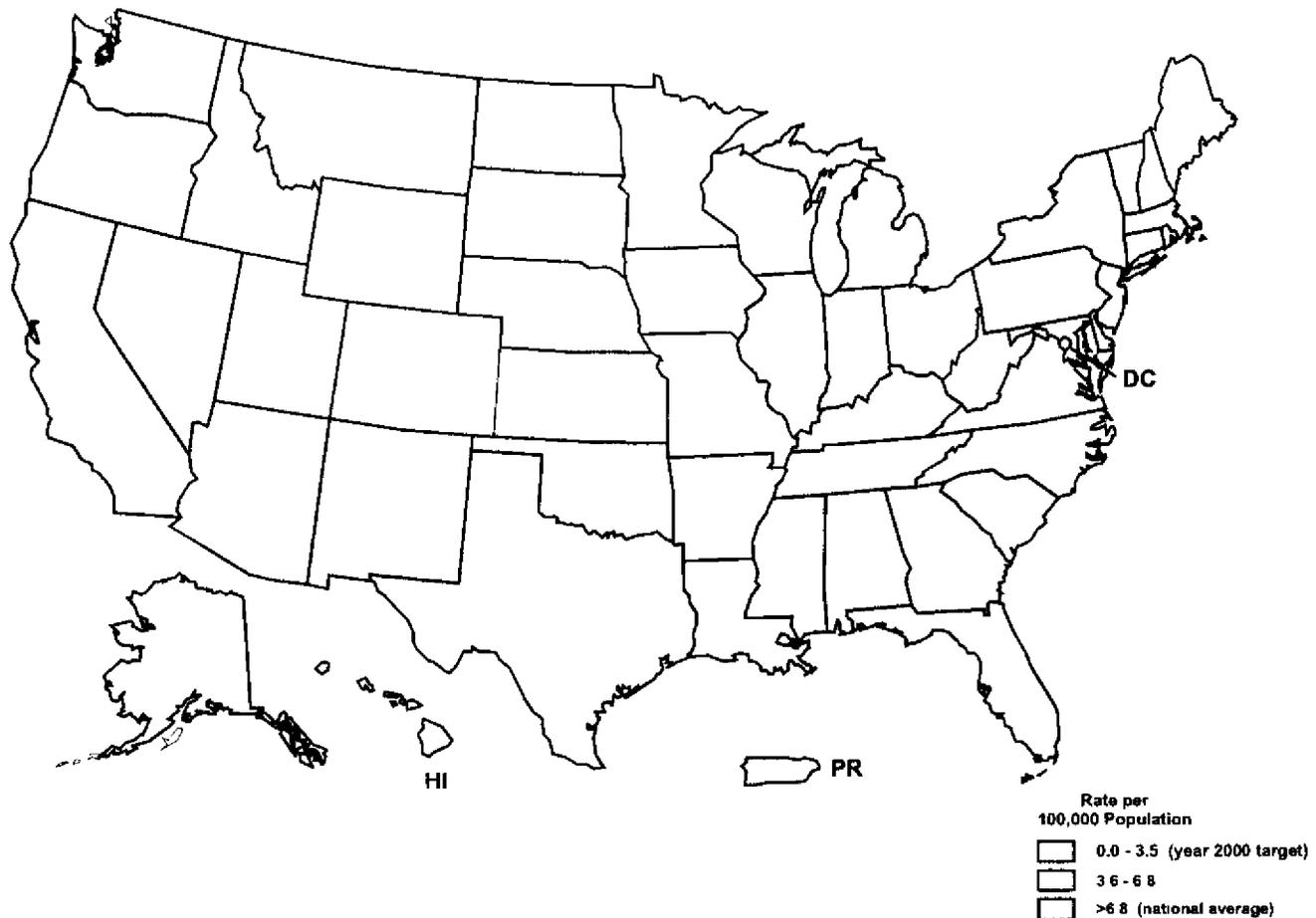


REPORTED TUBERCULOSIS IN THE UNITED STATES, 1998

Tuberculosis Case Rates: United States, 1998



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Centers for Disease Control and Prevention

National Center for HIV, STD, and TB Prevention

Division of Tuberculosis Elimination

Atlanta, Georgia 30333



Reported Tuberculosis in the United States, 1998
Centers for Disease Control and Prevention
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This report is also accessible via Internet: www.cdc.gov/nchstp/tb/

Cover: The map illustrates tuberculosis case rates in 1998. Nineteen states had tuberculosis case rates ≤ 3.5 cases per 100,000 population, the interim goal for the year 2000 established by the Advisory Committee (Council) for the Elimination of Tuberculosis (*MMWR* 1989;38(Suppl. No. S-3):1-25). Fifteen states and the District of Columbia had tuberculosis case rates that were higher than the 1998 national rate of 6.8 cases per 100,000 population.

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Introduction

Reports of tuberculosis (TB) cases are submitted to the Division of TB 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 other jurisdictions in the Pacific and Caribbean). In January 1993, DTBE, in conjunction with state and local health departments, implemented an expanded TB surveillance system. The expanded system collects additional information for each reported TB case in order to better monitor trends in TB, including drug-resistant TB, in the United States. A software package (SURVS -TB) for data entry, analysis, and transmission of case reports to CDC was designed and implemented as part of the expanded TB surveillance system. In 1998, the Tuberculosis Information Management System (TIMS) replaced SURVS-TB in order to provide reporting areas with a comprehensive software for surveillance, patient management, and program evaluation.

This publication, *Reported Tuberculosis in the United States, 1998*, presents summary data for TB cases reported to DTBE during 1998. It is similar to previous publications (page 5, #19) and contains five major sections. First, overall TB case counts and case rates with selected demographic characteristics are presented for the 50 states, New York City, and the District of Columbia. Second, TB case counts and case rates are presented by state with tables of selected demographic and clinical characteristics. In the third section, data collected as part of the expanded system (e.g., initial drug resistance, HIV status) are presented by reporting area. The fourth section provides TB case counts and case rates by metropolitan statistical areas (MSAs: see Technical Notes for further details) with tables of selected demographic and clinical characteristics. Finally, the fifth section is a collection of figures, including some data not presented in tabular format.

This is the second year several new tables (Tables 10, 11, 26) and figures (Figures 8, 9, 11) have been incorporated. Tables 10 and 11 present the country of origin and the duration of residence in the United States by state, for cases among foreign-born persons. Figures 8 and 9 present the number and percentage of the overall national total, by year, for cases among U.S.-born and foreign-born persons, respectively. Table 26 is the most recent addition to the section presenting data collected as part of the expanded system. This table provides estimates of completion of TB therapy (COT) rates by reporting area (see Technical Notes for further details). Figure 11 presents a U.S. map showing isoniazid resistance among cases without a history of previous TB. In addition, for the second year, Tables 12, 13, and 29 include all military cases under the classification of both pulmonary and extrapulmonary disease rather than the classification of extrapulmonary as was done in annual summaries prior to 1997.

To help interpret the data, an Executive Commentary (page 2) and Technical Notes (page 71) have been included. In addition, the current case definition (*MMWR* 1997;46 [No. RR-10]:40-1) and "Recommendations for Counting Reported Tuberculosis Cases" are provided in the Appendix. The recommendations for counting TB cases, which update the January 1977 recommendations, were first published in *Reported Tuberculosis in the United States, 1996*.

We will continue to adapt and improve this publication to better monitor trends in TB in the United States. Your comments and suggestions that may assist us in this process will be greatly appreciated.

Executive Commentary

During 1998, a total of 18,361 TB cases (6.8 cases per 100,000 population) were reported to CDC from the 50 states and the District of Columbia, representing a 7.5% decrease from 1997 and a 31% decrease from 1992, when the number of cases peaked during the resurgence of TB in the United States. The national TB case rate also steadily decreased during this period (Table 1). In 1998, 6% of cases were reported in children under 15 years old, 8% in persons aged 15-24 years, 35% in persons aged 25-44 years, 27% in persons aged 45-64 years, and 24% in persons aged 65 years and older (Table 2). During 1992-1998, there was a decline in both the number of cases reported in each of these age groups and the respective TB case rates.

An important consideration is that the overall national trends reflect the impact of varying changes within population subgroups. For example, the overall decrease in TB cases during 1992-1998 primarily reflected a 44% decrease in the number of cases among U.S.-born persons, with substantial declines in all age groups. In contrast, the total number of cases among foreign-born persons increased 4% during this period, reflecting a small increase among adults aged 25-44 years, a larger increase among adults aged ≥ 45 years, and a substantial decline among children aged < 15 years. In terms of case rates, there was a 46% decrease in the case rate among U.S.-born persons (from 8.2 to 4.4 per 100,000), and there was an 18% decrease in the case rate among foreign-born persons (from 34 to 28 per 100,000).

The overall trends also reflect the impact of changes by geographic location. For example, during 1992-1998, the seven states (California, Florida, Georgia, Illinois, New Jersey, New York, and Texas) reporting the highest number of cases (60% of the total number of U.S. cases in 1998) experienced a substantial decrease in both the annual number of reported cases and case rate. Overall substantial decreases also occurred in 14 other states during the 7 year period. In the remaining 23 states and the District of Columbia, annual case counts fluctuated (e.g. an increase followed by a decrease) or remained relatively stable during 1992-1998. Most of these states had case rates below 3.5 per 100,000 (17 states) or reported less than 100 cases (16 states) in 1998.

The resurgence of TB in the United States in the late 1980s and early 1990s was associated with the emergence of multidrug-resistant TB (MDR TB) and the HIV/AIDS epidemic.^{1,2} Analysis of initial drug susceptibility test results for isolates from persons with culture-positive TB found a relatively stable level of resistance to at least isoniazid and a decreasing level of MDR TB during 1993-1997.^{3,4} Data from cases reported during 1998 confirm these trends, with 8% of isolates resistant to at least isoniazid and 1.1% resistant to at least isoniazid and rifampin (MDR TB) (Table 21). The decrease in the level of MDR TB was influenced by a substantial decrease in New York City; however, during 1993-1998, the proportion of MDR TB cases reported from U.S. areas excluding New York City decreased from 1.7% to 0.9%.

Incomplete reporting has limited the analysis of national TB surveillance data by HIV status. Reporting of HIV status has improved slowly since 1993, the year such information was first included on TB case reports submitted to CDC. In 1998, 55% of TB case reports for persons aged 25-44 years included information about HIV status. Twenty-one states and New York City reported this information for at least 75% of cases among persons in this age group (Table 22). To help estimate the proportion of reported TB cases with HIV coinfection, state health departments have compared TB and AIDS registries.⁵ Using registry match data to supplement reported HIV test results on the individual TB case report, minimum estimates of the proportion with HIV coinfection range from 15% in 1993-1994 to 10% in 1997 for persons of all ages reported with TB and from 29% in 1993-1994 to 21% in 1997 for persons aged 25 to 44 (CDC,

unpublished data). The impact of the HIV/AIDS epidemic also differs by geographic location. For example, in 1998, over 35% of TB cases in persons aged 25-44 years reported from Delaware, Florida, and New York City were coinfecting with HIV, whereas (among states with more than 5 cases in this age group), <10% of cases from Ohio, South Carolina, and Wisconsin were reported with HIV coinfection.

During 1992-1998, the declines in the overall number of reported TB cases and in the level of MDR TB appear to reflect successful efforts to strengthen TB control following the resurgence of TB and the emergence of MDR TB. Emphasizing the first priority of TB control⁶ (i.e., promptly identifying persons with TB, initiating appropriate therapy, and ensuring completion of therapy) has likely been the most important factor in achieving this improvement, through the reduction of community transmission of *M. tuberculosis*, particularly in areas with a high incidence of AIDS.⁷ Improvements in infection control practices in nosocomial and other congregate settings, declining AIDS incidence, and the decreasing number of MDR TB cases also appear to have contributed to the overall decrease; however, the contribution of these factors has been difficult to measure. The substantial decline in both the number of reported cases among U.S.-born persons and the case rate for U.S.-born persons supports these inferences. In comparison, the relatively stable number of reported cases among foreign-born persons along with the modest decline in the case rate among foreign-born persons is consistent with other analyses of TB surveillance data that indicate that most cases of TB among foreign-born persons residing in the United States result from infection with *M. tuberculosis* in the person's country of birth.⁸ As the percentage of reported TB cases among foreign-born persons continues to increase, the elimination of TB in the United States will depend increasingly on the elimination of TB among foreign-born persons.⁹ CDC, in collaboration with state and local health departments, recently published recommendations for enhancing TB control efforts in the foreign-born,⁹ and is currently working with these jurisdictions to expand efforts based on these recommendations.

To move from TB control to TB elimination in the United States, the Advisory Council for the Elimination of Tuberculosis has emphasized that existing efforts must be sustained and enhanced.¹⁰ Monitoring the success of these efforts depends on continued surveillance at the national, state, and local levels. The expanded national TB surveillance system has proven its usefulness in assisting with this important activity, particularly through the collection of data on initial drug susceptibility results. Further assessment includes another important benchmark of TB program success: the rate of completion of therapy. Future evaluation of trends in completion of therapy, based on analysis of data collected through national surveillance (Table 26), will also assist in measuring continued progress.

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Morbidity Tables

United States

1998

Table 1. Tuberculosis Cases and Case Rates per 100,000 Population, Deaths and Death Rates per 100,000 Population: United States, 1953-1998

Year	Tuberculosis Cases				Tuberculosis Deaths			
	Number	Rate(a)	Percent Change		Number	Rate(a)	Percent Change	
			Number	Rate			Number	Rate
1953	84,304	53.0	--	--	19,707	12.4	--	--
1954	79,775	49.3	-5.4	-7.0	16,527	10.2	-16.1	-17.7
1955	77,368	46.9	-3.0	-4.9	15,016	9.1	-9.1	-10.8
1956	69,895	41.6	-9.7	-11.0	14,137	8.4	-5.9	-7.7
1957	67,149	39.2	-3.9	-5.8	13,390	7.8	-5.3	-7.1
1958	63,534	36.5	-5.4	-6.9	12,417	7.1	-7.3	-9.0
1959	57,535	32.5	-9.4	-11.0	11,474	6.5	-7.6	-8.5
1960	55,494	30.8	-3.5	-5.2	10,866	6.0	-5.3	-7.7
1961	53,726	29.4	-3.2	-4.5	9,938	5.4	-8.5	-10.0
1962	53,315	28.7	-0.8	-2.4	9,506	5.1	-4.3	-5.6
1963	54,042	28.7	+1.4	0.0	9,311	4.9	-2.1	-3.9
1964	50,874	26.6	-5.9	-7.3	8,303	4.3	-10.8	-12.2
1965	49,016	25.3	-3.7	-4.9	7,934	4.1	-4.4	-4.7
1966	47,767	24.4	-2.5	-3.6	7,625	3.9	-3.9	-4.9
1967	45,647	23.1	-4.4	-5.3	6,901	3.5	-9.5	-10.3
1968	42,623	21.3	-6.6	-7.8	6,292	3.1	-8.8	-11.4
1969	39,120	19.4	-8.2	-8.9	5,567	2.8	-11.5	-9.7
1970	37,137	18.3	-5.1	-5.7	5,217	2.6	-6.3	-7.1
1971	35,217	17.1	-5.2	-6.6	4,501	2.2	-13.7	-15.4
1972	32,882	15.8	-6.6	-7.6	4,376	2.1	-2.8	-4.5
1973	30,998	14.8	-5.7	-6.3	3,875	1.8	-11.4	-14.5
1974	30,122	14.2	-2.8	-4.1	3,513	1.7	-9.3	-5.6
1975	33,989	15.9	--	--	3,333	1.6	-5.1	-5.9
1976	32,105	15.0	-5.5	-5.7	3,130	1.5	-6.1	-6.3
1977	30,145	13.9	-6.1	-7.3	2,968	1.4	-5.2	-6.7
1978	28,521	13.1	-5.4	-5.8	2,914	1.3	-1.8	-7.1
1979	27,669	12.6	-3.0	-3.8	2,007(b)	0.9(b)	-31.1(b)	-30.8(b)
1980	27,749	12.3	+0.3	-2.4	1,978	0.9	-1.4	0.0
1981	27,373	11.9	-1.4	-3.3	1,937	0.8	-2.1	-11.1
1982	25,520	11.0	-6.8	-7.6	1,807	0.8	-6.7	0.0
1983	23,846	10.2	-6.6	-7.3	1,779	0.8	-1.5	0.0
1984	22,255	9.4	-6.7	-7.8	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	9.4	+2.6	+1.1	1,782	0.7	+1.7	0.0
1987	22,517	9.3	-1.1	-1.1	1,755	0.7	-1.5	0.0
1988	22,436	9.1	-0.4	-2.2	1,921	0.8	+9.5	+14.3
1989	23,495	9.5	+4.7	+4.4	1,970	0.8	+2.6	0.0
1990	25,701	10.3	+9.4	+8.4	1,810	0.7	-8.1	-12.5
1991	26,283	10.4	+2.3	+1.0	1,713	0.7	-5.4	0.0
1992	26,673	10.5	+1.5	+1.0	1,705	0.7	-0.5	0.0
1993	25,287	9.8	-5.2	-6.7	1,631	0.6	-4.3	-14.3
1994	24,361	9.4	-3.7	-4.1	1,478	0.6	-9.4	0.0
1995	22,860	8.7	-6.2	-7.4	1,336	0.5	-9.6	-16.7
1996	21,337	8.0	-6.7	-8.0	1,202	0.5	-10.0	0.0
1997	19,851	7.4	-7.0	-7.5	1,166	0.4	-3.0	-20.0
1998	18,361	6.8	-7.5	-8.1	...	...	...	...

(a)Per 100,000 population.

(b)The large decrease 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.

Ellipses indicate data not available.

Note: Case data after 1974 are not comparable to prior years due to changes in surveillance case definitions which became effective in 1975.

Table 2. Tuberculosis Cases by Race/Ethnicity, Sex, and Age: United States, 1998

Race/Ethnicity and Sex	All Ages	Age Group						Not Stated
		Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	
Total Cases	18,361	641	441	1,548	6,365	4,973	4,393	0
White, Not Hispanic	4,495	92	46	139	1,024	1,276	1,916	0
Male	2,964	48	27	75	696	948	1,170	0
Female	1,530	44	19	64	328	328	747	0
Unknown	1	0	0	0	0	0	1	0
Black, Not Hispanic	5,831	206	170	397	2,309	1,716	1,033	0
Male	3,633	91	79	184	1,425	1,267	587	0
Female	2,196	115	89	213	884	449	446	0
Unknown	2	0	2	0	0	0	0	0
Hispanic(a)	4,099	262	156	592	1,612	911	566	0
Male	2,610	141	65	369	1,078	632	325	0
Female	1,483	121	91	223	530	278	240	0
Unknown	6	0	0	0	4	1	1	0
American Indian/Alaskan Native	253	11	4	11	73	94	60	0
Male	150	7	1	6	51	58	27	0
Female	102	4	3	5	22	36	32	0
Unknown	1	0	0	0	0	0	1	0
Asian/Pacific Islander	3,623	69	63	405	1,320	957	809	0
Male	2,029	37	35	187	688	593	489	0
Female	1,591	32	28	218	631	364	318	0
Unknown	3	0	0	0	1	0	2	0
Not Stated	60	1	2	4	27	19	7	0
Male	27	0	0	1	15	11	0	0
Female	33	1	2	3	12	8	7	0
Unknown	0	0	0	0	0	0	0	0

(a) Persons of Hispanic origin may be of any race.

Table 3. Tuberculosis Case Rates per 100,000 Population by Race/Ethnicity, Sex, and Age: United States, 1998

Race/Ethnicity and Sex	All Ages	Age Group					
		Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+
Total Cases	6.8	3.4	1.1	4.2	7.6	8.7	12.8
White, Not Hispanic	2.3	0.8	0.2	0.6	1.7	2.8	6.6
Male	3.1	0.8	0.2	0.6	2.4	4.3	9.7
Female	1.5	0.8	0.2	0.5	1.1	1.4	4.4
Black, Not Hispanic	17.8	7.8	2.9	7.4	22.4	29.8	37.4
Male	23.5	6.8	2.7	6.8	29.4	49.4	54.3
Female	12.7	8.8	3.1	7.9	16.1	14.0	26.5
Hispanic(a)	13.6	7.7	2.7	11.2	16.6	21.0	32.1
Male	17.1	8.1	2.2	13.4	21.6	30.4	43.9
Female	9.9	7.3	3.2	8.8	11.2	12.3	23.5
American Indian/Alaskan Native	12.6	6.7	1.0	3.2	12.0	27.2	42.0
Male	15.3	8.5	0.5	3.4	16.8	35.4	45.0
Female	10.0	4.9	1.6	2.9	7.2	19.9	38.6
Asian/Pacific Islander	36.6	8.4	4.1	28.0	38.5	49.5	109.6
Male	42.8	8.9	4.5	25.8	42.7	66.0	156.7
Female	30.9	7.9	3.8	30.1	34.7	35.3	75.2

(a) Persons of Hispanic origin may be of any race.

Note: See Technical Notes for source of population.

Table 4. Tuberculosis Cases in U.S.-born Persons by Race/Ethnicity, Sex, and Age: United States 1998

Race/Ethnicity and Sex	All Ages	Age Group						Not Stated
		Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	
Total Cases	10,675	544	278	480	3,215	3,160	2,998	0
White, Not Hispanic	3,918	77	28	92	848	1,144	1,729	0
Male	2,626	41	17	50	583	861	1,074	0
Female	1,291	36	11	42	265	283	654	0
Unknown	1	0	0	0	0	0	1	0
Black, Not Hispanic	4,973	198	139	227	1,865	1,570	974	0
Male	3,148	88	63	107	1,161	1,172	557	0
Female	1,825	110	76	120	704	398	417	0
Unknown	0	0	0	0	0	0	0	0
Hispanic(a)	1,293	214	84	119	379	308	189	0
Male	793	115	35	61	247	226	109	0
Female	497	99	49	58	130	82	79	0
Unknown	3	0	0	0	2	0	1	0
American Indian/Alaskan Native	246	11	4	10	69	92	60	0
Male	146	7	1	5	50	56	27	0
Female	99	4	3	5	19	36	32	0
Unknown	1	0	0	0	0	0	1	0
Asian/Pacific Islander	215	44	22	30	43	34	42	0
Male	127	25	13	18	21	20	30	0
Female	88	19	9	12	22	14	12	0
Unknown	0	0	0	0	0	0	0	0
Not Stated	30	0	1	2	11	12	4	0
Male	15	0	0	1	7	7	0	0
Female	15	0	1	1	4	5	4	0
Unknown	0	0	0	0	0	0	0	0

(a)Persons of Hispanic origin may be of any race.

Table 5. Tuberculosis Cases in Foreign-born Persons(a) by Race/Ethnicity, Sex, and Age: United States, 1998

Race/Ethnicity and Sex	All Ages	Age Group						Not Stated
		Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	
Total Cases	7,591	92	161	1,063	3,121	1,788	1,366	0
White, Not Hispanic	560	14	18	47	172	127	182	0
Male	327	6	10	25	109	83	94	0
Female	233	8	8	22	63	44	88	0
Unknown	0	0	0	0	0	0	0	0
Black, Not Hispanic	842	8	31	170	440	141	52	0
Male	474	3	16	77	261	91	26	0
Female	366	5	13	93	179	50	26	0
Unknown	2	0	2	0	0	0	0	0
Hispanic(b)	2,774	45	71	471	1,222	595	370	0
Male	1,797	24	30	307	826	398	212	0
Female	974	21	41	164	394	196	158	0
Unknown	3	0	0	0	2	1	0	0
American Indian/Alaskan Native	7	0	0	1	4	2	0	0
Male	4	0	0	1	1	2	0	0
Female	3	0	0	0	3	0	0	0
Unknown	0	0	0	0	0	0	0	0
Asian/Pacific Islander	3,393	25	40	373	1,273	920	762	0
Male	1,894	12	22	168	666	571	455	0
Female	1,496	13	18	205	606	349	305	0
Unknown	3	0	0	0	1	0	2	0
Not Stated	15	0	1	1	10	3	0	0
Male	5	0	0	0	4	1	0	0
Female	10	0	1	1	6	2	0	0
Unknown	0	0	0	0	0	0	0	0

(a)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, U.S. Minor Outlying Islands, U.S. Miscellaneous Islands, and the U.S. Virgin Islands.

(b)Persons of Hispanic origin may be of any race.

