@health.ny.gov)

**TECHNICAL NOTE:**

All population-based rates were calculated using 2010 census figures.