

AGGCCTCGGTGACCGTGATCATGTTGCCCGC
CGAAGGTCATTACGTTGTGTACGTCAATGAC
CATCT**REPORTED**GCTCGTTGTATGGGGAT
GAATCGGGGAGTGGTGAT**TUBERCULOSIS**CC
GAGAGATCGATGGCGAATCTGGCCCTGGT
ATCGCCCCGCCACCAAGAI**IN**AGCCATTGTTG
AAGTCGCCCGGTGTGCGAAAGGCCGGTATTGA
CGTTGCCCGGGATTGAAGAT**THE**AGCCGGTGT
TGGTGTCACCCGGGGTTATAGCTGCCGGGTAT
TGGTGTCACCCACGT**UNITED**TGAAGTTGCC
GGTGTTGGTGTTACCGACGTTGAAGCCGCC
GGTGTTGTAGCTGCCCGGTGTT**STATES**GTAG
AAGCCCGTGTTGAAGTCGCCGGCGTTGAG
GATGCCCGGTGTTGTAGCTGCCAGCATTGAG
GATGCCCGGTATTGTCGGTACCCGGGGTTCC
GATACCCCAAGTTCCCGGTGCCCGAGTTTGC
GATGCCCGACGTTTCCCGGTGCCCGCGTTGA
AGATGCCAACGTTATTGGTGCCCGAATGAA
CAGGCCGCTGTTGCCGGTGCCCG**2012**AGT
TCAGCCGCTAGCAATATTGAAGCCCTGCTG
GTTGTCGCCGGACAGCCCGATGCCGATGTT
GTTGTTGCCGGTGTTGGCGAACC
GTT
GAAGTCGCCCGCGTTCCCGAAGCCGAGTT

For more information, contact

Division of Tuberculosis Elimination

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

Centers for Disease Control and Prevention

1600 Clifton Road NE

MS E-10

Atlanta, GA 30333

Phone: (404) 639-8120

Fax: (404) 639-8959

E-mail: TBInfo@cdc.gov

Web address: <http://www.cdc.gov/tb/>

Tuberculosis Applications Help Desk

Phone: (678) 460-7828

Email: ntss@cdc.gov

Ordering Information

Copies of *Reported Tuberculosis in the United States, 2012*, are available from the Division of Tuberculosis Elimination's online ordering system at <http://www.cdc.gov/tb/>.

This report is also accessible via the internet at <http://www.cdc.gov/tb/>

Suggested Citation: CDC. *Reported Tuberculosis in the United States, 2012*. Atlanta, GA: U.S. Department of Health and Human Services, CDC, October 2013.

All material in this report is in the public domain and may be reproduced or copied without permission. However, citation as to source is requested.

Reported Tuberculosis in the United States

2012

Publication Year 2013

Reported Tuberculosis in the United States, 2012
Centers for Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Tuberculosis Elimination

October 2013

Centers for Disease Control and Prevention Thomas R. Frieden, M.D., M.P.H.
Director

Office of Infectious Diseases Rima Khabbaz, M.D.
Director

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention ... Jonathan Mermin, M.D., M.P.H.
Director

Division of Tuberculosis Elimination Kenneth G. Castro, M.D.
Director

Surveillance, Epidemiology, and Outbreak Investigations Branch Thomas R. Navin, M.D.
Chief

Surveillance Team Roque Miramontes, P.A.-C., M.P.H.
Team Lead

Communications, Education, and Behavioral Studies Branch Wanda Walton, Ph.D.
Chief

Field Services and Evaluation Branch Terence Chorba, M.D., MPH DSc
Chief

Data Management and Statistics Branch José E. Becerra, M.D., M.P.H.
Chief

This report was prepared by

**Surveillance, Epidemiology, and Outbreak Investigations Branch
Division of Tuberculosis Elimination
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Centers for Disease Control and Prevention**

Surveillance Team

Roque Miramontes, P.A.-C., M.P.H.
Carla Jeffries, J.D., M.P.H.¹
Robert Pratt, B.S.
Rachel S. Yelk Woodruff, M.P.H.
Lori Armstrong, Ph.D.
Elvin Magee, M.P.H., M.S.
Lilia P. Manangan, R.N., M.P.H.
Glenda T. Newell
Kai Young, M.P.H.

Molecular Epidemiology Activity

Smita Ghosh, M.S.
J. Steve Kammerer, M.B.A.

Epidemic Intelligence Service Officer

Courtney M. Yuen, Ph.D.

Others contributing to the production of this publication

Office of the Director

Philip LoBue, M.D., FACP, FCCP

Data Management and Statistics Branch

Sandy Price, P.M.P.¹
Vic Bowker¹
Cynthia Adams¹
Stacey Parker¹

National Center for Health Marketing, Division of Creative Services

Brenda Holmes

Field Services and Evaluation Branch

Communications, Education, and Behavioral Studies Branch

All state and local health departments throughout the United States whose staff collected and reported the data used in this publication.

¹ CDC Information Management Systems Contractor

Preface

Reported Tuberculosis in the United States, 2012 presents summary data for tuberculosis (TB) cases verified and counted in 2012. Report of Verified Case of Tuberculosis (RVCT) forms are submitted to the Division of Tuberculosis Elimination (DTBE), Centers for Disease Control and Prevention (CDC), by 60 reporting areas (the 50 states, the District of Columbia, New York City, Puerto Rico, and seven other jurisdictions in the Pacific and Caribbean). First released in 1993, the RVCT was expanded in 2009 to collect additional information for each reported TB case in order to better monitor trends in TB and TB control.

Reported Tuberculosis in the United States, 2012 is similar to previous publications (see page xi, #19) and contains an Executive Commentary, Technical Notes, seven major data sections, and appendices. The Executive Commentary includes highlights of the 2012 data, and the Technical Notes section provides information about how the data were collected and reported; these sections are included to help the reader interpret the data.

Morbidity Trend Tables present trends in the overall TB case counts and case rates for the United States and the United States Affiliated Pacific Islands by selected demographic, clinical, and genotypic characteristics. *Morbidity Tables, 2012* present overall case counts and case rates for the United States and other jurisdictions by selected demographic and genotypic characteristics for the most recent year for which data are available. *Morbidity Tables, 2010* present overall case counts for the United States by selected demographic and clinical characteristics for the most recent year for which data are available on certain follow-up variables that require a longer data collection period. *Morbidity Tables, Reporting Areas, 2012* present TB case counts and case rates by state and by other jurisdictions with tables of selected demographic and clinical characteristics. *Morbidity Tables, Reporting Areas, 2010*

present data for the most recent year for which data are available on certain follow-up variables that require a longer data collection period. *Morbidity Tables, Cities and Metropolitan Statistical Areas, 2012* provide TB case counts and case rates by metropolitan statistical areas (MSAs: see Technical Notes, page 9, for further details) with tables of selected demographic and clinical characteristics. *Surveillance Slide Set, 2012* presents figures from the annual surveillance slide set, which emphasize key recent trends in TB epidemiology in the United States. The slides with accompanying text can also be viewed and downloaded from the DTBE website accessible at <http://www.cdc.gov/tb/>.

The current *Tuberculosis Case Definition for Public Health Surveillance and Recommendations for Reporting and Counting Tuberculosis Cases* are provided in Appendices A and B, respectively (pages 167 and 168). *National Surveillance for Severe Adverse Events Associated with Treatment for Latent Tuberculosis Infection - Reporting Information* is provided in Appendix C (page 177). *Genotyping Background Information and Glossary* is provided in Appendix D (page 178).

Previous Statistical Reports in this Series:

1. *Special Tuberculosis Projects, 1961–1965*. Atlanta: CDC; 1966.
2. *Special Tuberculosis Projects, December 1965*. Atlanta: CDC; 1966.
3. *Special Tuberculosis Projects, June 1966*. Atlanta: CDC; 1967.
4. *Special Tuberculosis Projects, December 1966*. Atlanta: CDC; 1967.
5. Summary Report. Atlanta: CDC; 1967.
6. *Special Tuberculosis Projects, June 1967*. Atlanta: CDC; 1968.
7. *Tuberculosis Program Reports, December 1967*. Atlanta: CDC; 1968.
8. Tuberculin testing during 1966–1967 school year. In: *Tuberculosis Program Reports*. Atlanta: CDC; 1968.
9. *Tuberculosis Program Reports: Six Month Period Ending June 1968*. Atlanta: CDC; 1969.
10. Program Performance Analyses, June–December 1968. In: *Tuberculosis Program Reports*. Atlanta: CDC; 1970.
11. Tuberculin testing data, 1967–1968 school year. In: *Tuberculosis Program Reports*. Atlanta: CDC; 1970.
12. The project years, 1961–1969, In: *Tuberculosis Program Reports*. Atlanta: CDC; 1970.
13. Tuberculosis programs (for years 1970–1973). In: *Tuberculosis Program Reports*. Atlanta: CDC; 1971–1974.
14. *Reported Tuberculosis Data* (for years 1962–1973). Atlanta: CDC; 1963–1974.
15. *Tuberculosis Statistics: States and Cities* (for years 1974–1985). Atlanta: CDC; 1971–1986.
16. *Tuberculosis in the United States* (for years 1974–1986). Atlanta: CDC; 1976–1987.
17. Tuberculosis program management in the United States, 1984. In: *Tuberculosis Program Reports*. Atlanta: CDC; 1986.
18. *Tuberculosis Statistics in the United States* (for years 1987–1992). Atlanta: CDC; 1989–1993.
19. *Reported Tuberculosis in the United States* (for years 1993–2011). Atlanta: CDC; 1994–2012.

Reports from 2006 through 2012 are available on the Internet at
<http://www.cdc.gov/tb/statistics/>

Access to the TB control offices for individual reporting areas may be found at:
<http://www.cdc.gov/tb/links/tboffices.htm>

Contents

Acknowledgments.....	vii
Preface.....	ix
Previous Statistical Reports in this Series.....	xi
Executive Commentary.....	3
Technical Notes.....	9

Morbidity Trend Tables

Table 1. Tuberculosis Cases, Case Rates per 100,000 Population, Deaths, and Death Rates per 100,000 Population, and Percent Change: United States, 1953–2012.....	17
Table 2. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Hispanic Ethnicity and non-Hispanic Race: United States, 1993–2012.....	18
Table 3. Tuberculosis Cases and Percentages by Hispanic Ethnicity and non-Hispanic Race, and Origin of Birth: United States, 1993–2012.....	19
Table 4. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Age Group: United States, 1993–2012.....	20
Table 5. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Origin of Birth: United States, 1993–2012.....	21
Table 6. Tuberculosis Cases and Percentages Among Foreign-born Persons by the Top 30 Countries of Birth: United States, 2008–2012.....	22
Table 7. Tuberculosis Cases and Percentages by Case Verification Criterion and Site of Disease: United States, 1993–2012.....	23
Table 8. Tuberculosis Cases and Percentages, by Resistance to INH, Origin of Birth, and Previous History of TB: United States, 1993–2012.....	24
Table 9. Tuberculosis Cases and Percentages, by Multidrug Resistance, Origin of Birth, and Previous History of TB: United States, 1993–2012.....	25
Table 10. Percentages of Tuberculosis Cases by Initial Drug Regimen, Use of Directly Observed Therapy (DOT), and Completion of Therapy (COT): United States, 1993–2012.....	26
Table 11. Tuberculosis Cases and Percentages in Persons with HIV Test Results and with HIV Coinfection, by Age Group: United States, 1993–2012.....	27
Table 12. Tuberculosis Cases and Percentages by Reason Tuberculosis Therapy Stopped: United States, 1993–2010.....	28

Table 13. National Tuberculosis Genotyping Surveillance Coverage:	
United States, 2004–2012	29
Table 14. National Tuberculosis Genotyping Surveillance Coverage:	
United States Affiliated Pacific Islands, 2004–2012	30
Table 15. Genotyped Tuberculosis Cases with Mycobacterium bovis by Origin of Birth:	
United States, 2004–2012	31

Morbidity Tables, 2012

Table 16. Tuberculosis Cases and Percentages Among Foreign-born Persons by the Top 30 Countries of Birth and Years in the United States Before TB Diagnosis: United States, 2012	35
Table 17. Tuberculosis Cases and Rates per 100,000 Population by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012	36
Table 18. Tuberculosis Cases in U.S.-born Persons by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012	38
Table 19. Tuberculosis Cases in Foreign-born Persons by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012	39
Table 20. Tuberculosis Cases Among Foreign-born Persons by Country of Birth:	
United States, 2012	40
Table 21. Tuberculosis Risk Factors by Origin and Race/Ethnicity: United States, 2012	42
Table 22. Epidemiologic Characteristics of Cases in GENType Clusters by Alert Levels Based on Log-likelihood Ratios (LLR): United States, 2010–2012	44
Table 23. Tuberculosis Cases by Cluster Status: United States, 2010–2012	46
Table 24. Tuberculosis Cases and Clusters by Cluster Size: United States, 2010–2012	47
Table 25. Ten Most Frequently Reported GENTypes Among Genotyped Tuberculosis Cases:	
United States, 2010–2012	48
Table 26. Five Most Frequently Reported GENTypes Among Genotyped Tuberculosis Cases:	
United States Affiliated Pacific Islands, 2010–2012	49

Morbidity Tables, 2010

Table 27. Tuberculosis Cases and Percentages by Reason Tuberculosis Therapy Stopped and Type of Move: United States, 2010	53
Table 28. Deaths Prior to Tuberculosis Diagnosis or During Tuberculosis Therapy by Age Group: United States, 2010	54

Table 29. Sputum Culture Conversion by Age Group: United States, 2010.....	55
--	----

Morbidity Tables, Reporting Areas, 2012

Table 30. Tuberculosis Cases and Case Rates per 100,000 Population: Reporting Areas, 2012 and 2011	59
Table 31. Tuberculosis Cases and Case Rates per 100,000 Population, Ranked and Grouped by Number of Cases: United States and the District of Columbia, 2012 and 2011	60
Table 32. Tuberculosis Cases and Percentages by Age Group: Reporting Areas, 2012	62
Table 33. Tuberculosis Cases and Percentages by Hispanic Ethnicity and Non-Hispanic Race: Reporting Areas, 2012	64
Table 34. Tuberculosis Cases and Percentages, U.S.-born and Foreign-born Persons: United States, 2012	66
Table 35. Tuberculosis Cases and Percentages in Foreign-born Persons by Top 7 Countries of Birth: Reporting Areas, 2012	68
Table 36. Tuberculosis Cases and Percentages in Foreign-born Persons by Immigration Status at First Entry: Reporting Areas, 2012	70
Table 37. Tuberculosis Cases and Percentages in Foreign-born Persons by Number of Years in the United States: Reporting Areas, 2012	72
Table 38. Tuberculosis Cases and Percentages by Pulmonary and Extrapulmonary Disease: Reporting Areas, 2012	73
Table 39. Extrapulmonary Tuberculosis Cases and Percentages by Site of Disease: Reporting Areas, 2012	74
Table 40. Tuberculosis Risk Factors: Reporting Areas, 2012	76
Table 41. Primary Reasons for Tuberculosis Evaluation: Reporting Areas, 2012	78
Table 42. Tuberculosis Cases and Percentages by Residence in and Type of Correctional Facili- ties, Age >15: Reporting Areas, 2012	80
Table 43. Tuberculosis Cases and Percentages by Homeless Status, Age >15: Reporting Areas, 2012	82
Table 44. Tuberculosis Cases and Percentages by Residence in Long-term Care Facilities, Age >15: Reporting Areas, 2012	83
Table 45. Tuberculosis Cases and Percentages by Injecting Drug Use, Age >15: Reporting Areas, 2012	84
Table 46. Tuberculosis Cases and Percentages by Noninjecting Drug Use, Age >15: Reporting Areas, 2012	85

Table 47. Tuberculosis Cases and Percentages by Excess Alcohol Use, Age >15: Reporting Areas, 2012	86
Table 48. Tuberculosis Cases and Percentages by Primary Occupation, Age >15: Reporting Areas, 2012	87
Table 49. Tuberculosis Cases and Percentages by Initial Drug Regimen: Reporting Areas, 2012	88
Table 50. Culture-Positive Tuberculosis Cases and Percentages with Drug Susceptibility Results, by Resistance to INH or Multidrug Resistance: Reporting Areas, 2012	89
Table 51. Tuberculosis Cases and Percentages by HIV Status: Reporting Areas, 2012	90
Table 52. Tuberculosis Diagnostic Tests by Type of Laboratory: Reporting Areas, 2012	92
Table 53. Tuberculosis Genotyping Surveillance Coverage: Reporting Areas, 2012	94
Table 54. County-based Tuberculosis Genotype Clusters Based on GENType: Reporting Areas, 2010–2012	95

Morbidity Tables, Reporting Areas, 2010

Table 55. Tuberculosis Cases and Percentages by Type of Health Care Provider: Reporting Areas, 2010	98
Table 56. Tuberculosis Cases and Percentages by Directly Observed Therapy (DOT): Reporting Areas, 2010	99
Table 57. Tuberculosis Cases and Percentages by Reason Therapy Stopped: Reporting Areas, 2010	100
Table 58. Reason Therapy Was Extended Beyond 12 Months: Reporting Areas, 2010	102
Table 59. Completion of Tuberculosis Therapy (COT) Cases and Percentages by Hispanic Ethnicity and Non-Hispanic Race: Reporting Areas, 2010	104
Table 60. Tuberculosis Cases and Percentages by Completion of Tuberculosis Therapy (COT): Reporting Areas, 2010	106
Table 61. Tuberculosis Cases and Percentages in Persons Completing Therapy for Whom Therapy Was Indicated for One Year or Less: Reporting Areas, 2006–2010	107

Morbidity Tables, Cities and Metropolitan Statistical Areas, 2012

Table 62. Tuberculosis Cases in Selected Cities: 2012 and 2011	109
Table 63. Tuberculosis Cases and Case Rates per 100,000 Population: Metropolitan Statistical Areas with >500,000 Population, 2012 and 2011	110

Table 64. Tuberculosis Cases by Age Group: Metropolitan Statistical Areas with >500,000 Population, 2012	114
Table 65. Tuberculosis Cases by Hispanic Ethnicity and Non-Hispanic Race: Metropolitan Statistical Areas with >500,000 Population, 2012	116
Table 66. Tuberculosis Cases and Percentages, U.S.-born Persons and Foreign-born Persons: Metropolitan Statistical Areas with >500,000 Population, 2012	118
Table 67. Tuberculosis Cases and Percentages by Homeless Status, Age >15: Metropolitan Statistical Areas with >500,000 Population, 2012	120

Surveillance Slide Set, 2012

Slides	125
Narrative	161

Appendices

Appendix A: Tuberculosis Case Definition for Public Health Surveillance	169
Appendix B: Recommendations for Counting Reported Tuberculosis Cases	170
Appendix C: National Surveillance for Severe Adverse Events Associated with Treatment for Latent Tuberculosis Infection - Reporting Information	179
Appendix D: Genotyping Background Information and Glossary	180

Executive Commentary

Executive Commentary

Highlights of 2012 Report

Since 1953, in cooperation with state and local health departments, the United States national tuberculosis program has collected information on each newly reported case of tuberculosis (TB) disease in the United States. Currently, each individual TB case report (Report of Verified Case of Tuberculosis or RVCT) is submitted electronically. Following are the highlights of the 2012 report.

1. Updated case counts for each year from 1993 through 2011.
2. Case counts: 9,945 TB cases were reported to CDC from the 50 states and the District of Columbia (DC) for 2012, representing a 5.4% decrease from 2011 (Table 1).
 - Seventeen states reported increased case counts from 2011 (Table 30).
 - California, Texas, New York, and Florida accounted for 50% of the national case total (Table 31).
 - Asians exceeded all other racial or ethnic groups with the largest percentage of total cases (30%) (Table 2).
 - Hispanics comprise the second largest racial or ethnic group (28%) (Table 2).
 - Blacks or African Americans born in the United States represented 37% of TB cases in U.S.-born persons (Table 18) and accounted for 13% of the national case total.
 - Asians born outside the United States represented 45% of TB cases in foreign-born persons (Table 19) and accounted for 29% of the national case total.
3. Case rates: In 2012, the TB case rate declined from 3.4 to 3.2 per 100,000 persons, representing a 5.9% decrease from 2011.
 - Ten states and DC reported rates above the national average (Table 30).
 - The TB case rate was 1.4 per 100,000 for U.S.-born persons and 15.9 for foreign-born persons (Table 5).
 - Asians continued to have the highest case rate (18.9 per 100,000 persons) among all racial or ethnic groups (Table 2).
4. Burden among the foreign-born: In 2012, the percentage of cases occurring in foreign-born persons increased to 63% of the national case total. This percentage has risen steadily since 1993. Foreign-born Hispanics and Asians together represented 79% of TB cases in foreign-born persons, and accounted for 50% of the national case total (Table 19).
 - In 31 states, $\geq 50\%$ of TB cases occurred among foreign-born persons (Table 34).
 - In 8 states, $\geq 70\%$ of TB cases occurred among foreign-born persons (Table 34).
 - In 3 states, $\geq 75\%$ of TB cases occurred among foreign-born persons (Table 34).
 - The top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, India, Vietnam, and China (Table 6).
5. Drug resistance: 1.1% of reported cases had primary multidrug resistance, which is defined as no previous history of TB disease and resistance to at least isoniazid and rifampin (Table 9). This percentage has remained stable, fluctuating from 0.9% to 1.3%, over the past decade.
6. HIV status: In 2012, 84% of persons with TB reported HIV test results.
 - The percentage of persons with HIV test results remained relatively stable between 2011 and 2012 at 83–84% among persons of all ages and 91–92% among persons 25–44 years of age (Table 11).
7. Genotype surveillance coverage: In 2012, genotype surveillance coverage was 94%.
 - Genotype surveillance coverage has increased steadily since 2004. Thirty-seven states met or exceeded the national target of 94% genotype surveillance coverage in 2012 (Table 13). Among genotyped cases during 2010–2012, 21% were clustered, suggesting recent transmission (Table 23).

Tuberculosis in the United States

In 2012, the reported number of TB cases (9,945) and case rate (3.2 cases per 100,000) both decreased; these represented declines of 5.4% and 5.9%, respectively, compared to 2011. Since the 1992 TB resurgence peak in the United States, the number of TB cases reported annually has decreased by 63% (Table 1).

TB case rates vary by well-known factors such as age, race and ethnicity, and country of origin. The proportion of total cases occurring in foreign-born persons has been increasing since 1993. In 2012, 63% of TB cases occurred in foreign-born persons. Foreign-born persons have accounted for the majority of TB cases in the United States every year since 2001. Moreover, the case rate among foreign-born persons in 2012 was approximately 11 times higher than among U.S.-born persons (Table 5).

Tuberculosis deaths increased by 7.6%, from 529 deaths in 2009 to 569 deaths in 2010. The number of TB deaths reported annually has decreased by 66% since 1992 (Table 1).

Age

Since 1993, TB case rates have declined annually for almost all age groups. In 2012, TB case rates continued the trend with declines in all age groups. The highest burden of disease continues to be among older adults. In 2012, adults aged 65 years and older had a case rate of 5.1 cases per 100,000, while children aged ≤ 14 years had the lowest rate at 0.8 cases per 100,000 (Table 4).

Race and Ethnicity

In 2003, the race and ethnicity category “non-Hispanic, Asian or Pacific Islander” was split into “non-Hispanic Asian” and “non-Hispanic Native Hawaiian or Other Pacific Islander.” In 2012, Asians had the highest TB case rate at 18.9 cases per 100,000, which was a slight decrease from 20.2 in 2011. Native Hawaiians or Other Pacific Islanders had the second-highest TB case rate at 12.3 cases per 100,000, which is a decrease compared to 15.9 cases per 100,000 reported in 2011. Owing to low case numbers among Native Hawaiians or other Pacific Islanders, case rates fluctuate and must be interpreted with caution (Table 2).

Since 1993, TB case rates have declined in almost all racial and ethnic groups: among Hispanic or Latinos, the decline has been from 19.9 to 5.3 cases per 100,000 (-54%); among non-Hispanic blacks or African Americans, from 28.5 to 5.8 cases per 100,000 (-80%); among American Indian or Alaska Natives, from 14.0 to 6.3 cases per 100,000 (-55%); among non-Hispanic whites, from 3.6 to 0.8 cases per 100,000 (-78%); and

among Asians, from 41.2 to 18.9 cases per 100,000 (-54%). In 2012, the TB case rate for Asians remained approximately three times higher than that for Hispanics or blacks or African Americans (Table 2).

Origin of Birth

Since 1993, the TB case rate among U.S.-born persons has declined annually. In 2012, the TB case rate for U.S.-born persons was 1.4 cases per 100,000, representing an 81% decrease from 7.4 cases per 100,000 in 1993. The TB case rate among foreign-born persons also declined during the same interval, though the decline was less substantial. In 2012, the TB case rate among foreign-born persons was 15.9 cases per 100,000, representing a 53% decrease from 34.0 cases per 100,000 in 1993 (Table 5).

The proportion of TB cases among persons born in the United States has also declined annually since 1993. In 2012, 37% of TB cases were among U.S.-born persons compared to 69% in 1993 (Table 5). In 31 states, $\geq 50\%$ of TB cases occurred among foreign-born persons. In 18 states (Arizona, California, Connecticut, Hawaii, Idaho, Kansas, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New York, Oregon, Utah, Vermont, Virginia, Washington), $\geq 70\%$ of TB cases occurred among foreign-born persons (Table 34).

Country of Origin and World Region

From 2007 through 2012, the top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, India, Vietnam, and China (Table 6). The distribution of TB cases by world region of origin reflects immigration patterns among persons settling in the United States.¹ Of the 6,274 TB cases reported among foreign-born persons in 2012, 42% occurred among persons born in the Americas region, and 23% occurred among persons born in the Western Pacific region (Table 20). From 1993 through 2012, the proportion of cases increased among persons born in the Eastern Mediterranean region (3% in 1993 to 4% in 2012), the Southeast Asia region (6% in 1993 to 15% in 2012), and the Africa region (2% in 1993 and 9% in 2012) (Table 20).

Multidrug-resistant Tuberculosis

From 1993, when the RVCT was expanded to include drug-susceptibility results, the proportion of patients with primary multidrug-resistant (MDR) TB, which is defined as no previous history of TB disease and resistance to at least isoniazid and rifampin, decreased from 3% to 1% by 1998. During 2009 through 2012, the per-

¹ United States Department of Homeland Security. 2010 Yearbook of Immigration Statistics. In: U.S. Department of Homeland Security, Office of Immigration Statistics; 2011.

centage of primary MDR TB cases has remained stable at approximately 1%. Since 1997, the percentage of U.S.-born patients with primary MDR TB has remained below 1%. However, of the total number of reported primary MDR TB cases, the proportion occurring in foreign-born persons increased from 25% (103 of 407) in 1993 to 86% (62 of 72) in 2012 (Table 9).

Extensively Drug-resistant Tuberculosis

CDC has included an updated case count of extensively drug-resistant (XDR) TB cases from 1993 to 2012 in the slide set that accompanies this report. XDR TB is defined as resistance to isoniazid and rifampin, plus resistance to any fluoroquinolone and at least one of three injectable second-line anti-TB drugs (i.e., amikacin, kanamycin, or capreomycin).^{2,3} Two cases were reported as XDR TB in 2012, compared to 6 cases in 2011, 1 case in 2010, 0 cases in 2009, and 5 in 2008. Of the 14 XDR TB cases reported since 2008, 13 were among foreign-born persons.

Tuberculosis Therapy

The proportion of TB patients prescribed an initial treatment regimen including at least isoniazid, rifampin, and pyrazinamide increased from 72% in 1993 to 87% in 2012. The proportion of patients who completed therapy within 1 year increased from 64% in 1993 to 88% in 2010 (the latest year for which complete outcome data are available). The proportion of persons receiving directly observed therapy for at least a portion of the treatment duration also increased from 36% in 1993 to 90% in 2010, the latest year for which complete outcome data are available (Table 10).

HIV Status

Between 2011 and 2012, the proportion of persons with TB who reported HIV test results has remained high at 83–84% for all ages and 91–92% for persons aged 25–44 (Table 11). The percentage of persons with TB who reported HIV test results and who were HIV-positive was 7% in 2012, representing a decline from 8% in 2011 (Table 11). Among persons 25–44 years of age, 12% of persons with TB who reported HIV test results were HIV-positive in 2012, increasing from 11% in 2011 (Table 11). The percentages have declined since 1993, when 49% of persons with TB of all ages with HIV test results reported HIV-positive results; among persons between 25–44 years of age, the percentage

was 64% in 1993 (Table 11). The American Thoracic Society and the Infectious Diseases Society of America recommend that all TB patients be counseled and tested for HIV.⁴

Genotyping

TB genotyping is a laboratory-based analysis of the genetic material of the bacteria that cause TB disease. In the United States, routine genotyping of isolates from culture-positive TB cases started in 2004 by CDC's National Tuberculosis Genotyping Service (NTGS). TB genotyping surveillance coverage, defined as the proportion of culture-positive TB cases with a genotype result, has increased from 53% in 2004 to 94% in 2012 (Table 13). TB genotype clusters are defined as two or more cases with matching genotypes in the same county during a 3-year time period. Cases that are clustered suggest recent transmission, while unique cases are more likely attributable to reactivation of disease that was acquired in the past. Among genotyped cases during 2010–2012, 21% were clustered (Table 23). During this period, the percentage of clustered cases among U.S.-born persons with TB was 34%, compared to 14% among foreign-born persons with TB (Table 22). In 2012, 1.7% of genotyped cases were due to infections with *Mycobacterium bovis*; most were in foreign-born persons (Table 15).

United States Affiliated Pacific Islands (USAPI)

The USAPI consist of six jurisdictions in the Pacific Ocean: American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau. As a result of their affiliations with the United States, the USAPI are among the recipients of U.S. federal government funding, including CDC cooperative agreement funding for domestic TB control program activities. In 2012, the USAPI had 416 reported cases of TB. Among these, 224 (54%) were male, 102 (25%) were aged less than 15 years and 117 (28%) were aged 25–44 years. In addition, 61 (15%) were not born in the USAPI jurisdictions or the United States, and of those, 50 (82%) emigrated from the Republic of the Philippines. Some other data highlights of the 416 reported USAPI cases are that 332 (80%) were diagnosed with pulmonary disease only, 185 (44%) were positive culture for *Mycobacterium tuberculosis*, 4 (1%) had MDR TB, and 150 (36%) were unemployed. Genotype surveillance coverage for USAPI was 79% in 2012.

² Centers for Disease Control and Prevention. Revised Definition of Extensively Drug-Resistant Tuberculosis. MMWR Morb Mortal Wkly Rep 2006;55:1176.

³ Extensively drug-resistant tuberculosis (XDR-TB): recommendations for prevention and control. Wkly Epidemiol Rec 2006;81:430-2.

⁴ CDC. Treatment of tuberculosis. American Thoracic Society, CDC, and Infectious Diseases Society of America. MMWR 2003;52(No. RR-11).

Puerto Rico

In 2012, the Commonwealth of Puerto Rico reported 71 TB cases to CDC, a case rate of 1.9 per 100,000 persons. Among those cases, 52 (73%) were male, three (4%) were aged less than 25 years, and 50 (70%) were aged 45 years and older. Of the 71 reported cases, nine were born outside of Puerto Rico, and of those, seven (78%) emigrated from the Dominican Republic. The majority of reported cases (86%) were diagnosed with pulmonary disease only, 87% were positive culture for *Mycobacterium tuberculosis*, 1% had MDR TB, and 35% were unemployed. Genotype surveillance coverage for Puerto Rico was 90% in 2012.

Summary

Both the absolute number of TB cases and the TB case rate in the United States continued to decrease in 2012. With 9,945 total cases, representing a case rate of 3.2 cases per 100,000 persons, 2012 had the lowest number of reported TB cases since reporting began in 1953. Furthermore, the number of TB cases reported in 2012 and the corresponding case rate decreased by approximately 5–6% from the previous year. However, despite successful declines in TB cases and case rates over the past 60 years, it is unlikely that current TB control and prevention efforts will result in TB elimination (<1 case per 1,000,000 population)⁵ in this century.⁶

As TB incidence declines, achieving elimination will depend on both reducing transmission of TB in the United States and controlling the importation of TB through immigration and international travel. Genotyping, a laboratory-based analysis of the genetic material of the bacteria that cause TB disease, is useful for distinguishing between these two sources of future TB cases and can help inform public health interventions. Cases occurring in genotype clusters suggest recent transmission and populations in which clustering is more common may benefit from intensified interventions to reduce transmission. For instance, during 2010–2012, clustering was higher among cases in persons reported as homeless compared to those who were not (44% versus 20%), among persons who drank alcohol excessively compared to those who did not (37% versus 19%), and among those who reported illicit drug use compared to those who did not (39% versus 21% for injecting drug use, 43% versus 19% for non-injecting drug use). Furthermore, among different racial and ethnic groups, American Indians and Alaskan

Natives had the highest proportion of clustered cases (49%), while Asians had the lowest (12%). Finally, the proportion of clustered cases was higher among U.S.-born persons than among foreign-born persons (34% versus 14%).

The small proportion of genotypically clustered TB cases in foreign-born persons suggests a large proportion of cases attributable to reactivation of disease acquired in the past. Since 2002, more than half of all TB cases reported in the U.S. have occurred among foreign-born persons. Focusing on LTBI testing and treatment of foreign-born persons would likely be more successful in decreasing TB among this group.⁷

Continuing the decline in TB cases in the United States will require sustained focus on domestic TB control activities and further support of global TB control initiatives.⁸ Improving TB control among groups at high risk for transmission and foreign-born persons is imperative as the United States strives to achieve TB elimination.⁹

⁵ Ending Neglect: The Elimination of Tuberculosis in the United States. Washington, DC: National Academy Press; 2000.

⁶ Hill AN, Becerra JE, Castro KG. Modelling tuberculosis trends in the USA. *Epidemiol Infect* 2012;140(10):1862.

⁷ Cain KP, Benoit SR, Winston CA, MacKenzie WR. Tuberculosis among foreign-born persons in the United States. *JAMA*. 2008;300(4):405-12.

⁸ Centers for Disease Control and Prevention. Trends in tuberculosis – United States 2011. *MMWR Morb Mortal Wkly Rep* 2012;61(11):181-5.

⁹ Centers for Disease Control and Prevention. CDC's response to ending neglect: the elimination of tuberculosis in the United States 2002. <http://www.cdc.gov/tb/publications/reportsarticles/iom/iomresponse/default.htm>.

Technical Notes

Technical Notes

National Tuberculosis Surveillance System

Reporting areas (i.e., the 50 states, the District of Columbia, New York City, Puerto Rico, and other U.S. jurisdictions in the Pacific and Caribbean¹) report tuberculosis (TB) cases to CDC's National TB Surveillance System (NTSS) using a standard case report form, Report of Verified Case of Tuberculosis (RVCT). TB cases are verified according to the Tuberculosis Case Definition for Public Health Surveillance in Appendix A. TB cases are reported and counted according to the Recommendations for Reporting and Counting Tuberculosis Cases in Appendix B.

New features of the 2012 Report

The 2012 report has 20 new tables that feature data from new variables collected in the NTSS and from the Tuberculosis Genotyping Information Management System (TB GIMS):

- National Tuberculosis Genotyping Surveillance Coverage: United States, 2004–2012 (Table 13)
- National Tuberculosis Genotyping Surveillance Coverage: United States Affiliated Pacific Islands, 2004–2012 (Table 14)
- Genotyped Tuberculosis Cases with *Mycobacterium bovis* by Origin of Birth: United States, 2004–2012 (Table 15)
- Tuberculosis Risk Factors by Origin and Race/Ethnicity: United States, 2012 (Table 21)
- Epidemiologic Characteristics of Cases in GENType Clusters by Alert Levels Based on Log-likelihood Ratios (LLR): United States, 2010–2012 (Table 22)
- Tuberculosis Cases by Cluster Status: United States, 2010–2012 (Table 23)
- Tuberculosis Cases and Clusters by Cluster Size: United States, 2010–2012 (Table 24)
- Ten Most Frequently Reported GENTypes Among Genotyped Tuberculosis Cases: United States, 2010–2012 (Table 25)
- Five Most Frequently Reported GENTypes Among Genotyped Tuberculosis Cases: United States Affiliated Pacific Islands, 2010–2012 (Table 26)
- Tuberculosis Cases and Percentages by Reason Tuberculosis Therapy Stopped and Type of Move: United States, 2010 (Table 27)
- Deaths Prior to Tuberculosis Diagnosis or During Tuberculosis Therapy by Age Group: United States, 2010 (Table 28)
- Sputum Culture Conversion by Age Group: United States, 2010 (Table 29)
- Tuberculosis Cases and Percentages in Foreign-born Persons by Immigration Status at First Entry: Reporting Areas, 2012 (Table 36)
- Tuberculosis Risk Factors: Reporting Areas, 2012 (Table 40)
- Primary Reasons for Tuberculosis Evaluation: Reporting Areas, 2012 (Table 41)
- Tuberculosis Cases and Percentages by Residence in and Type of Correctional Facilities, Age > 15: Reporting Areas, 2012 (Table 42)
- Tuberculosis Diagnostic Tests by Type of Laboratory: Reporting Areas, 2012 (Table 52)
- Tuberculosis Genotyping Surveillance Coverage: Reporting Areas, 2012 (Table 53)
- County-based Tuberculosis Genotype Clusters Based on GENType: Reporting Areas, 2010–2012 (Table 54)
- Reason Therapy Was Extended Beyond 12 Months: Reporting Areas, 2010 (Table 58)

TB Case Definition

In 2009, the case definition was modified. TB cases are verified according to the following specified laboratory and clinical criteria.

Laboratory criteria for diagnosis

A case may be verified by the laboratory case definition with at least one of the following criteria: 1) isolation of *M. tuberculosis* complex from a clinical specimen, OR 2) demonstration of *M. tuberculosis* complex from a clinical specimen by nucleic acid amplification test (NAAT), OR 3) demonstration of acid-fast bacilli (AFB) in a clinical specimen when a culture has not been or cannot be obtained or is falsely negative or contaminated.

Clinical case criteria

A case may be verified by the clinical case definition in the presence of ALL of the following clinical criteria: 1) a positive tuberculin skin test (TST) result or positive interferon gamma release assay (IGRA) result for *M. tuberculosis*, AND 2) other signs and symptoms compatible with TB (e.g., abnormal chest radiograph, abnormal chest computerized tomography scan or other chest imaging study, or clinical evidence of current disease, AND 3) treatment with two or more anti-TB drugs, AND 4) a completed diagnostic evaluation.

Provider Diagnosis

Provider diagnosis is not a component of the case definition for TB as described in Appendix A. However,

¹Other U.S. jurisdictions include American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, the Republic of Palau, and U.S. Virgin Islands.

when cases of TB are diagnosed but do not meet either the clinical or laboratory case definition, reporting areas have the option of verifying TB cases based on provider diagnosis as described in Appendix B. Through 2008, the RVCT did not collect information on IGRA results. If an IGRA was performed in lieu of the TST, then the RVCT would have indicated that the TST was not performed. Thus, culture- and smear-negative cases without a TST that are diagnosed by a positive IGRA result prior to 2008 were considered to have been confirmed by provider diagnosis. However, starting in 2009, positive results for an IGRA are included as part of the clinical case definition for TB confirmation. Anergic patients with a clinical presentation consistent with TB but without laboratory evidence of *M. tuberculosis* complex would also be an example of provider diagnosis and one which has not changed over time.

TB Case Verification Criteria Calculation

The software for TB surveillance developed by CDC includes a calculated variable for TB case verification called “Vercrit,” which was modified in 2009. The new variables, **Nucleic Acid Amplification Test Result, Interferon Gamma Release Assay (IGRA) for *Mycobacterium tuberculosis* at Diagnosis, and Initial Chest CT Scan or Other Chest Imaging Study** were added in the Vercrit calculation.

“Vercrit” is calculated by using the following criteria in hierarchical order:

1. Positive culture
2. Positive nucleic acid amplification test
3. Positive acid-fast bacilli test
4. Clinical case confirmation
5. Provider diagnosis

Changes in Reporting and Counting TB Cases

In 2009, the Recommendations for Reporting and Counting Tuberculosis Cases in Appendix B were modified. TB cases that are verified but not countable for morbidity statistics can now be reported to CDC as a measure of programmatic and case management burden. However, data on noncountable TB cases are incomplete and not included in this report.

The recommendations for counting TB cases among immigrants, refugees, and foreign visitors were revised based on the recommendations in the 2007 Technical Instructions for Tuberculosis Screening and Treatment for Panel Physicians.² Regardless of Panel Physician

²CDC. *Immigration Requirements: Technical Instructions for Tuberculosis Screening and Treatment, 2007*. Atlanta: CDC, Division of Global Migration and Quarantine, revised September 2007; http://www.cdc.gov/ncidod/dq/pdf/ti_tb_8_9_2007.pdf.

classification or citizenship status, immigrants and refugees examined after arriving in the United States and diagnosed with clinically active TB requiring anti-TB medications should be reported and counted by the locality of their current residence at the time of diagnosis. Foreign visitors diagnosed with TB, receiving anti-TB therapy, and planning to remain in the United States for 90 days or more should be reported and counted by the locality of current residence.

New and Expanded RVCT Variables

Data on demographic, clinical, laboratory, initial treatment, and treatment outcomes are collected through the RVCT’s three data collection reports:

1. Report of Verified Case of Tuberculosis: for all patients with a verified case of TB.
2. Initial Drug Susceptibility Report (Follow-Up Report 1): for all patients who had a culture that was positive for *M. tuberculosis* complex.
3. Case Completion Report (Follow-Up Report 2): for all patients who were alive when TB was diagnosed.

In 2009, the RVCT was modified and expanded to include 11 additional variables. Modifications to the RVCT accommodate the changing epidemiology of TB in terms of risk factors, new drug treatments, and enhanced laboratory capacity for diagnostic tests. The 2012 Report contains new tables reflecting the addition of these variables.

The instructions for completing the RVCT forms and the definitions for all data items are available at: CDC. Report of Verified Case of Tuberculosis (RVCT) Instruction Manual. Atlanta, GA: U.S. Department of Health and Human Services, CDC, 2009. <http://www.cdc.gov/tb/programs/rvct/InstructionManual.pdf>.

Tabulation and Presentation of TB Data

This report presents summary data for TB cases reported to CDC in 2012. TB cases are tabulated by year in which the reporting area verified that the patient had TB and included the patient in its official annual TB case count. Since 2004, the published report has reflected updated information on the numbers of cases of confirmed TB for each year from 1993 onward. Totals for the United States include data from the 50 states, the District of Columbia (DC), and New York City.

Trend data are presented in Tables 1 through 15. Age group tabulations are based on the patient’s age in the month and year the patient was reported to the health department as a suspected TB case. State or metro-

politan area data tabulations are based on the patient's residence at diagnosis of TB.

Rates

Rates are expressed as the number of cases reported each calendar year per 100,000 persons. Population denominators used in calculating TB rates were based on official census and midyear postcensal estimates from the U.S. Census Bureau. In Tables 1, 30, and 31, the U.S. total populations for 2000–2009 were taken from the U.S. Census Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico (April 1, 2000 to July 1, 2009); populations for 2010–2012 were taken from the U.S. Census Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico (April 1, 2010 to July 1, 2012).

In 2003, two modifications were made to the RVCT form: 1) entries for multiple race (two or more races reported for a person) were allowed, and 2) the previous category of “Asian/Pacific Islander” was divided into “Asian” and “Native Hawaiian or Other Pacific Islander.” To calculate rates in Table 2, denominators for 2000–2011 were obtained from the Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States (April 1, 2000 to July 1, 2009) and Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States (April 1, 2010 to July 1, 2012). The population source for nativity is the Current Population Survey and is used to calculate case rates for U.S. and foreign-born TB. This population source includes populations for the 50 states and D.C., those born abroad of U.S. parents, and those born in U.S. outlying areas (the U.S.-affiliated areas) as the U.S.-born population.

To calculate rates for Table 4, denominators were obtained from the Annual Estimates of the Resident Population by Sex and Five-Year Age Groups for the United States (April 1, 2000 to July 1, 2009) and Annual Estimates of the Resident Population for Selected Age Groups by Sex: (April 1, 2010 to July 1, 2012). Denominators for computing 2012 rates in Table 17 were obtained from U.S. Census Monthly Postcensal Resident Population, by single year of age, sex, race, and Hispanic origin. In 2004, the method for calculating the annual percentage change in the TB case rate was modified. Unrounded figures are applied to calculate the percentage change in the case rate.

In Table 5, the populations for U.S.-born and foreign-born persons for 1993 and 1994 were obtained from Quarterly Estimates of the United States Foreign-born

and Native Resident Populations: April 1, 1990–July 1, 1999. Denominators for computing the 1995–2012 rates were based on extrapolations from the U.S. Census Current Population Survey (July Supplement).

Mortality Data

Official TB mortality statistics for the United States are compiled by the National Center for Health Statistics (NCHS), CDC. The annual mortality rate is calculated as the number of deaths due to TB in that year, divided by the estimated population for the year, multiplied by 100,000 (Table 1). The number of deaths for 2010 was obtained from the NCHS, National Vital Statistics Report, Vol. 61, No. 4, May 8, 2013. The finalized numbers of deaths for 2011 and 2012 were not available at the time of this publication.

Drug Resistance

Drug-resistance patterns are displayed in separate tables with drug-resistance trend data by previous TB status and origin of birth. Isoniazid (INH) resistance and multidrug resistance (MDR) are shown in Tables 8 and 9, respectively.

Completion of Tuberculosis Therapy

Tables 10, 59, 60, and 61 present rates of completion of TB therapy (COT). Data collected by RVCT Follow Up Report-2 on date and reason therapy stopped (e.g., patient completed therapy) were used to calculate rates of COT. Cases were stratified by the indicated length of therapy, based on American Thoracic Society/CDC/Infectious Diseases Society of America treatment guidelines³ in effect during the period covered, and the patient's initial drug-susceptibility test results, age, and site of disease.

In Table 60, the first column shows the total number of cases reported during 2010. The remaining columns are grouped under three headings: therapy of 1 year or less indicated therapy, greater than 1 year indicated, and overall. Patients eligible to complete therapy within 1 year had to have been alive at diagnosis, and initiated therapy with at least one drug. Eligible patients did not have rifampin resistance, did not die during therapy, did not move out of country during treatment, and did not have meningeal TB, regardless of age. In addition, TB patients under the age of 15 were not eligible to complete therapy within 1 year if they had disseminated disease (defined as miliary tuberculosis and/or a positive tuberculosis blood culture). Patients with culture-negative disease, those with an unknown culture status,

³ CDC. Treatment of Tuberculosis, American Thoracic Society, CDC, and the Infectious Diseases Society of America. *MMWR* 2003;52(No.RR-11):1-77.

and those with culture-positive disease but unknown initial drug-susceptibility test results were included under the category of 1 year or less of therapy indicated.

In Table 60, each group under an indicated length of therapy has an initial column showing the number of cases in persons who were alive at diagnosis and prescribed an initial regimen of one or more drugs, and who did not die during therapy. This number was used as the denominator in COT rate calculations.

COT rates, shown as percentages, were only calculated for areas reporting reason therapy stopped for at least 90% of cases shown in the overall column. For the group with an indicated length of therapy of 1 year or less, rates are shown for both COT in 1 year or less (COT ≤ 1 year) and for COT, regardless of duration (i.e., duration of therapy ≤ 1 year, >1 year, or unknown). For COT ≤ 1 year, the numerator included only those patients completing therapy in ≤ 366 days (based on the dates therapy started and stopped). Patients with missing dates were classified as “treatment not completed” for this calculation.

Rates of COT, regardless of duration, were calculated by dividing the number of patients reported as having completed therapy by the number of total eligible patients. Patients with an outcome other than completed therapy (i.e., moved, lost, refused treatment, or other) were classified as “treatment not completed.” Patients with an unknown outcome were also classified as “treatment not completed.” For the remaining two groups of indicated therapy length (> 1 year and overall), only rates of COT, regardless of duration, are presented. Table 10 provides rates for COT ≤ 1 year and for COT, regardless of duration, only for the group with an indicated therapy of ≤ 1 year. Table 59 presents rates of COT by ethnicity and non-Hispanic race and by state for those in whom therapy ≤ 1 year was indicated.

Because streptomycin is no longer being used as part of the standard treatment for TB disease, streptomycin has been removed from the calculated variable for initial drug regimen. Consequently, a separate column for the treatment regimen of isoniazid, rifampin, pyrazinamide (IRZ), ethambutol, streptomycin (E/S) is no longer reported in Tables 10 and 49.

Site of TB Disease

Miliary disease is classified as both an extrapulmonary and a pulmonary form of TB (Tables 7, 38, and 39). In publications prior to 1997, miliary disease was classified as extrapulmonary TB unless pulmonary disease was reported as the major site of TB disease. Begin-

ning in 2009, miliary disease could not be classified as a site of TB disease because it is a clinical or radiologic finding and should be recorded under **Initial Chest Radiograph**, **Initial Chest CT Scan**, or **Other Chest Imaging Study**.

Reporting of HIV Status

Information on HIV status for persons with TB is shown in Tables 11 and 51; Table 11 additionally shows trend data for persons aged 25–44 years. The completeness of reporting on HIV status among persons with TB has significantly improved to 92% of TB cases tested among persons aged 25–44 years in 2012; however, this variable is still underreported among jurisdictions. Data on the HIV-infection status of persons with reported TB cases should be interpreted with caution. These data are not representative of all TB patients with HIV infection.

HIV testing is performed after a patient receives counseling and gives informed consent. TB patients who are tested anonymously may choose not to share the results of HIV testing with their health care provider. TB patients managed in the private sector may receive confidential HIV testing, but results may not be reported to the TB program in the health department. In addition, many factors may influence HIV testing of TB patients, including the extent to which testing is targeted or routinely offered to specific groups (e.g., 25- to 44-year-old males, injecting drug users, homeless persons), and the availability of and access to HIV testing services. These data may overrepresent or underrepresent the proportion of TB patients known to be HIV infected in a reporting area.

Primary Occupation for the Past Year

Table 48 now reflects the new 2009 RVCT variable, **Primary Occupation Within the Past Year**, which replaces the **Occupation Within Past 24 months of TB Diagnosis** in previous reports. Following the 2009 RVCT revision, “Multiple Occupation” was removed and the “Retired” and “Not Seeking Employment” categories were added.

Reason Therapy Stopped

Tables 12 and 57 report a new 2009 RVCT data entry option; these tables now include a patient’s adverse reaction to anti-TB drug therapy as an option for the reason therapy stopped. The 2009 RVCT revision removed the option of “Moved” as a valid response to the variable **Reason Therapy Stopped** and this option is not reported after 2009.

Metropolitan Statistical Areas

Tables 63 through 67 present data by metropolitan statistical areas (MSAs) with an estimated 2012 population of 500,000 or more. MSAs are defined by the federal Office of Management and Budget, and the definitions were based on the application of the 2010 OMB standards to 2010 Census and 2006-2010 American Community Survey data announced as of February 2013 (<http://www.whitehouse.gov/sites/default/files/omb/bulletins/b-13-01.pdf>).

The MSA definitions apply to all areas except the six New England states; for these states, the New England County Metropolitan Areas (NECMAs) are used. MSAs are named for a central city in the MSA or NECMA, may include several cities and counties, and may cross state boundaries. For example, the TB cases and case rates presented for the District of Columbia in Table 30 include only persons residing within the geographic boundaries of the District. However, the TB cases and case rates for the Washington, D.C., MSA (Table 63) include persons residing within the several counties in the metropolitan area, including counties in Maryland, Virginia, and West Virginia.

A city/MSA with incomplete or unavailable data was not included in the tables and some cities' or MSAs' total numbers may be underreported owing to missing information.

National Tuberculosis Genotyping Service (NTGS)

NTGS laboratories primarily use two genotyping methods: spoligotyping and MIRU-VNTR. Both methods require only a small amount of culture material, provide digital results, and are relatively quick. IS6110-restriction fragment length polymorphism (IS6110-RFLP) and retrospective 24-locus MIRU-VNTR for older isolates can be performed, if requested, and may help in further differentiating genotype clusters. All isolates are prepared for long-term storage at genotyping laboratories or CDC.

Tuberculosis Genotyping Information Management System (TB GIMS)

In March 2010, TB GIMS was launched by CDC as a secure Web-based system to support ongoing use of TB genotyping data in TB control activities. TB GIMS facilitates systematic data collection of TB genotyping results and integrates genotyping results with epidemiologic data collected by the National TB Surveillance System (NTSS) to form a national and centralized database. Primary users of TB GIMS include TB laboratories that submit isolates for genotyping, national CDC-contracted genotyping laboratories, state and local TB control programs, and CDC that apply this informa-

tion for TB control activities.

Genotyping results from the national genotyping laboratories or CDC are uploaded into TB GIMS as they become available. Line-listed data from the National TB Surveillance System are also uploaded into TB GIMS weekly. Once genotyping results have been linked to individual patient surveillance data in TB GIMS, the record is considered complete. Complete records are essential for most of the applications of TB genotyping, including all reports and maps as well as using the outbreak detection system to identify potential chains of transmission and outbreaks.

There have been 13 system updates adding new reports, data management functions, and other tools since TB GIMS was released in March 2010. As of June 2013, there were 446 local, state, and federal users of the system.

Genotype Clustering

A genotype cluster consists of two or more cases in a jurisdiction during a specified time period with *M. tuberculosis* isolates that share matching genotypes. The jurisdiction and time period used vary based on the specific application. Cases that are part of the same genotype cluster are likely to be related by TB transmission in some way; however, the cases may not be directly related (i.e., one case did not necessarily give TB to another case in the cluster) or recently related (i.e., both cases may have gotten TB from the same person, but the exposure may have happened years ago). Therefore, while we use genotype clustering to identify likely TB transmission, transmission must be confirmed using field data from contact investigations or other sources. In TB GIMS, clustering is defined as 2 or more cases with matching genotypes (spoligotype and 24-locus MIRU-VNTR) in a single county within a 3-year time period.

Mycobacterium bovis

Mycobacterium bovis can be defined on the basis of spoligotyping results; spoligotyping is a tool for differentiating *M. bovis* from *M. tuberculosis*. The spoligotyping-based definition requires either (1) the absence of spacers 3, 9, 16, and 39–43; the presence of at least 1 of the spacers 29–32; and the presence of at least 1 of the spacers 33–36; or (2) the absence of spacers 3, 9, 16, and 39–43 and 2 copies of the repeated sequence at MIRU locus 24.

Morbidity Trend Tables

Table 1. Tuberculosis Cases, Case Rates per 100,000 Population, Deaths, and Death Rates per 100,000 Population, and Percent Change: United States, 1953–2012

Year	Tuberculosis Cases				Tuberculosis Deaths			
	Number	Rate	Percent Change		Number ¹	Rate ¹	Percent Change	
			Number	Rate			Number	Rate
1953	84,304	52.6	--	--	19,707	12.4	--	--
1954	79,775	48.9	-5.4	-7.0	16,527	10.2	-16.1	-17.7
1955	77,368	46.6	-3.0	-4.7	15,016	9.1	-9.1	-10.8
1956	69,895	41.4	-9.7	-11.1	14,137	8.4	-5.9	-7.7
1957	67,149	39.0	-3.9	-5.8	13,390	7.8	-5.3	-7.1
1958	63,534	36.3	-5.4	-6.9	12,417	7.1	-7.3	-9.0
1959	57,535	32.4	-9.4	-10.7	11,474	6.5	-7.6	-8.5
1960	55,494	30.7	-3.5	-5.2	10,866	6.0	-5.3	-7.7
1961	53,726	29.2	-3.2	-4.9	9,938	5.4	-8.5	-10.0
1962	53,315	28.6	-0.8	-2.1	9,506	5.1	-4.3	-5.6
1963	54,042	28.6	1.4	0.0	9,311	4.9	-2.1	-3.9
1964	50,874	26.5	-5.9	-7.3	8,303	4.3	-10.8	-12.2
1965	49,016	25.2	-3.7	-4.9	7,934	4.1	-4.4	-4.7
1966	47,767	24.3	-2.5	-3.6	7,625	3.9	-3.9	-4.9
1967	45,647	23.0	-4.4	-5.3	6,901	3.5	-9.5	-10.3
1968	42,623	21.2	-6.6	-7.8	6,292	3.1	-8.8	-11.4
1969	39,120	19.3	-8.2	-9.0	5,567	2.8	-11.5	-9.7
1970	37,137	18.1	-5.1	-6.2	5,217	2.6	-6.3	-7.1
1971	35,217	17.0	-5.2	-6.1	4,501	2.2	-13.7	-15.4
1972	32,882	15.7	-6.6	-7.6	4,376	2.1	-2.8	-4.5
1973	30,998	14.6	-5.7	-7.0	3,875	1.8	-11.4	-14.5
1974 ²	30,122	14.1	-2.8	-3.4	3,513	1.7	-9.3	-5.6
1975	33,989	15.7	--	--	3,333	1.6	-5.1	-5.9
1976	32,105	14.7	-5.5	-6.4	3,130	1.5	-6.1	-6.3
1977	30,145	13.7	-6.1	-6.8	2,968	1.4	-5.2	-6.7
1978	28,521	12.8	-5.4	-6.6	2,914	1.3	-1.8	-7.1
1979 ³	27,669	12.3	-3.0	-3.9	2,007	0.9	-31.1	-30.8
1980	27,749	12.2	0.3	-0.7	1,978	0.9	-1.4	0.0
1981	27,373	11.9	-1.4	-2.3	1,937	0.8	-2.1	-11.1
1982	25,520	11.0	-6.8	-7.7	1,807	0.8	-6.7	0.0
1983	23,846	10.2	-6.6	-7.4	1,779	0.8	-1.5	0.0
1984	22,255	9.4	-6.7	-7.5	1,729	0.7	-2.8	-12.5
1985	22,201	9.3	-0.2	-1.1	1,752	0.7	1.3	0.0
1986	22,768	9.5	2.6	1.6	1,782	0.7	1.7	0.0
1987	22,517	9.3	-1.1	-2.0	1,755	0.7	-1.5	0.0
1988	22,436	9.2	-0.4	-1.3	1,921	0.8	9.5	14.3
1989	23,495	9.5	4.7	3.7	1,970	0.8	2.6	0.0
1990	25,701	10.3	9.4	8.2	1,810	0.7	-8.1	-12.5
1991	26,283	10.4	2.3	0.9	1,713	0.7	-5.4	0.0
1992	26,673	10.4	1.5	0.1	1,705	0.7	-0.5	0.0
1993	25,103	9.7	-5.9	-7.1	1,631	0.6	-4.3	-14.3
1994	24,205	9.2	-3.6	-4.8	1,478	0.6	-9.4	0.0
1995	22,727	8.5	-6.1	-7.2	1,336	0.5	-9.6	-16.7
1996	21,210	7.9	-6.7	-7.8	1,202	0.5	-10.0	0.0
1997	19,751	7.2	-6.9	-8.0	1,166	0.4	-3.0	-20.0
1998	18,287	6.6	-7.4	-8.5	1,112	0.4	-4.6	0.0
1999	17,499	6.3	-4.3	-5.4	930	0.3	-16.4	-25.0
2000	16,309	5.8	-6.8	-7.8	776	0.3	-16.6	0.0
2001	15,945	5.6	-2.2	-3.2	764	0.3	-1.6	0.0
2002	15,055	5.2	-5.6	-6.5	784	0.3	2.6	0.0
2003	14,835	5.1	-1.5	-2.3	711	0.2	-10.2	-33.3
2004	14,498	4.9	-2.3	-3.2	662	0.2	-6.9	0.0
2005	14,061	4.8	-3.0	-3.9	648	0.2	-2.1	0.0
2006	13,727	4.6	-2.4	-3.3	644	0.2	-0.6	0.0
2007	13,282	4.4	-3.2	-4.2	554	0.2	-14.0	0.0
2008	12,895	4.2	-2.9	-3.8	590	0.2	6.5	0.0
2009	11,520	3.8	-10.7	-11.4	529	0.2	-10.3	0.0
2010	11,163	3.6	-3.1	-3.8	569	0.2	7.6	0.0
2011	10,517	3.4	-5.8	-6.5	...	...	...	...
2012	9,945	3.2	-5.4	-6.1	...	...	...	...

¹ Official tuberculosis mortality statistics were compiled by the National Center for Health Statistics, CDC, National Vital Statistics Reports.

² Case data after 1974 are not comparable to prior years due to changes in the surveillance case definition that became effective in 1975.

³ The large decrease in death rate in 1979 occurred because late effects of tuberculosis (e.g., bronchiectasis or fibrosis) and pleurisy with effusion (without mention of cause) are no longer included in tuberculosis deaths.

Percent change in tuberculosis death rates is calculated with rounded figures. See Technical Notes.

Note: 1993 to 2012 tuberculosis case counts and rates updated as of June 25, 2012, using Bridged-Race 1990–1999 Intercensal Population Estimates for 1990–1999 (ftp://ftp.cdc.gov/pub/health_statistics/nchs/datasets/nvss/bridgepop/documentationbridgedintercena1.doc) (accessed August 12, 2013) and Intercensal Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2010 (<http://www.census.gov/popest/data/intercensal/state/state2010.html>) (accessed August 12, 2013) and Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2012 (<http://www.census.gov/popest/data/national/totals/2012/index.html>) (accessed August 12, 2013).

Percentage change results reported to one decimal. Ellipses indicate data not available. See Surveillance Slides #2 and #3.

Table 2. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Hispanic Ethnicity and non-Hispanic Race: United States, 1993–2012

Year	Total Cases	Non-Hispanic														Hispanic or Latino ⁴				Unknown or Missing ⁵									
		American Indian or Alaska Native			Asian ¹			Black or African American			Native Hawaiian or Other Pacific Islander ²			White								Multiple Race ³							
		No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	
1993	25103	272	(1)	14.0	3454	(14)	41.2	8947	(36)	28.5	...	...	...	6903	(27)	3.6	...	...	...	5138	(20)	19.9	389	(2)	...	...	...	389	(2)
1994	24205	327	(1)	16.4	3639	(15)	41.5	8383	(35)	26.2	...	...	...	6572	(27)	3.4	...	...	...	5018	(21)	18.6	266	(1)	...	...	...	266	(1)
1995	22727	320	(1)	15.7	3840	(17)	41.8	7554	(33)	23.2	...	...	...	5972	(26)	3.1	...	...	...	4834	(21)	17.2	207	(1)	...	...	...	207	(1)
1996	21210	287	(1)	13.7	3666	(17)	38.1	7097	(33)	21.5	...	...	...	5487	(26)	2.8	...	...	...	4492	(21)	15.2	181	(1)	...	...	...	181	(1)
1997	19751	264	(1)	12.3	3683	(19)	36.6	6604	(33)	19.7	...	...	...	4824	(24)	2.5	...	...	...	4218	(21)	13.7	158	(1)	...	...	...	158	(1)
1998	18287	254	(1)	11.5	3516	(19)	33.5	5823	(32)	17.0	...	...	...	4475	(24)	2.3	...	...	...	4090	(22)	12.6	129	(1)	...	...	...	129	(1)
1999	17499	242	(1)	10.7	3519	(20)	32.1	5549	(32)	16.0	...	...	...	4227	(24)	2.1	...	...	...	3864	(22)	11.4	98	(1)	...	...	...	98	(1)
2000	16309	232	(1)	11.0	3392	(21)	31.3	5149	(32)	15.0	...	...	...	3638	(22)	1.9	...	...	...	3803	(23)	10.7	95	(1)	...	...	...	95	(1)
2001	15945	226	(1)	10.6	3499	(22)	31.2	4782	(30)	13.7	...	...	...	3346	(21)	1.7	...	...	...	4009	(25)	10.8	83	(1)	...	...	...	83	(1)
2002	15055	185	(1)	8.6	3322	(22)	28.6	4467	(30)	12.7	...	...	...	3042	(20)	1.5	...	...	...	3973	(26)	10.3	66	(0)	...	...	...	66	(0)
2003	14835	179	(1)	8.2	3460	(23)	29.9	4159	(28)	11.7	64	(0)	16.2	2792	(19)	1.4	37	(0)	1.0	4105	(28)	10.3	39	(0)	...	...	...	39	(0)
2004	14498	157	(1)	7.1	3335	(23)	28.0	4069	(28)	11.4	63	(0)	15.6	2631	(18)	1.3	34	(0)	0.9	4181	(29)	10.2	28	(0)	...	...	...	28	(0)
2005	14061	153	(1)	6.8	3201	(23)	26.0	3955	(28)	10.9	54	(0)	13.1	2567	(18)	1.3	45	(0)	1.1	4044	(29)	9.5	42	(0)	...	...	...	42	(0)
2006	13727	164	(1)	7.2	3297	(24)	26.1	3730	(27)	10.2	52	(0)	12.3	2387	(17)	1.2	39	(0)	0.9	4049	(29)	9.2	9	(0)	...	...	...	9	(0)
2007	13282	133	(1)	5.8	3447	(26)	26.5	3477	(26)	9.4	95	(1)	22.1	2207	(17)	1.1	24	(0)	0.6	3875	(29)	8.5	24	(0)	...	...	...	24	(0)
2008	12895	137	(1)	5.9	3395	(26)	25.4	3280	(25)	8.8	69	(1)	15.7	2143	(17)	1.1	43	(0)	1.0	3803	(29)	8.1	25	(0)	...	...	...	25	(0)
2009	11520	101	(1)	4.3	3203	(28)	23.4	2872	(25)	7.6	75	(1)	16.7	1818	(16)	0.9	49	(0)	1.1	3372	(29)	7.0	30	(0)	...	...	...	30	(0)
2010	11163	152	(1)	6.7	3077	(28)	20.8	2678	(24)	7.0	96	(1)	19.2	1759	(16)	0.9	150	(1)	2.7	3232	(29)	6.4	19	(0)	...	...	...	19	(0)
2011	10517	130	(1)	5.7	3064	(29)	20.2	2410	(23)	6.3	81	(1)	15.9	1654	(16)	0.8	152	(1)	2.6	3008	(29)	5.8	18	(0)	...	...	...	18	(0)
2012	9945	146	(1)	6.3	2957	(30)	18.9	2234	(22)	5.8	64	(1)	12.3	1572	(16)	0.8	148	(1)	2.5	2790	(28)	5.3	34	(0)	...	...	...	34	(0)

¹ Asian race category reporting includes Pacific Islander from 1993–2002.

² Native Hawaiian or Other Pacific Islander race first reported separately in 2003.

³ Indicates two or more races reported for a person. Category first reported in 2003. Does not include persons of Hispanic or Latino origin.

⁴ Persons of Hispanic or Latino ethnicity may be of any race or multiple race.

⁵ The higher count for unknown or missing race results for 1993 - 2001 reflect the impact of the transitional period of incorporating new race definitions for Asian, Native Hawaiian, and Multiple Race in 2003.

Note: Rates for 1993–1999 have been updated using Resident Population: Monthly Postcensal Resident Population, by single year of age, sex, race, and Hispanic origin (http://www.census.gov/popest/data/national/asrh/1990s/nat_monthly_resident.html) (accessed August 12, 2013). Denominators for computing 2000–2011 case rates were obtained from the National Population Estimates for the 2000s: Monthly Postcensal Resident Population, by single year of age, sex, race, and Hispanic origin (<http://www.census.gov/popest/data/national/asrh/2000/2009-nat-res.html>) (accessed August 12, 2013) and National Population Estimates for the 2010s: Monthly Postcensal Resident Population, by single year of age, sex, race, and Hispanic origin (<http://www.census.gov/popest/data/national/asrh/2012/2012-nat-res.html>) (accessed August 12, 2013).

Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) do not include persons of Hispanic ethnicity or multiple race.

Data for all years updated through June 10, 2013.

Ellipses indicate data not available.

See Technical Notes.

See Surveillance Slide #10.

Zero % (0) denotes <0.5%.

Table 3. Tuberculosis Cases and Percentages by Hispanic Ethnicity and non-Hispanic Race, and Origin of Birth: United States, 1993–2012

Year	Non-Hispanic																																								Hispanic or Latino ⁴				Unknown or Missing ⁵																																																																																																																																																																																																																																																																																																						
	American Indian or Alaska Native				Asian ¹				Black or African American				Native Hawaiian or Other Pacific Islander ²				White				Multiple Race ³				Hispanic or Latino ⁴				Unknown or Missing ⁵																																																																																																																																																																																																																																																																																																																						
	US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born		US-born		Foreign-born																																																																																																																																																																																																																																																																																																												
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)																																																																																																																																																																																																																																																																																																											
1993	263 (97.0)	8 (3.0)	103 (3.0)	3299 (97.0)	8250 (92.9)	630 (7.1)	28 (63.6)	16 (36.4)	6317 (92.3)	528 (7.7)	1 (50.0)	1 (50.0)	2235 (44.0)	2850 (56.0)	238 (77.3)	70 (22.7)	1994	322 (98.5)	5 (1.5)	133 (3.7)	3443 (96.3)	7576 (91.1)	738 (8.9)	40 (75.5)	13 (24.5)	6009 (92.4)	494 (7.6)	1 (100.0)	0 (0.0)	1989 (40.1)	2966 (59.9)	121 (57.1)	91 (42.9)	1995	314 (98.1)	6 (1.9)	114 (3.0)	3665 (97.0)	6750 (89.4)	797 (10.6)	45 (77.6)	13 (22.4)	5427 (91.1)	529 (8.9)	1 (50.0)	1 (50.0)	1907 (39.6)	2911 (60.4)	118 (60.8)	76 (39.2)	1996	281 (97.9)	6 (2.1)	132 (3.7)	3479 (96.3)	6301 (88.8)	793 (11.2)	37 (77.1)	11 (22.9)	4968 (90.8)	503 (9.2)	1 (100.0)	0 (0.0)	1603 (35.9)	2859 (64.1)	75 (46.0)	88 (54.0)	1997	259 (98.5)	4 (1.5)	132 (3.6)	3494 (96.4)	5718 (86.7)	875 (13.3)	34 (66.7)	17 (33.3)	4255 (88.6)	546 (11.4)	1 (100.0)	0 (0.0)	1464 (34.9)	2727 (65.1)	72 (47.7)	79 (52.3)	1998	249 (98.0)	5 (2.0)	115 (3.3)	3329 (96.7)	4972 (85.5)	845 (14.5)	48 (72.7)	18 (27.3)	3914 (87.6)	553 (12.4)	4 (100.0)	0 (0.0)	1281 (31.5)	2785 (68.5)	51 (44.3)	64 (55.7)	1999	237 (97.9)	5 (2.1)	121 (3.5)	3336 (96.5)	4607 (83.3)	924 (16.7)	40 (80.0)	10 (20.0)	3637 (86.3)	575 (13.7)	5 (71.4)	2 (28.6)	1119 (29.2)	2717 (70.8)	39 (54.2)	33 (45.8)	2000	226 (97.4)	6 (2.6)	115 (3.5)	3217 (96.5)	4107 (79.8)	1038 (20.2)	39 (78.0)	11 (22.0)	3102 (85.3)	534 (14.7)	2 (50.0)	2 (50.0)	1015 (26.8)	2770 (73.2)	42 (50.6)	41 (49.4)	2001	214 (95.1)	11 (4.9)	102 (3.0)	3320 (97.0)	3664 (76.7)	1114 (23.3)	45 (78.9)	12 (21.1)	2787 (83.6)	547 (16.4)	1 (33.3)	2 (66.7)	1025 (25.7)	2995 (74.3)	34 (46.6)	39 (53.4)	2002	183 (98.9)	2 (1.1)	109 (3.3)	3159 (96.7)	3401 (76.4)	1051 (23.6)	34 (77.3)	10 (22.7)	2547 (83.9)	490 (16.1)	3 (33.3)	6 (66.7)	980 (24.8)	2973 (75.2)	25 (48.1)	27 (51.9)	2003	176 (98.3)	3 (1.7)	152 (4.4)	3297 (95.6)	3087 (74.4)	1064 (25.6)	50 (78.1)	14 (21.9)	2369 (85.0)	418 (15.0)	9 (24.3)	28 (75.7)	1000 (24.5)	3089 (75.5)	18 (52.9)	16 (47.1)	2004	154 (98.1)	3 (1.9)	146 (4.4)	3182 (95.6)	2971 (73.1)	1096 (26.9)	55 (87.3)	8 (12.7)	2211 (84.1)	418 (15.9)	15 (44.1)	19 (55.9)	1064 (25.5)	3107 (74.5)	15 (55.6)	12 (44.4)	2005	147 (96.1)	6 (3.9)	121 (3.8)	3077 (96.2)	2875 (72.8)	1075 (27.2)	41 (75.9)	13 (24.1)	2131 (83.1)	434 (16.9)	23 (51.1)	22 (48.9)	955 (23.7)	3073 (76.3)	13 (35.1)	24 (64.9)	2006	161 (98.2)	3 (1.8)	133 (4.0)	3161 (96.0)	2595 (69.6)	1132 (30.4)	38 (73.1)	14 (26.9)	1959 (82.1)	426 (17.9)	16 (41.0)	23 (59.0)	983 (24.4)	3051 (75.6)	3 (37.5)	5 (62.5)	2007	129 (97.0)	4 (3.0)	135 (3.9)	3302 (96.1)	2460 (71.0)	1003 (29.0)	72 (75.8)	23 (24.2)	1785 (81.2)	412 (18.8)	9 (37.5)	15 (62.5)	877 (22.8)	2968 (77.2)	14 (77.8)	4 (22.2)	2008	134 (97.8)	3 (2.2)	153 (4.5)	3238 (95.5)	2239 (68.3)	1041 (31.7)	52 (75.4)	17 (24.6)	1755 (81.9)	387 (18.1)	16 (37.2)	27 (62.8)	921 (24.2)	2878 (75.8)	12 (48.0)	13 (52.0)	2009	97 (96.0)	4 (4.0)	150 (4.7)	3049 (95.3)	1931 (67.3)	939 (32.7)	68 (90.7)	7 (9.3)	1449 (79.7)	368 (20.3)	16 (32.7)	33 (67.3)	849 (25.3)	2511 (74.7)	6 (20.7)	23 (79.3)	2010	150 (98.7)	2 (1.3)	128 (4.2)	2948 (95.8)	1774 (66.3)	901 (33.7)	79 (83.2)	16 (16.8)	1421 (80.8)	337 (19.2)	21 (14.0)	129 (86.0)	807 (25.0)	2419 (75.0)	1 (5.3)	18 (94.7)	2011	128 (98.5)	2 (1.5)	131 (4.3)	2932 (95.7)	1539 (63.9)	870 (36.1)	60 (74.1)	21 (25.9)	1328 (80.3)	326 (19.7)	28 (18.5)	123 (81.5)	766 (25.5)	2239 (74.5)	4 (22.2)	14 (77.8)	2012	144 (99.3)	1 (0.7)	118 (4.0)	2935 (96.0)	1340 (60.0)	894 (40.0)	51 (79.7)	13 (20.3)	1276 (81.2)	295 (18.8)	28 (18.9)	120 (81.1)	691 (24.8)	2095 (75.2)	11 (34.4)	21 (65.6)

Table 4. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Age Group: United States, 1993–2012

Year	Total Cases	0–14			15–24			25–44			45–64			≥64			Unknown ¹	
		No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate	No.	(%)
1993	25103	1660	(7)	2.9	1821	(7)	5.0	9589	(38)	11.5	6196	(25)	12.4	5820	(23)	17.7	17	(0)
1994	24205	1659	(7)	2.9	1832	(8)	5.0	9043	(37)	10.7	6125	(25)	11.9	5540	(23)	16.6	6	(0)
1995	22727	1536	(7)	2.6	1697	(7)	4.6	8200	(36)	9.7	5960	(26)	11.3	5329	(23)	15.8	5	(0)
1996	21210	1356	(6)	2.3	1637	(8)	4.4	7564	(36)	8.9	5572	(26)	10.2	5076	(24)	14.9	5	(0)
1997	19751	1251	(6)	2.1	1674	(8)	4.5	6884	(35)	8.0	5278	(27)	9.4	4663	(24)	13.6	1	(0)
1998	18287	1077	(6)	1.8	1543	(8)	4.1	6335	(35)	7.4	4954	(27)	8.5	4378	(24)	12.6	0	(0)
1999	17499	1038	(6)	1.7	1518	(9)	3.9	6062	(35)	7.1	4860	(28)	8.1	4019	(23)	11.5	2	(0)
2000	16309	965	(6)	1.6	1618	(10)	4.1	5576	(34)	6.6	4635	(28)	7.4	3515	(22)	10.0	0	(0)
2001	15945	929	(6)	1.5	1597	(10)	4.0	5610	(35)	6.6	4515	(28)	7.0	3293	(21)	9.3	1	(0)
2002	15055	944	(6)	1.6	1498	(10)	3.7	5288	(35)	6.3	4182	(28)	6.3	3142	(21)	8.8	1	(0)
2003	14835	911	(6)	1.5	1573	(11)	3.8	5074	(34)	6.1	4283	(29)	6.3	2994	(20)	8.3	0	(0)
2004	14498	952	(7)	1.6	1603	(11)	3.8	4939	(34)	5.9	4192	(29)	5.9	2811	(19)	7.8	1	(0)
2005	14061	851	(6)	1.4	1540	(11)	3.6	4738	(34)	5.7	4123	(29)	5.7	2809	(20)	7.7	0	(0)
2006	13727	803	(6)	1.3	1532	(11)	3.6	4689	(34)	5.6	4039	(29)	5.4	2663	(19)	7.2	1	(0)
2007	13282	777	(6)	1.3	1580	(12)	3.7	4314	(32)	5.2	4037	(30)	5.3	2574	(19)	6.8	0	(0)
2008	12895	785	(6)	1.3	1444	(11)	3.4	4241	(33)	5.1	3929	(30)	5.0	2496	(19)	6.4	0	(0)
2009	11520	647	(6)	1.0	1278	(11)	3.0	3887	(34)	4.7	3424	(30)	4.3	2284	(20)	5.8	0	(0)
2010	11163	636	(6)	1.0	1199	(11)	2.7	3669	(33)	4.5	3430	(31)	4.2	2228	(20)	5.5	1	(0)
2011	10517	577	(5)	0.9	1033	(10)	2.4	3367	(32)	4.1	3293	(31)	4.0	2246	(21)	5.4	1	(0)
2012	9945	486	(5)	0.8	1020	(10)	2.3	3118	(31)	3.8	3114	(31)	3.8	2204	(22)	5.1	3	(0)

¹Includes unknown and missing.