Morbidity Tables

States

1998

Table 6. Tuberculosis Cases and Case Rates per 100,000 Population: States, 1998 and 1997

State	Cases		Case Rates		Rank According to Rate		Population Estimates July 1, 1998
	1998	1997	1998	1997	1998	1997	
United States	18,361	19,851	6.8	7.4	--	--	270,299,000
Alabama	381	405	8.8	9.4	6	7	4,352,000
Alaska	55	78	9.0	12.8	5	2	614,000
Arizona	254	296	5.4	6.5	21	18	4,669,000
Arkansas	171	200	6.7	7.9	16	15	2,538,000
California	3,852	4,056	11.8	12.6	2	3	32,667,000
Colorado	79	94	2.0	2.4	42	41	3,971,000
Connecticut	128	128	3.9	3.9	30	30	3,274,000
Delaware	36	39	4.8	5.3	23	22	744,000
District of Columbia(a)	107	110	20.5	20.8	--	--	523,000
Florida	1,302	1,400	8.7	9.6	7	6	14,916,000
Georgia	631	696	8.3	9.3	9	9	7,642,000
Hawaii	181	167	15.2	14.1	1	1	1,193,000
Idaho	14	15	1.1	1.2	47	48	1,229,000
Illinois	850	974	7.1	8.2	15	14	12,045,000
Indiana	188	168	3.2	2.9	34	36	5,899,000
Iowa	55	74	1.9	2.6	43	37	2,862,000
Kansas	56	78	2.1	3.0	39	34	2,629,000
Kentucky	179	198	4.5	5.1	27	24	3,936,000
Louisiana	380	406	8.7	9.3	8	8	4,369,000
Maine	13	21	1.0	1.7	48	45	1,244,000
Maryland	324	340	6.3	6.7	19	17	5,135,000
Massachusetts	282	268	4.6	4.4	26	28	6,147,000
Michigan	385	374	3.9	3.8	28	32	9,817,000
Minnesota	161	161	3.4	3.4	32	33	4,725,000
Mississippi	225	245	8.2	9.0	10	10	2,752,000
Missouri	184	248	3.4	4.6	33	26	5,439,000
Montana	20	18	2.3	2.0	38	42	880,000
Nebraska	31	22	1.9	1.3	44	47	1,663,000
Nevada	128	112	7.3	6.7	14	16	1,747,000
New Hampshire	14	17	1.2	1.4	46	46	1,185,000
New Jersey	640	718	7.9	8.9	12	11	8,115,000
New Mexico	68	71	3.9	4.1	29	29	1,737,000
New York	2,000	2,265	11.0	12.5	3	4	18,175,000
North Carolina	498	463	6.6	6.2	17	20	7,546,000
North Dakota	10	12	1.6	1.9	45	43	638,000
Ohio	230	286	2.1	2.6	41	39	11,209,000
Oklahoma	198	212	5.9	6.4	20	19	3,347,000
Oregon	156	161	4.8	5.0	24	25	3,282,000
Pennsylvania	448	528	3.7	4.4	31	27	12,001,000
Rhode Island	63	38	6.4	3.9	18	31	988,000
South Carolina	286	328	7.5	8.7	13	12	3,836,000
South Dakota	23	19	3.1	2.6	35	38	738,000
Tennessee	439	467	8.1	8.7	11	13	5,431,000
Texas	1,820	1,992	9.2	10.2	4	5	19,760,000
Utah	52	36	2.5	1.7	36	44	2,100,000
Vermont	5	6	0.8	1.0	49	49	591,000
Virginia	339	350	5.0	5.2	22	23	6,791,000
Washington	265	305	4.7	5.4	25	21	5,689,000
West Virginia	42	54	2.3	3.0	37	35	1,811,000
Wisconsin	109	130	2.1	2.5	40	40	5,224,000
Wyoming	4	2	0.8	0.4	50	50	481,000
American Samoa(a,b)	...	5	...	8.3	--	--	62,093
Fed. States of Micronesia(a,b)	...	...	...	...	--	--	129,658
Guam(a,b)	89	...	59.7	...	--	--	149,101
N. Mariana Islands(a,b)	...	88	...	138.0	--	--	66,611
Puerto Rico(a,b)	201	257	5.2	6.7	--	--	3,860,091
Republic of Palau(a,b)	...	16	...	92.9	--	--	18,110
U.S. Virgin Islands(a,b)	...	...	...	...	--	--	118,382

(a)Not ranked with the states.

(b)Not included in totals.

Ellipses indicate data not available.

Note: See Technical Notes for source of population.

Table 7. Tuberculosis Cases by Age Group: States, 1998

State	Total Cases	Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	Unknown or Missing
United States	18,361	641	441	1,548	6,365	4,973	4,393	0
Alabama	381	7	11	17	107	112	127	0
Alaska	55	4	1	4	26	14	6	0
Arizona	254	11	13	21	69	72	68	0
Arkansas	171	7	7	4	32	37	84	0
California	3,852	160	92	358	1,275	1,063	904	0
Colorado	79	4	3	3	26	15	28	0
Connecticut	128	2	2	9	50	39	26	0
Delaware	36	1	0	3	13	13	6	0
District of Columbia	107	1	1	7	48	37	13	0
Florida	1,302	28	15	76	544	392	247	0
Georgia	631	33	22	45	228	179	124	0
Hawaii	181	4	1	15	46	52	63	0
Idaho	14	0	0	1	6	4	3	0
Illinois	850	39	26	69	319	234	163	0
Indiana	188	9	8	13	48	57	53	0
Iowa	55	2	0	7	15	18	13	0
Kansas	56	4	0	5	17	12	18	0
Kentucky	179	6	1	8	36	42	84	0
Louisiana	380	14	6	23	132	114	91	0
Maine	13	0	0	0	3	4	6	0
Maryland	324	16	5	39	112	78	74	0
Massachusetts	282	7	6	30	108	77	54	0
Michigan	385	17	10	24	123	115	96	0
Minnesota	161	3	6	33	60	32	27	0
Mississippi	225	10	10	7	55	68	75	0
Missouri	184	7	1	6	53	55	62	0
Montana	20	0	0	0	4	9	7	0
Nebraska	31	0	0	0	12	10	9	0
Nevada	128	6	3	11	48	41	19	0
New Hampshire	14	0	0	2	2	3	7	0
New Jersey	640	24	18	50	260	162	126	0
New Mexico	68	4	0	4	14	17	29	0
New York	2,000	44	43	213	802	515	383	0
North Carolina	498	15	6	38	152	128	159	0
North Dakota	10	1	2	0	2	3	2	0
Ohio	230	3	6	17	62	47	95	0
Oklahoma	198	3	14	16	53	58	54	0
Oregon	156	3	4	17	71	32	29	0
Pennsylvania	448	16	10	26	137	122	137	0
Rhode Island	63	6	7	5	16	16	13	0
South Carolina	286	8	5	23	78	83	89	0
South Dakota	23	0	1	0	4	12	6	0
Tennessee	439	15	3	34	120	92	175	0
Texas	1,820	74	61	189	696	493	305	0
Utah	52	0	2	2	24	12	12	0
Vermont	5	0	0	0	1	3	1	0
Virginia	339	9	2	34	121	63	110	0
Washington	265	13	6	28	89	71	58	0
West Virginia	42	0	0	1	8	13	20	0
Wisconsin	109	1	1	11	32	31	33	0
Wyoming	4	0	0	0	2	2	0	0
American Samoa(a)	...	...	...	...	...	...	...	...
Fed. States of Micronesia(a)	...	...	...	...	...	...	...	...
Guam(a)	89	1	1	13	20	34	20	0
N. Mariana Islands(a)	...	...	...	...	...	...	...	...
Puerto Rico(a)	201	7	2	12	72	64	43	1
Republic of Palau(a)	...	...	...	...	...	...	...	...
U.S. Virgin Islands(a)	...	...	...	...	...	...	...	...

(a)Not included in totals.
Ellipses indicate data not available.

Table 8. Tuberculosis Cases by Race/Ethnicity: States, 1998

State	Total Cases	White Not Hispanic	Black Not Hispanic	Hispanic(a)	American Indian or Alaskan Native	Asian or Pacific Islander	Unknown or Missing
United States	18,361	4,495	5,831	4,099	253	3,623	60
Alabama	381	144	214	7	0	16	0
Alaska	55	12	2	2	28	11	0
Arizona	254	78	17	105	39	15	0
Arkansas	171	102	44	14	0	7	4
California	3,852	519	383	1,402	24	1,522	2
Colorado	79	17	11	32	0	19	0
Connecticut	128	35	46	24	0	23	0
Delaware	36	11	11	8	0	6	0
District of Columbia	107	6	80	9	1	8	3
Florida	1,302	395	642	200	3	57	5
Georgia	631	137	385	64	3	41	1
Hawaii	181	5	0	2	0	172	2
Idaho	14	7	0	4	2	1	0
Illinois	850	183	388	132	2	143	2
Indiana	188	90	56	24	0	14	4
Iowa	55	29	8	4	0	14	0
Kansas	56	16	7	16	0	17	0
Kentucky	179	141	23	7	0	6	2
Louisiana	380	110	233	12	0	24	1
Maine	13	11	1	0	0	1	0
Maryland	324	62	163	25	0	74	0
Massachusetts	282	81	75	33	0	92	1
Michigan	385	123	180	25	1	54	2
Minnesota	161	26	66	7	10	51	1
Mississippi	225	80	130	4	0	10	1
Missouri	184	74	75	14	0	19	2
Montana	20	6	0	1	13	0	0
Nebraska	31	11	2	7	3	8	0
Nevada	128	31	18	46	0	33	0
New Hampshire	14	11	1	0	0	2	0
New Jersey	640	141	197	147	0	155	0
New Mexico	68	10	3	26	25	4	0
New York	2,000	308	754	540	1	397	0
North Carolina	498	132	287	52	3	24	0
North Dakota	10	3	0	0	5	2	0
Ohio	230	105	85	10	0	29	1
Oklahoma	198	106	18	20	41	13	0
Oregon	156	66	12	25	4	49	0
Pennsylvania	448	180	168	41	0	58	1
Rhode Island	63	19	8	19	0	17	0
South Carolina	286	51	210	10	1	14	0
South Dakota	23	4	1	0	17	1	0
Tennessee	439	222	188	7	0	22	0
Texas	1,820	336	443	865	4	153	19
Utah	52	15	3	10	6	17	1
Vermont	5	2	1	1	0	1	0
Virginia	339	82	129	40	0	84	4
Washington	265	84	27	39	14	100	1
West Virginia	42	34	6	2	0	0	0
Wisconsin	109	40	30	13	3	23	0
Wyoming	4	2	0	2	0	0	0
American Samoa(b)	...	...	...	...	...	...	...
Fed. States of Micronesia(b)	...	...	...	...	...	...	...
Guam(b)	39	1	0	0	0	85	3
N. Mariana Islands(b)	...	...	...	...	...	...	...
Puerto Rico(b)	201	0	0	199	0	2	0
Republic of Palau(b)	...	...	...	...	...	...	...
U.S. Virgin Islands(b)	...	...	...	...	...	...	...

(a)Persons of Hispanic origin may be of any race.

(b)Not included in totals.

Ellipses indicate data not available.

Table 9. Tuberculosis Cases, U.S.-born Persons and Foreign-born Persons: States, 1998

State	Total Cases	U.S.-born Persons		Foreign-born Persons(a)		Unknown	
		No.	%	No.	%	No.	%
United States	18,361	10,675	58.1	7,591	41.3	95	0.5
Alabama	381	357	93.7	22	5.8	2	0.5
Alaska	55	43	78.2	12	21.8	0	0.0
Arizona	254	155	61.0	99	39.0	0	0.0
Arkansas	171	149	87.1	16	9.4	6	3.5
California	3,852	1,150	29.9	2,682	69.6	20	0.5
Colorado	79	40	50.6	35	44.3	4	5.1
Connecticut	128	66	51.6	62	48.4	0	0.0
Delaware	36	17	47.2	19	52.8	0	0.0
District of Columbia	107	71	66.4	33	30.8	3	2.8
Florida	1,302	901	69.2	397	30.5	4	0.3
Georgia	631	509	80.7	119	18.9	3	0.5
Hawaii	181	51	28.2	129	71.3	1	0.6
Idaho	14	9	64.3	5	35.7	0	0.0
Illinois	850	606	71.3	238	28.0	6	0.7
Indiana	188	149	79.3	35	18.6	4	2.1
Iowa	55	31	56.4	24	43.6	0	0.0
Kansas	56	26	46.4	30	53.6	0	0.0
Kentucky	179	161	89.9	13	7.3	5	2.8
Louisiana	380	349	91.8	29	7.6	2	0.5
Maine	13	10	76.9	3	23.1	0	0.0
Maryland	324	183	56.5	141	43.5	0	0.0
Massachusetts	262	93	33.0	188	66.7	1	0.4
Michigan	385	287	74.5	97	25.2	1	0.3
Minnesota	161	46	28.6	115	71.4	0	0.0
Mississippi	225	215	95.6	10	4.4	0	0.0
Missouri	184	149	81.0	34	18.5	1	0.5
Montana	20	20	100.0	0	0.0	0	0.0
Nebraska	31	12	38.7	19	61.3	0	0.0
Nevada	128	63	49.2	64	50.0	1	0.8
New Hampshire	14	9	64.3	5	35.7	0	0.0
New Jersey	640	319	49.8	321	50.2	0	0.0
New Mexico	68	47	69.1	21	30.9	0	0.0
New York	2,000	922	46.1	1,067	53.4	11	0.6
North Carolina	498	425	85.3	71	14.3	2	0.4
North Dakota	10	10	100.0	0	0.0	0	0.0
Ohio	230	174	75.7	55	23.9	1	0.4
Oklahoma	138	166	83.8	32	16.2	0	0.0
Oregon	156	79	50.6	77	49.4	0	0.0
Pennsylvania	448	334	74.6	113	25.2	1	0.2
Rhode Island	63	28	44.4	35	55.6	0	0.0
South Carolina	286	267	93.4	18	6.3	1	0.3
South Dakota	23	21	91.3	2	8.7	0	0.0
Tennessee	439	394	89.7	44	10.0	1	0.2
Texas	1,820	1,138	62.5	677	37.2	5	0.3
Utah	52	19	36.5	32	61.5	1	1.9
Vermont	5	4	80.0	1	20.0	0	0.0
Virginia	339	183	54.0	148	43.7	8	2.4
Washington	265	104	39.2	161	60.8	0	0.0
West Virginia	42	40	95.2	2	4.8	0	0.0
Wisconsin	109	71	65.1	38	34.9	0	0.0
Wyoming	4	3	75.0	1	25.0	0	0.0

(a) 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, U.S. Minor Outlying Islands, U.S. Miscellaneous Pacific Islands, and the U.S. Virgin Islands.

Note: See Figure 5.

Table 10. Tuberculosis Cases in Foreign-born Persons(a) by Country of Origin: States, 1998

State	Total Cases	Country of Origin								Unknown or Missing
		Mexico	Philippines	Vietnam	India	Rep. of China	Haiti	Rep. of Korea	All Others(b)	
United States	7,591	1,757	968	748	503	373	299	219	2,706	18
Alabama	22	7	1	5	3	1	1	0	4	0
Alaska	12	1	6	0	0	1	1	0	3	0
Arizona	99	69	4	6	3	0	0	1	16	0
Arkansas	16	7	1	1	2	0	0	0	5	0
California	2,682	844	564	332	110	153	1	106	561	11
Colorado	35	13	4	6	0	5	0	0	7	0
Connecticut	62	2	2	2	10	2	5	1	38	0
Delaware	19	1	2	0	2	2	4	0	8	0
District of Columbia	33	2	3	1	1	0	1	0	24	1
Florida	397	25	16	14	16	1	143	5	177	0
Georgia	119	37	1	14	7	1	2	4	53	0
Hawaii	129	1	96	6	0	10	0	7	9	0
Idaho	5	4	0	1	0	0	0	0	0	0
Illinois	238	50	37	10	46	9	0	6	79	1
Indiana	35	15	2	4	3	2	0	0	9	0
Iowa	24	3	1	3	6	0	0	2	9	0
Kansas	30	10	0	10	0	0	0	1	9	0
Kentucky	13	4	0	0	4	1	0	0	4	0
Louisiana	29	0	3	13	3	0	0	1	9	0
Maine	3	0	0	0	0	0	0	0	3	0
Maryland	141	1	19	17	16	2	4	7	75	0
Massachusetts	188	2	3	24	13	22	25	4	95	0
Michigan	97	11	6	8	24	3	0	5	40	0
Minnesota	115	5	5	12	4	10	0	2	77	0
Mississippi	10	0	2	4	3	0	0	0	1	0
Missouri	34	6	1	8	2	1	0	1	14	1
Montana	0	0	0	0	0	0	0	0	0	0
Nebraska	19	7	1	5	0	1	0	1	4	0
Nevada	64	27	18	0	0	2	1	1	15	0
New Hampshire	5	0	0	0	1	0	0	0	4	0
New Jersey	321	10	32	15	66	10	16	11	161	0
New Mexico	21	14	0	2	0	0	0	0	5	0
New York	1,067	50	43	26	65	106	88	25	662	2
North Carolina	71	28	4	3	5	0	0	0	31	0
North Dakota	0	0	0	0	0	0	0	0	0	0
Ohio	55	1	5	5	6	5	0	3	30	0
Oklahoma	32	14	1	1	5	1	0	1	9	0
Oregon	77	20	9	17	2	2	0	6	21	0
Pennsylvania	113	5	3	19	17	3	3	2	61	0
Rhode Island	35	0	2	2	0	1	3	0	27	0
South Carolina	18	7	0	1	1	3	0	1	5	0
South Dakota	2	0	0	1	0	0	0	0	1	0
Tennessee	44	6	1	10	3	1	0	2	21	0
Texas	677	401	17	67	27	3	0	4	156	2
Utah	32	5	2	6	0	2	0	1	16	0
Vermont	1	0	0	1	0	0	0	0	0	0
Virginia	148	4	18	31	11	3	1	5	75	0
Washington	161	27	33	33	9	4	0	3	52	0
West Virginia	2	1	0	0	0	0	0	0	1	0
Wisconsin	38	9	0	2	7	0	0	0	20	0
Wyoming	1	1	0	0	0	0	0	0	0	0

(a) 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, U.S. Minor Outlying Islands, U.S. Miscellaneous Pacific Islands, and the U.S. Virgin Islands.

(b) Includes 149 countries.

Note: See Figure 5.

Table 11. Tuberculosis Cases in Foreign-born Persons(a) by Number of Years in the United States: States, 1998

State	Total Cases	<1 Year		1 - 4		5 - 9		10 - 19		20+		Unknown or Missing	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
United States	7,591	1,266	16.7	1,448	19.1	1,135	15.0	1,284	16.9	970	12.8	1,488	19.6
Alabama	22	5	22.7	8	36.4	2	9.1	2	9.1	1	4.5	4	18.2
Alaska	12	1	8.3	0	0.0	1	8.3	0	0.0	0	0.0	10	83.3
Arizona	99	19	19.2	20	20.2	13	13.1	18	18.2	17	17.2	12	12.1
Arkansas	16	7	43.8	2	12.5	0	0.0	0	0.0	2	12.5	5	31.3
California	2,682	436	16.3	407	15.2	394	14.7	501	18.7	378	14.1	566	21.1
Colorado	35	6	17.1	5	14.3	7	20.0	4	11.4	4	11.4	9	25.7
Connecticut	62	15	24.2	13	21.0	4	6.5	13	21.0	2	3.2	15	24.2
Delaware	19	3	15.8	3	15.8	1	5.3	1	5.3	2	10.5	9	47.4
District of Columbia	33	2	6.1	6	18.2	2	6.1	1	3.0	0	0.0	22	66.7
Florida	397	46	11.6	61	15.4	42	10.6	80	20.2	39	9.8	129	32.5
Georgia	119	18	15.1	35	29.4	20	16.8	12	10.1	8	6.7	26	21.8
Hawaii	129	49	38.0	15	11.6	18	14.0	21	16.3	16	12.4	10	7.8
Idaho	5	0	0.0	1	20.0	3	60.0	0	0.0	0	0.0	1	20.0
Illinois	238	39	16.4	66	27.7	27	11.3	37	15.5	30	12.6	39	16.4
Indiana	35	3	8.6	8	22.9	3	8.6	2	5.7	0	0.0	19	54.3
Iowa	24	8	33.3	4	16.7	3	12.5	3	12.5	3	12.5	3	12.5
Kansas	30	4	13.3	8	26.7	1	3.3	5	16.7	4	13.3	8	26.7
Kentucky	13	3	23.1	2	15.4	1	7.7	0	0.0	2	15.4	5	38.5
Louisiana	29	3	10.3	5	17.2	3	10.3	5	17.2	3	10.3	10	34.5
Maine	3	0	0.0	2	66.7	0	0.0	1	33.3	0	0.0	0	0.0
Maryland	141	25	17.7	33	23.4	23	16.3	15	10.6	8	5.7	37	26.2
Massachusetts	188	32	17.0	45	23.9	38	20.2	49	26.1	21	11.2	3	1.6
Michigan	97	21	21.6	28	28.9	17	17.5	8	8.2	13	13.4	10	10.3
Minnesota	115	29	25.2	27	23.5	13	11.3	8	7.0	3	2.6	35	30.4
Mississippi	10	2	20.0	2	20.0	4	40.0	2	20.0	0	0.0	0	0.0
Missouri	34	8	23.5	7	20.6	4	11.8	4	11.8	1	2.9	10	29.4
Montana	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Nebraska	19	4	21.1	2	10.5	2	10.5	1	5.3	3	15.8	7	36.8
Nevada	64	19	29.7	10	15.6	9	14.1	11	17.2	15	23.4	0	0.0
New Hampshire	5	2	40.0	2	40.0	0	0.0	0	0.0	1	20.0	0	0.0
New Jersey	321	41	12.8	90	28.0	61	19.0	46	14.3	33	10.3	50	15.6
New Mexico	21	7	33.3	1	4.8	2	9.5	2	9.5	8	38.1	1	4.8
New York	1,067	170	15.9	226	21.2	207	19.4	207	19.4	144	13.5	113	10.6
North Carolina	71	22	31.0	19	26.8	12	16.9	9	12.7	4	5.6	5	7.0
North Dakota	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ohio	55	13	23.6	15	27.3	5	9.1	9	16.4	6	10.9	7	12.7
Oklahoma	32	2	6.3	2	6.3	1	3.1	3	9.4	2	6.3	22	68.8
Oregon	77	12	15.6	17	22.1	12	15.6	13	16.9	5	6.5	18	23.4
Pennsylvania	113	16	14.2	20	17.7	15	13.3	10	8.8	8	7.1	44	38.9
Rhode Island	35	7	20.0	4	11.4	4	11.4	7	20.0	5	14.3	8	22.9
South Carolina	18	3	16.7	7	38.9	0	0.0	5	27.8	3	16.7	0	0.0
South Dakota	2	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0
Tennessee	44	10	22.7	14	31.8	9	20.5	6	13.6	1	2.3	4	9.1
Texas	677	107	15.8	151	22.3	99	14.6	127	18.8	157	23.2	36	5.3
Utah	32	3	9.4	10	31.3	5	15.6	1	3.1	2	6.3	11	34.4
Vermont	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0
Virginia	148	1	0.7	1	0.7	0	0.0	0	0.0	0	0.0	146	98.6
Washington	161	35	21.7	31	19.3	40	24.8	29	18.0	12	7.5	14	8.7
West Virginia	2	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	0	0.0
Wisconsin	38	6	15.8	12	31.6	7	18.4	6	15.8	3	7.9	4	10.5
Wyoming	1	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0

(a) 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, U.S. Minor Outlying Islands, U. S. Miscellaneous Pacific Islands, and the U.S. Virgin Islands.

Table 12. Tuberculosis Cases by Form of Disease: States, 1998

State	Total Cases	Pulmonary(a)		Extrapulmonary(b)		Cases with Both Pulmonary and Extrapulmonary Disease		
		No.	%	No.	%	Total(c)		Military
						No.	%		No.
United States	18,361	13,479	73.4	3,541	19.3	1,334	7.3	378
Alabama	381	305	80.1	60	15.7	16	4.2	4
Alaska	55	48	87.3	4	7.3	3	5.5	0
Arizona	254	192	75.6	44	17.3	18	7.1	4
Arkansas	171	131	76.6	25	14.6	14	8.2	4
California	3,852	2,842	73.8	738	19.2	272	7.1	85
Colorado	79	50	63.3	16	20.3	13	16.5	5
Connecticut	128	86	67.2	36	28.1	6	4.7	3
Delaware	36	27	75.0	5	13.9	4	11.1	1
District of Columbia	107	70	65.4	29	27.1	7	6.5	4
Florida	1,302	1,088	83.6	164	12.6	50	3.8	24
Georgia	631	483	76.5	108	17.1	40	6.3	10
Hawaii	181	141	77.9	33	18.2	7	3.9	3
Idaho	14	8	57.1	6	42.9	0	0.0	0
Illinois	850	661	77.8	157	18.5	32	3.8	7
Indiana	188	147	78.2	36	19.1	5	2.7	1
Iowa	55	33	60.0	21	38.2	1	1.8	1
Kansas	56	37	66.1	14	25.0	5	8.9	2
Kentucky	179	156	87.2	16	8.9	7	3.9	5
Louisiana	380	320	84.2	48	12.6	12	3.2	4
Maine	13	7	53.8	2	15.4	4	30.8	1
Maryland	324	208	64.2	77	23.8	38	11.7	20
Massachusetts	282	163	57.8	98	34.8	21	7.4	8
Michigan	385	261	67.8	107	27.8	17	4.4	2
Minnesota	161	91	56.5	58	36.0	12	7.5	3
Mississippi	225	178	79.1	38	16.9	9	4.0	1
Missouri	184	135	73.4	34	18.5	14	7.6	4
Montana	20	16	80.0	4	20.0	0	0.0	0
Nebraska	31	20	64.5	9	29.0	2	6.5	2
Nevada	128	111	86.7	14	10.9	3	2.3	1
New Hampshire	14	6	42.9	8	57.1	0	0.0	0
New Jersey	640	423	66.1	151	23.6	66	10.3	21
New Mexico	68	43	63.2	18	26.5	7	10.3	1
New York	2,000	1,360	68.0	387	19.3	252	12.6	62
North Carolina	498	386	77.5	83	16.7	29	5.8	11
North Dakota	10	6	60.0	2	20.0	2	20.0	1
Ohio	230	165	71.7	58	25.2	7	3.0	1
Oklahoma	198	148	74.7	35	17.7	15	7.6	3
Oregon	156	105	67.3	38	24.4	13	8.3	3
Pennsylvania	448	299	66.7	122	27.2	27	6.0	7
Rhode Island	63	36	57.1	17	27.0	9	14.3	1
South Carolina	286	175	61.2	74	25.9	36	12.6	8
South Dakota	23	12	52.2	6	26.1	5	21.7	1
Tennessee	439	322	73.3	79	18.0	38	8.7	6
Texas	1,820	1,378	75.7	291	16.0	151	8.3	34
Utah	52	34	65.4	14	26.9	4	7.7	0
Vermont	5	4	80.0	1	20.0	0	0.0	0
Virginia	339	263	77.6	66	19.5	10	2.9	3
Washington	265	181	68.3	62	23.4	22	8.3	4
West Virginia	42	35	83.3	6	14.3	1	2.4	0
Wisconsin	109	81	74.3	21	19.3	7	6.4	2
Wyoming	4	2	50.0	1	25.0	1	25.0	0
American Samoa(d)	...	...	...	...	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...	...	...	...	...
Guam(d)	89	74	83.1	11	12.4	4	4.5	1
N. Mariana Islands(d)	...	...	...	...	...	...	...	...
Puerto Rico(d)	201	174	86.6	25	12.4	2	1.0	1
Republic of Palau(d)	...	...	...	...	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...	...	...	...	...

(a)Includes cases with pulmonary listed as major site of disease and no additional site of disease.

(b)Includes cases with pleural, lymphatic, bone and/or joint, meningeal, peritoneal, or other site, excluding pulmonary, listed as major site of disease.

(c)Includes military cases.

(d)Not included in totals.

Ellipses indicate data not available.

Note:7(<0.1%) cases had missing and/or unknown site of disease.

Table 13. Extrapulmonary Tuberculosis Cases by Site of Disease: States, 1998

State	Total Extra- pulmonary Cases	Site of Disease						
		Pleural	Lymphatic	Bone and/ or Joint	Genito- urinary	Meningeal	Peritoneal	Other
United States	3,541	736	1,417	377	247	177	158	429
Alabama	60	15	16	11	2	3	4	9
Alaska	4	0	3	0	1	0	0	0
Arizona	44	6	18	8	1	3	4	4
Arkansas	25	8	2	7	2	1	1	4
California	738	128	332	76	56	34	38	74
Colorado	16	1	7	2	1	0	1	4
Connecticut	36	4	24	1	2	2	2	1
Delaware	5	1	3	0	1	0	0	0
District of Columbia	29	8	8	2	2	4	2	3
Florida	164	34	63	15	11	6	6	29
Georgia	108	33	38	10	5	1	7	14
Hawaii	33	9	16	3	1	0	1	3
Idaho	6	1	0	1	2	1	0	1
Illinois	157	29	57	14	9	9	9	30
Indiana	36	12	9	4	3	4	1	3
Iowa	21	10	5	3	1	1	0	1
Kansas	14	2	6	2	2	0	0	2
Kentucky	16	7	6	0	1	0	0	2
Louisiana	48	11	16	4	4	5	2	6
Maine	2	0	1	0	0	0	0	1
Maryland	77	26	30	10	2	4	3	2
Massachusetts	98	21	53	5	3	3	3	10
Michigan	107	20	53	16	6	5	5	2
Minnesota	58	8	16	4	2	3	5	20
Mississippi	38	15	5	4	3	1	2	8
Missouri	34	9	15	5	2	0	2	1
Montana	4	0	2	1	1	0	0	0
Nebraska	9	1	3	2	0	0	0	3
Nevada	14	3	5	1	0	1	1	3
New Hampshire	8	2	3	2	1	0	0	0
New Jersey	151	27	72	11	15	8	8	10
New Mexico	18	2	8	3	2	1	1	1
New York	387	60	159	52	36	28	15	37
North Carolina	83	32	22	7	2	6	2	12
North Dakota	2	0	0	1	0	0	0	1
Ohio	58	18	18	6	4	2	2	8
Oklahoma	35	10	15	3	1	4	0	2
Oregon	38	7	13	3	3	3	2	7
Pennsylvania	122	21	36	22	11	7	2	23
Rhode Island	17	0	9	0	1	1	1	5
South Carolina	74	24	26	4	7	3	3	7
South Dakota	6	2	3	0	0	0	0	1
Tennessee	79	19	31	14	2	5	1	7
Texas	291	61	113	21	26	15	13	42
Utah	14	0	7	0	2	0	1	4
Vermont	1	0	1	0	0	0	0	0
Virginia	66	11	31	6	3	3	2	10
Washington	62	10	32	6	2	0	4	8
West Virginia	6	1	0	3	1	0	0	1
Wisconsin	21	6	6	2	2	0	2	3
Wyoming	1	1	0	0	0	0	0	0
American Samoa(a)	...	...	...	...	...	...	...	...
Fed. States of Micronesia(a)	...	...	...	...	...	...	...	...
Guam(a)	11	3	1	1	3	0	2	1
N. Mariana Islands(a)	...	...	...	...	...	...	...	...
Puerto Rico(a)	25	9	9	1	0	0	1	5
Republic of Palau(a)	...	...	...	...	...	...	...	...
U.S. Virgin Islands(a)	...	...	...	...	...	...	...	...

(a)Not included in totals.

Ellipses indicate data not available.

Note: See Figure 6.

**Morbidity Tables
Reporting Areas
1998 and 1996**

Table 14. Tuberculosis Cases in Residents of Correctional Facilities: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Resident of Correctional Facility		Percent of Cases in Residents of Correctional Facilities(a)
		No.	%	
United States	18,361	18,260	99.4	3.6 (b)
Alabama	381	381	100.0	3.1
Alaska	55	55	100.0	1.8
Arizona	254	254	100.0	5.5
Arkansas	171	136	79.5	0.0
California	3,852	3,840	99.7	3.6
Colorado	79	75	94.9	1.3
Connecticut	128	128	100.0	4.7
Delaware	36	36	100.0	0.0
District of Columbia	107	107	100.0	5.6
Florida	1,302	1,301	99.9	4.5
Georgia	631	631	100.0	4.9
Hawaii	181	181	100.0	0.0
Idaho	14	14	100.0	7.1
Illinois	850	845	99.4	2.8
Indiana	188	188	100.0	3.2
Iowa	55	55	100.0	0.0
Kansas	56	52	92.9	1.9
Kentucky	179	178	99.4	3.4
Louisiana	380	376	98.9	5.1
Maine	13	13	100.0	0.0
Maryland	324	322	99.4	1.2
Massachusetts	282	281	99.6	1.8
Michigan	385	384	99.7	0.8
Minnesota	161	159	98.8	1.3
Mississippi	225	225	100.0	0.9
Missouri	184	181	98.4	1.7
Montana	20	20	100.0	0.0
Nebraska	31	31	100.0	0.0
Nevada	128	128	100.0	3.1
New Hampshire	14	14	100.0	0.0
New Jersey	640	640	100.0	0.9
New Mexico	68	68	100.0	4.4
New York State(c)	442	442	100.0	5.7
New York City	1,558	1,558	100.0	2.8
North Carolina	498	490	98.4	1.6
North Dakota	10	10	100.0	0.0
Ohio	230	230	100.0	2.2
Oklahoma	198	198	100.0	3.5
Oregon	156	154	98.7	5.2
Pennsylvania	448	448	100.0	3.3
Rhode Island	63	63	100.0	1.6
South Carolina	286	286	100.0	2.1
South Dakota	23	23	100.0	0.0
Tennessee	439	438	99.8	3.2
Texas	1,820	1,805	99.2	8.3
Utah	52	52	100.0	1.9
Vermont	5	5	100.0	0.0
Virginia	339	339	100.0	2.4
Washington	265	265	100.0	2.3
West Virginia	42	42	100.0	2.4
Wisconsin	109	109	100.0	2.8
Wyoming	4	4	100.0	0.0
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	88	98.9	0.0
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	200	99.5	1.5
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a) Resident of correctional facility at time of diagnosis. Percentages shown only for reporting areas with information reported for $\geq 75\%$ cases.

(b) Percentage based on data from 52 areas reporting information on resident of correctional facility for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available.

Table 15. Tuberculosis Cases by Homeless Status: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Homeless Status		Percent of Cases in Homeless Persons(a)
		No.	%	
United States	18,361	17,943	97.7	6.3 (b)
Alabama	381	379	99.5	5.0
Alaska	55	55	100.0	16.4
Arizona	254	252	99.2	11.9
Arkansas	171	128	75.0	3.9
California	3,852	3,774	98.0	6.4
Colorado	79	73	92.4	8.2
Connecticut	128	116	90.6	10.3
Delaware	36	36	100.0	2.8
District of Columbia	107	106	99.1	11.3
Florida	1,302	1,296	99.5	10.0
Georgia	631	622	98.6	7.7
Hawaii	181	181	100.0	0.0
Idaho	14	11	78.6	9.1
Illinois	850	822	96.7	5.6
Indiana	188	176	93.6	4.0
Iowa	55	55	100.0	9.1
Kansas	56	51	91.1	0.0
Kentucky	179	166	92.7	8.4
Louisiana	380	354	93.2	7.1
Maine	13	13	100.0	0.0
Maryland	324	323	99.7	2.5
Massachusetts	282	277	98.2	3.2
Michigan	385	356	92.5	2.5
Minnesota	161	157	97.5	4.5
Mississippi	225	225	100.0	0.9
Missouri	184	175	95.1	13.7
Montana	20	20	100.0	15.0
Nebraska	31	29	93.5	6.9
Nevada	128	126	98.4	7.9
New Hampshire	14	14	100.0	0.0
New Jersey	640	640	100.0	4.5
New Mexico	68	68	100.0	1.5
New York State(c)	442	437	98.9	3.4
New York City	1,558	1,549	99.4	5.5
North Carolina	498	490	98.4	6.7
North Dakota	10	10	100.0	0.0
Ohio	230	228	99.1	7.5
Oklahoma	198	198	100.0	7.6
Oregon	156	151	96.8	13.2
Pennsylvania	448	432	96.4	2.8
Rhode Island	63	63	100.0	0.0
South Carolina	286	279	97.6	3.6
South Dakota	23	23	100.0	4.3
Tennessee	439	432	98.4	7.6
Texas	1,820	1,808	99.3	6.6
Utah	52	52	100.0	17.3
Vermont	5	5	100.0	0.0
Virginia	339	295	87.0	2.0
Washington	265	263	99.2	10.6
West Virginia	42	40	95.2	2.5
Wisconsin	109	108	99.1	3.7
Wyoming	4	4	100.0	25.0
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	86	96.6	1.2
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	201	100.0	5.0
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a) Homeless within past 12 months. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.(b) Percentage based on data from 52 areas reporting information on homeless status for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available

Table 16. Tuberculosis Cases in Residents of Long-term Care Facilities: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Resident of Long-term Care Facilities		Percent of Cases in Residents of Long-term Care Facilities(a)
		No.	%	
United States	18,361	18,236	99.3	3.5 (b)
Alabama	381	378	99.2	2.1
Alaska	55	55	100.0	0.0
Arizona	254	254	100.0	2.0
Arkansas	171	137	80.1	12.4
California	3,852	3,844	99.8	3.6
Colorado	79	77	97.5	3.9
Connecticut	128	128	100.0	7.8
Delaware	36	36	100.0	19.4
District of Columbia	107	107	100.0	1.9
Florida	1,302	1,302	100.0	2.4
Georgia	631	630	99.8	3.2
Hawaii	181	181	100.0	1.1
Idaho	14	14	100.0	0.0
Illinois	850	845	99.4	4.6
Indiana	188	188	100.0	2.7
Iowa	55	54	98.2	1.9
Kansas	56	52	92.9	5.8
Kentucky	179	177	98.9	15.3
Louisiana	380	374	98.4	2.4
Maine	13	13	100.0	0.0
Maryland	324	322	99.4	3.7
Massachusetts	282	282	100.0	4.3
Michigan	385	383	99.5	3.7
Minnesota	161	159	98.8	3.1
Mississippi	225	225	100.0	4.9
Missouri	184	181	98.4	12.7
Montana	20	20	100.0	0.0
Nebraska	31	31	100.0	3.2
Nevada	128	128	100.0	2.3
New Hampshire	14	14	100.0	7.1
New Jersey	640	640	100.0	1.6
New Mexico	68	68	100.0	1.5
New York State(c)	442	442	100.0	2.7
New York City	1,558	1,556	99.9	1.7
North Carolina	498	470	94.4	4.0
North Dakota	10	10	100.0	0.0
Ohio	230	230	100.0	6.1
Oklahoma	198	198	100.0	2.5
Oregon	156	154	98.7	3.9
Pennsylvania	448	448	100.0	5.1
Rhode Island	63	63	100.0	4.8
South Carolina	286	286	100.0	3.5
South Dakota	23	23	100.0	17.4
Tennessee	439	438	99.8	5.9
Texas	1,820	1,803	99.1	2.6
Utah	52	52	100.0	1.9
Vermont	5	5	100.0	0.0
Virginia	339	339	100.0	4.4
Washington	265	265	100.0	1.5
West Virginia	42	42	100.0	0.0
Wisconsin	109	109	100.0	4.6
Wyoming	4	4	100.0	0.0
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	88	98.9	0.0
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	200	99.5	3.0
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a) Resident of long-term care facility at time of diagnosis. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b) Percentage based on data from 52 areas reporting information on resident of long-term care facility for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available.

Table 17. Tuberculosis Cases by Injecting Drug Use: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Injecting Drug Use		Percent of Cases in Injecting Drug Users(a)
		No.	%	
United States	18,361	16,849	91.8	2.9 (b)
Alabama	381	338	88.7	1.2
Alaska	55	33	60.0	--
Arizona	254	246	96.9	2.4
Arkansas	171	120	70.2	--
California	3,852	3,574	92.8	3.1
Colorado	79	59	74.7	--
Connecticut	128	113	88.3	3.5
Delaware	36	33	91.7	0.0
District of Columbia	107	84	78.5	4.8
Florida	1,302	1,237	95.0	2.1
Georgia	631	509	80.7	1.0
Hawaii	181	118	65.2	--
Idaho	14	10	71.4	--
Illinois	850	692	81.4	2.5
Indiana	188	129	68.6	--
Iowa	55	40	72.7	--
Kansas	56	42	75.0	0.0
Kentucky	179	161	89.9	4.3
Louisiana	380	340	89.5	6.8
Maine	13	13	100.0	0.0
Maryland	324	310	95.7	4.8
Massachusetts	282	235	83.3	1.7
Michigan	385	329	85.5	0.9
Minnesota	161	157	97.5	0.6
Mississippi	225	225	100.0	1.3
Missouri	184	159	86.4	3.1
Montana	20	18	90.0	0.0
Nebraska	31	29	93.5	0.0
Nevada	128	123	96.1	0.8
New Hampshire	14	13	92.9	0.0
New Jersey	640	640	100.0	6.9
New Mexico	68	68	100.0	1.5
New York State(c)	442	412	93.2	2.9
New York City	1,558	1,506	96.7	3.3
North Carolina	498	480	96.4	1.2
North Dakota	10	8	80.0	0.0
Ohio	230	226	98.3	0.9
Oklahoma	198	197	99.5	3.0
Oregon	156	142	91.0	8.5
Pennsylvania	448	391	87.3	4.3
Rhode Island	63	60	95.2	0.0
South Carolina	286	251	87.8	1.2
South Dakota	23	23	100.0	0.0
Tennessee	439	410	93.4	3.2
Texas	1,820	1,762	96.8	3.6
Utah	52	45	86.5	6.7
Vermont	5	1	20.0	--
Virginia	339	339	100.0	1.5
Washington	265	252	95.1	1.2
West Virginia	42	37	88.1	0.0
Wisconsin	109	108	99.1	1.9
Wyoming	4	2	50.0	--
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	82	92.1	1.2
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	201	100.0	18.9
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a)Injecting drug use within past 12 months. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b)Percentage based on data from 43 areas reporting information on injecting drug use for $\geq 75\%$ of cases.

(c)Excludes New York City.

(d)Not included in totals.

Ellipses indicate data not available.

Table 18. Tuberculosis Cases by Noninjecting Drug Use: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Noninjecting Drug Use		Percent of Cases in Noninjecting Drug Users(a)
		No.	%	
United States	18,361	16,730	91.1	7.7 (b)
Alabama	381	340	89.2	6.2
Alaska	55	31	56.4	--
Arizona	254	245	96.5	4.1
Arkansas	171	118	69.0	--
California	3,852	3,559	92.4	7.4
Colorado	79	57	72.2	--
Connecticut	128	107	83.6	6.5
Delaware	36	31	86.1	9.7
District of Columbia	107	81	75.7	7.4
Florida	1,302	1,228	94.3	12.4
Georgia	631	510	80.8	12.0
Hawaii	181	120	66.3	--
Idaho	14	9	64.3	--
Illinois	850	687	80.8	12.2
Indiana	188	129	68.6	--
Iowa	55	39	70.9	--
Kansas	56	41	73.2	--
Kentucky	179	160	89.4	5.6
Louisiana	380	328	86.3	17.1
Maine	13	13	100.0	0.0
Maryland	324	299	92.3	2.7
Massachusetts	282	231	81.9	3.5
Michigan	385	327	84.9	3.4
Minnesota	161	157	97.5	1.9
Mississippi	225	225	100.0	6.2
Missouri	184	160	87.0	12.5
Montana	20	17	85.0	0.0
Nebraska	31	29	93.5	0.0
Nevada	128	119	93.0	3.4
New Hampshire	14	13	92.9	0.0
New Jersey	640	640	100.0	9.8
New Mexico	68	64	94.1	1.6
New York State(c)	442	411	93.0	5.8
New York City	1,558	1,509	96.9	9.3
North Carolina	498	464	93.2	8.0
North Dakota	10	7	70.0	--
Ohio	230	223	97.0	9.4
Oklahoma	198	191	96.5	0.5
Oregon	156	138	88.5	10.1
Pennsylvania	448	388	86.6	7.0
Rhode Island	63	61	96.8	3.3
South Carolina	286	249	87.1	8.4
South Dakota	23	23	100.0	0.0
Tennessee	439	415	94.5	9.4
Texas	1,820	1,759	96.6	5.0
Utah	52	44	84.6	9.1
Vermont	5	1	20.0	--
Virginia	339	336	99.1	2.1
Washington	265	250	94.3	1.6
West Virginia	42	36	85.7	0.0
Wisconsin	109	108	99.1	8.3
Wyoming	4	3	75.0	33.3
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	82	92.1	0.0
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	201	100.0	13.9
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a) Noninjecting drug use within past 12 months. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases

(b) Percentage based on data from 42 areas reporting information on noninjecting drug use for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available.

Table 19. Tuberculosis Cases by Excess Alcohol Use: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Excess Alcohol Use		Percent of Cases in Persons with Excess Alcohol Use(a)
		No.	%	
United States	18,361	16,717	91.0	16.0 (b)
Alabama	381	323	84.8	22.3
Alaska	55	42	76.4	45.2
Arizona	254	246	96.9	16.3
Arkansas	171	117	68.4	--
California	3,852	3,551	92.2	12.3
Colorado	79	56	70.9	--
Connecticut	128	103	80.5	16.5
Delaware	36	32	88.9	15.6
District of Columbia	107	84	78.5	13.1
Florida	1,302	1,231	94.5	24.5
Georgia	631	519	82.3	23.9
Hawaii	181	121	66.9	--
Idaho	14	12	85.7	25.0
Illinois	850	688	80.9	18.9
Indiana	188	125	66.5	--
Iowa	55	41	74.5	--
Kansas	56	42	75.0	4.8
Kentucky	179	163	91.1	14.1
Louisiana	380	322	84.7	30.4
Maine	13	13	100.0	7.7
Maryland	324	293	90.4	15.4
Massachusetts	282	231	81.9	12.6
Michigan	385	330	85.7	12.1
Minnesota	161	156	96.9	8.3
Mississippi	225	225	100.0	17.8
Missouri	184	160	87.0	20.0
Montana	20	18	90.0	44.4
Nebraska	31	24	77.4	12.5
Nevada	128	121	94.5	7.4
New Hampshire	14	13	92.9	7.7
New Jersey	640	640	100.0	14.5
New Mexico	68	64	94.1	12.5
New York State(c)	442	409	92.5	12.5
New York City	1,558	1,508	96.8	10.8
North Carolina	498	445	89.4	26.1
North Dakota	10	8	80.0	12.5
Ohio	230	225	97.8	20.4
Oklahoma	198	197	99.5	11.2
Oregon	156	136	87.2	14.0
Pennsylvania	448	386	86.2	14.8
Rhode Island	63	62	98.4	6.5
South Carolina	286	253	88.5	27.3
South Dakota	23	23	100.0	30.4
Tennessee	439	406	92.5	20.4
Texas	1,820	1,770	97.3	16.2
Utah	52	43	82.7	11.6
Vermont	5	2	40.0	--
Virginia	339	339	100.0	4.4
Washington	265	253	95.5	5.9
West Virginia	42	35	83.3	14.3
Wisconsin	109	108	99.1	23.1
Wyoming	4	3	75.0	33.3
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	89	82	92.1	0.0
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	201	201	100.0	19.9
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a) Excess alcohol use within past 12 months. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b) Percentage based on data from 46 areas reporting information on excess alcohol use for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available.

Table 20. Tuberculosis Cases by Initial Drug Regimen: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Initial Drug Regimen		Percent of Cases with Initial Drug Regimen(a)		
		No.	%	IR	IRZ	IRZ,E/S(b)
United States	18,361	18,175	99.0	2.5 (c)	12.3 (c)	68.9 (c)
Alabama	381	381	100.0	3.1	68.8	20.7
Alaska	55	55	100.0	0.0	1.8	94.5
Arizona	254	252	99.2	1.2	9.5	70.6
Arkansas	171	163	95.3	44.2	38.7	11.0
California	3,852	3,821	99.2	1.9	8.1	80.4
Colorado	79	76	96.2	2.6	10.5	76.3
Connecticut	128	122	95.3	4.1	16.4	70.5
Delaware	36	36	100.0	0.0	8.3	80.6
District of Columbia	107	102	95.3	0.0	2.9	63.7
Florida	1,302	1,300	99.8	1.5	11.3	74.8
Georgia	631	628	99.5	0.8	14.6	73.7
Hawaii	181	180	99.4	7.2	16.1	62.8
Idaho	14	14	100.0	0.0	28.6	64.3
Illinois	850	848	99.8	2.4	9.0	73.6
Indiana	188	188	100.0	5.3	18.6	60.6
Iowa	55	52	94.5	0.0	21.2	63.5
Kansas	56	52	92.9	3.8	13.5	76.9
Kentucky	179	175	97.8	5.7	14.9	68.0
Louisiana	380	375	98.7	2.7	15.7	69.3
Maine	13	13	100.0	0.0	23.1	61.5
Maryland	324	317	97.8	0.3	4.4	86.4
Massachusetts	282	278	98.6	1.8	4.3	83.1
Michigan	385	385	100.0	7.0	28.6	54.8
Minnesota	161	157	97.5	1.9	18.5	55.4
Mississippi	225	225	100.0	0.9	15.6	79.6
Missouri	184	183	99.5	1.6	7.1	68.3
Montana	20	20	100.0	0.0	25.0	70.0
Nebraska	31	31	100.0	3.2	29.0	41.9
Nevada	128	127	99.2	0.8	3.9	85.8
New Hampshire	14	14	100.0	0.0	21.4	71.4
New Jersey	640	635	99.2	2.0	10.7	69.6
New Mexico	68	64	94.1	0.0	34.4	56.3
New York State(d)	442	442	100.0	2.3	5.9	77.6
New York City	1,558	1,558	100.0	1.2	3.8	81.6
North Carolina	498	479	96.2	0.8	6.1	87.9
North Dakota	10	10	100.0	0.0	20.0	50.0
Ohio	230	230	100.0	3.0	33.0	49.1
Oklahoma	198	198	100.0	12.6	17.7	54.0
Oregon	156	150	96.2	0.7	6.0	82.0
Pennsylvania	448	447	99.8	2.7	10.5	72.9
Rhode Island	63	60	95.2	1.7	3.3	85.0
South Carolina	286	285	99.7	3.2	21.4	56.1
South Dakota	23	23	100.0	0.0	39.1	34.8
Tennessee	439	435	99.1	2.8	27.6	57.9
Texas	1,820	1,775	97.5	0.7	6.9	36.6
Utah	52	52	100.0	1.9	5.8	80.8
Vermont	5	5	100.0	0.0	20.0	80.0
Virginia	339	337	99.4	5.0	19.3	64.1
Washington	265	265	100.0	1.5	10.6	79.6
West Virginia	42	42	100.0	7.1	35.7	40.5
Wisconsin	109	109	100.0	2.8	15.6	73.4
Wyoming	4	4	100.0	0.0	25.0	50.0
American Samoa(e)	...	...	...	...	...	...
Fed. States of Micronesia(e)	...	...	...	...	...	...
Guam(e)	89	89	100.0	0.0	0.0	84.3
N. Mariana Islands(e)	...	...	...	...	...	...
Puerto Rico(e)	201	198	98.5	1.5	6.1	77.8
Republic of Palau(e)	...	...	...	...	...	...
U.S. Virgin Islands(e)	...	...	...	...	...	...

(a) Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b) I=isoniazid; R=rifampin; Z=pyrazinamide; E=ethambutol; S=streptomycin.

(c) Percentage based on data from 52 areas reporting information on initial drug regimen for $\geq 75\%$ of cases.

(d) Excludes New York City.

(e) Not included in totals.

Ellipses indicate data not available.

Table 21. Isoniazid-Resistant Tuberculosis Cases with or without Rifampin Resistance: 59 Reporting Areas, 1998

Reporting Area	Total Culture Positive Cases	Cases with Initial Drug Susceptibility Testing Performed		Resistance(a)			
		No.	%	Isoniazid		Isoniazid and Rifampin	
				No.	%	No.	%
United States	14,830	13,477	90.9	1,060	8.0 (b)	145	1.1 (b)
Alabama	331	278	84.0	11	4.0	0	0.0
Alaska	51	51	100.0	1	2.0	0	0.0
Arizona	208	204	98.1	11	5.4	1	0.5
Arkansas	136	79	58.1	--	--	--	--
California	2,998	2,849	95.0	339	11.9	36	1.3
Colorado	71	67	94.4	7	10.4	0	0.0
Connecticut	111	108	97.3	8	7.4	1	0.9
Delaware	23	23	100.0	6	26.1	0	0.0
District of Columbia	99	68	68.7	--	--	--	--
Florida	1,182	1,042	88.2	116	11.1	10	1.0
Georgia	505	433	85.7	25	5.8	1	0.2
Hawaii	139	134	96.4	16	11.9	1	0.7
Idaho	13	9	69.2	--	--	--	--
Illinois	679	638	94.0	35	5.5	7	1.1
Indiana	142	120	84.5	8	6.7	1	0.8
Iowa	46	45	97.8	0	0.0	0	0.0
Kansas	47	44	93.6	5	11.4	1	2.3
Kentucky	153	127	83.0	5	3.9	1	0.8
Louisiana	304	291	95.7	18	6.2	1	0.3
Maine	12	12	100.0	0	0.0	0	0.0
Maryland	246	231	93.9	17	7.4	2	0.9
Massachusetts	223	217	97.3	18	8.3	1	0.5
Michigan	316	315	99.7	19	6.0	5	1.6
Minnesota	136	102	75.0	11	10.8	0	0.0
Mississippi	162	158	97.5	8	5.1	1	0.6
Missouri	151	134	88.7	7	5.2	0	0.0
Montana	18	16	88.9	1	6.3	0	0.0
Nebraska	31	27	87.1	2	7.4	2	7.4
Nevada	77	29	37.7	--	--	--	--
New Hampshire	12	12	100.0	2	16.7	0	0.0
New Jersey	496	485	97.8	52	10.7	9	1.9
New Mexico	61	59	96.7	3	5.1	1	1.7
New York State(c)	310	307	99.0	20	6.5	4	1.3
New York City	1,257	1,215	96.7	105	8.6	34	2.8
North Carolina	410	396	96.6	22	5.6	4	1.0
North Dakota	10	9	90.0	0	0.0	0	0.0
Ohio	193	170	88.1	6	3.5	2	1.2
Oklahoma	153	137	89.5	5	3.6	0	0.0
Oregon	130	128	98.5	11	8.6	2	1.6
Pennsylvania	359	324	90.3	24	7.4	2	0.6
Rhode Island	44	40	90.9	4	10.0	0	0.0
South Carolina	214	184	86.0	5	2.7	0	0.0
South Dakota	18	18	100.0	1	5.6	0	0.0
Tennessee	359	339	94.4	14	4.1	2	0.6
Texas	1,477	1,314	89.0	59	4.5	13	1.0
Utah	48	48	100.0	3	6.3	0	0.0
Vermont	5	2	40.0	--	--	--	--
Virginia	304	97	31.9	--	--	--	--
Washington	213	202	94.8	18	8.9	0	0.0
West Virginia	42	36	85.7	2	5.6	0	0.0
Wisconsin	103	102	99.0	10	9.8	0	0.0
Wyoming	2	2	100.0	0	0.0	0	0.0
American Samoa(d)	...	...	...	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...	...	...	...
Guam(d)	62	59	95.2	5	8.5	1	1.7
N. Mariana Islands(d)	...	...	...	...	...	...	...
Puerto Rico(d)	173	161	93.1	14	8.7	3	1.9
Republic of Palau(d)	...	...	...	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...	...	...	...