Note: Previously published rates for 1993–1999 have been updated using Bridged-Race 1990–1999 Intercensal Population Estimates for 1990–1999 (ftp://ftp.cdc.gov/pub/health_statistics/nchs/datasets/nvss/bridgepop/documentationbridgedintercena1.doc) (accessed August 12, 2013). Denominators for computing 2000–2012 case rates were obtained from the Annual Estimates of the Resident Population by Sex and Five-Year Age Groups for the United States: April 1, 2000 to July 1, 2009 (http://www.census.gov/popest/data/historical/2000s/vintage_2009/index.html), and Annual Estimates of the Resident Population for Selected Age Groups by Sex for the United States, States, Counties, and Puerto Rico Commonwealth and Municipalities: April 1, 2010 to July 1, 2012 (<http://factfinder2.census.gov/bkmk/table/1.0/en/PEP/2012/PEPAGESEX>) (accessed August 12, 2013).

Data for all years updated through June 10, 2013.

See Technical Notes.

Zero % (0) denotes <0.5%.

See Surveillance Slides #7 and #8.

Table 5. Tuberculosis Cases, Percentages, and Case Rates per 100,000 Population by Origin of Birth: United States, 1993–2012

Year	Total Cases	U.S.-born Persons		Foreign-born Persons ¹		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)
1993	25103	17435	(69)	7402	(29)	266	(1)
1994	24205	16191	(67)	7750	(32)	264	(1)
1995	22727	14676	(65)	7998	(35)	53	(0)
1996	21210	13398	(63)	7739	(36)	73	(0)
1997	19751	11935	(60)	7742	(39)	74	(0)
1998	18287	10634	(58)	7599	(42)	54	(0)
1999	17499	9805	(56)	7602	(43)	92	(1)
2000	16309	8648	(53)	7619	(47)	42	(0)
2001	15945	7872	(49)	8010	(50)	63	(0)
2002	15055	7282	(48)	7718	(51)	55	(0)
2003	14835	6861	(46)	7929	(53)	45	(0)
2004	14498	6631	(46)	7845	(54)	22	(0)
2005	14061	6306	(45)	7724	(55)	31	(0)
2006	13727	5888	(43)	7815	(57)	24	(0)
2007	13282	5481	(41)	7731	(58)	70	(1)
2008	12895	5282	(41)	7604	(59)	9	(0)
2009	11520	4566	(40)	6934	(60)	20	(0)
2010	11163	4381	(39)	6770	(61)	12	(0)
2011	10517	3984	(38)	6527	(62)	6	(0)
2012	9945	3659	(37)	6274	(63)	12	(0)

¹Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Note: Denominators for computing rates for years 1993–1994 were obtained from Quarterly Estimates of the United States Foreign-born and Native Resident Populations: April 1, 1990–July 1, 1999, located at <http://www.census.gov/population/estimates/nation/nativity/fbt001.txt> (accessed August 12, 2013). Denominators for computing the 1995–2012 rates are based on the U.S. Census Bureau, Current Population Survey (July Supplement) via Data Ferret (<http://dataferret.census.gov/>).

Data for all years updated through June 10, 2013.

See Technical Notes.

Zero % (0) denotes <0.5%.

See Surveillance Slides #13, #14, #17, and #18.

Table 6. Tuberculosis Cases and Percentages Among Foreign-born Persons¹ by the Top 30 Countries² of Birth: United States, 2008–2012

Country of Origin	Year									
	2012		2011		2010		2009		2008	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Total Cases	6274	(100)	6527	(100)	6770	(100)	6934	(100)	7604	(100)
Mexico	1,308	(21)	1,450	(22)	1,541	(23)	1,594	(23)	1,763	(23)
Philippines	773	(12)	757	(12)	756	(11)	806	(12)	860	(11)
India	532	(8)	509	(8)	584	(9)	541	(8)	598	(8)
Viet Nam	456	(7)	549	(8)	542	(8)	532	(8)	583	(8)
China	351	(6)	378	(6)	370	(5)	344	(5)	405	(5)
Guatemala	193	(3)	172	(3)	198	(3)	214	(3)	252	(3)
Haiti	197	(3)	189	(3)	195	(3)	207	(3)	237	(3)
Ethiopia	162	(3)	153	(2)	161	(2)	172	(2)	183	(2)
Honduras	126	(2)	128	(2)	143	(2)	151	(2)	195	(3)
Korea, Republic of	106	(2)	131	(2)	120	(2)	156	(2)	150	(2)
Somalia	101	(2)	116	(2)	125	(2)	112	(2)	151	(2)
El Salvador	116	(2)	103	(2)	116	(2)	118	(2)	147	(2)
Myanmar	116	(2)	92	(1)	116	(2)	104	(2)	108	(1)
Peru	79	(1)	93	(1)	111	(2)	94	(1)	144	(2)
Ecuador	65	(1)	79	(1)	84	(1)	99	(1)	114	(2)
Cambodia	78	(1)	91	(1)	70	(1)	99	(1)	77	(1)
Pakistan	68	(1)	87	(1)	74	(1)	84	(1)	87	(1)
Dominican Republic	74	(1)	75	(1)	85	(1)	71	(1)	88	(1)
Nepal	82	(1)	77	(1)	64	(1)	74	(1)	70	(1)
Kenya	58	(1)	75	(1)	63	(1)	73	(1)	82	(1)
Laos	64	(1)	62	(1)	70	(1)	60	(1)	68	(1)
Bangladesh	54	(1)	66	(1)	58	(1)	44	(1)	55	(1)
Nigeria	58	(1)	52	(1)	43	(1)	46	(1)	50	(1)
Thailand	33	(1)	37	(1)	47	(1)	57	(1)	62	(1)
Indonesia	41	(1)	32	(0)	58	(1)	34	(0)	30	(0)
Colombia	25	(0)	32	(0)	43	(1)	40	(1)	43	(1)
Cuba	30	(0)	40	(1)	33	(0)	36	(1)	42	(1)
Bhutan	57	(1)	39	(1)	37	(1)	33	(0)	8	(0)
Korea, Dem. Peoples Republic	50	(1)	38	(1)	35	(1)	16	(0)	27	(0)
Liberia	33	(1)	28	(0)	36	(1)	33	(0)	33	(0)
All Others	788	(13)	797	(12)	792	(12)	890	(13)	892	(12)

¹Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

²The top 30 countries were selected based on their ranked 5-year average number of TB cases.

³Includes Not Specified for Country of Origin.

Note: Zero (0) denotes <0.5%.

Data for all years updated through June 10, 2013.

Table 7. Tuberculosis Cases and Percentages by Case Verification Criterion and Site of Disease: United States, 1993–2012

Year	Total Cases	Verification Criterion ¹										Site of Disease ⁵			
		Positive Culture		Positive NAA ²		Positive Smear		Clinical Case Definition		Provider Diagnosis		Pulmonary ³		Extra-pulmonary ⁴	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1993	25103	20307	(81)	0	(0)	185	(1)	3088	(12)	1523	(6)	21154	(84)	3940	(16)
1994	24205	19506	(81)	0	(0)	189	(1)	2916	(12)	1594	(7)	20318	(84)	3885	(16)
1995	22727	18266	(80)	0	(0)	189	(1)	2748	(12)	1524	(7)	18887	(83)	3835	(17)
1996	21210	17154	(81)	0	(0)	131	(1)	2607	(12)	1318	(6)	17387	(82)	3814	(18)
1997	19751	15979	(81)	0	(0)	155	(1)	2411	(12)	1206	(6)	16239	(82)	3509	(18)
1998	18287	14790	(81)	0	(0)	155	(1)	2253	(12)	1089	(6)	14801	(81)	3484	(19)
1999	17499	13994	(80)	0	(0)	172	(1)	2103	(12)	1230	(7)	14065	(80)	3431	(20)
2000	16309	13013	(80)	0	(0)	148	(1)	1951	(12)	1197	(7)	13086	(80)	3211	(20)
2001	15945	12750	(80)	0	(0)	123	(1)	1886	(12)	1186	(7)	12724	(80)	3217	(20)
2002	15055	11974	(80)	0	(0)	104	(1)	1822	(12)	1155	(8)	11901	(79)	3148	(21)
2003	14835	11683	(79)	0	(0)	116	(1)	1783	(12)	1253	(8)	11805	(80)	3020	(20)
2004	14498	11326	(78)	0	(0)	80	(1)	1824	(13)	1268	(9)	11523	(80)	2971	(20)
2005	14061	10955	(78)	0	(0)	96	(1)	1797	(13)	1213	(9)	11122	(79)	2933	(21)
2006	13727	10744	(78)	0	(0)	93	(1)	1629	(12)	1261	(9)	10852	(79)	2872	(21)
2007	13282	10426	(78)	0	(0)	69	(1)	1496	(11)	1291	(10)	10592	(80)	2687	(20)
2008	12895	10024	(78)	18	(0)	60	(0)	1548	(12)	1245	(10)	10238	(79)	2653	(21)
2009	11520	8886	(77)	56	(0)	74	(1)	1776	(15)	728	(6)	9010	(78)	2494	(22)
2010	11163	8454	(76)	109	(1)	71	(1)	1875	(17)	654	(6)	8728	(78)	2426	(22)
2011	10517	8084	(77)	129	(1)	57	(1)	1680	(16)	567	(5)	8330	(79)	2182	(21)
2012	9945	7597	(76)	151	(2)	43	(0)	1611	(16)	543	(5)	7824	(79)	2100	(21)

¹ Based on the public health surveillance case definition for tuberculosis; see Appendix A.

² Nucleic Acid Amplification test

³ Includes all cases among persons with pulmonary as the only site of disease, and persons with both pulmonary and extrapulmonary sites of disease.

⁴ Includes cases among persons with extrapulmonary TB disease only.

⁵ Excludes missing and unknowns.

Note: See Technical Notes.

Data for all years updated through June 10, 2013.

Table 8. Tuberculosis Cases and Percentages, by Resistance to INH¹, Origin of Birth, and Previous History of TB: United States, 1993–2012

	Year	All INH-resistant ¹	Isoniazid Resistant TB Cases																		
			Total INH-resistant						U.S.-born INH-resistant ³						Foreign-born ^{3,4} INH-resistant						
			Previous TB			No Previous TB			Previous TB			No Previous TB			Previous TB			No Previous TB			
			Eligible	No.	(%)	Eligible	No.	(%)	Eligible	No.	(%)	Eligible	No.	(%)	Eligible	No.	(%)	Eligible	No.	(%)	
			1534	982	161	(16.4)	16601	1367	(8.2)	668	83	(12.4)	11809	789	(6.7)	301	75	(24.9)	4664	564	(12.1)
			1543	1033	175	(16.9)	16416	1352	(8.2)	693	81	(11.7)	11019	709	(6.4)	336	93	(27.7)	5280	631	(12.0)
			1350	958	168	(17.5)	16022	1172	(7.3)	593	77	(13.0)	10351	555	(5.4)	363	91	(25.1)	5640	616	(10.9)
			1284	862	142	(16.5)	15358	1133	(7.4)	559	68	(12.2)	9646	496	(5.1)	303	74	(24.4)	5665	636	(11.2)
			1195	742	109	(14.7)	14448	1078	(7.5)	455	35	(7.7)	8705	435	(5.0)	286	74	(25.9)	5698	640	(11.2)
			1120	749	98	(13.1)	13419	1011	(7.5)	485	38	(7.8)	7712	366	(4.7)	262	60	(22.9)	5674	643	(11.3)
			999	669	82	(12.3)	12655	899	(7.1)	383	25	(6.5)	7020	283	(4.0)	283	55	(19.4)	5583	614	(11.0)
			981	632	84	(13.3)	11825	889	(7.5)	360	22	(6.1)	6144	269	(4.4)	272	62	(22.8)	5652	617	(10.9)
			897	629	87	(13.8)	11510	800	(7.0)	324	28	(8.6)	5583	242	(4.3)	302	59	(19.5)	5891	557	(9.5)
			912	569	80	(14.1)	10813	826	(7.6)	303	23	(7.6)	5069	206	(4.1)	264	57	(21.6)	5703	619	(10.9)
			903	524	65	(12.4)	10751	822	(7.6)	253	16	(6.3)	4864	214	(4.4)	271	49	(18.1)	5858	605	(10.3)
			872	537	64	(11.9)	10480	801	(7.6)	274	15	(5.5)	4697	214	(4.6)	263	49	(18.6)	5773	587	(10.2)
			842	506	70	(13.8)	10064	761	(7.6)	239	18	(7.5)	4412	188	(4.3)	267	52	(19.5)	5635	567	(10.1)
			845	493	67	(13.6)	9905	770	(7.8)	203	9	(4.4)	4144	173	(4.2)	289	57	(19.7)	5745	596	(10.4)
			798	496	71	(14.3)	9647	715	(7.4)	206	14	(6.8)	3878	164	(4.2)	288	57	(19.8)	5716	547	(9.6)
			835	429	57	(13.3)	9308	774	(8.3)	170	13	(7.6)	3677	189	(5.1)	259	44	(17.0)	5625	584	(10.4)
			761	341	52	(15.2)	7735	650	(8.4)	116	6	(5.2)	3052	187	(6.1)	224	46	(20.5)	4674	463	(9.9)
			699	358	62	(17.3)	7805	629	(8.1)	127	12	(9.4)	2973	168	(5.7)	231	50	(21.6)	4824	460	(9.5)
			752	346	59	(17.1)	7505	685	(9.1)	137	9	(6.6)	2702	174	(6.4)	209	50	(23.9)	4800	511	(10.6)
			660	342	49	(14.3)	6846	610	(8.9)	124	8	(6.5)	2429	138	(5.7)	218	41	(18.8)	4411	471	(10.7)

Resistance to at least isoniazid. Isolates may be resistant to other drugs. Cases are culture positive with initial drug susceptibility testing done. Excludes cases with susceptibility testing not done or unknown for isoniazid.

? This column provides an overall total of all INH-resistant cases, including those where previous history of TB is unknown and origin or birth is unknown.

³ Excludes cases where previous history of TB is unknown and cases where origin of birth is unknown.

Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Note: Data for all years updated through June 10, 2013.

Table 9. Tuberculosis Cases and Percentages, by Multidrug Resistance¹, Origin of Birth, and Previous History of TB: United States, 1993–2012

Year	All MDR ²	Multidrug Resistant TB Cases															
		Total MDR ³								U.S.-born MDR ³							
		Previous TB				No Previous TB				Previous TB				No Previous TB			
		Eligible	No.	(%)	(%)	Eligible	No.	(%)	(%)	Eligible	No.	(%)	(%)	Eligible	No.	(%)	(%)
1993	484	982	76	(7.7)	(2.5)	16601	407	(2.5)	(2.5)	668	30	(4.5)	(15.3)	301	46	(15.3)	(2.2)
1994	431	1033	74	(7.2)	(2.2)	16416	353	(2.2)	(2.2)	693	35	(5.1)	(11.3)	336	38	(11.3)	(2.1)
1995	327	958	70	(7.3)	(1.6)	16022	254	(1.6)	(1.6)	593	28	(4.7)	(11.6)	363	42	(11.6)	(1.5)
1996	250	862	43	(5.0)	(1.3)	15358	207	(1.3)	(1.1)	559	21	(3.8)	(7.3)	303	22	(7.3)	(1.8)
1997	201	742	44	(5.9)	(1.1)	14448	155	(1.1)	(0.9)	455	12	(2.6)	(11.2)	286	32	(11.2)	(1.4)
1998	155	749	23	(3.1)	(1.0)	13419	132	(1.0)	(0.7)	485	6	(1.2)	(6.5)	262	17	(6.5)	(1.3)
1999	157	669	28	(4.2)	(1.0)	12655	127	(1.0)	(0.6)	383	6	(1.6)	(7.8)	283	22	(7.8)	(1.6)
2000	146	632	26	(4.1)	(1.0)	11825	120	(1.0)	(0.7)	360	2	(0.6)	(8.8)	272	24	(8.8)	(1.4)
2001	151	629	33	(5.2)	(1.0)	11510	115	(1.0)	(0.6)	324	7	(2.2)	(8.6)	302	26	(8.6)	(1.4)
2002	158	569	26	(4.6)	(1.2)	10813	132	(1.2)	(0.7)	303	3	(1.0)	(8.7)	264	23	(8.7)	(1.7)
2003	119	524	21	(4.0)	(0.9)	10751	94	(0.9)	(0.5)	253	2	(0.8)	(7.0)	271	19	(7.0)	(1.2)
2004	128	537	27	(5.0)	(1.0)	10480	100	(1.0)	(0.6)	274	4	(1.5)	(8.7)	263	23	(8.7)	(1.3)
2005	125	506	23	(4.5)	(1.0)	10064	98	(1.0)	(0.5)	239	2	(0.8)	(7.9)	267	21	(7.9)	(1.4)
2006	124	493	20	(4.1)	(1.0)	9905	103	(1.0)	(0.5)	203	1	(0.5)	(6.6)	289	19	(6.6)	(1.5)
2007	124	496	19	(3.8)	(1.0)	9647	101	(1.0)	(0.5)	206	3	(1.5)	(5.6)	288	16	(5.6)	(1.4)
2008	107	429	19	(4.4)	(0.9)	9308	88	(0.9)	(0.6)	170	3	(1.8)	(6.2)	259	16	(6.2)	(1.2)
2009	112	341	19	(5.6)	(1.1)	7735	87	(1.1)	(0.4)	116	1	(0.9)	(8.0)	224	18	(8.0)	(1.6)
2010	104	358	16	(4.5)	(1.1)	7805	87	(1.1)	(0.5)	127	2	(1.6)	(6.1)	231	14	(6.1)	(1.5)
2011	127	346	27	(7.8)	(1.3)	7505	99	(1.3)	(0.6)	137	1	(0.7)	(12.4)	209	26	(12.4)	(1.7)
2012	83	342	10	(2.9)	(1.1)	6846	72	(1.1)	(0.4)	124	0	(0.0)	(4.6)	218	10	(4.6)	(1.4)

¹ Resistance to at least isoniazid and rifampin. Isolates may be resistant to other drugs. Cases are culture positive with initial drug susceptibility testing done. Excludes cases with susceptibility testing not done or unknown for isoniazid and rifampin.

² This column provides an overall total of all MDR cases, including those where previous history of TB is unknown and origin or birth is unknown.

³ Excludes cases where previous history of TB is unknown and cases where origin of birth is unknown.

⁴ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific Islands.

Note: Data for all years updated through June 10, 2013.

Table 10. Percentages of Tuberculosis Cases by Initial Drug Regimen, Use of Directly Observed Therapy (DOT), and Completion of Therapy (COT): United States, 1993–2012

Year	Initial Drug Regimen ^{1,2}			Directly Observed Therapy ³		Therapy ≤1 Year Indicated ⁴	
	I R	IRZ	IRZE	DOT Only	Both DOT and Self-Administered	COT ≤1 Year	COT
1993	(12.9)	(31.2)	(40.3)	(21.7)	(14.4)	(64.0)	(87.5)
1994	(7.0)	(23.3)	(55.7)	(28.1)	(20.5)	(69.0)	(87.9)
1995	(5.2)	(20.3)	(62.7)	(37.3)	(21.5)	(74.0)	(89.8)
1996	(4.2)	(17.5)	(67.3)	(42.5)	(22.4)	(76.5)	(90.6)
1997	(3.2)	(15.1)	(71.9)	(47.0)	(23.8)	(78.3)	(91.4)
1998	(2.6)	(12.9)	(74.3)	(47.7)	(26.6)	(80.6)	(92.5)
1999	(2.2)	(11.2)	(76.9)	(49.4)	(27.6)	(80.8)	(92.4)
2000	(2.0)	(10.4)	(78.5)	(52.5)	(25.8)	(81.6)	(92.7)
2001	(1.7)	(9.6)	(79.8)	(53.6)	(27.5)	(81.8)	(92.8)
2002	(1.8)	(8.9)	(80.3)	(55.4)	(27.8)	(82.3)	(92.7)
2003	(1.4)	(8.1)	(81.3)	(56.5)	(28.5)	(83.0)	(92.9)
2004	(1.5)	(6.4)	(82.4)	(58.9)	(27.7)	(83.6)	(92.6)
2005	(1.3)	(5.5)	(83.7)	(57.9)	(29.6)	(83.2)	(92.6)
2006	(1.2)	(4.8)	(83.3)	(57.5)	(30.4)	(84.1)	(93.3)
2007	(1.1)	(4.6)	(83.6)	(56.3)	(32.9)	(84.8)	(94.0)
2008	(1.0)	(3.5)	(84.3)	(56.4)	(33.5)	(85.2)	(93.4)
2009	(1.0)	(3.2)	(84.2)	(59.6)	(30.3)	(87.8)	(95.5)
2010	(0.9)	(3.0)	(84.5)	(59.1)	(31.1)	(88.1)	(95.6)
2011 ⁵	(0.7)	(2.7)	(85.2)	(62.7)	(28.5)	(82.1)	(88.0)
2012	(0.7)	(2.2)	(84.5)	(64.0)	(25.8)	(47.1)	(48.3)

¹ Includes persons alive at diagnosis.

² I=isoniazid; R=rifampin; Z=pyrazinamide; E=ethambutol. Excludes cases with no information on initial drug regimen; In 2012, 0.83% received no initial drug therapy, 0.25% were started on one drug, and 11.50% had an initial multidrug regimen other than IR, IRZ, or IRZE.

³ Includes persons alive at diagnosis with initial drug regimen of one or more drugs prescribed.

⁴ Includes persons alive at diagnosis, with initial drug regimen of one or more drugs prescribed, who did not die during therapy. Excludes persons with initial isolate rifampin resistant, or patient with meningeal disease, or pediatric patient (aged <15) with miliary disease or positive blood culture.

⁵ Beginning in 2011, those who moved out of country during treatment are excluded from the denominator of those eligible for COT.

Note: Data for all years updated through June 10, 2013.

See Technical Notes for description of COT calculation.

See Surveillance Slides #30 and #31.

Table 11. Tuberculosis Cases and Percentages in Persons with HIV Test Results¹ and with HIV Coinfection by Age Group: United States, 1993–2012

Year	25–44 Years Old				All Ages			
	Total No.	HIV Test Results		HIV Positive	Total No.	HIV Test Results		HIV Positive
		No.	(%)			No.	(%)	
1993	9589	4382	(46)	2790	25103	7457	(30)	3682
1994	9043	4442	(49)	2669	24205	7887	(33)	3601
1995	8200	4276	(52)	2171	22727	8178	(36)	3037
1996	7564	4366	(58)	1856	21210	8832	(42)	2615
1997	6884	4141	(60)	1471	19751	8771	(44)	2091
1998	6335	3862	(61)	1240	18287	8292	(45)	1831
1999	6062	3810	(63)	1174	17499	8419	(48)	1725
2000	5576	3525	(63)	955	16309	8117	(50)	1484
2001	5610	3576	(64)	911	15945	8095	(51)	1408
2002	5288	3512	(66)	845	15055	8022	(53)	1390
2003	5074	3424	(67)	807	14835	8117	(55)	1320
2004	4939	3442	(70)	683	14498	8509	(59)	1195
2005	4738	3276	(69)	611	14061	8227	(59)	1042
2006	4689	3285	(70)	558	13727	8302	(60)	962
2007	4314	3161	(73)	489	13282	8357	(63)	883
2008	4241	3109	(73)	411	12895	8244	(64)	820
2009	3887	2857	(74)	402	11520	7395	(64)	717
2010	3669	2777	(76)	322	11163	7514	(67)	626
2011 ²	3367	3060	(91)	340	10517	8752	(83)	668
2012	3118	2862	(92)	333	9945	8377	(84)	625

¹Includes persons with positive, negative, or indeterminate HIV test results and persons from California with co-diagnosis of TB and AIDS. Rhode Island did not report HIV test results for years 1993–1997. HIV test results for Vermont are not included for years 2007–2010. HIV test results for California are not included for years 2005–2010.

² California began reporting HIV test results to CDC in 2011

Note: Data for all years updated through June 10, 2013.
See Surveillance Slides #26 and #27.

Table 12. Tuberculosis Cases and Percentages by Reason Tuberculosis Therapy Stopped: United States, 1993–2010

Year	Total Cases ¹	Completed Therapy		Adverse Event		Moved ²		Lost		Refused		Died ³		Unknown ⁴	
	No.	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1993	23741	18044	(76.0)	0	(0.0)	1120	(4.7)	1086	(4.6)	223	(0.9)	3053	(12.9)	215	(0.9)
1994	23051	17763	(77.1)	0	(0.0)	1194	(5.2)	740	(3.2)	183	(0.8)	2743	(11.9)	428	(1.9)
1995	21706	17306	(79.7)	0	(0.0)	969	(4.5)	570	(2.6)	156	(0.7)	2396	(11.0)	309	(1.4)
1996	20298	16528	(81.4)	0	(0.0)	783	(3.9)	525	(2.6)	156	(0.8)	1998	(9.8)	308	(1.5)
1997	18930	15673	(82.8)	0	(0.0)	667	(3.5)	444	(2.3)	119	(0.6)	1755	(9.3)	272	(1.4)
1998	17584	14766	(84.0)	0	(0.0)	534	(3.0)	411	(2.3)	104	(0.6)	1580	(9.0)	189	(1.1)
1999	16861	14234	(84.4)	0	(0.0)	456	(2.7)	359	(2.1)	104	(0.6)	1437	(8.5)	271	(1.6)
2000	15785	13408	(84.9)	0	(0.0)	408	(2.6)	397	(2.5)	112	(0.7)	1294	(8.2)	166	(1.1)
2001	15409	13242	(85.9)	0	(0.0)	378	(2.5)	402	(2.6)	99	(0.6)	1121	(7.3)	167	(1.1)
2002	14564	12482	(85.7)	0	(0.0)	336	(2.3)	412	(2.8)	87	(0.6)	1080	(7.4)	167	(1.1)
2003	14379	12418	(86.4)	0	(0.0)	313	(2.2)	389	(2.7)	84	(0.6)	994	(6.9)	181	(1.3)
2004	14080	12118	(86.1)	0	(0.0)	337	(2.4)	370	(2.6)	82	(0.6)	975	(6.9)	198	(1.4)
2005	13674	11728	(85.8)	1	(0.0)	323	(2.4)	338	(2.5)	90	(0.7)	985	(7.2)	209	(1.5)
2006	13316	11540	(86.7)	0	(0.0)	292	(2.2)	358	(2.7)	79	(0.6)	939	(7.1)	108	(0.8)
2007	12907	11348	(87.9)	0	(0.0)	241	(1.9)	327	(2.5)	73	(0.6)	819	(6.3)	99	(0.8)
2008	12552	10885	(86.7)	6	(0.0)	257	(2.0)	329	(2.6)	78	(0.6)	844	(6.7)	153	(1.2)
2009	11181	9820	(87.8)	21	(0.2)	96	(0.9)	191	(1.7)	86	(0.8)	681	(6.1)	286	(2.6)
2010	10824	9488	(87.7)	29	(0.3)	...	(0.0)	172	(1.6)	66	(0.6)	641	(5.9)	428	(4.0)

¹ Includes all cases in persons reported as alive at diagnosis and taking one or more TB drugs.

² In 2009 the moved variable was removed from the RVCT; see Technical Notes for details.

³ Died = died of any cause (not only TB).

⁴ Includes cases in persons reporting reason therapy stopped = Other, Missing, or Unknown.

Note: Data for all years are updated through June 10, 2013.

Data complete through 2010 only. See Technical Notes for details.

**Table 13. National Tuberculosis Genotyping Surveillance Coverage¹:
United States, 2004–2012**

Year	Reported TB Cases	Reported Culture Positive Cases	Cases with Genotype Result	Genotype Surveillance Coverage
	No.	No.	No.	(%)
2004	14,498	11,326	5,954	(52.6)
2005	14,061	10,955	7,500	(68.5)
2006	13,727	10,744	7,525	(70.0)
2007	13,282	10,426	8,431	(80.9)
2008	12,895	10,024	8,179	(81.6)
2009	11,520	8,886	7,710	(86.8)
2010	11,163	8,454	7,723	(91.3)
2011	10,517	8,084	7,557	(93.5)
2012	9,945	7,597	7,102	(93.5)

¹ Genotype surveillance coverage is defined as the percentage of all culture positive tuberculosis (TB) cases for which there was a genotyped isolate.

NOTE: This table reflects genotyping surveillance coverage for the 50 states and the District of Columbia; for genotyping surveillance coverage of the United States Affiliated Pacific Islands, please see Table 14.
See Surveillance Slide #33.

**Table 14. National Tuberculosis Genotyping Surveillance Coverage¹:
United States Affiliated Pacific Islands², 2004–2012**

Year	Reported TB Cases	Reported Culture Positive Cases	Cases with Genotype Result	Genotype Surveillance Coverage
	No.	No.	No.	(%)
2004	288	213	19	(8.9)
2005	388	237	95	(40.1)
2006	344	211	84	(39.8)
2007	527	181	60	(33.2)
2008	549	237	39	(16.5)
2009	534	237	207	(87.3)
2010	617	308	265	(86.0)
2011	455	220	163	(74.1)
2012	487	247	195	(78.9)

¹ Genotype surveillance coverage is defined as the percentage of all culture positive tuberculosis (TB) cases for which there was a genotyped isolate

² The U.S. Affiliated Pacific Islands include American Samoa, Northern Mariana Islands, Federated States of Micronesia, Guam, Marshall Islands, and Palau.

Table 15. Genotyped Tuberculosis Cases with *Mycobacterium bovis*¹ by Origin of Birth: United States, 2004–2012

Year	Total Genotyped Cases	<i>Mycobacterium bovis</i> cases					
		Total		U.S.-born		Foreign-born	
	No.	No. ²	(%)	No.	(%)	No.	(%)
2004	5,954	87	(1.5)	28	(32.2)	59	(67.8)
2005	7,500	100	(1.3)	33	(33.0)	67	(67.0)
2006	7,525	129	(1.7)	33	(25.6)	95	(73.6)
2007	8,431	129	(1.5)	27	(20.9)	101	(78.3)
2008	8,179	147	(1.8)	39	(26.5)	108	(73.5)
2009	7,710	131	(1.7)	40	(30.5)	91	(69.5)
2010	7,722	121	(1.6)	30	(24.8)	91	(75.2)
2011	7,557	135	(1.8)	44	(32.6)	91	(67.4)
2012	7,102	121	(1.7)	31	(25.6)	90	(74.4)

¹ Defined by Spoligotype motifs ending in "600".

² This column reports all genotyped *M. bovis* cases, including those where origin of birth is unknown.

This page intentionally left blank

Morbidity Tables

2012

Table 16. Tuberculosis Cases and Percentages Among Foreign-born Persons¹ by the Top 30 Countries of Birth and Years in the United States Before TB Diagnosis: United States, 2012

Country of Origin ²	No. Years in U.S. ³						
	Total Cases	< 1 Year		1 - 4 Years		≥ 5 Years	
	No.	No.	(%)	No.	(%)	No.	(%)
Total	6274	940	(15)	1101	(18)	3699	(59)
Mexico	1308	122	(9)	129	(10)	919	(70)
Philippines	773	84	(11)	104	(13)	519	(67)
India	532	88	(17)	140	(26)	266	(50)
Vietnam	456	40	(9)	67	(15)	284	(62)
China	351	42	(12)	59	(17)	233	(66)
Haiti	197	41	(21)	44	(22)	99	(50)
Guatemala	193	32	(17)	52	(27)	89	(46)
Ethiopia	162	38	(23)	58	(36)	59	(36)
Honduras	126	24	(19)	22	(17)	64	(51)
El Salvador	116	10	(9)	20	(17)	80	(69)
Myanmar	116	42	(36)	44	(38)	19	(16)
Korea, Republic of	106	7	(7)	12	(11)	79	(75)
Somalia	101	28	(28)	21	(21)	50	(50)
Nepal	82	20	(24)	37	(45)	23	(28)
Peru	79	15	(19)	13	(16)	45	(57)
Cambodia	78	6	(8)	6	(8)	54	(69)
Dominican Republic	74	9	(12)	14	(19)	47	(64)
Pakistan	68	15	(22)	12	(18)	35	(51)
Ecuador	65	9	(14)	10	(15)	44	(68)
Laos	64	0	(0)	2	(3)	52	(81)
Kenya	58	15	(26)	21	(36)	19	(33)
Nigeria	58	16	(28)	13	(22)	29	(50)
Bhutan	57	38	(67)	13	(23)	1	(2)
Bangladesh	54	12	(22)	26	(48)	14	(26)
Korea Dem People S. Republic	50	1	(2)	3	(6)	36	(72)
Indonesia	41	10	(24)	7	(17)	21	(51)
Liberia	33	11	(33)	7	(21)	13	(39)
Thailand	33	7	(21)	6	(18)	18	(55)
Cuba	30	3	(10)	0	(0)	26	(87)
Colombia	25	2	(8)	1	(4)	19	(76)
All Others ⁴	788	153	(19)	138	(18)	443	(56)

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

² Ranked by total case count.

³ Among foreign-born persons, the number of years since arrival in the United States before diagnosis with tuberculosis.

⁴ Includes Not Specified for Country of Origin.

See Surveillance Slide #20.

Table 17 Tuberculosis Cases and Rates per 100,000 Population by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012

	All Ages		Age Group																			
			Under 5			5–14			15–24			25–44			45–64			≥65			Unknown	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate				
Race/Ethnicity and Sex																						
Total Cases	9,945	3.2	260	1.3	226	0.5	1,020	2.3	3,118	3.8	3,114	3.8	2,204	5.1	3	--						
Male	6,028	3.9	133	1.3	110	0.5	553	2.5	1,766	4.3	2,089	5.2	1,375	7.3	2	--						
Female	3,914	2.5	127	1.3	116	0.6	465	2.2	1,352	3.3	1,024	2.4	829	3.4	1	--						
Unknown	3	--	0	--	0	--	2	--	0	--	1	--	0	--	0	--						
Hispanic or Latino ¹	2,790	5.3	119	2.3	68	0.7	362	3.9	1,021	6.3	761	8.0	458	14.6	1	--						
Male	1,804	6.7	52	2	32	0.6	240	5.0	663	7.8	555	11.8	261	19.4	1	--						
Female	986	3.8	67	2.7	36	0.8	122	2.8	358	4.6	206	4.3	197	11.0	0	--						
Unknown	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--						
American Indian or Alaska Native	146	6.3	7	4.1	12	3.4	19	4.9	28	4.6	48	8.4	32	15.6	0	--						
Male	77	6.8	3	3.5	6	3.3	6	3.0	20	6.5	24	8.7	18	19.6	0	--						
Female	68	5.8	4	4.7	6	3.4	12	6.4	8	2.6	24	8.0	14	12.4	0	--						
Unknown	1	--	0	--	0	--	1	--	0	--	0	--	0	--	0	--						
Asian	2,957	18.9	56	6.1	48	2.6	297	14.0	911	17.4	875	22.7	769	47.9	1	--						
Male	1,642	22.1	34	7.3	25	2.6	141	13.1	430	17.4	525	29.6	486	70.1	1	--						
Female	1,314	16.0	22	4.9	23	2.5	155	14.9	481	17.4	350	16.8	283	31.0	0	--						
Unknown	1	--	0	--	0	--	1	--	0	--	0	--	0	--	0	--						
Black or African American	2,234	5.8	53	1.9	72	1.3	253	3.9	769	7.3	762	7.9	324	8.8	1	--						
Male	1,362	7.4	28	2.0	35	1.2	126	3.9	440	8.8	517	11.6	216	14.9	0	--						
Female	872	4.3	25	1.8	37	1.3	127	4.0	329	6.0	245	4.7	108	4.9	1	--						
Unknown	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--						

Table 17. (Con't) Tuberculosis Cases and Rates per 100,000 Population by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012

	All Ages		Age Group																	
			Under 5			5–14			15–24			25–44			45–64			≥65			Unknown
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate		
Race/Ethnicity and Sex			No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Native Hawaiian or Other Pacific Islander			64	12.3	1	2.5	3	3.8	11	12.3	24	14.6	20	17.7	5	13.8	0	--	0	--
Male			34	12.9	0	0.0	1	2.5	8	17.4	11	13.1	10	17.9	4	24.0	0	--	0	--
Female			30	11.6	1	5.2	2	5.3	3	6.9	13	16.1	10	17.5	1	5.1	0	--	0	--
Unknown			0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--
White			1,572	0.8	17	0.2	19	0.1	63	0.3	291	0.6	609	1.0	573	1.7	0	--	0	--
Male			1,009	1.0	11	0.2	10	0.1	26	0.2	159	0.6	434	1.5	369	2.4	0	--	0	--
Female			562	0.6	6	0.1	9	0.1	37	0.3	132	0.5	174	0.6	204	1.1	0	--	0	--
Unknown			1	--	0	--	0	--	0	--	0	--	1	--	0	--	0	--	0	--
Multiple Race²			148	2.5	5	0.5	3	0.2	13	1.1	62	4.8	28	3.4	37	12.8	0	--	0	--
Male			78	2.6	4	0.8	0	0.0	5	0.9	36	5.9	16	4.1	17	13.5	0	--	0	--
Female			70	2.3	1	0.2	3	0.4	8	1.4	26	3.8	12	2.8	20	12.3	0	--	0	--
Unknown			0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--
Unknown			34	--	2	--	1	--	2	--	12	--	11	--	6	--	0	--	0	--
Male			22	--	1	--	1	--	1	--	7	--	8	--	4	--	0	--	0	--
Female			12	--	1	--	0	--	1	--	5	--	3	--	2	--	0	--	0	--
Unknown			0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--

¹Persons of Hispanic or Latino origin may be of any race or multiple race.

²Indicates two or more races reported for a person.

Note: Denominators for computing 2012 case rates were obtained from the U.S. Census Monthly Postcensal Resident Population, by single year of age, sex, race, and Hispanic origin (<http://www.census.gov/popest/data/national/asrh/2012/files/NC-EST2012-ALLDATA-R-File06.csv>) (accessed August 12, 2013).

Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple Race does not include persons of Hispanic ethnicity.

See Technical Notes.

See Surveillance Slides #9 and #11.

Table 18. Tuberculosis Cases in U.S.-born Persons by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012

Race/Ethnicity and Sex	Age Group							Unknown
	All Ages	Under 5	5–14	15–24	25–44	45–64	≥65	
Total Cases	3,659	217	134	351	758	1,347	851	1
Male	2,325	109	64	181	459	959	553	0
Female	1,332	108	70	169	299	387	298	1
Unknown	2	0	0	1	0	1	0	0
Hispanic or Latino¹	691	114	56	129	141	162	89	0
Male	394	52	30	75	79	117	41	0
Female	297	62	26	54	62	45	48	0
Unknown	0	0	0	0	0	0	0	0
American Indian or Alaska Native	144	7	12	18	28	47	32	0
Male	76	3	6	5	20	24	18	0
Female	67	4	6	12	8	23	14	0
Unknown	1	0	0	1	0	0	0	0
Asian	118	30	6	39	28	4	11	0
Male	66	17	2	17	22	0	8	0
Female	52	13	4	22	6	4	3	0
Unknown	0	0	0	0	0	0	0	0
Black or African American	1,340	41	40	107	326	571	254	1
Male	877	21	16	55	203	410	172	0
Female	463	20	24	52	123	161	82	1
Unknown	0	0	0	0	0	0	0	0
Native Hawaiian or Other Pacific Islander	51	1	3	11	19	15	2	0
Male	28	0	1	8	10	7	2	0
Female	23	1	2	3	9	8	0	0
Unknown	0	0	0	0	0	0	0	0
White	1,276	17	15	42	207	536	459	0
Male	861	11	9	19	120	392	310	0
Female	414	6	6	23	87	143	149	0
Unknown	1	0	0	0	0	1	0	0
Multiple Race²	28	5	2	4	6	7	4	0
Male	15	4	0	1	3	5	2	0
Female	13	1	2	3	3	2	2	0
Unknown	0	0	0	0	0	0	0	0
Unknown	11	2	0	1	3	5	0	0
Male	8	1	0	1	2	4	0	0
Female	3	1	0	0	1	1	0	0
Unknown	0	0	0	0	0	0	0	0

¹ Persons of Hispanic or Latino origin may be of any race or multiple race.

² Indicates two or more races reported for a person.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple race does not include persons of Hispanic ethnicity.

See Technical Notes.

See Surveillance Slide #15.

Table 19. Tuberculosis Cases in Foreign-born Persons¹ by Hispanic Ethnicity and Non-Hispanic Race, Sex, and Age Group: United States, 2012

Race/Ethnicity and Sex	Age Group							Unknown
	All Ages	Under 5	5–14	15–24	25–44	45–64	≥65	
Total Cases	6,274	43	92	665	2,359	1,763	1,350	2
Male	3,697	24	46	371	1,306	1,129	819	2
Female	2,577	19	46	294	1,053	634	531	0
Unknown	0	0	0	0	0	0	0	0
Hispanic or Latino²	2,095	5	12	232	879	598	368	1
Male	1,407	0	2	164	583	438	219	1
Female	688	5	10	68	296	160	149	0
Unknown	0	0	0	0	0	0	0	0
American Indian or Alaska Native	1	0	0	1	0	0	0	0
Male	1	0	0	1	0	0	0	0
Female	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0
Asian	2,835	26	42	256	883	870	757	1
Male	1,575	17	23	124	408	525	477	1
Female	1,260	9	19	132	475	345	280	0
Unknown	0	0	0	0	0	0	0	0
Black or African American	894	12	32	146	443	191	70	0
Male	485	7	19	71	237	107	44	0
Female	409	5	13	75	206	84	26	0
Unknown	0	0	0	0	0	0	0	0
Native Hawaiian or Other Pacific Islander	13	0	0	0	5	5	3	0
Male	6	0	0	0	1	3	2	0
Female	7	0	0	0	4	2	1	0
Unknown	0	0	0	0	0	0	0	0
White	295	0	4	21	84	72	114	0
Male	147	0	1	7	39	41	59	0
Female	148	0	3	14	45	31	55	0
Unknown	0	0	0	0	0	0	0	0
Multiple Race³	120	0	1	9	56	21	33	0
Male	63	0	0	4	33	11	15	0
Female	57	0	1	5	23	10	18	0
Unknown	0	0	0	0	0	0	0	0
Unknown	21	0	1	0	9	6	5	0
Male	13	0	1	0	5	4	3	0
Female	8	0	0	0	4	2	2	0
Unknown	0	0	0	0	0	0	0	0

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

² Persons of Hispanic or Latino ethnicity may be of any race or multiple race.

³ Indicates two or more races reported for a person.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple race does not include persons of Hispanic ethnicity.

See Technical Notes.

See Surveillance Slide #15.

**Table 20. Tuberculosis Cases Among Foreign-born Persons¹ by Country of Birth²:
United States, 2012**

African Region					
Total Cases = 562					
Algeria	6	Ethiopia	162	Niger	0
Angola	5	Gabon	2	Nigeria	58
Benin	1	Gambia	8	Rwanda	7
Botswana	4	Ghana	17	Sao Tome and Principe	0
Burkina Faso	2	Guinea	8	Senegal	9
Burundi	8	Guinea-Bissau	1	Seychelles	0
Cameroon	21	Kenya	58	Sierra Leone	24
Cape Verde	6	Lesotho	0	South Africa	14
Central African Republic	6	Liberia	33	Swaziland	1
Chad	0	Madagascar	3	Tanzania, UR	5
Comoros	1	Malawi	4	Togo	0
Congo, Republic of	23	Mali	5	Uganda	11
Côte d'Ivoire	8	Mauritania	5	Zambia	5
DR Congo	0	Mauritius	0	Zimbabwe	4
Equatorial Guinea	0	Mozambique	3		
Eritrea	24	Namibia	0		

Americas Region					
Total Cases = 2,356					
Anguilla	1	Costa Rica	1	Netherland Antilles	0
Antigua and Barbuda	0	Cuba	30	Nicaragua	16
Argentina	7	Dominica	0	Panama	4
Bahamas	2	Dominican Republic	74	Paraguay	0
Barbados	1	Ecuador	65	Peru	79
Belize	6	El Salvador	116	St. Kitts and Nevis	0
Bermuda	0	Grenada	1	St. Lucia	1
Bolivia	17	Guatemala	193	St. Vincent & Grenadines	0
Brazil	24	Guyana	18	Suriname	0
British Virgin Islands	0	Haiti	197	Trinidad and Tobago	10
Canada	7	Honduras	126	Turks and Caicos Islands	0
Cayman Islands	0	Jamaica	14	Uruguay	1
Chile	2	Mexico	1308	Venezuela	10
Colombia	25	Montserrat	0		

Eastern Mediterranean Region					
Total Cases = 268					
Afghanistan	16	Lebanon	4	Sudan	11
Bahrain	0	Libyan Arab Jamahiriya	4	Syrian Arab Republic	3
Djibouti	4	Morocco	8	Tunisia	1
Egypt	8	Oman	0	United Arab Emirates	1
Iran, Islamic Republic of	12	Pakistan	68	West Bank and Gaza	0
Iraq	12	Qatar	0	Yemen	5
Jordan	1	Saudi Arabia	8		
Kuwait	1	Somalia	101		

**Table 20. (Cont'd) Tuberculosis Cases Among Foreign-born Persons¹ by Country of Birth²:
United States, 2012**

European Region					
Total Cases = 179					
Albania	8	Greece	6	Poland	18
Andorra	0	Hungary	0	Portugal	8
Armenia	6	Iceland	0	Romania	11
Austria	0	Ireland	2	Russian Federation	17
Azerbaijan	2	Israel	2	San Marino	0
Belarus	0	Italy	6	Serbia	3
Belgium	1	Kazakhstan	3	Slovakia	0
Bosnia and Herzegovina	15	Kyrgyzstan	1	Slovenia	1
Bulgaria	3	Latvia	1	Spain	3
Croatia	1	Lithuania	1	Sweden	0
Cyprus	0	Luxembourg	0	Switzerland	2
Czech Republic	1	Macedonia, TFYR	0	Tajikistan	0
Denmark	0	Malta	0	Turkey	4
Estonia	0	Moldova, Republic of	3	Turkmenistan	1
Finland	0	Monaco	0	Ukraine	22
France	4	Montenegro	1	United Kingdom	6
Georgia	5	Netherlands	2	Uzbekistan	3
Germany	6	Norway	0		

Southeast Asia Region					
Total Cases = 970					
Bangladesh	54	Korea, DPR	50	Sri Lanka	5
Bhutan	57	Maldives	0	Thailand	33
India	532	Myanmar	116	Timor-Leste	0
Indonesia	41	Nepal	82		

Western Pacific Region					
Total Cases = 1,901					
Australia	0	Kiribati	0	Philippines	773
Brunei Darussalam	0	Korea, Rep.	106	Samoa	1
Cambodia	78	Lao, PDR	64	Singapore	1
China	351	Malaysia	17	Solomon Islands	0
China, Hong Kong SAR	23	Mongolia	12	Tokelau	0
China, Macao SAR	0	Nauru	0	Tonga	3
Cook Islands	1	New Caledonia	0	Tuvalu	0
Fiji	1	New Zealand	0	Vanuatu	1
French Polynesia	0	Niue	0	Vietnam	456
Japan	13	Papua New Guinea	0	Wallis and Futuna	0

Other³
Total Cases = 28

Unknown
Total Cases = 10

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands

² Country as reported by patient.

³ Includes country codes currently reported via the National Tuberculosis Surveillance System that are not represented by WHO member states.

Note: Regional composition of countries based on WHO Report *Global Tuberculosis Report 2012*, World Health Organization (http://www.who.int/tb/publications/global_report/en/index.html).

Table 21. Tuberculosis Risk Factors¹ by Origin and Race/Ethnicity: United States, 2012

	Total Eligible Cases ²	MDR Patient Contact		Missed Contact		Infectious TB Patient Contact		Incomplete LTBI therapy		TNF-Alpha Therapy		Post-organ Transplantation		Diabetes Mellitus		Renal Disease		Immuno-suppression		Other		None		Unknown	
		No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)	No. (%)	(%)		
United States	9933	15	(0.2)	45	(0.5)	749	(7.5)	262	(2.6)	52	(0.5)	46	(0.5)	1441	(14.5)	222	(2.2)	416	(4.2)	2203	(22.2)	4947	(49.8)	367	(3.7)
U.S.-born Total	3659	8	(0.2)	33	(0.9)	501	(13.7)	132	(3.6)	18	(0.5)	20	(0.5)	468	(12.8)	87	(2.4)	195	(5.3)	887	(24.2)	1571	(42.9)	137	(3.7)
American Indian/ Alaska Native	144	0	(0.0)	0	(0.0)	36	(25.0)	9	(6.3)	0	(0.0)	1	(0.7)	26	(18.1)	8	(5.6)	1	(0.7)	18	(12.5)	60	(41.7)	3	(2.1)
Asian	118	2	(1.7)	0	(0.0)	35	(29.7)	4	(3.4)	0	(0.0)	0	(0.0)	10	(8.5)	0	(0.0)	3	(2.5)	21	(17.8)	51	(43.2)	0	(0.0)
Black/African American	1340	2	(0.1)	21	(1.6)	191	(14.3)	59	(4.4)	2	(0.1)	4	(0.3)	165	(12.3)	32	(2.4)	73	(5.4)	326	(24.3)	572	(42.7)	57	(4.3)
Hispanic ³	691	2	(0.3)	2	(0.3)	112	(16.2)	17	(2.5)	2	(0.3)	1	(0.1)	117	(16.9)	16	(2.3)	16	(2.3)	168	(24.3)	312	(45.2)	10	(1.4)
Multiple Race ⁴	28	0	(0.0)	1	(3.6)	7	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(10.7)	0	(0.0)	0	(0.0)	9	(32.1)	7	(25.0)	1	(3.6)
Native Hawaiian/ Pacific Islander	51	1	(2.0)	0	(0.0)	8	(15.7)	2	(3.9)	0	(0.0)	1	(2.0)	16	(31.4)	5	(9.8)	2	(3.9)	6	(11.8)	17	(33.3)	1	(2.0)
White	1276	1	(0.1)	9	(0.7)	110	(8.6)	41	(3.2)	14	(1.1)	13	(1.0)	131	(10.3)	26	(2.0)	99	(7.8)	338	(26.5)	549	(43.0)	61	(4.8)
Unknown	11	0	(0.0)	0	(0.0)	2	(18.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(9.1)	1	(9.1)	3	(27.3)	4	(36.4)

U.S.-born

Table 24. (Con't) Tuberculosis Risk Factors¹ by Origin and Race/Ethnicity: United States, 2012

	Total Eligible Cases ²	MDR Patient Contact		Missed Contact		Infectious TB Patient Contact		Incomplete LTBI therapy		TNF-Alpha Therapy		Post-organ Transplantation		Diabetes Mellitus		Renal Disease		Immuno- suppression		Other		None		Unknown	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.		No.	
United States	9933	15	(0.2)	45	(0.5)	749	(7.5)	262	(2.6)	52	(0.5)	46	(0.5)	1441	(14.5)	222	(2.2)	416	(4.2)	2203	(22.2)	4947	(49.8)	367	(3.7)
Foreign-born Total	6274	7	(0.1)	12	(0.2)	248	(4.0)	130	(2.1)	34	(0.5)	26	(0.4)	973	(15.5)	135	(2.2)	221	(3.5)	1316	(21.0)	3376	(53.8)	230	(3.7)
American Indian/ Alaska Native	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Asian	2835	3	(0.1)	4	(0.1)	97	(3.4)	59	(2.1)	21	(0.7)	16	(0.6)	488	(17.2)	79	(2.8)	122	(4.3)	613	(21.6)	1457	(51.4)	106	(3.7)
Black/African American	894	1	(0.1)	4	(0.4)	47	(5.3)	22	(2.5)	0	(0.0)	2	(0.2)	67	(7.5)	5	(0.6)	25	(2.8)	162	(18.1)	555	(62.1)	37	(4.1)
Hispanic ³	2095	3	(0.1)	4	(0.2)	93	(4.4)	44	(2.1)	10	(0.5)	6	(0.3)	364	(17.4)	45	(2.1)	50	(2.4)	440	(21.0)	1123	(53.6)	64	(3.1)
Multiple Race ⁴	120	0	(0.0)	0	(0.0)	1	(0.8)	1	(0.8)	0	(0.0)	1	(0.8)	15	(12.5)	1	(0.8)	7	(5.8)	26	(21.7)	68	(56.7)	4	(3.3)
Native Hawaiian/ Pacific Islander	13	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(23.1)	1	(7.7)	0	(0.0)	2	(15.4)	7	(53.8)	2	(15.4)
White	295	0	(0.0)	0	(0.0)	10	(3.4)	4	(1.4)	3	(1.0)	1	(0.3)	34	(11.5)	2	(0.7)	16	(5.4)	70	(23.7)	153	(51.9)	13	(4.4)
Unknown	21	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(9.5)	2	(9.5)	1	(4.8)	3	(14.3)	12	(57.1)	4	(19.0)

¹ Includes the number of risk factors reported (which may be more than one per case) and the number of cases with no information on additional risk factors. The sum of risk factors is greater than the total number of cases because more than one risk factor may be selected per case.

² Excludes TB risk factor information for 12 cases with unknown origin

³ Persons of Hispanic or Latino origin may be of any race or multiple race.

⁴ Indicates two or more races reported for a person.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple Race does not include persons of Hispanic ethnicity.

Table 22. Epidemiologic Characteristics of Cases in GENType Clusters¹ by Alert Levels Based on Log-likelihood Ratios (LLR)²: United States, 2010–2012

Case Characteristics	Unique	Alert Levels for Clustered Cases ³					
		Clustered		Non-alerted (LLR <5)		Medium (LLR 5 – <10)	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	High (LLR ≥10)
Total	17,659 (78.9)	4,723 (21.1)	2,600 (55.0)	1,089 (23.1)	1,034 (21.9)		
Race and Ethnicity							
Hispanic or Latino	4,907 (77.3)	1,442 (22.7)	946 (65.6)	313 (21.7)	183 (12.7)		
American Indian/Alaska Native	175 (51.5)	165 (48.5)	22 (13.3)	43 (26.1)	100 (60.6)		
Asian	5,794 (88.0)	791 (12.0)	659 (83.3)	89 (11.2)	43 (5.4)		
Black or African American	3,484 (89.3)	1,546 (30.7)	623 (40.3)	406 (26.3)	517 (33.4)		
Native Hawaiian/Other Pacific Islander	91 (57.2)	68 (42.8)	26 (38.2)	27 (39.7)	15 (22.1)		
White	2,869 (81.1)	671 (18.9)	302 (45.0)	203 (30.2)	166 (24.7)		
Multiple Race	300 (91.5)	28 (8.5)	17 (60.7)	3 (10.7)	8 (28.6)		
Unknown or Missing	39 (76.5)	12 (23.5)	5 (41.7)	5 (41.7)	2 (16.7)		
Age Group (Years)							
0–4	69 (29.7)	163 (70.3)	76 (46.6)	57 (35.0)	30 (18.4)		
5–14	122 (62.6)	73 (37.4)	50 (68.5)	14 (19.2)	9 (12.3)		
15–24	1,762 (73.8)	625 (26.2)	355 (56.8)	159 (25.4)	111 (17.8)		
25–44	5,745 (78.7)	1,552 (21.3)	846 (54.5)	361 (23.3)	345 (22.2)		
45–64	5,365 (75.5)	1,744 (24.5)	891 (51.1)	391 (22.4)	462 (26.5)		
≥65	4,593 (89.1)	565 (10.9)	382 (67.6)	106 (18.8)	77 (13.6)		
Unknown	3 (75.0)	1 (25.0)	0 (0.0)	1 (100.0)	0 (0.0)		
Origin of Birth							
U.S.-born	5,442 (66.4)	2,755 (33.6)	1,122 (40.7)	753 (27.3)	880 (31.9)		
Foreign-born	12,203 (86.2)	1,958 (13.8)	1,475 (75.3)	335 (17.1)	148 (7.6)		
Unknown or Missing	14 (58.3)	10 (41.7)	3 (30.0)	1 (10.0)	6 (60.0)		
Disease Site							
Pulmonary Only	12,129 (76.9)	3,635 (23.1)	1,966 (54.1)	857 (23.6)	812 (22.3)		
Extrapulmonary	3,208 (86.8)	487 (13.2)	300 (61.6)	101 (20.7)	86 (17.7)		
Both	600 (20.6)	2,308 (79.4)	334 (55.7)	131 (21.8)	135 (22.5)		
Unknown	14 (93.3)	1 (6.7)	0 (0.0)	0 (0.0)	1 (100.0)		
Sputum Smear							
Positive	7,907 (75.6)	2,550 (24.4)	1,364 (53.5)	617 (24.2)	569 (22.3)		
Negative	7,139 (81.2)	1,647 (18.8)	940 (57.1)	346 (21.0)	361 (21.9)		
Not Done	2,592 (83.2)	524 (16.8)	295 (56.3)	126 (24.0)	103 (19.7)		
Unknown or Missing	21 (91.3)	2 (8.7)	1 (50.0)	0 (0.0)	1 (50.0)		
Cavitary disease							
Yes	263 (72.1)	102 (27.9)	49 (48.0)	30 (29.4)	23 (22.6)		
No	1,634 (79.2)	430 (20.8)	240 (55.8)	88 (20.5)	102 (23.7)		
Unknown or Missing	411 (85.8)	68 (14.2)	45 (66.2)	13 (19.1)	10 (14.7)		

Table 22. (Con't) Epidemiologic Characteristics of Cases in GENType Clusters¹ by Alert Levels Based on Log-likelihood Ratios (LLR)²: United States, 2010–2012

Case Characteristics	Unique	Alert Levels for Clustered Cases ³								
		Clustered		Non-alerted (LLR <5)		Medium (LLR 5 – <10)		High (LLR ≥10)		
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	
Homeless Within Past Year										
Yes	748	(56.5)	575	(43.5)	192	(33.4)	95	(16.5)	288	(50.1)
No	16,732	(80.3)	4,102	(19.7)	2,379	(58.0)	982	(23.9)	741	(18.1)
Unknown or Missing	179	(79.6)	46	(20.4)	29	(63.0)	12	(26.1)	5	(10.9)
Excess Alcohol Use Within the Past Year										
Yes	1,903	(63.3)	1,104	(36.7)	447	(40.5)	258	(23.4)	399	(36.1)
No	15,416	(81.4)	3,527	(18.6)	2,100	(59.5)	809	(22.9)	618	(17.5)
Unknown or Missing	340	(80.2)	92	(21.8)	53	(57.6)	22	(23.9)	17	(18.5)
Injecting Drug Use Within Past Year										
Yes	200	(61.5)	125	(38.5)	59	(47.2)	25	(20.0)	41	(32.8)
No	17,111	(79.2)	4,490	(20.8)	2,484	(55.3)	1,042	(23.2)	964	(21.5)
Unknown or Missing	348	(76.3)	108	(23.7)	57	(52.8)	22	(20.4)	29	(26.8)
Non-Injecting Drug Use Within Past Year										
Yes	958	(56.9)	725	(43.1)	292	(40.3)	178	(24.5)	255	(35.2)
No	16,329	(80.8)	3,890	(19.2)	2,250	(57.8)	890	(22.9)	750	(19.3)
Unknown or Missing	372	(77.5)	108	(22.5)	58	(53.7)	21	(19.4)	29	(26.9)
Resident of a Correction Facility at the Time of Diagnosis										
Yes	646	(71.9)	252	(28.1)	125	(49.6)	54	(21.4)	73	(29.0)
No	16,888	(79.2)	4,434	(20.8)	2,450	(55.2)	1,028	(23.2)	956	(21.6)
Unknown or Missing	125	(77.2)	37	(22.8)	25	(67.6)	7	(18.9)	5	(13.5)
HIV Status										
Positive	965	(70.6)	402	(29.4)	201	(50.0)	64	(15.9)	137	(34.1)
Negative	12,883	(78.9)	3,454	(21.1)	1,823	(52.8)	866	(25.1)	765	(22.1)
Refused	733	(86.3)	116	(13.7)	73	(62.9)	30	(25.9)	13	(11.2)
Not Offered	1,379	(82.4)	295	(17.6)	168	(56.9)	66	(22.4)	61	(20.7)
Unknown, Missing or Indeterminate	1,699	(78.8)	456	(21.2)	335	(73.5)	63	(13.8)	58	(12.7)
Multi-Drug Resistant TB										
Yes	251	(82.6)	53	(17.4)	41	(77.4)	12	(22.6)	0	(0.0)
No	16,985	(78.9)	4,552	(21.1)	2,505	(55.0)	1,049	(23.0)	998	(21.9)
Unknown or Missing	423	(78.2)	118	(21.8)	54	(45.7)	28	(23.7)	36	(30.5)

¹ GENType clusters have two or more cases with matching spoligotype and 24-locus locus mycobacterial interspersed repetitive unit-variable number tandem repeat type within a county during the specified 3-year time period.

² Alert levels are based on a log-likelihood ratio (LLR), which calculates the geographic concentration of a genotype in a county compared to the rest of the country during a 3-year period.

³ There were 4,723 cases in alerted clusters: 1,034 cases were in 112 (7.3%) High Alert clusters; 1,089 cases were in 361 (23.4%) medium alert clusters and 2,600 were in 1,069 (69.3%) Non-alerted clusters.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple Race does not include persons of Hispanic ethnicity.
See Surveillance Slide #36

Table 23. Tuberculosis Cases by Cluster Status¹: United States, 2010–2012

Cluster Status	Cases	
	No.	(%)
Total	22,382	(100.0)
Unique ²	17,659	(78.9)
Clustered ³	4,723	(21.1)

¹ Cluster status indicates whether a case is unique or clustered within a county.

² A unique case is a case with a spoligotype and 24 locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) that does not match any other case in that county during the specified three-year time period.

³ Clustered cases are defined as two or more cases with same GENType within a county during the specified 3-year time period.
See Surveillance Slide #34

Table 24. Tuberculosis Cases and Clusters by Cluster Size¹: United States, 2010–2012

Cluster Size	Clusters		Cases ²	
	No.	(%) ³	No.	(%) ⁴
Total	1,542	(100.0)	4,723	(100.0)
2-case cluster	996	(64.6)	1,992	(42.2)
3-case cluster	257	(16.7)	771	(16.3)
4–9 case cluster	250	(16.2)	1,272	(26.9)
10–19 case cluster	30	(2.0)	365	(7.7)
≥20 case cluster	9	(0.6)	323	(6.8)

¹ Clusters have two or more cases with matching spoligotype and 24-locus locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) within a county during the specified 3-year time period .

² Cases with matching spoligotype and 24-locus locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) are members of a cluster within a county during the specified 3-year time period.

³ Denominator is total number of clusters

⁴ Denominator is total number of cases

See Surveillance Slide #35.

Table 25. Ten Most Frequently Reported GENTypes¹ Among Genotyped Tuberculosis Cases: United States, 2010–2012

GENType	PCRType ²	Spoligotype	24-locus MIRU-VNTR		TB Cases with GENType ³		Reporting Areas ⁴ with GENType
					No.	(%)	No.
G00010	PCR00002	000000000003771	223325173533	444534423428	180	(0.79)	25
G00017	PCR00803	000000000003771	222325173533	445644423328	178	(0.78)	18
G00012	PCR00002	000000000003771	223325173533	445644423328	124	(0.54)	28
G00016	PCR00041	677777477413771	254326223432	14a843263217	114	(0.50)	31
G00011	PCR00015	777776777760601	224325153323	444234423337	109	(0.48)	30
G05056	PCR00041	677777477413771	254326223432	14a943263217	102	(0.45)	23
G10345	PCR00160	777776777760601	224325143323	244234423337	96	(0.42)	9
G00014	PCR00051	776037777760771	223125163324	242434223525	79	(0.34)	20
G00013	PCR00016	700036777760731	222325143223	434534412334	77	(0.34)	20
G00020	PCR01328	776377777760751	333325153222	351544223229	67	(0.29)	14

¹ GENType is defined as a unique combination of spoligotype and 24-locus mycobacterial interspersed repetitive unit-variable number tandem repeat (MIRU-VNTR) type.

² PCRType is defined as a unique combination of spoligotype and 12-locus MIRU-VNTR; every GENType has a corresponding PCRType.

³ Among 23,033 cases with GENTypes during 2010–2012.

⁴ This table reflects common GENTypes for the 50 states and the District of Columbia; for common GENTypes in the United States Affiliated Pacific Islands, please see Table 26.

Table 26. Five Most Frequently Reported GENTypes¹ Among Genotyped Tuberculosis Cases: United States Affiliated Pacific Islands, 2010–2012

GENType	PCRType ²	Spoligotype	24-locus MIRU-VNTR	TB Cases with GENType ³		Reporting Areas ⁴ with GENType
				No.	(%)	No.
G00017	PCR00803	000000000003771	222325173533 445644423328	115	(23.5)	4
G04701	PCR00117	677777477413771	254326223422 147843263217	18	(3.6)	2
G16047	PCR00028	77777777760771	223326153321 142334213423	16	(3.3)	1
G00016	PCR00041	677777477413771	254326223432 14a843263217	14	(2.9)	4
G01284	PCR00002	000000000003771	223325173533 44474442334A	14	(2.9)	3

¹ GENType is defined as a unique combination of spoligotype and 24-locus mycobacterial interspersed repetitive unit-variable number tandem repeat (MIRU-VNTR) type.

² PCRType is defined as a unique combination of spoligotype and 12-locus MIRU-VNTR; every GENType has a corresponding PCRType.

³ Among culture-positive genotyped TB cases during 2010–2012 (n=650).

⁴ The U.S. Affiliated Pacific Islands include American Samoa, Northern Mariana Islands, Federated States of Micronesia, Guam, Marshall Islands, and Palau.

This page intentionally left blank

Morbidity Tables 2010

Table 27. Tuberculosis Cases and Percentages by Reason Tuberculosis Therapy Stopped and Type of Move: United States, 2010

Type of Move	Total Cases	Completed Therapy	Adverse Event	Lost	Refused	Died	Other ¹	Unknown
	No.	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Moved in state ²	331	265 (80.1)	1 (0.3)	14 (4.2)	1 (0.3)	17 (5.1)	26 (7.9)	7 (2.1)
Moved out of state ³	305	228 (74.8)	1 (0.3)	23 (7.5)	1 (0.3)	7 (2.3)	35 (11.5)	10 (3.3)
Moved out of country ⁴	436	163 (37.4)	0 (0.0)	47 (10.8)	7 (1.6)	6 (1.4)	199 (45.6)	11 (2.5)
Did not move ⁵	9,692	8,780 (90.6)	27 (0.3)	83 (0.9)	56 (0.6)	609 (6.3)	27 (0.3)	108 (1.1)

- ¹ Therapy was discontinued for a known reason other than those listed (e.g. patient moved outside the U.S., or patient moved from state A to state B, and though state A notified state B, state B never followed up).
- ² Includes patients who were alive at diagnosis, started on treatment, and moved in state.
- ³ Includes patients who were alive at diagnosis, started on treatment, and moved out of state.
- ⁴ Includes patients who were alive at diagnosis, started on treatment, and moved out of the country; transnational referrals were provided for 262 (51.8%) TB patients who moved out of the country.
- ⁵ Includes patients who were alive at diagnosis, started on treatment, and did not indicate having moved.

Note: There may be differences in the way jurisdictions determine treatment completion for patients who moved out of the country; some reporting jurisdictions may be classifying all patients who moved out of the country as 'other' for reason therapy stopped.

Table 28. Deaths Prior to Tuberculosis Diagnosis or During Tuberculosis Therapy by Age Group: United States, 2010

Age Group	Total		Dead at Diagnosis				Died During Therapy ¹			
	Total Deaths Reported	Deaths Related to TB Disease or Therapy ²	Total Dead at Diagnosis		TB a Cause of Death		Total Died During Therapy		Unrelated to TB	
	No.	No. (%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Total	893	320 (35.8)	252	85 (33.7)	123	(48.8)	641	235 (36.7)	294	(45.9)
0–4	0	...	0	0	...	0	0	...	0	...
5–14	2	1 (50.0)	1	0 (0.0)	1	(100.0)	1	1 (100.0)	0	(0.0)
15–24	11	5 (45.5)	6	3 (50.0)	3	(50.0)	5	2 (40.0)	3	(60.0)
25–44	95	41 (43.2)	40	16 (40.0)	16	(40.0)	55	25 (45.5)	20	(36.4)
45–64	294	114 (38.8)	84	32 (38.1)	37	(44.0)	210	82 (39.0)	99	(47.1)
≥65	491	159 (32.4)	121	34 (28.1)	66	(54.5)	370	125 (33.8)	172	(46.5)
									73	(19.7)

¹ Among patients alive at diagnosis. Excludes 16 patients who died during therapy but did not start on therapy or unknown whether or not therapy was started.² Includes patients who were dead at diagnosis or died during therapy, for which TB or TB therapy was indicated as a cause of death.³ Eight patient deaths during therapy were related to TB therapy.**Note:** Ellipses indicate data not available.

Table 29. Sputum Culture Conversion by Age Group: United States, 2010

Age Group	Total Sputum Culture Positive ¹	Sputum Culture Conversion Documented ²		Sputum Culture Conversion Not Documented ³		Sputum Culture Conversion Unknown		Reason Sputum Culture Conversion Not Documented																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No

¹ Among persons who were alive at diagnosis and had positive sputum culture

² Among persons who had sputum culture conversion documented at any time.

³ Among persons who were alive at diagnosis, had positive culture, and did not have documented culture conversion (excludes patients with unknown culture conversion).