(a) Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases. Isolates may be resistant to other drugs.

(b) Percentages based on data from 46 areas reporting information on initial drug susceptibility results for $\geq 75\%$ of cases.

(c) Excludes New York City.

(d) Not included in totals.

Ellipses indicate data not available.

Table 22. Tuberculosis Cases, Age 25 - 44, by HIV Status: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on HIV Status(a)		Percent of Cases in HIV-Positive Persons(b)
		No.	%	
United States	6,365	3,509	55.1	--
Alabama	107	85	79.4	12.9
Alaska	26	11	42.3	--
Arizona	69	51	73.9	--
Arkansas	32	22	68.8	--
California	1,275	0	0.0	--
Colorado	26	23	88.5	21.7
Connecticut	50	26	52.0	--
Delaware	13	11	84.6	36.4
District of Columbia	48	35	72.9	--
Florida	544	457	84.0	46.8
Georgia	228	174	76.3	29.9
Hawaii	46	0	0.0	--
Idaho	6	2	33.3	--
Illinois	319	134	42.0	--
Indiana	48	8	16.7	--
Iowa	15	9	60.0	--
Kansas	17	8	47.1	--
Kentucky	38	16	42.1	--
Louisiana	132	103	78.0	18.4
Maine	3	3	100.0	33.3
Maryland	112	92	82.1	28.3
Massachusetts	108	38	35.2	--
Michigan	123	50	40.7	--
Minnesota	60	29	48.3	--
Mississippi	55	55	100.0	14.5
Missouri	53	34	64.2	--
Montana	4	3	75.0	0.0
Nebraska	12	2	16.7	--
Nevada	48	45	93.8	22.2
New Hampshire	2	0	0.0	--
New Jersey	260	151	58.1	--
New Mexico	14	11	78.6	27.3
New York State(c)	150	96	64.0	--
New York City	652	548	84.0	39.6
North Carolina	152	134	88.2	24.6
North Dakota	2	2	100.0	0.0
Ohio	62	51	82.3	7.8
Oklahoma	53	17	32.1	--
Oregon	71	60	84.5	13.3
Pennsylvania	137	82	59.9	--
Rhode Island	16	0	0.0	--
South Carolina	78	59	75.6	8.5
South Dakota	4	1	25.0	--
Tennessee	120	107	89.2	21.5
Texas	698	497	71.2	--
Utah	24	12	50.0	--
Vermont	1	1	100.0	0.0
Virginia	121	72	59.5	--
Washington	89	47	52.8	--
West Virginia	8	4	50.0	--
Wisconsin	32	29	90.6	6.9
Wyoming	2	2	100.0	0.0
American Samoa(d)	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...
Guam(d)	20	6	30.0	--
N. Mariana Islands(d)	...	...	...	...
Puerto Rico(d)	72	56	77.8	55.4
Republic of Palau(d)	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...

(a)Includes only those cases with negative, positive, and indeterminate HIV test results.

(b)Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(c)Excludes New York City.

(d)Not included in totals.

Ellipses indicate data not available.

Table 23. Tuberculosis Cases by Occupation: 59 Reporting Areas, 1998

Reporting Area	Total Cases	Cases with Information on Occupation		Percent of Cases by Occupation(a)					
		No.	%	Unemployed Past 24 Mos.	Health Care Worker	Correctional Employee	Migrant Worker	Other Occupation	Multiple Occupations
United States	18,361	16,980	92.5	59.3 (b)	3.0 (b)	0.1 (b)	1.2 (b)	36.2 (b)	0.2 (b)
Alabama	381	355	93.2	68.7	2.3	0.0	0.0	29.0	0.0
Alaska	55	28	50.9	--	--	--	--	--	--
Arizona	254	249	98.0	68.3	0.8	0.4	1.6	28.5	0.4
Arkansas	171	129	75.4	76.7	3.9	0.8	0.0	18.6	0.0
California	3,852	3,582	93.0	59.5	2.2	0.2	1.9	36.2	0.1
Colorado	79	64	81.0	53.1	4.7	0.0	1.6	40.6	0.0
Connecticut	128	122	95.3	54.9	6.6	0.0	2.5	35.2	0.8
Delaware	36	35	97.2	45.7	2.9	0.0	5.7	45.7	0.0
District of Columbia	107	100	93.5	78.0	0.0	0.0	0.0	22.0	0.0
Florida	1,302	1,251	96.1	48.7	2.6	0.0	2.2	46.4	0.1
Georgia	631	518	82.1	58.7	1.5	0.2	2.7	36.5	0.4
Hawaii	181	156	86.2	68.6	2.6	0.0	0.0	28.8	0.0
Idaho	14	14	100.0	35.7	7.1	0.0	21.4	35.7	0.0
Illinois	850	760	89.4	59.1	3.4	0.1	0.3	37.0	0.1
Indiana	188	164	87.2	64.0	3.0	0.0	0.6	31.7	0.6
Iowa	55	49	89.1	40.8	2.0	0.0	0.0	57.1	0.0
Kansas	56	51	91.1	45.1	3.9	0.0	2.0	49.0	0.0
Kentucky	179	167	93.3	78.4	1.2	0.0	2.4	18.0	0.0
Louisiana	380	320	84.2	64.7	1.6	0.0	0.0	33.8	0.0
Maine	13	13	100.0	84.6	0.0	0.0	0.0	15.4	0.0
Maryland	324	294	90.7	53.1	5.8	0.0	0.0	40.8	0.3
Massachusetts	282	262	92.9	51.1	6.5	0.0	0.0	42.4	0.0
Michigan	385	314	81.6	62.4	6.1	0.0	1.0	30.3	0.3
Minnesota	161	151	93.8	61.6	2.6	0.0	0.7	35.1	0.0
Mississippi	225	225	100.0	61.3	2.2	0.4	0.0	36.0	0.0
Missouri	184	164	89.1	62.2	4.3	0.0	0.0	33.5	0.0
Montana	20	20	100.0	85.0	0.0	0.0	0.0	15.0	0.0
Nebraska	31	31	100.0	45.2	3.2	0.0	0.0	51.6	0.0
Nevada	128	119	93.0	56.3	2.5	0.0	0.0	41.2	0.0
New Hampshire	14	14	100.0	78.6	0.0	0.0	0.0	21.4	0.0
New Jersey	640	640	100.0	62.7	5.5	0.0	0.5	30.8	0.6
New Mexico	68	61	89.7	62.3	0.0	0.0	0.0	37.7	0.0
New York State(c)	442	383	86.7	60.1	3.4	0.0	0.5	36.0	0.0
New York City	1,558	1,482	95.1	67.9	4.0	0.0	0.0	27.9	0.1
North Carolina	498	480	96.4	54.0	3.1	0.4	3.5	38.8	0.2
North Dakota	10	8	80.0	75.0	0.0	0.0	0.0	25.0	0.0
Ohio	230	227	98.7	68.7	5.3	0.0	0.4	25.6	0.0
Oklahoma	198	165	83.3	62.4	3.0	0.0	0.0	34.5	0.0
Oregon	156	138	88.5	47.1	1.4	0.0	2.9	48.6	0.0
Pennsylvania	448	392	87.5	66.6	5.1	0.3	0.0	27.8	0.3
Rhode Island	63	62	98.4	66.1	6.5	0.0	0.0	27.4	0.0
South Carolina	286	263	92.0	60.5	1.5	0.0	0.8	37.3	0.0
South Dakota	23	23	100.0	87.0	4.3	0.0	0.0	8.7	0.0
Tennessee	439	403	91.8	66.7	2.5	0.5	0.5	29.8	0.0
Texas	1,820	1,748	96.0	59.8	2.4	0.1	1.0	36.0	0.7
Utah	52	51	98.1	58.8	2.0	0.0	0.0	39.2	0.0
Vermont	5	4	80.0	25.0	0.0	0.0	0.0	75.0	0.0
Virginia	339	339	100.0	27.1	3.5	0.0	0.3	68.7	0.3
Washington	265	236	89.1	23.3	2.5	0.0	5.5	68.2	0.4
West Virginia	42	41	97.6	68.3	4.9	0.0	0.0	26.8	0.0
Wisconsin	109	109	100.0	51.4	2.8	0.0	0.0	45.9	0.0
Wyoming	4	4	100.0	50.0	0.0	0.0	0.0	50.0	0.0
American Samoa(d)	...	...	...	...	...	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...	...	...	...	...	...
Guam(d)	89	66	74.2	--	--	--	--	--	--
N. Mariana Islands(d)	...	...	...	...	...	...	...	...	...
Puerto Rico(d)	201	199	99.0	83.4	1.0	0.0	0.5	15.1	0.0
Republic of Palau(d)	...	...	...	...	...	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...	...	...	...	...	...

(a)Occupation within past 24 months. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b)Percentage based on data from 51 areas reporting information on occupation for $\geq 75\%$ of cases.

(c)Excludes New York City.

(d)Not included in totals.

Ellipses indicate data not available.

Table 24. Tuberculosis Cases by Type of Health Care Provider: 59 Reporting Areas, 1996

Reporting Area	Total Cases	Cases Alive at Diagnosis	Cases with Information on Type of Health Care Provider		Percent of Cases by Type of Health Care Provider(a)		
			No.	%	Health Department	Private/Other	Both Health Department and Private/Other
United States	21,221	20,443	20,007	97.9	45.5 (b)	27.5 (b)	27.0 (b)
Alabama	423	406	405	99.8	61.5	4.4	34.1
Alaska	97	97	97	100.0	70.1	14.4	15.5
Arizona	282	269	265	98.5	50.6	36.7	13.2
Arkansas	225	210	203	96.7	63.1	5.9	31.0
California	4,288	4,175	4,161	99.7	49.2	34.8	16.0
Colorado	101	96	92	95.8	65.2	26.1	8.7
Connecticut	138	131	131	100.0	14.5	70.2	15.3
Delaware	43	43	43	100.0	58.1	7.0	34.9
District of Columbia	139	127	117	92.1	56.4	36.8	6.8
Florida	1,411	1,341	1,336	99.6	43.3	20.1	36.5
Georgia	791	767	742	96.7	39.6	17.3	43.1
Hawaii	200	195	195	100.0	41.0	23.1	35.9
Idaho	15	15	6	40.0	--	--	--
Illinois	1,061	1,024	1,021	99.7	39.7	45.7	14.6
Indiana	202	192	192	100.0	24.0	17.2	58.9
Iowa	70	69	68	98.6	36.8	23.5	39.7
Kansas	73	71	68	95.8	39.7	23.5	36.8
Kentucky	259	244	232	95.1	47.4	11.2	41.4
Louisiana	420	406	367	90.4	55.6	16.3	28.1
Maine	21	20	20	100.0	45.0	0.0	55.0
Maryland	319	307	306	99.7	62.1	21.9	16.0
Massachusetts	262	258	256	99.2	57.4	16.0	26.6
Michigan	442	424	424	100.0	65.6	32.8	1.7
Minnesota	131	130	130	100.0	53.8	43.1	3.1
Mississippi	250	239	239	100.0	1.7	0.8	97.5
Missouri	224	214	209	97.7	23.0	23.4	53.6
Montana	19	19	19	100.0	42.1	21.1	36.8
Nebraska	22	20	20	100.0	0.0	85.0	15.0
Nevada	137	126	119	94.4	70.6	16.0	13.4
New Hampshire	21	21	21	100.0	0.0	14.3	85.7
New Jersey	820	784	765	97.6	51.2	46.3	2.5
New Mexico	89	85	85	100.0	34.1	8.2	57.6
New York State(c)	532	522	504	96.6	41.3	38.3	20.4
New York City	2,017	1,928	1,922	99.7	32.2	22.6	45.3
North Carolina	554	522	519	99.4	36.0	11.4	52.6
North Dakota	8	7	7	100.0	0.0	28.6	71.4
Ohio	301	290	284	97.9	36.6	38.4	25.0
Oklahoma	201	188	186	98.9	93.0	3.8	3.2
Oregon	189	184	178	96.7	39.3	23.6	37.1
Pennsylvania	580	553	516	93.3	38.2	43.0	18.8
Rhode Island	35	35	25	71.4	--	--	--
South Carolina	348	335	326	97.3	81.6	4.3	14.1
South Dakota	19	19	19	100.0	68.4	0.0	31.6
Tennessee	504	483	457	94.6	27.1	9.4	63.5
Texas	2,067	2,007	1,876	93.5	51.5	29.5	19.0
Utah	58	57	56	98.2	57.1	7.1	35.7
Vermont	4	4	4	100.0	0.0	0.0	100.0
Virginia	348	340	340	100.0	44.7	45.0	10.3
Washington	283	279	271	97.1	48.3	20.3	31.4
West Virginia	57	52	50	96.2	16.0	52.0	32.0
Wisconsin	114	106	106	100.0	9.4	11.3	79.2
Wyoming	7	7	7	100.0	0.0	42.9	57.1
American Samoa(d)	...	...	...	...	...	...	...
Fed. States of Micronesia(d)	...	...	...	...	...	...	...
Guam(d)	...	...	...	...	...	...	...
N. Mariana Islands(d)	...	...	...	...	...	...	...
Puerto Rico(d)	222	207	203	98.1	91.1	8.4	0.5
Republic of Palau(d)	...	...	...	...	...	...	...
U.S. Virgin Islands(d)	...	...	...	...	...	...	...

(a)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 care of patient. Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(b)Percentage based on data from 50 areas reporting information on type of health care provider for $\geq 75\%$ of cases.

(c)Excludes New York City.

(d)Not included in totals.

Ellipses indicate data not available.

Table 25. Tuberculosis Cases by Directly Observed Therapy: 59 Reporting Areas, 1996

Reporting Area	Total Cases	Cases with Initial Drug Regimen Prescribed(a)	Cases with Information on Directly Observed Therapy		Percent of Cases by Administration of Therapy(b)	
			No.	%	DOT Only	Both DOT and Self-Administered
United States	21,221	20,281	19,640	96.8	42.4 (c)	22.4 (c)
Alabama	423	404	403	99.8	84.1	10.4
Alaska	97	96	96	100.0	83.3	15.6
Arizona	282	265	259	97.7	46.3	12.7
Arkansas	225	208	203	97.6	29.6	15.3
California	4,288	4,137	4,009	96.9	38.1	16.6
Colorado	101	94	88	93.6	64.8	23.9
Connecticut	138	131	131	100.0	48.9	0.8
Delaware	43	43	41	95.3	41.5	41.5
District of Columbia	139	117	112	95.7	34.8	18.8
Florida	1,411	1,335	1,294	96.9	47.2	30.8
Georgia	791	766	712	93.0	53.8	24.2
Hawaii	200	195	195	100.0	54.9	9.7
Idaho	15	15	6	40.0	--	--
Illinois	1,061	1,004	995	99.1	47.0	11.3
Indiana	202	192	192	100.0	42.7	7.8
Iowa	70	69	67	97.1	35.8	13.4
Kansas	73	70	66	94.3	47.0	28.8
Kentucky	259	243	232	95.5	45.3	24.6
Louisiana	420	393	357	90.8	68.6	19.6
Maine	21	20	20	100.0	20.0	10.0
Maryland	319	305	305	100.0	84.9	4.6
Massachusetts	262	258	256	99.2	30.1	14.1
Michigan	442	417	416	99.8	5.5	4.1
Minnesota	131	128	110	85.9	43.6	20.9
Mississippi	250	239	239	100.0	99.2	0.8
Missouri	224	214	207	96.7	54.6	17.4
Montana	19	19	18	94.7	33.3	22.2
Nebraska	22	20	20	100.0	10.0	20.0
Nevada	137	126	115	91.3	24.3	18.3
New Hampshire	21	21	21	100.0	9.5	33.3
New Jersey	820	781	753	96.4	10.6	32.7
New Mexico	89	84	83	98.8	30.1	18.1
New York State(d)	532	522	520	99.6	56.7	22.9
New York City	2,017	1,911	1,905	99.7	0.2	63.5
North Carolina	554	521	519	99.6	54.5	21.8
North Dakota	8	7	7	100.0	57.1	42.9
Ohio	301	290	287	99.0	47.7	17.4
Oklahoma	201	187	186	99.5	55.4	1.1
Oregon	189	183	183	100.0	41.5	18.0
Pennsylvania	580	553	516	93.3	41.1	12.4
Rhode Island	35	35	25	71.4	--	--
South Carolina	348	335	325	97.0	77.2	7.7
South Dakota	19	19	19	100.0	63.2	21.1
Tennessee	504	483	453	93.8	27.4	24.5
Texas	2,067	1,989	1,860	93.5	61.6	24.2
Utah	58	55	54	98.2	55.6	18.5
Vermont	4	4	4	100.0	25.0	75.0
Virginia	348	334	334	100.0	50.9	1.8
Washington	283	279	265	95.0	58.9	10.2
West Virginia	57	52	45	86.5	13.3	13.3
Wisconsin	114	106	105	99.1	31.4	10.5
Wyoming	7	7	7	100.0	0.0	42.9
American Samoa(e)	...	...	...	...	...	...
Fed. States of Micronesia(e)	...	...	...	...	...	...
Guam(e)	...	...	...	...	...	...
N. Mariana Islands(e)	...	...	...	...	...	...
Puerto Rico(e)	222	207	201	97.1	35.8	0.0
Republic of Palau(e)	...	...	...	...	...	...
U.S. Virgin Islands(e)	...	...	...	...	...	...

(a)Includes patients alive at diagnosis with initial drug regimen of one or more drugs prescribed.

(b)Percentages shown only for reporting areas with information reported for $\geq 75\%$ of cases.

(c)Percentage based on data from 50 areas reporting information on directly observed therapy for $\geq 75\%$ of cases.

(d)Excludes New York City.

(e)Not included in totals.

Ellipses indicate data not available.

Table 26. Completion of Tuberculosis Therapy (COT): 59 Reporting Areas, 1996

Reporting Area	Total Cases	Therapy \leq 1 Year Indicated(a)		Therapy $>$ 1 Year Indicated(b)		Overall		
		No.(c)	COT \leq 1 Year(%)	COT(%)	No.(c)	COT(%)	No.(c)	COT(%)
United States	21,221	17,985	75.1 (d)	89.5 (d)	330	68.7 (d)	18,315	89.1 (d)
Alabama	423	357	80.4	92.7	2	50.0	359	92.5
Alaska	37	93	96.8	98.9	0	...	93	98.9
Arizona	282	228	72.4	82.0	13	53.8	241	80.5
Arkansas	225	189	89.4	93.1	1	100.0	190	93.2
California	4,288	3,729	75.6	90.3	78	75.6	3,807	90.0
Colorado	101	84	82.1	86.9	0	...	84	86.9
Connecticut	138	119	69.7	92.4	1	100.0	120	92.5
Delaware	43	36	72.2	91.7	0	...	36	91.7
District of Columbia	139	95	63.2	82.1	4	75.0	99	81.8
Florida	1,411	1,157	78.5	92.1	16	87.5	1,173	92.1
Georgia	791	697	76.2	89.4	9	66.7	706	89.1
Hawaii	200	182	78.6	87.9	3	100.0	185	88.1
Idaho	15	14	--	--	1	--	15	--
Illinois	1,061	879	71.3	85.7	23	73.9	902	85.4
Indiana	202	176	75.6	88.1	0	..	176	88.1
Iowa	70	63	66.7	79.4	2	50.0	65	78.5
Kansas	73	66	69.7	83.3	1	100.0	67	83.6
Kentucky	259	210	77.6	87.6	6	83.3	216	87.5
Louisiana	420	358	74.3	84.9	1	100.0	359	85.0
Maine	21	19	78.9	94.7	0	...	19	94.7
Maryland	319	265	85.7	92.8	0	...	265	92.8
Massachusetts	262	247	76.9	93.9	1	100.0	248	94.0
Michigan	442	376	65.7	80.1	11	81.8	387	80.1
Minnesota	131	121	61.2	83.5	1	100.0	122	83.6
Mississippi	250	202	86.6	97.0	2	100.0	204	97.1
Missouri	224	192	78.6	91.1	1	100.0	193	91.2
Montana	19	16	87.5	93.8	1	100.0	17	94.1
Nebraska	22	18	77.8	83.3	0	..	18	83.3
Nevada	137	113	67.3	83.2	1	0.0	114	82.5
New Hampshire	21	19	89.5	94.7	0	.	19	94.7
New Jersey	620	690	64.8	89.0	14	71.4	704	88.6
New Mexico	89	71	71.8	90.1	3	100.0	74	90.5
New York State(e)	532	455	70.8	91.2	9	66.7	464	90.7
New York City	2,017	1,624	72.8	92.2	56	53.6	1,680	91.0
North Carolina	554	470	84.3	95.1	3	100.0	473	95.1
North Dakota	8	5	100.0	100.0	0	...	5	100.0
Ohio	501	239	80.3	92.9	1	100.0	240	92.9
Oklahoma	201	166	68.1	89.2	0	...	166	89.2
Oregon	189	170	76.5	84.1	1	0.0	171	83.6
Pennsylvania	580	476	74.8	87.4	1	0.0	477	87.2
Rhode Island	35	32	--	--	0	...	32	--
South Carolina	348	304	63.5	89.8	3	100.0	307	89.9
South Dakota	19	18	88.9	94.4	0	.	18	94.4
Tennessee	504	417	78.7	89.7	3	66.7	420	89.5
Texas	2,067	1,786	74.8	87.2	44	54.5	1,830	86.4
Utah	58	51	76.5	92.2	1	100.0	52	92.3
Vermont	4	3	--	--	0	...	3	--
Virginia	348	295	78.3	84.4	2	50.0	297	84.2
Washington	283	252	76.2	87.3	7	57.1	259	86.5
West Virginia	57	42	61.9	76.2	0	..	42	76.2
Wisconsin	114	92	84.8	95.7	3	100.0	95	95.8
Wyoming	7	7	71.4	85.7	0	..	7	85.7
American Samoa(f)	...	...	...	...	...	..	...	...
Fed. States of Micronesia(f)	...	...	...	...	...	..	...	...
Guam(f)	...	...	...	...	...	..	...	...
N. Mariana Islands(f)	...	...	...	...	...	..	...	...
Puerto Rico(f)	222	168	79.2	89.3	7	57.1	175	88.0
Republic of Palau(f)	..	..	..	..	..	..	..	..
U.S. Virgin Islands(f)	..	..	..	..	..	..	..	..

(a)Initial isolate susceptible to rifampin (n=13,505) or susceptibility unknown (n=602); culture-negative (n=2,880), culture status unknown (n=993); age unknown (n=5).

(b)Initial isolate rifampin resistant, or pediatric (age <15) case with meningeal, bone or joint, or miliary disease

(c)Number of cases in persons alive at diagnosis, with initial drug regimen of one or more drugs prescribed, who did not die during therapy. Percentages only shown for reporting areas with information on reason therapy stopped for \geq 90% of cases.

(d)Percentages based on data from 49 areas reporting information on reason therapy stopped for \geq 90% of cases.

(e)Excludes New York City.

(f)Not included in totals.

Ellipses indicate data not available.

Note: See Technical Notes for description of COT calculation

**Morbidity Tables
Cities and Metropolitan
Statistical Areas, 1998**

Table 27. Tuberculosis Cases in Selected Cities: 1998 and 1997

City	Cases(a)	
	1998	1997
Albuquerque, NM	16	16
Anahelm, Calif	48	46
Arlington, Tex	21	15
Atlanta, Ga	129	165
Austin, Tex	64	72
Baltimore, Md	84	92
Birmingham, Ala	65	50
Boston, Mass	89	79
Buffalo, NY	16	25
Charlotte, NC	55	80
Chicago, Ill	473	599
Cincinnati, Ohio	14	18
Cleveland, Ohio	45	86
Colorado Springs, Colo	4	6
Columbus, Ohio	40	16
Corpus Christi, Tex	35	43
Dallas, Tex	199	233
Denver, Colo	33	38
Detroit, Mich	142	171
El Paso, Tex	74	74
Fort Worth, Tex	86	71
Fresno, Calif	87	70
Honolulu, Hawaii	77	78
Houston, Tex	424	572
Indianapolis, Ind	41	34
Jacksonville, Fla	101	118
Kansas City, Mo	40	39
Las Vegas, Nev	92	64
Long Beach, Calif	57	100
Los Angeles, Calif	544	558
Louisville, Ky	35	26
Memphis, Tenn	109	120
Mesa, Ariz	10	16
Miami, Fla	101	111
Milwaukee, Wis	38	41
Minneapolis, Minn	63	67
Nashville, Tenn	70	81
New Orleans, La	84	98
New York, NY	1,558	1,730
Newark, N.J.	90	108
Norfolk, Va	16	25
Oakland, Calif	99	97
Oklahoma City, Okla	43	59
Omaha, Neb	12	10
Philadelphia, Pa	179	236
Phoenix, Ariz	93	107
Pittsburgh, Pa	26	21
Portland, Ore	70	72
Sacramento, Calif	92	109
St. Louis, Mo	61	60
St. Paul, Minn	22	28
San Antonio, Tex	87	95
San Diego, Calif	194	193
San Francisco, Calif	207	241
San Jose, Calif	180	174
Santa Ana, Calif	57	85
Seattle, Wash	84	81
Tampa, Fla	66	78
Toledo, Ohio	7	11
Tucson, Ariz	42	30
Tulsa, Okla	27	24
Virginia Beach, Va	8	15
Washington, DC	107	110
Wichita, Kan	20	37
Total - 64 Cities	7,152	8,024
San Juan, Puerto Rico	36	12

(a) Case counts are based on verified cases residing within city limits. Residence within city limits was determined by the health department.