Morbidity Tables Reporting Areas, 2012

Table 30. Tuberculosis Cases and Case Rates per 100,000 Population: Reporting Areas, 2012 and 2011

Reporting Area	Cases		Case Rates		Rank According to Rate		Population Estimates July 1, 2012
	2012	2011	2012	2011	2012	2011	
United States	9,945	10,517	3.2	3.4	--	--	313,914,040
Alabama	134	161	2.8	3.4	18	13	4,822,023
Alaska	66	67	9	9.3	1	1	731,449
Arizona	211	255	3.2	3.9	13	8	6,553,255
Arkansas	70	85	2.4	2.9	24	18	2,949,131
California	2,191	2,322	5.8	6.2	3	3	38,041,430
Colorado	64	70	1.2	1.4	43	36	5,187,582
Connecticut	74	83	2.1	2.3	29	27	3,590,347
Delaware	28	21	3.1	2.3	14	28	917,092
District of Columbia ¹	37	55	5.9	8.9	--	--	619,020
Florida	679	754	3.5	4	9	7	19,317,568
Georgia	357	347	3.6	3.5	8	11	9,919,945
Hawaii	117	123	8.4	8.9	2	2	1,392,313
Idaho	15	12	0.9	0.8	45	47	1,595,728
Illinois	347	358	2.7	2.8	20	19	12,875,255
Indiana	102	100	1.6	1.5	34	35	6,537,334
Iowa	46	40	1.5	1.3	36	37	3,074,186
Kansas	42	36	1.5	1.3	38	40	2,885,905
Kentucky	80	70	1.8	1.6	32	34	4,380,415
Louisiana	149	167	3.2	3.7	11	10	4,601,893
Maine	17	9	1.3	0.7	41	50	1,329,192
Maryland	224	232	3.8	4	6	6	5,884,563
Massachusetts	215	195	3.2	3	12	16	6,646,144
Michigan	149	170	1.5	1.7	35	32	9,883,360
Minnesota	162	137	3	2.6	15	22	5,379,139
Mississippi	81	91	2.7	3.1	19	14	2,984,926
Missouri	89	98	1.5	1.6	37	33	6,021,988
Montana	5	8	0.5	0.8	49	46	1,005,141
Nebraska	22	23	1.2	1.2	44	41	1,855,525
Nevada	82	96	3	3.5	16	12	2,758,931
New Hampshire	9	11	0.7	0.8	46	45	1,320,718
New Jersey	302	331	3.4	3.7	10	9	8,864,590
New Mexico	40	49	1.9	2.4	30	26	2,085,538
New York	866	905	4.4	4.6	5	5	19,570,261
North Carolina	211	244	2.2	2.5	28	23	9,752,073
North Dakota	26	7	3.7	1	7	44	699,628
Ohio	149	145	1.3	1.3	40	39	11,544,225
Oklahoma	88	94	2.3	2.5	25	24	3,814,820
Oregon	61	74	1.6	1.9	33	30	3,899,353
Pennsylvania	234	260	1.8	2	31	29	12,763,536
Rhode Island	23	27	2.2	2.6	27	21	1,050,292
South Carolina	122	140	2.6	3	22	15	4,723,723
South Dakota	19	15	2.3	1.8	26	31	833,354
Tennessee	164	156	2.5	2.4	23	25	6,456,243
Texas	1,233	1,325	4.7	5.2	4	4	26,059,203
Utah	37	34	1.3	1.2	39	43	2,855,287
Vermont	4	8	0.6	1.3	47	38	626,011
Virginia	235	221	2.9	2.7	17	20	8,185,867
Washington	185	199	2.7	2.9	21	17	6,897,012
West Virginia	8	13	0.4	0.7	50	49	1,855,413
Wisconsin	71	70	1.2	1.2	42	42	5,726,398
Wyoming	3	4	0.5	0.7	48	48	576,412
American Samoa ^{1,2}	1	3	1.8	5.5	--	--	54,947
Fed. States of Micronesia ^{1,2}	173	142	162.5	133.3	--	--	106,487
Guam ^{1,2}	68	79	42.5	49.4	--	--	159,914
Marshall Islands ^{1,2}	145	148	211.7	216.1	--	--	68,480
N. Mariana Islands ^{1,2}	21	31	40.9	60.3	--	--	51,395
Puerto Rico ^{1,2}	71	50	1.9	1.4	--	--	3,690,923
Republic of Palau ^{1,2}	2	8	9.5	38	--	--	21,032
U.S. Virgin Islands ^{1,2}	4	...	3.8	...	--	--	105,275

¹ Not ranked with the states. See Table 31 for District of Columbia ranking among states.

² Not included in U.S. totals.

Note: Denominators for computing 2011 and 2012 rates for states, the District of Columbia, and Puerto Rico were obtained from Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2012 (<http://www.census.gov/popest/data/national/totals/2012/index.html>) (accessed August 12, 2013); for all other areas, from IDB Summary Demographic Data (<http://www.census.gov/population/international/data/idb/informationGateway.php>) (accessed August 12, 2013).

Ellipses indicate data not available.

See Technical Notes.

See Surveillance Slide #4.

Table 31. Tuberculosis Cases and Case Rates per 100,000 Population, Ranked and Grouped by Number of Cases: United States and the District of Columbia, 2012 and 2011

Reporting Area	2012		2011		2011–2012 % Change		Overall Rank by 2012 Rate
	No.	Rate	No.	Rate	No.	Rate	
Total	9,945	3.2	10,517	3.4	-5.4	-6.1	...
>= 500 cases in 2012							
California	2,191	5.8	2,322	6.2	-5.6	-6.5	3
Texas	1,233	4.7	1,325	5.2	-6.9	-8.5	4
New York ¹	866	4.4	905	4.6	-4.3	-4.6	5
Florida	679	3.5	754	4.0	-9.9	-11.0	9
100 - 499 cases in 2012							
Georgia	357	3.6	347	3.5	2.9	1.8	8
Illinois	347	2.7	358	2.8	-3.1	-3.2	20
New Jersey	302	3.4	331	3.7	-8.8	-9.1	10
Virginia	235	2.9	221	2.7	6.3	5.3	17
Pennsylvania	234	1.8	260	2.0	-10.0	-10.1	31
Maryland	224	3.8	232	4.0	-3.4	-4.2	6
Massachusetts	215	3.2	195	3.0	10.3	9.6	12
Arizona	211	3.2	255	3.9	-17.3	-18.3	13
North Carolina	211	2.2	244	2.5	-13.5	-14.4	28
Washington	185	2.7	199	2.9	-7.0	-8.0	21
Tennessee	164	2.5	156	2.4	5.1	4.2	23
Minnesota	162	3.0	137	2.6	18.2	17.5	15
Louisiana	149	3.2	167	3.7	-10.8	-11.3	11
Michigan	149	1.5	170	1.7	-12.4	-12.4	35
Ohio	149	1.3	145	1.3	2.8	2.7	40
Alabama	134	2.8	161	3.4	-16.8	-17.1	18
South Carolina	122	2.6	140	3.0	-12.9	-13.8	22
Hawaii	117	8.4	123	8.9	-4.9	-5.8	2
Indiana	102	1.6	100	1.5	2.0	1.7	34
< 100 cases in 2012							
Missouri	89	1.5	98	1.6	-9.2	-9.4	37
Oklahoma	88	2.3	94	2.5	-6.4	-7.1	25
Nevada	82	3.0	96	3.5	-14.6	-15.8	16
Mississippi	81	2.7	91	3.1	-11.0	-11.2	19
Kentucky	80	1.8	70	1.6	14.3	13.9	32
Connecticut	74	2.1	83	2.3	-10.8	-10.9	29
Wisconsin	71	1.2	70	1.2	1.4	1.1	42
Arkansas	70	2.4	85	2.9	-17.6	-17.9	24
Alaska	66	9.0	67	9.3	-1.5	-2.5	1
Colorado	64	1.2	70	1.4	-8.6	-9.8	43
Oregon	61	1.6	74	1.9	-17.6	-18.2	33
Iowa	46	1.5	40	1.3	15.0	14.6	36
Kansas	42	1.5	36	1.3	16.7	16.0	38
New Mexico	40	1.9	49	2.4	-18.4	-18.6	30
District of Columbia	37	6.0	55	8.9	-32.7	-32.7	--
Utah	37	1.3	34	1.2	8.8	7.3	39
Delaware	28	3.1	21	2.3	33.3	32.0	14
North Dakota	26	3.7	7	1.0	271.4	263.5	7
Rhode Island	23	2.2	27	2.6	-14.8	-14.8	27
Nebraska	22	1.2	23	1.2	-4.3	-5.0	44
South Dakota	19	2.3	15	1.8	26.7	25.2	26
Maine	17	1.3	9	0.7	88.9	88.8	41
Idaho	15	0.9	12	0.8	25.0	24.1	45
New Hampshire	9	0.7	11	0.8	-18.2	-18.4	46
West Virginia	8	0.4	13	0.7	-38.5	-38.5	50
Montana	5	0.5	8	0.8	-37.5	-38.0	49
Vermont	4	0.6	8	1.3	-50.0	-50.0	47
Wyoming	3	0.5	4	0.7	-25.0	-26.2	48

¹ Includes New York City.

Note: Denominators for computing 2011 and 2012 rates for states, the District of Columbia, and Puerto Rico were obtained from Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2012 (<http://www.census.gov/popest/data/national/totals/2012/index.html>) (accessed August 12, 2013).

See Table 30 for ranking of states without the District of Columbia.

This page intentionally left blank

Table 32. Tuberculosis Cases and Percentages by Age Group: Reporting Areas, 2012

Reporting Area	Total Cases		Under 5		5–14		15–24		25–44		45–64		≥65		Unknown or Missing	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	9,945	(2.6)	260	(2.3)	226	(2.3)	1,020	(10.3)	3,118	(31.4)	3,114	(31.3)	2,204	(22.2)	3	(0.0)
Alabama	134		4	(3.0)	0	(0.0)	14	(10.4)	33	(24.6)	38	(28.4)	45	(33.6)	0	(0.0)
Alaska	66		2	(3.0)	7	(10.6)	10	(15.2)	17	(25.8)	24	(36.4)	6	(9.1)	0	(0.0)
Arizona	211		3	(1.4)	7	(3.3)	31	(14.7)	84	(39.8)	49	(23.2)	37	(17.5)	0	(0.0)
Arkansas	70		1	(1.4)	2	(2.9)	4	(5.7)	20	(28.6)	22	(31.4)	21	(30.0)	0	(0.0)
California	2,191		48	(2.2)	40	(1.8)	215	(9.8)	597	(27.2)	700	(31.9)	590	(26.9)	1	(0.0)
Colorado	64		0	(0.0)	3	(4.7)	11	(17.2)	13	(20.3)	17	(26.6)	20	(31.3)	0	(0.0)
Connecticut	74		1	(1.4)	0	(0.0)	7	(9.5)	40	(54.1)	9	(12.2)	17	(23.0)	0	(0.0)
Delaware	28		0	(0.0)	0	(0.0)	3	(10.7)	10	(35.7)	7	(25.0)	8	(28.6)	0	(0.0)
District of Columbia	37		1	(2.7)	1	(2.7)	4	(10.8)	15	(40.5)	11	(29.7)	5	(13.5)	0	(0.0)
Florida	679		13	(1.9)	17	(2.5)	60	(8.8)	201	(29.6)	256	(37.7)	132	(19.4)	0	(0.0)
Georgia	357		11	(3.1)	12	(3.4)	39	(10.9)	118	(33.1)	127	(35.6)	50	(14.0)	0	(0.0)
Hawaii	117		1	(0.9)	3	(2.6)	14	(12.0)	21	(17.9)	40	(34.2)	38	(32.5)	0	(0.0)
Idaho	15		1	(6.7)	0	(0.0)	5	(33.3)	4	(26.7)	2	(13.3)	3	(20.0)	0	(0.0)
Illinois	347		9	(2.6)	7	(2.0)	29	(8.4)	105	(30.3)	122	(35.2)	75	(21.6)	0	(0.0)
Indiana	102		6	(5.9)	4	(3.9)	6	(5.9)	40	(39.2)	23	(22.5)	23	(22.5)	0	(0.0)
Iowa	46		1	(2.2)	1	(2.2)	7	(15.2)	22	(47.8)	11	(23.9)	4	(8.7)	0	(0.0)
Kansas	42		1	(2.4)	1	(2.4)	8	(19.0)	11	(26.2)	13	(31.0)	8	(19.0)	0	(0.0)
Kentucky	80		2	(2.5)	1	(1.3)	6	(7.5)	27	(33.8)	24	(30.0)	20	(25.0)	0	(0.0)
Louisiana	149		3	(2.0)	1	(0.7)	14	(9.4)	48	(32.2)	52	(34.9)	31	(20.8)	0	(0.0)
Maine	17		1	(5.9)	1	(5.9)	1	(5.9)	5	(29.4)	6	(35.3)	3	(17.6)	0	(0.0)
Maryland	224		9	(4.0)	5	(2.2)	23	(10.3)	88	(39.3)	56	(25.0)	43	(19.2)	0	(0.0)
Massachusetts	215		1	(0.5)	1	(0.5)	26	(12.1)	81	(37.7)	58	(27.0)	48	(22.3)	0	(0.0)
Michigan	149		3	(2.0)	0	(0.0)	17	(11.4)	36	(24.2)	46	(30.9)	47	(31.5)	0	(0.0)
Minnesota	162		7	(4.3)	16	(9.9)	32	(19.8)	60	(37.0)	27	(16.7)	20	(12.3)	0	(0.0)
Mississippi	81		0	(0.0)	1	(1.2)	4	(4.9)	20	(24.7)	36	(44.4)	20	(24.7)	0	(0.0)
Missouri	89		3	(3.4)	1	(1.1)	7	(7.9)	25	(28.1)	25	(28.1)	28	(31.5)	0	(0.0)
Montana	5		0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(60.0)	2	(40.0)	0	(0.0)
Nebraska	22		1	(4.5)	0	(0.0)	3	(13.6)	13	(59.1)	4	(18.2)	1	(4.5)	0	(0.0)
Nevada	82		5	(6.1)	5	(6.1)	12	(14.6)	14	(17.1)	25	(30.5)	21	(25.6)	0	(0.0)
New Hampshire	9		0	(0.0)	1	(11.1)	0	(0.0)	6	(66.7)	0	(0.0)	2	(22.2)	0	(0.0)
New Jersey	302		1	(0.3)	4	(1.3)	24	(7.9)	123	(40.7)	86	(28.5)	64	(21.2)	0	(0.0)

Table 32. (Cont'd) Tuberculosis Cases and Percentages by Age Group: Reporting Areas, 2012

Reporting Area	Under 5		5–14		15–24		25–44		45–64		≥65		Unknown or Missing	
	Total Cases	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.
New Mexico	40	0	(0.0)	0	(0.0)	1	(2.5)	12	(30.0)	10	(25.0)	17	(42.5)	0
New York	866	9	(1.0)	18	(2.1)	78	(9.0)	298	(34.4)	274	(31.6)	189	(21.8)	0
North Carolina	211	11	(5.2)	4	(1.9)	25	(11.8)	72	(34.1)	54	(25.6)	45	(21.3)	0
North Dakota	26	4	(15.4)	2	(7.7)	6	(23.1)	6	(23.1)	6	(23.1)	2	(7.7)	0
Ohio	149	3	(2.0)	4	(2.7)	19	(12.8)	49	(32.9)	37	(24.8)	37	(24.8)	0
Oklahoma	88	7	(8.0)	5	(5.7)	7	(8.0)	25	(28.4)	28	(31.8)	16	(18.2)	0
Oregon	61	0	(0.0)	1	(1.6)	5	(8.2)	20	(32.8)	24	(39.3)	11	(18.0)	0
Pennsylvania	234	3	(1.3)	4	(1.7)	16	(6.8)	70	(29.9)	79	(33.8)	62	(26.5)	0
Rhode Island	23	2	(8.7)	0	(0.0)	4	(17.4)	5	(21.7)	4	(17.4)	8	(34.8)	0
South Carolina	122	4	(3.3)	3	(2.5)	7	(5.7)	28	(23.0)	46	(37.7)	34	(27.9)	0
South Dakota	19	2	(10.5)	0	(0.0)	1	(5.3)	5	(26.3)	7	(36.8)	4	(21.1)	0
Tennessee	164	5	(3.0)	5	(3.0)	15	(9.1)	51	(31.1)	59	(36.0)	29	(17.7)	0
Texas	1,233	50	(4.1)	28	(2.3)	155	(12.6)	373	(30.3)	428	(34.7)	199	(16.1)	0
Utah	37	1	(2.7)	0	(0.0)	2	(5.4)	15	(40.5)	11	(29.7)	8	(21.6)	0
Vermont	4	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	3	(75.0)	0	(0.0)	0
Virginia	235	8	(3.4)	5	(2.1)	20	(8.5)	88	(37.4)	68	(28.9)	46	(19.6)	0
Washington	185	6	(3.2)	4	(2.2)	14	(7.6)	71	(38.4)	42	(22.7)	48	(25.9)	0
West Virginia	8	0	(0.0)	0	(0.0)	1	(12.5)	5	(62.5)	1	(12.5)	1	(12.5)	0
Wisconsin	71	6	(8.5)	1	(1.4)	7	(9.9)	26	(36.6)	14	(19.7)	15	(21.1)	2
Wyoming	3	0	(0.0)	0	(0.0)	0	(0.0)	2	(66.7)	0	(0.0)	1	(33.3)	0
American Samoa ¹	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)	0
Fed. States of Micronesia ¹	173	20	(11.6)	28	(16.2)	33	(19.1)	52	(30.1)	31	(17.9)	8	(4.6)	1
Guam ¹	68	6	(8.8)	9	(13.2)	5	(7.4)	12	(17.6)	22	(32.4)	14	(20.6)	0
Marshall Islands ¹	145	22	(15.2)	17	(11.7)	28	(19.3)	39	(26.9)	31	(21.4)	8	(5.5)	0
N. Mariana Islands ¹	21	0	(0.0)	0	(0.0)	1	(4.8)	11	(52.4)	8	(38.1)	1	(4.8)	0
Puerto Rico ¹	71	1	(1.4)	0	(0.0)	2	(2.8)	18	(25.4)	27	(38.0)	23	(32.4)	0
Republic of Palau ¹	4	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	2	(50.0)	1	(25.0)	0
U.S. Virgin Islands ¹	4	0	(0.0)	0	(0.0)	0	(0.0)	2	(50.0)	0	(0.0)	0	(0.0)	2

¹Not included in U.S. totals.

Table 33. Tuberculosis Cases and Percentages by Hispanic Ethnicity and Non-Hispanic Race: Reporting Areas, 2012

Reporting Area	Total Cases	Hispanic or Latino ¹		American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		Multiple Race ²		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	9,945	2,790	(28.1)	146	(1.5)	2,957	(29.7)	2,234	(22.5)	64	(0.6)	1,572	(15.8)	148	(1.5)	34	(0.3)
Alabama	134	21	(15.7)	0	(0.0)	3	(2.2)	67	(50.0)	0	(0.0)	43	(32.1)	0	(0.0)	0	(0.0)
Alaska	66	4	(6.1)	50	(75.8)	8	(12.1)	1	(1.5)	0	(0.0)	2	(3.0)	0	(0.0)	1	(1.5)
Arizona	211	123	(58.3)	15	(7.1)	30	(14.2)	24	(11.4)	0	(0.0)	19	(9.0)	0	(0.0)	0	(0.0)
Arkansas	70	10	(14.3)	0	(0.0)	11	(15.7)	10	(14.3)	4	(5.7)	35	(50.0)	0	(0.0)	0	(0.0)
California	2,191	816	(37.2)	6	(0.3)	959	(43.8)	137	(6.3)	14	(0.6)	183	(8.4)	76	(3.5)	0	(0.0)
Colorado	64	29	(45.3)	2	(3.1)	18	(28.1)	9	(14.1)	0	(0.0)	4	(6.3)	2	(3.1)	0	(0.0)
Connecticut	74	18	(24.3)	0	(0.0)	28	(37.8)	16	(21.6)	0	(0.0)	9	(12.2)	3	(4.1)	0	(0.0)
Delaware	28	6	(21.4)	0	(0.0)	6	(21.4)	11	(39.3)	0	(0.0)	4	(14.3)	1	(3.6)	0	(0.0)
District of Columbia	37	4	(10.8)	0	(0.0)	2	(5.4)	31	(83.8)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Florida	679	173	(25.5)	0	(0.0)	70	(10.3)	245	(36.1)	1	(0.1)	189	(27.8)	1	(0.1)	0	(0.0)
Georgia	357	55	(15.4)	0	(0.0)	67	(18.8)	183	(51.3)	0	(0.0)	51	(14.3)	0	(0.0)	1	(0.3)
Hawaii	117	2	(1.7)	0	(0.0)	90	(76.9)	0	(0.0)	17	(14.5)	5	(4.3)	3	(2.6)	0	(0.0)
Idaho	15	7	(46.7)	0	(0.0)	1	(6.7)	4	(26.7)	0	(0.0)	2	(13.3)	1	(6.7)	0	(0.0)
Illinois	347	88	(25.4)	0	(0.0)	116	(33.4)	82	(23.6)	3	(0.9)	58	(16.7)	0	(0.0)	0	(0.0)
Indiana	102	10	(9.8)	0	(0.0)	26	(25.5)	29	(28.4)	0	(0.0)	37	(36.3)	0	(0.0)	0	(0.0)
Iowa	46	8	(17.4)	0	(0.0)	18	(39.1)	8	(17.4)	1	(2.2)	11	(23.9)	0	(0.0)	0	(0.0)
Kansas	42	12	(28.6)	0	(0.0)	14	(33.3)	6	(14.3)	1	(2.4)	9	(21.4)	0	(0.0)	0	(0.0)
Kentucky	80	5	(6.3)	0	(0.0)	15	(18.8)	14	(17.5)	0	(0.0)	45	(56.3)	1	(1.3)	0	(0.0)
Louisiana	149	13	(8.7)	0	(0.0)	19	(12.8)	70	(47.0)	0	(0.0)	47	(31.5)	0	(0.0)	0	(0.0)
Maine	17	1	(5.9)	0	(0.0)	2	(11.8)	6	(35.3)	1	(5.9)	7	(41.2)	0	(0.0)	0	(0.0)
Maryland	224	33	(14.7)	0	(0.0)	73	(32.6)	99	(44.2)	0	(0.0)	18	(8.0)	1	(0.4)	0	(0.0)
Massachusetts	215	31	(14.4)	0	(0.0)	79	(36.7)	62	(28.8)	0	(0.0)	41	(19.1)	2	(0.9)	0	(0.0)
Michigan	149	20	(13.4)	0	(0.0)	45	(30.2)	41	(27.5)	0	(0.0)	34	(22.8)	0	(0.0)	9	(6.0)
Minnesota	162	16	(9.9)	2	(1.2)	42	(25.9)	90	(55.6)	0	(0.0)	12	(7.4)	0	(0.0)	0	(0.0)
Mississippi	81	7	(8.6)	0	(0.0)	4	(4.9)	49	(60.5)	0	(0.0)	21	(25.9)	0	(0.0)	0	(0.0)
Missouri	89	8	(9.0)	0	(0.0)	19	(21.3)	28	(31.5)	0	(0.0)	32	(36.0)	0	(0.0)	2	(2.2)
Montana	5	0	(0.0)	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Nebraska	22	6	(27.3)	0	(0.0)	4	(18.2)	7	(31.8)	0	(0.0)	3	(13.6)	2	(9.1)	0	(0.0)
Nevada	82	22	(26.8)	2	(2.4)	39	(47.6)	5	(6.1)	0	(0.0)	14	(17.1)	0	(0.0)	0	(0.0)
New Hampshire	9	2	(22.2)	0	(0.0)	5	(55.6)	2	(22.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
New Jersey	302	79	(26.2)	0	(0.0)	146	(48.3)	47	(15.6)	0	(0.0)	30	(9.9)	0	(0.0)	0	(0.0)

Table 33. (Cont'd) Tuberculosis Cases and Percentages by Hispanic Ethnicity and Non-Hispanic Race: Reporting Areas, 2012

Reporting Area	Total Cases	Hispanic or Latino ¹		American Indian or Alaska Native		Asian		Black or African American		Native Hawaiian or Other Pacific Islander		White		Multiple Race ²		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
New Mexico	40	24	(60.0)	12	(30.0)	2	(5.0)	0	(0.0)	0	(0.0)	2	(5.0)	0	(0.0)	0	(0.0)
New York	866	231	(26.7)	0	(0.0)	316	(36.5)	172	(19.9)	1	(0.1)	95	(11.0)	37	(4.3)	14	(1.6)
North Carolina	211	42	(19.9)	5	(2.4)	48	(22.7)	66	(31.3)	0	(0.0)	41	(19.4)	9	(4.3)	0	(0.0)
North Dakota	26	0	(0.0)	15	(57.7)	2	(7.7)	2	(7.7)	0	(0.0)	7	(26.9)	0	(0.0)	0	(0.0)
Ohio	149	15	(10.1)	0	(0.0)	28	(18.8)	63	(42.3)	0	(0.0)	42	(28.2)	1	(0.7)	0	(0.0)
Oklahoma	88	13	(14.8)	13	(14.8)	18	(20.5)	15	(17.0)	4	(4.5)	22	(25.0)	2	(2.3)	1	(1.1)
Oregon	61	22	(36.1)	2	(3.3)	23	(37.7)	2	(3.3)	1	(1.6)	11	(18.0)	0	(0.0)	0	(0.0)
Pennsylvania	234	25	(10.7)	0	(0.0)	86	(36.8)	66	(28.2)	0	(0.0)	53	(22.6)	4	(1.7)	0	(0.0)
Rhode Island	23	9	(39.1)	0	(0.0)	6	(26.1)	4	(17.4)	0	(0.0)	4	(17.4)	0	(0.0)	0	(0.0)
South Carolina	122	11	(9.0)	0	(0.0)	16	(13.1)	63	(51.6)	0	(0.0)	32	(26.2)	0	(0.0)	0	(0.0)
South Dakota	19	0	(0.0)	8	(42.1)	2	(10.5)	3	(15.8)	0	(0.0)	6	(31.6)	0	(0.0)	0	(0.0)
Tennessee	164	17	(10.4)	0	(0.0)	21	(12.8)	68	(41.5)	2	(1.2)	56	(34.1)	0	(0.0)	0	(0.0)
Texas	1,233	638	(51.7)	0	(0.0)	204	(16.5)	224	(18.2)	5	(0.4)	162	(13.1)	0	(0.0)	0	(0.0)
Utah	37	11	(29.7)	4	(10.8)	11	(29.7)	3	(8.1)	2	(5.4)	6	(16.2)	0	(0.0)	0	(0.0)
Vermont	4	0	(0.0)	0	(0.0)	2	(50.0)	2	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Virginia	235	52	(22.1)	1	(0.4)	97	(41.3)	50	(21.3)	0	(0.0)	35	(14.9)	0	(0.0)	0	(0.0)
Washington	185	31	(16.8)	3	(1.6)	82	(44.3)	36	(19.5)	7	(3.8)	22	(11.9)	2	(1.1)	2	(1.1)
West Virginia	8	1	(12.5)	0	(0.0)	2	(25.0)	1	(12.5)	0	(0.0)	4	(50.0)	0	(0.0)	0	(0.0)
Wisconsin	71	18	(25.4)	1	(1.4)	32	(45.1)	10	(14.1)	0	(0.0)	6	(8.5)	0	(0.0)	4	(5.6)
Wyoming	3	1	(33.3)	0	(0.0)	0	(0.0)	1	(33.3)	0	(0.0)	1	(33.3)	0	(0.0)	0	(0.0)
American Samoa ³	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
Fed. States of Micronesia ³	173	0	(0.0)	0	(0.0)	3	(1.7)	0	(0.0)	167	(96.5)	0	(0.0)	1	(0.6)	2	(1.2)
Guam ³	68	0	(0.0)	0	(0.0)	41	(60.3)	0	(0.0)	26	(38.2)	0	(0.0)	0	(0.0)	1	(1.5)
Marshall Islands ³	145	1	(0.7)	0	(0.0)	0	(0.0)	0	(0.0)	142	(97.9)	0	(0.0)	1	(0.7)	1	(0.7)
N. Mariana Islands ³	21	0	(0.0)	0	(0.0)	12	(57.1)	0	(0.0)	8	(38.1)	0	(0.0)	0	(0.0)	1	(4.8)
Puerto Rico ³	71	70	(98.6)	0	(0.0)	0	(0.0)	1	(1.4)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Republic of Palau ³	4	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	3	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)
U.S. Virgin Islands ³	4	2	(50.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)

¹ Persons of Hispanic origin may be of any race or multiple race.

² Indicates two or more races reported for a person.

³ Not included in U.S. totals.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple Race does not include persons of Hispanic ethnicity.
See Technical Notes.

Table 34. Tuberculosis Cases and Percentages, U.S.-born and Foreign-born Persons¹: Reporting Areas, 2012

Reporting Area	Total Cases	U.S.-born Persons		Foreign-born Persons ¹		Unknown Origin	
		No.	(%)	No.	(%)	No.	(%)
United States	9,945	3,659	(36.8)	6,274	(63.1)	12	(0.1)
Alabama	134	108	(80.6)	26	(19.4)	0	(0.0)
Alaska	66	51	(77.3)	11	(16.7)	4	(6.1)
Arizona	211	60	(28.4)	149	(70.6)	2	(0.9)
Arkansas	70	51	(72.9)	19	(27.1)	0	(0.0)
California	2,191	473	(21.6)	1,717	(78.4)	1	(0.0)
Colorado	64	20	(31.3)	44	(68.8)	0	(0.0)
Connecticut	74	13	(17.6)	61	(82.4)	0	(0.0)
Delaware	28	10	(35.7)	18	(64.3)	0	(0.0)
District of Columbia	37	17	(45.9)	20	(54.1)	0	(0.0)
Florida	679	348	(51.3)	331	(48.7)	0	(0.0)
Georgia	357	203	(56.9)	153	(42.9)	1	(0.3)
Hawaii	117	29	(24.8)	88	(75.2)	0	(0.0)
Idaho	15	3	(20.0)	12	(80.0)	0	(0.0)
Illinois	347	106	(30.5)	241	(69.5)	0	(0.0)
Indiana	102	59	(57.8)	43	(42.2)	0	(0.0)
Iowa	46	14	(30.4)	31	(67.4)	1	(2.2)
Kansas	42	12	(28.6)	30	(71.4)	0	(0.0)
Kentucky	80	55	(68.8)	25	(31.3)	0	(0.0)
Louisiana	149	116	(77.9)	33	(22.1)	0	(0.0)
Maine	17	7	(41.2)	10	(58.8)	0	(0.0)
Maryland	224	52	(23.2)	171	(76.3)	1	(0.4)
Massachusetts	215	29	(13.5)	186	(86.5)	0	(0.0)
Michigan	149	75	(50.3)	74	(49.7)	0	(0.0)
Minnesota	162	26	(16.0)	136	(84.0)	0	(0.0)
Mississippi	81	70	(86.4)	11	(13.6)	0	(0.0)
Missouri	89	49	(55.1)	40	(44.9)	0	(0.0)
Montana	5	5	(100.0)	0	(0.0)	0	(0.0)
Nebraska	22	8	(36.4)	14	(63.6)	0	(0.0)
Nevada	82	20	(24.4)	61	(74.4)	1	(1.2)
New Hampshire	9	0	(0.0)	9	(100.0)	0	(0.0)
New Jersey	302	56	(18.5)	246	(81.5)	0	(0.0)
New Mexico	40	21	(52.5)	19	(47.5)	0	(0.0)
New York	866	173	(20.0)	693	(80.0)	0	(0.0)
North Carolina	211	114	(54.0)	97	(46.0)	0	(0.0)
North Dakota	26	22	(84.6)	4	(15.4)	0	(0.0)
Ohio	149	77	(51.7)	72	(48.3)	0	(0.0)
Oklahoma	88	57	(64.8)	31	(35.2)	0	(0.0)
Oregon	61	17	(27.9)	44	(72.1)	0	(0.0)
Pennsylvania	234	93	(39.7)	141	(60.3)	0	(0.0)
Rhode Island	23	10	(43.5)	13	(56.5)	0	(0.0)
South Carolina	122	94	(77.0)	28	(23.0)	0	(0.0)
South Dakota	19	12	(63.2)	7	(36.8)	0	(0.0)
Tennessee	164	115	(70.1)	49	(29.9)	0	(0.0)
Texas	1,233	571	(46.3)	662	(53.7)	0	(0.0)
Utah	37	10	(27.0)	27	(73.0)	0	(0.0)
Vermont	4	0	(0.0)	4	(100.0)	0	(0.0)
Virginia	235	52	(22.1)	183	(77.9)	0	(0.0)
Washington	185	45	(24.3)	140	(75.7)	0	(0.0)
West Virginia	8	6	(75.0)	2	(25.0)	0	(0.0)
Wisconsin	71	24	(33.8)	46	(64.8)	1	(1.4)
Wyoming	3	1	(33.3)	2	(66.7)	0	(0.0)

¹Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Note: See Surveillance Slide #16.

This page intentionally left blank

Table 35. Tuberculosis Cases and Percentages in Foreign-born Persons¹ by Top 7 Countries of Birth: Reporting Areas, 2012

Reporting Area		Country of Origin																			
		Mexico		Philippines		India		Vietnam		China		Haiti		Guatemala		All Others ²		Unknown or Missing			
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)		
Total Cases		1,308 (20.8)		773 (12.3)		532 (8.5)		456 (7.3)		351 (5.6)		197 (3.1)		193 (3.1)		2,455 (39.1)		9 (0.1)			
United States		6,274		1,308		773		532		456		351		197		193		2,455		9	
Alabama	26	8	(30.8)	0	(0.0)	1	(3.8)	2	(7.7)	0	(0.0)	1	(3.8)	5	(19.2)	9	(34.6)	0	(0.0)		
Alaska	11	2	(18.2)	5	(45.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	4	(36.4)	0	(0.0)		
Arizona	149	74	(49.7)	7	(4.7)	2	(1.3)	4	(2.7)	2	(1.3)	1	(0.7)	15	(10.1)	44	(29.5)	0	(0.0)		
Arkansas	19	6	(31.6)	1	(5.3)	4	(21.1)	0	(0.0)	0	(0.0)	0	(0.0)	1	(5.3)	6	(31.6)	1	(5.3)		
California	1,717	490	(28.5)	377	(22.0)	97	(5.6)	198	(11.5)	120	(7.0)	3	(0.2)	42	(2.4)	390	(22.7)	0	(0.0)		
Colorado	44	18	(40.9)	2	(4.5)	3	(6.8)	2	(4.5)	2	(4.5)	1	(2.3)	0	(0.0)	16	(36.4)	0	(0.0)		
Connecticut	61	2	(3.3)	6	(9.8)	9	(14.8)	2	(3.3)	3	(4.9)	5	(8.2)	2	(3.3)	32	(52.5)	0	(0.0)		
Delaware	18	4	(22.2)	2	(11.1)	3	(16.7)	0	(0.0)	0	(0.0)	1	(5.6)	0	(0.0)	8	(44.4)	0	(0.0)		
District of Columbia	20	1	(5.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	19	(95.0)	0	(0.0)		
Florida	331	30	(9.1)	21	(6.3)	13	(3.9)	17	(5.1)	4	(1.2)	86	(26.0)	16	(4.8)	144	(43.5)	0	(0.0)		
Georgia	153	27	(17.6)	6	(3.9)	15	(9.8)	13	(8.5)	1	(0.7)	3	(2.0)	6	(3.9)	82	(53.6)	0	(0.0)		
Hawaii	88	0	(0.0)	66	(75.0)	1	(1.1)	5	(5.7)	3	(3.4)	0	(0.0)	0	(0.0)	13	(14.8)	0	(0.0)		
Idaho	12	3	(25.0)	0	(0.0)	0	(0.0)	1	(8.3)	0	(0.0)	1	(8.3)	1	(8.3)	6	(50.0)	0	(0.0)		
Illinois	241	57	(23.7)	33	(13.7)	41	(17.0)	9	(3.7)	10	(4.1)	4	(1.7)	7	(2.9)	79	(32.8)	1	(0.4)		
Indiana	43	8	(18.6)	1	(2.3)	8	(18.6)	1	(2.3)	2	(4.7)	1	(2.3)	0	(0.0)	22	(51.2)	0	(0.0)		
Iowa	31	4	(12.9)	0	(0.0)	4	(12.9)	5	(16.1)	2	(6.5)	0	(0.0)	1	(3.2)	15	(48.4)	0	(0.0)		
Kansas	30	10	(33.3)	2	(6.7)	2	(6.7)	0	(0.0)	1	(3.3)	0	(0.0)	0	(0.0)	15	(50.0)	0	(0.0)		
Kentucky	25	2	(8.0)	5	(20.0)	1	(4.0)	1	(4.0)	0	(0.0)	0	(0.0)	2	(8.0)	14	(56.0)	0	(0.0)		
Louisiana	33	2	(6.1)	4	(12.1)	3	(9.1)	3	(9.1)	5	(15.2)	0	(0.0)	3	(9.1)	13	(39.4)	0	(0.0)		
Maine	10	0	(0.0)	1	(10.0)	0	(0.0)	1	(10.0)	0	(0.0)	1	(10.0)	0	(0.0)	7	(70.0)	0	(0.0)		
Maryland	171	4	(2.3)	13	(7.6)	15	(8.8)	8	(4.7)	7	(4.1)	3	(1.8)	2	(1.2)	119	(69.6)	0	(0.0)		
Massachusetts	186	4	(2.2)	3	(1.6)	24	(12.9)	13	(7.0)	16	(8.6)	24	(12.9)	5	(2.7)	97	(52.2)	0	(0.0)		
Michigan	74	7	(9.5)	2	(2.7)	18	(24.3)	3	(4.1)	6	(8.1)	0	(0.0)	4	(5.4)	34	(45.9)	0	(0.0)		
Minnesota	136	10	(7.4)	4	(2.9)	3	(2.2)	5	(3.7)	0	(0.0)	0	(0.0)	2	(1.5)	112	(82.4)	0	(0.0)		
Mississippi	11	4	(36.4)	0	(0.0)	1	(9.1)	1	(9.1)	1	(9.1)	0	(0.0)	2	(18.2)	2	(18.2)	0	(0.0)		
Missouri	40	3	(7.5)	3	(7.5)	4	(10.0)	6	(15.0)	1	(2.5)	0	(0.0)	0	(0.0)	23	(57.5)	0	(0.0)		
Montana	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)		

Table 35. (Cont'd) Tuberculosis Cases and Percentages in Foreign-born Persons¹ by Top 7 Countries of Birth: Reporting Areas, 2012

Reporting Area	Total Cases	Country of Origin																	
		Mexico		Philippines		India		Vietnam		China		Haiti		Guatemala		All Others ²		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Nebraska	14	2	(14.3)	0	(0.0)	1	(7.1)	4	(28.6)	0	(0.0)	0	(0.0)	0	(0.0)	6	(42.9)	1	(7.1)
Nevada	61	15	(24.6)	21	(34.4)	0	(0.0)	2	(3.3)	5	(8.2)	0	(0.0)	2	(3.3)	16	(26.2)	0	(0.0)
New Hampshire	9	2	(22.2)	0	(0.0)	2	(22.2)	1	(11.1)	0	(0.0)	0	(0.0)	0	(0.0)	4	(44.4)	0	(0.0)
New Jersey	246	15	(6.1)	41	(16.7)	65	(26.4)	7	(2.8)	9	(3.7)	16	(6.5)	5	(2.0)	88	(35.8)	0	(0.0)
New Mexico	19	15	(78.9)	0	(0.0)	1	(5.3)	0	(0.0)	0	(0.0)	0	(0.0)	1	(5.3)	2	(10.5)	0	(0.0)
New York	693	38	(5.5)	44	(6.3)	52	(7.5)	4	(0.6)	107	(15.4)	34	(4.9)	14	(2.0)	400	(57.7)	0	(0.0)
North Carolina	97	21	(21.6)	5	(5.2)	9	(9.3)	13	(13.4)	1	(1.0)	2	(2.1)	5	(5.2)	37	(38.1)	4	(4.1)
North Dakota	4	0	(0.0)	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(75.0)	0	(0.0)
Ohio	72	7	(9.7)	4	(5.6)	8	(11.1)	2	(2.8)	5	(6.9)	1	(1.4)	4	(5.6)	41	(56.9)	0	(0.0)
Oklahoma	31	7	(22.6)	1	(3.2)	3	(9.7)	2	(6.5)	1	(3.2)	0	(0.0)	0	(0.0)	17	(54.8)	0	(0.0)
Oregon	44	13	(29.5)	2	(4.5)	1	(2.3)	12	(27.3)	3	(6.8)	0	(0.0)	4	(9.1)	9	(20.5)	0	(0.0)
Pennsylvania	141	8	(5.7)	10	(7.1)	26	(18.4)	20	(14.2)	7	(5.0)	4	(2.8)	2	(1.4)	64	(45.4)	0	(0.0)
Rhode Island	13	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(23.1)	10	(76.9)	0	(0.0)
South Carolina	28	5	(17.9)	6	(21.4)	3	(10.7)	2	(7.1)	0	(0.0)	0	(0.0)	2	(7.1)	10	(35.7)	0	(0.0)
South Dakota	7	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	6	(85.7)	1	(14.3)
Tennessee	49	8	(16.3)	3	(6.1)	6	(12.2)	0	(0.0)	1	(2.0)	0	(0.0)	4	(8.2)	27	(55.1)	0	(0.0)
Texas	662	325	(49.1)	31	(4.7)	44	(6.6)	54	(8.2)	13	(2.0)	2	(0.3)	19	(2.9)	174	(26.3)	0	(0.0)
Utah	27	7	(25.9)	4	(14.8)	0	(0.0)	0	(0.0)	1	(3.7)	0	(0.0)	1	(3.7)	14	(51.9)	0	(0.0)
Vermont	4	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	1	(25.0)	0	(0.0)	0	(0.0)	2	(50.0)	0	(0.0)
Virginia	183	12	(6.6)	13	(7.1)	18	(9.8)	19	(10.4)	3	(1.6)	2	(1.1)	6	(3.3)	110	(60.1)	0	(0.0)
Washington	140	17	(12.1)	20	(14.3)	13	(9.3)	12	(8.6)	5	(3.6)	1	(0.7)	5	(3.6)	66	(47.1)	1	(0.7)
West Virginia	2	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)
Wisconsin	46	11	(23.9)	3	(6.5)	7	(15.2)	1	(2.2)	3	(6.5)	0	(0.0)	0	(0.0)	21	(45.7)	0	(0.0)
Wyoming	2	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(100.0)	0	(0.0)

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor outlying and Pacific islands.

² Includes 139 countries.

Note: See Surveillance Slide #19.

Table 36. Tuberculosis Cases and Percentages in Foreign-born Persons¹ by Immigration Status at First Entry: Reporting Areas, 2012

Reporting Area	Total Cases	Asylee or Parolee		Employment Visa		Family/Fiance Visa		Immigrant Visa		Refugee		Student Visa		Tourist Visa		Other Immigration Status ²		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	6274	22	(0.4)	100	(1.6)	136	(2.2)	1437	(22.9)	358	(5.7)	158	(2.5)	104	(1.7)	1312	(20.9)	2050	(32.7)
Alabama	26	0	(0.0)	2	(7.7)	2	(7.7)	2	(7.7)	3	(11.5)	2	(7.7)	1	(3.8)	6	(23.1)	6	(23.1)
Alaska	11	0	(0.0)	1	(9.1)	0	(0.0)	3	(27.3)	0	(0.0)	0	(0.0)	0	(0.0)	2	(18.2)	5	(45.5)
Arizona	149	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arkansas	19	0	(0.0)	0	(0.0)	1	(5.3)	0	(0.0)	0	(0.0)	2	(10.5)	0	(0.0)	13	(68.4)	0	(0.0)
California	1717	4	(0.2)	23	(1.3)	47	(2.7)	704	(41.0)	61	(3.6)	42	(2.4)	53	(3.1)	437	(25.5)	344	(20.0)
Colorado	44	0	(0.0)	1	(2.3)	1	(2.3)	20	(45.5)	8	(18.2)	3	(6.8)	1	(2.3)	9	(20.5)	1	(2.3)
Connecticut	61	1	(1.6)	6	(9.8)	3	(4.9)	23	(37.7)	5	(8.2)	7	(11.5)	4	(6.6)	12	(19.7)	0	(0.0)
Delaware	18	2	(11.1)	2	(11.1)	2	(11.1)	0	(0.0)	0	(0.0)	3	(16.7)	0	(0.0)	7	(38.9)	0	(0.0)
District of Columbia	20	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	19	(95.0)
Florida	331	5	(1.5)	12	(3.6)	9	(2.7)	83	(25.1)	3	(0.9)	5	(1.5)	2	(0.6)	49	(14.8)	162	(48.9)
Georgia	153	1	(0.7)	3	(2.0)	8	(5.2)	35	(22.9)	26	(17.0)	4	(2.6)	6	(3.9)	67	(43.8)	3	(2.0)
Hawaii	88	0	(0.0)	0	(0.0)	0	(0.0)	17	(19.3)	0	(0.0)	1	(1.1)	0	(0.0)	0	(0.0)	69	(78.4)
Idaho	12	0	(0.0)	0	(0.0)	0	(0.0)	3	(25.0)	4	(33.3)	0	(0.0)	0	(0.0)	2	(16.7)	3	(25.0)
Illinois	241	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	241	(100.0)
Indiana	43	0	(0.0)	0	(0.0)	0	(0.0)	2	(4.7)	10	(23.3)	1	(2.3)	0	(0.0)	1	(2.3)	29	(67.4)
Iowa	31	0	(0.0)	2	(6.5)	0	(0.0)	13	(41.9)	8	(25.8)	3	(9.7)	1	(3.2)	4	(12.9)	0	(0.0)
Kansas	30	0	(0.0)	1	(3.3)	3	(10.0)	14	(46.7)	4	(13.3)	4	(13.3)	0	(0.0)	4	(13.3)	0	(0.0)
Kentucky	25	0	(0.0)	1	(4.0)	0	(0.0)	3	(12.0)	7	(28.0)	0	(0.0)	1	(4.0)	11	(44.0)	1	(4.0)
Louisiana	33	0	(0.0)	1	(3.0)	2	(6.1)	9	(27.3)	1	(3.0)	3	(9.1)	0	(0.0)	5	(15.2)	12	(36.4)
Maine	10	1	(10.0)	0	(0.0)	2	(20.0)	1	(10.0)	2	(20.0)	0	(0.0)	2	(20.0)	0	(0.0)	2	(20.0)
Maryland	171	2	(1.2)	4	(2.3)	9	(5.3)	79	(46.2)	8	(4.7)	15	(8.8)	7	(4.1)	24	(14.0)	23	(13.5)
Massachusetts	186	1	(0.5)	0	(0.0)	1	(0.5)	9	(4.8)	0	(0.0)	0	(0.0)	1	(0.5)	1	(0.5)	173	(93.0)
Michigan	74	0	(0.0)	2	(2.7)	1	(1.4)	22	(29.7)	5	(6.8)	2	(2.7)	3	(4.1)	25	(33.8)	14	(18.9)
Minnesota	136	3	(2.2)	1	(0.7)	16	(11.8)	26	(19.1)	65	(47.8)	4	(2.9)	3	(2.2)	13	(9.6)	5	(3.7)
Mississippi	11	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(18.2)	9	(81.8)
Missouri	40	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	7	(17.5)
Montana	0	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
Nebraska	14	0	(0.0)	0	(0.0)	0	(0.0)	2	(14.3)	4	(28.6)	1	(7.1)	0	(0.0)	1	(7.1)	6	(42.9)

Table 36. (Con't) Tuberculosis Cases and Percentages in Foreign-born Persons¹ by Immigration Status at First Entry: Reporting Areas, 2012

Reporting Area	Total Cases	Asylee or Parolee		Employment Visa		Family/Fiance Visa		Immigrant Visa		Refugee		Student Visa		Tourist Visa		Other Immigration Status ²		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Nevada	61	0	(0.0)	1	(1.6)	0	(0.0)	40	(65.6)	4	(6.6)	0	(0.0)	1	(1.6)	7	(11.5)	8	(13.1)
New Hampshire	9	0	(0.0)	0	(0.0)	0	(0.0)	2	(22.2)	4	(44.4)	0	(0.0)	0	(0.0)	0	(0.0)	3	(33.3)
New Jersey	246	0	(0.0)	5	(2.0)	2	(0.8)	155	(63.0)	0	(0.0)	3	(1.2)	5	(2.0)	51	(20.7)	24	(9.8)
New Mexico	19	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(5.3)	18	(94.7)
New York State ³	150	0	(0.0)	1	(0.7)	3	(2.0)	22	(14.7)	18	(12.0)	10	(6.7)	2	(1.3)	83	(55.3)	11	(7.3)
New York City	543	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Carolina	97	0	(0.0)	2	(2.1)	2	(2.1)	11	(11.3)	15	(15.5)	4	(4.1)	1	(1.0)	40	(41.2)	22	(22.7)
North Dakota	4	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	1	(25.0)	0	(0.0)	0	(0.0)	2	(50.0)
Ohio	72	0	(0.0)	4	(5.6)	2	(2.8)	7	(9.7)	5	(6.9)	4	(5.6)	0	(0.0)	6	(8.3)	44	(61.1)
Oklahoma	31	0	(0.0)	0	(0.0)	2	(6.5)	1	(3.2)	7	(22.6)	1	(3.2)	0	(0.0)	3	(9.7)	17	(54.8)
Oregon	44	0	(0.0)	0	(0.0)	0	(0.0)	9	(20.5)	5	(11.4)	4	(9.1)	0	(0.0)	4	(9.1)	22	(50.0)
Pennsylvania	141	2	(1.4)	9	(6.4)	5	(3.5)	59	(41.8)	16	(11.3)	5	(3.5)	5	(3.5)	33	(23.4)	7	(5.0)
Rhode Island	13	0	(0.0)	0	(0.0)	0	(0.0)	2	(15.4)	0	(0.0)	0	(0.0)	0	(0.0)	1	(7.7)	10	(76.9)
South Carolina	28	0	(0.0)	1	(3.6)	0	(0.0)	5	(17.9)	2	(7.1)	0	(0.0)	1	(3.6)	4	(14.3)	13	(46.4)
South Dakota	7	0	(0.0)	1	(14.3)	0	(0.0)	0	(0.0)	3	(42.9)	0	(0.0)	0	(0.0)	1	(14.3)	2	(28.6)
Tennessee	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Texas	662	0	(0.0)	10	(1.5)	13	(2.0)	30	(4.5)	39	(5.9)	19	(2.9)	2	(0.3)	354	(53.5)	194	(29.3)
Utah	27	0	(0.0)	1	(3.7)	0	(0.0)	13	(48.1)	7	(25.9)	1	(3.7)	0	(0.0)	5	(18.5)	0	(0.0)
Vermont	4	0	(0.0)	0	(0.0)	0	(0.0)	2	(50.0)	1	(25.0)	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)
Virginia	183	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington	140	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	140	(100.0)
West Virginia	2	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)
Wisconsin	46	0	(0.0)	1	(2.2)	0	(0.0)	8	(17.4)	7	(15.2)	0	(0.0)	2	(4.3)	22	(47.8)	2	(4.3)
Wyoming	2	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor outlying and Pacific islands.

² Other immigration status includes (but is not limited to) foreign-born persons who were not required to obtain a visa or persons with no official immigration status (i.e. undocumented).

³ Excludes New York City.

NOTE: Arizona, Tennessee, Virginia, and New York City do not collect immigration status at first entry to the U.S. due to directives or policies that prohibit that activity. Ellipses indicate data are not available.

Table 37. Tuberculosis Cases and Percentages in Foreign-born Persons¹ by Number of Years in the United States: Reporting Areas, 2012

Reporting Area	Total Cases	<1 Year		1–4		5–9		10–19		≥20		Unknown or Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	6,274	940	(15.0)	1,101	(17.5)	927	(14.8)	1,199	(19.1)	1,573	(25.1)	534	(8.5)
Alabama	26	5	(19.2)	4	(15.4)	11	(42.3)	4	(15.4)	2	(7.7)	0	(0.0)
Alaska	11	0	(0.0)	5	(45.5)	1	(9.1)	1	(9.1)	2	(18.2)	2	(18.2)
Arizona	149	62	(41.6)	16	(10.7)	13	(8.7)	18	(12.1)	26	(17.4)	14	(9.4)
Arkansas	19	4	(21.1)	5	(26.3)	1	(5.3)	3	(15.8)	5	(26.3)	1	(5.3)
California	1,717	149	(8.7)	200	(11.6)	186	(10.8)	325	(18.9)	602	(35.1)	255	(14.9)
Colorado	44	7	(15.9)	9	(20.5)	6	(13.6)	12	(27.3)	6	(13.6)	4	(9.1)
Connecticut	61	17	(27.9)	17	(27.9)	7	(11.5)	10	(16.4)	10	(16.4)	0	(0.0)
Delaware	18	2	(11.1)	4	(22.2)	3	(16.7)	4	(22.2)	5	(27.8)	0	(0.0)
District of Columbia	20	4	(20.0)	8	(40.0)	2	(10.0)	3	(15.0)	2	(10.0)	1	(5.0)
Florida	331	56	(16.9)	47	(14.2)	58	(17.5)	73	(22.1)	67	(20.2)	30	(9.1)
Georgia	153	28	(18.3)	39	(25.5)	23	(15.0)	34	(22.2)	24	(15.7)	5	(3.3)
Hawaii	88	13	(14.8)	13	(14.8)	13	(14.8)	12	(13.6)	26	(29.5)	11	(12.5)
Idaho	12	5	(41.7)	2	(16.7)	1	(8.3)	1	(8.3)	3	(25.0)	0	(0.0)
Illinois	241	32	(13.3)	47	(19.5)	27	(11.2)	65	(27.0)	65	(27.0)	5	(2.1)
Indiana	43	7	(16.3)	7	(16.3)	2	(4.7)	7	(16.3)	1	(2.3)	19	(44.2)
Iowa	31	2	(6.5)	1	(3.2)	1	(3.2)	2	(6.5)	0	(0.0)	25	(80.6)
Kansas	30	7	(23.3)	5	(16.7)	9	(30.0)	1	(3.3)	8	(26.7)	0	(0.0)
Kentucky	25	7	(28.0)	7	(28.0)	5	(20.0)	4	(16.0)	2	(8.0)	0	(0.0)
Louisiana	33	5	(15.2)	9	(27.3)	6	(18.2)	6	(18.2)	5	(15.2)	2	(6.1)
Maine	10	5	(50.0)	1	(10.0)	1	(10.0)	1	(10.0)	2	(20.0)	0	(0.0)
Maryland	171	33	(19.3)	45	(26.3)	35	(20.5)	31	(18.1)	26	(15.2)	1	(0.6)
Massachusetts	186	32	(17.2)	51	(27.4)	31	(16.7)	39	(21.0)	31	(16.7)	2	(1.1)
Michigan	74	12	(16.2)	17	(23.0)	7	(9.5)	14	(18.9)	10	(13.5)	14	(18.9)
Minnesota	136	33	(24.3)	32	(23.5)	39	(28.7)	17	(12.5)	14	(10.3)	1	(0.7)
Mississippi	11	2	(18.2)	5	(45.5)	1	(9.1)	2	(18.2)	1	(9.1)	0	(0.0)
Missouri	40	2	(5.0)	12	(30.0)	7	(17.5)	9	(22.5)	7	(17.5)	3	(7.5)
Montana	0	0	.	0	.	0	.	0	.	0	.	0	.
Nebraska	14	1	(7.1)	2	(14.3)	5	(35.7)	2	(14.3)	3	(21.4)	1	(7.1)
Nevada	61	10	(16.4)	6	(9.8)	13	(21.3)	11	(18.0)	18	(29.5)	3	(4.9)
New Hampshire	9	3	(33.3)	3	(33.3)	1	(11.1)	2	(22.2)	0	(0.0)	0	(0.0)
New Jersey	246	30	(12.2)	58	(23.6)	44	(17.9)	48	(19.5)	45	(18.3)	21	(8.5)
New Mexico	19	5	(26.3)	4	(21.1)	2	(10.5)	3	(15.8)	5	(26.3)	0	(0.0)
New York	693	102	(14.7)	131	(18.9)	106	(15.3)	144	(20.8)	169	(24.4)	41	(5.9)
North Carolina	97	14	(14.4)	21	(21.6)	14	(14.4)	12	(12.4)	10	(10.3)	26	(26.8)
North Dakota	4	1	(25.0)	2	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)
Ohio	72	18	(25.0)	16	(22.2)	13	(18.1)	13	(18.1)	12	(16.7)	0	(0.0)
Oklahoma	31	5	(16.1)	2	(6.5)	3	(9.7)	5	(16.1)	6	(19.4)	10	(32.3)
Oregon	44	3	(6.8)	5	(11.4)	0	(0.0)	10	(22.7)	6	(13.6)	20	(45.5)
Pennsylvania	141	23	(16.3)	29	(20.6)	28	(19.9)	36	(25.5)	25	(17.7)	0	(0.0)
Rhode Island	13	1	(7.7)	3	(23.1)	1	(7.7)	2	(15.4)	4	(30.8)	2	(15.4)
South Carolina	28	5	(17.9)	4	(14.3)	6	(21.4)	2	(7.1)	10	(35.7)	1	(3.6)
South Dakota	7	3	(42.9)	0	(0.0)	1	(14.3)	1	(14.3)	1	(14.3)	1	(14.3)
Tennessee	49	13	(26.5)	8	(16.3)	13	(26.5)	8	(16.3)	7	(14.3)	0	(0.0)
Texas	662	114	(17.2)	108	(16.3)	107	(16.2)	134	(20.2)	199	(30.1)	0	(0.0)
Utah	27	5	(18.5)	4	(14.8)	5	(18.5)	7	(25.9)	6	(22.2)	0	(0.0)
Vermont	4	1	(25.0)	1	(25.0)	0	(0.0)	1	(25.0)	1	(25.0)	0	(0.0)
Virginia	183	30	(16.4)	42	(23.0)	34	(18.6)	31	(16.9)	43	(23.5)	3	(1.6)
Washington	140	15	(10.7)	31	(22.1)	27	(19.3)	19	(13.6)	42	(30.0)	6	(4.3)
West Virginia	2	0	(0.0)	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Wisconsin	46	6	(13.0)	10	(21.7)	8	(17.4)	10	(21.7)	9	(19.6)	3	(6.5)
Wyoming	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Table 38. Tuberculosis Cases and Percentages by Pulmonary and Extrapulmonary Disease: Reporting Areas, 2012

Reporting Area	Total Cases	Pulmonary ¹		Extrapulmonary ²		Pulmonary and Extrapulmonary Cases		
		No.	(%)	No.	(%)	Total ³		Miliary
						No.	(%)	No.
United States	9,945	6,808	(68.5)	2,100	(21.1)	1,016	(10.2)	349
Alabama	134	110	(82.1)	21	(15.7)	3	(2.2)	3
Alaska	66	58	(87.9)	6	(9.1)	1	(1.5)	2
Arizona	211	164	(77.7)	27	(12.8)	20	(9.5)	13
Arkansas	70	45	(64.3)	20	(28.6)	5	(7.1)	3
California	2,191	1,456	(66.5)	499	(22.8)	236	(10.8)	74
Colorado	64	33	(51.6)	19	(29.7)	12	(18.8)	5
Connecticut	74	37	(50.0)	18	(24.3)	15	(20.3)	5
Delaware	28	14	(50.0)	11	(39.3)	3	(10.7)	2
District of Columbia	37	21	(56.8)	14	(37.8)	2	(5.4)	2
Florida	679	543	(80.0)	105	(15.5)	31	(4.6)	28
Georgia	357	259	(72.5)	75	(21.0)	20	(5.6)	11
Hawaii	117	84	(71.8)	23	(19.7)	10	(8.5)	6
Idaho	15	10	(66.7)	1	(6.7)	4	(26.7)	2
Illinois	347	225	(64.8)	90	(25.9)	32	(9.2)	10
Indiana	102	80	(78.4)	17	(16.7)	5	(4.9)	3
Iowa	46	27	(58.7)	8	(17.4)	7	(15.2)	1
Kansas	42	32	(76.2)	7	(16.7)	3	(7.1)	1
Kentucky	80	67	(83.8)	8	(10.0)	5	(6.3)	2
Louisiana	149	109	(73.2)	31	(20.8)	6	(4.0)	1
Maine	17	13	(76.5)	4	(23.5)	0	(0.0)	1
Maryland	224	133	(59.4)	66	(29.5)	25	(11.2)	7
Massachusetts	215	132	(61.4)	61	(28.4)	22	(10.2)	6
Michigan	149	99	(66.4)	47	(31.5)	3	(2.0)	11
Minnesota	162	82	(50.6)	58	(35.8)	22	(13.6)	3
Mississippi	81	65	(80.2)	10	(12.3)	6	(7.4)	3
Missouri	89	64	(71.9)	17	(19.1)	8	(9.0)	0
Montana	5	4	(80.0)	0	(0.0)	1	(20.0)	1
Nebraska	22	11	(50.0)	10	(45.5)	1	(4.5)	0
Nevada	82	68	(82.9)	11	(13.4)	1	(1.2)	2
New Hampshire	9	6	(66.7)	2	(22.2)	1	(11.1)	0
New Jersey	302	189	(62.6)	69	(22.8)	44	(14.6)	14
New Mexico	40	30	(75.0)	7	(17.5)	3	(7.5)	1
New York	866	539	(62.2)	214	(24.7)	113	(13.0)	31
North Carolina	211	143	(67.8)	53	(25.1)	15	(7.1)	8
North Dakota	26	17	(65.4)	5	(19.2)	1	(3.8)	1
Ohio	149	98	(65.8)	37	(24.8)	14	(9.4)	3
Oklahoma	88	60	(68.2)	18	(20.5)	9	(10.2)	5
Oregon	61	38	(62.3)	19	(31.1)	4	(6.6)	1
Pennsylvania	234	151	(64.5)	69	(29.5)	14	(6.0)	10
Rhode Island	23	11	(47.8)	7	(30.4)	5	(21.7)	1
South Carolina	122	82	(67.2)	23	(18.9)	17	(13.9)	2
South Dakota	19	12	(63.2)	3	(15.8)	4	(21.1)	2
Tennessee	164	111	(67.7)	34	(20.7)	19	(11.6)	7
Texas	1,233	938	(76.1)	119	(9.7)	176	(14.3)	24
Utah	37	22	(59.5)	12	(32.4)	3	(8.1)	3
Vermont	4	2	(50.0)	1	(25.0)	1	(25.0)	1
Virginia	235	152	(64.7)	58	(24.7)	25	(10.6)	11
Washington	185	110	(59.5)	48	(25.9)	27	(14.6)	7
West Virginia	8	7	(87.5)	1	(12.5)	0	(0.0)	1
Wisconsin	71	42	(59.2)	17	(23.9)	12	(16.9)	7
Wyoming	3	3	(100.0)	0	(0.0)	0	(0.0)	1
American Samoa ⁴	1	1	(100.0)	0	(0.0)	0	(0.0)	1
Fed. States of Micronesia ⁴	173	149	(86.1)	19	(11.0)	5	(2.9)	8
Guam ⁴	68	58	(85.3)	8	(11.8)	2	(2.9)	0
Marshall Islands ⁴	145	108	(74.5)	25	(17.2)	12	(8.3)	1
N. Mariana Islands ⁴	21	18	(85.7)	2	(9.5)	1	(4.8)	0
Puerto Rico ⁴	71	61	(85.9)	10	(14.1)	0	(0.0)	0
Republic of Palau ⁴	4	4	(100.0)	0	(0.0)	0	(0.0)	0
U.S. Virgin Islands ⁴	4	3	(75.0)	0	(0.0)	0	(0.0)	0

¹ Includes cases with pulmonary listed as the only site of disease.

² Includes cases with pleural, lymphatic, bone and/or joint, meningeal, peritoneal, genitourinary, or other site, excluding pulmonary, listed as site of disease.

³ Includes cases with evidence of miliary disease.

⁴ Not included in U.S. totals.

Note: 21 cases had missing and/or unknown site of disease.

Table 39. Extrapulmonary Tuberculosis Cases and Percentages by Site of Disease: Reporting Areas, 2012

Reporting Area	Total Extrapulm. Cases ¹	Total Extrapulm. Sites ²	Site of Disease															
			Pleural		Lymphatic		Bone and/or Joint		Genitourinary		Meningeal		Peritoneal		Laryngeal		Other	
			No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	2,100	2,213	368	(16.6)	846	(38.2)	229	(10.3)	111	(5.0)	108	(4.9)	127	(5.7)	8	(0.4)	416	(18.8)
Alabama	21	23	7	(30.4)	5	(21.7)	2	(8.7)	0	(0.0)	1	(4.3)	0	(0.0)	0	(0.0)	8	(34.8)
Alaska	6	6	0	(0.0)	5	(83.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(16.7)
Arizona	27	28	5	(17.9)	14	(50.0)	1	(3.6)	1	(3.6)	2	(7.1)	2	(7.1)	0	(0.0)	3	(10.7)
Arkansas	20	20	3	(15.0)	3	(15.0)	2	(10.0)	0	(0.0)	2	(10.0)	0	(0.0)	1	(5.0)	9	(45.0)
California	499	517	70	(13.5)	211	(40.8)	45	(8.7)	24	(4.6)	22	(4.3)	35	(6.8)	2	(0.4)	108	(20.9)
Colorado	19	21	4	(19.0)	6	(28.6)	4	(19.0)	2	(9.5)	2	(9.5)	0	(0.0)	0	(0.0)	3	(14.3)
Connecticut	18	19	6	(31.6)	9	(47.4)	2	(10.5)	1	(5.3)	1	(5.3)	0	(0.0)	0	(0.0)	0	(0.0)
Delaware	11	14	2	(14.3)	0	(0.0)	2	(14.3)	2	(14.3)	3	(21.4)	1	(7.1)	0	(0.0)	4	(28.6)
District of Columbia	14	15	2	(13.3)	4	(26.7)	2	(13.3)	0	(0.0)	3	(20.0)	1	(6.7)	1	(6.7)	2	(13.3)
Florida	105	108	27	(25.0)	39	(36.1)	10	(9.3)	6	(5.6)	5	(4.6)	7	(6.5)	0	(0.0)	14	(13.0)
Georgia	75	75	17	(22.7)	28	(37.3)	5	(6.7)	3	(4.0)	4	(5.3)	1	(1.3)	2	(2.7)	15	(20.0)
Hawaii	23	23	11	(47.8)	6	(26.1)	0	(0.0)	0	(0.0)	2	(8.7)	1	(4.3)	0	(0.0)	3	(13.0)
Idaho	1	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
Illinois	90	97	10	(10.3)	36	(37.1)	10	(10.3)	3	(3.1)	4	(4.1)	8	(8.2)	0	(0.0)	26	(26.8)
Indiana	17	19	1	(5.3)	4	(21.1)	4	(21.1)	4	(21.1)	2	(10.5)	1	(5.3)	0	(0.0)	3	(15.8)
Iowa	8	8	4	(50.0)	2	(25.0)	2	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Kansas	7	7	1	(14.3)	3	(42.9)	2	(28.6)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(14.3)
Kentucky	8	9	2	(22.2)	1	(11.1)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)	0	(0.0)	5	(55.6)
Louisiana	31	31	5	(16.1)	13	(41.9)	4	(12.9)	1	(3.2)	1	(3.2)	0	(0.0)	0	(0.0)	7	(22.6)
Maine	4	4	1	(25.0)	1	(25.0)	0	(0.0)	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)
Maryland	66	71	16	(22.5)	26	(36.6)	3	(4.2)	2	(2.8)	3	(4.2)	1	(1.4)	1	(1.4)	19	(26.8)
Massachusetts	61	64	10	(15.6)	25	(39.1)	6	(9.4)	4	(6.3)	5	(7.8)	4	(6.3)	0	(0.0)	10	(15.6)
Michigan	47	48	5	(10.4)	15	(31.3)	6	(12.5)	1	(2.1)	1	(2.1)	1	(2.1)	0	(0.0)	19	(39.6)
Minnesota	58	63	7	(11.1)	31	(49.2)	6	(9.5)	1	(1.6)	2	(3.2)	5	(7.9)	0	(0.0)	11	(17.5)
Mississippi	10	10	6	(60.0)	1	(10.0)	2	(20.0)	0	(0.0)	0	(0.0)	1	(10.0)	0	(0.0)	0	(0.0)
Missouri	17	18	4	(22.2)	7	(38.9)	1	(5.6)	1	(5.6)	1	(5.6)	1	(5.6)	0	(0.0)	3	(16.7)
Nebraska	10	10	0	(0.0)	5	(50.0)	2	(20.0)	0	(0.0)	0	(0.0)	2	(20.0)	0	(0.0)	1	(10.0)
Nevada	11	12	0	(0.0)	3	(25.0)	1	(8.3)	5	(41.7)	1	(8.3)	1	(8.3)	0	(0.0)	1	(8.3)
New Hampshire	2	2	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(50.0)
New Jersey	69	73	16	(21.9)	30	(41.1)	15	(20.5)	2	(2.7)	2	(2.7)	6	(8.2)	0	(0.0)	2	(2.7)
New Mexico	7	7	1	(14.3)	3	(42.9)	2	(28.6)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(14.3)

Table 39. (Con't) Extrapulmonary Tuberculosis Cases and Percentages by Site of Disease: Reporting Areas, 2012

Reporting Area	Total Extrapulm. Cases ¹		Total Extrapulm. Sites ²		Site of Disease															
					Pleural		Lymphatic		Bone and/or Joint		Genitourinary		Meningeal		Peritoneal		Laryngeal		Other	
					No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
New York	214	238	33	(13.9)	105	(44.1)	27	(11.3)	11	(4.6)	8	(3.4)	16	(6.7)	1	(0.4)	37	(15.5)		
North Carolina	53	56	16	(28.6)	23	(41.1)	3	(5.4)	4	(7.1)	2	(3.6)	3	(5.4)	0	(0.0)	5	(8.9)		
North Dakota	5	5	2	(40.0)	1	(20.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(20.0)	0	(0.0)	1	(20.0)		
Ohio	37	38	5	(13.2)	20	(52.6)	5	(13.2)	2	(5.3)	1	(2.6)	0	(0.0)	0	(0.0)	5	(13.2)		
Oklahoma	18	18	3	(16.7)	8	(44.4)	3	(16.7)	0	(0.0)	1	(5.6)	0	(0.0)	0	(0.0)	3	(16.7)		
Oregon	19	20	3	(15.0)	7	(35.0)	2	(10.0)	2	(10.0)	0	(0.0)	1	(5.0)	0	(0.0)	5	(25.0)		
Pennsylvania	69	70	10	(14.3)	25	(35.7)	9	(12.9)	7	(10.0)	4	(5.7)	6	(8.6)	0	(0.0)	9	(12.9)		
Rhode Island	7	9	3	(33.3)	2	(22.2)	2	(22.2)	0	(0.0)	0	(0.0)	1	(11.1)	0	(0.0)	1	(11.1)		
South Carolina	23	24	8	(33.3)	8	(33.3)	3	(12.5)	1	(4.2)	2	(8.3)	0	(0.0)	0	(0.0)	2	(8.3)		
South Dakota	3	3	1	(33.3)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(33.3)		
Tennessee	34	35	8	(22.9)	17	(48.6)	1	(2.9)	0	(0.0)	4	(11.4)	1	(2.9)	0	(0.0)	4	(11.4)		
Texas	119	123	7	(5.7)	42	(34.1)	16	(13.0)	10	(8.1)	12	(9.8)	7	(5.7)	0	(0.0)	29	(23.6)		
Utah	12	12	1	(8.3)	2	(16.7)	2	(16.7)	1	(8.3)	0	(0.0)	0	(0.0)	0	(0.0)	6	(50.0)		
Vermont	1	1	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)		
Virginia	58	64	10	(15.6)	20	(31.3)	6	(9.4)	4	(6.3)	3	(4.7)	7	(10.9)	0	(0.0)	14	(21.9)		
Washington	48	52	9	(17.3)	21	(40.4)	7	(13.5)	4	(7.7)	2	(3.8)	2	(3.8)	0	(0.0)	7	(13.5)		
West Virginia	1	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)		
Wisconsin	17	21	6	(28.6)	6	(28.6)	2	(9.5)	1	(4.8)	0	(0.0)	2	(9.5)	0	(0.0)	4	(19.0)		
Wyoming	0	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)		
American Samoa ³	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fed. States of Micronesia ³	19	20	11	(55.0)	7	(35.0)	2	(10.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)		
Guam ³	8	8	3	(37.5)	1	(12.5)	1	(12.5)	0	(0.0)	0	(0.0)	1	(12.5)	0	(0.0)	2	(25.0)		
Marshall Islands ³	25	29	8	(27.6)	13	(44.8)	0	(0.0)	0	(0.0)	0	(0.0)	7	(24.1)	0	(0.0)	1	(3.4)		
N. Mariana Islands ³	2	2	0	(0.0)	0	(0.0)	2	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)		
Puerto Rico ³	10	10	5	(50.0)	1	(10.0)	0	(0.0)	0	(0.0)	1	(10.0)	2	(20.0)	0	(0.0)	1	(10.0)		
Republic of Palau ³	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
U.S. Virgin Islands ³	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

¹ Excludes cases with pulmonary site of disease.

² Patient may have more than one extrapulmonary site of disease.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.
See Technical Notes.

76

76

Table 40. (Con't) Tuberculosis Risk Factors¹: Reporting Areas, 2012

Reporting Area	Total	MDR Patient Contact		Missed Contact		Infectious TB Patient Contact		Incomplete LTBI therapy		TNF-Alpha Therapy		Post-organ Transplantation		Diabetes Mellitus		Renal Disease		Immuno-suppression		Other		None		Missing ²	
		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
New York State ³	215	0	(0.0)	0	(0.0)	8	(3.7)	13	(6.0)	2	(0.9)	1	(0.5)	21	(9.8)	3	(1.4)	13	(6.0)	36	(16.7)	124	(57.7)	3	(1.4)
New York City	651	0	(0.0)	1	(0.2)	25	(3.8)	5	(0.8)	0	(0.0)	3	(0.5)	92	(14.1)	9	(1.4)	27	(4.1)	77	(11.8)	424	(65.1)	9	(1.4)
North Carolina	211	0	(0.0)	2	(0.9)	28	(13.3)	21	(10.0)	2	(0.9)	3	(1.4)	30	(14.2)	7	(3.3)	17	(8.1)	41	(19.4)	113	(53.6)	18	(8.5)
North Dakota	26	0	(0.0)	1	(3.8)	18	(69.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(7.7)	7	(26.9)	1	(3.8)
Ohio	149	0	(0.0)	0	(0.0)	11	(7.4)	10	(6.7)	2	(1.3)	2	(1.3)	17	(11.4)	2	(1.3)	7	(4.7)	18	(12.1)	87	(58.4)	0	(0.0)
Oklahoma	88	1	(1.1)	1	(1.1)	18	(20.5)	4	(4.5)	0	(0.0)	0	(0.0)	12	(13.6)	3	(3.4)	1	(1.1)	14	(15.9)	47	(53.4)	0	(0.0)
Oregon	61	0	(0.0)	0	(0.0)	2	(3.3)	2	(3.3)	0	(0.0)	0	(0.0)	8	(13.1)	1	(1.6)	1	(1.6)	5	(8.2)	47	(77.0)	0	(0.0)
Pennsylvania	234	0	(0.0)	2	(0.9)	10	(4.3)	13	(5.6)	2	(0.9)	4	(1.7)	25	(10.7)	7	(3.0)	15	(6.4)	48	(20.5)	115	(49.1)	16	(6.8)
Rhode Island	23	0	(0.0)	0	(0.0)	4	(17.4)	1	(4.3)	1	(4.3)	0	(0.0)	5	(21.7)	1	(4.3)	0	(0.0)	2	(8.7)	11	(47.8)	0	(0.0)
South Carolina	122	0	(0.0)	2	(1.6)	14	(11.5)	2	(1.6)	0	(0.0)	0	(0.0)	11	(9.0)	1	(0.8)	6	(4.9)	14	(11.5)	74	(60.7)	0	(0.0)
South Dakota	19	0	(0.0)	0	(0.0)	3	(15.8)	2	(10.5)	0	(0.0)	0	(0.0)	5	(26.3)	3	(15.8)	1	(5.3)	1	(5.3)	7	(36.8)	1	(5.3)
Tennessee	164	0	(0.0)	0	(0.0)	17	(10.4)	9	(5.5)	1	(0.6)	2	(1.2)	13	(7.9)	2	(1.2)	8	(4.9)	15	(9.1)	100	(61.0)	0	(0.0)
Texas	1233	5	(0.4)	1	(0.1)	102	(8.3)	15	(1.2)	3	(0.2)	4	(0.3)	180	(14.6)	22	(1.8)	18	(1.5)	497	(40.3)	508	(41.2)	1	(0.1)
Utah	37	0	(0.0)	0	(0.0)	0	(0.0)	1	(2.7)	1	(2.7)	0	(0.0)	7	(18.9)	1	(2.7)	3	(8.1)	3	(8.1)	22	(59.5)	0	(0.0)
Vermont	4	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	1	(25.0)	0	(0.0)	1	(25.0)	1	(25.0)	4	(100.0)	0	(0.0)	0	(0.0)
Virginia	235	1	(0.4)	2	(0.9)	12	(5.1)	5	(2.1)	3	(1.3)	1	(0.4)	26	(11.1)	3	(1.3)	9	(3.8)	43	(18.3)	140	(59.6)	1	(0.4)
Washington	185	0	(0.0)	0	(0.0)	11	(5.9)	4	(2.2)	0	(0.0)	2	(1.1)	45	(24.3)	7	(3.8)	10	(5.4)	31	(16.8)	89	(48.1)	11	(5.9)
West Virginia	8	0	(0.0)	1	(12.5)	1	(12.5)	2	(25.0)	0	(0.0)	0	(0.0)	1	(12.5)	0	(0.0)	0	(0.0)	2	(25.0)	2	(25.0)	0	(0.0)
Wisconsin	71	0	(0.0)	1	(1.4)	11	(15.5)	8	(11.3)	3	(4.2)	0	(0.0)	4	(5.6)	2	(2.8)	0	(0.0)	30	(42.3)	17	(23.9)	2	(2.8)
Wyoming	3	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)	2	(66.7)	0	(0.0)
American Samoa ⁴	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Fed. States of Micronesia ⁴	173	10	(5.8)	1	(0.6)	116	(67.1)	1	(0.6)	0	(0.0)	0	(0.0)	5	(2.9)	0	(0.0)	0	(0.0)	26	(15.0)	16	(9.2)	2	(1.2)
Guam ⁴	68	0	(0.0)	0	(0.0)	6	(8.8)	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.5)	2	(2.9)	0	(0.0)	9	(13.2)	46	(67.6)	4	(5.9)
Marshall Islands ⁴	145	2	(1.4)	0	(0.0)	40	(27.6)	0	(0.0)	0	(0.0)	0	(0.0)	38	(26.2)	0	(0.0)	0	(0.0)	6	(4.1)	67	(46.2)	5	(3.4)
N. Mariana Islands ⁴	21	0	(0.0)	0	(0.0)	1	(4.8)	1	(4.8)	0	(0.0)	0	(0.0)	8	(38.1)	0	(0.0)	0	(0.0)	1	(4.8)	10	(47.6)	0	(0.0)
Puerto Rico ⁴	71	0	(0.0)	0	(0.0)	4	(5.6)	0	(0.0)	0	(0.0)	0	(0.0)	11	(15.5)	0	(0.0)	0	(0.0)	8	(11.3)	48	(67.6)	0	(0.0)
Republic of Palau ⁴	4	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)
U.S. Virgin Islands ⁴	4	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	3	(75.0)

¹ Includes the number of risk factors reported (which may be more than one per case) and the number of cases with no information on additional risk factors. The sum of risk factors is greater than the total number of cases because more than one risk factor may be selected per case.

² None of the options for additional risk factors was selected.

³ Excludes New York City

⁴ Not included in U.S. totals.

Table 41. Primary Reasons for Tuberculosis Evaluation¹: Reporting Areas, 2012

Reporting Area	Total	TB Symptoms		Abnormal Chest Radiograph		Contact Investigation		Targeted Testing		Health Care Worker		Administrative Testing		Immigrant Medical Exam		Incidental Lab Result		Unknown/Missing	
		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)		No. (%)	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	9945	5737	(57.7)	2016	(20.3)	400	(4.0)	352	(3.5)	43	(0.4)	68	(0.7)	189	(1.9)	1058	(10.6)	82	(0.8)
Alabama	134	55	(41.0)	52	(38.8)	8	(6.0)	1	(0.7)	1	(0.7)	0	(0.0)	0	(0.0)	17	(12.7)	0	(0.0)
Alaska	66	26	(39.4)	7	(10.6)	15	(22.7)	8	(12.1)	1	(1.5)	1	(1.5)	1	(1.5)	4	(6.1)	3	(4.5)
Arizona	211	76	(36.0)	44	(20.9)	2	(0.9)	49	(23.2)	1	(0.5)	0	(0.0)	6	(2.8)	33	(15.6)	0	(0.0)
Arkansas	70	22	(31.4)	31	(44.3)	3	(4.3)	0	(0.0)	1	(1.4)	0	(0.0)	1	(1.4)	12	(17.1)	0	(0.0)
California	2191	1414	(64.5)	384	(17.5)	65	(3.0)	52	(2.4)	6	(0.3)	17	(0.8)	49	(2.2)	192	(8.8)	12	(0.5)
Colorado	64	46	(71.9)	5	(7.8)	2	(3.1)	6	(9.4)	0	(0.0)	1	(1.6)	0	(0.0)	3	(4.7)	1	(1.6)
Connecticut	74	49	(66.2)	11	(14.9)	1	(1.4)	5	(6.8)	0	(0.0)	1	(1.4)	2	(2.7)	5	(6.8)	0	(0.0)
Delaware	28	16	(57.1)	8	(28.6)	0	(0.0)	0	(0.0)	1	(3.6)	2	(7.1)	0	(0.0)	1	(3.6)	0	(0.0)
District of Columbia	37	34	(91.9)	2	(5.4)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(2.7)	0	(0.0)
Florida	679	278	(40.9)	233	(34.3)	11	(1.6)	7	(1.0)	1	(0.1)	3	(0.4)	5	(0.7)	138	(20.3)	3	(0.4)
Georgia	357	214	(59.9)	62	(17.4)	28	(7.8)	17	(4.8)	0	(0.0)	0	(0.0)	8	(2.2)	27	(7.6)	1	(0.3)
Hawaii	117	65	(55.6)	18	(15.4)	2	(1.7)	1	(0.9)	2	(1.7)	7	(6.0)	10	(8.5)	12	(10.3)	0	(0.0)
Idaho	15	9	(60.0)	3	(20.0)	1	(6.7)	1	(6.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(6.7)
Illinois	347	215	(62.0)	71	(20.5)	6	(1.7)	5	(1.4)	1	(0.3)	2	(0.6)	8	(2.3)	39	(11.2)	0	(0.0)
Indiana	102	57	(55.9)	21	(20.6)	8	(7.8)	5	(4.9)	1	(1.0)	0	(0.0)	1	(1.0)	9	(8.8)	0	(0.0)
Iowa	46	33	(71.7)	4	(8.7)	2	(4.3)	0	(0.0)	0	(0.0)	2	(4.3)	2	(4.3)	2	(4.3)	1	(2.2)
Kansas	42	19	(45.2)	5	(11.9)	3	(7.1)	2	(4.8)	0	(0.0)	0	(0.0)	4	(9.5)	9	(21.4)	0	(0.0)
Kentucky	80	32	(40.0)	29	(36.3)	3	(3.8)	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.3)	15	(18.8)	0	(0.0)
Louisiana	149	83	(55.7)	17	(11.4)	8	(5.4)	2	(1.3)	0	(0.0)	0	(0.0)	4	(2.7)	21	(14.1)	14	(9.4)
Maine	17	12	(70.6)	2	(11.8)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(17.6)	0	(0.0)
Maryland	224	117	(52.2)	66	(29.5)	7	(3.1)	6	(2.7)	0	(0.0)	2	(0.9)	3	(1.3)	17	(7.6)	6	(2.7)
Massachusetts	215	160	(74.4)	36	(16.7)	2	(0.9)	1	(0.5)	2	(0.9)	5	(2.3)	2	(0.9)	6	(2.8)	1	(0.5)
Michigan	149	73	(49.0)	47	(31.5)	3	(2.0)	1	(0.7)	1	(0.7)	0	(0.0)	6	(4.0)	15	(10.1)	3	(2.0)
Minnesota	162	128	(79.0)	4	(2.5)	10	(6.2)	4	(2.5)	0	(0.0)	1	(0.6)	14	(8.6)	1	(0.6)	0	(0.0)
Mississippi	81	43	(53.1)	18	(22.2)	5	(6.2)	3	(3.7)	0	(0.0)	0	(0.0)	1	(1.2)	11	(13.6)	0	(0.0)
Missouri	89	73	(82.0)	6	(6.7)	2	(2.2)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	4	(4.5)	4	(4.5)
Montana	5	3	(60.0)	2	(40.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Nebraska	22	19	(86.4)	2	(9.1)	1	(4.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Nevada	82	21	(25.6)	36	(43.9)	6	(7.3)	0	(0.0)	0	(0.0)	2	(2.4)	6	(7.3)	10	(12.2)	1	(1.2)
New Hampshire	9	6	(66.7)	1	(11.1)	0	(0.0)	1	(11.1)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)	0	(0.0)
New Jersey	302	170	(56.3)	65	(21.5)	4	(1.3)	1	(0.3)	1	(0.3)	2	(0.7)	4	(1.3)	55	(18.2)	0	(0.0)
New Mexico	40	31	(77.5)	8	(20.0)	1	(2.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)

Table 41. (Con't) Primary Reasons for Tuberculosis Evaluation¹: Reporting Areas, 2012

Reporting Area	Total	TB Symptoms		Abnormal Chest Radiograph		Contact Investigation		Targeted Testing		Health Care Worker		Administrative Testing		Immigrant Medical Exam		Incidental Lab Result		Unknown/ Missing	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
New York State ²	215	103	(47.9)	53	(24.7)	4	(1.9)	2	(0.9)	1	(0.5)	1	(0.5)	3	(1.4)	35	(16.3)	13	(6.0)
New York City	651	352	(54.1)	138	(21.2)	15	(2.3)	9	(1.4)	1	(0.2)	6	(0.9)	8	(1.2)	117	(18.0)	5	(0.8)
North Carolina	211	65	(30.8)	74	(35.1)	14	(6.6)	1	(0.5)	1	(0.5)	3	(1.4)	5	(2.4)	48	(22.7)	0	(0.0)
North Dakota	26	9	(34.6)	1	(3.8)	11	(42.3)	0	(0.0)	2	(7.7)	0	(0.0)	0	(0.0)	2	(7.7)	1	(3.8)
Ohio	149	92	(61.7)	27	(18.1)	5	(3.4)	4	(2.7)	1	(0.7)	1	(0.7)	4	(2.7)	15	(10.1)	0	(0.0)
Oklahoma	88	39	(44.3)	17	(19.3)	7	(8.0)	3	(3.4)	1	(1.1)	1	(1.1)	6	(6.8)	14	(15.9)	0	(0.0)
Oregon	61	53	(86.9)	2	(3.3)	1	(1.6)	3	(4.9)	0	(0.0)	0	(0.0)	1	(1.6)	1	(1.6)	0	(0.0)
Pennsylvania	234	140	(59.8)	44	(18.8)	7	(3.0)	7	(3.0)	1	(0.4)	1	(0.4)	7	(3.0)	25	(10.7)	2	(0.9)
Rhode Island	23	13	(56.5)	7	(30.4)	2	(8.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.3)	0	(0.0)
South Carolina	122	46	(37.7)	43	(35.2)	7	(5.7)	1	(0.8)	1	(0.8)	0	(0.0)	1	(0.8)	23	(18.9)	0	(0.0)
South Dakota	19	7	(36.8)	7	(36.8)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	5	(26.3)	0	(0.0)
Tennessee	164	78	(47.6)	60	(36.6)	8	(4.9)	1	(0.6)	0	(0.0)	0	(0.0)	0	(0.0)	17	(10.4)	0	(0.0)
Texas	1233	761	(61.7)	162	(13.1)	91	(7.4)	139	(11.3)	14	(1.1)	2	(0.2)	9	(0.7)	53	(4.3)	2	(0.2)
Utah	37	27	(73.0)	4	(10.8)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(5.4)	4	(10.8)	0	(0.0)
Vermont	4	3	(75.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)	0	(0.0)
Virginia	235	178	(75.7)	28	(11.9)	6	(2.6)	2	(0.9)	0	(0.0)	5	(2.1)	1	(0.4)	13	(5.5)	2	(0.9)
Washington	185	127	(68.6)	30	(16.2)	7	(3.8)	1	(0.5)	0	(0.0)	0	(0.0)	1	(0.5)	14	(7.6)	5	(2.7)
West Virginia	8	3	(37.5)	4	(50.0)	0	(0.0)	1	(12.5)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Wisconsin	71	40	(56.3)	15	(21.1)	6	(8.5)	0	(0.0)	0	(0.0)	0	(0.0)	2	(2.8)	7	(9.9)	1	(1.4)
Wyoming	3	2	(66.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(33.3)	0	(0.0)
American Samoa ³	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Fed. States of Micronesia ³	173	117	(67.6)	16	(9.2)	31	(17.9)	1	(0.6)	1	(0.6)	1	(0.6)	0	(0.0)	4	(2.3)	2	(1.2)
Guam ³	68	29	(42.6)	20	(29.4)	5	(7.4)	0	(0.0)	0	(0.0)	0	(0.0)	5	(7.4)	9	(13.2)	0	(0.0)
Marshall Islands ³	145	124	(85.5)	6	(4.1)	11	(7.6)	2	(1.4)	0	(0.0)	0	(0.0)	0	(0.0)	2	(1.4)	0	(0.0)
N. Mariana Islands ³	21	14	(66.7)	3	(14.3)	1	(4.8)	0	(0.0)	0	(0.0)	0	(0.0)	2	(9.5)	0	(0.0)	1	(4.8)
Puerto Rico ³	71	34	(47.9)	28	(39.4)	4	(5.6)	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.4)	4	(5.6)	0	(0.0)
Republic of Palau ³	4	4	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
U.S. Virgin Islands ³	4	1	(25.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(75.0)

¹ Each TB patient has only one primary reason for TB evaluation.

² Excludes New York City.

³ Not included in U.S. totals.

Table 42. Tuberculosis Cases and Percentages by Residence in and Type of Correctional Facilities,¹ Age ≥ 15: Reporting Areas, 2012

Reporting Area	Total Cases	Cases with Information on Residence in Correctional Facilities		Cases Reported As Residents of Correctional Facilities ²	
		No.	(%)	No.	(%)
United States	9456	9407	(99.5)	384	(4.1)
Alabama	130	130	(100.0)	10	(7.7)
Alaska	57	52	(91.2)	4	(7.7)
Arizona	201	201	(100.0)	55	(27.4)
Arkansas	67	67	(100.0)	0	0.0
California	2102	2093	(99.6)	57	(2.7)
Colorado	61	61	(100.0)	2	(3.3)
Connecticut	73	73	(100.0)	0	0.0
Delaware	28	28	(100.0)	0	0.0
District of Columbia	35	35	(100.0)	1	(2.9)
Florida	649	649	(100.0)	24	(3.7)
Georgia	334	333	(99.7)	19	(5.7)
Hawaii	113	113	(100.0)	0	0.0
Idaho	14	14	(100.0)	1	(7.1)
Illinois	331	330	(99.7)	6	(1.8)
Indiana	92	90	(97.8)	3	(3.3)
Iowa	44	43	(97.7)	0	0.0
Kansas	40	40	(100.0)	1	(2.5)
Kentucky	77	77	(100.0)	7	(9.1)
Louisiana	145	141	(97.2)	5	(3.5)
Maine	15	15	(100.0)	0	0.0
Maryland	210	210	(100.0)	1	(0.5)
Massachusetts	213	212	(99.5)	5	(2.4)
Michigan	146	143	(97.9)	2	(1.4)
Minnesota	139	139	(100.0)	0	0.0
Mississippi	80	80	(100.0)	3	(3.8)
Missouri	85	78	(91.8)	3	(3.8)
Montana	5	5	(100.0)	0	0.0
Nebraska	21	21	(100.0)	1	(4.8)
Nevada	72	72	(100.0)	2	(2.8)
New Hampshire	8	8	(100.0)	0	0.0
New Jersey	297	297	(100.0)	2	(0.7)
New Mexico	40	40	(100.0)	2	(5.0)
New York State ⁵	203	202	(99.5)	0	0.0
New York City	636	629	(98.9)	8	(1.3)
North Carolina	196	196	(100.0)	5	(2.6)
North Dakota	20	19	(95.0)	3	(15.8)
Ohio	142	142	(100.0)	3	(2.1)
Oklahoma	76	74	(97.4)	3	(4.1)
Oregon	60	60	(100.0)	1	(1.7)
Pennsylvania	227	227	(100.0)	8	(3.5)
Rhode Island	21	21	(100.0)	0	0.0
South Carolina	115	115	(100.0)	6	(5.2)
South Dakota	17	16	(94.1)	0	0.0
Tennessee	154	154	(100.0)	8	(5.2)
Texas	1155	1154	(99.9)	115	(10.0)
Utah	36	36	(100.0)	0	0.0
Vermont	4	4	(100.0)	0	0.0
Virginia	222	222	(100.0)	4	(1.8)
Washington	175	173	(98.9)	2	(1.2)
West Virginia	8	8	(100.0)	2	(25.0)
Wisconsin	62	62	(100.0)	0	0.0
Wyoming	3	3	(100.0)	0	0.0
American Samoa ⁶	1	1	(100.0)	0	0.0
Fed. States of Micronesia ⁶	124	123	(99.2)	0	0.0
Guam ⁶	53	53	(100.0)	0	0.0
Marshall Islands ⁶	106	106	(100.0)	0	0.0
N. Mariana Islands ⁶	21	21	(100.0)	0	0.0
Puerto Rico ⁶	70	70	(100.0)	6	(8.6)
Republic of Palau ⁶	4	4	(100.0)	0	0.0
U.S. Virgin Islands ⁶	2	1	(50.0)	0	0.0

Table 42. (Con't) Tuberculosis Cases and Percentages by Residence in and Type of Correctional Facilities,¹ Age ≥ 15: Reporting Areas, 2012

Federal Prison		State Prison		Local Jail		Juvenile Facility ³		Other Type of Facility		Unknown/Missing		Cases with Information on ICE Custody ⁴		Cases Under ICE Custody	
No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
71	(18.5)	77	(20.1)	141	(36.7)	4	(1.0)	87	(22.7)	4	(1.0)	377	(98.2)	130	(34.5)
0	0.0	8	(80.0)	1	(10.0)	0	0.0	1	(10.0)	0	0.0	9	(90.0)	0	0.0
0	0.0	3	(75.0)	1	(25.0)	0	0.0	0	0.0	0	0.0	4	(100.0)	0	0.0
11	(20.0)	1	(1.8)	3	(5.5)	3	(5.5)	37	(67.3)	0	0.0	55	(100.0)	49	(89.1)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
24	(42.1)	4	(7.0)	28	(49.1)	0	0.0	1	(1.8)	0	0.0	57	(100.0)	16	(28.1)
0	0.0	1	(50.0)	1	(50.0)	0	0.0	0	0.0	0	0.0	2	(100.0)	0	0.0
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	0	0.0	1	(100.0)	0	0.0	0	0.0	0	0.0	1	(100.0)	0	0.0
3	(12.5)	13	(54.2)	7	(29.2)	0	0.0	1	(4.2)	0	0.0	24	(100.0)	4	(16.7)
0	0.0	6	(31.6)	8	(42.1)	0	0.0	5	(26.3)	0	0.0	19	(100.0)	5	(26.3)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	1	(100.0)	0	0.0	0	0.0	0	0.0	0	0.0	1	(100.0)	0	0.0
0	0.0	2	(33.3)	3	(50.0)	0	0.0	1	(16.7)	0	0.0	5	(83.3)	1	(20.0)
0	0.0	0	0.0	3	(100.0)	0	0.0	0	0.0	0	0.0	3	(100.0)	0	0.0
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	0	0.0	1	(100.0)	0	0.0	0	0.0	0	0.0	1	(100.0)	0	0.0
0	0.0	4	(57.1)	3	(42.9)	0	0.0	0	0.0	0	0.0	7	(100.0)	1	(14.3)
0	0.0	1	(20.0)	3	(60.0)	0	0.0	1	(20.0)	0	0.0	5	(100.0)	2	(40.0)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	0	0.0	1	(100.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	2	(40.0)	2	(40.0)	0	0.0	1	(20.0)	0	0.0	5	(100.0)	0	0.0
1	(50.0)	0	0.0	1	(50.0)	0	0.0	0	0.0	0	0.0	2	(100.0)	0	0.0
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
1	(33.3)	1	(33.3)	1	(33.3)	0	0.0	0	0.0	0	0.0	3	(100.0)	1	(33.3)
0	...	0	...	0	...	0	...	0	...	3	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	0	0.0	1	(100.0)	0	0.0	0	0.0	0	0.0	1	(100.0)	1	(100.0)
0	0.0	0	0.0	2	(100.0)	0	0.0	0	0.0	0	0.0	2	(100.0)	1	(50.0)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	1	(50.0)	1	(50.0)	0	0.0	0	0.0	0	0.0	2	(100.0)	0	0.0
0	0.0	0	0.0	0	0.0	0	0.0	2	(100.0)	0	0.0	2	(100.0)	1	(50.0)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	1	(12.5)	7	(87.5)	0	0.0	0	0.0	0	0.0	8	(100.0)	1	(12.5)
0	0.0	3	(60.0)	2	(40.0)	0	0.0	0	0.0	0	0.0	5	(100.0)	0	0.0
0	0.0	0	0.0	3	(100.0)	0	0.0	0	0.0	0	0.0	3	(100.0)	0	0.0
2	(66.7)	0	0.0	1	(33.3)	0	0.0	0	0.0	0	0.0	3	(100.0)	0	0.0
1	(33.3)	2	(66.7)	0	0.0	0	0.0	0	0.0	0	0.0	3	(100.0)	0	0.0
1	(100.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	(100.0)	0	0.0
2	(25.0)	0	0.0	6	(75.0)	0	0.0	0	0.0	0	0.0	8	(100.0)	4	(50.0)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
1	(16.7)	1	(16.7)	4	(66.7)	0	0.0	0	0.0	0	0.0	6	(100.0)	0	0.0
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	0.0	1	(12.5)	7	(87.5)	0	0.0	0	0.0	0	0.0	7	(87.5)	0	0.0
21	(18.3)	21	(18.3)	38	(33.0)	1	(0.9)	34	(29.6)	0	0.0	115	(100.0)	39	(33.9)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
1	(25.0)	0	0.0	1	(25.0)	0	0.0	2	(50.0)	0	0.0	4	(100.0)	2	(50.0)
0	0.0	0	0.0	0	0.0	0	0.0	1	(50.0)	1	(50.0)	2	(100.0)	2	(100.0)
2	(100.0)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	(100.0)	0	0.0
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
3	(50.0)	3	(50.0)	0	0.0	0	0.0	0	0.0	0	0.0	3	(50.0)	1	(33.3)
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...
0	...	0	...	0	...	0	...	0	...	0	...	0	...	0	...

¹ Resident of correctional facility at time of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Percent of those with known status.

³ Excludes youth who are under 15 years of age.

⁴ Immigration and Customs Enforcement (ICE) detainment among cases who were residents in correctional facilities.

⁵ Excludes New York City.

⁶ Not included in U.S. totals.

Note: Ellipses indicate data not available.
See Surveillance Slide #28.

**Table 43. Tuberculosis Cases and Percentages by Homeless Status,¹ Age ≥15:
Reporting Areas, 2012**

Reporting Area	Total Cases	Cases with Information on Homeless Status		Cases Reported As Being Homeless ²	
		No.	(%)	No.	(%)
United States	9,456	9,345	(98.8)	528	(5.7)
Alabama	130	130	(100.0)	8	(6.2)
Alaska	57	52	(91.2)	5	(9.6)
Arizona	201	176	(87.6)	11	(6.3)
Arkansas	67	67	(100.0)	6	(9.0)
California	2,102	2,086	(99.2)	128	(6.1)
Colorado	61	61	(100.0)	4	(6.6)
Connecticut	73	73	(100.0)	2	(2.7)
Delaware	28	28	(100.0)	2	(7.1)
District of Columbia	35	35	(100.0)	2	(5.7)
Florida	649	640	(98.6)	64	(10.0)
Georgia	334	332	(99.4)	36	(10.8)
Hawaii	113	109	(96.5)	3	(2.8)
Idaho	14	14	(100.0)	0	(0.0)
Illinois	331	330	(99.7)	20	(6.1)
Indiana	92	91	(98.9)	9	(9.9)
Iowa	44	43	(97.7)	1	(2.3)
Kansas	40	40	(100.0)	9	(22.5)
Kentucky	77	77	(100.0)	6	(7.8)
Louisiana	145	139	(95.9)	7	(5.0)
Maine	15	15	(100.0)	1	(6.7)
Maryland	210	209	(99.5)	12	(5.7)
Massachusetts	213	212	(99.5)	6	(2.8)
Michigan	146	144	(98.6)	9	(6.3)
Minnesota	139	139	(100.0)	2	(1.4)
Mississippi	80	80	(100.0)	10	(12.5)
Missouri	85	78	(91.8)	1	(1.3)
Montana	5	5	(100.0)	1	(20.0)
Nebraska	21	21	(100.0)	2	(9.5)
Nevada	72	72	(100.0)	3	(4.2)
New Hampshire	8	8	(100.0)	0	(0.0)
New Jersey	297	297	(100.0)	4	(1.3)
New Mexico	40	40	(100.0)	1	(2.5)
New York State ³	203	201	(99.0)	1	(0.5)
New York City	636	623	(98.0)	19	(3.0)
North Carolina	196	196	(100.0)	7	(3.6)
North Dakota	20	17	(85.0)	5	(29.4)
Ohio	142	142	(100.0)	10	(7.0)
Oklahoma	76	72	(94.7)	7	(9.7)
Oregon	60	60	(100.0)	3	(5.0)
Pennsylvania	227	226	(99.6)	4	(1.8)
Rhode Island	21	21	(100.0)	0	(0.0)
South Carolina	115	115	(100.0)	12	(10.4)
South Dakota	17	15	(88.2)	0	(0.0)
Tennessee	154	154	(100.0)	6	(3.9)
Texas	1,155	1,154	(99.9)	63	(5.5)
Utah	36	36	(100.0)	1	(2.8)
Vermont	4	4	(100.0)	0	(0.0)
Virginia	222	220	(99.1)	9	(4.1)
Washington	175	173	(98.9)	6	(3.5)
West Virginia	8	8	(100.0)	0	(0.0)
Wisconsin	62	62	(100.0)	0	(0.0)
Wyoming	3	3	(100.0)	0	(0.0)
American Samoa ⁴	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ⁴	124	123	(99.2)	4	(3.3)
Guam ⁴	53	53	(100.0)	0	(0.0)
Marshall Islands ⁴	106	106	(100.0)	0	(0.0)
N. Mariana Islands ⁴	21	21	(100.0)	0	(0.0)
Puerto Rico ⁴	70	70	(100.0)	2	(2.9)
Republic of Palau ⁴	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ⁴	2	2	(100.0)	0	(0.0)

¹ Homeless within past 12 months of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Percent of those with known status.

³ Excludes New York City.

⁴ Not included in U.S. totals.

Note: Ellipses indicate data not available.

See Surveillance Slide #29

**Table 44. Tuberculosis Cases and Percentages by Residence in Long-term Care Facilities,¹
Age ≥15: Reporting Areas, 2012**

Reporting Area	Total Cases	Cases with Information on Residence in Long-term Care Facilities		Cases Reported As Residents of Long-term Care Facilities ²	
		No.	(%)	No.	(%)
United States	9,456	9,405	(99.5)	208	(2.2)
Alabama	130	130	(100.0)	5	(3.8)
Alaska	57	53	(93.0)	3	(5.7)
Arizona	201	201	(100.0)	2	(1.0)
Arkansas	67	67	(100.0)	2	(3.0)
California	2,102	2,095	(99.7)	48	(2.3)
Colorado	61	61	(100.0)	1	(1.6)
Connecticut	73	73	(100.0)	0	(0.0)
Delaware	28	28	(100.0)	0	(0.0)
District of Columbia	35	35	(100.0)	0	(0.0)
Florida	649	649	(100.0)	3	(0.5)
Georgia	334	333	(99.7)	6	(1.8)
Hawaii	113	113	(100.0)	2	(1.8)
Idaho	14	14	(100.0)	0	(0.0)
Illinois	331	330	(99.7)	7	(2.1)
Indiana	92	90	(97.8)	4	(4.4)
Iowa	44	43	(97.7)	0	(0.0)
Kansas	40	40	(100.0)	1	(2.5)
Kentucky	77	76	(98.7)	5	(6.6)
Louisiana	145	141	(97.2)	5	(3.5)
Maine	15	15	(100.0)	0	(0.0)
Maryland	210	210	(100.0)	2	(1.0)
Massachusetts	213	212	(99.5)	1	(0.5)
Michigan	146	145	(99.3)	8	(5.5)
Minnesota	139	139	(100.0)	1	(0.7)
Mississippi	80	80	(100.0)	4	(5.0)
Missouri	85	78	(91.8)	2	(2.6)
Montana	5	5	(100.0)	0	(0.0)
Nebraska	21	20	(95.2)	0	(0.0)
Nevada	72	71	(98.6)	2	(2.8)
New Hampshire	8	8	(100.0)	0	(0.0)
New Jersey	297	297	(100.0)	3	(1.0)
New Mexico	40	40	(100.0)	1	(2.5)
New York State ³	203	203	(100.0)	5	(2.5)
New York City	636	629	(98.9)	26	(4.1)
North Carolina	196	196	(100.0)	8	(4.1)
North Dakota	20	19	(95.0)	0	(0.0)
Ohio	142	142	(100.0)	4	(2.8)
Oklahoma	76	73	(96.1)	1	(1.4)
Oregon	60	60	(100.0)	2	(3.3)
Pennsylvania	227	227	(100.0)	10	(4.4)
Rhode Island	21	21	(100.0)	1	(4.8)
South Carolina	115	115	(100.0)	3	(2.6)
South Dakota	17	16	(94.1)	1	(6.3)
Tennessee	154	154	(100.0)	5	(3.2)
Texas	1,155	1,150	(99.6)	11	(1.0)
Utah	36	36	(100.0)	0	(0.0)
Vermont	4	4	(100.0)	0	(0.0)
Virginia	222	222	(100.0)	2	(0.9)
Washington	175	173	(98.9)	10	(5.8)
West Virginia	8	8	(100.0)	0	(0.0)
Wisconsin	62	62	(100.0)	0	(0.0)
Wyoming	3	3	(100.0)	1	(33.3)
American Samoa ⁴	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ⁴	124	124	(100.0)	0	(0.0)
Guam ⁴	53	53	(100.0)	0	(0.0)
Marshall Islands ⁴	106	106	(100.0)	0	(0.0)
N. Mariana Islands ⁴	21	21	(100.0)	1	(4.8)
Puerto Rico ⁴	70	70	(100.0)	10	(14.3)
Republic of Palau ⁴	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ⁴	2	2	(100.0)	0	(0.0)

¹ Resident of long-term care facility at time of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Percent of those with known status.

³ Excludes New York City.

⁴ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 45. Tuberculosis Cases and Percentages by Injecting Drug Use,¹ Age ≥15: Reporting Areas, 2012

Reporting Area	Total Cases	Cases with Information on Injecting Drug Use		Cases Reporting Injecting Drug Use	
		No.	(%)	No.	(%)
United States	9,456	9,264	(98.0)	138	(1.5)
Alabama	130	129	(99.2)	0	(0.0)
Alaska	57	50	(87.7)	1	(2.0)
Arizona	201	169	(84.1)	7	(4.1)
Arkansas	67	67	(100.0)	1	(1.5)
California	2,102	2,064	(98.2)	41	(2.0)
Colorado	61	61	(100.0)	0	(0.0)
Connecticut	73	73	(100.0)	0	(0.0)
Delaware	28	28	(100.0)	0	(0.0)
District of Columbia	35	35	(100.0)	1	(2.9)
Florida	649	644	(99.2)	10	(1.6)
Georgia	334	328	(98.2)	2	(0.6)
Hawaii	113	88	(77.9)	1	(1.1)
Idaho	14	14	(100.0)	0	(0.0)
Illinois	331	328	(99.1)	3	(0.9)
Indiana	92	90	(97.8)	2	(2.2)
Iowa	44	43	(97.7)	0	(0.0)
Kansas	40	40	(100.0)	0	(0.0)
Kentucky	77	77	(100.0)	1	(1.3)
Louisiana	145	137	(94.5)	3	(2.2)
Maine	15	15	(100.0)	0	(0.0)
Maryland	210	209	(99.5)	2	(1.0)
Massachusetts	213	212	(99.5)	1	(0.5)
Michigan	146	139	(95.2)	1	(0.7)
Minnesota	139	139	(100.0)	2	(1.4)
Mississippi	80	80	(100.0)	1	(1.3)
Missouri	85	78	(91.8)	1	(1.3)
Montana	5	5	(100.0)	0	(0.0)
Nebraska	21	20	(95.2)	1	(5.0)
Nevada	72	69	(95.8)	2	(2.9)
New Hampshire	8	8	(100.0)	0	(0.0)
New Jersey	297	297	(100.0)	1	(0.3)
New Mexico	40	40	(100.0)	3	(7.5)
New York State ²	203	195	(96.1)	0	(0.0)
New York City	636	631	(99.2)	7	(1.1)
North Carolina	196	196	(100.0)	0	(0.0)
North Dakota	20	9	(45.0)	--	--
Ohio	142	141	(99.3)	1	(0.7)
Oklahoma	76	70	(92.1)	0	(0.0)
Oregon	60	60	(100.0)	0	(0.0)
Pennsylvania	227	225	(99.1)	2	(0.9)
Rhode Island	21	21	(100.0)	0	(0.0)
South Carolina	115	114	(99.1)	3	(2.6)
South Dakota	17	14	(82.4)	0	(0.0)
Tennessee	154	154	(100.0)	2	(1.3)
Texas	1,155	1,154	(99.9)	28	(2.4)
Utah	36	36	(100.0)	0	(0.0)
Vermont	4	4	(100.0)	0	(0.0)
Virginia	222	222	(100.0)	2	(0.9)
Washington	175	173	(98.9)	2	(1.2)
West Virginia	8	8	(100.0)	0	(0.0)
Wisconsin	62	61	(98.4)	1	(1.6)
Wyoming	3	0	(0.0)	--	--
American Samoa ³	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ³	124	124	(100.0)	1	(0.8)
Guam ³	53	53	(100.0)	0	(0.0)
Marshall Islands ³	106	106	(100.0)	0	(0.0)
N. Mariana Islands ³	21	21	(100.0)	0	(0.0)
Puerto Rico ³	70	70	(100.0)	10	(14.3)
Republic of Palau ³	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ³	2	2	(100.0)	0	(0.0)

¹ Injecting drug use within past 12 months of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Excludes New York City.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 46. Tuberculosis Cases and Percentages by Noninjecting Drug Use,¹ Age ≥15: Reporting Areas, 2012

Reporting Area	Total Cases	Cases with Information on Noninjecting Drug Use		Cases Reporting Noninjecting Drug Use	
		No.	(%)	No.	(%)
United States	9,456	9,246	(97.8)	687	(7.4)
Alabama	130	129	(99.2)	16	(12.4)
Alaska	57	49	(86.0)	13	(26.5)
Arizona	201	170	(84.6)	26	(15.3)
Arkansas	67	67	(100.0)	3	(4.5)
California	2,102	2,061	(98.0)	116	(5.6)
Colorado	61	61	(100.0)	4	(6.6)
Connecticut	73	73	(100.0)	3	(4.1)
Delaware	28	28	(100.0)	3	(10.7)
District of Columbia	35	35	(100.0)	3	(8.6)
Florida	649	643	(99.1)	68	(10.6)
Georgia	334	328	(98.2)	28	(8.5)
Hawaii	113	85	(75.2)	1	(1.2)
Idaho	14	14	(100.0)	0	(0.0)
Illinois	331	326	(98.5)	25	(7.7)
Indiana	92	90	(97.8)	7	(7.8)
Iowa	44	43	(97.7)	0	(0.0)
Kansas	40	40	(100.0)	3	(7.5)
Kentucky	77	77	(100.0)	9	(11.7)
Louisiana	145	137	(94.5)	15	(10.9)
Maine	15	15	(100.0)	2	(13.3)
Maryland	210	208	(99.0)	6	(2.9)
Massachusetts	213	213	(100.0)	6	(2.8)
Michigan	146	134	(91.8)	10	(7.5)
Minnesota	139	139	(100.0)	3	(2.2)
Mississippi	80	80	(100.0)	6	(7.5)
Missouri	85	78	(91.8)	4	(5.1)
Montana	5	5	(100.0)	0	(0.0)
Nebraska	21	20	(95.2)	2	(10.0)
Nevada	72	69	(95.8)	9	(13.0)
New Hampshire	8	8	(100.0)	0	(0.0)
New Jersey	297	297	(100.0)	14	(4.7)
New Mexico	40	40	(100.0)	6	(15.0)
New York State ²	203	194	(95.6)	5	(2.6)
New York City	636	629	(98.9)	39	(6.2)
North Carolina	196	196	(100.0)	23	(11.7)
North Dakota	20	11	(55.0)	--	--
Ohio	142	141	(99.3)	14	(9.9)
Oklahoma	76	69	(90.8)	6	(8.7)
Oregon	60	60	(100.0)	6	(10.0)
Pennsylvania	227	225	(99.1)	7	(3.1)
Rhode Island	21	21	(100.0)	2	(9.5)
South Carolina	115	114	(99.1)	18	(15.8)
South Dakota	17	14	(82.4)	2	(14.3)
Tennessee	154	154	(100.0)	23	(14.9)
Texas	1,155	1,154	(99.9)	104	(9.0)
Utah	36	36	(100.0)	0	(0.0)
Vermont	4	4	(100.0)	0	(0.0)
Virginia	222	222	(100.0)	15	(6.8)
Washington	175	171	(97.7)	4	(2.3)
West Virginia	8	8	(100.0)	1	(12.5)
Wisconsin	62	61	(98.4)	1	(1.6)
Wyoming	3	0	(0.0)	--	--
American Samoa ³	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ³	124	124	(100.0)	17	(13.7)
Guam ³	53	53	(100.0)	0	(0.0)
Marshall Islands ³	106	106	(100.0)	2	(1.9)
N. Mariana Islands ³	21	21	(100.0)	0	(0.0)
Puerto Rico ³	70	70	(100.0)	13	(18.6)
Republic of Palau ³	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ³	2	2	(100.0)	0	(0.0)

¹ Noninjecting drug use within past 12 months of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Excludes New York City.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 47. Tuberculosis Cases and Percentages by Excess Alcohol Use,¹ Age ≥15: Reporting Areas, 2012

Reporting Area	Total Cases	Cases with Information on Excess Alcohol Use		Cases Reporting Excess Alcohol Use	
		No.	(%)	No.	(%)
United States	9,456	9,263	(98.0)	1,152	(12.4)
Alabama	130	129	(99.2)	20	(15.5)
Alaska	57	51	(89.5)	27	(52.9)
Arizona	201	174	(86.6)	24	(13.8)
Arkansas	67	67	(100.0)	12	(17.9)
California	2,102	2,061	(98.0)	199	(9.7)
Colorado	61	61	(100.0)	5	(8.2)
Connecticut	73	73	(100.0)	5	(6.8)
Delaware	28	28	(100.0)	4	(14.3)
District of Columbia	35	35	(100.0)	1	(2.9)
Florida	649	644	(99.2)	116	(18.0)
Georgia	334	328	(98.2)	52	(15.9)
Hawaii	113	101	(89.4)	11	(10.9)
Idaho	14	14	(100.0)	2	(14.3)
Illinois	331	326	(98.5)	40	(12.3)
Indiana	92	90	(97.8)	17	(18.9)
Iowa	44	43	(97.7)	7	(16.3)
Kansas	40	40	(100.0)	7	(17.5)
Kentucky	77	77	(100.0)	10	(13.0)
Louisiana	145	137	(94.5)	21	(15.3)
Maine	15	15	(100.0)	2	(13.3)
Maryland	210	208	(99.0)	17	(8.2)
Massachusetts	213	213	(100.0)	19	(8.9)
Michigan	146	134	(91.8)	12	(9.0)
Minnesota	139	139	(100.0)	4	(2.9)
Mississippi	80	80	(100.0)	19	(23.8)
Missouri	85	78	(91.8)	10	(12.8)
Montana	5	5	(100.0)	1	(20.0)
Nebraska	21	20	(95.2)	6	(30.0)
Nevada	72	70	(97.2)	7	(10.0)
New Hampshire	8	8	(100.0)	0	(0.0)
New Jersey	297	297	(100.0)	22	(7.4)
New Mexico	40	40	(100.0)	7	(17.5)
New York State ²	203	190	(93.6)	10	(5.3)
New York City	636	626	(98.4)	19	(3.0)
North Carolina	196	196	(100.0)	25	(12.8)
North Dakota	20	12	(60.0)	--	--
Ohio	142	140	(98.6)	19	(13.6)
Oklahoma	76	70	(92.1)	22	(31.4)
Oregon	60	60	(100.0)	11	(18.3)
Pennsylvania	227	225	(99.1)	12	(5.3)
Rhode Island	21	21	(100.0)	3	(14.3)
South Carolina	115	113	(98.3)	31	(27.4)
South Dakota	17	14	(82.4)	4	(28.6)
Tennessee	154	154	(100.0)	34	(22.1)
Texas	1,155	1,154	(99.9)	207	(17.9)
Utah	36	36	(100.0)	1	(2.8)
Vermont	4	4	(100.0)	1	(25.0)
Virginia	222	222	(100.0)	21	(9.5)
Washington	175	171	(97.7)	13	(7.6)
West Virginia	8	8	(100.0)	1	(12.5)
Wisconsin	62	61	(98.4)	5	(8.2)
Wyoming	3	0	(0.0)	--	--
American Samoa ³	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ³	124	122	(98.4)	10	(8.2)
Guam ³	53	53	(100.0)	0	(0.0)
Marshall Islands ³	106	104	(98.1)	17	(16.3)
N. Mariana Islands ³	21	21	(100.0)	1	(4.8)
Puerto Rico ³	70	70	(100.0)	11	(15.7)
Republic of Palau ³	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ³	2	2	(100.0)	0	(0.0)

¹ Excess alcohol use within past 12 months of TB diagnosis. Percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

² Excludes New York City.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.

**Table 48. Tuberculosis Cases and Percentages by Primary Occupation, Age ≥15:
Reporting Areas, 2012**

Reporting Area	Total Cases	Cases with Information on Occupation		Percentage of Cases by Occupation ¹						
		No.	(%)	Unemployed	Health Care Worker	Correctional Employee	Migrant Worker	Retired	Not Seeking Employment	Other
United States	9,456	9,164	(96.9)	(28.6)	(4.0)	(0.2)	(1.5)	(15.6)	(15.9)	(34.2)
Alabama	130	130	(100.0)	(10.8)	(0.0)	(1.5)	(0.0)	(17.7)	(39.2)	(30.8)
Alaska	57	46	(80.7)	(34.8)	(2.2)	(0.0)	(2.2)	(10.9)	(19.6)	(30.4)
Arizona	201	181	(90.0)	(26.0)	(4.4)	(0.0)	(8.8)	(13.8)	(18.2)	(28.7)
Arkansas	67	67	(100.0)	(19.4)	(1.5)	(0.0)	(0.0)	(25.4)	(6.0)	(47.8)
California	2,102	2,068	(98.4)	(23.9)	(4.2)	(0.1)	(2.4)	(20.6)	(15.4)	(33.4)
Colorado	61	61	(100.0)	(9.8)	(3.3)	(0.0)	(1.6)	(21.3)	(32.8)	(31.1)
Connecticut	73	73	(100.0)	(17.8)	(8.2)	(0.0)	(0.0)	(17.8)	(21.9)	(34.2)
Delaware	28	28	(100.0)	(17.9)	(17.9)	(0.0)	(0.0)	(21.4)	(10.7)	(32.1)
District of Columbia	35	35	(100.0)	(51.4)	(0.0)	(0.0)	(0.0)	(2.9)	(0.0)	(45.7)
Florida	649	630	(97.1)	(64.0)	(2.4)	(0.0)	(0.8)	(3.8)	(5.7)	(23.3)
Georgia	334	330	(98.8)	(36.1)	(2.4)	(0.3)	(2.1)	(10.0)	(13.3)	(35.8)
Hawaii	113	109	(96.5)	(17.4)	(2.8)	(0.0)	(1.8)	(21.1)	(18.3)	(38.5)
Idaho	14	13	(92.9)	(30.8)	(0.0)	(0.0)	(15.4)	(15.4)	(15.4)	(23.1)
Illinois	331	320	(96.7)	(20.0)	(5.9)	(0.0)	(0.3)	(17.8)	(21.3)	(34.7)
Indiana	92	92	(100.0)	(28.3)	(5.4)	(0.0)	(1.1)	(17.4)	(16.3)	(31.5)
Iowa	44	43	(97.7)	(4.7)	(0.0)	(0.0)	(0.0)	(7.0)	(34.9)	(53.5)
Kansas	40	40	(100.0)	(20.0)	(2.5)	(0.0)	(2.5)	(10.0)	(42.5)	(22.5)
Kentucky	77	77	(100.0)	(20.8)	(0.0)	(0.0)	(1.3)	(14.3)	(32.5)	(31.2)
Louisiana	145	131	(90.3)	(39.7)	(3.1)	(0.0)	(1.5)	(15.3)	(10.7)	(29.8)
Maine	15	15	(100.0)	(13.3)	(0.0)	(0.0)	(6.7)	(26.7)	(13.3)	(40.0)
Maryland	210	207	(98.6)	(18.8)	(9.7)	(0.5)	(0.5)	(10.6)	(18.4)	(41.5)
Massachusetts	213	213	(100.0)	(24.4)	(6.6)	(0.0)	(0.5)	(20.2)	(12.7)	(35.7)
Michigan	146	134	(91.8)	(67.9)	(3.0)	(0.7)	(0.0)	(0.0)	(0.0)	(28.4)
Minnesota	139	139	(100.0)	(13.7)	(1.4)	(0.7)	(0.0)	(7.9)	(33.1)	(43.2)
Mississippi	80	80	(100.0)	(46.3)	(1.3)	(1.3)	(0.0)	(13.8)	(12.5)	(25.0)
Missouri	85	2	(2.4)	--	--	--	--	--	--	--
Montana	5	5	(100.0)	(0.0)	(0.0)	(0.0)	(0.0)	(40.0)	(20.0)	(40.0)
Nebraska	21	21	(100.0)	(23.8)	(4.8)	(0.0)	(0.0)	(0.0)	(19.0)	(52.4)
Nevada	72	71	(98.6)	(9.9)	(4.2)	(0.0)	(1.4)	(23.9)	(19.7)	(40.8)
New Hampshire	8	8	(100.0)	(25.0)	(12.5)	(0.0)	(0.0)	(0.0)	(12.5)	(50.0)
New Jersey	297	297	(100.0)	(22.9)	(5.7)	(0.0)	(1.3)	(16.5)	(19.5)	(34.0)
New Mexico	40	40	(100.0)	(27.5)	(0.0)	(0.0)	(2.5)	(32.5)	(2.5)	(35.0)
New York State ²	203	193	(95.1)	(17.6)	(6.7)	(0.0)	(1.6)	(24.9)	(12.4)	(36.8)
New York City	636	631	(99.2)	(41.8)	(6.5)	(0.0)	(1.3)	(14.1)	(3.5)	(32.8)
North Carolina	196	196	(100.0)	(31.1)	(2.6)	(0.0)	(1.5)	(16.3)	(8.2)	(40.3)
North Dakota	20	5	(25.0)	--	--	--	--	--	--	--
Ohio	142	141	(99.3)	(25.5)	(4.3)	(0.0)	(1.4)	(20.6)	(14.9)	(33.3)
Oklahoma	76	63	(82.9)	(23.8)	(9.5)	(0.0)	(0.0)	(15.9)	(3.2)	(47.6)
Oregon	60	60	(100.0)	(18.3)	(1.7)	(0.0)	(0.0)	(10.0)	(20.0)	(50.0)
Pennsylvania	227	223	(98.2)	(26.9)	(4.5)	(0.0)	(0.9)	(21.1)	(11.7)	(35.0)
Rhode Island	21	21	(100.0)	(9.5)	(0.0)	(0.0)	(0.0)	(28.6)	(19.0)	(42.9)
South Carolina	115	114	(99.1)	(29.8)	(3.5)	(0.0)	(0.9)	(25.4)	(12.3)	(28.1)
South Dakota	17	16	(94.1)	(25.0)	(0.0)	(0.0)	(6.3)	(18.8)	(31.3)	(18.8)
Tennessee	154	153	(99.4)	(30.7)	(2.0)	(0.0)	(2.0)	(13.7)	(14.4)	(37.3)
Texas	1,155	1,143	(99.0)	(28.6)	(2.7)	(0.7)	(0.2)	(12.2)	(22.7)	(33.0)
Utah	36	36	(100.0)	(30.6)	(5.6)	(0.0)	(2.8)	(19.4)	(2.8)	(38.9)
Vermont	4	4	(100.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(75.0)	(25.0)
Virginia	222	220	(99.1)	(9.1)	(3.6)	(0.0)	(0.5)	(15.0)	(18.6)	(53.2)
Washington	175	173	(98.9)	(9.8)	(4.6)	(0.6)	(3.5)	(15.0)	(30.6)	(35.8)
West Virginia	8	7	(87.5)	(0.0)	(0.0)	(0.0)	(0.0)	(28.6)	(28.6)	(42.9)
Wisconsin	62	58	(93.5)	(8.6)	(3.4)	(0.0)	(1.7)	(19.0)	(31.0)	(36.2)
Wyoming	3	1	(33.3)	--	--	--	--	--	--	--
American Samoa ³	1	1	(100.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)	(0.0)	(0.0)
Fed. States of Micronesia ³	124	124	(100.0)	(62.9)	(0.8)	(0.0)	(1.6)	(1.6)	(15.3)	(17.7)
Guam ³	53	53	(100.0)	(30.2)	(0.0)	(0.0)	(0.0)	(24.5)	(5.7)	(39.6)
Marshall Islands ³	106	106	(100.0)	(38.7)	(3.8)	(0.0)	(0.0)	(2.8)	(20.8)	(34.0)
N. Mariana Islands ³	21	21	(100.0)	(9.5)	(0.0)	(0.0)	(38.1)	(4.8)	(19.0)	(28.6)
Puerto Rico ³	70	70	(100.0)	(34.3)	(4.3)	(0.0)	(0.0)	(17.1)	(25.7)	(18.6)
Republic of Palau ³	4	4	(100.0)	(25.0)	(0.0)	(0.0)	(0.0)	(50.0)	(0.0)	(25.0)
U.S. Virgin Islands ³	...	...	...	...	...	...	...	...	...	...

¹ Occupation within past 12 months of TB diagnosis. Overall U.S. percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Percentages shown only for reporting areas with information reported for ≥75% of cases.

² Excludes New York City.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.

**Table 49. Tuberculosis Cases and Percentages by Initial Drug Regimen:
Reporting Areas, 2012**

Reporting Area	Total Cases	Cases in Persons Alive at Diagnosis	Cases with Information on Initial Drug Regimen ¹		Percentage of Cases in Persons with Initial Drug Regimen ^{2,3}		
			No.	(%)	IR	IRZ	IRZE ³
United States	9,945	9,711	9,606	(98.9)	(0.7)	(2.2)	(85.2)
Alabama	134	133	132	(99.2)	(0.8)	(5.3)	(68.9)
Alaska	66	64	61	(95.3)	(0.0)	(4.9)	(90.2)
Arizona	211	207	196	(94.7)	(0.0)	(2.0)	(94.4)
Arkansas	70	67	67	(100.0)	(0.0)	(17.9)	(82.1)
California	2,191	2,142	2,120	(99.0)	(0.8)	(1.3)	(90.3)
Colorado	64	63	63	(100.0)	(3.2)	(0.0)	(77.8)
Connecticut	74	73	72	(98.6)	(0.0)	(2.8)	(15.3)
Delaware	28	27	27	(100.0)	(0.0)	(0.0)	(85.2)
District of Columbia	37	35	35	(100.0)	(0.0)	(0.0)	(94.3)
Florida	679	662	653	(98.6)	(0.2)	(3.5)	(88.2)
Georgia	357	346	343	(99.1)	(0.9)	(1.2)	(60.9)
Hawaii	117	113	112	(99.1)	(0.0)	(0.9)	(95.5)
Idaho	15	15	15	(100.0)	(6.7)	(0.0)	(46.7)
Illinois	347	343	338	(98.5)	(0.9)	(4.4)	(84.9)
Indiana	102	99	99	(100.0)	(0.0)	(5.1)	(88.9)
Iowa	46	44	44	(100.0)	(0.0)	(4.5)	(86.4)
Kansas	42	40	40	(100.0)	(0.0)	(2.5)	(95.0)
Kentucky	80	78	77	(98.7)	(0.0)	(2.6)	(80.5)
Louisiana	149	143	136	(95.1)	(0.0)	(2.2)	(92.6)
Maine	17	17	17	(100.0)	(0.0)	(0.0)	(94.1)
Maryland	224	222	221	(99.5)	(3.2)	(0.5)	(88.7)
Massachusetts	215	209	208	(99.5)	(2.4)	(0.0)	(76.0)
Michigan	149	146	140	(95.9)	(1.4)	(5.0)	(52.9)
Minnesota	162	161	160	(99.4)	(0.6)	(4.4)	(88.8)
Mississippi	81	78	78	(100.0)	(1.3)	(10.3)	(82.1)
Missouri	89	87	84	(96.6)	(0.0)	(1.2)	(79.8)
Montana	5	5	5	(100.0)	(0.0)	(0.0)	(100.0)
Nebraska	22	22	22	(100.0)	(0.0)	(0.0)	(86.4)
Nevada	82	79	79	(100.0)	(0.0)	(0.0)	(96.2)
New Hampshire	9	9	9	(100.0)	(0.0)	(0.0)	(88.9)
New Jersey	302	293	293	(100.0)	(0.7)	(1.0)	(90.8)
New Mexico	40	38	38	(100.0)	(0.0)	(0.0)	(97.4)
New York State ⁴	215	210	210	(100.0)	(0.5)	(1.0)	(88.1)
New York City	651	640	626	(97.8)	(1.1)	(2.2)	(83.2)
North Carolina	211	207	207	(100.0)	(0.0)	(1.9)	(82.6)
North Dakota	26	25	23	(92.0)	(0.0)	(0.0)	(91.3)
Ohio	149	145	143	(98.6)	(0.0)	(1.4)	(92.3)
Oklahoma	88	86	85	(98.8)	(12.9)	(14.1)	(56.5)
Oregon	61	60	60	(100.0)	(0.0)	(1.7)	(93.3)
Pennsylvania	234	228	227	(99.6)	(0.4)	(0.4)	(56.8)
Rhode Island	23	23	23	(100.0)	(0.0)	(4.3)	(91.3)
South Carolina	122	118	118	(100.0)	(0.8)	(2.5)	(91.5)
South Dakota	19	17	17	(100.0)	(0.0)	(0.0)	(29.4)
Tennessee	164	161	161	(100.0)	(0.0)	(0.6)	(93.8)
Texas	1,233	1,210	1,203	(99.4)	(0.4)	(2.2)	(90.4)
Utah	37	35	35	(100.0)	(0.0)	(2.9)	(85.7)
Vermont	4	4	4	(100.0)	(0.0)	(0.0)	(50.0)
Virginia	235	226	226	(100.0)	(0.0)	(0.0)	(92.9)
Washington	185	179	178	(99.4)	(0.0)	(1.1)	(89.9)
West Virginia	8	8	8	(100.0)	(0.0)	(0.0)	(100.0)
Wisconsin	71	66	65	(98.5)	(0.0)	(3.1)	(84.6)
Wyoming	3	3	3	(100.0)	(0.0)	(0.0)	(100.0)
American Samoa ⁵	1	1	1	(100.0)	(0.0)	(0.0)	(100.0)
Fed. States of Micronesia ⁵	173	173	172	(99.4)	(0.0)	(0.0)	(90.7)
Guam ⁵	68	67	67	(100.0)	(0.0)	(9.0)	(86.6)
Marshall Islands ⁵	145	145	145	(100.0)	(0.0)	(0.7)	(95.2)
N. Mariana Islands ⁵	21	21	21	(100.0)	(0.0)	(0.0)	(76.2)
Puerto Rico ⁵	71	66	66	(100.0)	(1.5)	(0.0)	(95.5)
Republic of Palau ⁵	4	4	4	(100.0)	(0.0)	(0.0)	(100.0)
U.S. Virgin Islands ⁵	4	4	4	(100.0)	(0.0)	(0.0)	(100.0)

¹ Includes persons who were alive at diagnosis and started on one or more drug.

² Overall U.S. percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

³ I=isoniazid; R=rifampin; Z=pyrazinamide; E=ethambutol. Cases with other drugs prescribed in addition to these regimens are excluded.

⁴ Excludes New York City.

⁵ Not included in U.S. totals.

Note: Excluding cases with no information on drug regimen, 80 (0.83%) persons were not started on any drugs, 24 (0.25%) were started on one drug, and 1,114 (11.50%) had an initial multidrug regimen other than IR, IRZ, or IRZE.

Table 50. Culture-Positive Tuberculosis Cases and Percentages with Drug-Susceptibility Results, by Resistance to INH or Multidrug Resistance: Reporting Areas, 2012

Reporting Area	Total Culture Positive Cases	Cases with Initial Drug-Susceptibility Testing Performed ¹		Resistance ²			
				Isoniazid ¹		Isoniazid and Rifampin ¹	
		No.	(%)	No.	(%)	No.	(%)
United States	7,598	7,250	(95.4)	660	(9.1)	83	(1.1)
Alabama	108	108	(100.0)	5	(4.6)	0	(0.0)
Alaska	50	50	(100.0)	1	(2.0)	0	(0.0)
Arizona	168	165	(98.2)	13	(7.9)	0	(0.0)
Arkansas	36	35	(97.2)	6	(17.1)	0	(0.0)
California	1,737	1,678	(96.6)	167	(10.0)	13	(0.8)
Colorado	47	47	(100.0)	3	(6.4)	1	(2.1)
Connecticut	55	53	(96.4)	7	(13.2)	1	(1.9)
Delaware	18	18	(100.0)	1	(5.6)	0	(0.0)
District of Columbia	28	27	(96.4)	1	(3.7)	0	(0.0)
Florida	539	497	(92.2)	40	(8.0)	6	(1.2)
Georgia	248	245	(98.8)	25	(10.2)	1	(0.4)
Hawaii	89	88	(98.9)	21	(23.9)	5	(5.7)
Idaho	10	10	(100.0)	3	(30.0)	0	(0.0)
Illinois	246	236	(95.9)	17	(7.2)	1	(0.4)
Indiana	78	77	(98.7)	8	(10.4)	0	(0.0)
Iowa	32	29	(90.6)	5	(17.2)	1	(3.4)
Kansas	40	40	(100.0)	0	(0.0)	0	(0.0)
Kentucky	60	59	(98.3)	6	(10.2)	0	(0.0)
Louisiana	122	105	(86.1)	2	(1.9)	0	(0.0)
Maine	14	14	(100.0)	0	(0.0)	0	(0.0)
Maryland	161	160	(99.4)	9	(5.6)	1	(0.6)
Massachusetts	153	151	(98.7)	13	(8.6)	2	(1.3)
Michigan	102	101	(99.0)	4	(4.0)	2	(2.0)
Minnesota	124	124	(100.0)	12	(9.7)	1	(0.8)
Mississippi	66	65	(98.5)	7	(10.8)	0	(0.0)
Missouri	89	40	(44.9)	--	--	--	--
Montana	4	4	(100.0)	1	(25.0)	0	(0.0)
Nebraska	14	14	(100.0)	0	(0.0)	0	(0.0)
Nevada	58	53	(91.4)	6	(11.3)	2	(3.8)
New Hampshire	8	5	(62.5)	--	--	--	--
New Jersey	227	226	(99.6)	19	(8.4)	4	(1.8)
New Mexico	38	38	(100.0)	1	(2.6)	0	(0.0)
New York State ³	161	158	(98.1)	14	(8.9)	3	(1.9)
New York City	492	480	(97.6)	53	(11.0)	16	(3.3)
North Carolina	170	169	(99.4)	16	(9.5)	1	(0.6)
North Dakota	13	0	(0.0)	--	--	--	--
Ohio	106	105	(99.1)	5	(4.8)	0	(0.0)
Oklahoma	69	63	(91.3)	3	(4.8)	0	(0.0)
Oregon	49	49	(100.0)	5	(10.2)	1	(2.0)
Pennsylvania	188	178	(94.7)	15	(8.4)	2	(1.1)
Rhode Island	19	19	(100.0)	2	(10.5)	0	(0.0)
South Carolina	84	79	(94.0)	7	(8.9)	0	(0.0)
South Dakota	14	14	(100.0)	1	(7.1)	0	(0.0)
Tennessee	113	113	(100.0)	9	(8.0)	0	(0.0)
Texas	919	847	(92.2)	73	(8.6)	5	(0.6)
Utah	28	28	(100.0)	2	(7.1)	1	(3.6)
Vermont	3	3	(100.0)	1	(33.3)	0	(0.0)
Virginia	173	172	(99.4)	16	(9.3)	5	(2.9)
Washington	164	154	(93.9)	25	(16.2)	4	(2.6)
West Virginia	7	6	(85.7)	2	(33.3)	0	(0.0)
Wisconsin	54	48	(88.9)	4	(8.3)	2	(4.2)
Wyoming	3	3	(100.0)	0	(0.0)	0	(0.0)
American Samoa ⁴	1	1	(100.0)	0	(0.0)	0	(0.0)
Fed. States of Micronesia ⁴	57	40	(70.2)	--	--	--	--
Guam ⁴	32	27	(84.4)	2	(7.4)	0	(0.0)
Marshall Islands ⁴	75	74	(98.7)	3	(4.1)	3	(4.1)
N. Mariana Islands ⁴	15	14	(93.3)	1	(7.1)	0	(0.0)
Puerto Rico ⁴	62	54	(87.1)	5	(9.3)	1	(1.9)
Republic of Palau ⁴	3	0	(0.0)	--	--	--	--
U.S. Virgin Islands ⁴	2	1	(50.0)	--	--	--	--

¹ Patients tested to at least isoniazid and rifampin

² Isolates may be resistant to other drugs. Overall U.S. percentage based on 52 reporting areas (50 states, New York City, and the District of Columbia). Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

³ Excludes New York City.

⁴ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 51. Tuberculosis Cases and Percentages by HIV Status: Reporting Areas, 2012

Reporting Area	Total Cases	Cases with Information on HIV Status ¹		Cases in Persons with HIV-Positive Results ²	
		No.	(%)	No.	(%)
United States	9,945	8,377	(84.2)	625	(7.5)
Alabama	134	128	(95.5)	7	(5.5)
Alaska	66	45	(68.2)	0	(0.0)
Arizona	211	189	(89.6)	11	(5.8)
Arkansas	70	60	(85.7)	0	(0.0)
California	2,191	1,851	(84.5)	87	(4.7)
Colorado	64	62	(96.9)	1	(1.6)
Connecticut	74	64	(86.5)	4	(6.3)
Delaware	28	27	(96.4)	3	(11.1)
District of Columbia	37	32	(86.5)	9	(28.1)
Florida	679	534	(78.6)	76	(14.2)
Georgia	357	333	(93.3)	38	(11.4)
Hawaii	117	112	(95.7)	1	(0.9)
Idaho	15	12	(80.0)	0	(0.0)
Illinois	347	299	(86.2)	18	(6.0)
Indiana	102	81	(79.4)	6	(7.4)
Iowa	46	38	(82.6)	5	(13.2)
Kansas	42	41	(97.6)	3	(7.3)
Kentucky	80	73	(91.3)	4	(5.5)
Louisiana	149	124	(83.2)	10	(8.1)
Maine	17	17	(100.0)	3	(17.6)
Maryland	224	203	(90.6)	26	(12.8)
Massachusetts	215	128	(59.5)	16	(12.5)
Michigan	149	123	(82.6)	7	(5.7)
Minnesota	162	155	(95.7)	6	(3.9)
Mississippi	81	78	(96.3)	5	(6.4)
Missouri	89	62	(69.7)	4	(6.5)
Montana	5	5	(100.0)	0	(0.0)
Nebraska	22	21	(95.5)	2	(9.5)
Nevada	82	79	(96.3)	2	(2.5)
New Hampshire	9	9	(100.0)	1	(11.1)
New Jersey	302	237	(78.5)	18	(7.6)
New Mexico	40	36	(90.0)	2	(5.6)
New York State ³	215	161	(74.9)	7	(4.3)
New York City	651	519	(79.7)	60	(11.6)
North Carolina	211	201	(95.3)	13	(6.5)
North Dakota	26	26	(100.0)	1	(3.8)
Ohio	149	117	(78.5)	11	(9.4)
Oklahoma	88	70	(79.5)	1	(1.4)
Oregon	61	60	(98.4)	1	(1.7)
Pennsylvania	234	170	(72.6)	19	(11.2)
Rhode Island	23	21	(91.3)	1	(4.8)
South Carolina	122	110	(90.2)	12	(10.9)
South Dakota	19	19	(100.0)	2	(10.5)
Tennessee	164	161	(98.2)	18	(11.2)
Texas	1,233	1,004	(81.4)	78	(7.8)
Utah	37	34	(91.9)	2	(5.9)
Vermont	4	0	(0.0)	0	—
Virginia	235	224	(95.3)	12	(5.4)
Washington	185	162	(87.6)	6	(3.7)
West Virginia	8	8	(100.0)	0	(0.0)
Wisconsin	71	50	(70.4)	5	(10.0)
Wyoming	3	2	(66.7)	1	(50.0)
American Samoa ⁴	1	1	(100.0)	0	(0.0)
Fed. States of Micronesia ⁴	173	120	(69.4)	—	—
Guam ⁴	68	44	(64.7)	—	—
Marshall Islands ⁴	145	87	(60.0)	—	—
N. Mariana Islands ⁴	21	16	(76.2)	1	(6.3)
Puerto Rico ⁴	71	61	(85.9)	11	(18.0)
Republic of Palau ⁴	4	4	(100.0)	0	(0.0)
U.S. Virgin Islands ⁴	4	4	(100.0)	2	(50.0)

¹ Includes only those cases in persons with negative, positive, or indeterminate HIV test results.

² Counts and percentages shown only for reporting areas with information reported for ≥75% of cases.

³ Excludes New York City.

⁴ Not included in U.S. totals.

Note: Ellipses indicate data not available.

See Technical Notes.

This page intentionally left blank

Table 52. Tuberculosis Diagnostic Tests by Type of Laboratory: Reporting Areas, 2012

Reporting Area	Nucleic Acid Amplification Test					Sputum Culture					Culture of Tissue or Other Fluids				
	Total ¹		Commercial Lab		Public Health Lab	Other Lab	Missing	Total ²	Commercial Lab		Public Health Lab	Other Lab	Missing	Total ³	No.
	No.	(%)	(%)	(%)	(%)	(%)	(%)		(%)	(%)	(%)	(%)	(%)		(%)
United States	4337	(28.5)	(52.0)	(12.7)	(6.8)			8050	(24.8)	(50.9)	(14.7)	(9.6)		4590	(9.7)
Alabama	33	(18.2)	(69.7)	(12.1)	(0.0)			122	(4.9)	(93.4)	(0.8)	(0.8)		55	(12.7)
Alaska	29	(0.0)	(100.0)	(0.0)	(0.0)			57	(3.5)	(93.0)	(3.5)	(0.0)		12	(8.3)
Arizona	81	(23.5)	(65.4)	(8.6)	(2.5)			198	(12.1)	(76.8)	(11.1)	(0.0)		80	(37.5)
Arkansas	24	(12.5)	(75.0)	(12.5)	(0.0)			60	(5.0)	(78.3)	(15.0)	(1.7)		27	(22.2)
California	1018	(33.8)	(48.7)	(13.3)	(4.2)			1803	(39.1)	(43.4)	(13.3)	(4.2)		1017	(53.3)
Colorado	24	(8.3)	(33.3)	(41.7)	(16.7)			51	(3.9)	(37.3)	(23.5)	(35.3)		38	(5.3)
Connecticut	12	(41.7)	(58.3)	(0.0)	(0.0)			54	(50.0)	(50.0)	(0.0)	(0.0)		50	(54.0)
Delaware	19	(5.3)	(84.2)	(10.5)	(0.0)			25	(20.0)	(64.0)	(16.0)	(0.0)		17	(41.2)
District of Columbia	11	(63.6)	(0.0)	(36.4)	(0.0)			25	(60.0)	(24.0)	(16.0)	(0.0)		24	(79.2)
Florida	464	(12.7)	(82.5)	(4.7)	(0.0)			511	(16.8)	(80.2)	(2.9)	(0.0)		255	(45.1)
Georgia	160	(37.5)	(51.3)	(6.9)	(4.4)			306	(33.0)	(54.9)	(11.1)	(1.0)		126	(79.4)
Hawaii	47	(97.9)	(0.0)	(0.0)	(2.1)			106	(97.2)	(0.0)	(2.8)	(0.0)		49	(89.8)
Idaho	10	(0.0)	(100.0)	(0.0)	(0.0)			13	(23.1)	(76.9)	(0.0)	(0.0)		5	(40.0)
Illinois	140	(40.0)	(50.7)	(6.4)	(2.9)			261	(24.5)	(47.9)	(25.7)	(1.9)		174	(48.3)
Indiana	60	(21.7)	(58.3)	(18.3)	(1.7)			72	(13.9)	(58.3)	(27.8)	(0.0)		46	(41.3)
Iowa	32	(0.0)	(100.0)	(0.0)	(0.0)			33	(0.0)	(97.0)	(3.0)	(0.0)		21	(33.3)
Kansas	18	(22.2)	(77.8)	(0.0)	(0.0)			38	(10.5)	(89.5)	(0.0)	(0.0)		22	(31.8)
Kentucky	50	(30.0)	(56.0)	(14.0)	(0.0)			70	(22.9)	(62.9)	(14.3)	(0.0)		45	(48.9)
Louisiana	8	(25.0)	(25.0)	(50.0)	(0.0)			113	(36.3)	(43.4)	(15.9)	(4.4)		48	(58.3)
Maine	7	(0.0)	(85.7)	(14.3)	(0.0)			8	(12.5)	(87.5)	(0.0)	(0.0)		10	(10.0)
Maryland	110	(26.4)	(71.8)	(1.8)	(0.0)			204	(9.8)	(86.3)	(3.9)	(0.0)		104	(42.3)
Massachusetts	79	(8.9)	(67.1)	(0.0)	(24.1)			146	(16.4)	(43.8)	(0.0)	(39.7)		126	(24.6)
Michigan	61	(4.9)	(75.4)	(16.4)	(3.3)			109	(0.0)	(100.0)	(0.0)	(0.0)		49	(10.2)
Minnesota	56	(55.4)	(44.6)	(0.0)	(0.0)			113	(46.0)	(54.0)	(0.0)	(0.0)		99	(53.5)
Mississippi	65	(1.5)	(0.0)	(61.5)	(36.9)			75	(10.7)	(0.0)	(60.0)	(29.3)		46	(2.2)
Missouri	24	(0.0)	(0.0)	(0.0)	(100.0)			77	(0.0)	(0.0)	(0.0)	(100.0)		61	(0.0)
Montana	3	(0.0)	(100.0)	(0.0)	(0.0)			5	(0.0)	(80.0)	(20.0)	(0.0)		3	(0.0)
Nebraska	11	(0.0)	(45.5)	(54.5)	(0.0)			14	(7.1)	(42.9)	(50.0)	(0.0)		10	(0.0)
Nevada	34	(5.9)	(94.1)	(0.0)	(0.0)			67	(19.4)	(64.2)	(4.5)	(11.9)		21	(47.6)
New Hampshire	5	(20.0)	(60.0)	(0.0)	(20.0)			7	(0.0)	(100.0)	(0.0)	(0.0)		3	(100.0)
New Jersey	88	(52.3)	(3.4)	(43.2)	(1.1)			241	(21.6)	(36.9)	(40.7)	(0.8)		187	(40.6)
New Mexico	21	(76.2)	(23.8)	(0.0)	(0.0)			35	(60.0)	(40.0)	(0.0)	(0.0)		18	(77.8)

Table 52. (Con't) Tuberculosis Diagnostic Tests by Type of Laboratory: Reporting Areas, 2012

Reporting Area	Nucleic Acid Amplification Test					Sputum Culture					Culture of Tissue or Other Fluids				
	Total ¹		Public Health Lab		Other Lab	Missing	Commercial Lab		Public Health Lab	Other Lab	Missing	Commercial Lab		Public Health Lab	Other Lab
	No.	(%)	(%)	(%)	(%)	(%)	No.	(%)	(%)	(%)	(%)	No.	(%)	(%)	(%)
New York State ⁴	147	(23.8)	(34.7)	(9.5)	(32.0)		176	(27.3)	(26.1)	(9.7)	(36.9)	125	(34.4)	(24.0)	(10.4)
New York City	329	(8.5)	(48.6)	(23.7)	(19.1)		551	(7.8)	(11.6)	(43.9)	(36.7)	314	(3.8)	(10.2)	(55.4)
North Carolina	83	(39.8)	(60.2)	(0.0)	(0.0)		174	(20.1)	(64.9)	(14.9)	(0.0)	109	(40.4)	(18.3)	(41.3)
North Dakota	1	(0.0)	(0.0)	(0.0)	(100.0)		12	(8.3)	(16.7)	(0.0)	(75.0)	9	(11.1)	(22.2)	(0.0)
Ohio	62	(88.7)	(11.3)	(0.0)	(0.0)		121	(85.1)	(14.9)	(0.0)	(0.0)	97	(96.9)	(3.1)	(0.0)
Oklahoma	41	(12.2)	(87.8)	(0.0)	(0.0)		59	(10.2)	(86.4)	(3.4)	(0.0)	39	(41.0)	(59.0)	(0.0)
Oregon	43	(2.3)	(62.8)	(34.9)	(0.0)		53	(9.4)	(66.0)	(24.5)	(0.0)	30	(13.3)	(23.3)	(0.0)
Pennsylvania	54	(25.9)	(14.8)	(5.6)	(53.7)		154	(20.1)	(36.4)	(3.2)	(40.3)	136	(31.6)	(13.2)	(6.6)
Rhode Island	8	(0.0)	(100.0)	(0.0)	(0.0)		17	(0.0)	(94.1)	(5.9)	(0.0)	16	(0.0)	(100.0)	(0.0)
South Carolina	45	(17.8)	(68.9)	(13.3)	(0.0)		104	(11.5)	(71.2)	(17.3)	(0.0)	51	(45.1)	(31.4)	(23.5)
South Dakota	15	(0.0)	(100.0)	(0.0)	(0.0)		14	(0.0)	(100.0)	(0.0)	(0.0)	9	(0.0)	(100.0)	(0.0)
Tennessee	84	(51.2)	(41.7)	(7.1)	(0.0)		154	(14.9)	(79.2)	(4.5)	(1.3)	69	(50.7)	(33.3)	(14.5)
Texas	383	(42.8)	(27.7)	(25.8)	(3.7)		990	(15.1)	(50.6)	(20.5)	(13.8)	463	(37.8)	(18.6)	(34.1)
Utah	25	(16.0)	(84.0)	(0.0)	(0.0)		28	(35.7)	(64.3)	(0.0)	(0.0)	18	(94.4)	(5.6)	(0.0)
Vermont	2	(50.0)	(50.0)	(0.0)	(0.0)		2	(0.0)	(100.0)	(0.0)	(0.0)	3	(100.0)	(0.0)	(0.0)
Virginia	65	(44.6)	(47.7)	(4.6)	(3.1)		209	(21.1)	(69.4)	(6.7)	(2.9)	111	(51.4)	(26.1)	(19.8)
Washington	95	(31.6)	(65.3)	(0.0)	(3.2)		150	(48.0)	(40.0)	(7.3)	(4.7)	101	(83.2)	(5.0)	(7.9)
West Virginia	5	(0.0)	(100.0)	(0.0)	(0.0)		6	(0.0)	(100.0)	(0.0)	(0.0)	3	(0.0)	(100.0)	(0.0)
Wisconsin	44	(13.6)	(75.0)	(0.0)	(11.4)		54	(11.1)	(75.9)	(0.0)	(13.0)	39	(61.5)	(33.3)	(2.6)
Wyoming	2	(100.0)	(0.0)	(0.0)	(0.0)		3	(33.3)	(33.3)	(0.0)	(33.3)	0	...	...	...
American Samoa ⁵	0	...	...	...	...		1	(100.0)	(0.0)	(0.0)	(0.0)	0	...	...	...
Fed. States of Micronesia ⁵	24	(87.5)	(0.0)	(0.0)	(12.5)		142	(97.9)	(1.4)	(0.0)	(0.7)	5	(100.0)	(0.0)	(0.0)
Guam ⁵	8	(100.0)	(0.0)	(0.0)	(0.0)		39	(92.3)	(2.6)	(0.0)	(5.1)	14	(100.0)	(0.0)	(0.0)
Marshall Islands ⁵	32	(100.0)	(0.0)	(0.0)	(0.0)		117	(99.1)	(0.9)	(0.0)	(0.0)	5	(100.0)	(0.0)	(0.0)
N. Mariana Islands ⁵	0	...	...	...	...		21	(100.0)	(0.0)	(0.0)	(0.0)	0	...	...	...
Puerto Rico ⁵	34	(0.0)	(100.0)	(0.0)	(0.0)		58	(8.6)	(91.4)	(0.0)	(0.0)	24	(16.7)	(83.3)	(0.0)
Republic of Palau ⁵	0	...	...	...	...		4	(100.0)	(0.0)	(0.0)	(0.0)	0	...	...	...
U.S. Virgin Islands ⁵	0	...	...	...	...		2	(50.0)	(50.0)	(0.0)	(0.0)	1	(100.0)	(0.0)	(0.0)

¹ Number of patients with positive or negative NAA test results.