Table 28. Tuberculosis Cases and Case Rates per 100,000 Population: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998 and 1997

Metropolitan Statistical Area	Cases		Case Rate		Population Estimates 1998
	1998	1997	1998	1997	
Akron, Ohio	7	5	1.0	0.7	688,952
Albany-Schenectady, NY	14	22	1.6	2.5	871,604
Albuquerque, NM	25	24	3.7	3.6	678,633
Allentown, Pa	22	15	3.6	2.4	616,877
Ann Arbor, Mich	4	8	0.7	1.5	547,646
Atlanta, Ga	334	388	8.9	10.7	3,746,059
Austin, Tex	92	80	8.3	7.5	1,105,909
Bakersfield, Calif	48	63	7.6	10.0	631,459
Baltimore, Md	160	167	6.4	6.7	2,483,952
Baton Rouge, La	27	32	4.7	5.6	575,129
Bergen-Passaic, NJ	117	128	8.7	9.6	1,344,266
Birmingham, Ala	89	77	9.8	8.6	908,508
Boston, Mass	274	262	4.7	4.5	5,867,187
Buffalo, NY	35	45	3.0	3.9	1,152,541
Charleston, SC	37	47	6.8	9.2	541,159
Charlotte, NC	107	120	7.7	8.9	1,383,080
Chicago, Ill	730	858	9.2	11.0	7,939,351
Cincinnati, Ohio	30	43	1.9	2.7	1,617,836
Cleveland, Ohio	77	139	3.5	6.2	2,222,731
Columbia, SC	25	34	4.9	6.7	512,316
Columbus, Ohio	47	25	3.2	1.7	1,469,604
Dallas, Tex	291	312	9.1	10.0	3,209,886
Dayton, Ohio	17	15	1.8	1.6	948,522
Denver, Colo	54	62	2.8	3.3	1,938,642
Detroit, Mich	261	259	5.8	5.8	4,473,853
El Paso, Tex	81	76	11.5	10.8	703,127
Fort Lauderdale, Fla	135	124	9.0	8.4	1,503,407
Fort Worth, Tex	117	110	7.3	7.1	1,592,577
Fresno, Calif	121	102	13.9	11.7	870,478
Gary, Ind	23	19	3.7	3.0	624,049
Grand Rapids, Mich	32	34	3.1	3.3	1,037,933
Greensboro, NC	65	52	5.6	4.5	1,167,629
Greenville, SC	36	44	3.9	4.9	918,351
Harrisburg, Pa	25	17	4.1	2.8	616,031
Hartford, Conn	47	43	4.2	3.9	1,110,065
Honolulu, Hawaii	149	128	17.1	14.7	872,478
Houston, Tex	482	667	12.3	17.3	3,931,688
Indianapolis, Ind	56	50	3.7	3.3	1,519,194
Jacksonville, Fla	117	142	11.2	13.7	1,044,684
Jersey City, NJ	88	110	15.8	19.9	557,159
Kansas City, Mo	62	57	3.6	3.3	1,737,025
Knoxville, Tenn	45	47	6.8	7.2	659,074
Las Vegas, Nev	109	98	8.2	7.8	1,321,546
Little Rock, Ark	20	37	3.6	6.7	556,295
Los Angeles, Calif	1,372	1,458	14.9	15.9	9,213,533
Louisville, Ky	51	38	5.1	3.8	999,267
McAllen, Tex	80	78	15.3	15.3	522,204
Memphis, Tenn	131	140	12.0	12.9	1,093,427
Miami, Fla	288	317	13.4	15.5	2,152,437
Middlesex, NJ	94	90	8.4	8.1	1,121,504

Table 28.(Cont'd) Tuberculosis Cases and Case Rates per 100,000 Population: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998 and 1997

Metropolitan Statistical Area	Cases		Case Rate		Population Estimates 1998
	1998	1997	1998	1997	
Milwaukee, Wis	54	49	3.7	3.4	1,459,805
Minneapolis-St. Paul, Minn	124	133	4.4	4.8	2,831,234
Mobile, Ala	43	41	8.1	7.8	532,257
Monmouth-Ocean City, NJ	40	33	3.7	3.1	1,093,253
Nashville, Tenn	97	116	8.4	10.2	1,156,225
Nassau-Suffolk, NY	154	157	5.8	5.9	2,673,489
New Haven, Conn	76	72	4.7	4.4	1,631,866
New Orleans, La	149	162	11.4	12.4	1,309,445
New York, NY	1,657	1,856	19.1	21.6	8,692,782
Newark, NJ	209	257	10.7	13.2	1,952,407
Norfolk, Va	65	84	4.2	5.4	1,542,143
Oakland, Calif	332	318	14.3	14.0	2,318,522
Oklahoma City, Okla	77	81	7.4	7.9	1,038,999
Omaha, Neb	20	13	2.9	1.9	693,900
Orange County, Calif	298	330	10.9	12.3	2,721,701
Orlando, Fla	163	171	10.8	11.7	1,504,569
Philadelphia, Pa	286	329	5.8	6.7	4,946,562
Phoenix, Ariz	145	183	4.9	6.4	2,931,004
Pittsburgh, Pa	52	71	2.2	3.0	2,346,153
Portland, Ore	118	118	6.5	6.6	1,818,955
Providence, RI	61	36	6.7	4.0	905,612
Raleigh-Durham, NC	82	70	7.6	6.7	1,079,873
Richmond, Va	37	24	3.9	2.5	957,032
Riverside-San Bernardino, Calif	175	197	5.6	6.4	3,114,072
Rochester, NY	44	60	4.1	5.5	1,081,883
Sacramento, Calif	120	152	7.8	10.1	1,531,963
St. Louis, Mo	110	144	4.3	5.6	2,563,801
Salt Lake City, Utah	42	21	3.3	1.7	1,267,745
San Antonio, Tex	98	108	6.4	7.1	1,538,338
San Diego, Calif	339	333	12.2	12.2	2,780,592
San Francisco, Calif	307	338	18.2	20.3	1,683,309
San Jose, Calif	251	258	15.3	16.0	1,641,215
Sarasota, Fla	35	24	6.4	4.5	543,082
Scranton, Pa	14	27	2.3	4.3	615,491
Seattle, Wash	136	143	5.9	6.3	2,312,978
Springfield, Mass	12	17	2.0	2.9	588,993
Stockton, Calif	65	64	11.8	11.8	550,445
Syracuse, NY	23	28	3.1	3.8	734,640
Tacoma, Wash	36	43	5.3	6.5	676,505
Tampa-St. Petersburg, Fla	152	164	6.7	7.4	2,256,559
Toledo, Ohio	8	12	1.3	2.0	609,935
Tucson, Ariz	51	38	6.4	4.9	790,755
Tulsa, Okla	34	35	4.4	4.6	776,906
Ventura, Calif	57	79	7.8	10.9	731,967
Washington, DC	398	399	8.5	8.7	4,673,902
West Palm Beach, Fla	83	115	8.0	11.3	1,032,625
Wichita, Kan	22	39	4.0	7.4	544,343
Wilmington, Del	12	22	2.1	4.0	565,329
Youngstown, Ohio	17	13	2.9	2.2	591,752
Total - 99 Areas	13,730	14,885	8.1	8.9	168,857,777
San Juan, Puerto Rico	79	138	3.9	6.9	2,007,980

Table 29. Tuberculosis Cases by Form of Disease: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	Pulmonary(a)		Extrapulmonary(b)		Cases with Both Pulmonary and Extrapulmonary Disease		
		No.	%	No.	%	Total(c)	Miliary	No.
Akron, Ohio	7	5	71.4	2	28.6	0	0.0	0
Albany-Schenectady, NY	14	10	71.4	3	21.4	1	7.1	0
Albuquerque, NM	25	13	52.0	8	32.0	4	16.0	1
Allentown, Pa	22	14	63.6	7	31.8	1	4.5	1
Ann Arbor, Mich	4	3	75.0	1	25.0	0	0.0	0
Atlanta, Ga	334	252	75.4	64	19.2	18	5.4	6
Austin, Tex	92	65	70.7	18	19.6	9	9.8	1
Bakersfield, Calif	48	42	87.5	5	10.4	1	2.1	1
Baltimore, Md	160	99	61.9	38	23.7	23	14.4	10
Baton Rouge, La	27	22	81.5	5	18.5	0	0.0	0
Bergen-Passaic, NJ	117	75	64.1	34	29.1	8	6.8	4
Birmingham, Ala	89	60	67.4	22	24.7	7	7.9	0
Boston, Mass	274	157	57.3	97	35.4	20	7.3	7
Buffalo, NY	35	26	74.3	7	20.0	2	5.7	0
Charleston, SC	37	24	64.9	10	27.0	3	8.1	1
Charlotte, NC	107	83	77.6	19	17.8	5	4.7	0
Chicago, Ill	730	566	77.5	133	18.2	31	4.2	6
Cincinnati, Ohio	30	24	80.0	6	20.0	0	0.0	0
Cleveland, Ohio	77	45	58.4	25	32.5	7	9.1	1
Columbia, SC	25	15	60.0	6	24.0	4	16.0	0
Columbus, Ohio	47	40	85.1	7	14.9	0	0.0	0
Dallas, Tex	291	204	70.1	60	20.6	27	9.3	5
Dayton, Ohio	17	14	82.4	3	17.6	0	0.0	0
Denver, Colo	54	33	61.1	11	20.4	10	18.5	4
Detroit, Mich	261	177	67.8	75	28.7	9	3.4	1
El Paso, Tex	81	58	71.6	13	16.0	10	12.3	0
Fort Lauderdale, Fla	135	114	84.4	19	14.1	2	1.5	1
Fort Worth, Tex	117	87	74.4	15	12.8	15	12.8	9
Fresno, Calif	121	92	76.0	19	15.7	10	8.3	0
Gary, Ind	23	21	91.3	2	8.7	0	0.0	0
Grand Rapids, Mich	32	19	59.4	10	31.3	3	9.4	0
Greensboro, NC	65	51	78.5	10	15.4	4	6.2	2
Greenville, SC	36	24	66.7	9	25.0	3	8.3	0
Harrisburg, Pa	25	16	64.0	9	36.0	0	0.0	0
Hartford, Conn	47	33	70.2	13	27.7	1	2.1	0
Honolulu, Hawaii	149	111	74.5	32	21.5	6	4.0	2
Houston, Tex	482	377	78.2	83	17.2	22	4.6	8
Indianapolis, Ind	56	35	62.5	20	35.7	1	1.8	1
Jacksonville, Fla	117	95	81.2	16	13.7	6	5.1	3
Jersey City, NJ	88	69	78.4	13	14.8	6	6.8	2
Kansas City, Mo	62	43	69.4	13	21.0	6	9.7	1
Knoxville, Tenn	45	37	82.2	3	6.7	5	11.1	1
Las Vegas, Nev	109	91	83.5	14	12.8	4	3.7	1
Little Rock, Ark	20	15	75.0	1	5.0	4	20.0	2
Los Angeles, Calif	1,372	991	72.2	263	19.2	118	8.6	41
Louisville, Ky	51	39	76.5	9	17.6	3	5.9	1
McAllen, Tex	80	63	78.8	12	15.0	5	6.3	1
Memphis, Tenn	131	77	58.8	34	26.0	20	15.3	2
Miami, Fla	288	246	85.4	31	10.8	11	3.8	9
Middlesex, NJ	94	52	55.3	32	34.0	10	10.6	0

(a)Includes cases with pulmonary listed as major site of disease and no additional site of disease.

(b)Includes cases with pleural, lymphatic, bone and/or joint, meningeal, peritoneal, or other site, excluding pulmonary, listed as major site of disease.

(c)Includes miliary cases.

Note:5(<0.1%) cases had missing and/or unknown site of disease.

Table 29.(Cont'd) Tuberculosis Cases by Form of Disease: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	Pulmonary(a)		Extrapulmonary(b)		Cases with Both Pulmonary and Extrapulmonary Disease		
		No.	%	No.	%	Total(c)	Miliary	No.
Milwaukee, Wis	54	36	66.7	13	24.1	5	9.3	1
Minneapolis-St. Paul, Minn	124	70	56.5	47	37.9	7	5.6	2
Mobile, Ala	43	35	81.4	7	16.3	1	2.3	0
Monmouth-Ocean City, NJ	40	27	67.5	11	27.5	2	5.0	0
Nashville, Tenn	97	72	74.2	18	18.6	7	7.2	1
Nassau-Suffolk, NY	154	108	70.1	28	18.2	18	11.7	3
New Haven, Conn	76	48	63.2	23	30.3	5	6.6	3
New Orleans, La	149	127	85.2	17	11.4	5	3.4	3
New York, NY	1,657	1,126	68.0	315	19.0	215	13.0	57
Newark, NJ	209	137	65.6	41	19.6	31	14.8	12
Norfolk, Va	65	54	83.1	10	15.4	1	1.5	0
Oakland, Calif	332	251	75.6	58	17.5	23	6.9	6
Oklahoma City, Okla	77	61	79.2	12	15.6	4	5.2	0
Omaha, Neb	20	16	80.0	3	15.0	1	5.0	1
Orange County, Calif	298	197	66.1	72	24.2	29	9.7	9
Orlando, Fla	163	144	88.3	14	8.6	5	3.1	1
Philadelphia, Pa	286	188	65.7	74	25.9	24	8.4	4
Phoenix, Ariz	145	110	75.9	27	18.6	8	5.5	0
Pittsburgh, Pa	52	33	63.5	13	25.0	6	11.5	3
Portland, Ore	118	80	67.8	29	24.6	9	7.6	3
Providence, RI	61	34	55.7	17	27.9	9	14.8	1
Raleigh-Durham, NC	82	61	74.4	17	20.7	4	4.9	0
Richmond, Va	37	29	78.4	7	18.9	1	2.7	0
Riverside-San Bernardino, Calif	175	137	78.3	31	17.7	7	4.0	3
Rochester, NY	44	24	54.5	14	31.8	6	13.6	0
Sacramento, Calif	120	93	77.5	19	15.8	8	6.7	4
St. Louis, Mo	110	82	74.5	22	20.0	5	4.5	2
Salt Lake City, Utah	42	26	61.9	12	28.6	4	9.5	0
San Antonio, Tex	98	74	75.5	15	15.3	9	9.2	2
San Diego, Calif	339	243	71.7	68	20.1	28	8.3	8
San Francisco, Calif	307	227	73.9	65	21.2	15	4.9	2
San Jose, Calif	251	180	71.7	63	25.1	8	3.2	2
Sarasota, Fla	35	32	91.4	3	8.6	0	0.0	0
Scranton, Pa	14	11	78.6	3	21.4	0	0.0	0
Seattle, Wash	136	79	58.1	39	28.7	18	13.2	3
Springfield, Mass	12	9	75.0	2	16.7	1	8.3	1
Stockton, Calif	65	50	76.9	10	15.4	5	7.7	2
Syracuse, NY	23	13	56.5	7	30.4	3	13.0	1
Tacoma, Wash	36	29	80.6	7	19.4	0	0.0	0
Tampa-St. Petersburg, Fla	152	121	79.6	22	14.5	9	5.9	2
Toledo, Ohio	8	5	62.5	3	37.5	0	0.0	0
Tucson, Ariz	51	41	80.4	7	13.7	3	5.9	1
Tulsa, Okla	34	25	73.5	5	14.7	4	11.8	1
Ventura, Calif	57	51	89.5	3	5.3	3	5.3	3
Washington, DC	398	266	66.8	106	26.6	24	6.0	14
West Palm Beach, Fla	83	58	69.9	19	22.9	6	7.2	3
Wichita, Kan	22	16	72.7	5	22.7	1	4.5	1
Wilmington, Del	12	9	75.0	2	16.7	1	8.3	0
Youngstown, Ohio	17	11	64.7	6	35.3	0	0.0	0
Total - 99 Areas	13,730	9,880	72.0	2,792	20.3	1,053	7.7	301
San Juan, Puerto Rico	79	67	84.8	11	13.9	1	1.3	1

(a)Includes cases with pulmonary listed as major site of disease and no additional site of disease.

(b)Includes cases with pleural, lymphatic, bone and/or joint, meningeal, peritoneal, or other site, excluding pulmonary, listed as major site of disease.

(c)Includes miliary cases.

Note: 5(<0.1%) cases had missing and/or unknown site of disease.

Table 30. Tuberculosis Cases by Age Group: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	Unknown or Missing
Akron, Ohio	7	0	0	0	2	1	4	0
Albany-Schenectady, NY	14	0	0	1	3	2	8	0
Albuquerque, NM	25	2	0	2	6	9	6	0
Allentown, Pa	22	0	0	1	5	6	10	0
Ann Arbor, Mich	4	0	0	0	2	1	1	0
Atlanta, Ga	334	24	14	23	140	97	36	0
Austin, Tex	92	5	2	12	36	23	14	0
Bakersfield, Calif	48	2	1	3	14	13	15	0
Baltimore, Md	160	9	2	18	48	46	37	0
Baton Rouge, La	27	2	1	2	8	7	7	0
Bergen-Passaic, NJ	117	4	2	12	51	26	22	0
Birmingham, Ala	89	4	1	4	28	23	29	0
Boston, Mass	274	6	4	31	106	71	56	0
Buffalo, NY	35	0	0	2	10	6	17	0
Charleston, SC	37	2	2	4	6	12	11	0
Charlotte, NC	107	4	2	7	51	29	14	0
Chicago, Ill	730	36	26	59	287	207	115	0
Cincinnati, Ohio	30	0	0	0	7	9	14	0
Cleveland, Ohio	77	1	4	6	22	18	26	0
Columbia, SC	25	0	0	1	7	10	7	0
Columbus, Ohio	47	1	1	8	19	8	10	0
Dallas, Tex	291	5	8	25	145	79	29	0
Dayton, Ohio	17	0	0	1	2	1	13	0
Denver, Colo	54	3	3	2	19	11	16	0
Detroit, Mich	261	13	9	15	83	79	62	0
El Paso, Tex	81	3	0	4	19	28	27	0
Fort Lauderdale, Fla	135	4	4	4	67	30	26	0
Fort Worth, Tex	117	2	8	13	50	34	10	0
Fresno, Calif	121	12	4	12	33	42	18	0
Gary, Ind	23	0	1	0	6	7	9	0
Grand Rapids, Mich	32	1	0	3	15	8	5	0
Greensboro, NC	65	3	2	4	15	25	16	0
Greenville, SC	36	2	0	5	8	11	10	0
Harrisburg, Pa	25	2	0	2	10	8	3	0
Hartford, Conn	47	0	0	1	20	17	9	0
Honolulu, Hawaii	149	3	1	11	36	42	56	0
Houston, Tex	482	20	14	50	209	132	57	0
Indianapolis, Ind	56	1	4	6	16	21	8	0
Jacksonville, Fla	117	3	1	5	52	39	17	0
Jersey City, NJ	88	4	5	9	40	23	7	0
Kansas City, Mo	62	1	0	4	19	19	19	0
Knoxville, Tenn	45	3	0	0	6	9	27	0
Las Vegas, Nev	109	6	3	10	40	33	17	0
Little Rock, Ark	20	0	0	0	5	4	11	0
Los Angeles, Calif	1,372	44	25	121	478	397	307	0
Louisville, Ky	51	4	0	0	14	18	15	0
McAllen, Tex	80	6	1	9	27	20	17	0
Memphis, Tenn	131	7	5	15	56	29	19	0
Miami, Fla	288	0	1	20	140	84	43	0
Middlesex, NJ	94	2	3	7	38	23	21	0

Table 30.(Cont'd) Tuberculosis Cases by Age Group: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	Under 5	5 - 14	15 - 24	25 - 44	45 - 64	65+	Unknown or Missing
Milwaukee, Wis	54	0	1	2	20	16	15	0
Minneapolis-St. Paul, Minn	124	2	5	28	51	24	14	0
Mobile, Ala	43	0	2	3	12	18	8	0
Monmouth-Ocean City, NJ	40	1	1	4	14	7	13	0
Nashville, Tenn	97	1	1	9	33	27	26	0
Nassau-Suffolk, NY	154	5	3	25	49	33	39	0
New Haven, Conn	76	2	2	8	27	20	17	0
New Orleans, La	149	7	1	8	50	58	25	0
New York, NY	1,657	37	37	175	690	443	275	0
Newark, NJ	209	10	5	13	89	57	35	0
Norfolk, Va	65	4	2	5	16	14	24	0
Oakland, Calif	332	18	5	22	118	89	80	0
Oklahoma City, Okla	77	2	7	10	19	21	18	0
Omaha, Neb	20	0	0	0	7	9	4	0
Orange County, Calif	298	7	6	29	115	70	71	0
Oriando, Fla	163	2	0	12	78	48	23	0
Philadelphia, Pa	286	10	12	19	104	72	69	0
Phoenix, Ariz	145	6	12	19	47	33	28	0
Pittsburgh, Pa	52	1	0	1	9	19	22	0
Portland, Ore	118	3	4	13	51	27	20	0
Providence, RI	61	6	7	5	16	15	12	0
Raleigh-Durham, NC	82	4	1	6	23	21	27	0
Richmond, Va	37	0	0	1	16	10	10	0
Riverside-San Bernardino, Calif	175	8	4	21	53	49	40	0
Rochester, NY	44	0	2	4	14	7	17	0
Sacramento, Calif	120	4	2	6	32	39	37	0
St. Louis, Mo	110	5	0	3	34	33	35	0
Salt Lake City, Utah	42	0	1	1	21	11	8	0
San Antonio, Tex	98	2	3	6	26	30	31	0
San Diego, Calif	339	20	20	35	114	82	68	0
San Francisco, Calif	307	5	5	29	97	81	90	0
San Jose, Calif	251	4	3	28	99	62	55	0
Sarasota, Fla	35	0	0	2	10	16	7	0
Scranton, Pa	14	1	0	0	0	4	9	0
Seattle, Wash	136	3	2	15	52	35	29	0
Springfield, Mass	12	0	2	0	1	6	3	0
Stockton, Calif	65	3	1	4	18	25	14	0
Syracuse, NY	23	2	0	1	7	6	7	0
Tacoma, Wash	36	0	1	3	10	14	8	0
Tampa-St. Petersburg, Fla	152	6	4	8	55	52	27	0
Toledo, Ohio	8	0	0	0	1	3	4	0
Tucson, Ariz	51	0	0	0	10	25	16	0
Tulsa, Okla	34	0	0	1	11	11	11	0
Ventura, Calif	57	4	2	7	14	15	15	0
Washington, DC	398	11	4	50	172	88	73	0
West Palm Beach, Fla	83	1	0	9	34	25	14	0
Wichita, Kan	22	2	0	2	9	3	6	0
Wilmington, Del	12	0	0	0	4	5	3	0
Youngstown, Ohio	17	0	1	0	3	3	10	0
Total - 99 Areas	13,730	465	335	1,206	5,081	3,778	2,865	0
San Juan, Puerto Rico	79	2	1	4	26	30	16	0

Table 31. Tuberculosis Cases by Race/Ethnicity: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	White Not Hispanic	Black Not Hispanic	Hispanic(a)	American Indian or Alaskan Native	Asian or Pacific Islander	Unknown or Missing
Akron, Ohio	7	3	2	0	0	2	0
Albany-Schenectady, NY	14	9	2	0	0	3	0
Albuquerque, NM	25	6	1	10	5	3	0
Allentown, Pa	22	13	2	4	0	3	0
Ann Arbor, Mich	4	1	1	1	0	1	0
Atlanta, Ga	334	61	206	31	0	35	1
Austin, Tex	92	17	20	40	0	15	0
Bakersfield, Calif	48	12	5	20	1	10	0
Baltimore, Md	160	45	83	5	0	27	0
Baton Rouge, La	27	6	16	1	0	4	0
Bergen-Passaic, NJ	117	27	19	33	0	38	0
Birmingham, Ala	89	24	62	1	0	2	0
Boston, Mass	274	79	75	30	0	89	1
Buffalo, NY	35	18	9	0	0	8	0
Charleston, SC	37	6	29	1	0	1	0
Charlotte, NC	107	23	71	7	2	4	0
Chicago, Ill	730	126	348	123	2	130	1
Cincinnati, Ohio	30	18	7	0	0	5	0
Cleveland, Ohio	77	26	40	1	0	10	0
Columbia, SC	25	5	18	0	0	2	0
Columbus, Ohio	47	19	20	1	0	6	1
Dallas, Tex	291	45	119	89	2	31	5
Dayton, Ohio	17	11	5	0	0	1	0
Denver, Colo	54	11	10	20	0	13	0
Detroit, Mich	261	71	147	5	0	37	1
El Paso, Tex	81	6	2	71	0	2	0
Fort Lauderdale, Fla	135	35	76	16	0	8	0
Fort Worth, Tex	117	34	45	23	1	14	0
Fresno, Calif	121	11	8	73	0	29	0
Gary, Ind	23	6	13	3	0	1	0
Grand Rapids, Mich	32	9	5	12	0	6	0
Greensboro, NC	65	14	43	4	0	4	0
Greenville, SC	36	15	16	5	0	0	0
Harrisburg, Pa	25	9	8	4	0	4	0
Hartford, Conn	47	12	15	9	0	11	0
Honolulu, Hawaii	149	4	0	1	0	143	1
Houston, Tex	482	89	170	148	1	71	3
Indianapolis, Ind	56	24	17	9	0	5	1
Jacksonville, Fla	117	32	78	1	0	6	0
Jersey City, NJ	88	8	20	31	0	29	0
Kansas City, Mo	62	13	29	10	0	10	0
Knoxville, Tenn	45	40	4	0	0	1	0
Las Vegas, Nev	109	30	16	36	0	27	0
Little Rock, Ark	20	11	7	0	0	1	1
Los Angeles, Calif	1,372	146	182	587	7	450	0
Louisville, Ky	51	36	11	1	0	2	1
McAllen, Tex	80	1	0	76	0	3	0
Memphis, Tenn	131	19	103	1	0	8	0
Miami, Fla	288	21	155	103	0	6	3
Middlesex, NJ	94	25	9	20	0	40	0

(a) Persons of Hispanic origin may be of any race.