² Number of patients with positive or negative sputum culture test results.

³ Number of patients with positive or negative culture of tissue and other body fluid test results.

⁴ Excludes New York City.

⁵ Not included in U.S. totals.

Table 53. Tuberculosis Genotyping Surveillance Coverage¹: Reporting Areas, 2012

Reporting Area	Total Cases	Culture Positive Cases	Genotyped Cases	Genotype Surveillance Coverage ²
		No.	No.	(%)
United States	9,945	7,598	7,102	(93.5)
Alabama	134	108	108	(100.0)
Alaska	66	50	49	(98.0)
Arizona	211	168	165	(98.2)
Arkansas	70	36	36	(100.0)
California	2,191	1,737	1,598	(91.9)
Colorado	64	47	47	(100.0)
Connecticut	74	55	55	(100.0)
District of Columbia	37	28	23	(82.1)
Delaware	28	18	15	(83.3)
Florida	679	539	535	(99.3)
Georgia	357	248	247	(99.6)
Hawaii	117	89	87	(97.8)
Idaho	15	10	10	(100.0)
Illinois	347	246	206	(83.7)
Indiana	102	78	76	(97.4)
Iowa	46	32	29	(90.6)
Kansas	42	40	33	(82.5)
Kentucky	80	60	59	(98.3)
Louisiana	149	122	64	(52.5)
Maine	17	14	14	(100.0)
Maryland	224	161	151	(93.8)
Massachusetts	215	153	146	(95.4)
Michigan	149	102	100	(98.0)
Minnesota	162	124	123	(99.2)
Mississippi	81	66	65	(98.5)
Missouri	89	89	70	(78.7)
Montana	5	4	4	(100.0)
Nebraska	22	14	14	(100.0)
Nevada	82	58	55	(94.8)
New Hampshire	9	8	7	(87.5)
New Jersey	302	227	220	(96.9)
New Mexico	40	38	36	(94.7)
New York	866	653	602	(92.2)
North Carolina	211	170	163	(95.9)
North Dakota	26	13	13	(100.0)
Ohio	149	106	105	(99.1)
Oklahoma	88	69	67	(97.1)
Oregon	61	49	49	(100.0)
Pennsylvania	234	188	167	(88.8)
Rhode Island	23	19	18	(94.7)
South Carolina	122	84	72	(85.7)
South Dakota	19	14	8	(57.1)
Tennessee	164	113	110	(97.3)
Texas	1,233	919	859	(93.5)
Utah	37	28	28	(100.0)
Vermont	4	3	3	(100.0)
Virginia	235	173	169	(97.7)
Washington	185	164	160	(97.6)
West Virginia	8	7	7	(100.0)
Wisconsin	71	54	53	(98.1)
Wyoming	3	3	2	(66.7)
American Samoa ³	1	1	1	(100.0)
Fed State of Micronesia ³	173	57	49	(86.0)
Guam ³	68	32	23	(71.9)
Marshall Islands ³	145	75	66	(88.0)
N. Mariana Islands ³	21	15	0	0.0
Puerto Rico ³	71	62	56	(90.3)
Republic of Palau ³	4	3	0	0.0
U.S. Virgin Islands ³	4	2	0	0.0

¹ Genotype surveillance coverage is defined as the percentage of all culture positive tuberculosis (TB) cases for which there was a genotyped isolate.

² National TB Performance Indicator goal for national TB genotyping surveillance coverage is 94%.

³ Not included in U.S. totals.

Note: Ellipses indicate data not available.

See Technical Notes.

Table 54. County-based Tuberculosis Genotype Clusters¹ Based on GENType: Reporting Areas, 2010–2012

Reporting Area	Genotyped Cases	Genotype Surveillance Coverage ²	Clusters	Clustered Cases	Cluster Size	
	No.	(%)	No.	No.	Median	(Range)
United States	22,382	(92.8)	1,542	4,723	2	(2–67)
Alabama	339	(98.5)	35	109	3	(2–11)
Alaska	158	(97.5)	18	90	4	(2–12)
Arizona	550	(97.7)	46	115	2	(2–9)
Arkansas	151	(99.3)	11	33	2	(2–7)
California	4,949	(90.9)	391	1,200	2	(2–38)
Colorado	150	(100.0)	6	12	2	(2–2)
Connecticut	200	(99.5)	7	19	2	(2–5)
Delaware	44	(84.6)	...	...	...	...
District of Columbia	82	(78.1)	6	13	2	(2–3)
Florida	1,703	(95.8)	138	411	2	(2–67)
Georgia	775	(98.0)	67	213	2	(2–12)
Hawaii	233	(94.7)	11	40	2	(2–8)
Idaho	31	(100.0)	...	...	...	...
Illinois	696	(87.3)	46	144	2	(2–30)
Indiana	208	(96.7)	11	42	2	(2–17)
Iowa	84	(92.3)	1	2	2	(2–2)
Kansas	106	(91.4)	5	10	2	(2–2)
Kentucky	176	(94.1)	10	26	2	(2–4)
Louisiana	237	(57.2)	23	62	2	(2–6)
Maine	26	(100.0)	...	...	...	...
Maryland	477	(97.5)	20	45	2	(2–6)
Massachusetts	438	(93.6)	15	33	2	(2–3)
Michigan	342	(96.6)	17	67	3	(2–18)
Minnesota	331	(99.1)	17	42	2	(2–4)
Mississippi	212	(99.1)	10	40	3	(2–12)
Missouri	152	(64.4)	14	34	2	(2–5)
Montana	13	(92.9)	1	3	3	(3–3)
Nebraska	41	(89.1)	1	2	2	(2–2)
Nevada	187	(94.9)	10	26	2	(2–4)
New Hampshire	21	(80.8)	3	7	2	(2–3)
New Jersey	794	(98.1)	39	98	2	(2–11)
New Mexico	122	(97.6)	5	11	2	(2–3)
New York	1,893	(94.8)	118	308	2	(2–8)
North Carolina	547	(96.3)	40	122	2	(2–11)
North Dakota	23	(95.8)	1	9	9	(9–9)
Ohio	351	(97.2)	20	62	3	(2–6)
Oklahoma	184	(94.4)	16	42	2	(2–6)
Oregon	168	(100.0)	11	23	2	(2–3)
Pennsylvania	440	(75.9)	16	45	2	(2–6)
Rhode Island	56	(96.6)	4	9	2	(2–3)
South Carolina	245	(80.9)	20	66	2	(2–10)
South Dakota	23	(74.2)	1	6	6	(6–6)
Tennessee	341	(95.5)	23	85	2	(2–16)
Texas	2,755	(93.6)	219	818	2	(2–52)
Utah	70	(100.0)	2	4	2	(2–2)
Vermont	13	(100.0)	...	...	...	...
Virginia	542	(96.1)	25	63	2	(2–7)
Washington	504	(96.7)	29	77	2	(2–10)
West Virginia	31	(96.9)	...	...	...	...
Wisconsin	158	(98.1)	13	35	2	(2–4)
Wyoming	9	(90.0)	...	...	...	...

¹ Clusters are two or more cases with matching spoligotype and 24-locus locus mycobacterial interspersed repetitive unit-variable number tandem repeat type (GENType) within a county during the specified 3-year time period (Total number of clusters from 2010–2012=1,542)

² Genotype surveillance coverage is defined as the percentage of all culture positive tuberculosis (TB) cases for which there was a genotyped isolate.

Note: Ellipses indicate data not available.

See Technical Notes.

Morbidity Tables Reporting Areas, 2010

**Table 55. Tuberculosis Cases and Percentages by Type of Health Care Provider:
Reporting Areas, 2010¹**

Reporting Area	Total Cases	Cases in Persons Alive at Diagnosis	Cases with Information on Type of Health Care Provider		Percentage of Cases by Type of Health Care Provider ²		
			No.	(%)	Health Department	Private/Other	Both Health Dep't. and Private/Other
United States	11,163	10,903	10,517	(96.5)	(69.0)	(24.5)	(6.5)
Alabama	146	142	142	(100.0)	(85.2)	(14.1)	(0.7)
Alaska	57	56	56	(100.0)	(67.9)	(26.8)	(5.4)
Arizona	282	279	253	(90.7)	(73.1)	(25.7)	(1.2)
Arkansas	78	78	72	(92.3)	(88.9)	(11.1)	(0.0)
California	2,326	2,269	2,225	(98.1)	(56.4)	(34.7)	(8.9)
Colorado	71	71	71	(100.0)	(91.5)	(8.5)	(0.0)
Connecticut	85	84	84	(100.0)	(19.0)	(26.2)	(54.8)
Delaware	20	20	20	(100.0)	(95.0)	(5.0)	(0.0)
District of Columbia	43	41	41	(100.0)	(78.0)	(22.0)	(0.0)
Florida	833	811	809	(99.8)	(70.7)	(29.2)	(0.1)
Georgia	411	399	372	(93.2)	(80.1)	(19.1)	(0.8)
Hawaii	115	115	114	(99.1)	(75.4)	(24.6)	(0.0)
Idaho	15	14	13	(92.9)	(38.5)	(61.5)	(0.0)
Illinois	372	364	360	(98.9)	(46.9)	(14.7)	(38.3)
Indiana	90	89	89	(100.0)	(84.3)	(11.2)	(4.5)
Iowa	48	47	43	(91.5)	(0.0)	(100.0)	(0.0)
Kansas	46	44	41	(93.2)	(92.7)	(7.3)	(0.0)
Kentucky	90	89	74	(83.1)	(91.9)	(8.1)	(0.0)
Louisiana	200	198	196	(99.0)	(88.8)	(10.7)	(0.5)
Maine	8	8	8	(100.0)	(0.0)	(100.0)	(0.0)
Maryland	220	216	211	(97.7)	(89.6)	(10.4)	(0.0)
Massachusetts	222	219	200	(91.3)	(81.0)	(14.0)	(5.0)
Michigan	183	172	157	(91.3)	(78.3)	(21.7)	(0.0)
Minnesota	135	133	133	(100.0)	(66.2)	(33.1)	(0.8)
Mississippi	116	115	115	(100.0)	(93.9)	(5.2)	(0.9)
Missouri	107	102	0	(0.0)	--	--	--
Montana	6	6	6	(100.0)	(16.7)	(83.3)	(0.0)
Nebraska	27	27	26	(96.3)	(34.6)	(61.5)	(3.8)
Nevada	114	114	103	(90.4)	(98.1)	(1.9)	(0.0)
New Hampshire	10	9	9	(100.0)	(22.2)	(77.8)	(0.0)
New Jersey	405	398	396	(99.5)	(77.8)	(21.5)	(0.8)
New Mexico	50	45	44	(97.8)	(68.2)	(31.8)	(0.0)
New York State ³	243	239	231	(96.7)	(68.8)	(30.3)	(0.9)
New York City	706	692	691	(99.9)	(34.2)	(45.6)	(20.3)
North Carolina	296	292	280	(95.9)	(97.1)	(2.5)	(0.4)
North Dakota	9	9	1	(11.1)	--	--	--
Ohio	190	184	169	(91.8)	(83.4)	(15.4)	(1.2)
Oklahoma	86	85	85	(100.0)	(89.4)	(5.9)	(4.7)
Oregon	87	83	83	(100.0)	(45.8)	(21.7)	(32.5)
Pennsylvania	238	230	229	(99.6)	(79.9)	(19.2)	(0.9)
Rhode Island	26	25	25	(100.0)	(96.0)	(4.0)	(0.0)
South Carolina	153	148	148	(100.0)	(89.9)	(10.1)	(0.0)
South Dakota	15	14	14	(100.0)	(35.7)	(64.3)	(0.0)
Tennessee	193	185	185	(100.0)	(89.2)	(9.2)	(1.6)
Texas	1,381	1,346	1,308	(97.2)	(76.1)	(17.8)	(6.0)
Utah	20	20	20	(100.0)	(100.0)	(0.0)	(0.0)
Vermont	5	5	5	(100.0)	(100.0)	(0.0)	(0.0)
Virginia	268	260	258	(99.2)	(70.9)	(28.3)	(0.8)
Washington	239	236	232	(98.3)	(68.5)	(27.6)	(3.9)
West Virginia	15	14	14	(100.0)	(64.3)	(35.7)	(0.0)
Wisconsin	55	55	52	(94.5)	(94.2)	(5.8)	(0.0)
Wyoming	7	7	4	(57.1)	--	--	--
American Samoa ⁴	3	3	1	(33.3)	--	--	--
Fed. States of Micronesia ⁴	172	172	143	(83.1)	(93.7)	(6.3)	(0.0)
Guam ⁴	102	98	95	(96.9)	(96.8)	(3.2)	(0.0)
Marshall Islands ⁴	211	208	84	(40.4)	--	--	--
N. Mariana Islands ⁴	32	30	30	(100.0)	(100.0)	(0.0)	(0.0)
Puerto Rico ⁴	80	78	78	(100.0)	(96.2)	(3.8)	(0.0)
Republic of Palau ⁴	17	17	10	(58.8)	--	--	--
U.S. Virgin Islands ⁴	...	...	0	...	...	...	...

¹ Most recent year for which data are available.

² Health Department: All outpatient care provided by the state or local health department; Private/Other: All care (except contact investigation and dispensing of medication) provided by non-health department providers; Both Health Department and Private/Other: Both sectors involved in the care of the patient. Percentage for U.S. based on 52 reporting areas (50 states, New York City, and the District of Columbia). Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

³ Excludes New York City.

⁴ Not included in U.S. totals.

98 Note: Ellipses indicate data not available.

Table 56. Tuberculosis Cases and Percentages by Directly Observed Therapy (DOT): Reporting Areas, 2010¹

Reporting Area	Total Cases	Cases with Initial Drug Regimen Prescribed ²	Cases with Information on Directly Observed Therapy		Percentage of Cases by Directly Observed Therapy ³	
			No.	(%)	DOT Only	Both DOT and Self-Administered
United States	11,163	10,824	10,662	(98.5)	(59.1)	(31.1)
Alabama	146	142	142	(100.0)	(47.2)	(51.4)
Alaska	57	56	55	(98.2)	(94.5)	(1.8)
Arizona	282	269	263	(97.8)	(81.0)	(13.7)
Arkansas	78	78	77	(98.7)	(26.0)	(37.7)
California	2,326	2,248	2,208	(98.2)	(50.6)	(35.4)
Colorado	71	71	71	(100.0)	(81.7)	(16.9)
Connecticut	85	84	83	(98.8)	(15.7)	(57.8)
Delaware	20	20	20	(100.0)	(35.0)	(65.0)
District of Columbia	43	40	40	(100.0)	(80.0)	(0.0)
Florida	833	806	805	(99.9)	(33.0)	(61.1)
Georgia	411	397	381	(96.0)	(85.8)	(13.4)
Hawaii	115	114	114	(100.0)	(44.7)	(43.9)
Idaho	15	14	13	(92.9)	(30.8)	(23.1)
Illinois	372	360	358	(99.4)	(36.3)	(50.3)
Indiana	90	89	89	(100.0)	(79.8)	(18.0)
Iowa	48	47	47	(100.0)	(72.3)	(19.1)
Kansas	46	44	44	(100.0)	(90.9)	(6.8)
Kentucky	90	88	73	(83.0)	(84.9)	(15.1)
Louisiana	200	198	194	(98.0)	(52.1)	(27.8)
Maine	8	8	8	(100.0)	(37.5)	(62.5)
Maryland	220	216	212	(98.1)	(82.5)	(13.7)
Massachusetts	222	218	216	(99.1)	(50.0)	(33.8)
Michigan	183	170	167	(98.2)	(35.3)	(64.7)
Minnesota	135	133	133	(100.0)	(83.5)	(15.8)
Mississippi	116	115	115	(100.0)	(64.3)	(34.8)
Missouri	107	100	97	(97.0)	(50.5)	(35.1)
Montana	6	6	6	(100.0)	(100.0)	(0.0)
Nebraska	27	27	27	(100.0)	(55.6)	(37.0)
Nevada	114	114	109	(95.6)	(83.5)	(16.5)
New Hampshire	10	9	9	(100.0)	(77.8)	(22.2)
New Jersey	405	397	396	(99.7)	(56.3)	(21.2)
New Mexico	50	45	45	(100.0)	(82.2)	(13.3)
New York State ⁴	243	239	239	(100.0)	(22.2)	(75.3)
New York City	706	687	684	(99.6)	(29.2)	(42.8)
North Carolina	296	292	292	(100.0)	(96.9)	(3.1)
North Dakota	9	9	5	(55.6)	--	--
Ohio	190	183	179	(97.8)	(71.5)	(16.2)
Oklahoma	86	83	83	(100.0)	(28.9)	(69.9)
Oregon	87	83	83	(100.0)	(86.7)	(13.3)
Pennsylvania	238	229	229	(100.0)	(72.1)	(18.3)
Rhode Island	26	25	25	(100.0)	(8.0)	(92.0)
South Carolina	153	147	147	(100.0)	(93.2)	(5.4)
South Dakota	15	14	14	(100.0)	(78.6)	(14.3)
Tennessee	193	184	184	(100.0)	(94.0)	(6.0)
Texas	1,381	1,333	1,300	(97.5)	(76.8)	(20.7)
Utah	20	20	20	(100.0)	(85.0)	(15.0)
Vermont	5	5	5	(100.0)	(60.0)	(20.0)
Virginia	268	259	252	(97.3)	(94.0)	(4.4)
Washington	239	234	230	(98.3)	(63.5)	(14.8)
West Virginia	15	14	14	(100.0)	(92.9)	(7.1)
Wisconsin	55	54	53	(98.1)	(28.3)	(67.9)
Wyoming	7	7	7	(100.0)	(14.3)	(57.1)
American Samoa ⁵	3	3	3	(100.0)	(66.7)	(33.3)
Fed. States of Micronesia ⁵	172	172	167	(97.1)	(82.6)	(16.8)
Guam ⁵	102	98	97	(99.0)	(100.0)	(0.0)
Marshall Islands ⁵	211	207	87	(42.0)	--	--
N. Mariana Islands ⁵	32	30	30	(100.0)	(100.0)	(0.0)
Puerto Rico ⁵	80	78	78	(100.0)	(75.6)	(2.6)
Republic of Palau ⁵	17	17	10	(58.8)	--	--
U.S. Virgin Islands ⁵	...	...	...	...	...	...

¹ Most recent year for which data are available.

² Includes persons alive at diagnosis with an initial drug regimen of one or more drugs prescribed.

³ Percentage for U.S. based on 52 reporting areas (50 states, New York City, and the District of Columbia). Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

⁴ Excludes New York City.

⁵ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 57. Tuberculosis Cases and Percentages by Reason Therapy Stopped: Reporting Areas, 2010¹

Reporting Area	Cases with Initial Drug Regimen Prescribed ²	Completed Therapy		Did Not Complete Therapy				Adverse Event		Lost		Refused		Died ³		Unknown ⁴	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	10,824	9,488	(87.7)	29	(0.3)	172	(1.6)	66	(0.6)	641	(5.9)	428	(4.0)				
Alabama	142	122	(85.9)	1	(0.7)	2	(1.4)	2	(1.4)	15	(10.6)	0	(0.0)				
Alaska	56	51	(91.1)	0	(0.0)	0	(0.0)	0	(0.0)	4	(7.1)	1	(1.8)				
Arizona	269	216	(80.3)	1	(0.4)	10	(3.7)	2	(0.7)	8	(3.0)	32	(11.9)				
Arkansas	78	69	(88.5)	0	(0.0)	1	(1.3)	2	(2.6)	2	(2.6)	4	(5.1)				
California	2,248	1,937	(86.2)	6	(0.3)	28	(1.2)	15	(0.7)	134	(6.0)	128	(5.7)				
Colorado	71	66	(93.0)	0	(0.0)	0	(0.0)	0	(0.0)	5	(7.0)	0	(0.0)				
Connecticut	84	73	(86.9)	0	(0.0)	1	(1.2)	1	(1.2)	6	(7.1)	3	(3.6)				
Delaware	20	17	(85.0)	0	(0.0)	1	(5.0)	0	(0.0)	1	(5.0)	1	(5.0)				
District of Columbia	40	30	(75.0)	0	(0.0)	2	(5.0)	0	(0.0)	2	(5.0)	6	(15.0)				
Florida	806	727	(90.2)	1	(0.1)	11	(1.4)	0	(0.0)	53	(6.6)	14	(1.7)				
Georgia	397	345	(86.9)	3	(0.8)	7	(1.8)	2	(0.5)	22	(5.5)	18	(4.5)				
Hawaii	114	106	(93.0)	0	(0.0)	3	(2.6)	0	(0.0)	5	(4.4)	0	(0.0)				
Idaho	14	13	(92.9)	0	(0.0)	1	(7.1)	0	(0.0)	0	(0.0)	0	(0.0)				
Illinois	360	320	(88.9)	1	(0.3)	10	(2.8)	6	(1.7)	21	(5.8)	2	(0.6)				
Indiana	89	81	(91.0)	0	(0.0)	1	(1.1)	1	(1.1)	5	(5.6)	1	(1.1)				
Iowa	47	40	(85.1)	0	(0.0)	0	(0.0)	2	(4.3)	3	(6.4)	2	(4.3)				
Kansas	44	41	(93.2)	0	(0.0)	0	(0.0)	0	(0.0)	3	(6.8)	0	(0.0)				
Kentucky	88	75	(85.2)	0	(0.0)	1	(1.1)	0	(0.0)	8	(9.1)	4	(4.5)				
Louisiana	198	168	(84.8)	3	(1.5)	7	(3.5)	2	(1.0)	12	(6.1)	6	(3.0)				
Maine	8	6	(75.0)	0	(0.0)	1	(12.5)	0	(0.0)	1	(12.5)	0	(0.0)				
Maryland	216	192	(88.9)	2	(0.9)	3	(1.4)	0	(0.0)	16	(7.4)	3	(1.4)				
Massachusetts	218	193	(88.5)	0	(0.0)	1	(0.5)	2	(0.9)	6	(2.8)	16	(7.3)				
Michigan	170	150	(88.2)	0	(0.0)	5	(2.9)	1	(0.6)	12	(7.1)	2	(1.2)				
Minnesota	133	126	(94.7)	0	(0.0)	0	(0.0)	2	(1.5)	4	(3.0)	1	(0.8)				
Mississippi	115	106	(92.2)	0	(0.0)	1	(0.9)	0	(0.0)	7	(6.1)	1	(0.9)				
Missouri	100	84	(84.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(3.0)	13	(13.0)				
Montana	6	6	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)				
Nebraska	27	26	(96.3)	0	(0.0)	0	(0.0)	0	(0.0)	1	(3.7)	0	(0.0)				
Nevada	114	104	(91.2)	0	(0.0)	0	(0.0)	0	(0.0)	3	(2.6)	7	(6.1)				
New Hampshire	9	8	(88.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)	0	(0.0)				
New Jersey	397	357	(89.9)	1	(0.3)	6	(1.5)	1	(0.3)	22	(5.5)	10	(2.5)				
New Mexico	45	40	(88.9)	0	(0.0)	0	(0.0)	0	(0.0)	4	(8.9)	1	(2.2)				

Table 57. (Con't) Tuberculosis Cases and Percentages by Reason Therapy Stopped: Reporting Areas, 2010¹

Reporting Area	Cases with Initial Drug Regimen Prescribed ²	Completed Therapy		Did Not Complete Therapy						Unknown ⁴	
		No.	(%)	Adverse Event		Lost		Refused		Died ³	
				No.	(%)	No.	(%)	No.	(%)	No.	(%)
New York State ⁵	239	220	(92.1)	0	(0.0)	1	(0.4)	0	(0.0)	13	(5.4)
New York City	687	624	(90.8)	2	(0.3)	14	(2.0)	3	(0.4)	33	(4.8)
North Carolina	292	276	(94.5)	0	(0.0)	4	(1.4)	0	(0.0)	10	(3.4)
North Dakota	9	8	(88.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(11.1)
Ohio	183	159	(86.9)	0	(0.0)	3	(1.6)	2	(1.1)	14	(7.7)
Oklahoma	83	77	(92.8)	0	(0.0)	0	(0.0)	1	(1.2)	4	(4.8)
Oregon	83	78	(94.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(3.6)
Pennsylvania	229	198	(86.5)	0	(0.0)	7	(3.1)	2	(0.9)	18	(7.9)
Rhode Island	25	24	(96.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.0)
South Carolina	147	132	(89.8)	0	(0.0)	2	(1.4)	1	(0.7)	12	(8.2)
South Dakota	14	11	(78.6)	0	(0.0)	0	(0.0)	1	(7.1)	1	(7.1)
Tennessee	184	163	(88.6)	2	(1.1)	2	(1.1)	0	(0.0)	14	(7.6)
Texas	1,333	1,092	(81.9)	3	(0.2)	28	(2.1)	15	(1.1)	94	(7.1)
Utah	20	18	(90.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(10.0)
Vermont	5	5	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Virginia	259	240	(92.7)	0	(0.0)	6	(2.3)	0	(0.0)	10	(3.9)
Washington	234	207	(88.5)	3	(1.3)	1	(0.4)	0	(0.0)	15	(6.4)
West Virginia	14	12	(85.7)	0	(0.0)	0	(0.0)	0	(0.0)	2	(14.3)
Wisconsin	54	46	(85.2)	0	(0.0)	1	(1.9)	0	(0.0)	5	(9.3)
Wyoming	7	3	(42.9)	0	(0.0)	0	(0.0)	0	(0.0)	0	(57.1)
American Samoa ⁶	3	3	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Fed. States of Micronesia ⁶	172	153	(89.0)	0	(0.0)	0	(0.0)	5	(2.9)	8	(4.7)
Guam ⁶	98	91	(92.9)	0	(0.0)	0	(0.0)	0	(0.0)	6	(6.1)
Marshall Islands ⁶	207	71	(34.3)	0	(0.0)	1	(0.5)	1	(0.5)	13	(6.3)
N. Mariana Islands ⁶	30	24	(80.0)	0	(0.0)	1	(3.3)	0	(0.0)	3	(10.0)
Puerto Rico ⁶	78	65	(83.3)	0	(0.0)	3	(3.8)	2	(2.6)	8	(10.3)
Republic of Palau ⁶	17	8	(47.1)	0	(0.0)	0	(0.0)	0	(0.0)	2	(11.8)
U.S. Virgin Islands ⁶	...	...	...	...	...	...	...	...	...	...	...

¹Most recent year for which data are available.

²Number of cases in persons alive at diagnosis, with an initial regimen of one or more drugs prescribed. Percentage for U.S. based on 52 reporting areas (50 states, New York City, and the District of Columbia).

³ Died = Died of any cause.

⁴ Includes cases reported as Other, Missing, or Unknown.

⁵ Excludes New York City.

⁶ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 58. Reason Therapy Was Extended Beyond 12 Months: Reporting Areas, 2010¹

Reporting Area	Total Cases with Therapy Extended ^{2,3}	Reasons Therapy Was Extended											
		Rifampin Resistant		Adverse Event		Non-adherence		Failure		Clinically Indicated		Other	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States	766	72	(9.4)	156	(20.4)	104	(13.6)	7	(0.9)	330	(43.1)	211	(27.5)
Alabama	4	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	4	(100.0)	0	(0.0)
Alaska	4	3	(75.0)	2	(50.0)	2	(50.0)	1	(25.0)	0	(0.0)	0	(0.0)
Arizona	7	0	(0.0)	1	(14.3)	0	(0.0)	0	(0.0)	5	(71.4)	2	(28.6)
Arkansas	4	0	(0.0)	1	(25.0)	2	(50.0)	0	(0.0)	1	(25.0)	0	(0.0)
California	228	16	(7.0)	59	(25.9)	20	(8.8)	0	(0.0)	105	(46.1)	73	(32.0)
Colorado	4	0	(0.0)	1	(25.0)	1	(25.0)	0	(0.0)	1	(25.0)	1	(25.0)
Connecticut	10	1	(10.0)	3	(30.0)	1	(10.0)	0	(0.0)	4	(40.0)	6	(60.0)
Delaware	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)
District of Columbia	1	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Florida	41	6	(14.6)	9	(22.0)	3	(7.3)	1	(2.4)	22	(53.7)	6	(14.6)
Georgia	37	4	(10.8)	1	(2.7)	12	(32.4)	0	(0.0)	22	(59.5)	7	(18.9)
Hawaii	3	0	(0.0)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)	3	(100.0)
Idaho	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
Illinois	23	1	(4.3)	8	(34.8)	2	(8.7)	1	(4.3)	11	(47.8)	1	(4.3)
Indiana	4	0	(0.0)	1	(25.0)	1	(25.0)	0	(0.0)	1	(25.0)	2	(50.0)
Iowa	0	0	...	0	...	0	...	0	...	0	...	0	...
Kansas	0	0	...	0	...	0	...	0	...	0	...	0	...
Kentucky	1	0	(0.0)	1	(100.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
Louisiana	13	0	(0.0)	3	(23.1)	2	(15.4)	0	(0.0)	2	(15.4)	6	(46.2)
Maine	0	0	...	0	...	0	...	0	...	0	...	0	...
Maryland	13	0	(0.0)	1	(7.7)	3	(23.1)	0	(0.0)	6	(46.2)	4	(30.8)
Massachusetts	15	1	(6.7)	7	(46.7)	0	(0.0)	1	(6.7)	6	(40.0)	1	(6.7)
Michigan	11	0	(0.0)	0	(0.0)	4	(36.4)	0	(0.0)	3	(27.3)	4	(36.4)
Minnesota	15	0	(0.0)	4	(26.7)	3	(20.0)	0	(0.0)	8	(53.3)	1	(6.7)
Mississippi	4	1	(25.0)	2	(50.0)	0	(0.0)	0	(0.0)	1	(25.0)	0	(0.0)
Missouri	0	0	...	0	...	0	...	0	...	0	...	0	...
Montana	0	0	...	0	...	0	...	0	...	0	...	0	...
Nebraska	2	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)
Nevada	9	2	(22.2)	4	(44.4)	1	(11.1)	0	(0.0)	3	(33.3)	1	(11.1)
New Hampshire	1	0	(0.0)	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
New Jersey	23	8	(34.8)	6	(26.1)	1	(4.3)	0	(0.0)	6	(26.1)	10	(43.5)
New Mexico	3	1	(33.3)	1	(33.3)	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)

Table 58. (Con't) Reason Therapy Was Extended Beyond 12 Months: Reporting Areas, 2010¹

Reporting Area	Total Cases with Therapy Extended ^{2,3}	Reasons Therapy Was Extended							
		Rifampin Resistant		Adverse Event		Non-adherence		Failure	
		No.	(%)	No.	(%)	No.	(%)	No.	(%)
New York State ⁴	21	6	(28.6)	3	(14.3)	1	(4.8)	0	(0.0)
New York City	17	3	(17.6)	3	(17.6)	4	(23.5)	0	(0.0)
North Carolina	18	0	(0.0)	5	(27.8)	2	(11.1)	0	(0.0)
North Dakota	2	0	(0.0)	1	(50.0)	1	(50.0)	0	(0.0)
Ohio	7	1	(14.3)	1	(14.3)	0	(0.0)	0	(0.0)
Oklahoma	4	0	(0.0)	2	(50.0)	0	(0.0)	0	(0.0)
Oregon	1	1	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
Pennsylvania	32	4	(12.5)	13	(40.6)	2	(6.3)	0	(0.0)
Rhode Island	9	0	(0.0)	0	(0.0)	4	(44.4)	0	(0.0)
South Carolina	7	0	(0.0)	2	(28.6)	1	(14.3)	0	(0.0)
South Dakota	0	0	...	0	...	0	...	0	...
Tennessee	12	0	(0.0)	0	(0.0)	1	(8.3)	0	(0.0)
Texas	110	7	(6.4)	4	(3.6)	25	(22.7)	2	(1.8)
Utah	2	1	(50.0)	1	(50.0)	0	(0.0)	0	(0.0)
Vermont	0	0	...	0	...	0	...	0	...
Virginia	18	1	(5.6)	2	(11.1)	0	(0.0)	0	(0.0)
Washington	15	2	(13.3)	0	(0.0)	2	(13.3)	0	(0.0)
West Virginia	0	0	...	0	...	0	...	0	...
Wisconsin	8	2	(25.0)	0	(0.0)	1	(12.5)	1	(12.5)
Wyoming	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
American Samoa ⁵	0	0	...	0	...	0	...	0	...
Fed. States of Micronesia ⁵	3	1	(33.3)	1	(33.3)	0	(0.0)	0	(0.0)
Guam ⁵	2	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)
Marshall Islands ⁵	1	0	(0.0)	0	(0.0)	1	(100.0)	0	(0.0)
N. Mariana Islands ⁵	0	0	...	0	...	0	...	0	...
Puerto Rico ⁵	0	0	...	0	...	0	...	0	...
Republic of Palau ⁵	0	0	...	0	...	0	...	0	...
U.S. Virgin Islands ⁵	0	0	...	0	...	0	...	0	...

¹ Most recent year for which data are available.

² Among patients who were alive at diagnosis, started on treatment and had a duration of treatment greater than 365 days.

³ Patient may have more than 1 reason therapy was extended beyond 12 months (total reasons therapy extended may be greater than total patients with therapy extended).

⁴ Excludes New York City.

⁵ Not included in U.S. totals.

Note: Ellipses indicate data not available.

Table 59. Completion of Tuberculosis Therapy (COT) Cases and Percentages¹ by Hispanic Ethnicity and Non-Hispanic Race:
Reporting Areas, 2010²

Reporting Area		Total Cases ³		Hispanic ⁴		Non-Hispanic										Multiple Race		Unknown or Missing	
						American Indian or Alaska Native		Asian		Black		Native Hawaiian or Other Pacific Islander		White					
				No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
United States		9,480	2686	(87.5)	123	(90.2)	2666	(87.7)	2312	(88.8)	84	(92.9)	1461	(88.1)	130	(92.3)	18	(94.4)	
Alabama	124	21	(95.2)	1	(100.0)	10	(80.0)	50	(86.0)	0	...	42	(95.2)	0	...	0	...		
Alaska	50	0	...	36	(91.7)	7	(100.0)	2	(100.0)	0	...	5	(100.0)	0	...	0	...		
Arizona	220	93	(82.8)	21	(95.2)	53	(86.8)	18	(100.0)	0	...	35	(80.0)	0	...	0	...		
Arkansas	70	8	(100.0)	0	...	8	(87.5)	22	(77.3)	3	(100.0)	29	(89.7)	0	...	0	...		
California	1,967	737	(83.7)	0	...	828	(86.7)	133	(88.7)	12	(83.3)	156	(87.8)	96	(90.6)	5	(80.0)		
Colorado	59	19	(89.5)	1	(100.0)	15	(86.7)	15	(100.0)	2	(100.0)	7	(100.0)	0	...	0	...		
Connecticut	70	19	(89.5)	0	...	27	(81.5)	10	(90.0)	0	...	12	(83.3)	2	(100.0)	0	...		
Delaware	16	2	(100.0)	0	...	6	(83.3)	8	(100.0)	0	...	0	...	0	...	0	...		
District of Columbia	34	7	(71.4)	0	...	2	(100.0)	24	(83.3)	0	...	1	(100.0)	0	...	0	...		
Florida	718	221	(94.1)	2	(100.0)	78	(93.6)	246	(95.5)	3	(100.0)	167	(91.6)	1	(100.0)	0	...		
Georgia	341	53	(86.8)	0	...	71	(93.0)	174	(83.9)	0	...	42	(92.9)	1	(100.0)	0	...		
Hawaii	105	1	(100.0)	0	...	80	(95.0)	0	...	18	(94.4)	6	(100.0)	0	...	0	...		
Idaho	14	4	(50.0)	0	...	1	(100.0)	4	(100.0)	0	...	4	(100.0)	1	(100.0)	0	...		
Illinois	317	98	(87.8)	0	...	86	(83.7)	73	(87.7)	0	...	60	(86.7)	0	...	0	...		
Indiana	81	22	(100.0)	0	...	17	(94.1)	16	(93.8)	0	...	26	(84.6)	0	...	0	...		
Iowa	41	10	(100.0)	0	...	14	(92.9)	11	(81.8)	0	...	6	(100.0)	0	...	0	...		
Kansas	40	11	(100.0)	1	(100.0)	12	(100.0)	12	(100.0)	0	...	4	(100.0)	0	...	0	...		
Kentucky	78	10	(90.0)	0	...	11	(72.7)	19	(84.2)	0	...	38	(84.2)	0	...	0	...		
Louisiana	179	21	(71.4)	0	...	21	(71.4)	99	(83.8)	0	...	37	(81.1)	1	(100.0)	0	...		
Maine	6	1	(100.0)	0	...	0	...	4	(100.0)	0	...	1	(100.0)	0	...	0	...		
Maryland	187	37	(81.1)	1	(0.0)	54	(90.7)	81	(96.3)	0	...	14	(85.7)	0	...	0	...		
Massachusetts	195	28	(85.7)	0	...	78	(78.2)	51	(88.2)	0	...	37	(83.8)	1	(100.0)	0	...		
Michigan	148	16	(93.8)	0	...	46	(93.5)	57	(84.2)	1	(100.0)	27	(92.6)	0	...	1	(100.0)		
Minnesota	123	10	(100.0)	3	(66.7)	35	(82.9)	65	(90.8)	0	...	9	(77.8)	1	(100.0)	0	...		
Mississippi	106	8	(87.5)	1	(100.0)	5	(60.0)	65	(92.3)	0	...	27	(96.3)	0	...	0	...		
Missouri	96	11	(72.7)	1	(100.0)	24	(87.5)	27	(85.2)	3	(100.0)	28	(71.4)	0	...	2	(100.0)		
Montana	6	0	...	5	(100.0)	0	...	0	...	0	...	1	(100.0)	0	...	0	...		
Nebraska	25	11	(90.9)	0	...	4	(100.0)	6	(100.0)	0	...	3	(100.0)	1	(0.0)	0	...		
Nevada	108	28	(78.6)	1	(100.0)	39	(89.7)	21	(85.7)	2	(100.0)	16	(87.5)	1	(100.0)	0	...		
New Hampshire	8	2	(100.0)	0	...	2	(100.0)	3	(100.0)	0	...	1	(0.0)	0	...	0	...		
New Jersey	344	103	(91.3)	0	...	134	(88.8)	73	(91.8)	0	...	34	(94.1)	0	...	0	...		

Table 59. (Cont'd) Completion of Tuberculosis Therapy (COT) Cases and Percentages¹ by Hispanic Ethnicity and Non-Hispanic Race: Reporting Areas, 2010²

Reporting Area	Total Cases ³	Hispanic ⁴		Non-Hispanic							Multiple Race		Unknown or Missing	
		No.	(%)	American Indian or Alaska Native	Asian	Black	Native Hawaiian or Other Pacific Islander	White	No.	(%)	No.	(%)	No.	(%)
New Mexico	31	16	(87.5)	8	(87.5)	2	(100.0)	2	(100.0)	3	(100.0)	0	...	0
New York State ⁵	215	72	(86.1)	0	...	65	(95.4)	40	(90.0)	37	(89.2)	1	(100.0)	0
New York City	616	173	(90.8)	0	...	244	(93.4)	140	(93.6)	44	(90.9)	7	(100.0)	7
North Carolina	264	50	(94.0)	5	(100.0)	50	(94.0)	98	(94.9)	51	(94.1)	6	(100.0)	0
North Dakota	8	0	...	2	(0.0)	2	(100.0)	4	(100.0)	0	...	0	...	0
Ohio	157	19	(84.2)	0	...	22	(77.3)	71	(95.8)	44	(84.1)	0	...	1
Oklahoma	77	13	(92.3)	10	(100.0)	13	(92.3)	11	(90.9)	6	(83.3)	22	(95.5)	2
Oregon	74	18	(100.0)	1	(100.0)	21	(100.0)	13	(92.3)	3	(100.0)	18	(100.0)	0
Pennsylvania	191	19	(94.7)	0	...	66	(86.4)	64	(78.1)	0	...	40	(92.5)	2
Rhode Island	23	8	(62.5)	0	...	7	(57.1)	4	(75.0)	0	...	4	(75.0)	0
South Carolina	132	22	(81.8)	0	...	8	(75.0)	71	(91.5)	8	(100.0)	23	(100.0)	0
South Dakota	12	0	...	10	(90.0)	0	...	1	(100.0)	0	...	1	(100.0)	0
Tennessee	156	35	(91.4)	0	...	21	(90.5)	48	(93.8)	0	...	51	(88.2)	1
Texas	1,117	544	(87.7)	4	(75.0)	176	(83.0)	220	(75.9)	3	(100.0)	169	(81.1)	1
Utah	16	7	(100.0)	0	...	2	(100.0)	5	(100.0)	0	...	2	(50.0)	0
Vermont	5	0	...	0	...	0	...	2	(100.0)	0	...	3	(100.0)	0
Virginia	242	42	(92.9)	0	...	93	(81.7)	77	(90.9)	0	...	29	(89.7)	1
Washington	205	26	(92.3)	8	(100.0)	92	(84.8)	34	(85.3)	15	(86.7)	25	(76.0)	3
West Virginia	12	0	...	0	...	0	...	4	(100.0)	0	...	8	(100.0)	0
Wisconsin	45	9	(77.8)	1	(0.0)	13	(92.3)	13	(84.6)	0	...	9	(100.0)	0
Wyoming	6	--	--	--	--	--	--	--	--	--	--	--	--	--
American Samoa ⁶	3	0	...	0	...	1	(0.0)	0	...	2	(50.0)	0	...	0
Fed. States of Micronesia ⁶	162	1	(100.0)	0	...	0	...	0	...	155	(91.6)	0	...	4
Guam ⁶	87	1	(100.0)	0	...	24	(100.0)	0	...	58	(91.4)	2	(100.0)	2
Marshall Islands ⁶	191	--	--	--	--	--	--	--	--	--	--	--	--	--
N. Mariana Islands ⁶	25	0	...	0	...	8	(87.5)	0	...	12	(100.0)	0	...	5
Puerto Rico ⁶	70	67	(92.5)	0	...	0	...	0	...	0	...	2	(50.0)	1
Republic of Palau ⁶	15	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Virgin Islands ⁶	--	--	--	--	--	--	--	--	--	--	--	--	--	--

¹ Percentages shown only for reporting areas with information reported for ≥90% of cases, and indicate the percentage of those who completed therapy within 1 year.

² Most recent year for which data are available.

³ Therapy < 1 year indicated in persons alive at diagnosis with an initial regimen of one or more drugs prescribed, who did not die during therapy. Excludes persons with initial isolate rifampin resistant, or patient with meningial disease, or pediatric patient (aged <15) with miliary disease or positive blood culture, and those who moved out of country during treatment.

⁴ Persons of Hispanic or Latino origin may be of any race.

⁵ Excludes New York City.

⁶ Not included in U.S. totals.

Note: Case counts and percentage for race categories do not include persons of Hispanic ethnicity. Ellipses indicate data not available. See Technical Notes for description of Completion of Therapy calculation (page 9).

Table 60. Tuberculosis Cases and Percentages by Completion of Tuberculosis Therapy (COT): Reporting Areas, 2010¹

Reporting Area	Total Cases	Therapy ≤1 Year Indicated ^{2,3,4}			Therapy >1 Year Indicated ^{3,5}		All Drug Therapy ³	
		No.	COT ≤1 Year(%)	COT(%)	No.	COT(%)	No.	COT(%)
United States	11,163	9480	(88.1)	(95.6)	702	(59.8)	10183	(93.2)
Alabama	146	124	(90.3)	(96.8)	3	(66.7)	127	(96.1)
Alaska	57	50	(94.0)	(98.0)	2	(100.0)	52	(98.1)
Arizona	282	220	(85.9)	(90.5)	41	(41.5)	261	(82.8)
Arkansas	78	70	(87.1)	(94.3)	6	(50.0)	76	(90.8)
California	2,326	1967	(86.0)	(94.7)	146	(50.7)	2114	(91.6)
Colorado	71	59	(93.2)	(100.0)	7	(100.0)	66	(100.0)
Connecticut	85	70	(85.7)	(97.1)	8	(62.5)	78	(93.6)
Delaware	20	16	(93.8)	(100.0)	3	(33.3)	19	(89.5)
District of Columbia	43	34	(82.4)	(85.3)	4	(25.0)	38	(78.9)
Florida	833	718	(94.0)	(98.1)	35	(65.7)	753	(96.5)
Georgia	411	341	(87.4)	(95.3)	34	(58.8)	375	(92.0)
Hawaii	115	105	(95.2)	(99.0)	4	(50.0)	109	(97.2)
Idaho	15	14	(85.7)	(92.9)	0	...	14	(92.9)
Illinois	372	317	(86.4)	(97.2)	22	(54.5)	339	(94.4)
Indiana	90	81	(92.6)	(97.5)	3	(66.7)	84	(96.4)
Iowa	48	41	(92.7)	(95.1)	3	(33.3)	44	(90.9)
Kansas	46	40	(100.0)	(100.0)	1	(100.0)	41	(100.0)
Kentucky	90	78	(83.3)	(94.9)	2	(50.0)	80	(93.8)
Louisiana	200	179	(80.4)	(92.7)	7	(28.6)	186	(90.3)
Maine	8	6	(100.0)	(100.0)	1	(0.0)	7	(85.7)
Maryland	220	187	(90.4)	(97.3)	13	(76.9)	200	(96.0)
Massachusetts	222	195	(83.1)	(95.4)	17	(41.2)	212	(91.0)
Michigan	183	148	(89.9)	(97.3)	10	(60.0)	158	(94.9)
Minnesota	135	123	(87.8)	(98.4)	6	(83.3)	129	(97.7)
Mississippi	116	106	(91.5)	(98.1)	2	(100.0)	108	(98.1)
Missouri	107	96	(81.3)	(86.5)	1	(100.0)	97	(86.6)
Montana	6	6	(100.0)	(100.0)	0	...	6	(100.0)
Nebraska	27	25	(92.0)	(100.0)	1	(100.0)	26	(100.0)
Nevada	114	108	(86.1)	(94.4)	3	(66.7)	111	(93.7)
New Hampshire	10	8	(87.5)	(100.0)	0	...	8	(100.0)
New Jersey	405	344	(90.7)	(98.5)	31	(58.1)	375	(95.2)
New Mexico	50	31	(90.3)	(100.0)	10	(90.0)	41	(97.6)
New York State ⁶	243	215	(90.2)	(97.7)	11	(90.9)	226	(97.3)
New York City	706	616	(92.7)	(96.8)	38	(73.7)	654	(95.4)
North Carolina	296	264	(94.7)	(98.9)	18	(83.3)	282	(97.9)
North Dakota	9	8	(75.0)	(100.0)	0	...	8	(100.0)
Ohio	190	157	(88.5)	(98.1)	12	(41.7)	169	(94.1)
Oklahoma	86	77	(93.5)	(98.7)	2	(50.0)	79	(97.5)
Oregon	87	74	(98.6)	(100.0)	6	(66.7)	80	(97.5)
Pennsylvania	238	191	(85.9)	(96.3)	20	(70.0)	211	(93.8)
Rhode Island	26	23	(65.2)	(100.0)	1	(100.0)	24	(100.0)
South Carolina	153	132	(90.9)	(98.5)	3	(66.7)	135	(97.8)
South Dakota	15	12	(91.7)	(91.7)	1	(0.0)	13	(84.6)
Tennessee	193	156	(91.0)	(97.4)	14	(78.6)	170	(95.9)
Texas	1,381	1117	(83.6)	(90.9)	122	(63.1)	1239	(88.1)
Utah	20	16	(93.8)	(100.0)	2	(100.0)	18	(100.0)
Vermont	5	5	(100.0)	(100.0)	0	...	5	(100.0)
Virginia	268	242	(87.6)	(98.3)	7	(28.6)	249	(96.4)
Washington	239	205	(85.9)	(96.6)	14	(64.3)	219	(94.5)
West Virginia	15	12	(100.0)	(100.0)	0	...	12	(100.0)
Wisconsin	55	45	(86.7)	(97.8)	4	(50.0)	49	(93.9)
Wyoming	7	6	(50.0)	(50.0)	1	(0.0)	7	(42.9)
American Samoa ⁷	3	3	(33.3)	(100.0)	0	...	3	(100.0)
Fed. States of Micronesia ⁷	172	162	(92.0)	(93.2)	2	(100.0)	164	(93.3)
Guam ⁷	102	87	(94.3)	(100.0)	5	(80.0)	92	(98.9)
Marshall Islands ⁷	211	191	(36.1)	(37.2)	3	(0.0)	194	(36.6)
N. Mariana Islands ⁷	32	25	(96.0)	(96.0)	2	(0.0)	27	(88.9)
Puerto Rico ⁷	80	70	(91.4)	(92.9)	0	...	70	(92.9)
Republic of Palau ⁷	17	15	(53.3)	(53.3)	0	...	15	(53.3)
U.S. Virgin Islands ⁷	0	0	--	--	0	...	0	--

¹ Most recent year for which data are available.

² Initial isolate susceptible to rifampin (n=6,889) or susceptibility unknown (n=118); culture negative (n=2,048); culture status unknown (n=425).

³ Number of cases in persons alive at diagnosis, with an initial regimen of one or more drugs prescribed, who did not die during therapy. Percentage for U.S. based on 52 reporting areas (50 states, New York City, and the District of Columbia). Percentages shown only for reporting areas with information reported for ≥90% of cases.

⁴ Excludes initial isolate rifampin resistant, or patient with meningeal disease, or pediatric patient (aged <15) with miliary disease or positive blood culture, and those who moved out of country during treatment.

⁵ Initial isolate rifampin resistant, or patient with meningeal disease, or pediatric patient (aged <15) with miliary disease or positive blood culture.

⁶ Excludes New York City.

⁷ Not included in U.S. totals.

Table 61. Tuberculosis Cases and Percentages in Persons Completing Therapy for Whom Therapy Was Indicated for One Year or Less: Reporting Areas, 2006–2010¹

Reporting Area	Year									
	2006		2007		2008		2009		2010	
	No. ²	(%) ³	No. ²	(%) ³	No. ²	(%) ³	No. ²	(%) ³	No. ²	(%) ³
United States	12032	(84.1)	11763	(84.8)	11388	(85.2)	9860	(87.8)	9480	(88.1)
Alabama	166	(86.7)	149	(91.9)	150	(90.0)	146	(93.2)	124	(90.3)
Alaska	63	(88.9)	43	(88.4)	45	(88.9)	32	(84.4)	50	(94.0)
Arizona	272	(79.8)	242	(71.1)	195	(72.8)	177	(83.6)	220	(85.9)
Arkansas	89	(89.9)	96	(92.7)	74	(79.7)	59	(86.4)	70	(87.1)
California	2398	(81.3)	2424	(79.6)	2386	(83.9)	2142	(83.3)	1967	(86.0)
Colorado	108	(88.9)	91	(97.8)	94	(92.6)	69	(94.2)	59	(93.2)
Connecticut	77	(88.3)	96	(82.3)	88	(90.9)	82	(86.6)	70	(85.7)
Delaware	24	(83.3)	18	(94.4)	22	(81.8)	18	(77.8)	16	(93.8)
District of Columbia	64	(70.3)	51	(70.6)	49	(79.6)	32	(81.3)	34	(82.4)
Florida	919	(89.4)	884	(90.2)	826	(89.6)	695	(93.2)	718	(94.0)
Georgia	445	(82.5)	426	(85.2)	413	(87.9)	345	(84.1)	341	(87.4)
Hawaii	101	(79.2)	109	(77.1)	115	(77.4)	96	(83.3)	105	(95.2)
Idaho	18	(77.8)	8	(75.0)	11	(90.9)	17	(94.1)	14	(85.7)
Illinois	500	(82.0)	455	(84.6)	408	(87.0)	364	(87.6)	317	(86.4)
Indiana	116	(90.5)	118	(89.0)	102	(91.2)	106	(90.6)	81	(92.6)
Iowa	37	(86.5)	36	(88.9)	47	(89.4)	39	(87.2)	41	(92.7)
Kansas	73	(93.2)	53	(83.0)	54	(92.6)	56	(100.0)	40	(100.0)
Kentucky	75	(82.7)	108	(89.8)	88	(80.7)	62	(91.9)	78	(83.3)
Louisiana	178	(77.0)	196	(79.6)	210	(79.5)	171	(86.0)	179	(80.4)
Maine	13	(100.0)	18	(88.9)	8	(87.5)	7	(100.0)	6	(100.0)
Maryland	226	(90.7)	246	(89.4)	248	(89.1)	191	(88.5)	187	(90.4)
Massachusetts	239	(85.4)	205	(81.0)	235	(80.9)	218	(82.1)	195	(83.1)
Michigan	200	(79.5)	186	(81.2)	146	(82.9)	115	(87.8)	148	(89.9)
Minnesota	200	(90.0)	225	(88.9)	199	(90.5)	146	(91.8)	123	(87.8)
Mississippi	97	(85.6)	118	(95.8)	96	(92.7)	106	(88.7)	106	(91.5)
Missouri	92	(78.3)	106	(76.4)	100	(86.0)	75	(81.3)	96	(81.3)
Montana	10	(90.0)	11	(100.0)	5	(100.0)	7	(100.0)	6	(100.0)
Nebraska	23	(100.0)	24	(91.7)	30	(80.0)	29	(86.2)	25	(92.0)
Nevada	82	(90.2)	82	(85.4)	89	(83.1)	94	(87.2)	108	(86.1)
New Hampshire	15	(93.3)	10	(90.0)	17	(82.4)	15	(93.3)	8	(87.5)
New Jersey	463	(84.9)	411	(85.2)	379	(87.6)	349	(92.6)	344	(90.7)
New Mexico	37	(81.1)	43	(90.7)	48	(91.7)	32	(90.6)	31	(90.3)
New York State ⁴	271	(85.6)	228	(87.3)	275	(85.8)	207	(82.6)	215	(90.2)
New York City	823	(84.4)	792	(90.7)	798	(88.7)	661	(92.6)	616	(92.7)
North Carolina	339	(87.3)	312	(91.7)	304	(90.8)	221	(93.2)	264	(94.7)
North Dakota	10	(60.0)	4	(100.0)	3	(33.3)	5	(60.0)	8	(75.0)
Ohio	205	(82.9)	221	(87.3)	189	(85.7)	147	(91.2)	157	(88.5)
Oklahoma	129	(81.4)	131	(81.7)	86	(76.7)	89	(86.5)	77	(93.5)
Oregon	71	(91.5)	88	(90.9)	70	(97.1)	79	(97.5)	74	(98.6)
Pennsylvania	290	(83.4)	249	(84.3)	333	(83.2)	202	(83.7)	191	(85.9)
Rhode Island	24	(79.2)	40	(90.0)	34	(85.3)	23	(87.0)	23	(65.2)
South Carolina	194	(86.1)	188	(89.4)	160	(85.0)	137	(92.0)	132	(90.9)
South Dakota	12	(50.0)	11	(100.0)	15	(93.3)	17	(88.2)	12	(91.7)
Tennessee	239	(88.3)	202	(86.6)	247	(88.3)	176	(93.8)	156	(91.0)
Texas	1363	(83.1)	1340	(81.9)	1319	(79.4)	1222	(88.1)	1117	(83.6)
Utah	32	(84.4)	35	(94.3)	23	(95.7)	28	(100.0)	16	(93.8)
Vermont	6	(83.3)	3	(33.3)	5	(60.0)	5	(80.0)	5	(100.0)
Virginia	292	(85.3)	292	(88.4)	269	(83.6)	244	(87.3)	242	(87.6)
Washington	227	(81.9)	264	(88.6)	197	(90.4)	232	(91.4)	205	(85.9)
West Virginia	18	(77.8)	16	(100.0)	22	(95.5)	16	(68.8)	12	(100.0)
Wisconsin	63	(88.9)	57	(78.9)	57	(73.7)	55	(83.6)	45	(86.7)
Wyoming	4	(100.0)	2	(50.0)	5	(80.0)	2	(50.0)	6	...
American Samoa ⁵	2	(100.0)	3	...	3	(100.0)	3	(66.7)	3	(33.3)
Fed. States of Micronesia ⁵	76	...	126	...	157	...	175	(82.9)	162	(92.0)
Guam ⁵	52	(84.6)	90	(91.1)	84	(89.3)	93	(95.7)	87	(94.3)
Marshall Islands ⁵	33	...	124	...	115	(80.0)	108	(88.0)	191	...
N. Mariana Islands ⁵	44	...	38	(81.6)	34	(70.6)	28	(96.4)	25	(96.0)
Puerto Rico ⁵	89	(96.6)	81	(97.5)	69	(95.7)	51	(94.1)	70	(91.4)
Republic of Palau ⁵	9	(66.7)	12	...	14	...	15	...	15	...
U.S. Virgin Islands ⁵	0	...	0	...	4	(50.0)	0	...	0	...

¹ Most recent year for which data are available.

² Total cases for which therapy less than 1 year indicated in persons alive at diagnosis, with an initial regimen of one or more drugs prescribed, who did not die during therapy. Excludes persons with initial isolate rifampin resistant, or patient with meningeal disease, or pediatric patient (aged <15) with miliary disease or positive blood culture, and those who moved out of country during treatment.

³ Percentage of total cases in persons who completed therapy within one year for whom therapy less than 1 year was indicated.

⁴ Excludes New York City.

⁵ Not included in U.S. totals.

Note: Ellipses indicate data not available.

See Technical Notes for description of Completion of Therapy calculation.

Morbidity Tables

Cities and Metropolitan Statistical Areas, 2012

Table 62. Tuberculosis Cases in Selected Cities¹: 2012 and 2011

City	Cases ²	
	2012	2011
Albuquerque, NM	8	12
Anaheim, CA	31	24
Arlington, TX	20	21
Atlanta, GA	13	15
Austin, TX	33	45
Baltimore, MD	33	39
Birmingham, AL	15	25
Boston, MA	42	44
Buffalo, NY	13	13
Charlotte, NC	27	35
Chicago, IL	146	166
Cincinnati, OH	11	8
Cleveland, OH	19	27
Colorado Springs, CO	4	7
Columbus, OH	37	38
Corpus Christi, TX	8	10
Dallas, TX	123	130
Denver, CO	11	23
Detroit, MI	36	47
El Paso, TX	33	28
Fort Worth, TX	39	35
Fresno, CA	27	25
Honolulu, HI	57	51
Houston, TX	195	225
Indianapolis, IN	39	30
Jacksonville, FL	81	66
Kansas City, MO	15	16
Las Vegas, NV	53	76
Long Beach, CA	34	29
Los Angeles, CA	231	246
Louisville, KY	21	22
Memphis, TN	53	45
Mesa, AZ	6	13
Miami, FL	88	111
Milwaukee, WI	26	19
Minneapolis, MN	41	38
Nashville, TN	27	29
Newark, NJ	20	20
New Orleans, LA	22	24
New York, NY	651	684
Norfolk, VA	7	4
Oakland, CA	46	45
Omaha, NE	13	11
Philadelphia, PA	86	101
Phoenix, AZ	66	56
Pittsburgh, PA	2	7
Portland, OR	26	30
Sacramento, CA	33	57
St. Louis, MO	13	31
St. Paul, MN	35	26
San Antonio, TX	69	94
San Diego, CA	130	147
San Francisco, CA	116	108
San Jose, CA	102	116
Santa Ana, CA	32	40
Seattle, WA	51	53
Tampa, FL	18	17
Toledo, OH	3	1
Tucson, AZ	13	23
Virginia Beach, VA	8	4
Washington, DC	37	55
Wichita, KS	7	7
TOTAL - 62 CITIES	3,301	3,593
San Juan, PR	9	17

¹ Historical list of cities.² Case counts are based on verified cases residing within city limits. Excludes cases known to not be within city limits; residence within city limits was determined by the health department.

Table 63. Tuberculosis Cases and Case Rates per 100,000 Population: Metropolitan Statistical Areas with $\geq 500,000$ Population, 2012 and 2011

Metropolitan Statistical Area	Cases		Case Rates		Population Estimates 2012
	2012	2011	2012	2011	
Akron, OH	7	2	1.0	0.3	702,262
Albany-Schenectady-Troy, NY	13	13	1.5	1.5	874,646
Albuquerque, NM	10	14	1.1	1.6	901,700
Allentown-Bethlehem-Easton, PA-NJ	6	10	0.7	1.2	827,171
Atlanta-Sandy Springs-Roswell, GA	210	212	3.8	3.9	5,457,831
Augusta-Richmond County, GA-SC	20	26	3.5	4.6	575,898
Austin-Round Rock, TX	58	71	3.2	4.0	1,834,303
Bakersfield, CA	34	40	4.0	4.7	856,158
Baltimore-Columbia-Towson, MD	79	91	2.9	3.3	2,753,149
Baton Rouge, LA	19	20	2.3	2.5	815,298
Birmingham-Hoover, AL	35	36	3.1	3.2	1,136,650
Boise City, ID	6	5	0.9	0.8	637,896
Boston-Cambridge-Newton, MA-NH	175	157	3.8	3.4	4,640,802
Bridgeport-Stamford-Norwalk, CT	32	33	3.4	3.6	933,835
Buffalo-Cheektowaga-Niagara Falls, NY	21	15	1.9	1.3	1,134,210
Cape Coral-Fort Myers, FL	26	26	4.0	4.1	645,293
Charleston-North Charleston, SC	29	21	4.2	3.1	697,439
Charlotte-Concord-Gastonia, NC-SC	58	64	2.5	2.8	2,296,569
Chattanooga, TN-GA	11	10	2.0	1.9	537,889
Chicago-Naperville-Elgin, IL-IN-WI	307	335	3.2	3.5	9,522,434
Cincinnati, OH-KY-IN	30	19	1.4	0.9	2,128,603
Cleveland-Elyria, OH	35	43	1.7	2.1	2,063,535
Colorado Springs, CO	6	7	0.9	1.1	668,353
Columbia, SC	12	16	1.5	2.1	784,745
Columbus, OH	48	57	2.5	3.0	1,944,002
Dallas-Fort Worth-Arlington, TX	300	342	4.5	5.2	6,700,991
Dayton, OH	8	9	1.0	1.1	800,972
Denver-Aurora-Lakewood, CO	32	48	1.2	1.8	2,645,209
Des Moines-West Des Moines, IA	13	12	2.2	2.1	588,999
Detroit-Warren-Dearborn, MI	95	107	2.2	2.5	4,292,060
Durham-Chapel Hill, NC	14	13	2.7	2.5	522,826
El Paso, TX	37	37	4.5	4.5	830,735
Fresno, CA	35	46	3.7	4.9	947,895
Grand Rapids-Wyoming, MI	19	25	1.9	2.5	1,005,648
Greensboro-High Point, NC	19	26	2.6	3.6	736,065
Greenville-Anderson-Mauldin, SC	11	17	1.3	2.0	842,853
Harrisburg-Carlisle, PA	14	7	2.5	1.3	553,980
Hartford-West Hartford-East Hartford, CT	23	21	1.9	1.7	1,214,400
Houston-The Woodlands-Sugar Land, TX	340	397	5.5	6.6	6,177,035
Indianapolis-Carmel-Anderson, IN	47	45	2.4	2.4	1,928,982
Jackson, MS	31	41	5.4	7.1	576,800
Jacksonville, FL	99	77	7.2	5.7	1,377,850
Kansas City, MO-KS	35	35	1.7	1.7	2,038,724
Knoxville, TN	13	2	1.5	0.2	848,350
Lakeland-Winter Haven, FL	15	16	2.4	2.6	616,158
Lancaster, PA	9	5	1.7	1.0	526,823
Las Vegas-Henderson-Paradise, NV	68	84	3.4	4.3	2,000,759
Little Rock-North Little Rock-Conway, AR	11	19	1.5	2.7	717,666
Los Angeles-Long Beach-Anaheim, CA	862	922	6.6	7.1	13,052,921
Louisville/Jefferson County, KY-IN	29	27	2.3	2.2	1,251,351
Madison, WI	11	12	1.8	2.0	620,778
McAllen-Edinburg-Mission, TX	72	80	8.9	10.1	806,552
Memphis, TN-MS-AR	66	53	4.9	4.0	1,341,690
Miami-Fort Lauderdale-West Palm Beach, FL	230	292	4.0	5.1	5,762,717
Milwaukee-Waukesha-West Allis, WI	32	30	2.0	1.9	1,566,981
Minneapolis-St. Paul-Bloomington, MN-WI	140	103	4.1	3.0	3,422,264
Modesto, CA	7	9	1.3	1.7	521,726

Table 63. (Cont'd) Tuberculosis Cases and Case Rates per 100,000 Population: Metropolitan Statistical Areas with $\geq 500,000$ Population, 2012 and 2011

Metropolitan Statistical Area	Cases		Case Rates		Population Estimates 2012
	2012	2011	2012	2011	
Nashville-Davidson-Murfreesboro--Franklin, TN	49	55	2.8	3.2	1,726,693
New Haven-Milford, CT	15	19	1.7	2.2	862,813
New Orleans-Metairie, LA	53	61	4.3	5.0	1,227,096
New York-Newark-Jersey City, NY-NJ-PA	1,029	1,099	5.2	5.6	19,831,858
Northport-Sarasota-Bradenton, FL	14	24	1.9	3.4	720,042
Ogden-Clearfield, UT	2	4	0.3	0.7	612,441
Oklahoma City, OK	32	34	2.5	2.7	1,296,565
Omaha-Council Bluffs, NE-IA	13	12	1.5	1.4	885,624
Orlando-Kissimmee-Sanford, FL	94	80	4.2	3.7	2,223,674
Oxnard-Thousand Oaks-Ventura, CA	35	35	4.2	4.2	835,981
Palm Bay-Melbourne-Titusville, FL	12	9	2.2	1.7	547,307
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	180	196	3.0	3.3	6,018,800
Phoenix-Mesa-Scottsdale, AZ	150	171	3.5	4.0	4,329,534
Pittsburgh, PA	23	31	1.0	1.3	2,360,733
Portland-South Portland, ME	12	3	2.3	0.6	518,117
Portland-Vancouver-Hillsboro, OR-WA	49	60	2.1	2.7	2,289,800
Providence-Warwick, RI-MA	35	34	2.2	2.1	1,601,374
Provo-Orem, UT	3	4	0.5	0.7	550,845
Raleigh, NC	20	31	1.7	2.7	1,188,564
Richmond, VA	24	29	1.9	2.4	1,231,980
Riverside-San Bernardino-Ontario, CA	114	121	2.6	2.8	4,350,096
Rochester, NY	16	26	1.5	2.4	1,082,284
Sacramento--Roseville--Arden Arcade, CA	75	87	3.4	4.0	2,196,482
St. Louis, MO-IL	42	49	1.5	1.8	2,795,794
Salt Lake City, UT	22	17	2.0	1.5	1,123,712
San Antonio-New Braunfels, TX	79	104	3.5	4.7	2,234,003
San Diego-Carlsbad, CA	234	263	7.4	8.4	3,177,063
San Francisco-Oakland-Hayward, CA	382	372	8.6	8.5	4,455,560
San Jose-Sunnyvale-Santa Clara, CA	176	183	9.3	9.8	1,894,388
Scranton-Wilkes-Barre-Hazleton, PA	6	10	1.1	1.8	563,629
Seattle-Tacoma-Bellevue, WA	145	154	4.1	4.4	3,552,157
Springfield, MA	13	15	2.1	2.4	625,718
Stockton-Lodi, CA	44	44	6.3	6.3	702,612
Syracuse, NY	14	8	2.1	1.2	660,934
Tampa-St. Petersburg-Clearwater, FL	77	81	2.7	2.9	2,842,878
Toledo, OH	8	2	1.3	0.3	608,711
Tucson, AZ	16	28	1.6	2.8	992,394
Tulsa, OK	27	25	2.8	2.6	951,880
Urban Honolulu, HI	96	103	9.8	10.7	976,372
Virginia Beach-Norfolk-Newport News, VA-NC	31	20	1.8	1.2	1,699,925
Washington-Arlington-Alexandria, DC-VA-MD-WV	321	332	5.5	5.8	5,860,342
Wichita, KS	8	8	1.3	1.3	636,105
Worcester, MA-CT	11	15	1.2	1.6	923,762
Youngstown-Warren-Boardman, OH-PA	4	3	0.7	0.5	558,206
Total - 101 Areas	7,829	8,363	3.8	4.0	208,534,279
San Juan-Caguas-Guaynabo, PR	56	23	2.3	0.9	2,444,002

Note: 2012 and 2011 population case counts and rates updated using County Totals Datasets: Population, Population Change and Estimated Components of Population Change: April 1, 2010 to July 1, 2012 (<http://www.census.gov/popest/data/counties/totals/2012/files/CO-EST2012-Alldata.csv>) and Vintage 2009 County Population Datasets (http://www.census.gov/popest/data/historical/2000s/vintage_2009/datasets.html) (accessed August 12, 2013).
See Technical Notes for definition of MSA.

Table 64. Tuberculosis Cases by Age Group: Metropolitan Statistical Areas with ≥500,000 Population, 2012

Metropolitan Statistical Area	Total Cases	Under 5	5–14	15–24	25–44	45–64	≥65	Unknown or Missing
Akron, OH	7	0	0	0	2	0	5	0
Albany-Schenectady-Troy, NY	13	0	0	0	4	1	8	0
Albuquerque, NM	10	0	0	0	2	3	5	0
Allentown-Bethlehem-Easton, PA-NJ	6	0	0	2	2	1	1	0
Atlanta-Sandy Springs-Roswell, GA	210	6	10	25	81	68	20	0
Augusta-Richmond County, GA-SC	20	1	0	6	3	7	3	0
Austin-Round Rock, TX	58	0	2	5	25	20	6	0
Bakersfield, CA	34	2	1	1	10	7	13	0
Baltimore-Columbia-Towson, MD	79	2	1	9	27	22	18	0
Baton Rouge, LA	19	1	0	2	8	6	2	0
Birmingham-Hoover, AL	35	0	0	2	11	11	11	0
Boise City, ID	6	1	0	2	1	1	1	0
Boston-Cambridge-Newton, MA-NH	175	1	1	20	64	50	39	0
Bridgeport-Stamford-Norwalk, CT	32	1	0	3	19	4	5	0
Buffalo-Cheektowaga-Niagara Falls, NY	21	0	1	0	6	9	5	0
Cape Coral-Fort Myers, FL	26	1	2	3	6	9	5	0
Charleston-North Charleston, SC	29	1	0	4	12	7	5	0
Charlotte-Concord-Gastonia, NC-SC	58	3	2	6	21	18	8	0
Chattanooga, TN-GA	11	0	0	0	4	4	3	0
Chicago-Naperville-Elgin, IL-IN-WI	307	6	5	24	89	116	67	0
Cincinnati, OH-KY-IN	30	0	0	4	14	8	4	0
Cleveland-Elyria, OH	35	0	1	6	9	9	10	0
Colorado Springs, CO	6	0	0	0	2	2	2	0
Columbia, SC	12	0	0	0	3	3	6	0
Columbus, OH	48	3	3	6	21	11	4	0
Dallas-Fort Worth-Arlington, TX	300	10	6	34	103	105	42	0
Dayton, OH	8	0	0	1	2	2	3	0
Denver-Aurora-Lakewood, CO	32	0	3	4	6	11	8	0
Des Moines-West Des Moines, IA	13	1	0	0	7	3	2	0
Detroit-Warren-Dearborn, MI	95	1	0	8	24	30	32	0
Durham-Chapel Hill, NC	14	0	0	1	11	1	1	0
El Paso, TX	37	1	0	1	7	18	10	0
Fresno, CA	35	0	0	5	8	8	14	0
Grand Rapids-Wyoming, MI	19	2	0	4	6	4	3	0
Greensboro-High Point, NC	19	0	0	4	3	9	3	0
Greenville-Anderson-Mauldin, SC	11	0	2	0	1	6	2	0
Harrisburg-Carlisle, PA	14	0	1	1	8	3	1	0
Hartford-West Hartford-East Hartford, CT	23	0	0	2	12	2	7	0
Houston-The Woodlands-Sugar Land, TX	340	11	5	41	101	130	52	0
Indianapolis-Carmel-Anderson, IN	47	3	3	3	21	11	6	0
Jackson, MS	31	0	1	3	7	13	7	0
Jacksonville, FL	99	0	4	7	30	46	12	0
Kansas City, MO-KS	35	1	1	6	13	7	7	0
Knoxville, TN	13	0	0	2	4	2	5	0
Lakeland-Winter Haven, FL	15	0	0	2	2	8	3	0
Lancaster, PA	9	1	2	0	0	4	2	0
Las Vegas-Henderson-Paradise, NV	68	5	5	12	13	19	14	0
Little Rock-North Little Rock-Conway, AR	11	0	1	1	2	4	3	0
Los Angeles-Long Beach-Anaheim, CA	862	13	9	78	195	308	259	0
Louisville/Jefferson County, KY-IN	29	0	0	3	8	15	3	0
Madison, WI	11	0	0	2	6	1	2	0
McAllen-Edinburg-Mission, TX	72	3	0	10	15	25	19	0
Memphis, TN-MS-AR	66	4	5	4	19	24	10	0
Miami-Fort Lauderdale-West Palm Beach, FL	230	5	7	24	72	73	49	0
Milwaukee-Waukesha-West Allis, WI	32	3	0	3	10	10	5	1
Minneapolis-St. Paul-Bloomington, MN-WI	140	6	13	24	56	24	17	0

Table 64. (Cont'd) Tuberculosis Cases by Age Group: Metropolitan Statistical Areas with ≥500,000 Population, 2012

Metropolitan Statistical Area	Total Cases	Under 5	5–14	15–24	25–44	45–64	≥65	Unknown or Missing
Modesto, CA	7	0	0	1	1	5	0	0
Nashville-Davidson-Murfreesboro--Franklin, TN	49	1	0	5	17	21	5	0
New Haven-Milford, CT	15	0	0	1	8	2	4	0
New Orleans-Metairie, LA	53	0	1	5	23	14	10	0
New York-Newark-Jersey City, NY-NJ-PA	1,029	9	17	87	381	328	207	0
Northport-Sarasota-Bradenton, FL	14	1	0	0	7	3	3	0
Ogden-Clearfield, UT	2	0	0	0	2	0	0	0
Oklahoma City, OK	32	0	1	2	10	10	9	0
Omaha-Council Bluffs, NE-IA	13	0	0	1	9	3	0	0
Orlando-Kissimmee-Sanford, FL	94	2	1	14	31	34	12	0
Oxnard-Thousand Oaks-Ventura, CA	35	1	5	4	10	9	6	0
Palm Bay-Melbourne-Titusville, FL	12	2	0	0	3	5	2	0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	180	2	1	13	48	62	54	0
Phoenix-Mesa-Scottsdale, AZ	150	3	3	28	63	31	22	0
Pittsburgh, PA	23	0	0	3	5	9	6	0
Portland-South Portland, ME	12	1	0	1	5	3	2	0
Portland-Vancouver-Hillsboro, OR-WA	49	0	1	2	18	18	10	0
Providence-Warwick, RI-MA	35	2	0	7	9	5	12	0
Provo-Orem, UT	3	0	0	1	2	0	0	0
Raleigh, NC	20	2	1	2	9	2	4	0
Richmond, VA	24	2	1	3	4	8	6	0
Riverside-San Bernardino-Ontario, CA	114	2	1	10	25	44	31	1
Rochester, NY	16	0	2	2	7	2	3	0
Sacramento--Roseville--Arden Arcade, CA	75	1	1	8	28	18	19	0
St. Louis, MO-IL	42	0	0	2	15	13	12	0
Salt Lake City, UT	22	1	0	1	5	9	6	0
San Antonio-New Braunfels, TX	79	3	3	12	19	31	11	0
San Diego-Carlsbad, CA	234	6	5	41	68	65	49	0
San Francisco-Oakland-Hayward, CA	382	4	6	32	120	114	106	0
San Jose-Sunnyvale-Santa Clara, CA	176	3	3	13	67	47	43	0
Scranton-Wilkes-Barre-Hazleton, PA	6	0	0	1	3	1	1	0
Seattle-Tacoma-Bellevue, WA	145	6	4	10	59	29	37	0
Springfield, MA	13	0	0	1	7	2	3	0
Stockton-Lodi, CA	44	3	2	3	6	15	15	0
Syracuse, NY	14	1	1	2	3	4	3	0
Tampa-St. Petersburg-Clearwater, FL	77	1	1	4	23	32	16	0
Toledo, OH	8	0	0	0	2	3	3	0
Tucson, AZ	16	0	2	1	5	4	4	0
Tulsa, OK	27	7	2	4	6	6	2	0
Urban Honolulu, HI	96	0	2	11	17	36	30	0
Virginia Beach-Norfolk-Newport News, VA-NC	31	2	0	6	9	8	6	0
Washington-Arlington-Alexandria, DC-VA-MD-WV	321	12	6	23	140	84	56	0
Wichita, KS	8	0	0	1	3	3	1	0
Worcester, MA-CT	11	0	0	1	5	4	1	0
Youngstown-Warren-Boardman, OH-PA	4	0	0	0	0	1	3	0
Total - 101 Areas	7,829	179	170	789	2,525	2,470	1,694	2
San Juan-Caguas-Guaynabo, PR	56	0	0	1	16	23	16	0

Note: See Technical Notes for definition of MSA.

Table 65. Tuberculosis Cases by Hispanic Ethnicity and Non-Hispanic Race: Metropolitan Statistical Areas with $\geq 500,000$ Population, 2012

Metropolitan Statistical Area	Total Cases	Hispanic or Latino ¹	American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Multiple Race ²	Unknown or Missing
Akron, OH	7	0	0	3	0	0	4	0	0
Albany-Schenectady-Troy, NY	13	1	0	2	2	0	4	2	2
Albuquerque, NM	10	7	1	1	0	0	1	0	0
Allentown-Bethlehem-Easton, PA-NJ	6	2	0	2	1	0	1	0	0
Atlanta-Sandy Springs-Roswell, GA	210	33	0	54	113	0	9	0	1
Augusta-Richmond County, GA-SC	20	2	0	1	13	0	4	0	0
Austin-Round Rock, TX	58	25	0	16	6	0	11	0	0
Bakersfield, CA	34	20	0	5	1	0	3	5	0
Baltimore-Columbia-Towson, MD	79	8	0	27	29	0	15	0	0
Baton Rouge, LA	19	5	0	4	6	0	4	0	0
Birmingham-Hoover, AL	35	2	0	0	23	0	10	0	0
Boise City, ID	6	3	0	0	3	0	0	0	0
Boston-Cambridge-Newton, MA-NH	175	25	0	67	52	0	30	1	0
Bridgeport-Stamford-Norwalk, CT	32	11	0	11	7	0	3	0	0
Buffalo-Cheektowaga-Niagara Falls, NY	21	0	0	6	4	1	7	2	1
Cape Coral-Fort Myers, FL	26	7	0	1	10	0	8	0	0
Charleston-North Charleston, SC	29	4	0	3	15	0	7	0	0
Charlotte-Concord-Gastonia, NC-SC	58	7	0	18	20	0	9	4	0
Chattanooga, TN-GA	11	2	0	2	1	0	6	0	0
Chicago-Naperville-Elgin, IL-IN-WI	307	78	0	107	71	3	48	0	0
Cincinnati, OH-KY-IN	30	7	0	5	9	0	9	0	0
Cleveland-Elyria, OH	35	3	0	8	17	0	6	1	0
Colorado Springs, CO	6	1	0	2	1	0	2	0	0
Columbia, SC	12	0	0	3	6	0	3	0	0
Columbus, OH	48	0	0	11	29	0	8	0	0
Dallas-Fort Worth-Arlington, TX	300	88	0	76	89	1	46	0	0
Dayton, OH	8	2	0	2	2	0	2	0	0
Denver-Aurora-Lakewood, CO	32	13	0	12	4	0	2	1	0
Des Moines-West Des Moines, IA	13	2	0	4	5	0	2	0	0
Detroit-Warren-Dearborn, MI	95	7	0	31	33	0	19	0	5
Durham-Chapel Hill, NC	14	5	0	3	3	0	2	1	0
El Paso, TX	37	33	0	2	1	0	1	0	0
Fresno, CA	35	19	0	9	0	0	3	4	0
Grand Rapids-Wyoming, MI	19	7	0	7	2	0	2	0	1
Greensboro-High Point, NC	19	1	0	12	4	0	2	0	0
Greenville-Anderson-Mauldin, SC	11	1	0	2	3	0	5	0	0
Harrisburg-Carlisle, PA	14	0	0	6	5	0	3	0	0
Hartford-West Hartford-East Hartford, CT	23	4	0	11	3	0	2	3	0
Houston-The Woodlands-Sugar Land, TX	340	152	0	66	74	2	46	0	0
Indianapolis-Carmel-Anderson, IN	47	6	0	14	16	0	11	0	0
Jackson, MS	31	5	0	2	18	0	6	0	0
Jacksonville, FL	99	4	0	14	53	0	28	0	0
Kansas City, MO-KS	35	7	0	12	8	0	7	0	1
Knoxville, TN	13	1	0	1	2	2	7	0	0
Lakeland-Winter Haven, FL	15	3	0	1	3	0	8	0	0
Lancaster, PA	9	2	0	1	1	0	3	2	0
Las Vegas-Henderson-Paradise, NV	68	19	0	32	5	0	12	0	0
Little Rock-North Little Rock-Conway, AR	11	2	0	0	2	0	7	0	0
Los Angeles-Long Beach-Anaheim, CA	862	344	0	382	62	2	54	18	0
Louisville/Jefferson County, KY-IN	29	1	0	7	8	0	13	0	0
Madison, WI	11	1	0	8	1	0	1	0	0
McAllen-Edinburg-Mission, TX	72	70	0	1	0	0	1	0	0
Memphis, TN-MS-AR	66	7	0	5	46	0	8	0	0
Miami-Fort Lauderdale-West Palm Beach, FL	230	101	0	16	85	0	28	0	0
Milwaukee-Waukesha-West Allis, WI	32	10	0	12	4	0	3	0	3
Minneapolis-St. Paul-Bloomington, MN-WI	140	14	0	37	80	0	9	0	0
Modesto, CA	7	3	0	1	0	0	2	1	0

Table 65. (Cont'd) Tuberculosis Cases by Hispanic Ethnicity and Non-Hispanic Race: Metropolitan Statistical Areas with $\geq 500,000$ Population, 2012

Metropolitan Statistical Area	Total Cases	Hispanic or Latino ¹	American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Multiple Race ²	Unknown or Missing
Nashville-Davidson-Murfreesboro--Franklin, TN	49	5	0	11	19	0	14	0	0
New Haven-Milford, CT	15	2	0	5	5	0	3	0	0
New Orleans-Metairie, LA	53	5	0	9	27	0	12	0	0
New York-Newark-Jersey City, NY-NJ-PA	1,029	286	0	420	194	0	91	28	10
Northport-Sarasota-Bradenton, FL	14	2	0	3	3	0	5	1	0
Ogden-Clearfield, UT	2	1	0	0	0	0	1	0	0
Oklahoma City, OK	32	7	5	3	5	0	11	0	1
Omaha-Council Bluffs, NE-IA	13	2	0	2	5	0	3	1	0
Orlando-Kissimmee-Sanford, FL	94	24	0	10	36	0	24	0	0
Oxnard-Thousand Oaks-Ventura, CA	35	19	0	9	1	0	5	1	0
Palm Bay-Melbourne-Titusville, FL	12	1	0	2	2	0	7	0	0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	180	21	0	71	59	0	26	3	0
Phoenix-Mesa-Scottsdale, AZ	150	87	6	25	22	0	10	0	0
Pittsburgh, PA	23	1	0	7	6	0	9	0	0
Portland-South Portland, ME	12	1	0	1	4	1	5	0	0
Portland-Vancouver-Hillsboro, OR-WA	49	13	1	24	3	0	8	0	0
Providence-Warwick, RI-MA	35	10	0	9	7	0	9	0	0
Provo-Orem, UT	3	2	0	0	0	0	1	0	0
Raleigh, NC	20	3	0	8	7	0	1	1	0
Richmond, VA	24	1	0	7	10	0	6	0	0
Riverside-San Bernardino-Ontario, CA	114	64	1	32	7	0	8	2	0
Rochester, NY	16	2	0	6	4	0	3	0	1
Sacramento--Roseville--Arden Arcade, CA	75	12	0	42	4	4	11	2	0
St. Louis, MO-IL	42	4	0	12	14	0	11	0	1
Salt Lake City, UT	22	5	1	7	3	2	4	0	0
San Antonio-New Braunfels, TX	79	50	0	9	11	0	9	0	0
San Diego-Carlsbad, CA	234	129	0	71	12	2	15	5	0
San Francisco-Oakland-Hayward, CA	382	57	3	225	38	6	47	6	0
San Jose-Sunnyvale-Santa Clara, CA	176	25	0	110	8	0	10	23	0
Scranton-Wilkes-Barre-Hazleton, PA	6	1	0	0	1	0	4	0	0
Seattle-Tacoma-Bellevue, WA	145	15	3	68	34	5	18	1	1
Springfield, MA	13	4	0	6	2	0	1	0	0
Stockton-Lodi, CA	44	11	0	28	0	0	2	3	0
Syracuse, NY	14	2	0	1	5	0	4	2	0
Tampa-St. Petersburg-Clearwater, FL	77	13	0	18	19	1	26	0	0
Toledo, OH	8	1	0	0	2	0	5	0	0
Tucson, AZ	16	6	2	2	2	0	4	0	0
Tulsa, OK	27	5	1	11	7	0	3	0	0
Urban Honolulu, HI	96	2	0	75	0	13	4	2	0
Virginia Beach-Norfolk-Newport News, VA-NC	31	5	0	13	9	0	4	0	0
Washington-Arlington-Alexandria, DC-VA-MD-WV	321	65	0	113	127	0	15	1	0
Wichita, KS	8	2	0	2	4	0	0	0	0
Worcester, MA-CT	11	1	0	4	2	0	3	1	0
Youngstown-Warren-Boardman, OH-PA	4	0	0	1	2	0	1	0	0
Total - 101 Areas	7,829	2,161	24	2,630	1,793	45	1,020	128	28
San Juan-Caguas-Guaynabo, PR	56	55	0	0	1	0	0	0	0

¹ Persons of Hispanic or Latino origin may be of any race or multiple race.

² Indicates two or more races reported for a person.

Note: Case counts for race categories (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White) are mutually exclusive and do not include persons of Hispanic ethnicity or multiple race. Multiple Race does not include persons of Hispanic ethnicity.

See Technical Notes for definition of MSA and Hispanic ethnicity and non-Hispanic race.

Table 66. Tuberculosis Cases and Percentages, U.S.-born Persons and Foreign-born Persons¹: Metropolitan Statistical Areas with $\geq 500,000$ Population, 2012

Metropolitan Statistical Area	Total Cases	U.S.-born Persons		Foreign-born Persons		Unknown	
		No.	(%)	No.	(%)	No.	(%)
Akron, OH	7	3	(42.9)	4	(57.1)	0	(0.0)
Albany-Schenectady-Troy, NY	13	6	(46.2)	7	(53.8)	0	(0.0)
Albuquerque, NM	10	4	(40.0)	6	(60.0)	0	(0.0)
Allentown-Bethlehem-Easton, PA-NJ	6	2	(33.3)	4	(66.7)	0	(0.0)
Atlanta-Sandy Springs-Roswell, GA	210	90	(42.9)	119	(56.7)	1	(0.5)
Augusta-Richmond County, GA-SC	20	18	(90.0)	2	(10.0)	0	(0.0)
Austin-Round Rock, TX	58	24	(41.4)	34	(58.6)	0	(0.0)
Bakersfield, CA	34	9	(26.5)	25	(73.5)	0	(0.0)
Baltimore-Columbia-Towson, MD	79	30	(38.0)	48	(60.8)	1	(1.3)
Baton Rouge, LA	19	10	(52.6)	9	(47.4)	0	(0.0)
Birmingham-Hoover, AL	35	32	(91.4)	3	(8.6)	0	(0.0)
Boise City, ID	6	1	(16.7)	5	(83.3)	0	(0.0)
Boston-Cambridge-Newton, MA-NH	175	22	(12.6)	153	(87.4)	0	(0.0)
Bridgeport-Stamford-Norwalk, CT	32	7	(21.9)	25	(78.1)	0	(0.0)
Buffalo-Cheektowaga-Niagara Falls, NY	21	7	(33.3)	14	(66.7)	0	(0.0)
Cape Coral-Fort Myers, FL	26	14	(53.8)	12	(46.2)	0	(0.0)
Charleston-North Charleston, SC	29	21	(72.4)	8	(27.6)	0	(0.0)
Charlotte-Concord-Gastonia, NC-SC	58	33	(56.9)	25	(43.1)	0	(0.0)
Chattanooga, TN-GA	11	7	(63.6)	4	(36.4)	0	(0.0)
Chicago-Naperville-Elgin, IL-IN-WI	307	93	(30.3)	214	(69.7)	0	(0.0)
Cincinnati, OH-KY-IN	30	15	(50.0)	15	(50.0)	0	(0.0)
Cleveland-Elyria, OH	35	21	(60.0)	14	(40.0)	0	(0.0)
Colorado Springs, CO	6	2	(33.3)	4	(66.7)	0	(0.0)
Columbia, SC	12	8	(66.7)	4	(33.3)	0	(0.0)
Columbus, OH	48	16	(33.3)	32	(66.7)	0	(0.0)
Dallas-Fort Worth-Arlington, TX	300	133	(44.3)	167	(55.7)	0	(0.0)
Dayton, OH	8	2	(25.0)	6	(75.0)	0	(0.0)
Denver-Aurora-Lakewood, CO	32	9	(28.1)	23	(71.9)	0	(0.0)
Des Moines-West Des Moines, IA	13	3	(23.1)	10	(76.9)	0	(0.0)
Detroit-Warren-Dearborn, MI	95	51	(53.7)	44	(46.3)	0	(0.0)
Durham-Chapel Hill, NC	14	5	(35.7)	9	(64.3)	0	(0.0)
El Paso, TX	37	10	(27.0)	27	(73.0)	0	(0.0)
Fresno, CA	35	11	(31.4)	24	(68.6)	0	(0.0)
Grand Rapids-Wyoming, MI	19	4	(21.1)	15	(78.9)	0	(0.0)
Greensboro-High Point, NC	19	4	(21.1)	15	(78.9)	0	(0.0)
Greenville-Anderson-Mauldin, SC	11	8	(72.7)	3	(27.3)	0	(0.0)
Harrisburg-Carlisle, PA	14	4	(28.6)	10	(71.4)	0	(0.0)
Hartford-West Hartford-East Hartford, CT	23	2	(8.7)	21	(91.3)	0	(0.0)
Houston-The Woodlands-Sugar Land, TX	340	150	(44.1)	190	(55.9)	0	(0.0)
Indianapolis-Carmel-Anderson, IN	47	23	(48.9)	24	(51.1)	0	(0.0)
Jackson, MS	31	24	(77.4)	7	(22.6)	0	(0.0)
Jacksonville, FL	99	77	(77.8)	22	(22.2)	0	(0.0)
Kansas City, MO-KS	35	9	(25.7)	26	(74.3)	0	(0.0)
Knoxville, TN	13	9	(69.2)	4	(30.8)	0	(0.0)
Lakeland-Winter Haven, FL	15	10	(66.7)	5	(33.3)	0	(0.0)
Lancaster, PA	9	5	(55.6)	4	(44.4)	0	(0.0)
Las Vegas-Henderson-Paradise, NV	68	16	(23.5)	51	(75.0)	1	(1.5)
Little Rock-North Little Rock-Conway, AR	11	10	(90.9)	1	(9.1)	0	(0.0)
Los Angeles-Long Beach-Anaheim, CA	862	149	(17.3)	713	(82.7)	0	(0.0)
Louisville/Jefferson County, KY-IN	29	18	(62.1)	11	(37.9)	0	(0.0)
Madison, WI	11	2	(18.2)	9	(81.8)	0	(0.0)
McAllen-Edinburg-Mission, TX	72	25	(34.7)	47	(65.3)	0	(0.0)
Memphis, TN-MS-AR	66	52	(78.8)	14	(21.2)	0	(0.0)
Miami-Fort Lauderdale-West Palm Beach, FL	230	65	(28.3)	165	(71.7)	0	(0.0)
Milwaukee-Waukesha-West Allis, WI	32	10	(31.3)	22	(68.8)	0	(0.0)
Minneapolis-St. Paul-Bloomington, MN-WI	140	20	(14.3)	120	(85.7)	0	(0.0)
Modesto, CA	7	3	(42.9)	4	(57.1)	0	(0.0)

Table 66. (Cont'd) Tuberculosis Cases and Percentages, U.S.-born Persons and Foreign-born Persons¹: Metropolitan Statistical Areas with ≥500,000 Population, 2012

Metropolitan Statistical Area	Total Cases	U.S.-born Persons		Foreign-born Persons		Unknown	
		No.	(%)	No.	(%)	No.	(%)
Nashville-Davidson-Murfreesboro--Franklin, TN	49	28	(57.1)	21	(42.9)	0	(0.0)
New Haven-Milford, CT	15	3	(20.0)	12	(80.0)	0	(0.0)
New Orleans-Metairie, LA	53	38	(71.7)	15	(28.3)	0	(0.0)
New York-Newark-Jersey City, NY-NJ-PA	1,029	182	(17.7)	847	(82.3)	0	(0.0)
Northport-Sarasota-Bradenton, FL	14	9	(64.3)	5	(35.7)	0	(0.0)
Ogden-Clearfield, UT	2	1	(50.0)	1	(50.0)	0	(0.0)
Oklahoma City, OK	32	19	(59.4)	13	(40.6)	0	(0.0)
Omaha-Council Bluffs, NE-IA	13	5	(38.5)	8	(61.5)	0	(0.0)
Orlando-Kissimmee-Sanford, FL	94	45	(47.9)	49	(52.1)	0	(0.0)
Oxnard-Thousand Oaks-Ventura, CA	35	9	(25.7)	26	(74.3)	0	(0.0)
Palm Bay-Melbourne-Titusville, FL	12	7	(58.3)	5	(41.7)	0	(0.0)
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	180	62	(34.4)	118	(65.6)	0	(0.0)
Phoenix-Mesa-Scottsdale, AZ	150	38	(25.3)	111	(74.0)	1	(0.7)
Pittsburgh, PA	23	14	(60.9)	9	(39.1)	0	(0.0)
Portland-South Portland, ME	12	5	(41.7)	7	(58.3)	0	(0.0)
Portland-Vancouver-Hillsboro, OR-WA	49	8	(16.3)	41	(83.7)	0	(0.0)
Providence-Warwick, RI-MA	35	11	(31.4)	24	(68.6)	0	(0.0)
Provo-Orem, UT	3	2	(66.7)	1	(33.3)	0	(0.0)
Raleigh, NC	20	6	(30.0)	14	(70.0)	0	(0.0)
Richmond, VA	24	13	(54.2)	11	(45.8)	0	(0.0)
Riverside-San Bernardino-Ontario, CA	114	28	(24.6)	86	(75.4)	0	(0.0)
Rochester, NY	16	5	(31.3)	11	(68.8)	0	(0.0)
Sacramento--Roseville--Arden Arcade, CA	75	16	(21.3)	59	(78.7)	0	(0.0)
St. Louis, MO-IL	42	19	(45.2)	23	(54.8)	0	(0.0)
Salt Lake City, UT	22	4	(18.2)	18	(81.8)	0	(0.0)
San Antonio-New Braunfels, TX	79	43	(54.4)	36	(45.6)	0	(0.0)
San Diego-Carlsbad, CA	234	70	(29.9)	164	(70.1)	0	(0.0)
San Francisco-Oakland-Hayward, CA	382	76	(19.9)	306	(80.1)	0	(0.0)
San Jose-Sunnyvale-Santa Clara, CA	176	18	(10.2)	157	(89.2)	1	(0.6)
Scranton-Wilkes-Barre-Hazleton, PA	6	4	(66.7)	2	(33.3)	0	(0.0)
Seattle-Tacoma-Bellevue, WA	145	37	(25.5)	108	(74.5)	0	(0.0)
Springfield, MA	13	2	(15.4)	11	(84.6)	0	(0.0)
Stockton-Lodi, CA	44	17	(38.6)	27	(61.4)	0	(0.0)
Syracuse, NY	14	7	(50.0)	7	(50.0)	0	(0.0)
Tampa-St. Petersburg-Clearwater, FL	77	42	(54.5)	35	(45.5)	0	(0.0)
Toledo, OH	8	7	(87.5)	1	(12.5)	0	(0.0)
Tucson, AZ	16	6	(37.5)	10	(62.5)	0	(0.0)
Tulsa, OK	27	13	(48.1)	14	(51.9)	0	(0.0)
Urban Honolulu, HI	96	21	(21.9)	75	(78.1)	0	(0.0)
Virginia Beach-Norfolk-Newport News, VA-NC	31	11	(35.5)	20	(64.5)	0	(0.0)
Washington-Arlington-Alexandria, DC-VA-MD-WV	321	52	(16.2)	269	(83.8)	0	(0.0)
Wichita, KS	8	2	(25.0)	6	(75.0)	0	(0.0)
Worcester, MA-CT	11	1	(9.1)	10	(90.9)	0	(0.0)
Youngstown-Warren-Boardman, OH-PA	4	3	(75.0)	1	(25.0)	0	(0.0)
Total - 101 Areas	7,829	2,427	(31.0)	5,397	(68.9)	5	(0.1)
San Juan-Caguas-Guaynabo, PR	56	49	(87.5)	7	(12.5)	0	(0.0)

¹ Includes persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, the U.S. Virgin Islands, and U.S. minor and outlying Pacific islands.

Note: See Technical Notes for definition of MSA.

**Table 67. Tuberculosis Cases and Percentages by Homeless Status,¹ Age ≥15:
Metropolitan Statistical Areas with ≥500,000 Population, 2012**

Metropolitan Statistical Area	Total Cases	Cases with Information on Homeless Status		Cases Reported as Being Homeless ²	
		No.	(%)	No.	(%)
Akron, OH	7	7	(100.0)	0	(0.0)
Albany-Schenectady-Troy, NY	13	13	(100.0)	0	(0.0)
Albuquerque, NM	10	10	(100.0)	1	(10.0)
Allentown-Bethlehem-Easton, PA-NJ	6	6	(100.0)	0	(0.0)
Atlanta-Sandy Springs-Roswell, GA	194	192	(99.0)	23	(11.9)
Augusta-Richmond County, GA-SC	19	19	(100.0)	4	(21.1)
Austin-Round Rock, TX	56	56	(100.0)	2	(3.6)
Bakersfield, CA	31	30	(96.8)	0	(0.0)
Baltimore-Columbia-Towson, MD	76	75	(98.7)	7	(9.2)
Baton Rouge, LA	18	17	(94.4)	0	(0.0)
Birmingham-Hoover, AL	35	35	(100.0)	0	(0.0)
Boise City, ID	5	5	(100.0)	0	(0.0)
Boston-Cambridge-Newton, MA-NH	173	172	(99.4)	5	(2.9)
Bridgeport-Stamford-Norwalk, CT	31	31	(100.0)	0	(0.0)
Buffalo-Cheektowaga-Niagara Falls, NY	20	20	(100.0)	0	(0.0)
Cape Coral-Fort Myers, FL	23	23	(100.0)	1	(4.3)
Charleston-North Charleston, SC	28	28	(100.0)	2	(7.1)
Charlotte-Concord-Gastonia, NC-SC	53	53	(100.0)	3	(5.7)
Chattanooga, TN-GA	11	11	(100.0)	0	(0.0)
Chicago-Naperville-Elgin, IL-IN-WI	296	295	(99.7)	19	(6.4)
Cincinnati, OH-KY-IN	30	30	(100.0)	5	(16.7)
Cleveland-Elyria, OH	34	34	(100.0)	4	(11.8)
Colorado Springs, CO	6	6	(100.0)	1	(16.7)
Columbia, SC	12	12	(100.0)	0	(0.0)
Columbus, OH	42	42	(100.0)	2	(4.8)
Dallas-Fort Worth-Arlington, TX	284	284	(100.0)	38	(13.4)
Dayton, OH	8	8	(100.0)	0	(0.0)
Denver-Aurora-Lakewood, CO	29	29	(100.0)	2	(6.9)
Des Moines-West Des Moines, IA	12	12	(100.0)	0	(0.0)
Detroit-Warren-Dearborn, MI	94	92	(97.9)	4	(4.3)
Durham-Chapel Hill, NC	14	14	(100.0)	1	(7.1)
El Paso, TX	36	36	(100.0)	1	(2.8)
Fresno, CA	35	35	(100.0)	5	(14.3)
Grand Rapids-Wyoming, MI	17	17	(100.0)	1	(5.9)
Greensboro-High Point, NC	19	19	(100.0)	0	(0.0)
Greenville-Anderson-Mauldin, SC	9	9	(100.0)	1	(11.1)
Harrisburg-Carlisle, PA	13	13	(100.0)	1	(7.7)
Hartford-West Hartford-East Hartford, CT	23	23	(100.0)	1	(4.3)
Houston-The Woodlands-Sugar Land, TX	324	324	(100.0)	10	(3.1)
Indianapolis-Carmel-Anderson, IN	41	40	(97.6)	7	(17.1)
Jackson, MS	30	30	(100.0)	3	(10.0)
Jacksonville, FL	95	95	(100.0)	24	(25.3)
Kansas City, MO-KS	33	31	(93.9)	5	(15.2)
Knoxville, TN	13	13	(100.0)	0	(0.0)
Lakeland-Winter Haven, FL	15	15	(100.0)	2	(13.3)
Lancaster, PA	6	6	(100.0)	0	(0.0)
Las Vegas-Henderson-Paradise, NV	58	58	(100.0)	1	(1.7)
Little Rock-North Little Rock-Conway, AR	10	10	(100.0)	2	(20.0)
Los Angeles-Long Beach-Anaheim, CA	840	836	(99.5)	46	(5.5)
Louisville/Jefferson County, KY-IN	29	29	(100.0)	3	(10.3)
Madison, WI	11	11	(100.0)	0	(0.0)
McAllen-Edinburg-Mission, TX	69	69	(100.0)	1	(1.4)
Memphis, TN-MS-AR	57	57	(100.0)	3	(5.3)
Miami-Fort Lauderdale-West Palm Beach, FL	218	212	(97.2)	21	(9.6)
Milwaukee-Waukesha-West Allis, WI	28	28	(100.0)	0	(0.0)
Minneapolis-St. Paul-Bloomington, MN-WI	121	121	(100.0)	2	(1.7)
Modesto, CA	7	7	(100.0)	0	(0.0)

Table 67. (Cont'd) Tuberculosis Cases and Percentages by Homeless Status,¹ Age ≥15: Metropolitan Statistical Areas with ≥500,000 Population, 2012

Metropolitan Statistical Area	Total Cases	Cases with Information on Homeless Status		Cases Reported as Being Homeless ²	
		No.	(%)	No.	(%)
Nashville-Davidson-Murfreesboro--Franklin, TN	48	48	(100.0)	4	(8.3)
New Haven-Milford, CT	15	15	(100.0)	1	(6.7)
New Orleans-Metairie, LA	52	50	(96.2)	4	(7.7)
New York-Newark-Jersey City, NY-NJ-PA	1,003	989	(98.6)	22	(2.2)
Northport-Sarasota-Bradenton, FL	13	13	(100.0)	1	(7.7)
Ogden-Clearfield, UT	2	2	(100.0)	0	(0.0)
Oklahoma City, OK	31	30	(96.8)	1	(3.2)
Omaha-Council Bluffs, NE-IA	13	13	(100.0)	2	(15.4)
Orlando-Kissimmee-Sanford, FL	91	91	(100.0)	4	(4.4)
Oxnard-Thousand Oaks-Ventura, CA	29	29	(100.0)	1	(3.4)
Palm Bay-Melbourne-Titusville, FL	10	10	(100.0)	0	(0.0)
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	177	177	(100.0)	5	(2.8)
Phoenix-Mesa-Scottsdale, AZ	144	122	(84.7)	9	(6.3)
Pittsburgh, PA	23	22	(95.7)	0	(0.0)
Portland-South Portland, ME	11	11	(100.0)	1	(9.1)
Portland-Vancouver-Hillsboro, OR-WA	48	48	(100.0)	2	(4.2)
Providence-Warwick, RI-MA	33	33	(100.0)	0	(0.0)
Provo-Orem, UT	3	3	(100.0)	0	(0.0)
Raleigh, NC	17	17	(100.0)	0	(0.0)
Richmond, VA	21	21	(100.0)	1	(4.8)
Riverside-San Bernardino-Ontario, CA	110	110	(100.0)	3	(2.7)
Rochester, NY	14	14	(100.0)	0	(0.0)
Sacramento--Roseville--Arden Arcade, CA	73	71	(97.3)	6	(8.2)
St. Louis, MO-IL	42	42	(100.0)	1	(2.4)
Salt Lake City, UT	21	21	(100.0)	1	(4.8)
San Antonio-New Braunfels, TX	73	73	(100.0)	2	(2.7)
San Diego-Carlsbad, CA	223	223	(100.0)	28	(12.6)
San Francisco-Oakland-Hayward, CA	372	370	(99.5)	17	(4.6)
San Jose-Sunnyvale-Santa Clara, CA	170	168	(98.8)	4	(2.4)
Scranton-Wilkes-Barre-Hazleton, PA	6	6	(100.0)	0	(0.0)
Seattle-Tacoma-Bellevue, WA	135	134	(99.3)	4	(3.0)
Springfield, MA	13	13	(100.0)	1	(7.7)
Stockton-Lodi, CA	39	38	(97.4)	3	(7.7)
Syracuse, NY	12	12	(100.0)	0	(0.0)
Tampa-St. Petersburg-Clearwater, FL	75	75	(100.0)	8	(10.7)
Toledo, OH	8	8	(100.0)	0	(0.0)
Tucson, AZ	14	14	(100.0)	0	(0.0)
Tulsa, OK	18	16	(88.9)	3	(16.7)
Urban Honolulu, HI	94	90	(95.7)	3	(3.2)
Virginia Beach-Norfolk-Newport News, VA-NC	29	28	(96.6)	1	(3.4)
Washington-Arlington-Alexandria, DC-VA-MD-WV	303	302	(99.7)	11	(3.6)
Wichita, KS	8	8	(100.0)	0	(0.0)
Worcester, MA-CT	11	11	(100.0)	0	(0.0)
Youngstown-Warren-Boardman, OH-PA	4	4	(100.0)	0	(0.0)
Total - 101 Areas	7,478	7,400	(99.0)	418	(5.6)
San Juan-Caguas-Guaynabo, PR	56	56	(100.0)	2	(3.6)

¹ Homeless within past 12 months of TB diagnosis.

² Percent of those with known status.

Note: See Technical Notes for definition of MSA.

This page intentionally left blank

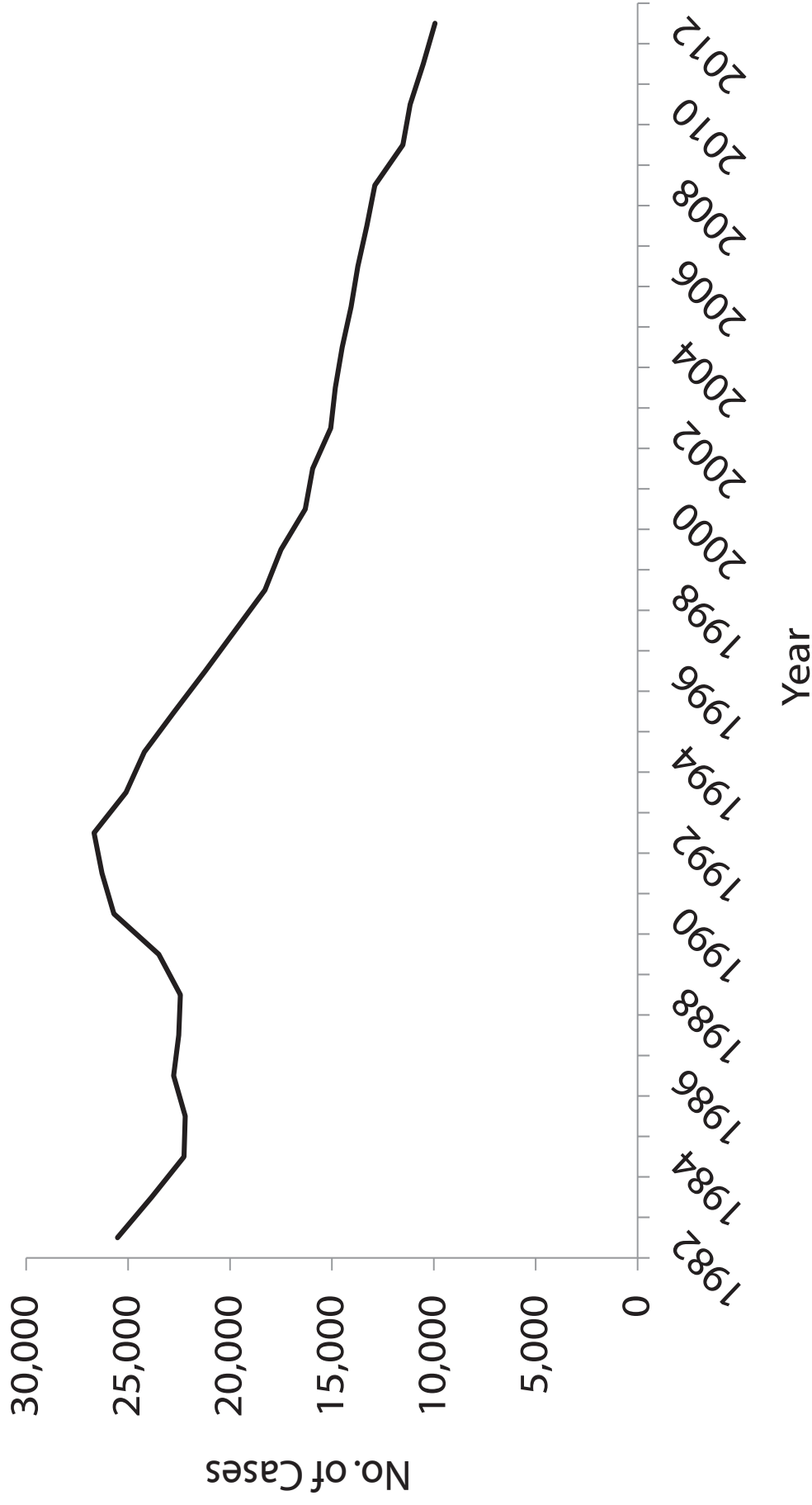
Surveillance Slide Set 2012

Tuberculosis in the United States

National Tuberculosis Surveillance System

Highlights from 2012

Reported TB Cases United States, 1982–2012*



*Updated as of June 10, 2013.

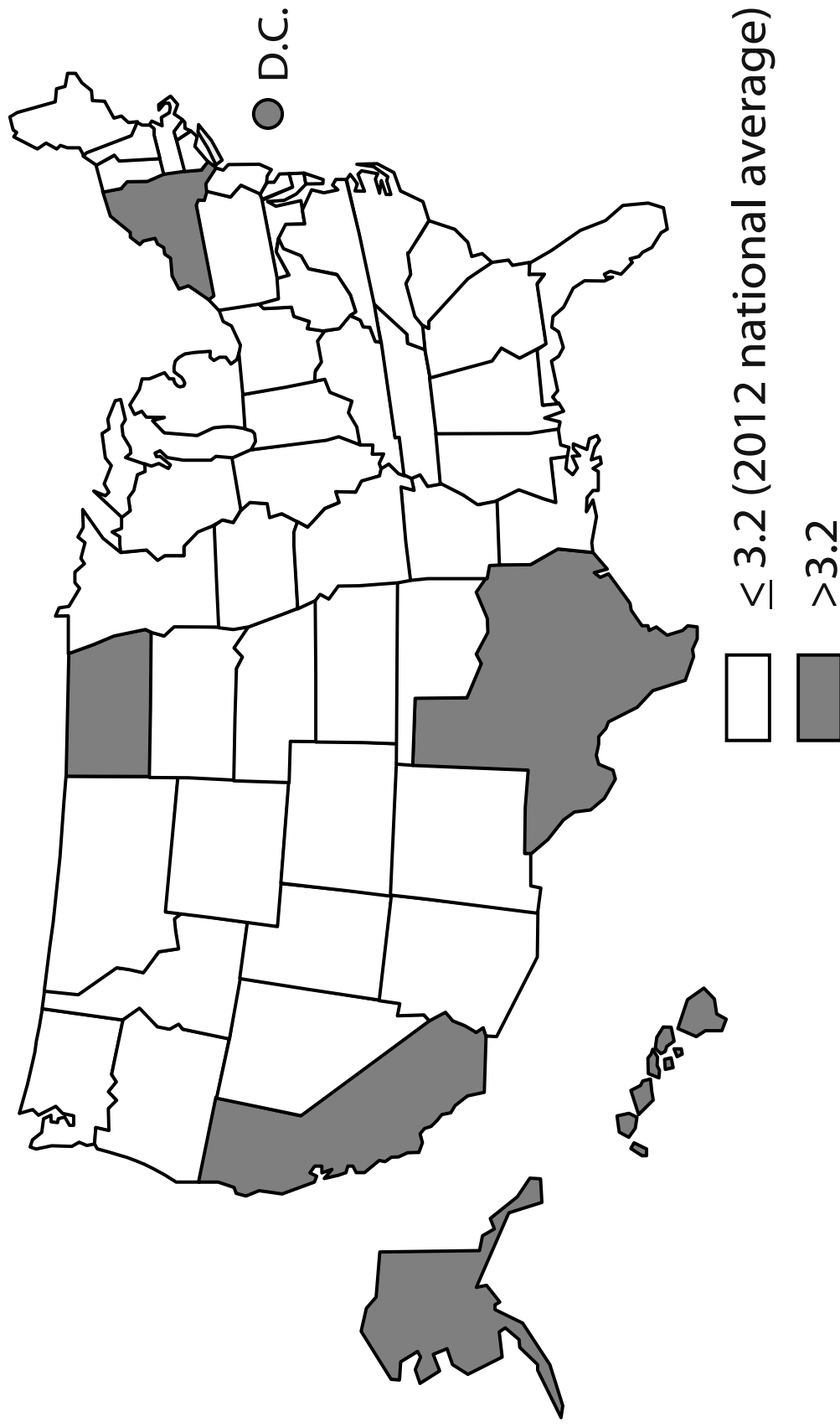
TB Morbidity

United States, 2007–2012

Year	No.	Rate*
2007	13,282	4.4
2008	12,895	4.2
2009	11,520	3.8
2010	11,163	3.6
2011	10,517	3.4
2012	9,945	3.2

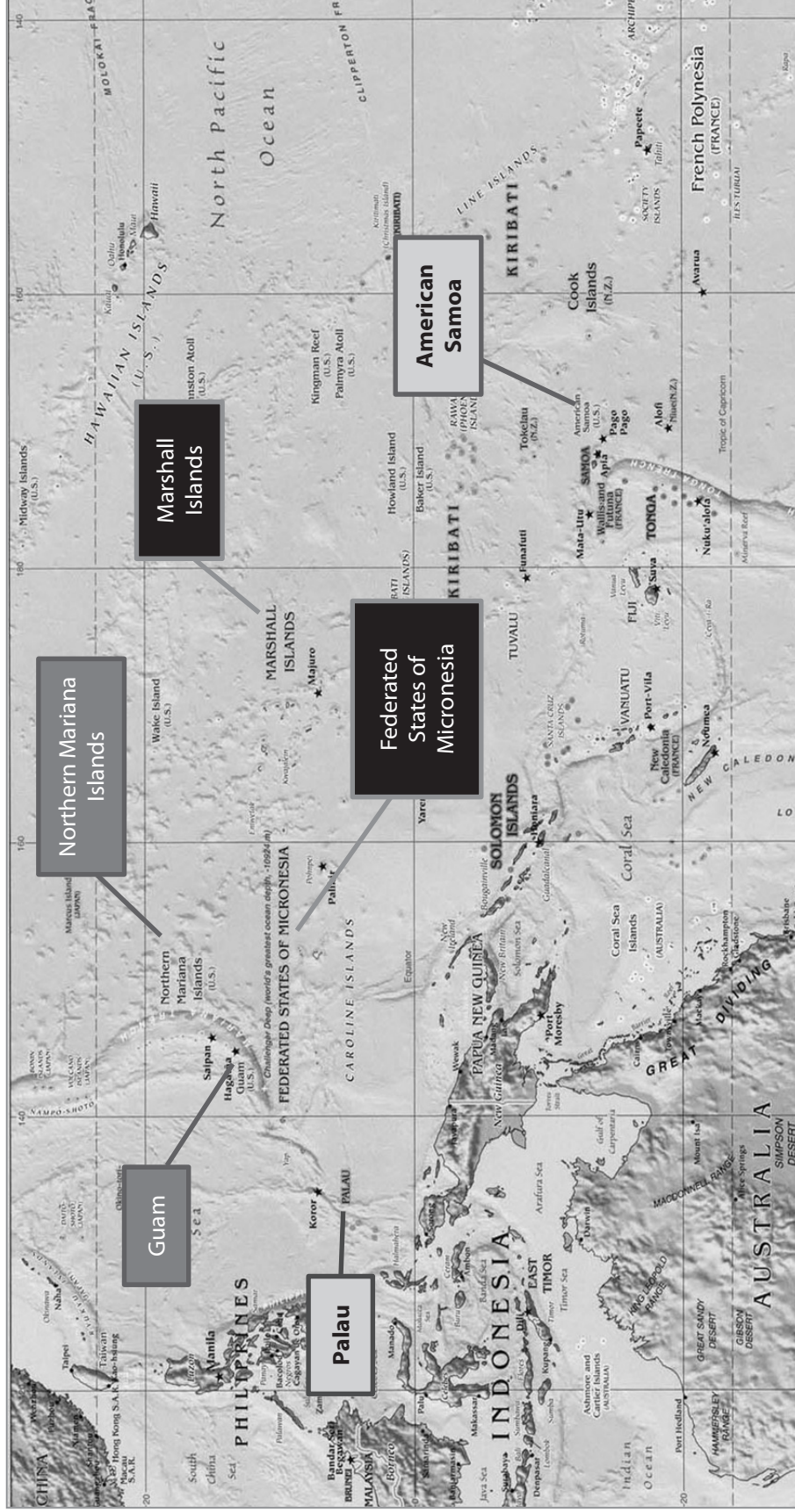
*Cases per 100,000. Updated as of June 10, 2013.

TB Case Rates,* United States, 2012



*Cases per 100,000.

Map of U.S.-Affiliated Pacific Islands by TB Case Rates,* 2012



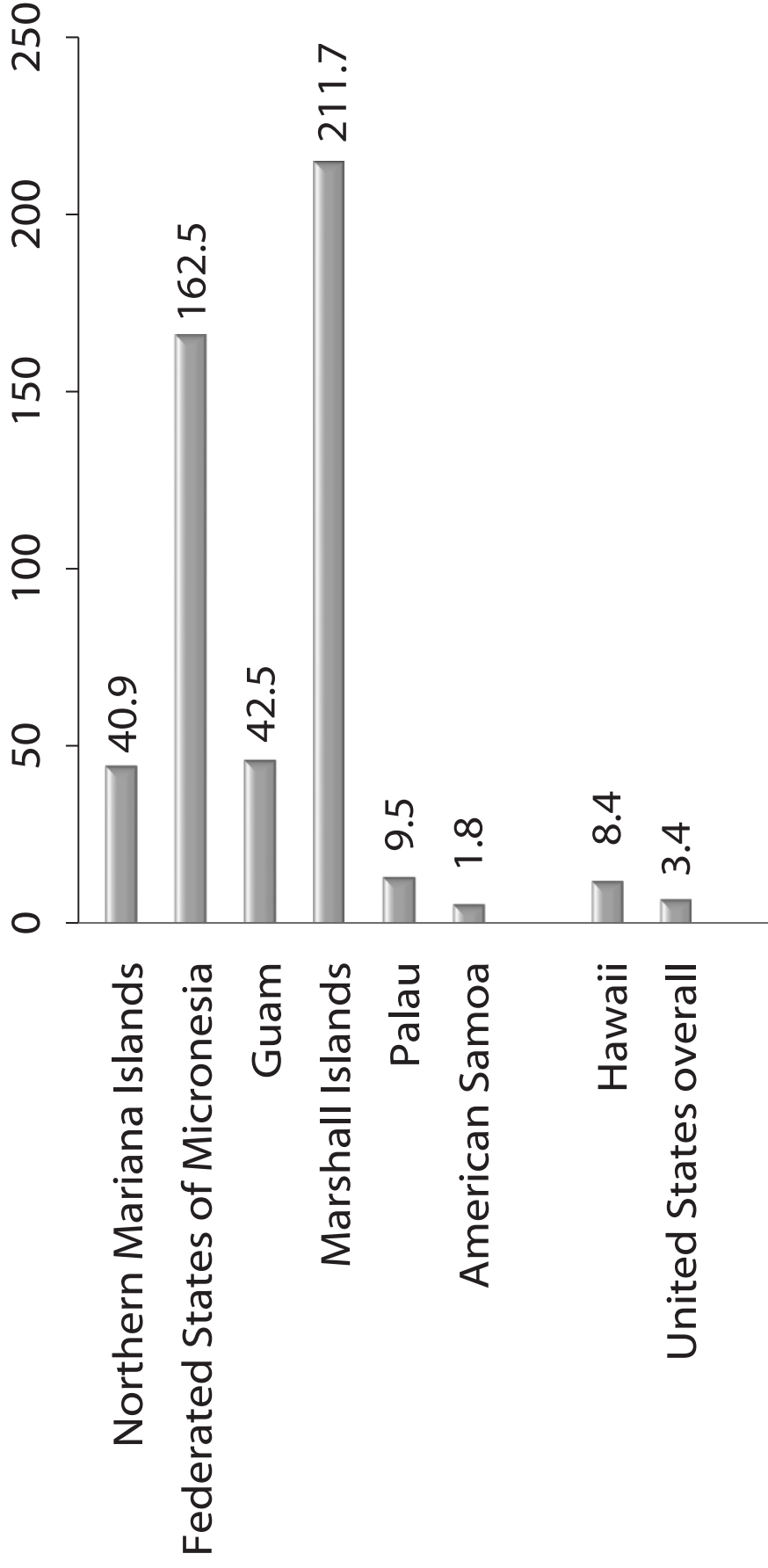
≥50

10-49.9

≤9.9

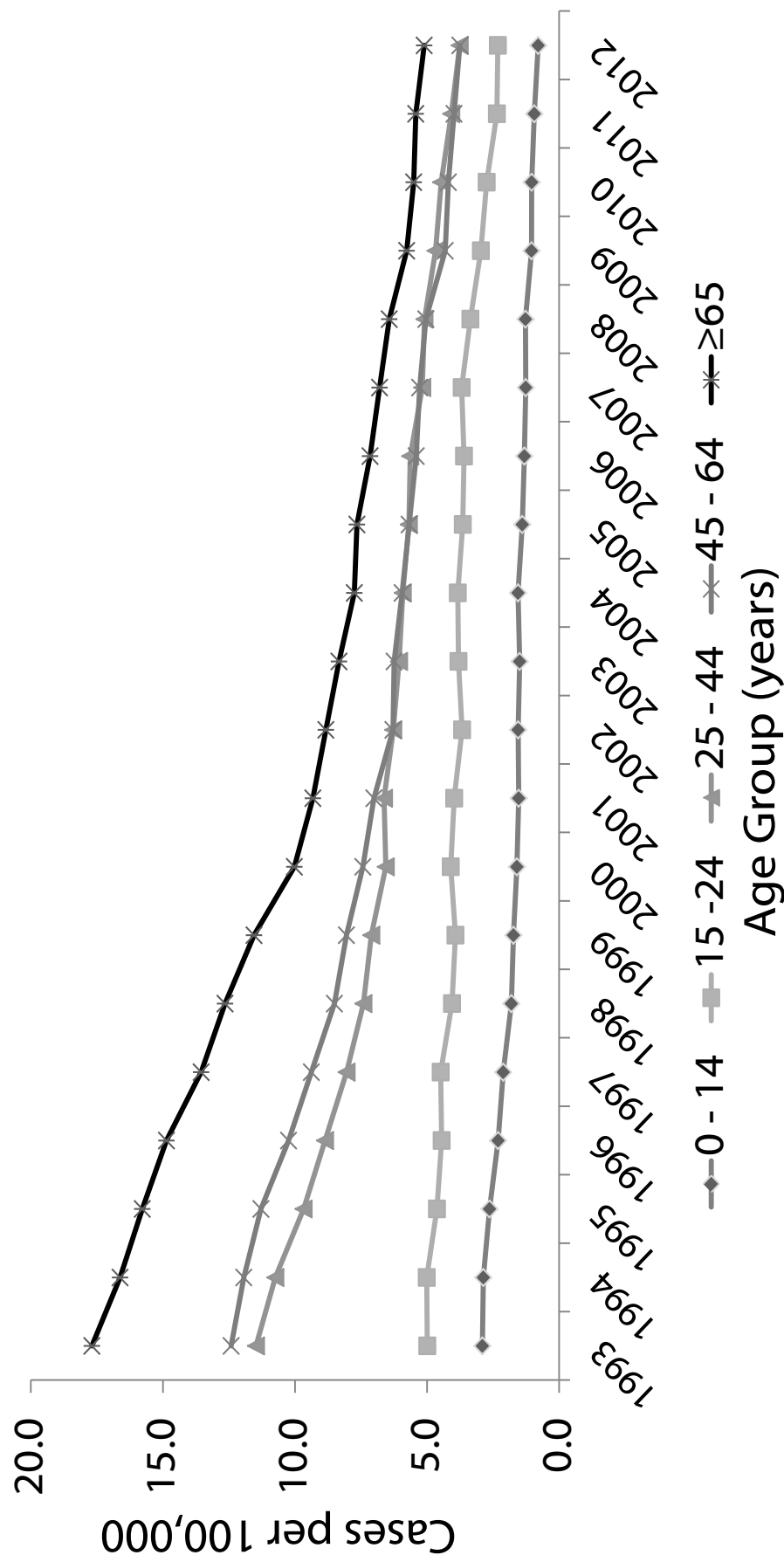
*Case per 100,000

TB Case Rates,* U.S.-Affiliated Pacific Islands, 2012



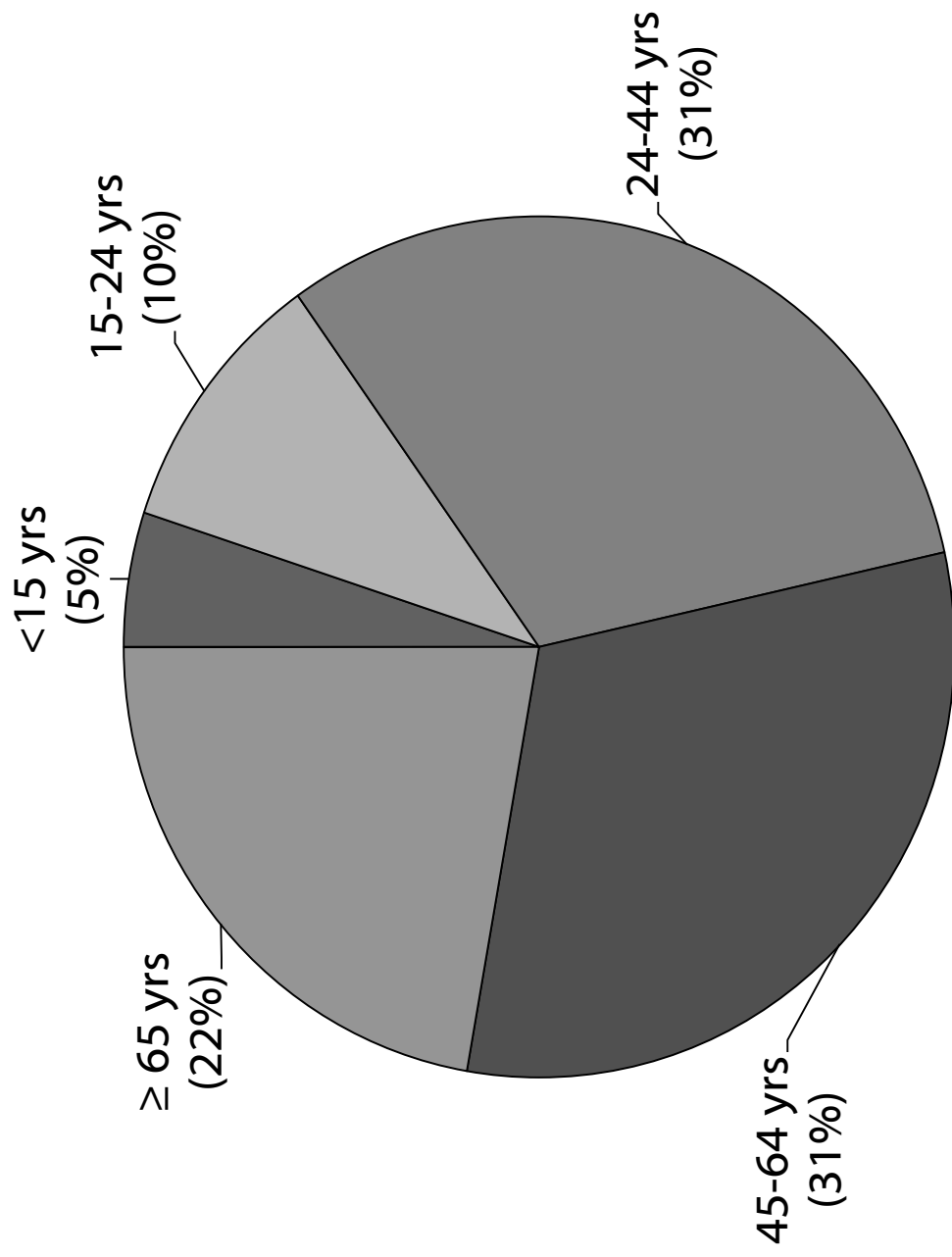
*Cases per 100,000

TB Case Rates* by Age Group **United States, 1993–2012**

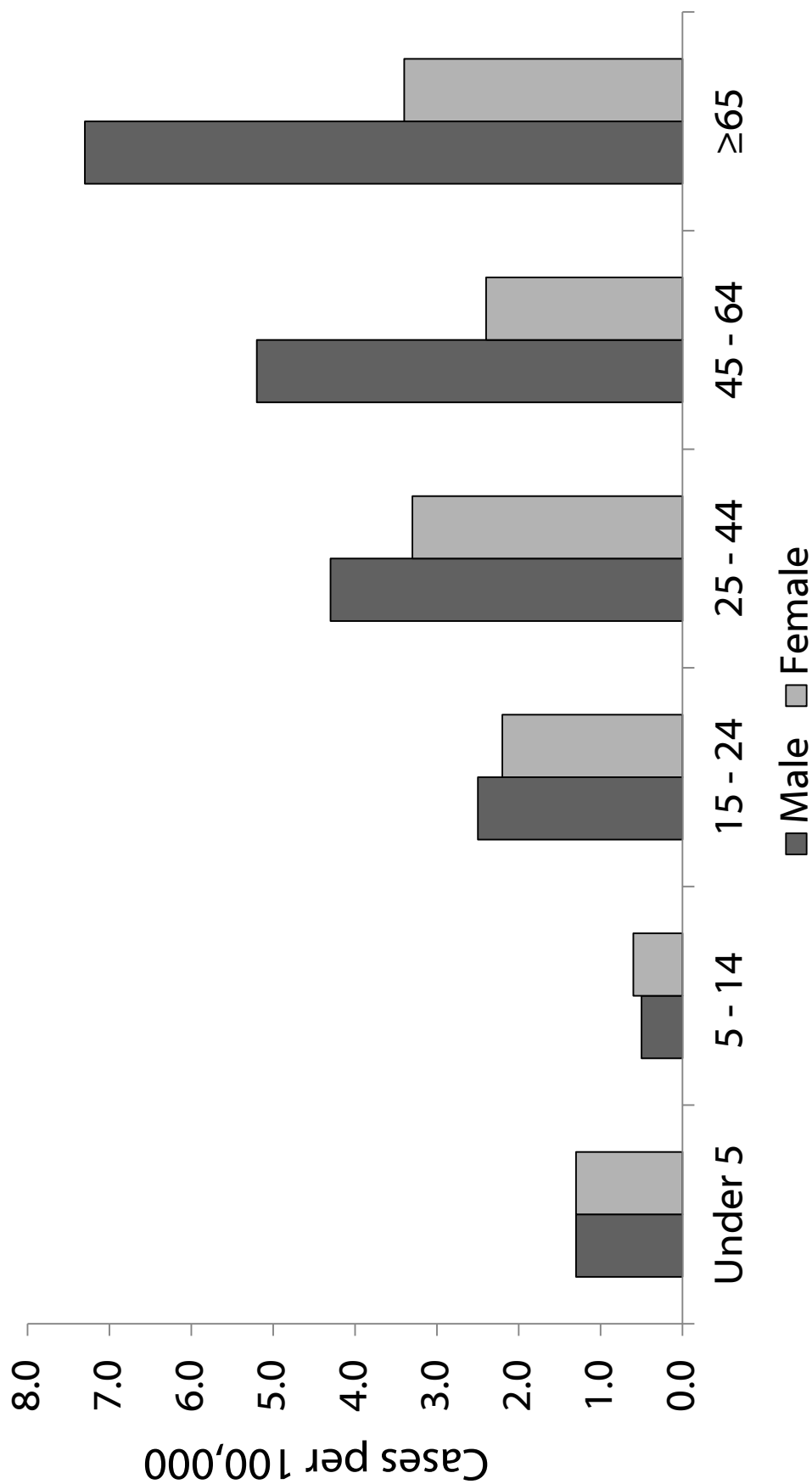


* Updated as of June 10, 2013.

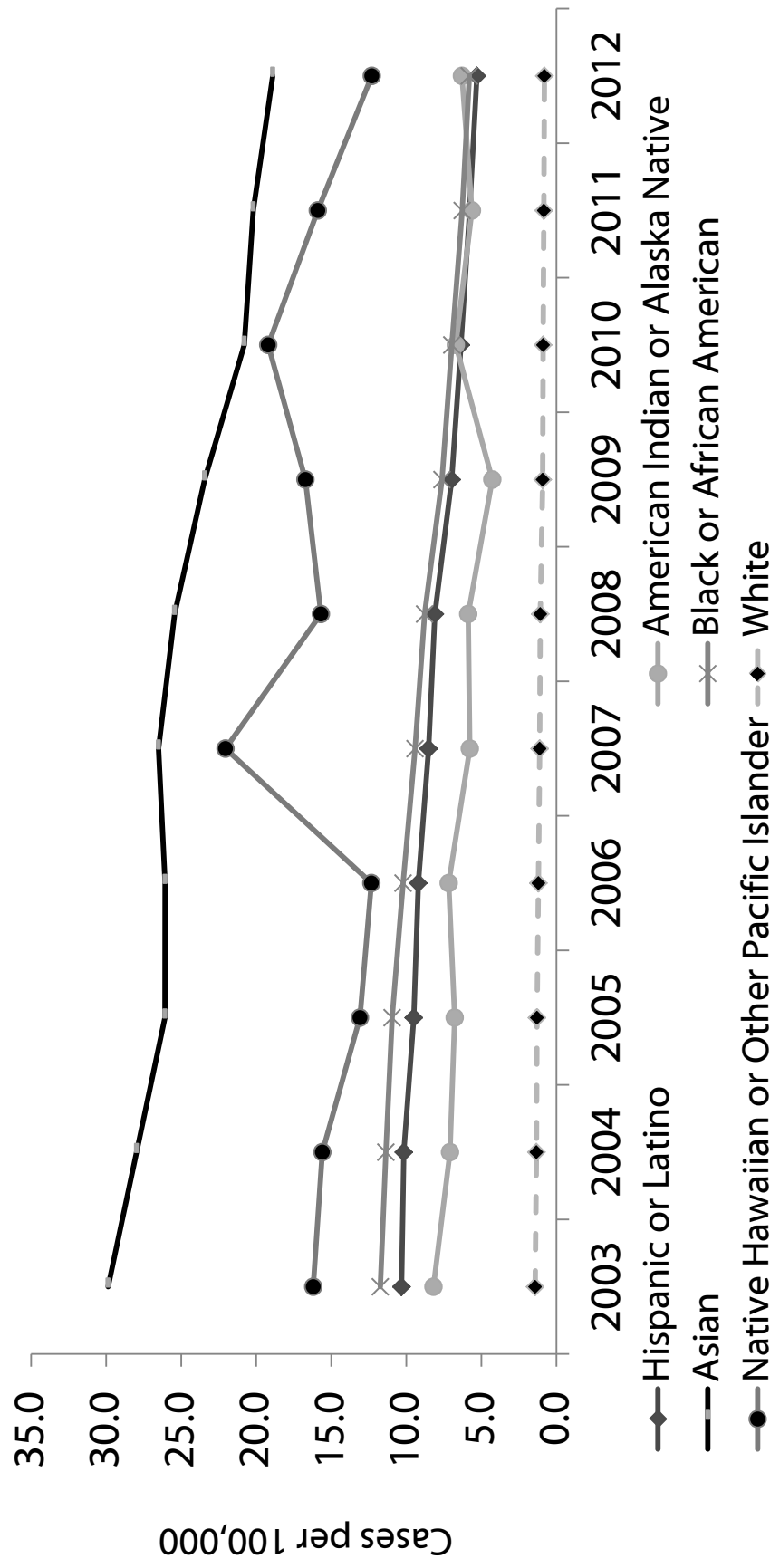
Reported TB Cases by Age Group, United States, 2011



TB Case Rates by Age Group and Sex, United States, 2012



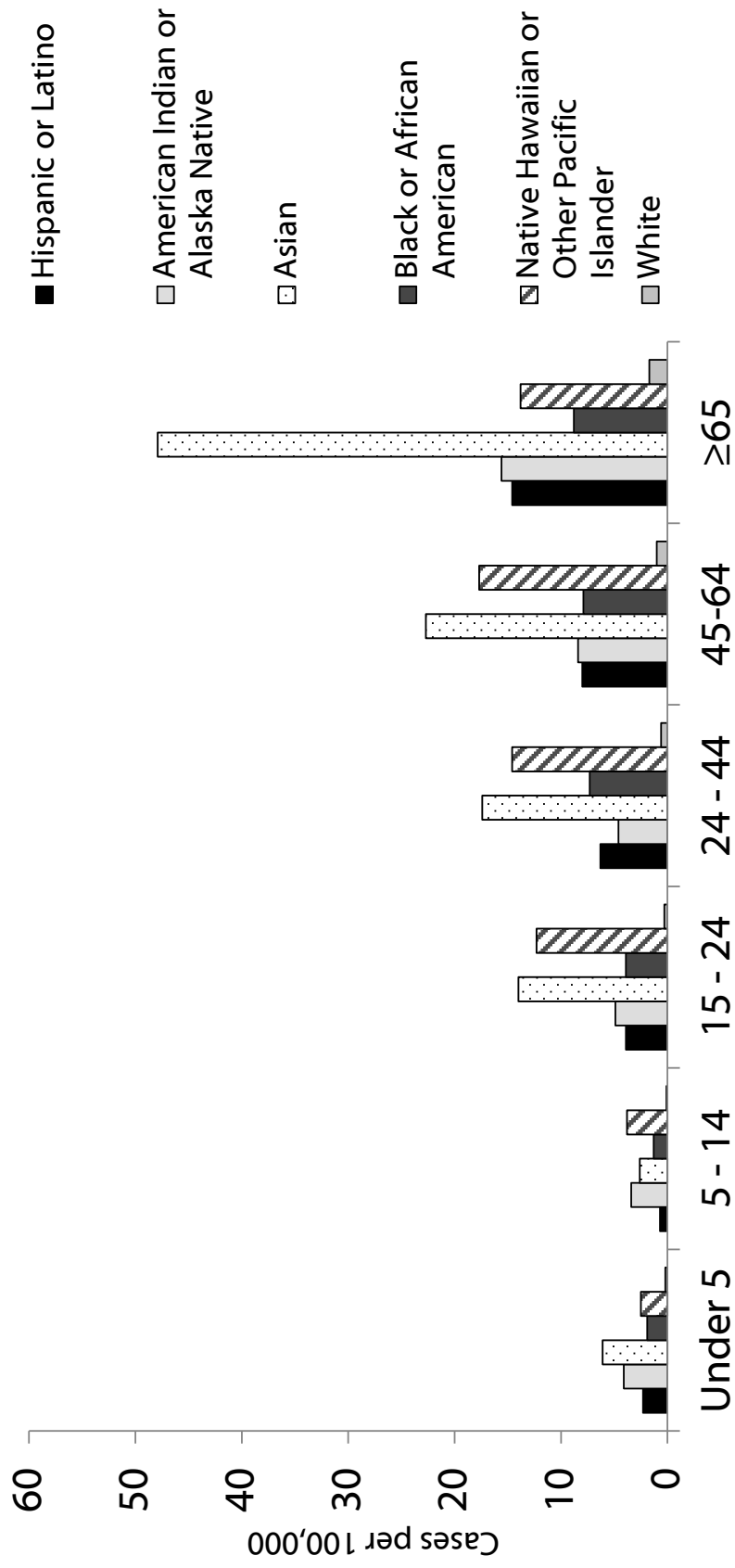
Surveillance Slide #10 TB Case Rates by Race/Ethnicity,* United States, 2003–2012**



*All races are non-Hispanic.

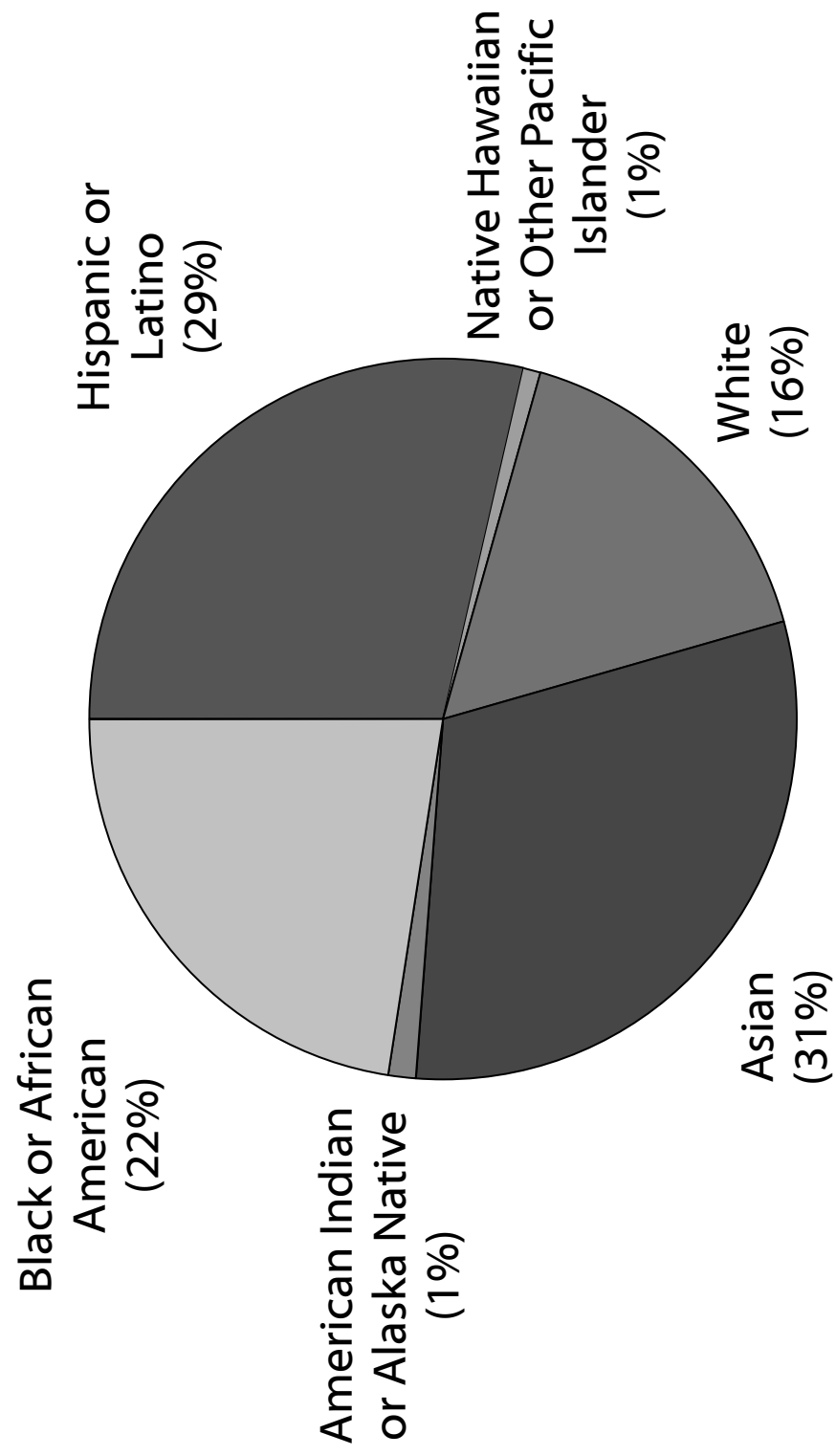
**Updated as of June 10, 2013.