Table 31.(Cont'd) Tuberculosis Cases by Race/Ethnicity: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	White Not Hispanic	Black Not Hispanic	Hispanic(a)	American Indian or Alaskan Native	Asian or Pacific Islander	Unknown or Missing
Milwaukee, Wis	54	15	25	7	0	7	0
Minneapolis-St. Paul, Minn	124	13	58	4	8	40	1
Mobile, Ala	43	13	22	1	0	7	0
Monmouth-Ocean City, NJ	40	21	5	4	0	10	0
Nashville, Tenn	97	34	54	3	0	6	0
Nassau-Suffolk, NY	154	45	31	49	1	28	0
New Haven, Conn	76	21	30	14	0	11	0
New Orleans, La	149	28	98	8	0	14	1
New York, NY	1,657	181	668	467	0	341	0
Newark, NJ	209	28	113	51	0	17	0
Norfolk, Va	65	14	37	1	0	13	0
Oakland, Calif	332	31	83	37	2	179	0
Oklahoma City, Okla	77	43	5	10	10	9	0
Omaha, Neb	20	11	2	4	0	3	0
Orange County, Calif	298	28	1	106	0	161	2
Orlando, Fla	163	55	83	17	0	8	0
Philadelphia, Pa	286	60	140	28	0	57	1
Phoenix, Ariz	145	41	13	72	6	13	0
Pittsburgh, Pa	52	30	19	1	0	2	0
Portland, Ore	118	44	13	17	1	43	0
Providence, RI	61	18	7	19	0	17	0
Raleigh-Durham, NC	82	19	43	13	0	7	0
Richmond, Va	37	10	19	2	0	6	0
Riverside-San Bernardino, Calif	175	38	17	82	0	38	0
Rochester, NY	44	10	19	6	0	9	0
Sacramento, Calif	120	35	11	15	0	59	0
St. Louis, Mo	110	33	64	3	0	8	2
Salt Lake City, Utah	42	14	2	9	3	13	1
San Antonio, Tex	98	7	9	77	0	4	1
San Diego, Calif	339	44	16	169	2	108	0
San Francisco, Calif	307	52	25	43	3	184	0
San Jose, Calif	251	24	6	45	0	176	0
Sarasota, Fla	35	16	7	8	0	4	0
Scranton, Pa	14	13	0	0	0	1	0
Seattle, Wash	136	32	21	10	9	64	0
Springfield, Mass	12	6	1	2	0	3	0
Stockton, Calif	65	6	7	18	0	34	0
Syracuse, NY	23	10	10	3	0	0	0
Tacoma, Wash	36	16	4	2	1	13	0
Tampa-St. Petersburg, Fla	152	71	56	14	0	11	0
Toledo, Ohio	8	5	2	1	0	0	0
Tucson, Ariz	51	22	4	16	9	0	0
Tulsa, Okla	34	18	6	2	7	1	0
Ventura, Calif	57	10	1	28	0	18	0
Washington, DC	398	42	178	58	1	114	5
West Palm Beach, Fla	83	23	49	9	1	1	0
Wichita, Kan	22	4	2	7	0	9	0
Wilmington, Del	12	5	4	0	0	3	0
Youngstown, Ohio	17	7	6	2	0	2	0
Total - 99 Areas	13,730	2,698	4,445	3,231	85	3,237	34
San Juan, Puerto Rico	79	0	0	78	0	1	0

(a) Persons of Hispanic origin may be of any race.

Table 32. Tuberculosis Cases, U.S.-Born Persons and Foreign-Born Persons: Metropolitan Statistical Areas with ≥500,000 Population, 1998

Metropolitan Statistical Area	Total Cases	U.S.-born Persons		Foreign-born Persons(a)		Unknown	
		No.	%	No.	%	No.	%
Akron, Ohio	7	5	71.4	2	28.6	0	0.0
Albany-Schenectady, NY	14	9	64.3	5	35.7	0	0.0
Albuquerque, NM	25	14	56.0	11	44.0	0	0.0
Allentown, Pa	22	13	59.1	9	40.9	0	0.0
Ann Arbor, Mich	4	4	100.0	0	0.0	0	0.0
Atlanta, Ga	334	247	74.0	85	25.4	2	0.6
Austin, Tex	92	58	63.0	34	37.0	0	0.0
Bakersfield, Calif	48	31	64.6	17	35.4	0	0.0
Baltimore, Md	160	117	73.1	43	26.9	0	0.0
Baton Rouge, La	27	21	77.8	6	22.2	0	0.0
Bergen-Passaic, NJ	117	42	35.9	75	64.1	0	0.0
Birmingham, Ala	89	85	95.5	4	4.5	0	0.0
Boston, Mass	274	87	31.8	186	67.9	1	0.4
Buffalo, NY	35	27	77.1	8	22.9	0	0.0
Charleston, SC	37	34	91.9	3	8.1	0	0.0
Charlotte, NC	107	96	89.7	11	10.3	0	0.0
Chicago, Ill	730	507	69.5	218	29.9	5	0.7
Cincinnati, Ohio	30	24	80.0	6	20.0	0	0.0
Cleveland, Ohio	77	55	71.4	22	28.6	0	0.0
Columbia, SC	25	23	92.0	2	8.0	0	0.0
Columbus, Ohio	47	34	72.3	13	27.7	0	0.0
Dallas, Tex	291	178	61.2	113	38.8	0	0.0
Dayton, Ohio	17	12	70.6	4	23.5	1	5.9
Denver, Colo	54	29	53.7	25	46.3	0	0.0
Detroit, Mich	261	199	76.2	61	23.4	1	0.4
El Paso, Tex	81	19	23.5	62	76.5	0	0.0
Fort Lauderdale, Fla	135	67	49.6	68	50.4	0	0.0
Fort Worth, Tex	117	78	66.7	38	32.5	1	0.9
Fresno, Calif	121	46	38.0	70	57.9	5	4.1
Gary, Ind	23	20	87.0	3	13.0	0	0.0
Grand Rapids, Mich	32	12	37.5	20	62.5	0	0.0
Greensboro, NC	65	53	81.5	12	18.5	0	0.0
Greenville, SC	36	32	88.9	4	11.1	0	0.0
Harrisburg, Pa	25	15	60.0	10	40.0	0	0.0
Hartford, Conn	47	24	51.1	23	48.9	0	0.0
Honolulu, Hawaii	149	41	27.5	107	71.8	1	0.7
Houston, Tex	482	301	62.4	179	37.1	2	0.4
Indianapolis, Ind	56	40	71.4	14	25.0	2	3.6
Jacksonville, Fla	117	111	94.9	6	5.1	0	0.0
Jersey City, NJ	88	30	34.1	58	65.9	0	0.0
Kansas City, Mo	62	43	69.4	19	30.6	0	0.0
Knoxville, Tenn	45	44	97.8	1	2.2	0	0.0
Las Vegas, Nev	109	58	53.2	50	45.9	1	0.9
Little Rock, Ark	20	18	90.0	1	5.0	1	5.0
Los Angeles, Calif	1,372	374	27.3	991	72.2	7	0.5
Louisville, Ky	51	47	92.2	4	7.8	0	0.0
McAllen, Tex	80	37	46.3	43	53.8	0	0.0
Memphis, Tenn	131	119	90.8	12	9.2	0	0.0
Miami, Fla	288	115	39.9	172	59.7	1	0.3
Middlesex, NJ	94	32	34.0	62	66.0	0	0.0

(a) 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, U.S. Minor Outlying Islands, U.S. Miscellaneous Pacific Islands, and the U.S. Virgin Islands.

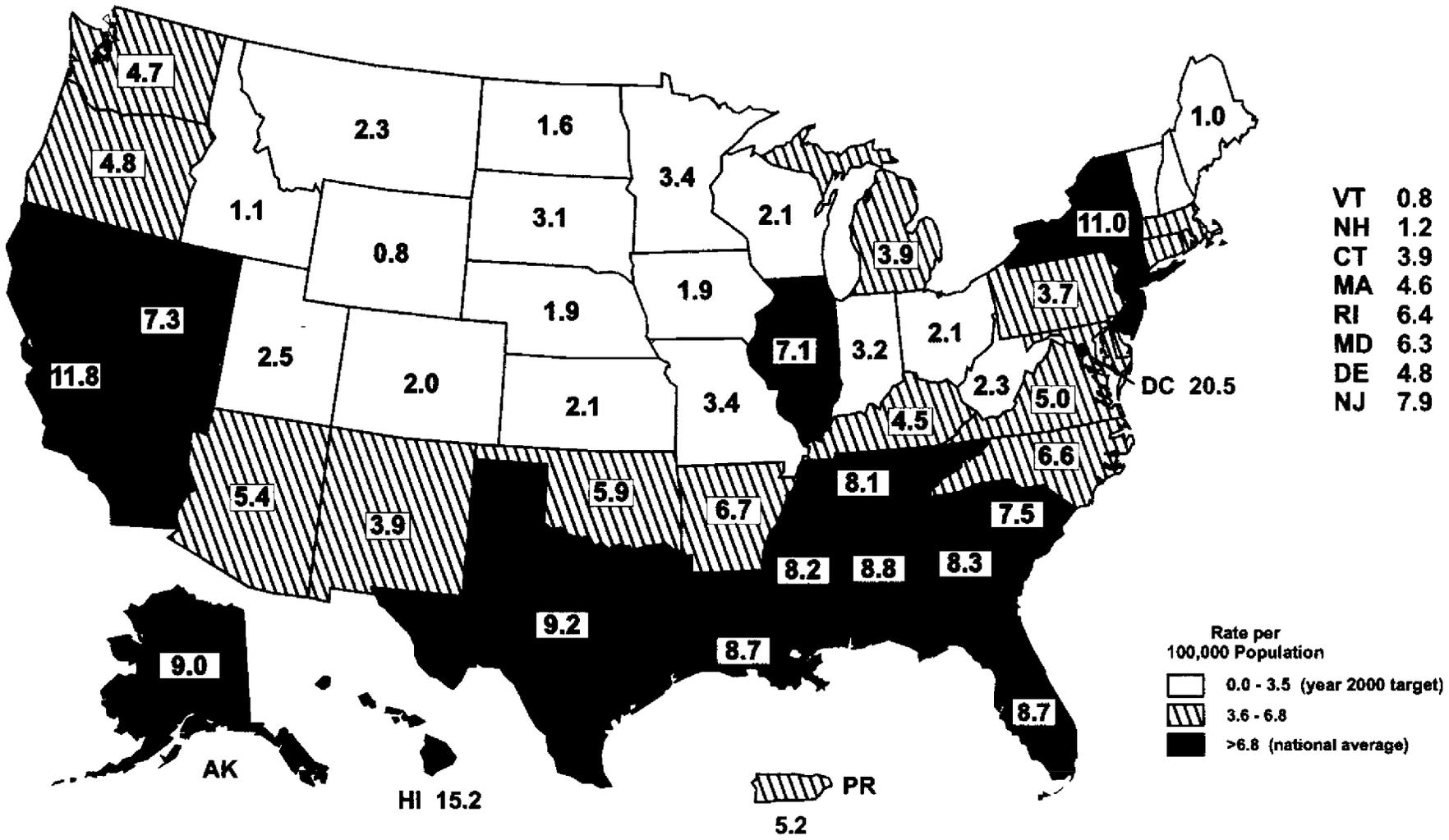
Table 32.(Cont'd) Tuberculosis Cases, U.S.-born Persons and Foreign-born Persons: Metropolitan Statistical Areas with $\geq 500,000$ Population, 1998

Metropolitan Statistical Area	Total Cases	U.S.-born Persons		Foreign-born Persons(a)		Unknown	
		No.	%	No.	%	No.	%
Milwaukee, Wis	54	41	75.9	13	24.1	0	0.0
Minneapolis-St. Paul, Minn	124	33	26.6	91	73.4	0	0.0
Mobile, Ala	43	37	86.0	6	14.0	0	0.0
Monmouth-Ocean City, NJ	40	23	57.5	17	42.5	0	0.0
Nashville, Tenn	97	77	79.4	19	19.6	1	1.0
Nassau-Suffolk, NY	154	63	40.9	90	58.4	1	0.6
New Haven, Conn	76	39	51.3	37	48.7	0	0.0
New Orleans, La	149	133	89.3	15	10.1	1	0.7
New York, NY	1,657	733	44.2	914	55.2	10	0.6
Newark, NJ	209	131	62.7	78	37.3	0	0.0
Norfolk, Va	65	48	73.8	16	24.6	1	1.5
Oakland, Calif	332	127	38.3	205	61.7	0	0.0
Oklahoma City, OKla	77	57	74.0	20	26.0	0	0.0
Omaha, Neb	20	9	45.0	11	55.0	0	0.0
Orange County, Calif	298	34	11.4	261	87.6	3	1.0
Orlando, Fla	163	129	79.1	33	20.2	1	0.6
Philadelphia, Pa	286	195	68.2	90	31.5	1	0.3
Phoenix, Ariz	145	75	51.7	70	48.3	0	0.0
Pittsburgh, Pa	52	47	90.4	5	9.6	0	0.0
Portland, Ore	118	52	44.1	66	55.9	0	0.0
Providence, RI	61	26	42.6	35	57.4	0	0.0
Raleigh-Durham, NC	82	61	74.4	21	25.6	0	0.0
Richmond, Va	37	30	81.1	7	18.9	0	0.0
Riverside-San Bernardino, Calif	175	83	47.4	91	52.0	1	0.6
Rochester, NY	44	27	61.4	17	38.6	0	0.0
Sacramento, Calif	120	44	36.7	74	61.7	2	1.7
St. Louis, Mo	110	91	82.7	18	16.4	1	0.9
Salt Lake City, Utah	42	15	35.7	26	61.9	1	2.4
San Antonio, Tex	98	65	66.3	32	32.7	1	1.0
San Diego, Calif	339	112	33.0	226	66.7	1	0.3
San Francisco, Calif	307	80	26.1	227	73.9	0	0.0
San Jose, Calif	251	32	12.7	219	87.3	0	0.0
Sarasota, Fla	35	21	60.0	14	40.0	0	0.0
Scranton, Pa	14	13	92.9	1	7.1	0	0.0
Seattle, Wash	136	44	32.4	92	67.6	0	0.0
Springfield, Mass	12	8	66.7	4	33.3	0	0.0
Stockton, Calif	65	19	29.2	46	70.8	0	0.0
Syracuse, NY	23	18	78.3	5	21.7	0	0.0
Tacoma, Wash	36	22	61.1	14	38.9	0	0.0
Tampa-St. Petersburg, Fla	152	126	82.9	26	17.1	0	0.0
Toledo, Ohio	8	8	100.0	0	0.0	0	0.0
Tucson, Ariz	51	37	72.5	14	27.5	0	0.0
Tulsa, Okla	34	31	91.2	3	8.8	0	0.0
Ventura, Calif	57	21	36.8	36	63.2	0	0.0
Washington, DC	398	151	37.9	238	59.8	9	2.3
West Palm Beach, Fla	83	53	63.9	30	36.1	0	0.0
Wichita, Kan	22	7	31.8	15	68.2	0	0.0
Wilmington, Del	12	6	50.0	6	50.0	0	0.0
Youngstown, Ohio	17	14	82.4	3	17.6	0	0.0
Total - 99 Areas	13,730	7,075	51.5	6,589	48.0	66	0.5

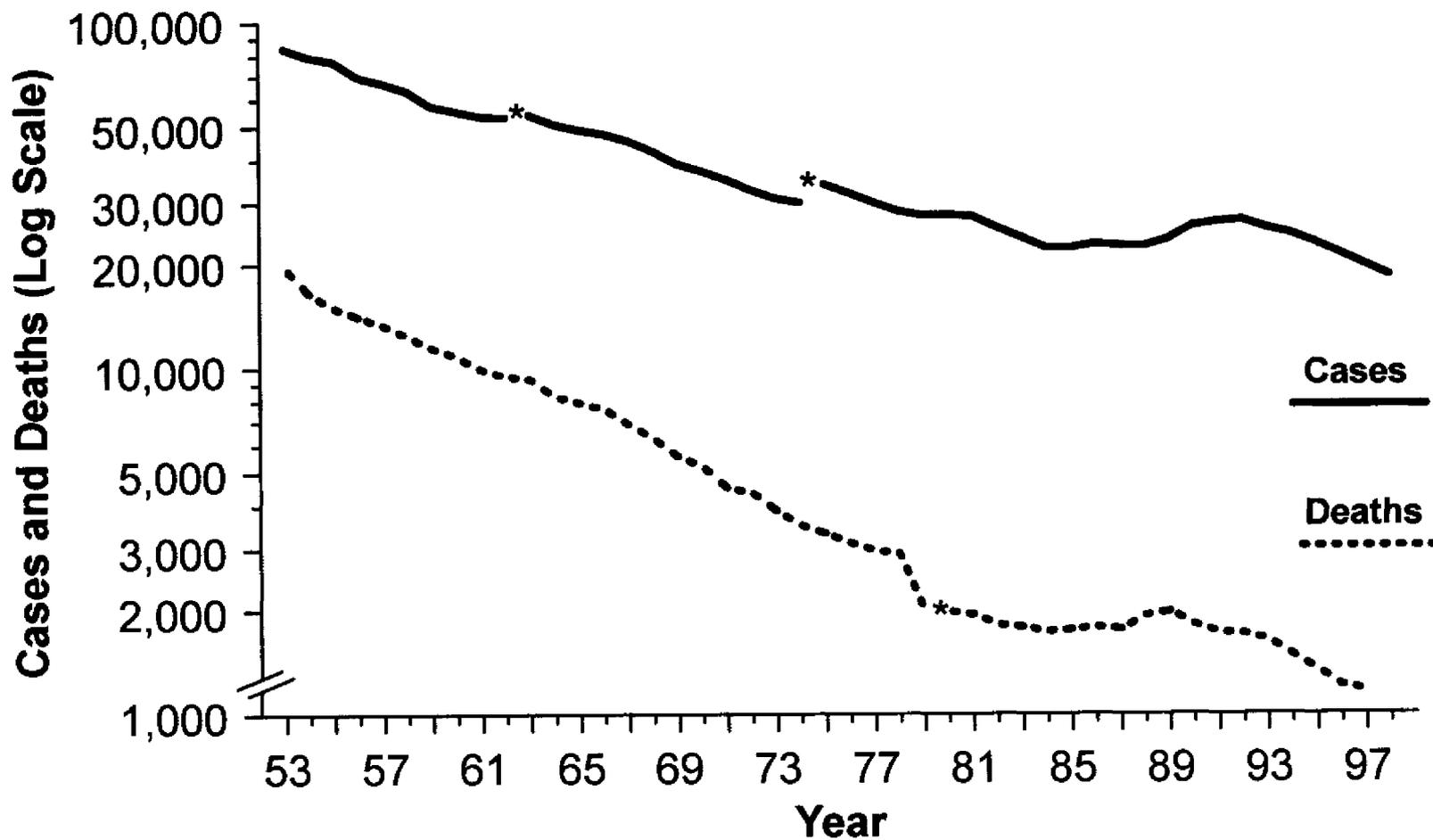
(a) Persons born outside the United States, American Samoa, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, Midway Island, the Commonwealth of the Northern Mariana Islands, Puerto Rico, the Republic of Palau, U.S. Minor Outlying Islands, U.S. Miscellaneous Pacific Islands, and the U.S. Virgin Islands.

Morbidity Figures
United States
1998 and 1996

Figure 1. Tuberculosis Case Rates, United States, 1998

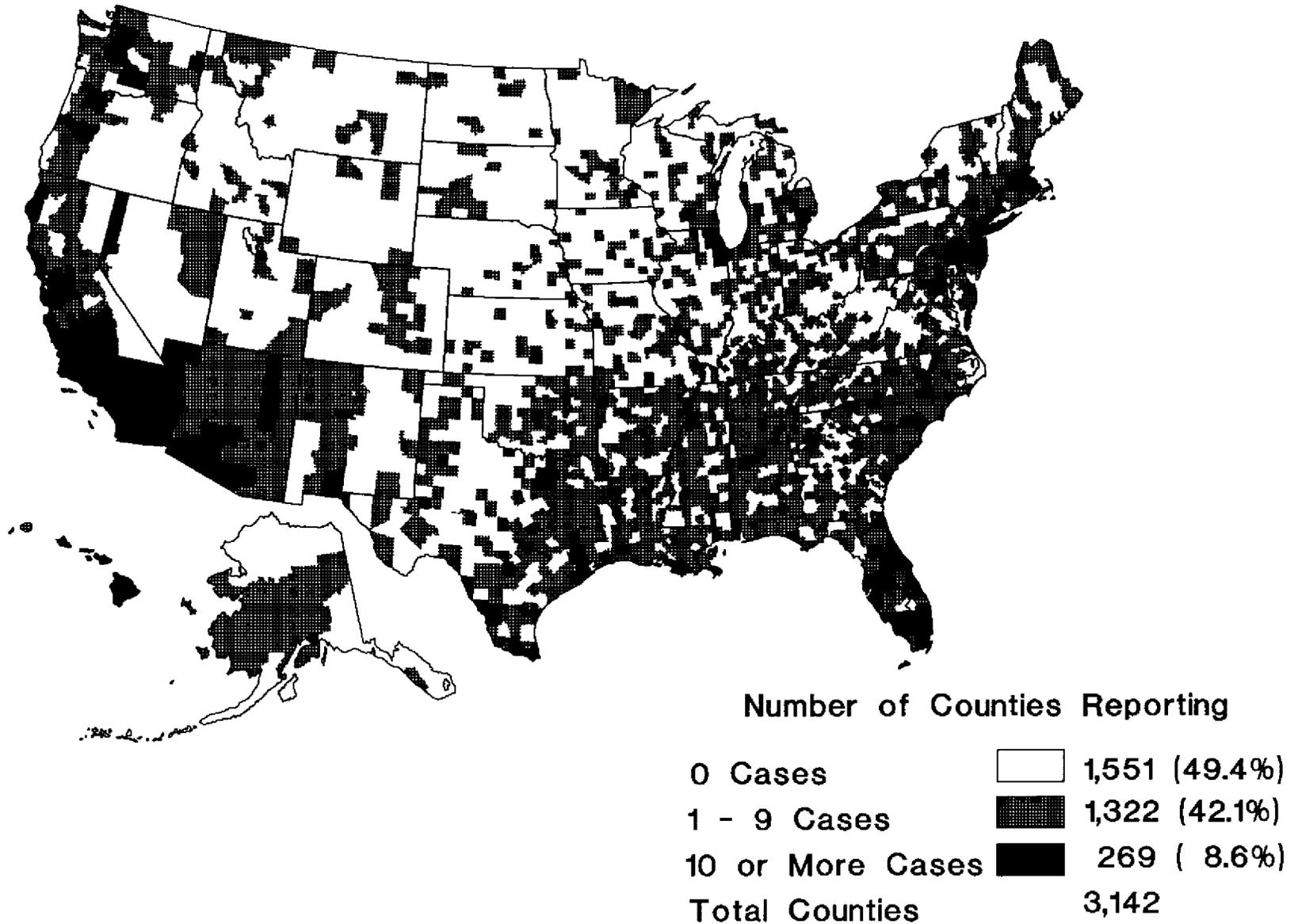


**Figure 2. Tuberculosis Cases and Deaths
United States, 1953 - 1998**

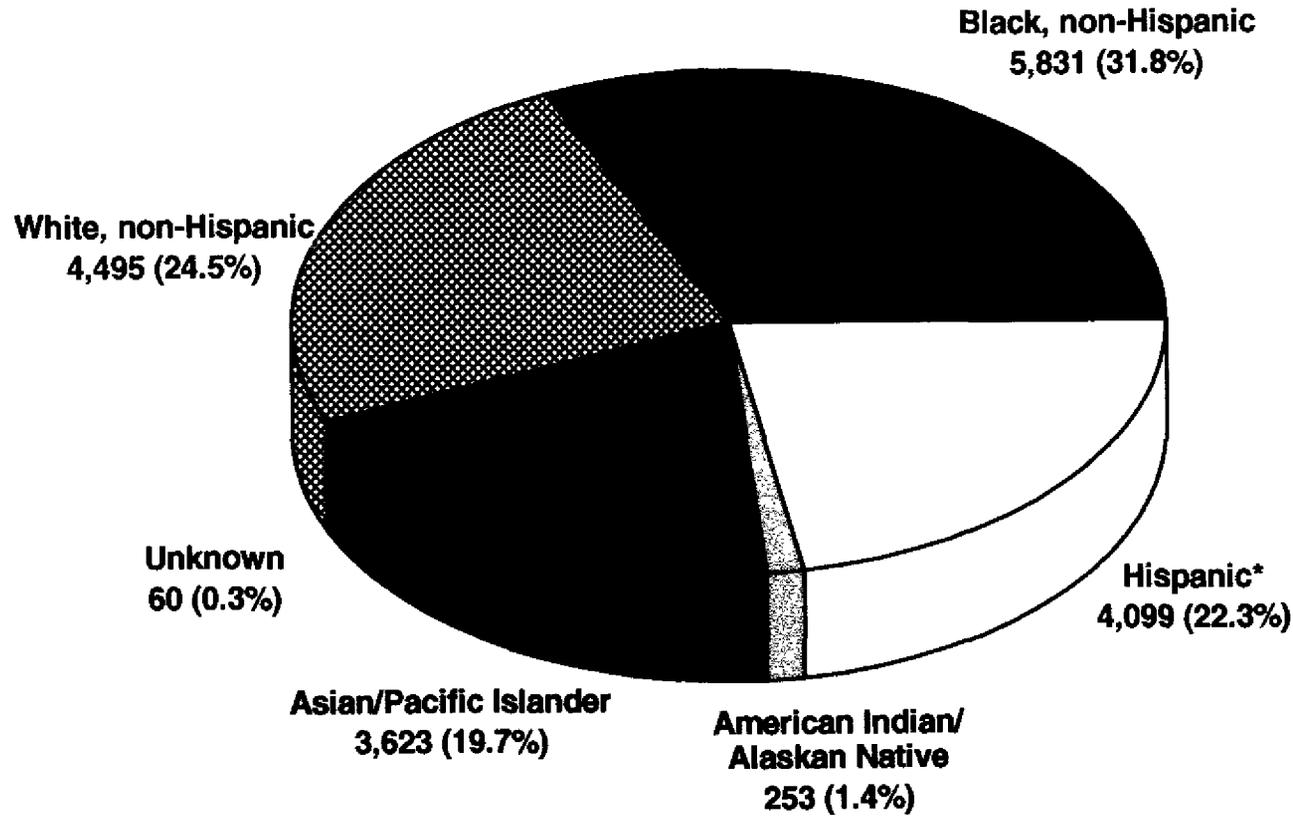


*Change in reporting criteria.
Note: 1998 deaths are not available.

Figure 3. Tuberculosis Cases Reported by County
United States, 1998

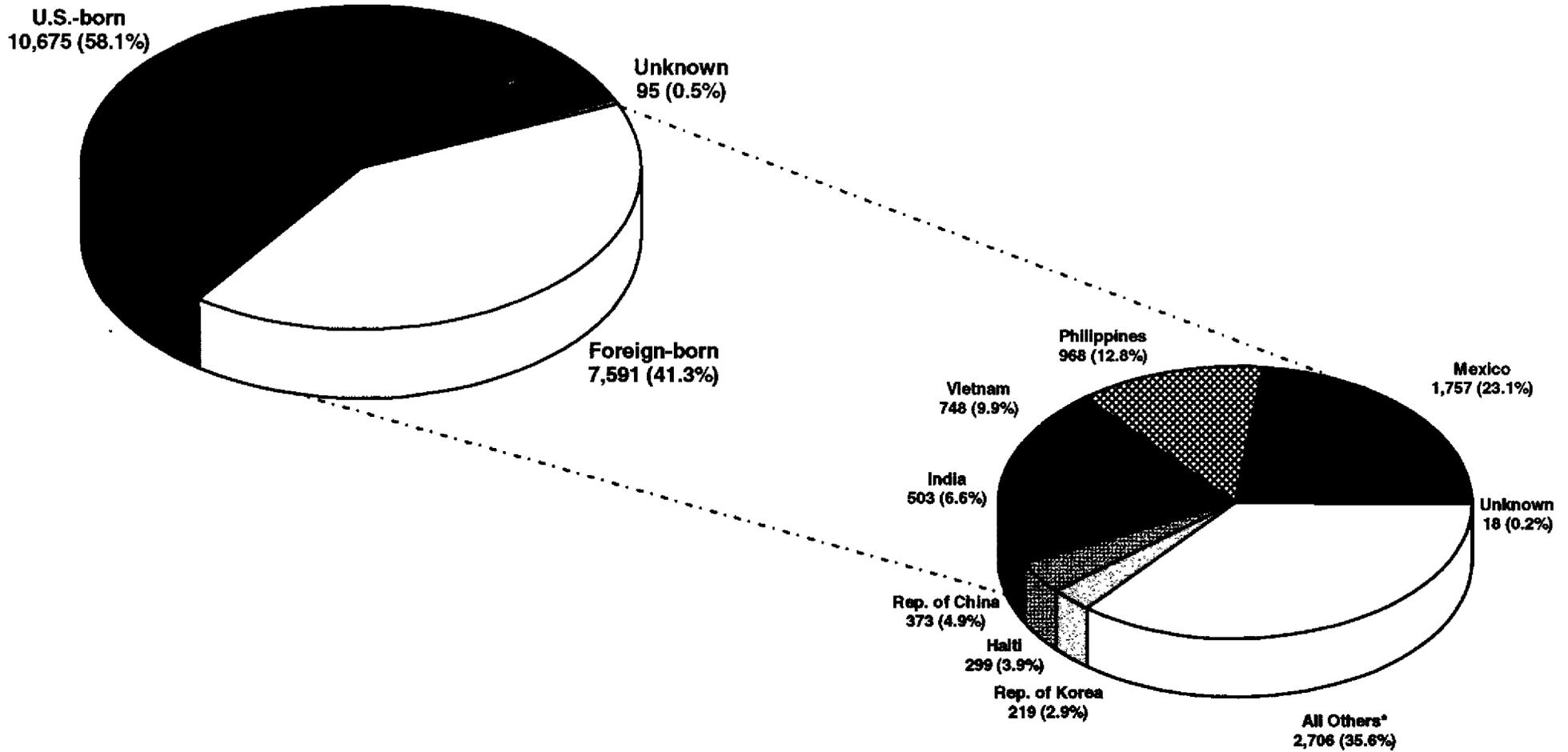


**Figure 4. Reported Tuberculosis Cases by Race/Ethnicity
United States, 1998**



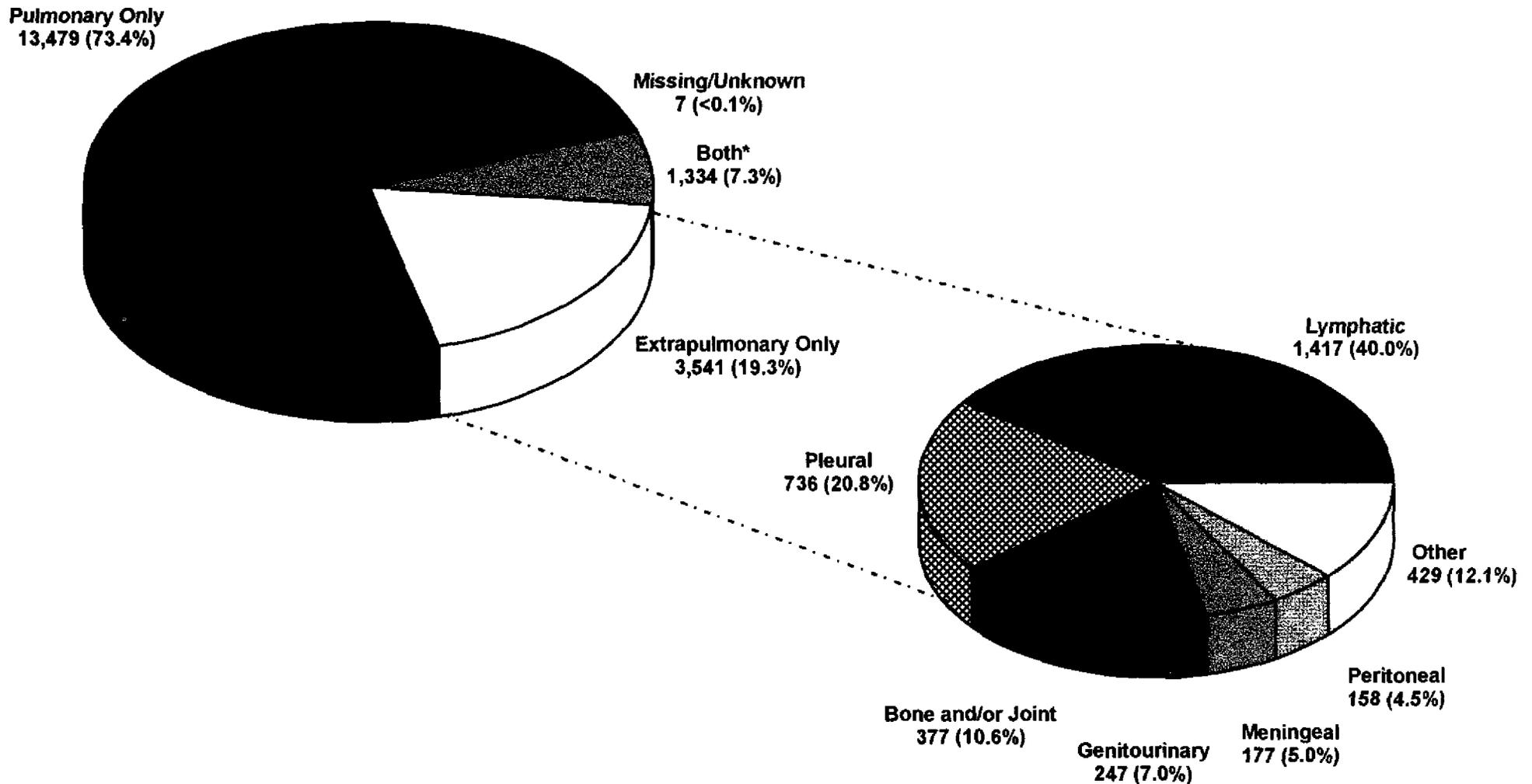
*Persons of Hispanic origin may be of any race.

Figure 5. Reported Tuberculosis Cases by Country of Origin United States, 1998



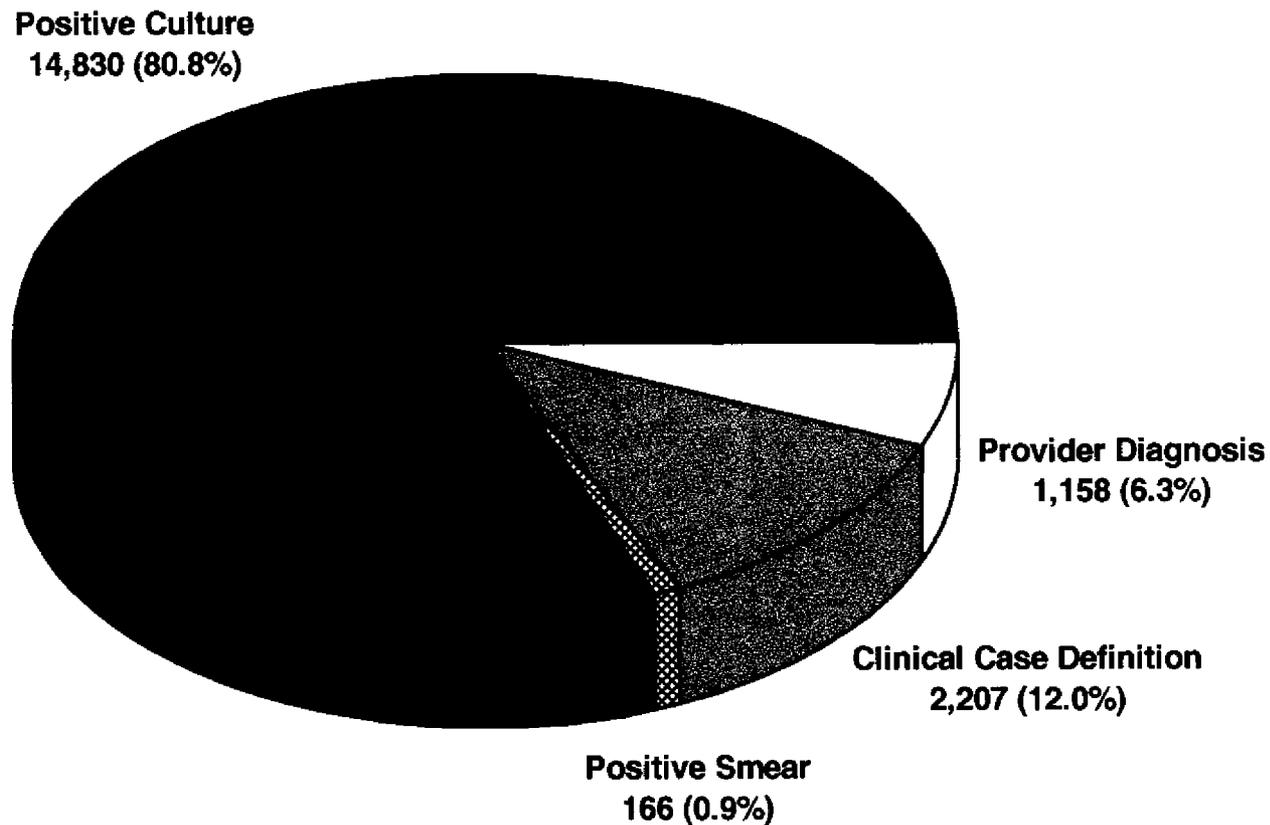
*Includes 149 countries.

**Figure 6. Reported Tuberculosis Cases by Form of Disease
United States, 1998**

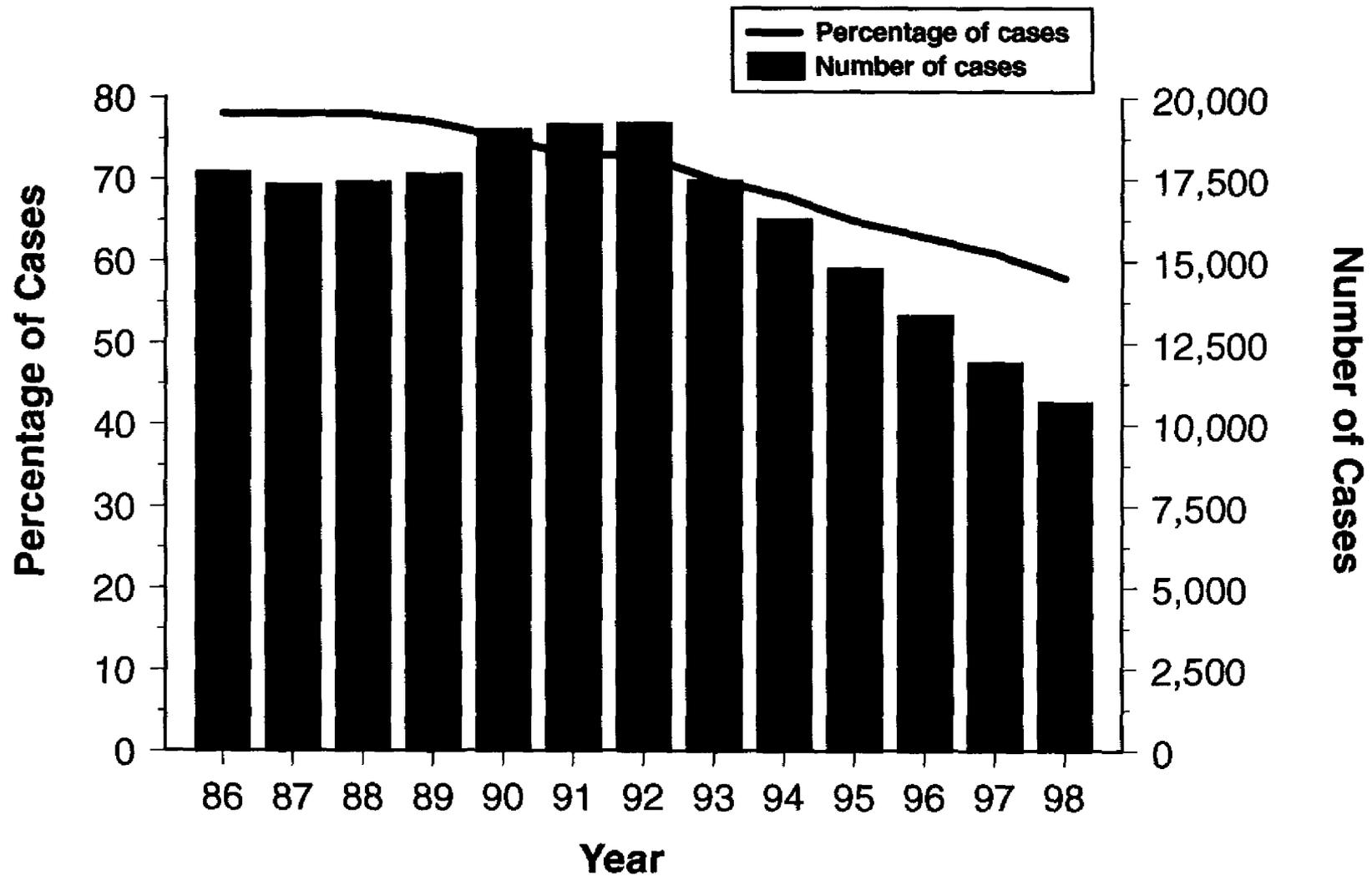


* Includes 378 military cases.

**Figure 7. Reported Tuberculosis Cases by Verification Criterion
United States, 1998**

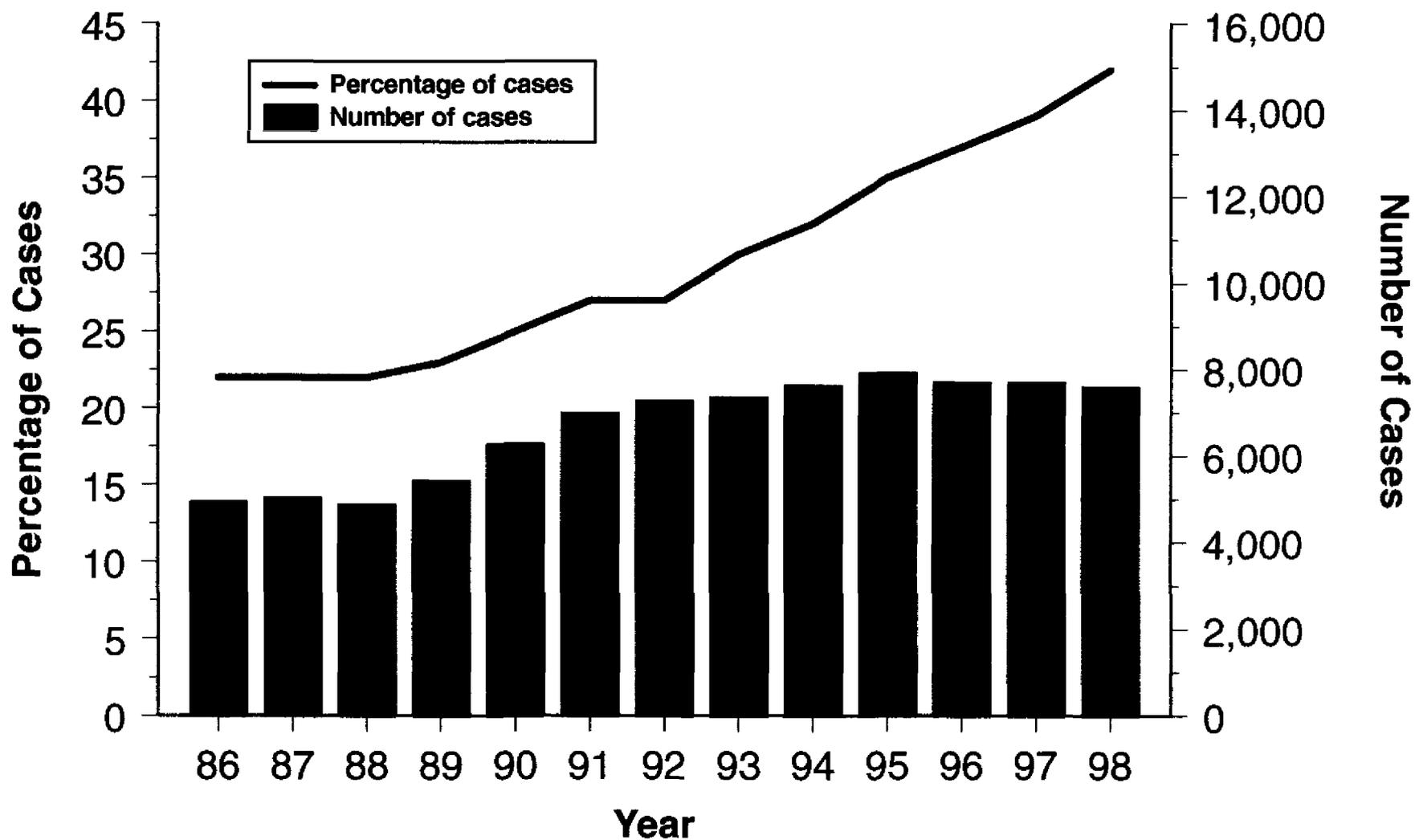


**Figure 8. Trends in TB Cases in U.S.-born Persons
United States*, 1986-1998**



* Comprises the 50 states, the District of Columbia, and New York City

**Figure 9. Trends in TB Cases in Foreign-born Persons
United States*, 1986-1998**



* Comprises the 50 states, the District of Columbia, and New York City

**Figure 10. Tuberculosis Case Rates by Origin
United States, 1986 - 1998**

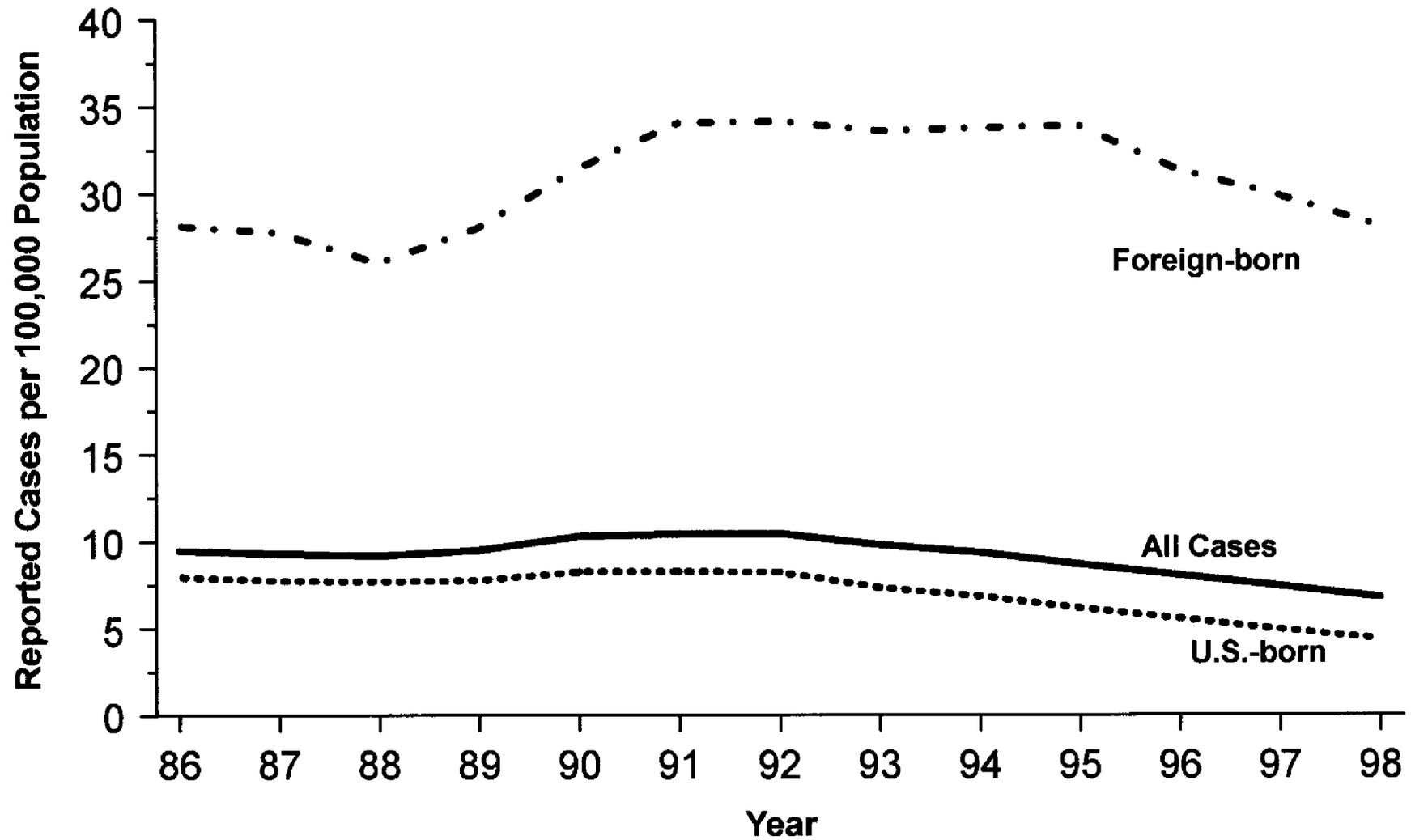
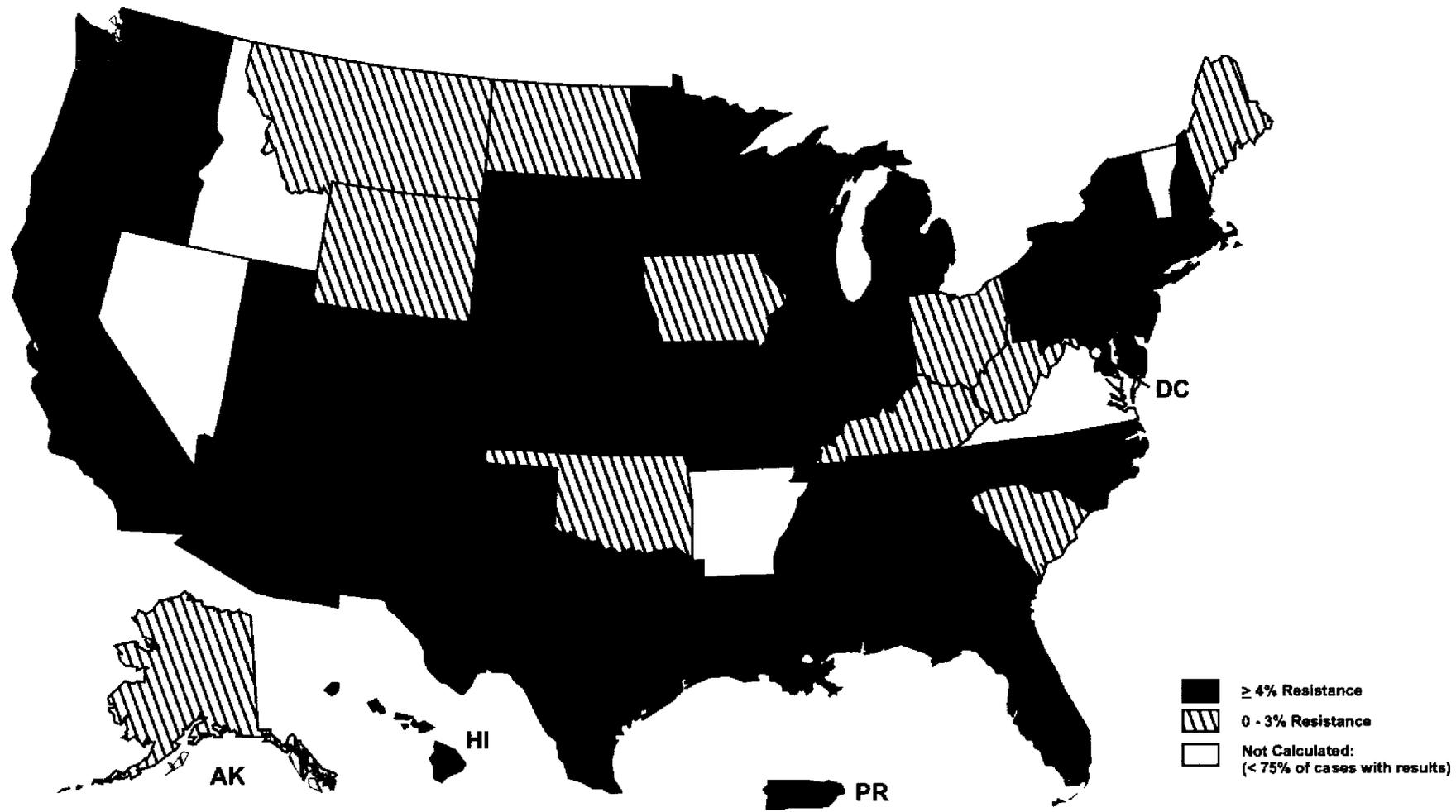