TB Case Rates by Age Group and Race/Ethnicity,* United States, 2012



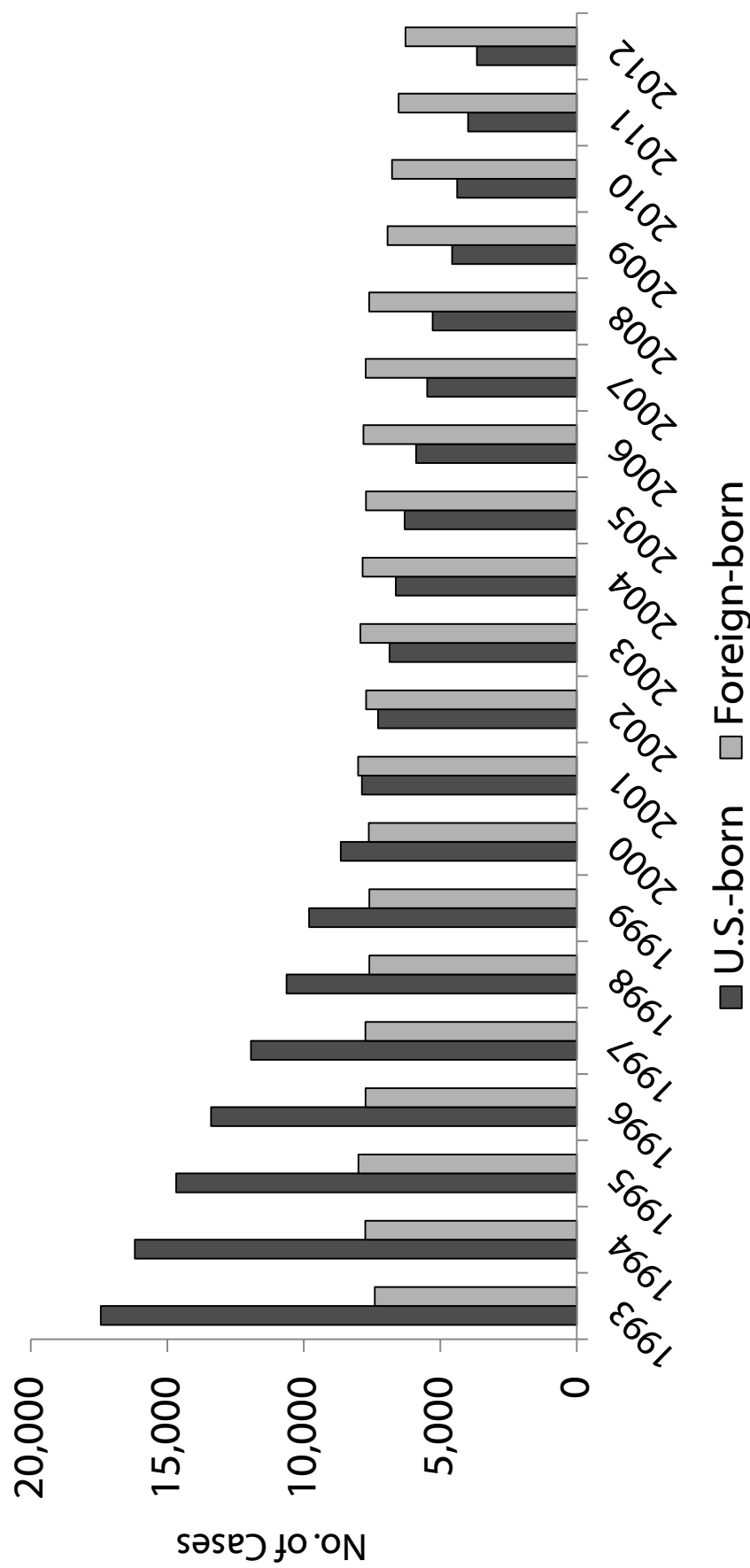
*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.

Reported TB Cases by Race/Ethnicity,* United States, 2012



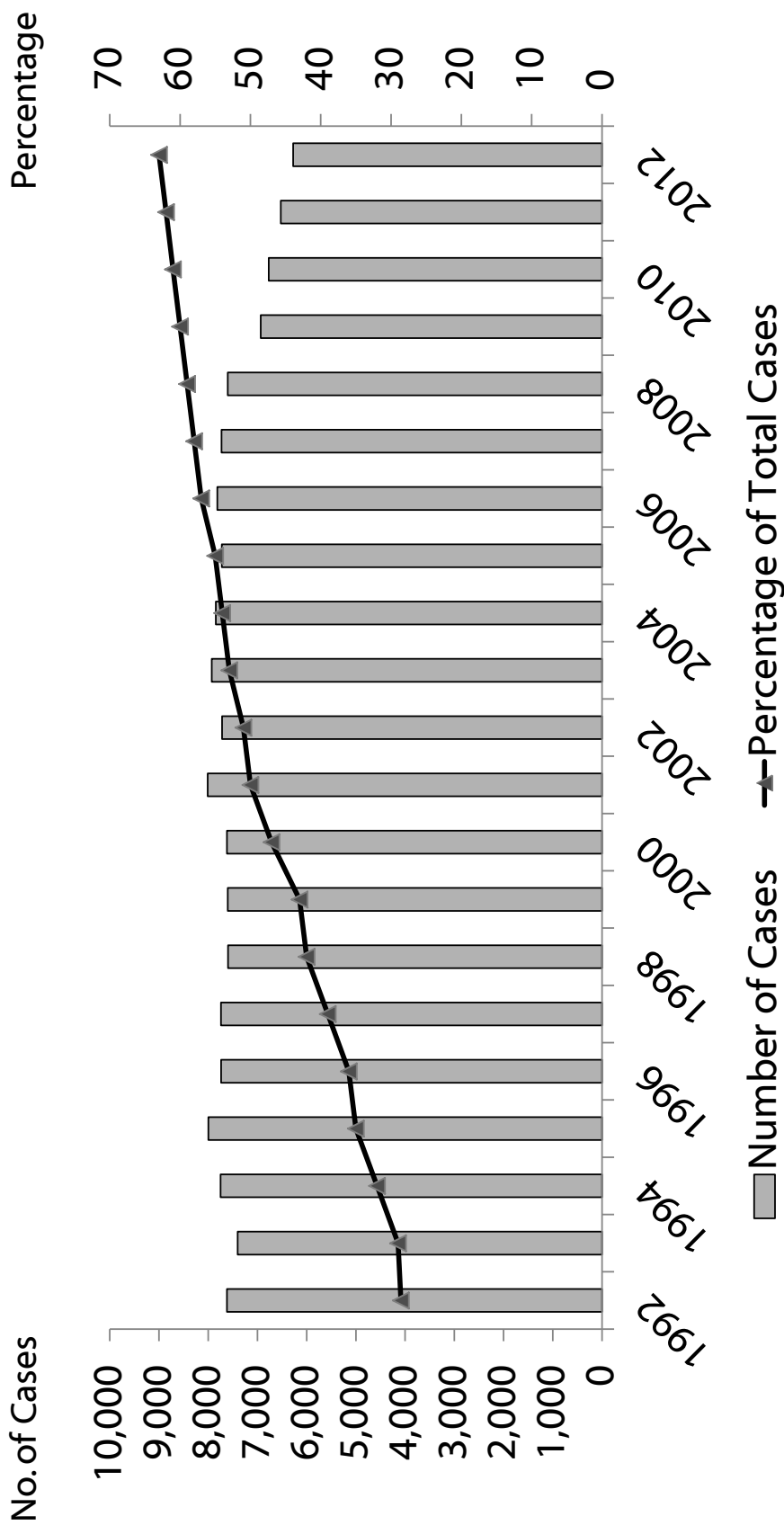
*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.

Number of TB Cases in U.S.-born vs. Foreign-born Persons, United States, 1993–2012*



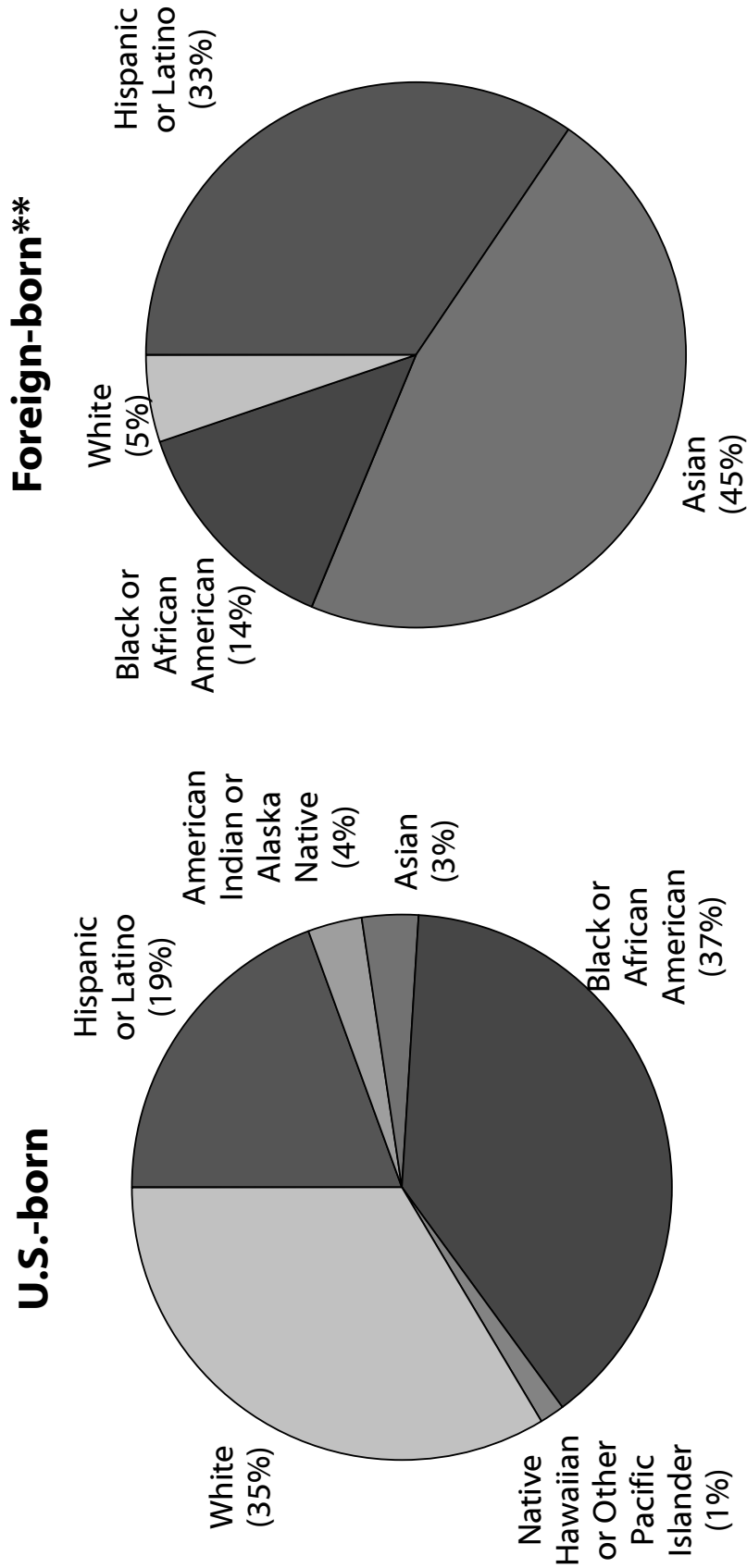
*Updated as of June 10, 2013

Trends in TB Cases in Foreign-born Persons, United States, 1992 – 2012*



*Updated as of June 10, 2013

Reported TB Cases by Origin and Race/Ethnicity,* United States, 2012



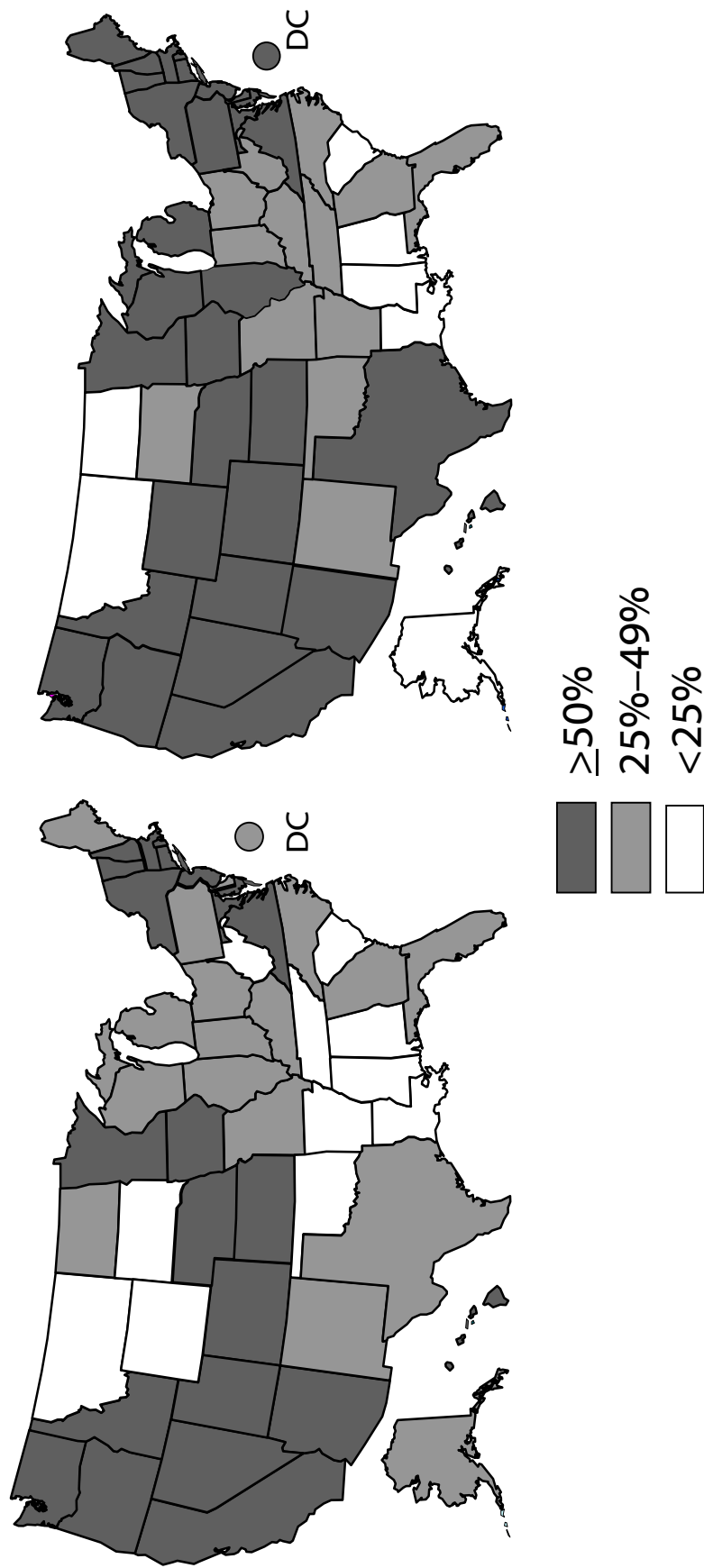
*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.

** American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander accounted for less than 1% of foreign-born cases and are not shown.

Percentage of TB Cases Among Foreign-born Persons, United States*

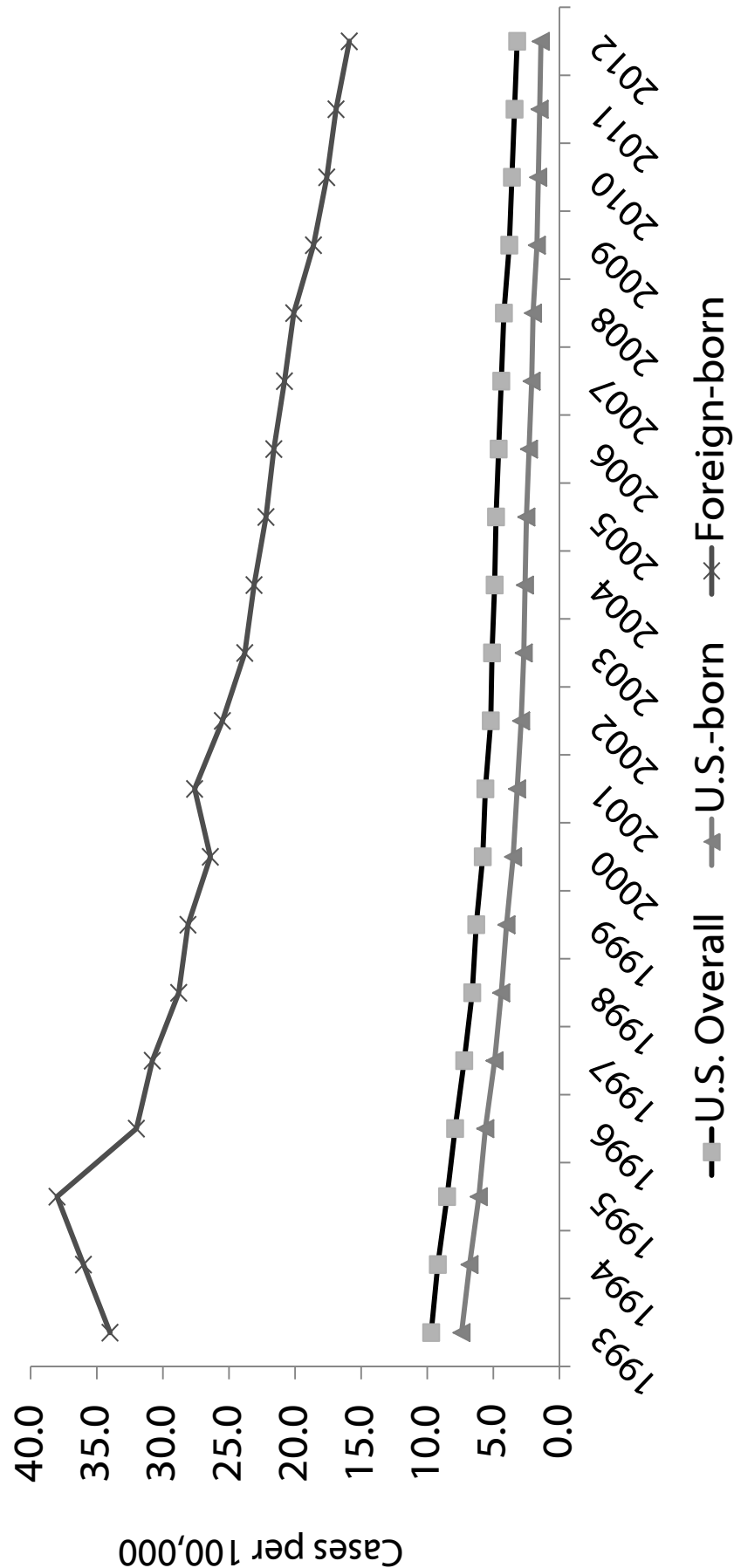
2002

2012



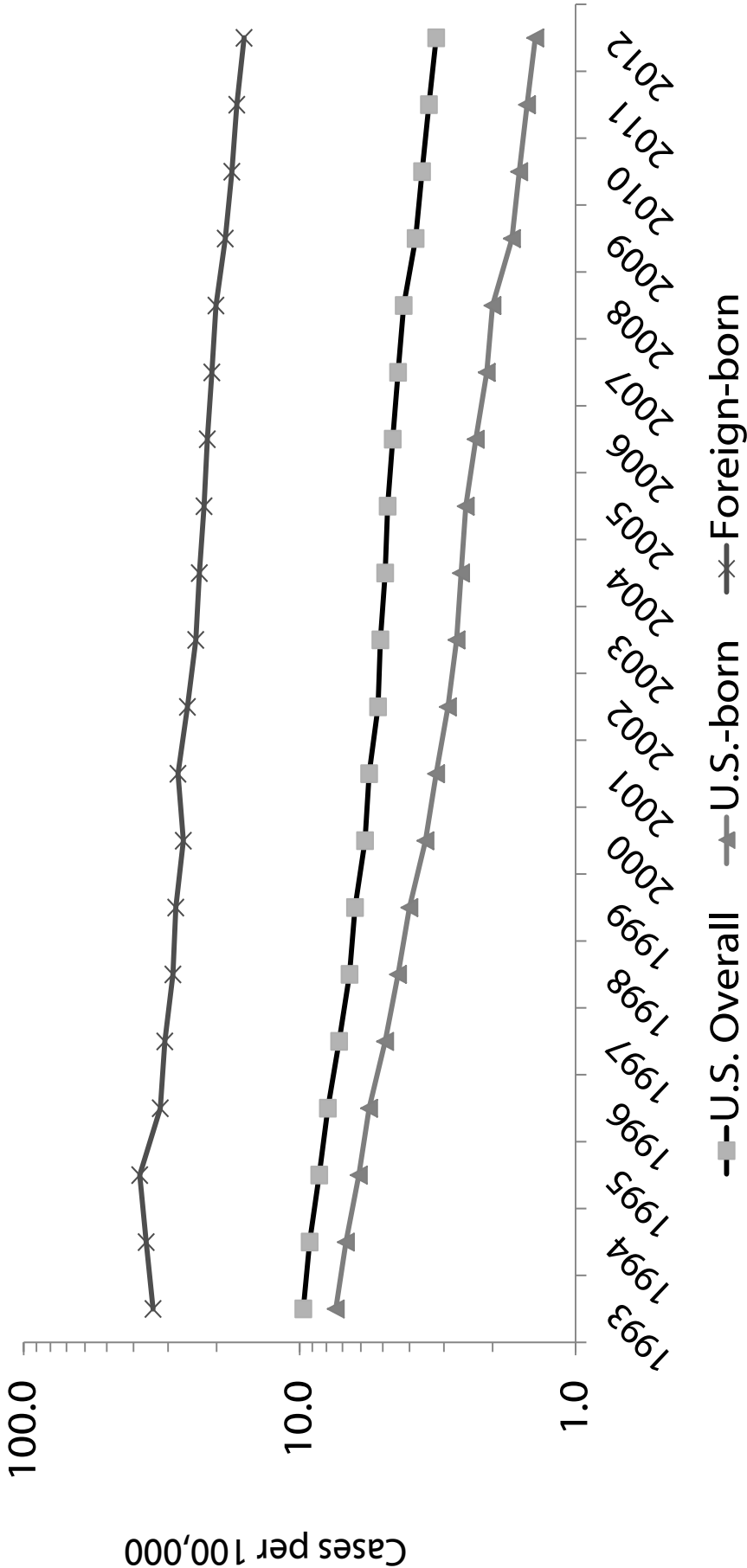
*Updated as of June 10, 2013.

TB Case Rates in U.S.-born vs. Foreign-born Persons, United States, 1993 – 2012*



*Updated as of June 10, 2013.

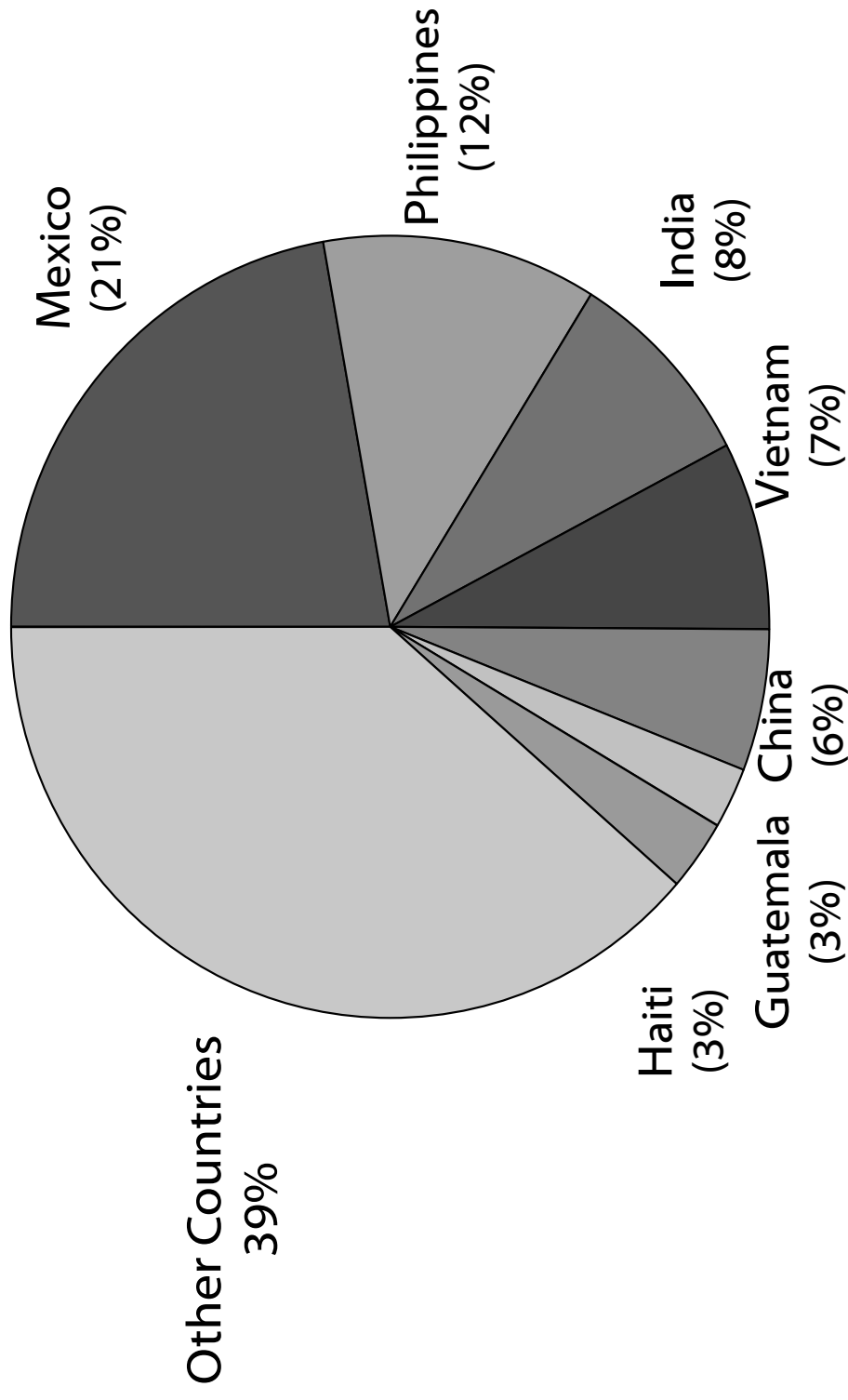
TB Case Rates in U.S.-born vs. Foreign-born Persons, United States,* 1993 – 2012**



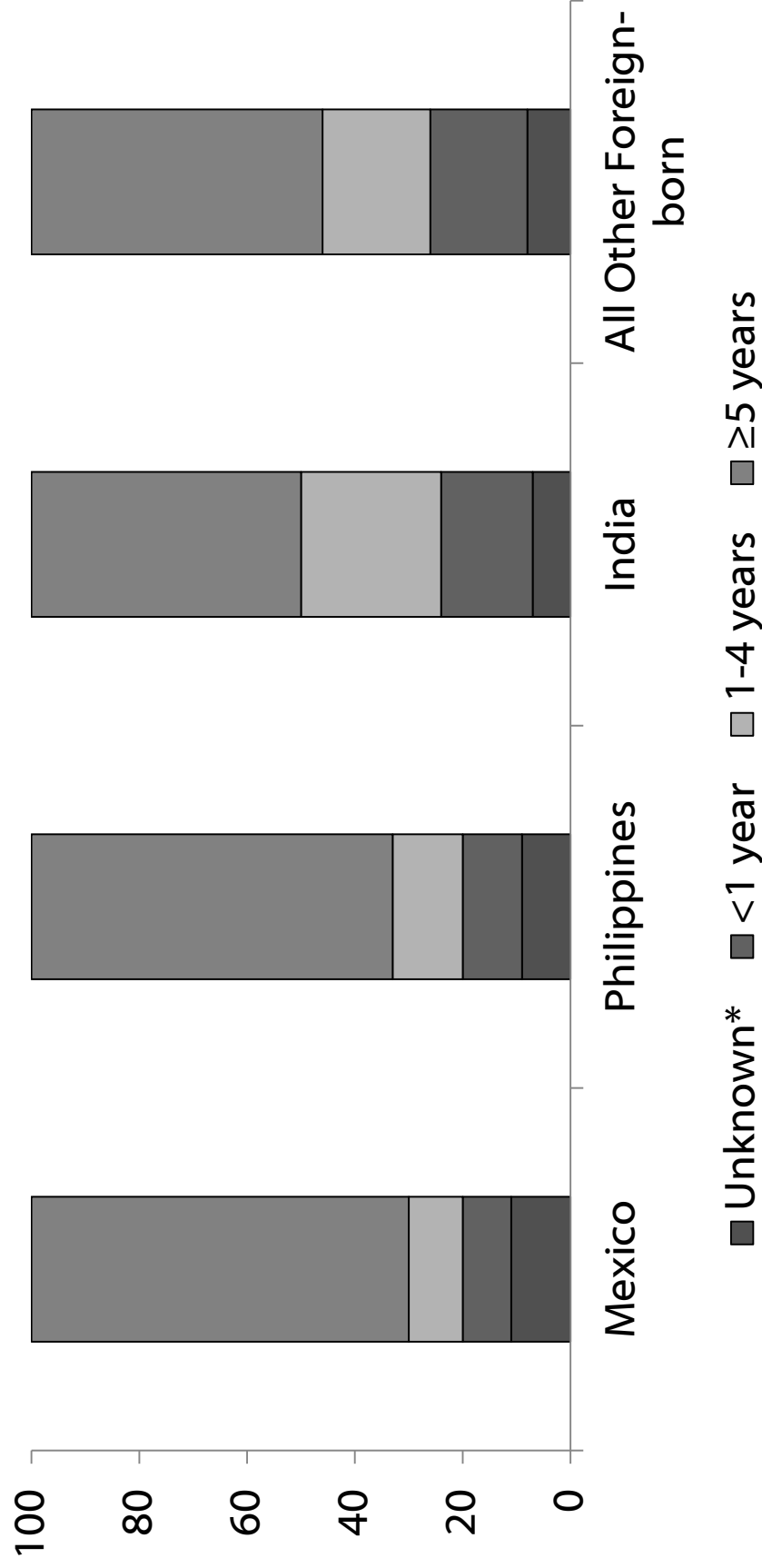
*Includes the same data as slide 15, but rates presented on a logarithmic scale.

**Updated as of June 10, 2013.

Countries of Birth of Foreign-born Persons Reported with TB, United States, 2012

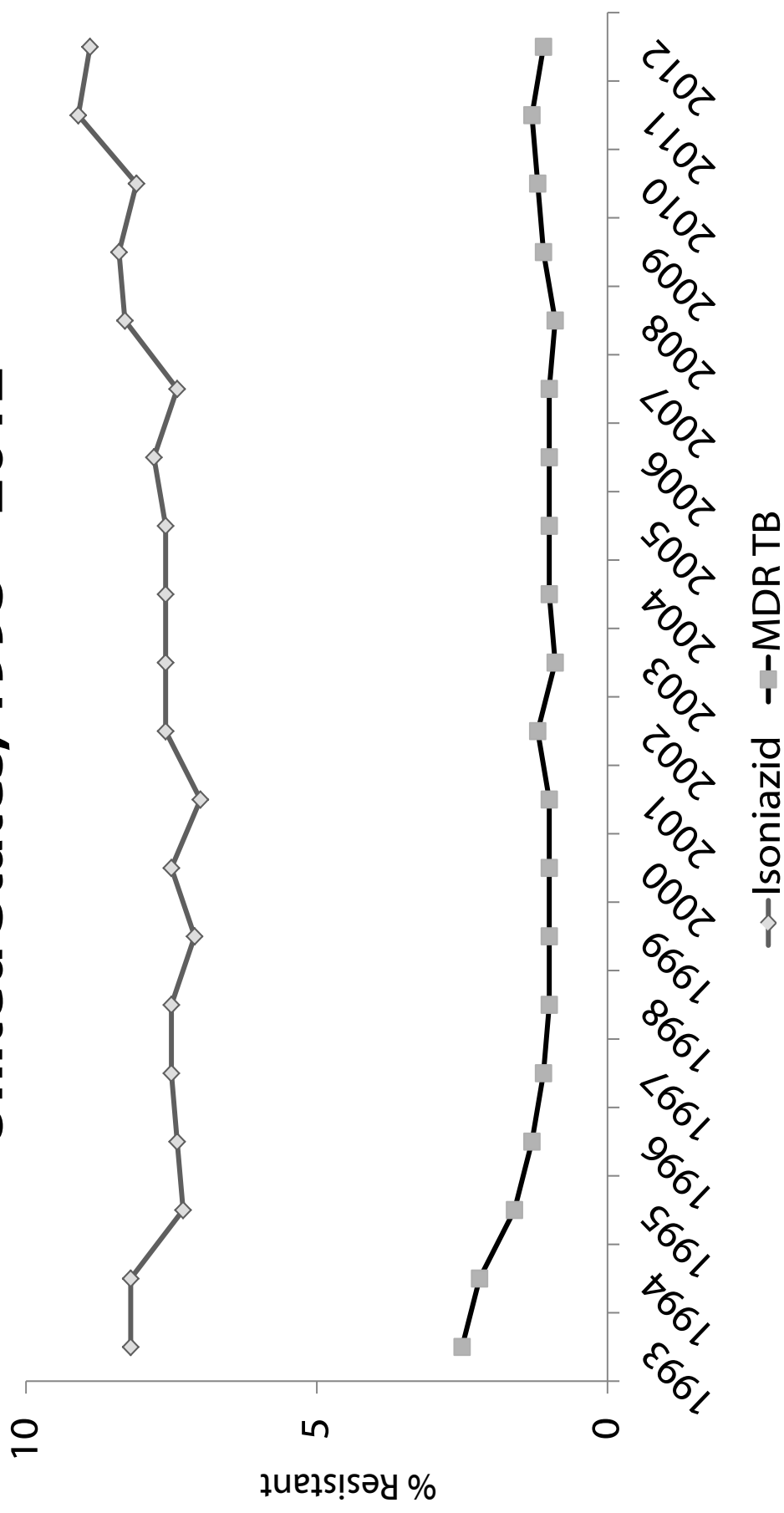


Percent of Foreign-born with TB by Time of Residence in U.S. Prior to Diagnosis, 2012



*Foreign-born TB patients for whom information on length of residence in the U.S. prior to diagnosis is unknown or missing

Primary Anti-TB Drug Resistance, United States, 1993 – 2012*

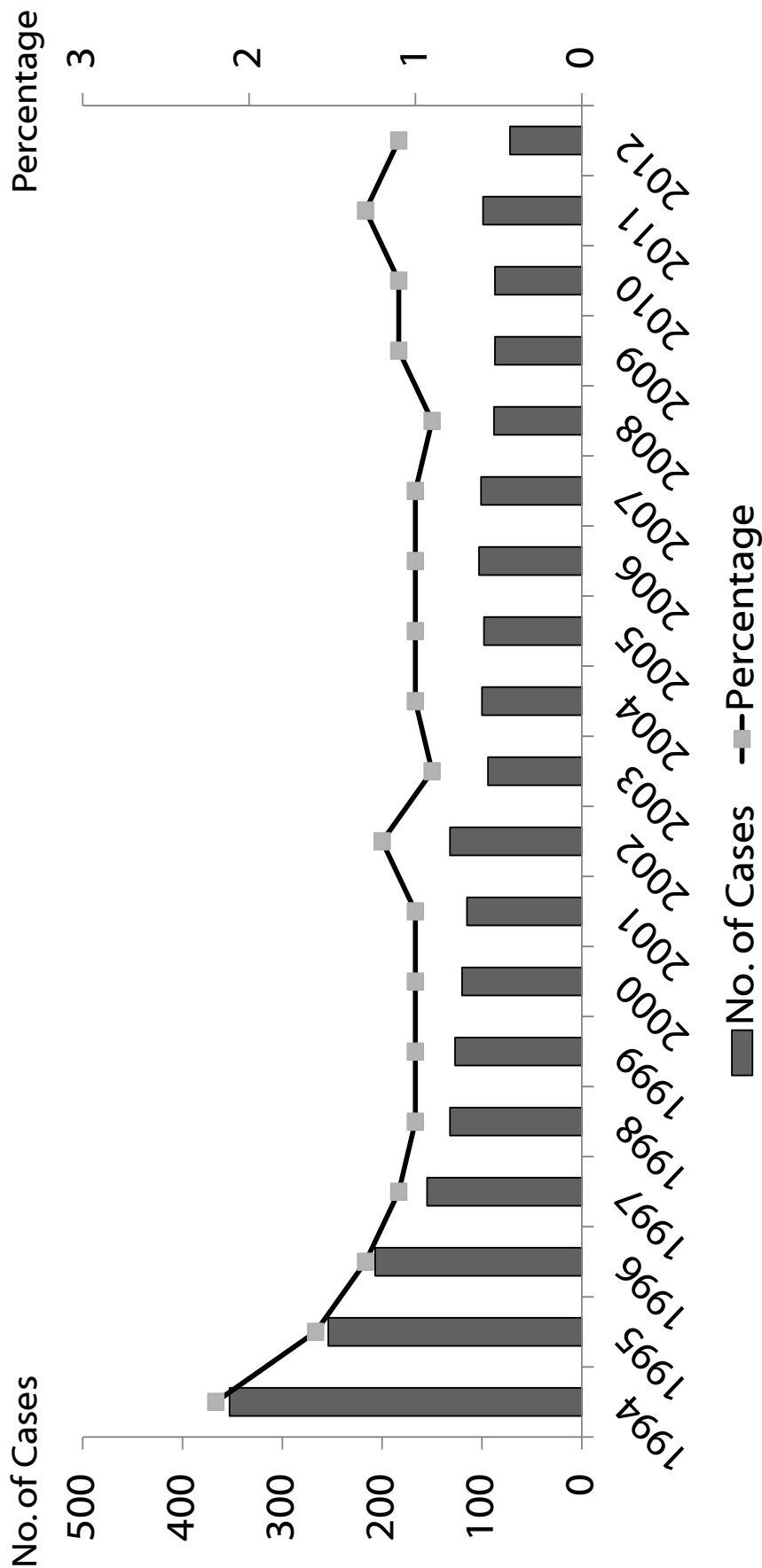


*Updated as of June 10, 2013.

Note: Based on initial isolates from persons with no prior history of TB. Multidrug resistant TB (MDR TB) is defined as resistance to at least isoniazid and rifampin

Surveillance Slide #22

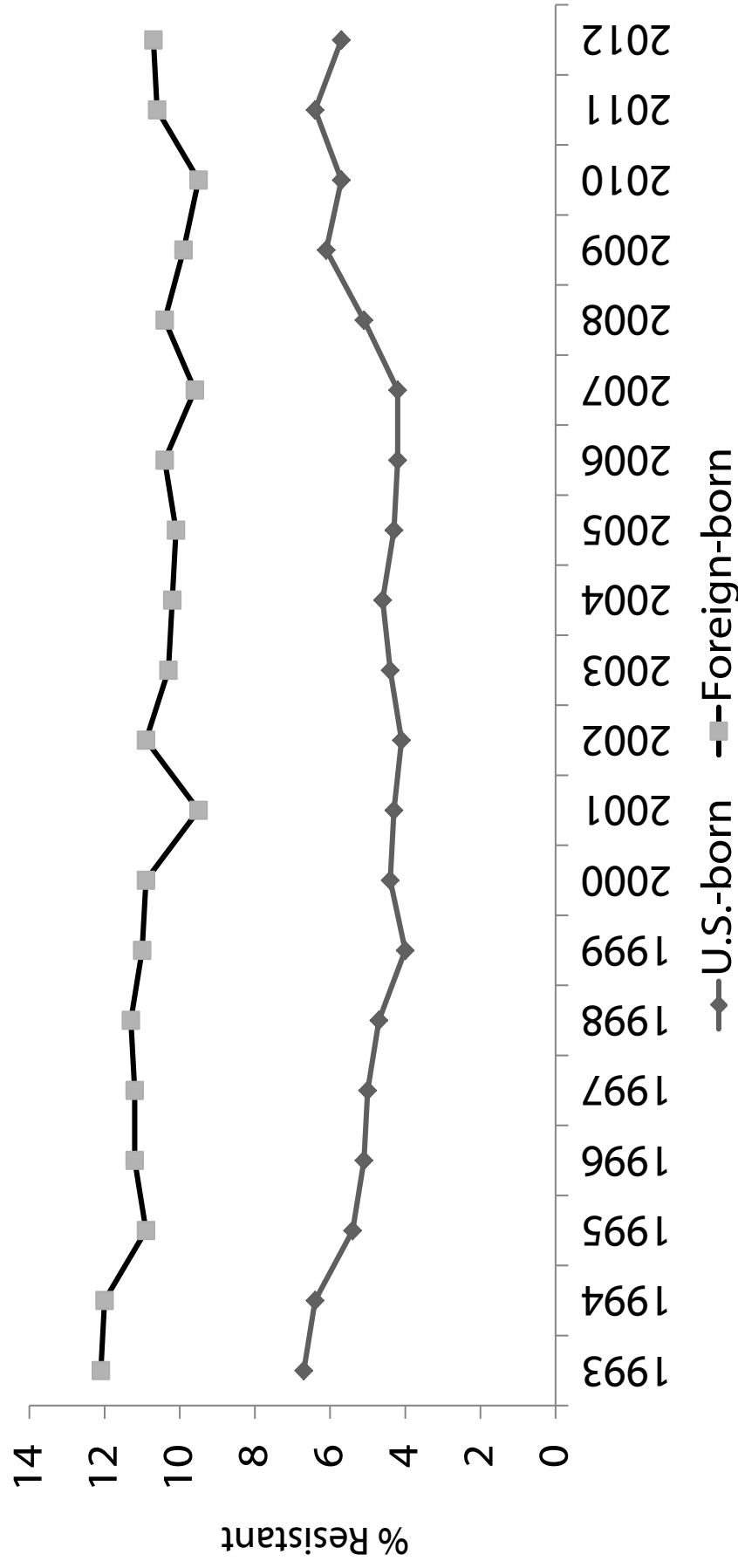
Primary MDR TB, United States, 1993 – 2012*



*Updated as of June 10, 2013.

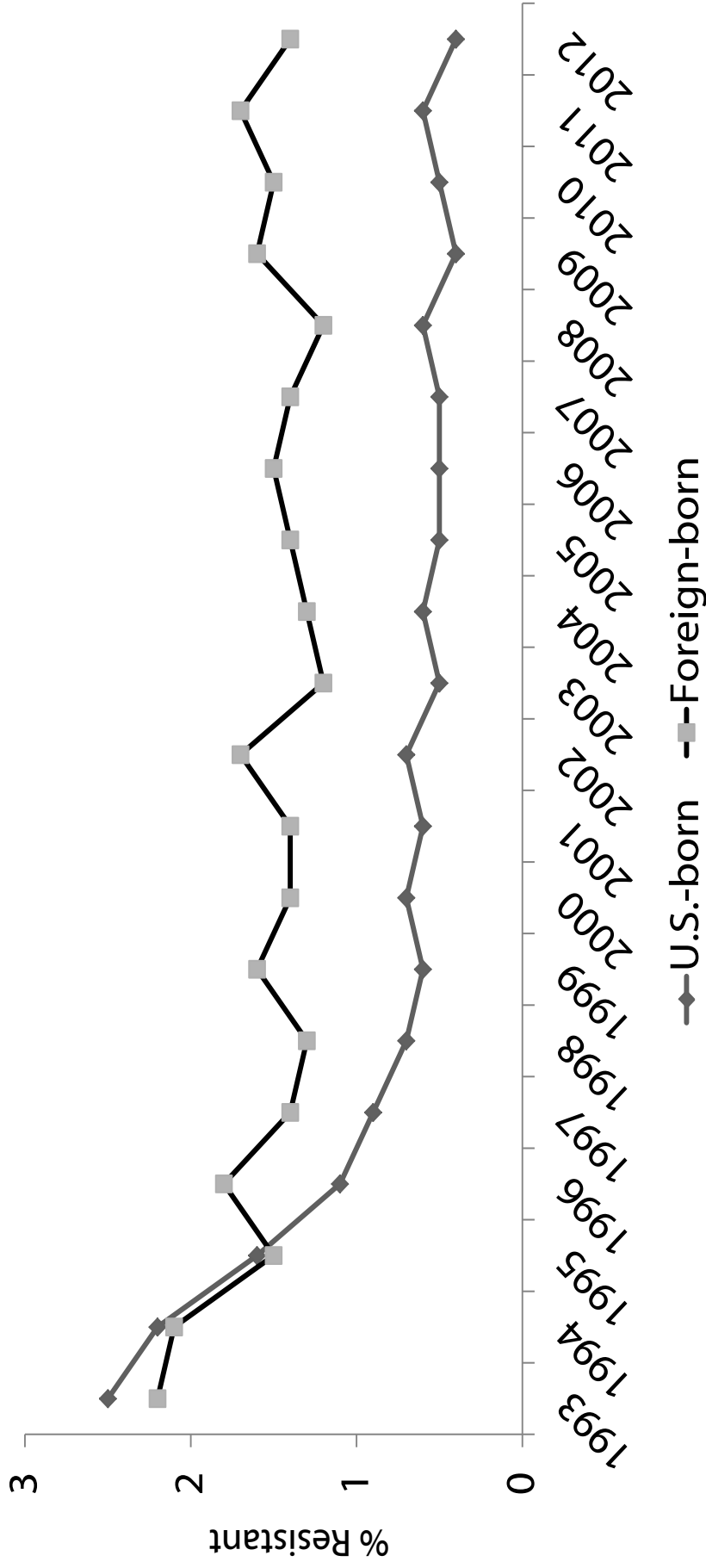
Note: Based on initial isolates from persons with no prior history of TB. MDR TB defined as resistance to at least isoniazid and rifampin.

Primary Isoniazid Resistance in U.S.-born vs. Foreign-born Persons, United States, 1993 – 2012*



*Updated as of June 10, 2013.

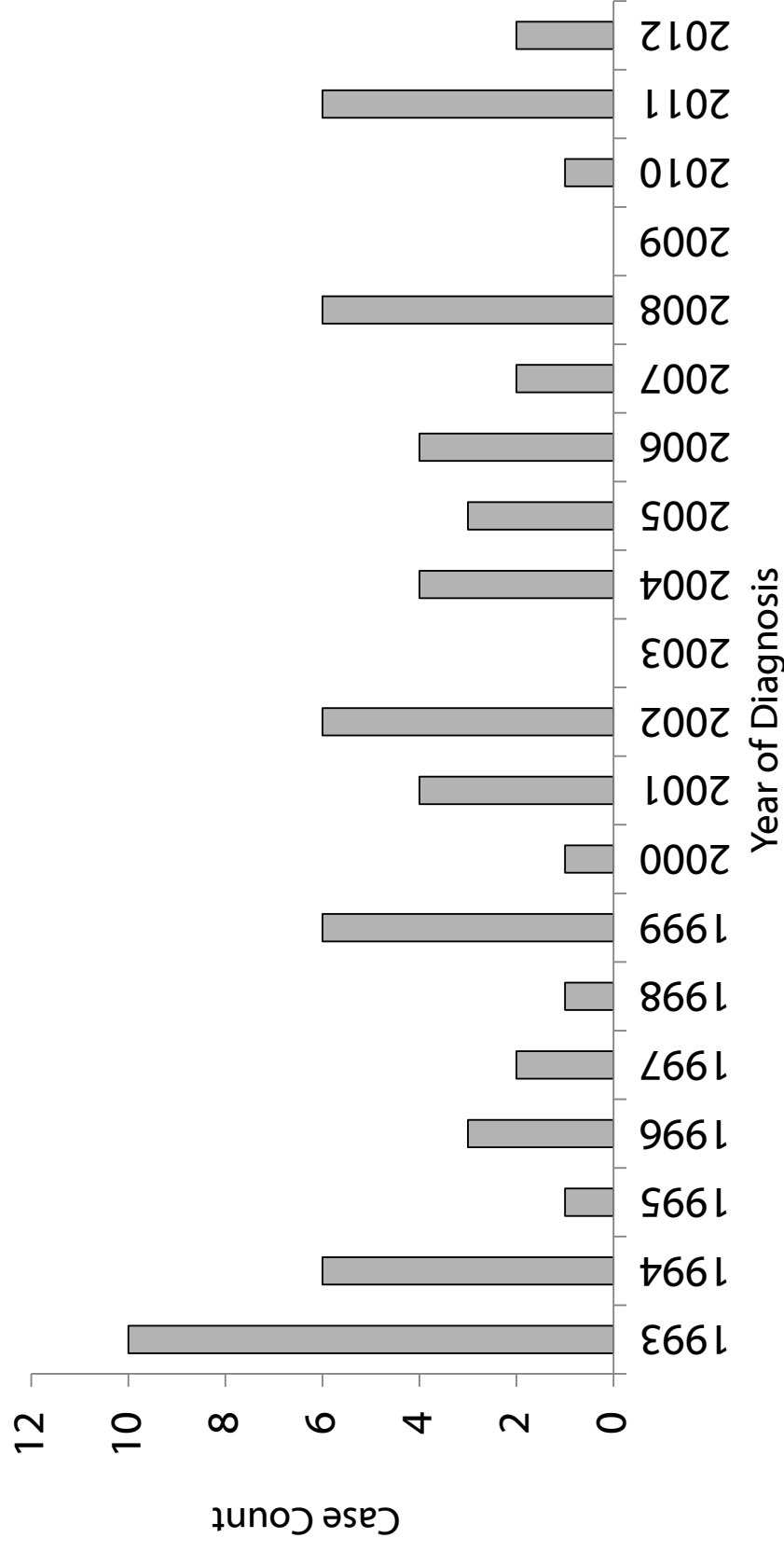
Primary MDR TB in U.S.-born vs. Foreign-born Persons United States, 1993 – 2012*



*Updated as of June 10, 2013.

Note: Based on initial isolates from persons with no prior history of TB. MDR TB defined as resistance to at least isoniazid and rifampin

XDR TB Case Count Defined on Initial DST* by Year, 1993 – 2012**

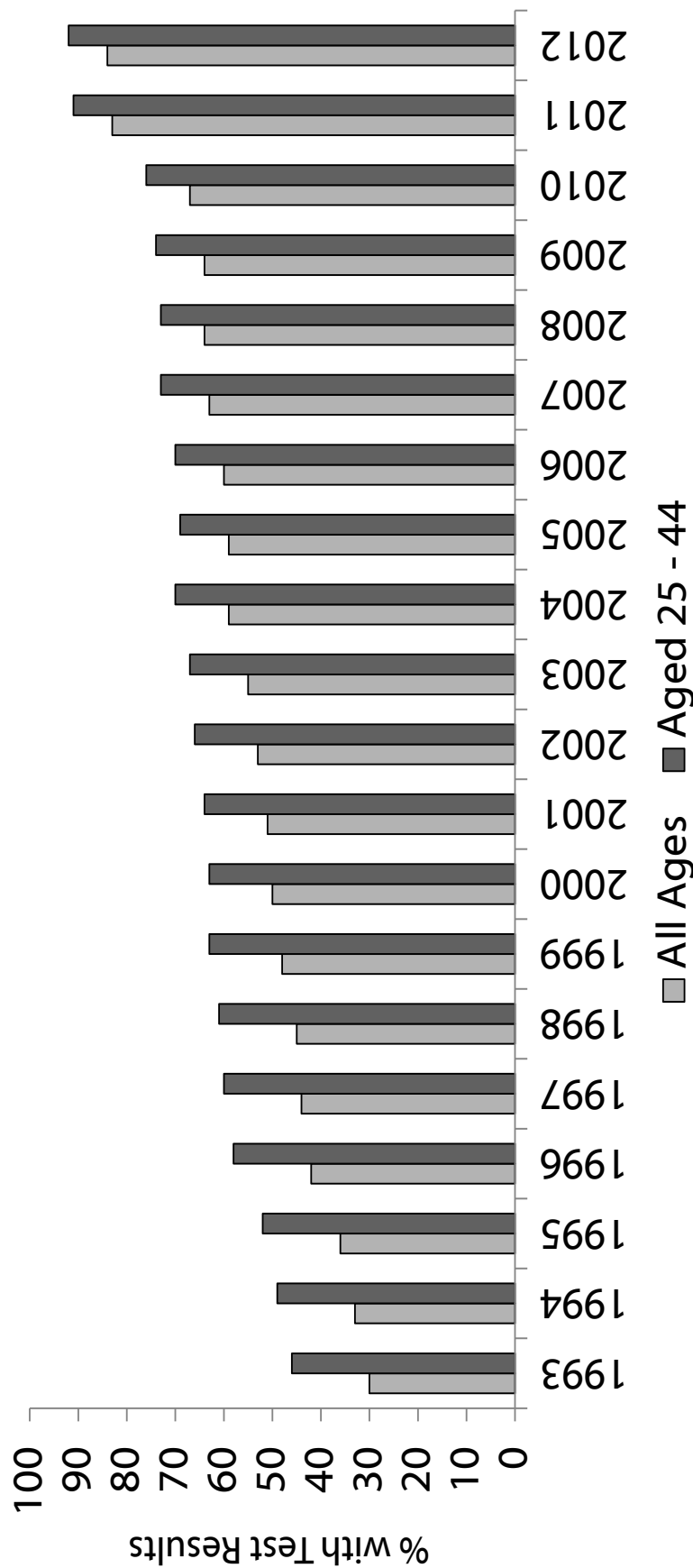


* Drug susceptibility test

** Updated as of June 10, 2013.

Note: Extensively drug-resistant TB (XDR TB) is defined as resistance to isoniazid and rifampin, plus resistance to any fluoroquinolone and at least one of three injectable second-line anti-TB drugs

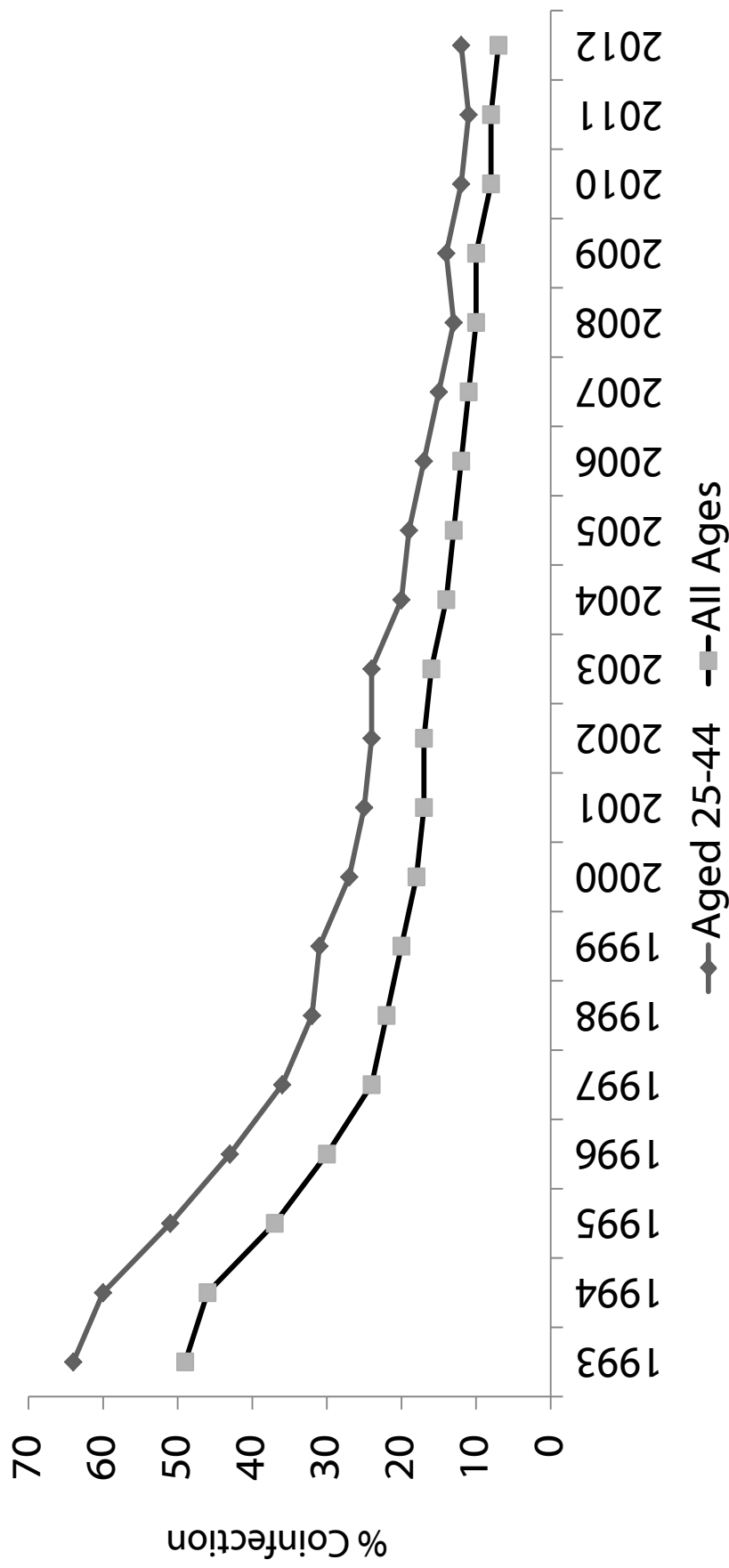
Reporting of HIV Test Results in Persons with TB by Age Group, United States, 1993 – 2012*



*Updated as of June 10, 2013.

Note: Includes persons with positive, negative, or indeterminate HIV test results and persons from California with co-diagnosis of TB and AIDS. Rhode Island did not report HIV test results for years 1993–1997. HIV test results for Vermont are not included for years 2007–2010. HIV test results for California are not included for years 2005 - 2010

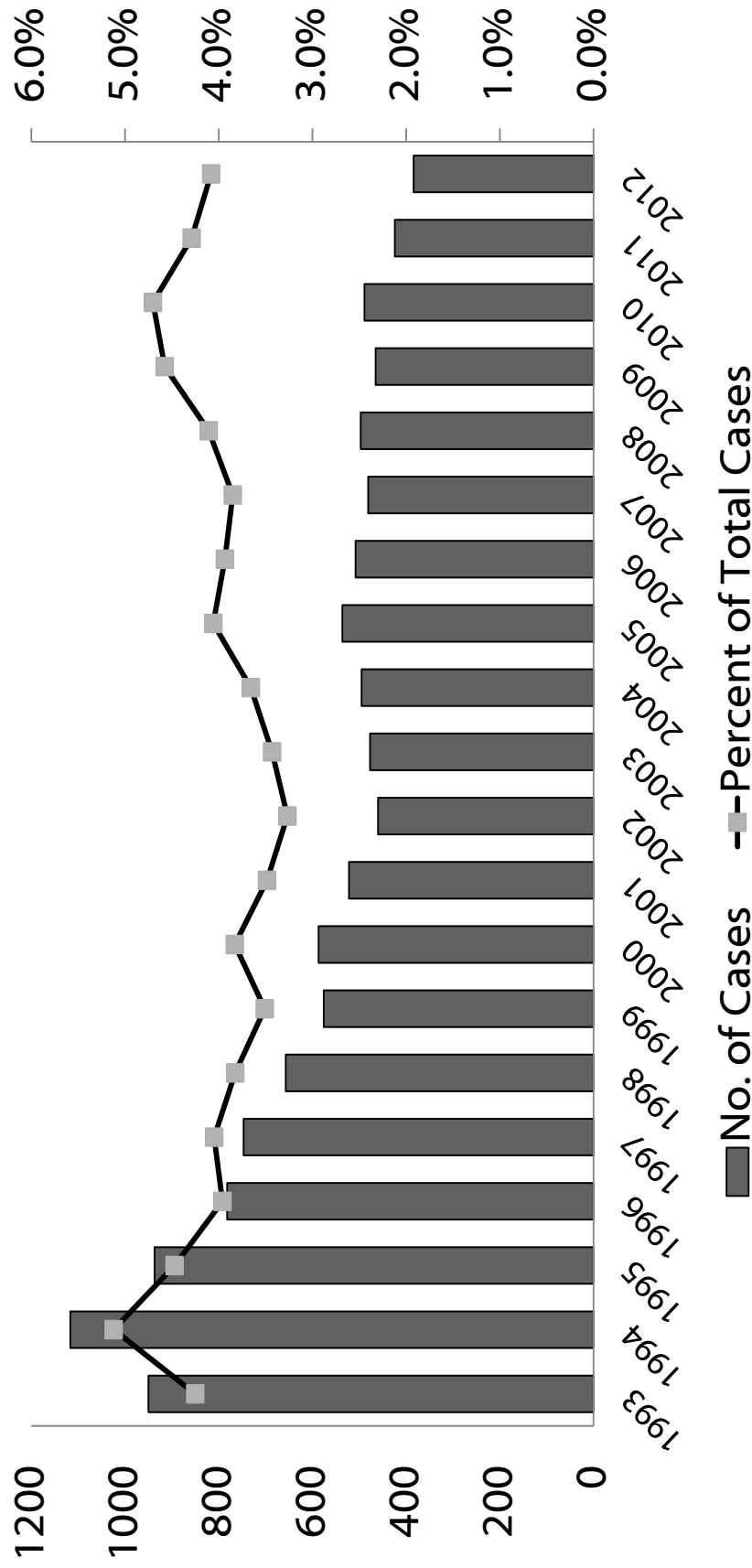
Estimated HIV Coinfection in Persons Reported with TB, United States, 1993 – 2012*



*Updated as of June 10, 2013

Note: Minimum estimates based on reported HIV-positive status among all TB cases in the age group

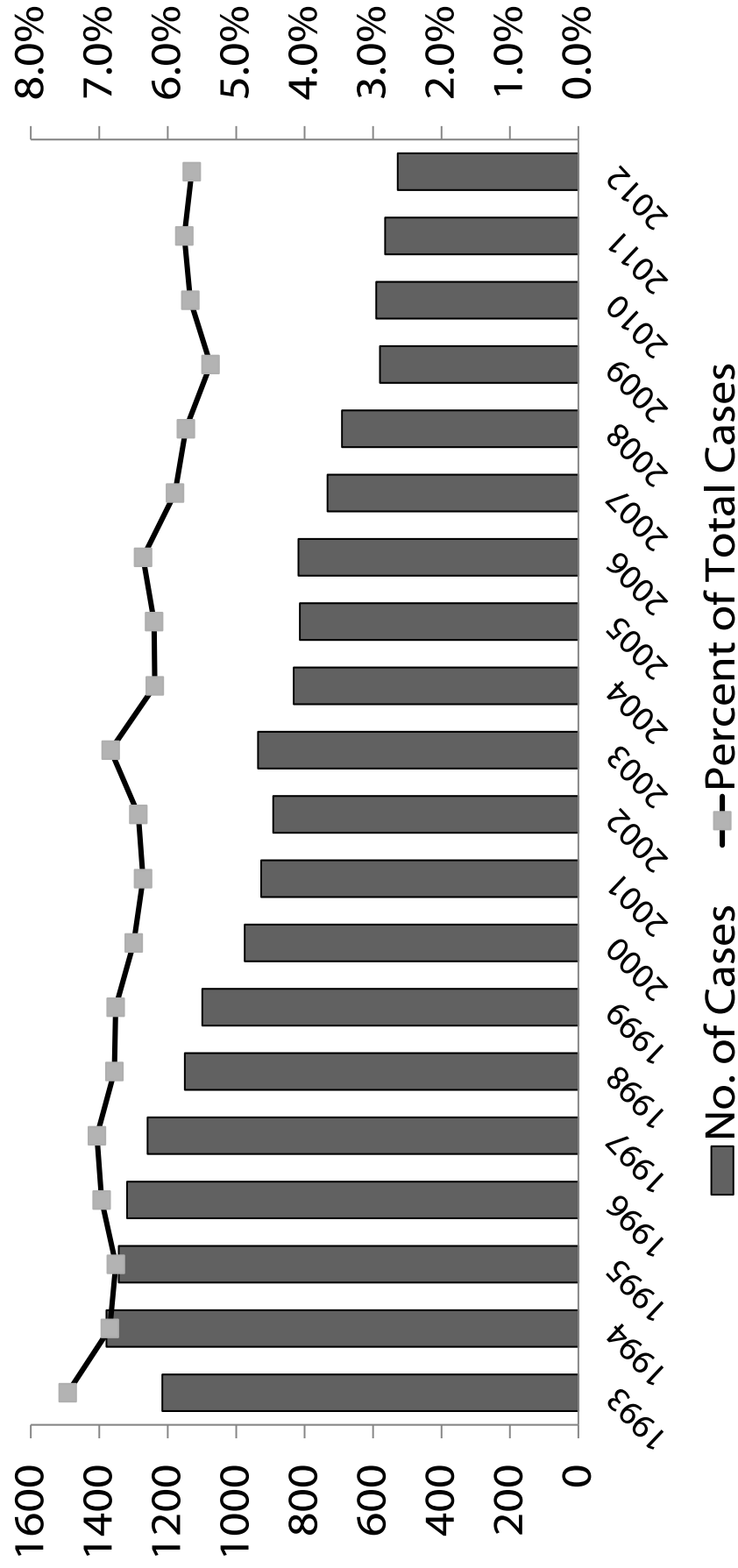
TB Cases by Residence in Correctional Facilities, Age ≥15, United States, 1993-2012*



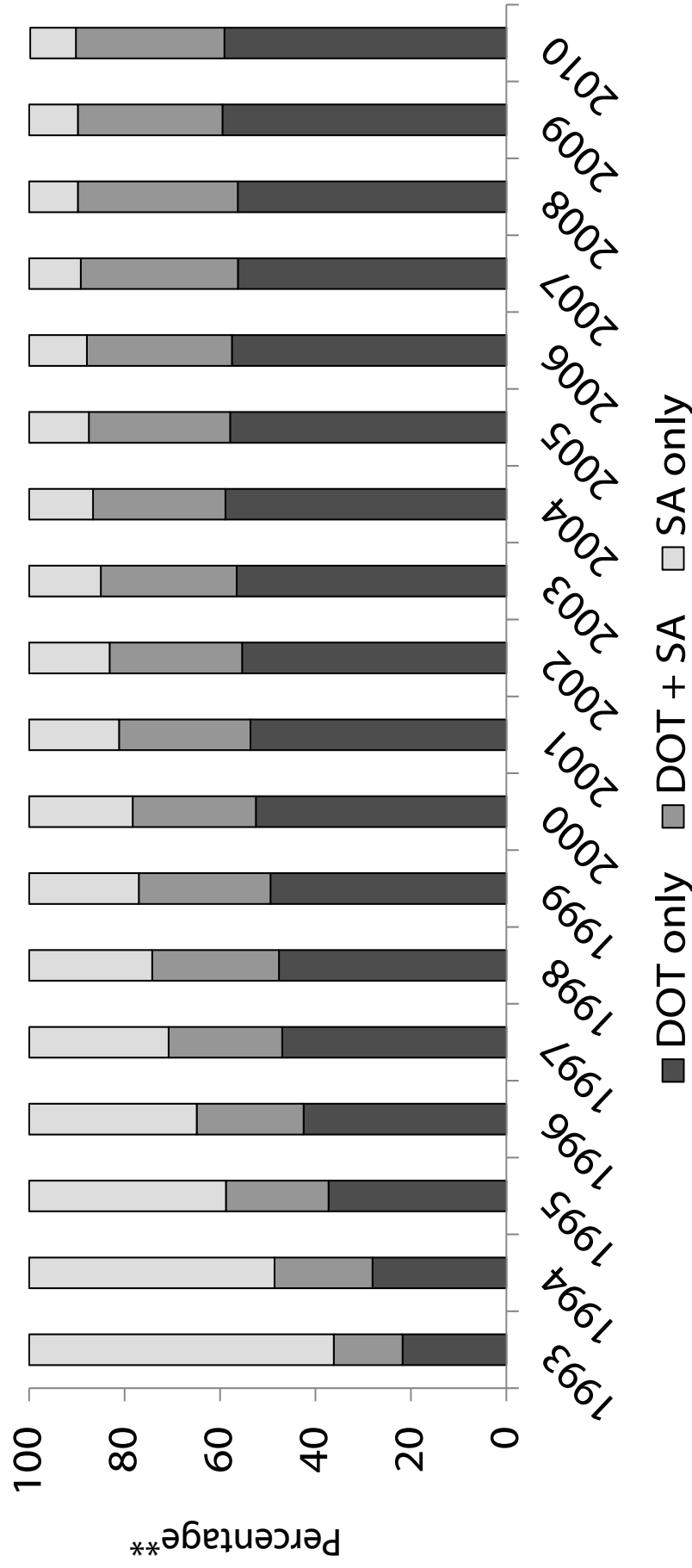
*Updated as of June 10, 2013

Note: Resident of correctional facility at time of TB diagnosis

TB Cases Reported as Homeless in the 12 Months Prior to Diagnosis, Age ≥15, United States, 1993-2012*



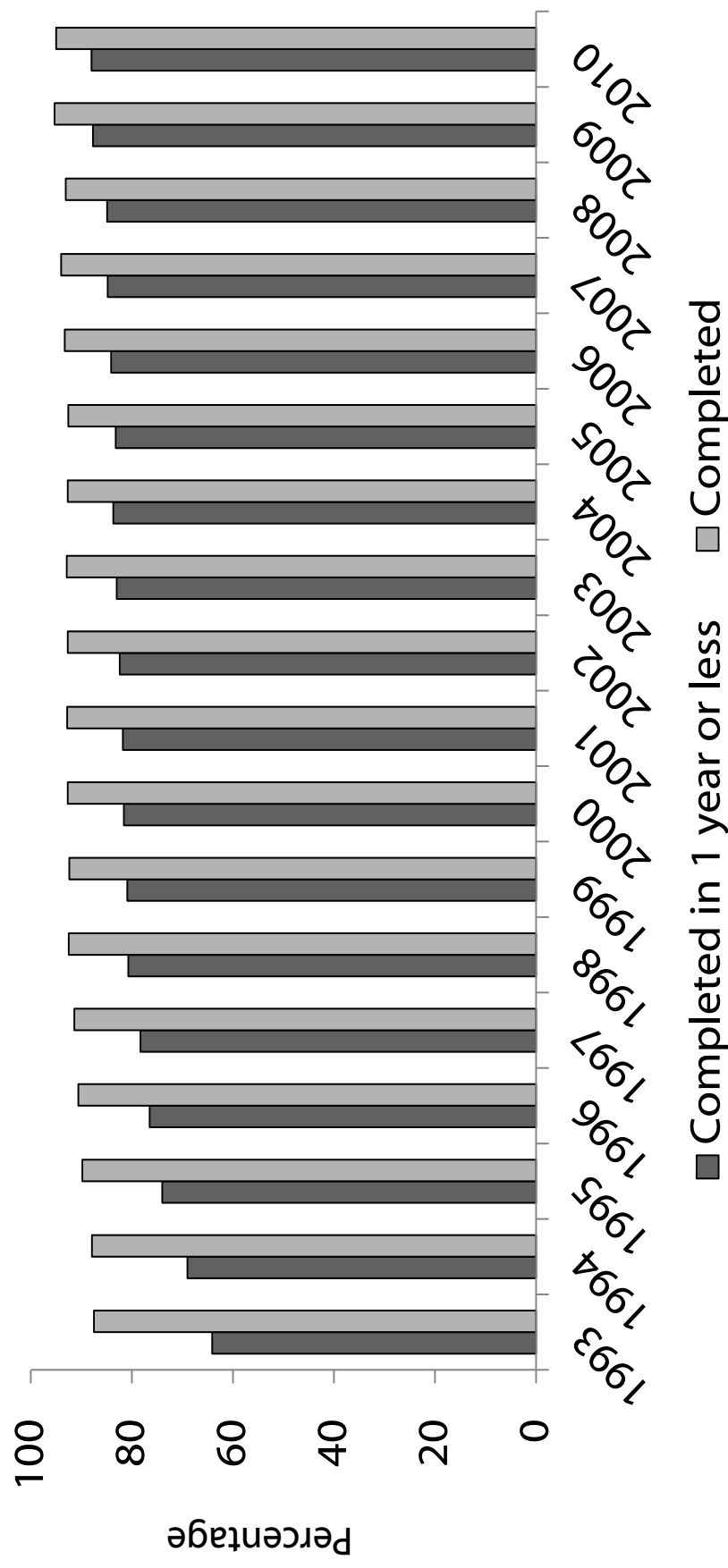
Mode of Treatment Administration in Persons Reported with TB, United States, 1993 – 2010*



*Updated as of June 10, 2013. Data available through 2010 only.

**Percentage of total cases in persons alive at diagnosis, with an initial regimen of one or more drugs prescribed, and excluding cases with unknown mode of treatment administration.

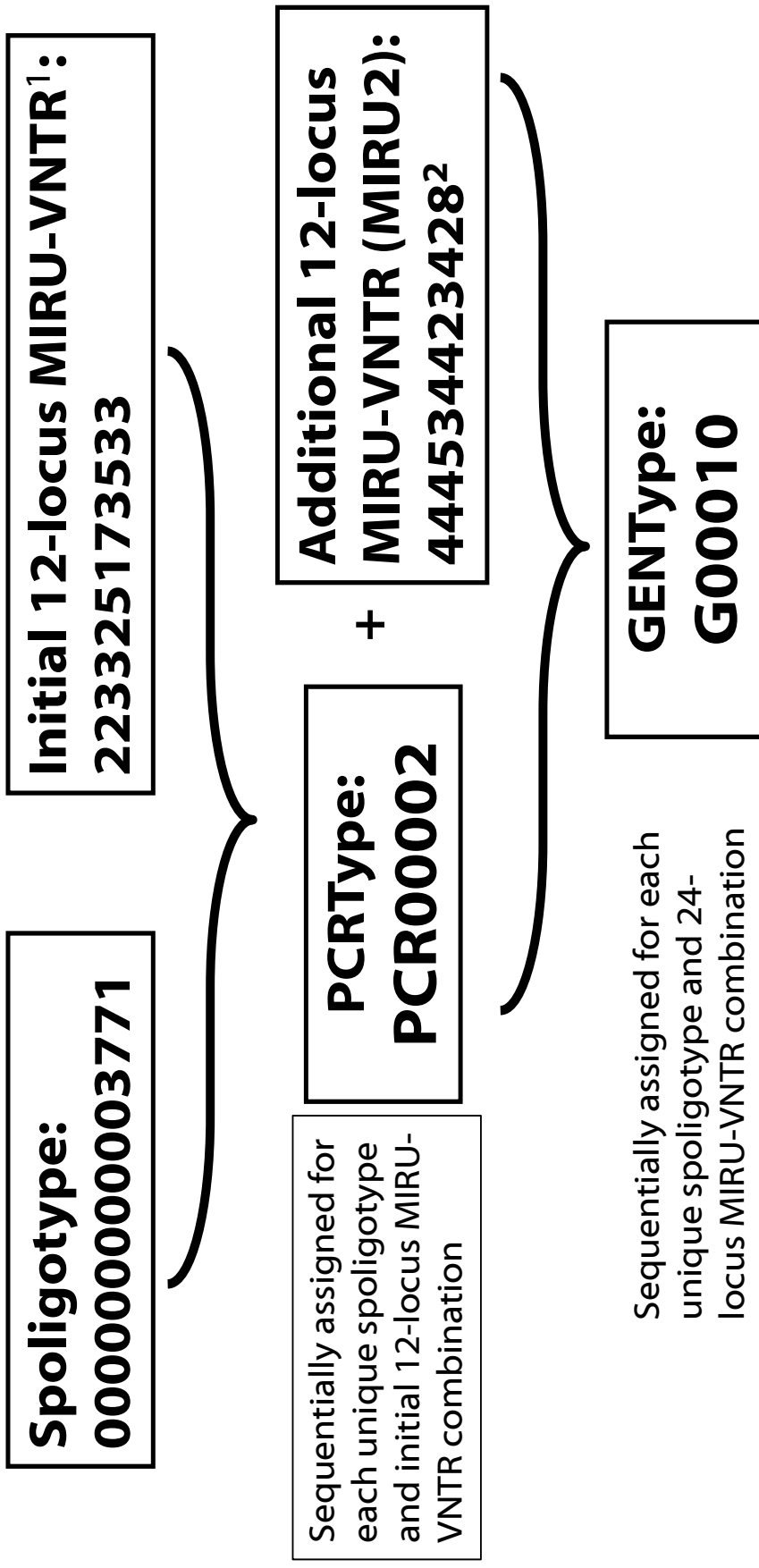
Completion of TB Therapy, United States, 1993 – 2010*



* Updated as of June 10, 2013. Data available through 2010 only.

Note: Includes persons alive at diagnosis, with initial drug regimen of one or more drugs prescribed, who did not die during therapy. Excludes persons with initial isolate rifampin resistant, or patient with meningial disease, or pediatric patient (aged <15) with miliary disease or positive blood culture.

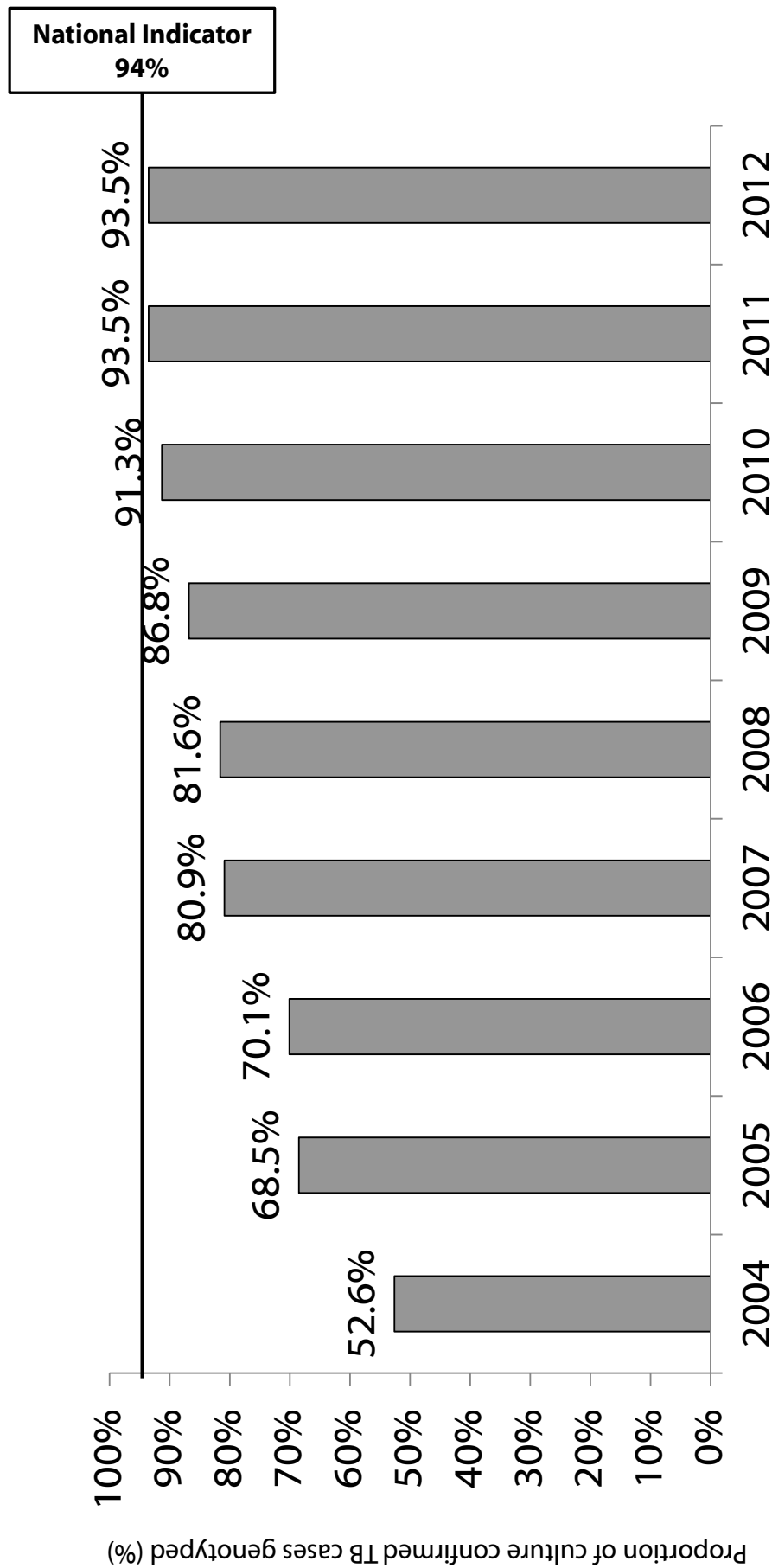
Definition for Tuberculosis Genotyping in the United States



¹ Mycobacterial interspersed repetitive unit--variable number tandem repeat

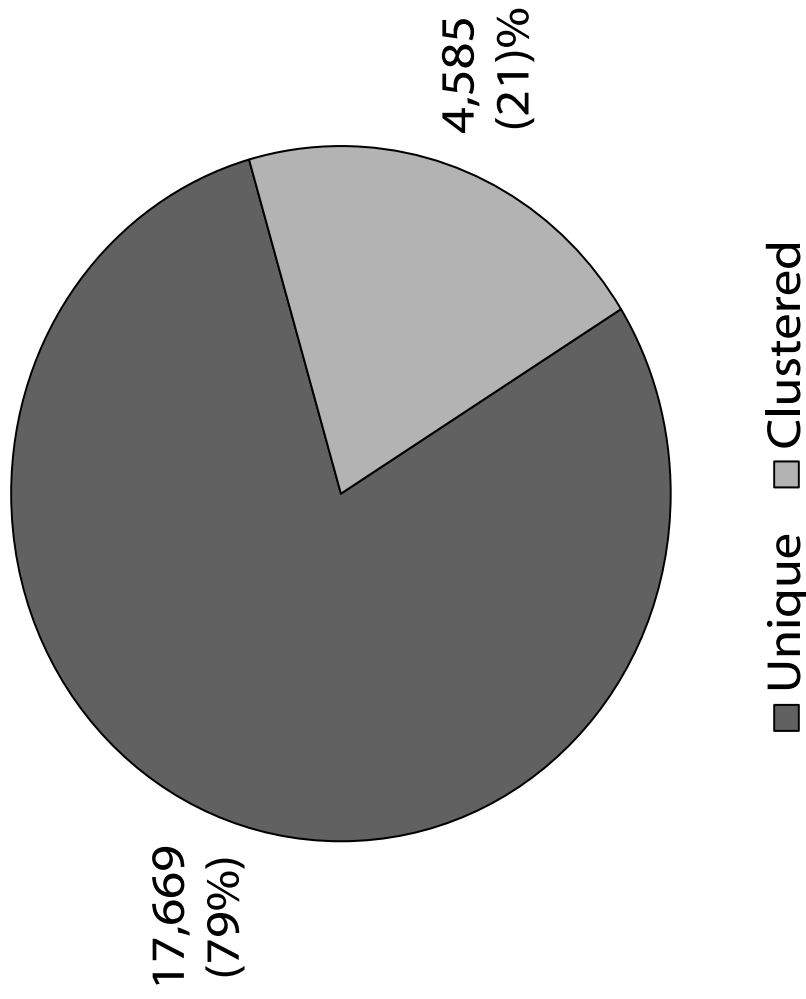
² The complete set of 24 loci is referred to as 24-locus MIRU-VNTR and is used for GENType designation for genotype in the U.S.

National Tuberculosis Genotyping Surveillance Coverage* by Year, United States, 2004–2012



* The proportion of positive cultures with at least one genotyped isolate

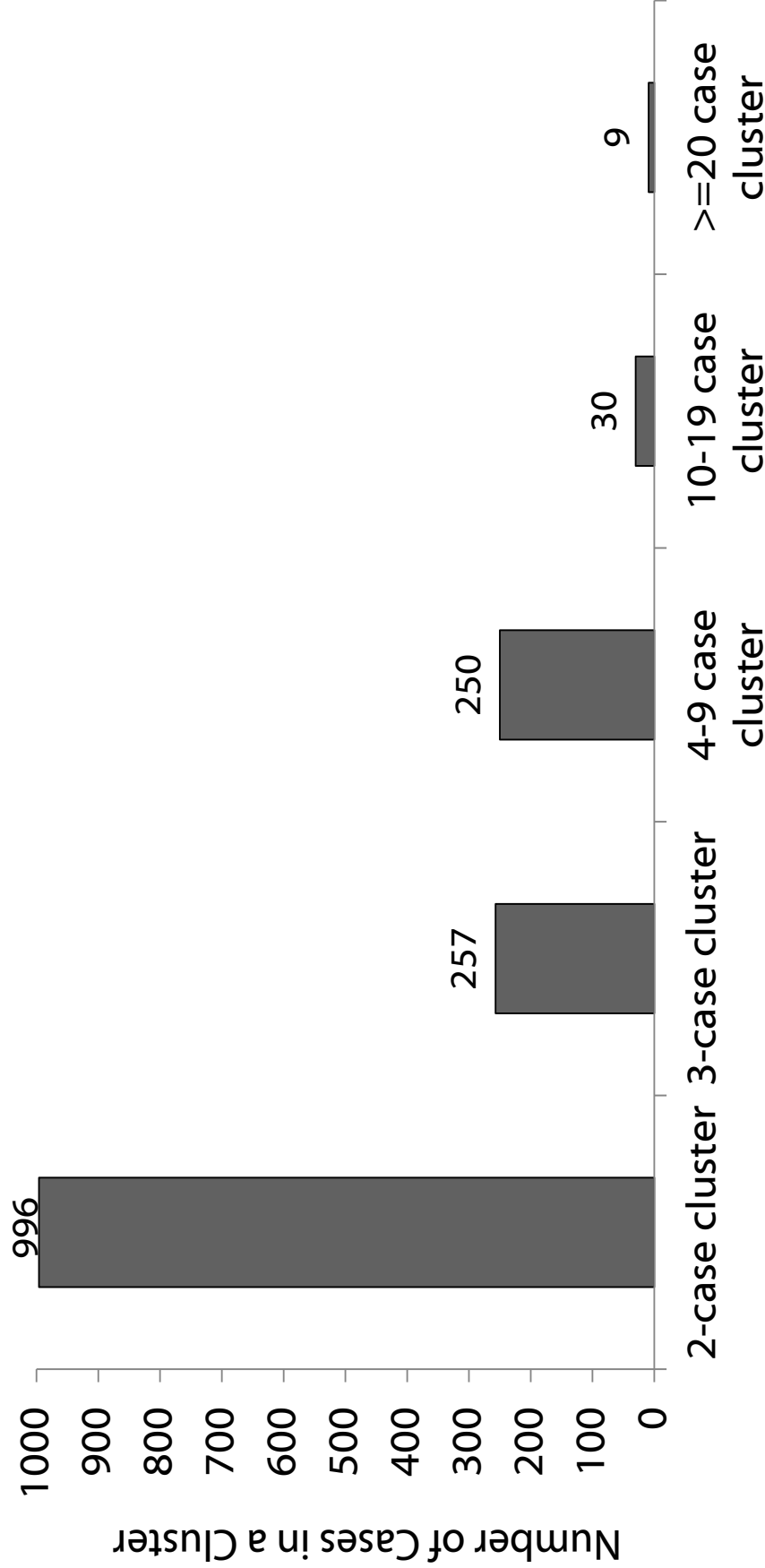
Number and Percent of Unique* and County-GENType Clustered** Cases, United States, 2010–2012



*Unique case is a case with a spoligotype and 24-locus locus MIRU-VNTR (GENType) that does not match any other case in that county during the specified 3-year time period

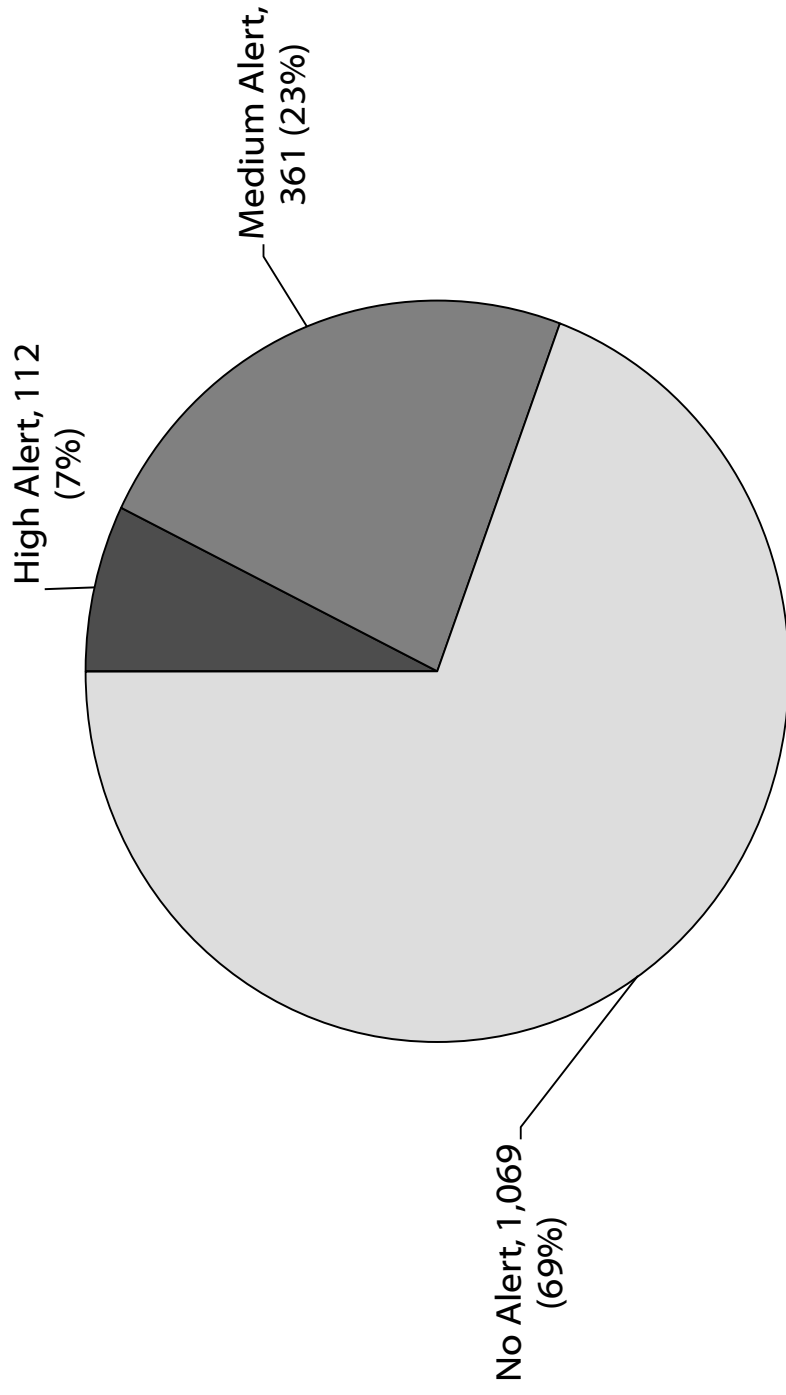
** Two or more cases with matching spoligotype and 24-locus locus MIRU-VNTR (GENType) within a county during the specified 3-year time period

Number of County-based Tuberculosis Genotype Clusters* by Cluster Size, United States, 2010–2012



* Genotype cluster is defined as two or more cases with matching spoligotype and 24-locus MIRU-VNTR (GENType) within a county during the specified 3-year time period

Tuberculosis Genotype Clusters by TB GIMS* Alert Levels**, United States, 2010-2012



*Tuberculosis Genotyping Information Management System

**Alert level is determined by the log likelihood ratio statistic (LLR) for a given cluster, identifying higher than expected geospatial concentrations for a TB genotype cluster in a specific county, compared to the national distribution of that genotype; TB GIMS generates alert level notifications based on this statistic: "No alert" is indicated if LLR is between 0-5, "medium" is for LLR of 5.1-10 and "high" alert is for clusters with LLR >10

Tuberculosis in the United States

National Tuberculosis Surveillance System Highlights from 2012

Slide 1 (title slide). Tuberculosis in the United States—National Tuberculosis Surveillance System, Highlights from 2012. This slide set was prepared by the Division of Tuberculosis Elimination, Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (DHHS). It provides trends for the recent past and highlights data collected through the National Tuberculosis Surveillance System for 2012. Since 1953, through the cooperation of state and local health departments, CDC has collected information on newly reported cases of tuberculosis (TB) disease in the United States. The data presented here were collected via the revised TB case report introduced in 2009. Currently, each individual TB case report (Report of Verified Case of Tuberculosis or RVCT) is submitted electronically to CDC. The data for this slide set are based on updates received by CDC as of June 10, 2013. All case counts and rates for years 1993–2012 have been updated.

Slide 2. Reported TB Cases, United States, 1982–2012. The resurgence of TB in the mid-1980s was marked by several years of increasing case counts until its peak in 1992. Case counts began decreasing again in 1993, and 2012 marked the twentieth year of decline in the total number of TB cases reported in the United States since the peak of the resurgence. From 1992 until 2002, the total number of TB cases decreased 5%–7% annually. From 2002 to 2003, however, the total number of TB cases decreased by only 1.4%. An unprecedented decrease occurred in 2009, when the total number of TB cases decreased by more than 10% from 2008 to 2009. In 2012, a total of 9,945 cases were reported from the 50 states and the District of Columbia (DC). This represents a decline of 5.9% from 2011 and 69.2% from 1992.

Slide 3. TB Morbidity, United States, 2007–2012. This slide provides the total number of reported U.S. TB cases and the associated rates for each of the past 6 years. Rate is defined as cases per 100,000 population. The number of TB cases decreased from 13,282 in 2007 to 9,945 in 2012, and the TB rate decreased from 4.4 in 2007 to 3.2 in 2012.

Slide 4. TB Case Rates, United States, 2012. This map shows TB rates for 2012. Forty states reported a rate less than 3.2 TB cases per 100,000, the 2012 national average. Ten states and DC reported a rate above 3.2 TB cases per 100,000; these accounted for 61% of the national total in 2012 and have experienced substantial overall decreases in cases and rates from 1992 through 2012.

Slide 5. Map of U.S.-Affiliated Pacific Islands by TB Case Rates, 2012. This map of the Pacific region shows the case rates by jurisdiction.

Slide 6. TB Case Rates, U.S.-Affiliated Pacific Islands, 2012. This bar chart shows TB rates for the U.S. Pacific Islands for reported cases in 2012. These case rates range from 1.8 per 100,000 in American Samoa to 211.7 per 100,000 in the Republic of the Marshall Islands. The overall case rate for the United States (3.2 per 100,000) and for Hawaii (8.4 per 100,000) are also shown

Slide 7. TB Case Rates by Age Group, United States, 1993–2012. This slide shows the last 20 years' declining trend in TB rates by age group. In 2012, case rates in all age groups declined by more than 50% from 1993 values: persons 65 years and older (from 17.7 per 100,000 in 1993 to 5.1 in 2012); adults aged 45 to 64 years (from 12.4 to 3.8); adults aged 25 to 44 years (from 11.5 to 3.8); those 15 to 24 years of age (from 5.0 to 2.3); and in children under 15 years of age (from 2.9 to 0.8)

Slide 8. Reported TB Cases by Age Group, United States, 2012. This pie chart shows the age distribution of persons reported with TB in 2012. Five percent were children under 15 years of age, 10% were age 15 to 24, 31% were age 25 to 44, 31% were age 45 to 64, and 22% were at least 65 years old.

Slide 9. TB Case Rates by Age Group and Sex, United States, 2012. This slide graphs the TB rates in 2012 by age group and sex. It shows that rates tended to increase with age, ranging from a low of less than 1 per 100,000 in children aged 5 - 14 to a high of 7.3 per 100,000 in men 65 years and older. As age increased, the case rate in men increased faster than women; the rates in men 45 years and older were approximately more than twice those in same-age women.

Slide 10. TB Case Rates by Race/Ethnicity, United States, 2003–2012. This slide shows the declining trend in TB rates by race/ethnicity during the last 11 years. Asians had the highest TB rates, which declined from 29.9 per 100,000 in 2003 to 18.9 in 2012, and had a percent decline over the time period of 37%. Rates also declined in the following racial/ethnic groups: among non-Hispanic blacks or African-Americans, from 11.7 in 2003 to 5.8 in 2012 (-50%); among Hispanics, from 10.3 to 5.3 (-48%); among American Indians and Alaska Natives, from 8.2 to 6.3 (-23%); and among non-Hispanic whites, from 1.4 to 0.8 (-43%). Rates also decreased among Native Hawaiian or Other Pacific Islanders, from 16.2 in 2003 to 12.3 in 2012 (-24%).

Several important factors likely contribute to the disproportionate burden of TB in minorities. In persons who were born in countries where TB is common, TB disease may result from infection acquired in the country of origin. Unequal distribution of TB risk factors, such as HIV infection, may also contribute to increased exposure to TB or to an increased risk of developing TB once infected with *M. tuberculosis*.

Slide 11. TB Case Rates by Age Group and Race/Ethnicity, United States, 2012. This slide presents TB rates in 2012 by age group and race/ethnicity. After infancy (age under 5), risk typically increased with age across all racial and ethnic groups. Rates were consistently higher in minority racial and ethnic groups than in non-Hispanic whites. Rates were the highest in Asians and Native Hawaiians and Other Pacific Islanders, particularly in adult age groups.

Slide 12. Reported TB Cases by Race/Ethnicity, United States, 2012. In 2012, 84% of all reported TB cases occurred in racial and ethnic minorities (31% in Asians, 29% in Hispanics, 22% in non-Hispanic blacks or African-Americans, 1% in American Indians or Alaska Natives, and 1% in Native Hawaiians or Other Pacific Islanders), whereas 16% of cases occurred in non-Hispanic whites. Persons reporting two or more races totaled less than 1% of all cases.

Slide 13. Number of TB Cases in U.S.-born vs. Foreign-born Persons, United States, 1993–2012. This graph plots the number of U.S.-born vs. foreign-born persons reported with TB each year, from 1993 through 2012. It illustrates the increase in the percentage of cases occurring in foreign-born persons during this period, from 29% in 1993 to 63% in 2011. Overall, the number of cases in foreign-born persons remained virtually level, with approximately 7,000–8,000 cases each year before 2009, until 2009 when the number dropped to 6,854. That decreasing trend continued in 2012 with the number of foreign-born cases dropping to 6,274. The number in U.S.-born persons decreased from more than 17,000 in 1993 to 3,659 in 2012.

Slide 14. Trends in TB Cases in Foreign-born Persons, United States, 1991–2012. This slide shows trends in the past 21 years of TB cases in foreign-born persons in the United States from 1992 through 2012. The percentage of TB cases accounted for by foreign-born persons increased from 29% in 1992 to 63% in 2012.

Slide 15. Reported TB Cases by Origin and Race/Ethnicity, United States, 2012. Among U.S.-born persons with TB in 2012, 37% were non-Hispanic black or African-American, 35% were non-Hispanic white, 19% were Hispanic or Latino, 3% were Asian, 4% were American Indian or Alaska Native, and 1% were Native Hawaiian or Other Pacific Islander. Among the foreign-born, 45% were Asian, 34% were Hispanic or Latino, 14% were non-Hispanic black or African-American, and 5% were non-Hispanic white. Cases among American Indians or Alaska Natives and among Native Hawaiians or Other Pacific Islanders constituted less than 1%, respectively, of the cases among the foreign-born and are not shown. Persons reporting two or more races totaled less than 1% of all cases.

Slide 16. Percentage of TB Cases Among Foreign-born Persons, United States, 2002 and 2012. The percentage range of the total number of TB cases that occurred in foreign-born persons in each state is highlighted for 2002 and 2012 in these side-by-side maps. The number of states with less than 25% of their TB cases among the foreign-born decreased from 11 states in 2002 to 7 states in 2012. The number of states with at least 25–49% of cases among the foreign-born decreased from 18 states in 2002 to 13 states in 2012. However, the number of states that had 50% or more of their cases among the foreign-born increased from 23 states in 2002 to 31 states in 2012.

Slide 17. TB Case Rates in U.S.-born vs. Foreign-born Persons, United States, 1993–2012. TB rates in foreign-born persons remain higher than those in the U.S.-born population. From 1993 through 2012, the rates in U.S.-born persons decreased from 7.4 per 100,000 to 1.4, whereas the rates in foreign-born persons decreased from 34.0 per 100,000 to 15.9.

Slide 18. TB Case Rates in U.S.-born vs. Foreign-born Persons, United States, 1993–2012. This is the same as Slide 15, but the rates are presented on a logarithmic scale to better illustrate the trend in TB rates among the U.S.-born and foreign-born. The lines show a greater rate of decline among the U.S.-born compared with the foreign-born during this period.

Slide 19. Countries of Birth of Foreign-born Persons Reported with TB, United States, 2012. This slide shows the overall distribution of the countries of birth of foreign-born persons reported with TB in 2012, with the top seven highlighted. The list of countries has remained relatively constant since 1986, when information on country of birth was first reported by all areas submitting reports to CDC. In 2012 the seven top countries accounted for 61% of the total cases, with Mexico accounting for 21%; the Philippines, 12%; India, 8%; Vietnam, 7%; China, 6%; Guatemala, 3%; and Haiti, 3%. Persons from more than 135 other countries each accounted for 2% or less of the total, but altogether accounted for 39% of foreign-born persons reported with TB.

Slide 20. Percent of Foreign-born with TB by Time of Residence in U.S. Prior to Diagnosis, 2012. The length of U.S. residence among foreign-born persons prior to their TB diagnosis in 2012 is shown in these stacked bars. Overall, 15% had been in the United States for less than 1 year, 18% between 1 and 4 years, and 59% for at least 5 years. The distribution is also shown for the top three countries of birth: Mexico, the Philippines, and India. Among persons born in Mexico, 9% had been in the United States for less than 1 year, 10% between 1 and 4 years, and 70% for at least 5 years. Among persons born in the Philippines, 11% had been in the United States for less than 1 year, 10% between 1 and 4 years, and 70% for at least 5 years. Among persons born in India, 17% had been in the United States for less than 1 year, 26% between 1 and 4 years, and 50% for at least 5 years. Values for unknown length of residence in U.S. for these top three countries ranged between 9 – 10% for 2012.

Slide 21. Primary Anti-TB Drug Resistance, United States, 1993–2012. Primary drug resistance is shown for the past 20 years. The graph starts in 1993, the year in which the individual TB case reports submitted to the national surveillance system began collecting information on initial susceptibility test results for patients with culture-positive TB. Data were available for more than 85% of culture-positive cases for each year. Primary resistance was calculated by using data from persons with no reported prior TB episode. Resistance to at least isoniazid was 8.2% in 1993; however by 2012, this had increased to 8.9%. Resistance to at least isoniazid and rifampin, known as multidrug-resistant TB (MDR TB), was 2.5% in 1993; the percent of primary MDR TB has remained approximately stable since it decreased to 1.0% in 1998. In 2012 the percent of primary MDR TB was 1.1%.

Slide 22. Primary MDR TB, United States, 1993–2012. This graph focuses on trends in primary MDR TB (based on initial isolates from persons with no prior history of TB) in the United States from 1993 through 2012. The number of primary MDR TB cases, represented by bars, steadily declined from 407 in 1993 to 132 in 2002. Since then, the total number of primary MDR TB cases has fluctuated between 87 to 103 cases, with 72 cases reported for 2012. Primary MDR TB, shown by the line, decreased from 2.5% in 1993 to approximately 1.0% in 1998, and has fluctuated around 1.0% since then. In 2012, the percentage was 1.1%.

Slide 23. Primary Isoniazid Resistance in U.S.-born vs. Foreign-born Persons, United States, 1993–2012. This graph shows primary isoniazid resistance in U.S.-born vs. foreign-born persons. Based on initial isolates from persons with no prior history of TB, the percentage of isoniazid resistance is more than twice as high among foreign-born persons than among U.S.-born persons. In foreign-born persons, the percentage declined from 12.1% in 1993 to 10.7% in 2012. In U.S.-born persons, the percentage decreased from 6.7% in 1993 to 4.2% in 2007, but has increased since then to 5.7% in 2012.

Slide 24. Primary MDR TB in U.S.-born vs. Foreign-born Persons, United States, 1993–2012. This graph highlights primary MDR TB in U.S.-born versus foreign-born persons. The percentage with primary MDR TB has declined among both groups since 1993, although the decline in the U.S.-born has been greater. As a result, the proportion of primary MDR TB cases in the US that are attributed to foreign-born persons increased from approximately 25% in 1993 to 86% in 2012 (not shown on slide). Among the U.S.-born, the percentage with primary MDR TB has been less than 1% since 1997 and was 0.4% in 2011. The percentage among foreign-born persons has fluctuated year by year, although it has remained between 1.2 and 1.8% since 1995. In 2012, the percentage of primary MDR TB among foreign-born persons was 1.4%

Slide 25. Extensively Drug Resistant (XDR) TB, as Defined on Initial Drug Susceptibility Testing (DST), United States, 1993–2012. This graph shows the annual number of counted XDR TB cases as defined on initial DST from 1993–2012. XDR TB is defined as resistance to isoniazid and rifampin, plus resistance to any fluoroquinolone and at least one of three injectable second-line anti-TB drugs. Two cases of XDR TB were reported in 2012. The most reported in a single year was 10 in 1993, while there were no cases reported in 2003 and 2009. There is no apparent trend in the number of cases over time.

Slide 26. Reporting of HIV Test Results in Persons with TB by Age Group, United States, 1993–2012. This slide shows the completeness of reporting of HIV test results in persons with TB by age group from 1993 through 2012. The percentage of TB patients for whom test results were reported increased from 30% among all ages in 1993 to 84% in 2012. Among adults aged 25–44 years, the percentage increased from 46% in 1993 to 92% in 2012. California began reporting HIV test results to CDC in 2011; this accounts for the substantial percentage increase for that year.

Slide 27. Estimated HIV Coinfection in Persons Reported with TB, United States, 1993–2012. This slide provides minimum estimates of HIV coinfection among persons reported with TB from 1993 through 2012. Since the addition of the request for HIV status to the individual TB case report in 1993, incomplete reporting has provided a challenge to calculating reliable estimates. Results from the cross-matching of TB and AIDS registries have been used to supplement reported HIV test results. For all ages, the estimated percentage of HIV coinfection in persons who reported HIV testing (positive, negative, or indeterminate test results) with TB decreased from 49% to 7% overall from 1993 – 2012, and from 64% to 12% among persons aged 25 to 44 years during this period.

Slide 28. TB Cases by Residence in Correctional Facilities, Age ≥15, United States, 1993–2012. This graph highlights the number of cases that were a resident of any type of correctional facility at the time of TB diagnosis. Cases must have been 15 years of age or greater. The number of cases residing in a correctional facility has decreased from a high of 1,117 cases in 1994 to 384 cases in 2012. Between the years 2000 and 2010, the number of cases residing in a correctional facility ranged between the high-400s and high-500s; 2011 was the first year to drop below this range to 424 cases. Of total cases, the percentage of cases residing in a correctional facility has ranged from 5.1% in 1994 to 3.3% in 2002. The 1990s saw a decreasing trend in percentage until 2002. Since 2002, there has been an increasing trend in percentage; in 2012 the percentage of total cases was 4.1%.

Slide 29. TB Cases by Homeless Status, Age ≥15, United States, 1993–2012. This graph highlights the status of cases that were homeless within twelve months prior of TB diagnosis from 1993 through 2012. Cases must have been 15 years of age or greater. The number of homeless cases has decreased from a high of 1,379 cases in 1994 to 528 in 2012. This category has seen an overall decrease in cases since 1994; increases were observed in the years 2003 (6.8%), 2006 (6.4%), and 2010 (5.7%); these have been exceptions with a small increase in cases. Of total cases, 6.8% were homeless in 1994 and percentages have ranged between 7.5% in 1993 and a low of 5.4% in 2009. It has since increased to 5.7% in 2012.

Slide 30. Mode of Treatment Administration in Persons Reported with TB, United States, 1993–2010. In 1993, the reporting areas began providing information about mode of treatment administration on the individual TB case report form. Treatment administered as only directly observed therapy (DOT) increased from 21.7% in 1993 to 59.1% in 2010, the latest year with available data. The proportion of patients who received at least some portion of their treatment as DOT (based on combining the percentage of patients who received only DOT and the percentage for whom some portion was self-administered) was 31.1% in 2010. In 2010, 90.4% of patients received at least some portion of their treatment as DOT.

Slide 31. Completion of TB Therapy, United States, 1993–2010. The reporting areas began providing information on completion of therapy in 1993 through the individual TB case report form. The calculations exclude persons with initial isolate rifampin resistant, or patient with meningeal disease, or pediatric patient (aged <15) with miliary disease or positive blood culture. Overall completion of therapy had remained at approximately 92–93% from 1998 through 2008, but increased to 95% in 2009. Completion in 1 year or less increased from 64% in 1993 to 88% in 2010, the latest year with available data. The current DHHS Healthy People 2020 objective is completion of therapy in 1 year or less in 93% of patients. CDC is working with state and local health departments to determine and evaluate reasons for apparently delayed completion of therapy, which may vary by jurisdiction.

Slide 32. Definition for Tuberculosis Genotyping in the United States. This slide shows the schematic for sequential assignment of unique spoligotypes and initial 12-locus MIRU-VNTR combination or 24-locus MIRU-VNTR combination.

Slide 33. National Tuberculosis Genotyping Surveillance Coverage by Year, United States, 2004–2012. This slide shows the increase in genotyping surveillance coverage from 2004 to 2012. In 2004 the proportion of positive cultures with at least one genotyped isolate was 52.6%; in 2012 it was 93.5%. The national indicator for genotyping surveillance coverage is 94%.

Slide 34. Number and Percent of Unique and County-GENType Clustered Cases, United States, 2010–2012. This slide shows a chart with the percentage of unique and clustered cases. Unique cases are those with a spoligotype and 24-locus locus MIRU-VNTR (GENType) that does not match any other case in that county during the specified three year time period. Clustered cases are two or more cases with matching spoligotype and 24-locus locus MIRU-VNTR (GENType) within a county during the specified three year time period. In the 2010 – 2012 three year time period, there were 79% unique cases, and 21% clustered cases.

Slide 35. Number of County-based Tuberculosis Genotype Clusters by Cluster Size, United States, 2010–2012. This slide shows the number of county-based TB genotype clusters by the size of the clusters; genotype cluster is defined as two or more cases with matching spoligotype and 24-locus MIRU-VNTR (GENType) within a county during the specified three year time period. In the 2010 – 2012 three year time period, there were 996 two-case clusters, 257 three-case clusters, 250 4– 9-case clusters, 30 10 – 19 case clusters, and nine case clusters that were greater or equal to 20 in size.

Slide 36. Tuberculosis Genotype Clusters by TB GIMS Alert Levels, United States, 2010-2012. This slide shows a chart with percentage of genotype clusters by alert level. Alert level is determined by the log likelihood ratio statistic (LLR) for a given cluster, identifying higher than expected geospatial concentrations for a TB genotype cluster in a specific county, compared to the national distribution of that genotype; TB GIMS generates alert level notifications based on this statistic: “No alert” is indicated if LLR is between 0–5, “medium” is for LLR of 5.1–10 and “high” alert is for clusters with LLR >10. In the 2010-2012 three year time period, high alerts made up 7% of the total, medium alerts were 23%, and no alert were 69%.

Appendices

Appendix A

Tuberculosis Case Definition for Public Health Surveillance¹ (Revised May 13, 2009)

Clinical description

A chronic bacterial infection caused by *Mycobacterium tuberculosis*, usually characterized pathologically by the formation of granulomas. The most common site of infection is the lung, but other organs may be involved.

Clinical case definition

A case that meets **all** of the following criteria:

- A positive tuberculin skin test result or positive interferon gamma release assay for *M. tuberculosis*
- Other signs and symptoms compatible with tuberculosis (TB) (e.g., abnormal chest radiograph, abnormal chest computerized tomography scan or other chest imaging study, or clinical evidence of current disease)
- Treatment with two or more anti-TB medications
- A completed diagnostic evaluation

Laboratory criteria for diagnosis

- Isolation of *M. tuberculosis* complex from a clinical specimen,^{*}
or
- Demonstration of *M. tuberculosis* complex from a clinical specimen by nucleic acid amplification test,[†]
or
- Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained or is falsely negative or contaminated.

Case classification

Confirmed: a case that meets the clinical case definition or is laboratory confirmed

Comment

A case should not be counted twice within any consecutive 12-month period. However, a case occurring in a patient who had previously had verified TB disease should be reported and counted again if more than 12 months have elapsed since the patient completed therapy. A case should also be reported and counted again if the patient was lost to supervision for greater than 12 months and TB disease can be verified again. Mycobacterial diseases other than those caused by *M. tuberculosis* complex should not be counted in tuberculosis morbidity statistics unless there is concurrent tuberculosis.

^{*}Use of rapid identification techniques for *M. tuberculosis* (e.g., DNA probes and mycolic acid high-pressure liquid chromatography performed on a culture from a clinical specimen) are acceptable under this criterion.

[†]Nucleic acid amplification (NAA) tests must be accompanied by culture for mycobacteria species for clinical purposes. A culture isolate of *M. tuberculosis* complex is required for complete drug susceptibility testing and also genotyping. However, for surveillance purposes, CDC will accept results obtained from NAA tests approved by the Food and Drug Administration (FDA) and used according to the approved product labeling on the package insert, or a test produced and validated in accordance with applicable FDA and Clinical Laboratory Improvement Amendments (CLIA) regulations.

Appendix B

Recommendations for Reporting and Counting Tuberculosis Cases (Revised May 13, 2009)

Since publication of the “Recommendations for Counting Reported Tuberculosis Cases”¹ in July 1997, numerous changes have occurred, and many issues have been raised within the field of tuberculosis (TB) surveillance. This current version updates and supersedes the previous version.

A distinction should be made between **reporting** TB cases to a health department and **counting** TB cases for determining incidence of disease. Throughout each year, TB cases and suspected cases are reported to public health authorities by sources such as clinics, hospitals, laboratories, and health care providers. From these reports, the state or local TB control officer must determine which cases meet the current surveillance definition for TB disease and whether the case is countable. These countable TB cases are then reported to the Centers for Disease Control and Prevention (CDC).

Beginning in 2009, state and local TB control officers may also report to CDC those TB cases that are verified but not countable for morbidity statistics, as a measure of programmatic and case management burden. The noncountable report can include persons with TB disease recurring within a consecutive 12-month period after the patient completed TB therapy.

I. Reporting TB Cases. CDC recommends that health care providers and laboratories be required to report all TB cases or suspected cases to state and local health departments based on the current “Tuberculosis Case Definition for Public Health Surveillance” (Appendix A). This notification is essential in order for TB programs to

- Ensure case supervision
- Ensure completion of appropriate therapy
- Ensure completion of contact investigations
- Evaluate program effectiveness
- Assess trends and characteristics of TB morbidity

II. TB Surveillance. For purposes of surveillance, a case of TB is defined on the basis of laboratory or clinical evidence of active disease due to *M. tuberculosis* complex.*

* Because most laboratories use tests that do not routinely distinguish *Mycobacterium tuberculosis* from very closely related species, these laboratories report culture results as being positive or negative for “*Mycobacterium tuberculosis* complex.” Although in almost all cases of human disease, isolates in the *M. tuberculosis* complex are, in fact, *M. tuberculosis*, other species are possible. Other species in the *Mycobacterium tuberculosis* complex include *M. bovis*, *M. africanum*, *M. microti*, *M. canettii*, *M. caprae*, *M. pinnipedii*, and *M. mungi*; the inclusion of these species in *M. tuberculosis* complex should not impact public health laboratories or programs, because only a few laboratories identify to the species level. These seven species are almost identical in DNA homology studies. In terms of their ability to cause clinical disease or be transmissible from person to person, *M. bovis*, *M. africanum*, *M. microti*, *M. canettii*, *M. pinnipedii*, and *M. mungi* behave like *M. tuberculosis*; therefore, disease caused by any of the organisms should be reported as TB, using the Report of Verified Case of Tuberculosis (RVCT). The only exception is the BCG strain of *M. bovis*, which may be isolated from persons who have received the vaccine for protection against TB or as cancer immunotherapy; disease caused by the BCG strain of *M. bovis* should not be reported as TB.

a. Laboratory Case Definition

- Isolation of *M. tuberculosis* complex from a clinical specimen. The use of rapid identification techniques for *M. tuberculosis* performed on a culture from a clinical specimen, such as DNA probes and high-pressure liquid chromatography (HPLC), is acceptable under this criterion.

OR

- Demonstration of *M. tuberculosis* from a clinical specimen by nucleic acid amplification (NAA) test. NAA tests must be accompanied by cultures of mycobacterial species. However, for surveillance purposes, CDC will accept results obtained from NAA tests approved by the Food and Drug Administration (FDA) and used according to the approved product labeling on the package insert, or a test produced and validated in accordance with applicable FDA and Clinical Laboratory Improvement Amendments (CLIA) regulations.

OR

- Demonstration of acid-fast bacilli (AFB) in a clinical specimen when a culture has not been or cannot be obtained or is falsely negative or contaminated; historically this criterion has been most commonly used to diagnose TB in the postmortem setting.

b. Clinical Case Definition. In the absence of laboratory confirmation of *M. tuberculosis* complex after a diagnostic process has been completed, persons must have **all** of the following criteria for clinical TB:

- Evidence of TB infection based on a positive tuberculin skin test result or positive interferon gamma release assay for *M. tuberculosis*
- Current treatment with two or more anti-TB medications

AND

- One of the following:
 - (1) Signs and symptoms compatible with current TB disease, such as an abnormal chest radiograph or abnormal chest computerized tomography scan or other chest imaging study,

OR

- (2) Clinical evidence of current disease (e.g., fever, night sweats, cough, weight loss, hemoptysis)

NOTE: The software for TB surveillance developed by CDC includes a calculated variable called “Vercrit,” for which one of the values is “Provider Diagnosis.” “Provider Diagnosis” is selected when the user chooses to override a “Suspect” default value in the case verification screen as “Verified by Provider Diagnosis.” Thus, “Provider Diagnosis” is not a component of the case definition for TB in the current “Tuberculosis Case Definition for Public Health Surveillance” (Appendix A). CDC’s national morbidity reports have traditionally included all TB cases that are considered verified by the reporting areas, without a requirement that cases meet the published case definition.

III. Counting TB Cases. Cases that meet the current CDC surveillance case definition for verified TB are counted by 52 reporting areas with count authority (50 states, District of Columbia, and New York City) to determine annual incidence for the United States. The remaining 8 reporting areas (American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Republic of Palau, and U.S. Virgin Islands) report cases to CDC but are not included in the annual incidence for the United States. The laboratory and clinical case definitions are the two diagnostic categories used in the CDC “Tuberculosis Case Definition for Public Health Surveillance.”

Most verified TB cases are accepted for counting based on laboratory confirmation of *M. tuberculosis* complex from a clinical specimen.

A person may have more than one discrete (separate and distinct) episode of TB. If disease recurs in a person **within** any 12-consecutive-month period after the patient completed therapy, count only one episode as a case. However, if TB disease recurs in a person, **and** if more than 12 months have elapsed since the person completed TB therapy or was lost to supervision, the TB case is considered a separate episode and should be counted as a new case.

Mycobacterial diseases other than those caused by *M. tuberculosis* complex should not be counted in TB morbidity statistics unless there is concurrent TB.

a. Verified TB Cases

COUNT

Count only verified TB cases that meet the laboratory or clinical case definitions (see Section II). The diagnosis of TB must be verified by the TB control officer or designee. The current CDC surveillance case definition for TB describes and defines the criteria to be used in the case definition for TB disease.

DO NOT COUNT

If diagnostic procedures have not been completed, do not count; wait for confirmation of disease. Do not count as a case the patient for which two or more anti-TB medications have been prescribed for preventive therapy for exposure to multidrug-resistant (MDR) TB, or while the diagnosis is still pending

b. Nontuberculous Mycobacterial Diseases (NTM)

COUNT

An episode of TB disease diagnosed concurrently with another nontuberculous mycobacterial disease should be counted as a TB case.

DO NOT COUNT

Disease attributed to or caused by nontuberculous mycobacteria alone should not be counted as a TB case.

c. TB Cases Reported at Death

COUNT

TB cases first reported to the health department at the time of a person's death are counted as incident cases, provided the person had current disease at the time of death. The TB control officer should verify the diagnosis of TB.

DO NOT COUNT

Do not count as a case of TB if there is no evidence of current disease at the time of death or at autopsy.

d. Immigrants, Refugees, Permanent Resident Aliens, Border Crossers,* and Foreign Visitors³

COUNT

Immigrants and refugees who are examined after arriving in the United States and diagnosed with clinically active TB requiring anti-TB medications should be reported and counted by the locality of their current residence at the time of diagnosis regardless of citizenship status.

Border crossers* who are diagnosed with TB and plan to receive anti-TB therapy from a locality in the United States for 90 days or more should be reported and counted by the locality where they receive anti-TB therapy.

Foreign visitors (e.g., students, commercial representatives, and diplomatic personnel) who are diagnosed with TB, are receiving anti-TB therapy, **and** have been, or plan to remain in, the United States for 90 days or more should be reported and counted by the locality of current residence.

**Border crosser — defined, by the U.S. Citizenship and Immigration Services (USCIS)² as “an alien resident of the United States reentering the country after an absence of less than six months in Canada or Mexico, or a nonresident alien entering the United States across the Canadian border for stays of no more than six months, or across the Mexican border for stays of no more than 72 hours.” Border crossers may go back and forth across the border many times in a short period.*

DO NOT COUNT

Any person who was diagnosed and started on anti-TB drugs in another country should not be counted as a new case but should be reported as a verified noncountable TB case.

Border crossers* and foreign visitors who are diagnosed with TB and receive anti-TB therapy from a locality in the United States for less than 90 days but plan to return to their native country to continue therapy should not be reported or counted by the locality where they receive anti-TB therapy.

e. Out-of-State or Out-of-Area Residents

COUNT

A person's TB case should be counted by the locality in which he or she resides at the time of diagnosis. TB in a person who has no address should be counted by the locality that diagnosed and is treating the TB. The TB control officer should notify the appropriate out-of-state or out-of-area TB control officer of the person's home locality to (1) determine whether the case has already been counted to avoid "double counting," and (2) agree on which TB control office should count the case if it has not yet been counted.

DO NOT COUNT

Do not count a case in a newly diagnosed TB patient who is an out-of-area resident and whose TB has already been counted by the out-of-area TB control office.

f. Migrants and Other Transients

COUNT

Persons without any fixed U.S. residence are considered to be the public health responsibility of their present locality and their TB case should be reported and counted where diagnosed.

DO NOT COUNT

Cases in transient TB patients should not be counted when there is evidence that they have already been counted by another locality.

g. Federal Facilities (e.g., Military and Veterans Administration Facilities)

COUNT

Cases in military personnel, dependents, or veterans should be reported and counted by the locality where the persons are residing in the United States at the time of diagnosis and initiation of treatment.

However, if military personnel or dependents are discovered to have TB at a military base outside the United States but are referred elsewhere for treatment (e.g., a military base located within the United States), the TB case should be reported and counted where treated and not where the diagnosis was made.

DO NOT COUNT

Do not count if the case was already counted by another locality in the United States.

h. Indian Health Service

COUNT

TB should be reported to the local health authority (e.g., state or county) and counted where diagnosed and treatment initiated. However, for a specific group such as

the Navajo Nation, which is geographically located in multiple states, health departments should discuss each case and determine which locality should count the case.

DO NOT COUNT

Do not count if the case was already counted by another locality.

i. Correctional Facilities (e.g., Local, State, Federal, and Military)

COUNT

Persons who reside in local, state, federal, or military correctional facilities may frequently be transferred or relocated within and/or between various correctional facilities. TB in these persons should be reported to the local health authority and counted by the locality where the diagnosis was made and treatment plans were initiated.

DO NOT COUNT

Do not count correctional facility residents' TB cases that were counted elsewhere by another locality or correctional facility, even if treatment continues at another locale or correctional facility.

j. Peace Corps, Missionaries, and Other Citizens Residing Outside the United States

DO NOT COUNT

TB in persons diagnosed outside the United States should not be counted. TB in these persons should be counted by the country in which they are residing, regardless of their plans to return to the United States for further work-up or treatment.

IV. Suggested Administrative Practices

To promote uniformity in TB case counting, the following administrative procedures are recommended:

- (a) All TB cases verified by the 52 reporting areas with count authority (50 states, District of Columbia, and New York City) during the calendar year (by December 31) will be included in the annual U.S. incidence count for that year. All tuberculosis cases verified during the calendar year by a reporting area with count authority from one of the remaining 8 reporting areas (American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Republic of Palau, and U.S. Virgin Islands) are also counted but are not included in the annual incidence for the United States. Cases for which bacteriologic results are pending or for which confirmation of disease is questionable for any other reason should not be counted until their status is clearly determined; they should be counted at the time they meet the criteria for counting. This means that a case reported in one calendar year could be included in the morbidity count for the following year. The reporting area with count authority should ensure that there is agreement between final local and state TB figures reported to CDC. Currently, some reporting areas may not use this suggested protocol. Some of these areas may wait until the beginning of the following year when they have received and processed all of the TB cases

for inclusion in the annual case count for the previous year. If reporting areas decide to revise their protocols, they should be aware that their TB trends may change.

- (b) TB is occasionally reported to health departments over the telephone, by letter or fax, or on forms other than the Report of Verified Case of Tuberculosis (RVCT). Such information should be accepted as an official morbidity report if sufficient details are provided; otherwise, the notification should be used as an indicator of a possible TB case (suspect) which should be investigated promptly for confirmation.

V. TB Surveillance Definitions

Case - an episode of TB disease in a person meeting the laboratory or clinical criteria for TB as defined in the document “Tuberculosis Case Definition for Public Health Surveillance” (see Section II for criteria).

Suspect - a person for whom there is a high index of suspicion for active TB (e.g., a known contact to an active TB case or a person with signs or symptoms consistent with TB) who is currently under evaluation for TB disease.

Verification of a TB case - the process whereby a TB case, after the diagnostic evaluation is complete, is reviewed at the local level (e.g., state or county) by a TB control official who is familiar with TB surveillance definitions; if all the criteria for a TB case are met, the TB case is then verified and eligible for counting.

Counting of a TB case - the process whereby a reporting area with count authority evaluates verified TB cases against count criteria (e.g., assesses for case duplication). These cases are then counted for morbidity in that locality (e.g., state or county) and reported to CDC for national morbidity counting. Noncountable, verified cases may also be sent to CDC.

***Mycobacterium tuberculosis* complex** (*M. tuberculosis* complex) - Because most laboratories use tests that do not routinely distinguish *Mycobacterium tuberculosis* from very closely related species, these laboratories report culture results as being positive or negative for “*Mycobacterium tuberculosis* complex.” Although in almost all cases of human disease, isolates in the *M. tuberculosis* complex are, in fact, *M. tuberculosis*, other species are possible. For example, one study in San Diego found that 6% of human tuberculosis was caused by *Mycobacterium bovis*; cultures from these cases would be reported by most laboratories as being positive for *M. tuberculosis* complex. Other species in the *Mycobacterium tuberculosis* complex include *M. africanum*, *M. microti*, *M. canettii*, *M. caprae*, and *M. pinnipedii*. Although *M. microti*, *M. canettii*, *M. caprae*, and *M. pinnipedii* are newly described species, their inclusion in *M. tuberculosis* complex should not impact public health laboratories or programs because only a few laboratories identify to the species level. These seven species are almost identical in DNA homology studies. In terms of their ability to cause clinical disease or be transmissible from person to person, *M. bovis*, *M. africanum*, *M. microti*, *M. canetti*, *M. caprae*, and *M. pinnipedii* behave like *M. tuberculosis*; therefore, disease caused by any of the organisms should be reported as TB,

using the Report of Verified Case of Tuberculosis (RVCT). The only exception is the BCG strain of *M. bovis*, which may be isolated from persons who have received the vaccine for protection against TB or as cancer immunotherapy; disease caused by the BCG strain of *M. bovis* should not be reported as TB.

Nontuberculous mycobacteria (NTM) - mycobacteria other than *Mycobacterium tuberculosis* complex that can cause human infection or disease. Common nontuberculous mycobacteria include *M. avium* complex or MAC (*M. avium*, *M. intracellulare*), *M. kansasii*, *M. marinum*, *M. scrofulaceum*, *M. chelonae*, *M. fortuitum*, and *M. simiae*. Other terms have been used to represent NTM, including MOTT (mycobacteria other than TB) and “atypical” mycobacteria.

Reporting area - areas responsible for counting and reporting verified TB cases to CDC. Currently there are 60 reporting areas: the 50 states, District of Columbia, New York City, American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Republic of Palau, and U.S. Virgin Islands. The annual incidence of tuberculosis for the United States is based on 52 reporting areas (the 50 states, District of Columbia, and New York City).

Alien - defined by the U.S. Citizenship and Immigration Services (USCIS)² as “any person not a citizen or national of the United States.”

Border crosser - defined, by the U.S. Citizenship and Immigration Services (USCIS)² as “an alien resident of the United States reentering the country after an absence of less than six months in Canada or Mexico, or a nonresident alien entering the United States across the Canadian border for stays of no more than six months, or across the Mexican border for stays of no more than 72 hours.” Border crossers may go back and forth across the border many times in a short period.

Class A TB with waiver³

All applicants who have tuberculosis disease and have been granted a waiver.

Class B1 TB, Pulmonary³

No treatment

- Applicants who have medical history, physical exam, HIV, or CXR findings suggestive of pulmonary TB but have negative AFB sputum smears and cultures and are not diagnosed with TB or can wait to have TB treatment started after immigration.

Completed treatment

- Applicants who were diagnosed with pulmonary TB and successfully completed directly observed therapy prior to immigration. The cover sheet should indicate if the initial sputum smears and cultures were positive and if drug susceptibility testing results are available.

Class B1 TB, Extrapulmonary³

Applicants with evidence of extrapulmonary TB. Document the anatomic site of infection.

Class B2 TB, Latent TB Infection (LTBI) Evaluation³

Applicants who have a tuberculin skin test ≥ 10 mm but otherwise have a negative evaluation for TB. The size of the TST reaction, the applicant's status with respect to LTBI treatment, and the medication(s) used should be documented. For applicants who had more than one TST, whether the applicant converted the TST should be documented (i.e., initial TST < 10 mm but subsequent TST ≥ 10 mm).

Class B3 TB, Contact Evaluation³

Applicants who are a recent contact of a known tuberculosis case. The size of the applicant's TST reaction should be documented. Information about the source case, name, alien number, relationship to contact, and type of tuberculosis should also be documented.

Immigrant - defined by the USCIS² as “an alien admitted to the United States as a lawful permanent resident. Immigrants are those persons lawfully accorded the privilege of residing permanently in the United States. They may be issued immigrant visas by the Department of State overseas or adjusted to permanent resident status by the USCIS of the United States.”

Permanent Resident Alien - see Immigrant.

Waivers³ - A provision allows applicants undergoing pulmonary or laryngeal tuberculosis treatment to petition for a Class A TB with waiver. Waivers should be pursued for any immigrant or refugee who has a complicated clinical course and would benefit from receiving treatment of their tuberculosis in the United States. Applicants diagnosed with tuberculosis disease who are both smear- and culture-negative and will be traveling to the United States prior to start of treatment do not need to complete the waiver process.

References

1. *Recommendations for Counting Reported TB Cases*. Atlanta: CDC, July 1997.
2. U.S. Department of Homeland Security, U.S. Citizenship and Immigration Services; <http://uscis.gov>. Accessed September 2010.
3. *2007 Technical Instructions for Tuberculosis Screening and Treatment for Panel Physicians*. Atlanta: CDC, Division of Global Migration and Quarantine. <http://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/tuberculosis-panel-technical-instructions.html>. Accessed September 2010.

Appendix C

National Surveillance for Severe Adverse Events Associated with Treatment for Latent Tuberculosis Infection - Reporting Information

This information is included to alert our public health partners of the importance of reporting severe (i.e., hospitalization or death) adverse events associated with treatment for latent TB infection (LTBI). Data on severe adverse events (SAEs) among persons receiving treatment for LTBI are needed to serve as a basis for periodic evaluation of guidelines for treatment of LTBI.

In April 2000, after the publication of updated *Guidelines for Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection*¹, DTBE began receiving reports of SAEs related to the use of a 2-month course of rifampin and pyrazinamide (RZ) for treatment of LTBI. In response, DTBE requested and received reports and conducted on-site investigations of liver injury in persons on treatment for LTBI, and treatment guidelines were revised to recommend against the general use of rifampin and pyrazinamide to treat LTBI.^{2,3} In January 2004, DTBE implemented the National Surveillance System for Severe Adverse Events Associated with Treatment for LTBI, which collects reports about SAEs associated with any treatment regimen for LTBI, to quantify the frequency of SAEs and to characterize the clinical features of affected patients.⁴

Local medical providers should report possible LTBI-treatment associated SAEs to their respective local/state health departments. State health departments should report SAEs that occurred on or after January 1, 2004 to DTBE (e-mail: LTBIdrugevents@cdc.gov).

References

1. ATS/CDC. Targeted tuberculin testing and treatment of latent tuberculosis infection. *Am J Respir Crit Care Med* 2000;161:S221-S247.
2. American Thoracic Society/CDC. Update: Adverse event data and revised American Thoracic Society/CDC recommendations against the use of rifampin and pyrazinamide for treatment of latent tuberculosis infection—United States, 2003. *MMWR* 2003;52(31):735-9.
3. ATS. An official ATS statement: hepatotoxicity of antituberculosis therapy. *Am J Respir Crit Care Med* 2006;174:935-52.
4. CDC. Severe isoniazid-associated liver injuries among persons being treated for latent tuberculosis infection — United States, 2004–2008. *MMWR* 2010;59(8):224-9.

Appendix D

Genotyping Background Information and Glossary

Tuberculosis (TB) genotyping is a laboratory-based analysis of the genetic material of the bacteria that cause TB disease, *Mycobacterium tuberculosis* complex. The total genetic content is referred to as the genome. Specific sections of the genome contain distinct genetic patterns that help distinguish different strains of *M. tuberculosis*. TB genotyping examines the location, number, and presence of different types of spacer or repetitive DNA patterns. The areas of the genome examined in TB genotyping are different from those related to drug resistance.

Applications of Genotyping

Persons with TB disease who are related by transmission should have matching genotype results. Conversely, persons with matching TB genotyping results are probably related by transmission in some way, although the connection might not be recent or direct.

Genotyping results, when combined with epidemiologic data, can help identify persons with TB disease involved in the same chain of transmission. This information adds value to conventional TB control activities in a variety of ways. These applications are summarized as follows:

Patient-level Applications of Genotyping

- Complete contact investigations
 - Confirm or refute patient connections (epidemiologic linkages) identified that may or may not be found through routine contact investigations
- Cluster investigations
 - Find patient connections that were not identified through routine contact investigations
- Detect, refute, or confirm potential false-positive culture results
- Distinguish relapse TB disease from new TB infection among TB cases with recurrent TB disease

Population-level Applications of Genotyping

- Detect potential outbreaks using geospatial or other analyses of genotype clusters
- Refute outbreaks when cases thought to be part of the same outbreak have non-matching genotype results
- Define the scope of potential outbreaks by identifying all cases in an area with a matching genotype
- Monitor known outbreaks over time by watching for new cases with the outbreak genotype that get added to existing clusters (outbreak surveillance)

History of TB Genotyping Surveillance in the United States

In 1996, CDC started the National Tuberculosis Genotyping Surveillance Network (NTGSN), a 5-year initiative which established the utility of genotyping in TB control efforts.¹ In 2004, based on the knowledge gained from NTGSN and associated studies,² CDC established the National TB Genotyping Service (NTGS) and funded two national genotyping laboratories, located in Michigan and California, to genotype at least one *M. tuberculosis* isolate from each culture-positive TB case reported in the United States.³ All TB control programs may use NTGS at no cost to the patients, healthcare providers, or health departments. NTGS participation is voluntary, with individual programs determining how genotyping data will be used for their TB control activities. Since 2004, over 85,000 *M. tuberculosis* isolates have been successfully genotyped through NTGS and its partnerships between CDC, national genotyping laboratories, and 58 states and jurisdictions.

In 2010, CDC launched the TB Genotyping Information Management System (TB GIMS), a secure web-based database available to all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the U.S.-affiliated Pacific Islands. TB GIMS makes genotyping data easily available to users and links genotyping data to patient surveillance records. Key features include tools to link genotype results of isolate records from NTGS to patient surveillance records from the National TB Surveillance System (NTSS). Additional features include database queries on genotypes and clusters, data quality checks, aggregate reports, maps, and outbreak detection tools. TB GIMS currently has over 400 users among local, state, federal, and territorial partners.

Genotyping-based Outbreak Detection

CDC identifies genotype clusters that are most likely to represent TB outbreaks. Genotyping-based outbreak detection involves the use of geospatial analysis to identify unusual groupings of TB cases with matching genotypes that may represent outbreaks. TB control programs can use outbreak detection information to help allocate and prioritize resources for investigation and intervention on specific TB genotype clusters.

Currently, CDC's primary outbreak detection method is based on identifying higher than expected geospatial concentrations of a TB genotype in a specific county, compared to the national distribution of that genotype. This method calculates a log-likelihood ratio (LLR) statistic; clusters with higher LLRs are more likely to represent greater geospatial concentrations than clusters with lower LLRs; higher LLRs might indicate recent transmission of TB. LLR is then classified into alert levels within TB GIMS based on established cut points. Clusters are classified as no alert ($LLR < 5.0$), medium alert ($LLR \geq 5.0$ and < 10.0), or high alert (≥ 10.0). The alert level and changes in alert levels (e.g., from none to medium or high) can help TB programs identify outbreaks and prioritize TB genotype clusters for further investigation or intervention.

¹ Cowan LS, Crawford JT. Genotype analysis of *Mycobacterium tuberculosis* isolates from a sentinel surveillance population. *Emerg Infect Dis* 2002; 8(11): 1294–302.

² Haddad MB, Diem MA, Cowan LS, et al. Tuberculosis genotyping in six low-incidence states, 2000–2003. *Am J Prev Med* 2007; 32(3):239–43.

³ Ghosh S, Moonan PK, Cowan L, Grant J, Kammerer S, Navin TR. Tuberculosis Genotyping Information Management System: Enhancing Tuberculosis Surveillance in the United States. *Infect Genet Evol* 2012;12:782–8.

Genotyping Terminology

In NTGS, a genotype is currently defined as a unique combination of spacer oligonucleotide typing results (spoligotype) and 24-locus mycobacterial interspersed repetitive unit-variable number tandem repeat typing (MIRU–VNTR) results. Each unique combination of results is assigned a “GENType” designated as “G” followed by five digits, which are assigned sequentially to every genotype identified in the U.S. (e.g., G00162). This nomenclature is designed for convenience and ease of communication, but the specific numbers assigned have no additional significance outside of NTGS. Genotyping data from NTGS should not be used for clinical decision making.

National TB Genotyping Surveillance Coverage in the United States

National TB genotyping surveillance coverage refers to the proportion of culture-positive TB cases with a genotyped *M. tuberculosis* isolate. High levels of coverage in the United States can provide a better understanding of the epidemiology of TB transmission within a specific geographic area, as well as the entire country. Additionally, since outbreak detection algorithms are based on identifying unusual geospatial concentrations of genotypes, high coverage levels help decrease the likelihood of false-negative alerts. The National Tuberculosis Indicator Project (NTIP) national genotyping surveillance coverage objective is 94%.

GLOSSARY

Alert level

A mechanism used by TB GIMS to notify users of genotype clusters, possibly representing TB out-breaks, in a specific county. The alert level is determined by the log likelihood ratio statistic (LLR) for a given cluster. This is calculated by TB GIMS and is updated whenever a new case is added to a genotype cluster. Email notifications are generated whenever an alert level changes from a “none” LLR (0–5) to “medium” LLR (5.1–10) or “high” LLR (>10), or from a “medium” LLR to a “high” LLR.

Cluster investigation

A cluster investigation identifies epidemiologic links between TB patients whose isolates have matching genotypes. It may consist of reviewing information from public health and medical records and interviewing case managers and outreach workers. It can also involve re-interviewing TB patients.

Epidemiologic link (epi link)

An epidemiologic link is a relationship that two TB patients share that explains where, when, and how *M. tuberculosis* could have been transmitted between them. Patients that named each other as contacts have an epidemiologic link. However, an epidemiologic link could be a location where the two persons spent time together or an activity that brought them together.

Geospatial concentration

Geospatial concentration is a measure of how concentrated a genotype is in time and space. It suggests that recent transmission has occurred since cases with the same genotype in the same location are more likely to have come in contact with each other. TB GIMS uses the log likelihood ratio (LLR) to generate a numeric measure of geospatial concentration of a given TB genotype.

Genotype

The designation that represents one or more of the three genotyping techniques used for *M. tuberculosis*: spoligotyping, MIRU–VNTR analysis, and IS6110-based RFLP. These designations were developed to facilitate communication of genotyping information within and between TB programs. In the U.S., we use GENType or PCRTYPE to define a genotype.

Genotyping cluster

A genotyping cluster consists of two or more cases in a jurisdiction during a specified time period with *M. tuberculosis* isolates that share matching genotypes. In the U.S., all cases with matching GENType or PCRTyp are considered to be in a genotype cluster. The jurisdiction and time period used vary based on the specific application of the term cluster. Within TB GIMS, a single county and a 3-year time period are used to define a cluster.

Genotype Surveillance Coverage

Genotyping surveillance coverage is defined as the proportion of culture-positive TB cases with a genotype result.

GENType

A designation for each unique combination of spoligotype and 24-locus MIRU–VNTR results. GENType is designated as “G” followed by five digits, which are assigned sequentially to every genotype identified in the U.S. (e.g., G00017).

LLR (log likelihood ratio)

A measure of the geographic concentration of a specific genotype in a county, compared to the national distribution of that same genotype, over a 3-year period. The higher the LLR, the greater the evidence that the local genotype cluster within the county represents a greater geospatial concentration than the national average, which might indicate recent transmission of *M. tuberculosis*.

Linking

In TB GIMS, linking refers to the process of connecting genotyping results with a reported TB case from the National TB Surveillance System (NTSS). This step is essential to ensure that demographic, risk factor and geographic data can be viewed in TB GIMS for genotype clusters.

MDR

Multidrug-resistant (MDR) tuberculosis strains are resistant to at least isoniazid (INH) and rifampin (RIF).

MIRU-VNTR

Mycobacterial interspersed repetitive unit–variable number tandem repeat typing analysis. MIRU-VNTR is a PCR-based genotyping assay. The CDC genotyping program currently performs 24-locus MIRU-VNTR analysis on every isolate submitted for genotyping. Before 2009, only 12-locus MIRU-VNTR was performed.

Mycobacterium bovis

A member of the *M. tuberculosis* complex that is commonly associated with cattle, particularly in the developing world. In the United States, human cases of *M. bovis* TB generally have a foodborne origin, such as through consumption of unpasteurized dairy products. *M. bovis* is typically resistant to pyrazinamide (PZA). Identification of TB isolates that are *M. bovis* can be done through genotyping; however, this information should not be relied on for clinical decision making.

***Mycobacterium tuberculosis* complex**

Often abbreviated MTC, a group of closely related mycobacterial species that can cause latent TB infection (LTBI) and TB disease (i.e., *M. tuberculosis*, *M. bovis*, *M. bovis* BCG, *M. africanum*, *M. canetti*, *M. microti*, *M. pinnipedii*, and *M. mungi*). In humans, most TB is caused by *M. tuberculosis*.

NTGS

The National TB Genotyping Service has provided TB genotyping services to local and state TB control programs since 2004. Two national genotyping laboratories are contracted by CDC to provide genotyping services at no cost to the patients, healthcare providers, or health departments.

NTSS

National TB Surveillance System administered by CDC. NTSS collects surveillance data through an electronic reporting registry. Data collected include socio-demographic, clinical, and risk factor variables that are reported to CDC by states and local health departments.

PCR

Polymerase chain reaction (PCR) is a laboratory method that can rapidly amplify small quantities of DNA, thereby enabling certain types of laboratory testing. The national genotyping laboratories routinely use two PCR-based techniques, spoligotyping and MIRU-VNTR analysis.

PCRType

A designation for each a unique combination of spoligotype and 12-locus MIRU–VNTR results. PCRType is designated as “PCR” followed by five digits, which are assigned sequentially to every genotype identified in the U.S. (e.g., PCR01974).

Recent Transmission

Although the precise time interval is not well defined, “recent” transmission for TB is often considered to be TB disease that is due to exposure 2-3 years prior to disease onset. That is, the chain of transmission spanning from exposure to source case through onset of symptoms for secondary cases would be <3 years. Immunocompromised patients (e.g., patients with HIV or diabetes) may be at a higher risk for acquiring TB disease.

Relapse vs. reinfection

A case of relapsed TB represents a worsening of signs and symptoms of disease after a period of improvement, caused by the same strain of *M. tuberculosis*. TB that represents a new infection (or reinfection) is disease caused by a second infection (often with a strain that is different from the strain that caused the initial infection). Genotyping the initial and the subsequent *M. tuberculosis* isolate might distinguish these two possibilities.

RFLP

Restriction fragment length polymorphism. Also called IS6110-based restriction fragment length polymorphism (RFLP) analysis was the first widely used method for genotyping *M. tuberculosis* isolates. A genotyping technique based on measuring the number and length of specific DNA fragments that are cut using specific restriction enzymes.

RVCT

Report of a Verified Case of TB. National surveillance data on patients with tuberculosis is recorded on this form, and subsequently reported to CDC’s National TB Surveillance System (NTSS).

Spoligotyping

Spacer oligonucleotide genotyping. A genotyping technique based on spacer sequences found in the direct repeat region in the chromosomes (genetic makeup) of the *M. tuberculosis* complex. The “spoligotype” is reported as a 15-digit number.

GTAGTCGCCGACGTTTCCAAAACCGAGTTG
TAGATCCCGAGGGTTTCCGGATCCGATGTTG
TAGTTTCCCAGGGCTTCCGGAACCGACATTG
AATACTCCGATGTTTCCACTGCCGATAGAAG
CTGCCGACGTTGCCGCTGCCCAAGATGTTT
TGGCTGCCGAGGGTTGCCGCTGCCAAGGAT
GTTGAAGTCACCGACGTTTCCGCTGCCGAG
AATGTTGTAATTGCCGATGTTGGCGTTGCC
GAGAATGTTCACGACGCCCCGGTTTGCCAG
GCCGAGATTGAAGACCGGTGGGGCCACCGA
AAAATCCCGACATGTTGCTTCCGGTGTTGA
AGAAGCCCGAGATCAAGGCCGGCGTTGTG
ATGGCCACCAGGGCTCATGTTGAACAAACCC
GATACGGTGTTGCCCGAGTTGATCCGCCCG
ATACCAGCACGCCCGCGTTTGCCAGGGCCG
GAGTTACCGATGGCCCCCGACGAAGAGTG
GAAGAGCCAGAATTGTTGGCACCGAGTTCA
GGAAGCCGGACGCGCTACCGGGCACCGCTG
TTGAAGAATCCCGACGACGGCGCACTGGTC
GAGTTGAAGAAGCCGGGCTCCCGAAAATC
AGGCCTAGGCCTCGGTGACCGTGATCATG
TTGCCGCCGAAGGTCATTACGTTGTGTACG
CATCTGCTCGTTGTATGGGGGATGAATCGG
GAGTGGTGACCGAGAGATCGATGGCG