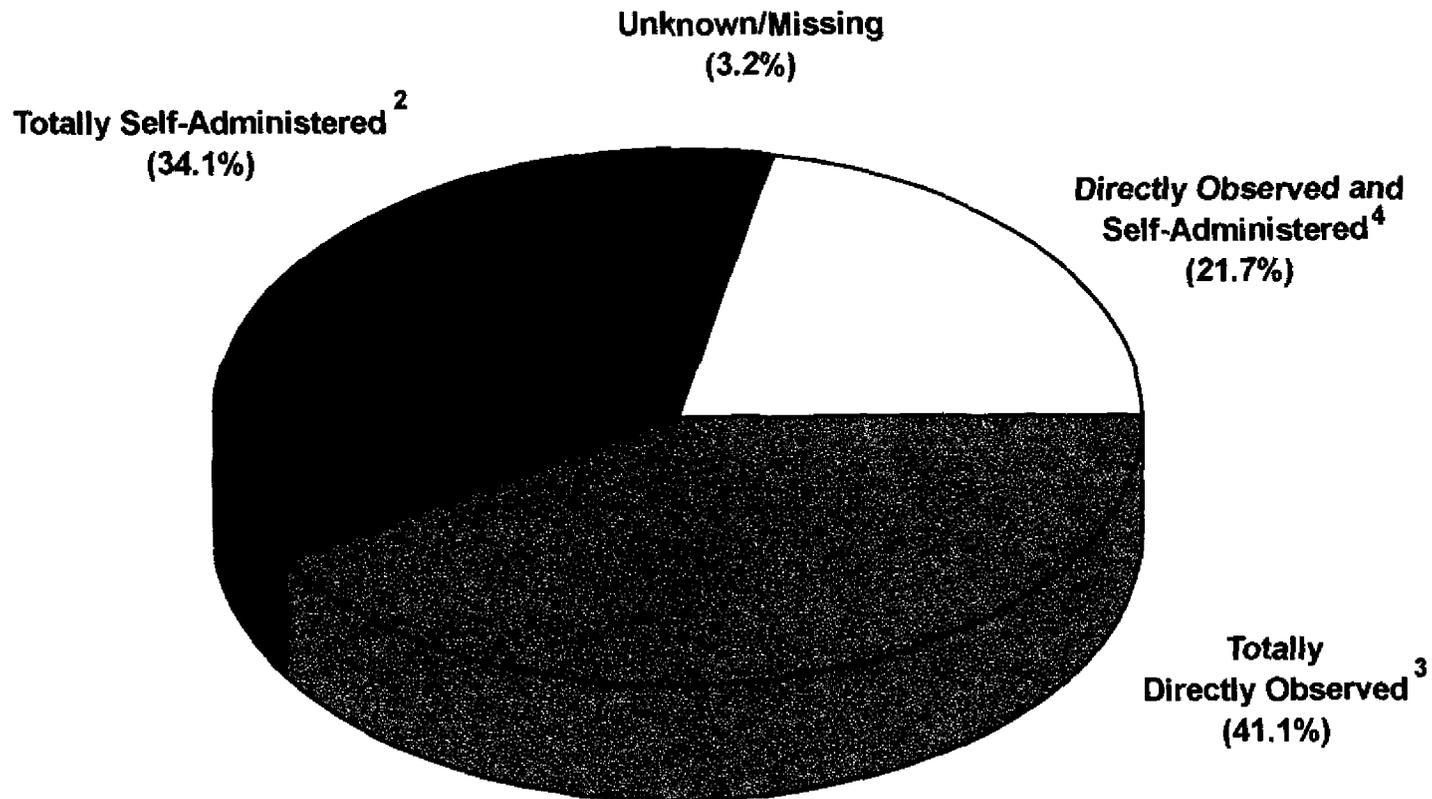
Figure 11. Isoniazid Resistance Among Cases without Previous TB, United States, 1998



U.S. Total = 7.7%*

* Percentage based on data from 46 areas reporting information on initial drug susceptibility results for ≥ 75% of cases.

**Figure 12. Reported Tuberculosis Cases¹ by Administration of Therapy
United States, 1996**



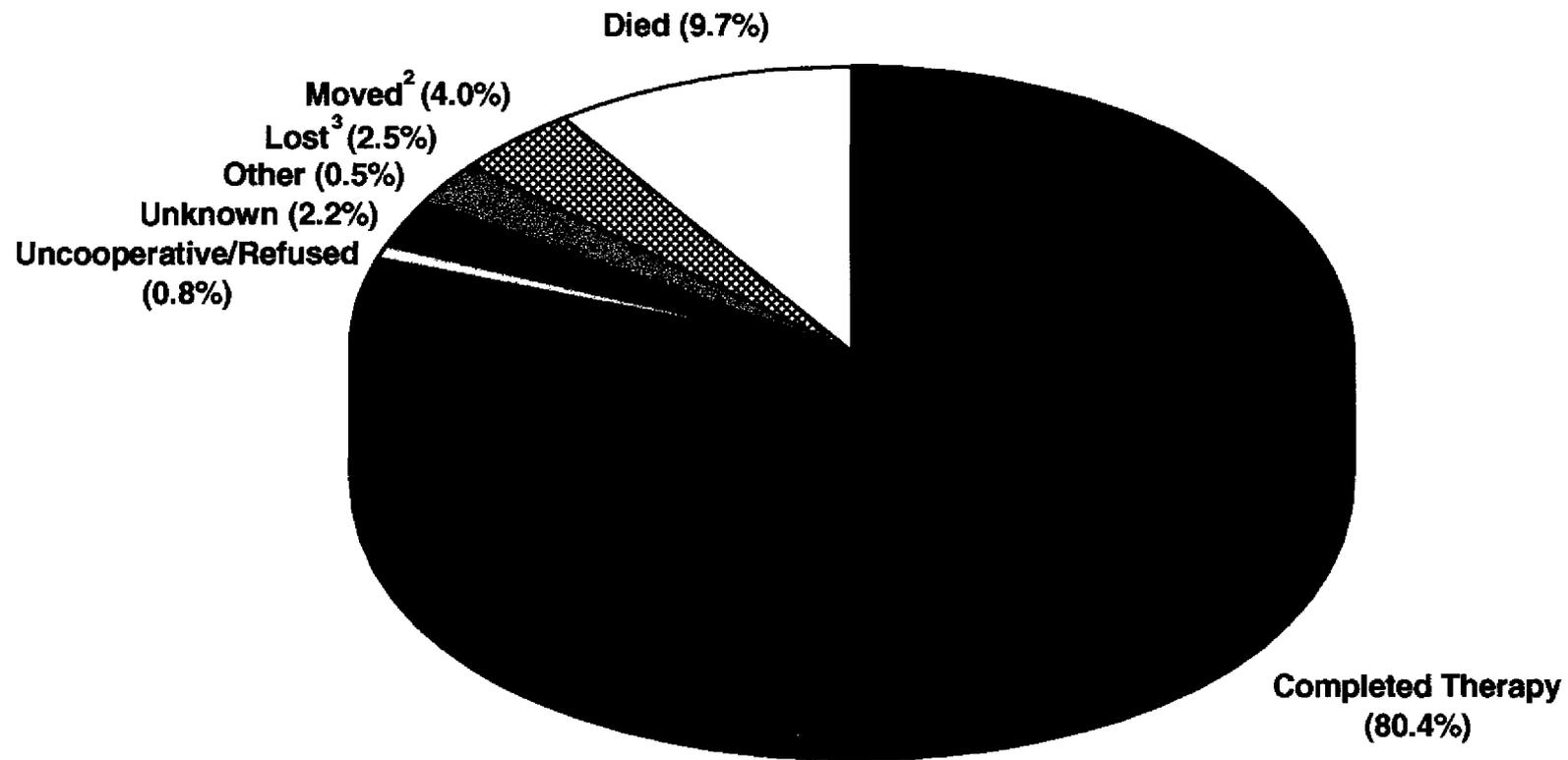
¹ Patients alive at diagnosis with initial drug regimen of 1 or more drugs prescribed.

² No doses of medication were given under supervision.

³ All doses of medication were given under supervision.

⁴ One or more doses of medication were given under supervision and one or more doses were not.

**Figure 13. Reported Tuberculosis Cases¹ by Reason
Therapy Stopped, United States, 1996**



¹ Patients alive at diagnosis with initial drug regimen of 1 or more drugs prescribed.

² Patient moved to another jurisdiction with a known forwarding address before treatment was completed.

³ Patient could not be located prior to the completion of treatment.

Appendix

Technical Notes

National Surveillance for Tuberculosis

All 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 Caribbean) report tuberculosis (TB) cases to CDC using a standard case report form, Report of a Verified Case of Tuberculosis (RVCT).¹ Reported TB cases are verified according to the TB case definition for public health surveillance (*MMWR* 1997;46[No. RR-10]:40-1). Cases may be verified using the laboratory or clinical case definition. A case may be verified by the laboratory case definition either by (1) isolation of *M. tuberculosis* from a clinical specimen, OR (2) demonstration of acid-fast bacilli (AFB) in a clinical specimen when a culture has not been or cannot be obtained. A case may be verified by the clinical case definition in the presence of ALL of the following clinical criteria: (a) a positive tuberculin skin test result, (b) other signs and symptoms compatible with TB, such as an abnormal, unstable (worsening or improving) chest radiograph, or clinical evidence of current disease, (c) treatment with two or more antituberculosis medications, and (d) a completed diagnostic evaluation. When patients are diagnosed with TB but do not meet the case definition (e.g., anergic patients with a clinical picture consistent with TB but without laboratory evidence of *M. tuberculosis*), reporting areas also have the option of verifying TB cases based on provider diagnosis.

In January 1993, in conjunction with state and local health departments, CDC implemented an expanded surveillance system for TB to collect additional data to better monitor and target groups at risk for TB disease, to estimate and follow the extent of drug-resistant TB, and to evaluate outcomes of TB cases. The RVCT form for reporting TB cases was revised to collect information on occupation, the initial drug regimen, human immunodeficiency virus (HIV) test results, history of substance abuse and homelessness, and residence in correctional or long-term care facilities at the time of diagnosis. RVCT Follow Up Report-1 was added to collect drug susceptibility results for the initial *M. tuberculosis* isolate from patients with culture-positive disease. To evaluate the outcomes of TB therapy, RVCT Follow Up Report-2 was added to collect information on the reason and date therapy was stopped, the type of health care provider, sputum culture conversion, the use of directly observed therapy, and the results of drug susceptibility testing for the final *M. tuberculosis* isolate from patients with culture-positive disease. Since 1993, RVCT data have been reported to CDC using software specifically developed for expanded TB surveillance (i.e., SURVS-TB, 1993-1997; TIMS, 1998). Instructions for completing the RVCT forms and definitions for all data items were included in the software user's guide. Summary data presented for 1998 TB cases in this publication (and for 1996 cases, Tables 24-26) were received at CDC via TIMS by June 3, 1999.

¹Other U.S. jurisdictions include Guam, American Samoa, the Republic of the Marshall Islands, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of Palau, and the U.S. Virgin Islands. RVCT data for 1998 were available only for Guam.

Completion of Tuberculosis Therapy

Table 26 is a recent addition to this publication and presents rates of completion of TB therapy (COT) by reporting area. Data collected by RVCT Follow Up Report-2 on date and reason therapy stopped (e.g., patient completed therapy, moved, was lost) were used to calculate rates of COT. Cases were stratified by the indicated length of therapy based on current American Thoracic Society/CDC treatment guidelines² and the patient's initial drug susceptibility test results, age, and site of disease. The adequacy of the treatment regimen (e.g., the sufficiency of the duration of therapy, the appropriateness of the prescribed TB drugs) was not evaluated in this analysis. Acquired drug resistance during therapy with the need for a longer duration of therapy was also not considered in this analysis.

The first column shows the total number of cases reported during 1996. The remaining columns are grouped under three headings: therapy of 1 year or less indicated, therapy greater than 1 year indicated, and overall. Patients with an initial isolate resistant to rifampin and pediatric patients (age under 15 years old) with meningeal, bone or joint, or miliary disease were included under the category of greater than 1 year of therapy indicated. All other patients, including those with culture-negative disease, an unknown culture status, 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.

Each group for 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 reporting areas that had information on reason therapy stopped for at least 90% of cases shown in the overall column. For the group with an indicated length of therapy 1 year or less, rates are shown for both completion of therapy in 1 year or less (COT ≤ 1 year) and for COT, regardless of duration of therapy (i.e., duration of therapy ≤ 1 year, >1 year, or unknown). For COT ≤ 1 year, the numerator included only those patients completing therapy in ≤ 365 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 of therapy, were calculated by dividing the number of patients reported as having completed therapy by the number of patients listed in the first column of each group. Patients with an outcome other than completed therapy (i.e., moved, lost, refused treatment, and 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 (greater than 1 year and overall), only rates of COT, regardless of duration of therapy, are presented.

Acknowledgment: Table 26 was developed in collaboration with the Field Services Branch, Division of Tuberculosis Elimination, CDC.

²ATS/CDC. Treatment of tuberculosis and tuberculosis infection in adults and children *Am J Respir Crit Care Med* 1994;149:1359-74.

Site of TB Disease

Tables 12, 13, and 29 and Figure 6 reflect a recent change in the definition of miliary disease used in this publication. Miliary disease is now classified as both an extrapulmonary and a pulmonary form of TB. In publications prior to 1997, miliary disease was classified as extrapulmonary TB unless pulmonary disease was reported as the major site of TB disease.

Reporting of HIV Infection

Table 22 shows information on HIV status for TB cases among persons aged 25-44 years, the age group in which 75% of AIDS cases occur (CDC. *HIV/AIDS Surveillance Report* 1998;10[No. 2]:16). Information on HIV status for TB cases reported in 1998 is incomplete. Reasons for incomplete reporting of HIV test results to the national surveillance system include concerns about confidentiality, which may limit the exchange of data between TB and HIV/AIDS programs; laws and regulations in selected states and local jurisdictions that have been interpreted as prohibiting the HIV/AIDS program from sharing the HIV status of TB patients with the TB program, or from reporting patients with TB and AIDS to the TB program; and reluctance by health care providers to report HIV test results to the TB surveillance program staff. In addition, health care providers may not offer counseling and HIV testing to some TB patients because of a lack of resources or of appropriately trained staff, or due to the perception that selected patients (e.g., foreign-born persons) are not at risk for HIV infection.

Data on the HIV infection status of reported TB patients in 1998 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. Since testing is voluntary, some TB patients may decline HIV testing. 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., 25-44 year old males, injecting drug users, homeless persons), and the availability and access to HIV testing services. These data do not provide a minimum estimate of the number of TB patients known to be HIV infected in a reporting area.

Tabulation and Presentation of TB Data

This report primarily presents summary data for TB cases reported to CDC in 1998. Data from the RVCT Follow Up Report-2 (i.e., completion of therapy, the use of directly observed therapy, and the type of health care provider) are only presented for cases reported in 1996. TB cases are tabulated by the year in which the reporting area verified that the patient had TB and included the patient in its official annual TB case count. Totals for the U.S. only include data from the 50 states, the District of Columbia, and New York City. 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 metropolitan area data tabulations are based on the patient's residence at diagnosis of TB (see Appendix: "Recommendations for Counting Reported Tuberculosis Cases").

Tables 28 through 32 present data by metropolitan statistical areas (MSAs) with an estimated 1998 population of 500,000 or more. Metropolitan areas are defined by the federal Office of Management and Budget, and the definitions effective as of June 30, 1998, were used for this publication (www.census.gov/population/www.estimated/pastmetro.html). The metropolitan area definitions apply to all areas except the six New England states; for these states, the New England

County Metropolitan Areas (NECMAs) are used. Metropolitan areas 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 6 include only persons residing within the geographic boundaries of the District. However, the TB cases and case rates for Washington, D.C., (Table 28) include persons residing within the several counties in the metropolitan area, including counties in Maryland, Virginia, and West Virginia. The cities and counties that comprised each metropolitan area in 1998 are available from the National Technical Information Service (1-800-553-NTIS, accession no. PB98-502198, Metropolitan Areas for 1998).

Rates

Rates are expressed as the number of cases reported each calendar year per 100,000 population. Population denominators used in calculating TB rates (Table 6) are based on official postcensus estimates from the U.S. Census Bureau. The denominators for computing race-specific rates (Table 3) are based on 1998 estimates from the Population Projections Branch, Population Division, U.S. Census Bureau. The denominators for computing rates for foreign-born persons (Figure 10) are based on population estimates from the U.S. Census Bureau Current Population Report P20-507, *The Foreign-Born Population in the United States: March 1997 (Update)*, previous reports in this series, and the decennial census years of 1980 and 1990.

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 and Figure 2). The number of deaths for 1997 was obtained from the NCHS *National Vital Statistics Report* (Vol. 47, No. 19), June 30, 1999. The number of deaths for 1998 was not available at the time of this publication.

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³CDC Information Systems Support Services contractor(s).

Tuberculosis Case Definition for Public Health Surveillance¹

Tuberculosis (Revised 9/96)

Clinical description

A chronic bacterial infection caused by *Mycobacterium tuberculosis*, 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 the following criteria:

- A positive tuberculin skin test
- Other signs and symptoms compatible with tuberculosis (e.g. an abnormal, unstable [i.e., worsening or improving] chest radiographs, or clinical evidence of current disease)
- Treatment with two or more antituberculosis medications
- Completed diagnostic evaluation

Laboratory criteria for diagnosis

- Isolation of *M. tuberculosis* from a clinical specimen* or
- Demonstration of *M. tuberculosis* 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.

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, cases in which the patients had previously had verified disease should be reported again if the patients were discharged from treatment. Cases also should be reported again if patients were lost to supervision for >12 months and 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.

¹CDC. *Case definitions for infectious conditions under public health surveillance. MMWR 1997;46(No. RR-10):40-41.*

*Use of rapid identification techniques for *M. tuberculosis* (e.g., DNA probes and mycolic acids 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. 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. Current FDA-approved NAA tests are only approved for smear-positive respiratory specimens.

Recommendations for Counting Reported Tuberculosis Cases (Revised July 1997)

Since publication of the "Recommendations for Counting Reported Tuberculosis Cases"¹ in January 1977, 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; it clarifies the parameters for counting TB cases among (a) immigrants, resident aliens, and border crossers, (b) military personnel stationed in the United States and abroad, and (c) persons diagnosed within the Indian Health Service and correctional facilities.

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. These verified TB cases are then counted and reported to the Centers for Disease Control and Prevention (CDC).

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 "Case Definition for Public Health Surveillance."² This notification is essential in order for TB programs to

- Ensure case supervision
- Ensure completion of appropriate therapy
- Ensure completion of timely 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 and/or clinical evidence of active disease due to *M. tuberculosis* complex.*

**Mycobacterium tuberculosis* complex (*M. tuberculosis* complex) consists of three mycobacterial species: *M. tuberculosis*, *M. bovis*, and *M. africanum*. These species are identical in DNA homology studies. In terms of their ability to cause clinical disease and be transmissible from person to person, *M. bovis* and *M. africanum* behave like *M. tuberculosis*; therefore, disease caused by any of the three 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 this *M. bovis* strain should not be reported as TB because the transmission is iatrogenic (treatment-induced), rather than person-to-person or communicable.

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 that are approved by the Food and Drug Administration (FDA) and used according to the approved product labeling on the package insert. Current FDA-approved NAA tests are only approved for use on smear-positive respiratory specimens.

OR

- Demonstration of acid-fast bacilli (AFB) in a clinical specimen when a culture has not been or cannot be obtained; 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

AND

- One of the following:
 - (1) Signs and symptoms compatible with current TB disease, such as an abnormal, unstable (worsening or improving) chest radiograph, or
 - (2) Clinical evidence of current disease (e.g., fever, night sweats, cough, weight loss, hemoptysis)

AND

- Current treatment with two or more anti-TB medications

NOTE: *The case definition described herein was developed for use in this document and is not intended to replace the case definition for TB as stated in the current “Case Definitions for Infectious Conditions Under Public Health Surveillance.”*

In addition, 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 "Case Definitions for Infectious Conditions Under Public Health Surveillance" publication. CDC's national morbidity reports have traditionally included all 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 7 reporting areas (American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, Puerto Rico, Republic of Palau, and the U.S. Virgin Islands) report cases to the CDC but are not included in the annual incidence for the United States. Laboratory and clinical case definitions are the two primary diagnostic categories used by the CDC "Case Definitions for Infectious Conditions Under 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, count only one episode as a case for that year. However, if TB disease recurs in a person, **and** if more than 12 months have elapsed since the person was discharged from or lost to supervision, the TB 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 a case 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 that 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 Visitors.⁴

COUNT

Immigrants and refugees who have been screened overseas for TB and

- have been classified as Class B (B1, B2, or B3)³ or resident aliens
- are not already on anti-TB medications for treatment of tuberculous disease, and
- are examined after arriving in the United States and diagnosed with clinically active TB requiring anti-TB medications

should be counted by the locality of their current residence at the time of diagnosis regardless of citizenship status.

Border crossers* and permanent resident aliens 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 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** plan to remain in the United States for 90 days or more should be counted by the locality of current residence.

*Border crosser - defined, in part, by the Immigration and Naturalization Service (INS)⁴ as "a nonresident alien entering the United States 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

TB cases in immigrants or refugees who have been classified as Class A with a waiver (TB, infectious, "Noncommunicable for travel purposes")³ should not be counted as new cases even if the persons receive routine initial work-ups in the United States.

TB in persons who are temporarily (<90 days) in the United States, for whom therapy may have been started but who plan to return to their native country to continue therapy, should not be counted in the United States.

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 during the calendar year by the 52 reporting areas with count authority (50 states, District of Columbia, and New York City) 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 7 reporting areas (American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, Puerto Rico, Republic of Palau, and the 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 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 "Case Definitions for Infectious Conditions Under Public Health Surveillance"² (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/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 (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.

***Mycobacterium tuberculosis* complex** (*M. tuberculosis* complex) - consists of three mycobacterial species: *M. tuberculosis*, *M. bovis*, and *M. africanum*. These species are identical in DNA homology studies. In terms of their ability to cause clinical disease and to be transmissible from person to person, *M. bovis* and *M. africanum* behave like *M. tuberculosis*; therefore, disease caused by any of the three 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 to protect against TB or as cancer immunotherapy; disease caused

by this *M. bovis* strain should not be reported as TB because the transmission is iatrogenic (treatment-induced), rather than person-to-person or communicable.

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 59 reporting areas; 50 states, District of Columbia, New York City, American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, Puerto Rico, Republic of Palau, and the U.S. Virgin Islands. Annual incidence of tuberculosis for the United States is based on 52 reporting areas (50 states, District of Columbia, and New York City).

Alien - defined by the Immigration and Naturalization Service (INS)⁴ as “any person not a citizen or national of the United States.”

Border crosser - defined, in part, by the Immigration and Naturalization Service (INS)⁴ as “a nonresident alien entering the United States 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, Infectious) - defined by the Division of Quarantine³ as an alien “with an abnormal chest radiograph or series of chest radiographs suggestive of current pulmonary TB and one or more positive sputum smear examinations for acid-fast bacilli.” This person is not authorized to enter the United States unless a waiver has been granted (see definition for Class A - TB, Infectious, “Noncommunicable for travel purposes.”)

Class A (TB, Infectious, “Noncommunicable for travel purposes”) - defined by the Division of Quarantine³ as an alien “with an abnormal chest radiograph or series of chest radiographs suggestive of active TB, a history of one or more positive sputum smear examinations for acid-fast bacilli, currently on recommended treatment, and sputum smears that are negative for acid-fast bacilli on 3 consecutive days.” This person is authorized to enter the United States if a waiver has been granted.

Class B1 (TB, clinically active, not infectious) - defined by the Division of Quarantine³ as an alien “with an abnormal chest radiograph or series of chest radiographs suggestive of active TB, and sputum smears that are negative for acid-fast bacilli on 3 consecutive days.” This person may be on anti-TB medications when entering the United States.

Class B1 (Extrapulmonary TB, clinically active, not infectious) - defined by the Division of Quarantine³ as an alien “with radiographic or other evidence of extrapulmonary TB, clinically active.” This person may be on anti-TB medications when entering the United States.

Class B2 (TB, not clinically active) - defined by the Division of Quarantine³ as an alien “with an abnormal chest radiograph or series of chest radiographs suggestive of active TB, not clinically active (e.g., fibrosis, scarring, pleural thickening, diaphragmatic tenting, blunting of costophrenic angles.) Sputum smears are not required.” Such a person who “completed the recommended course of anti-TB therapy and whose chest radiographs are stable should be reported as Class B2 - TB, treatment completed.” This person may be on anti-TB medications when entering the United States.

Class B3 (Consistent with TB, old or healed) - defined by the Division of Quarantine³ as an alien “with an abnormal chest radiograph or series of chest radiographs (the only abnormality is a calcified lymph node, calcified primary complex, or calcified granuloma). Sputum smears are not required.”

Immigrant - defined by the Immigration and Naturalization Service (INS)⁴ 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 Immigration and Naturalization Service of the United States.”

Permanent Resident Alien - see Immigrant.

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1. *Recommendations for Counting Reported TB Cases*. Atlanta: CDC, January 1977.
2. CDC. Case definitions for infectious conditions under public health surveillance. *MMWR* 1997;46(No. RR-10):40-41.
3. *Technical Instructions for Medical Examination of Aliens*. Atlanta: CDC, Division of Quarantine, revised July 13, 1992.
4. *Statistical Yearbook of the Immigration and Naturalization Service, 1994*. Washington, DC: US Department of Justice, Immigration and Naturalization Service, 1995.