

TUBERCULOSIS IN ARIZONA

A Summary of Cases Reported through December 31, 1997

Report Generated on June 16, 1998

Tuberculosis Elimination Section
Office of Infectious Disease Services/Bureau of Epidemiology and Disease Control
Arizona Department of Health Services

Data in this Report are Provisional

Morbidity

Table 1: Tuberculosis Cases and Case Rates per 100,000 Population: Arizona and United States, 1990-1997

Year Reported*	Arizona			United States	
	Cases	Population	Rate per 100,000	Cases****	Rate per 100,000****
1990	275	3,665,228**	7.5**	25,701	10.3
1991	324	3,763,372***	8.6***	26,283	10.4
1992	258	3,858,825***	6.7***	26,673	10.5
1993	228	3,946,975***	5.8***	25,287	9.8
1994	247	4,036,875***	6.1***	24,361	9.4
1995	317	4,184,723***	7.6***	22,860	8.7
1996	282	4,462,717***	6.3***	21,337	8.0
1997	296	4,595,379***	6.4***	19,855	7.4
Total	2,227	NA	NA	NA	NA

* Year reported reflects the year a case was counted by ADHS
 ** Based on the 1990 Census
 *** Based on population projections for the corresponding years (February 1997)
 **** Data from the U.S. Department of Health and Human Services

Demographics

Table 2: Tuberculosis Cases and Case Rates per 100,000 Population by Age Group: Arizona, 1997

Age Group	Cases # (%)	Population*	Rate per 100,000*
Under 5	14 (4.7)	346,123	4.0
5 - 14	17 (5.7)	691,044	2.5
15 - 24	19 (6.4)	628,868	3.0
25 - 44	96 (32.4)	1,400,869	6.9
45 - 64	74 (25.0)	889,740	8.3
Over 64	76 (25.7)	638,735	11.9
Total	296 (100)	4,595,379	6.4

* Based on 1997 population projections (approved by the ADHS Director , February 1997)

Table 3: Tuberculosis Cases by Age Group and Sex: Arizona, 1997

Age Group	Male # (%) * (%) **	Female # (%) * (%) **	Total Cases # (%) * (%) **
Under 5	6 (42.9) (3.3)	8 (57.1) (7.0)	14 (100) (4.7)
5 - 14	7 (41.2) (3.8)	10 (58.8) (8.8)	17 (100) (5.8)
15 - 24	11 (57.9) (6.0)	8 (42.1) (7.0)	19 (100) (6.4)
25 - 44	68 (70.8) (37.4)	28 (29.2) (24.6)	96 (100) (32.4)
45 - 64	49 (66.2) (26.9)	25 (33.8) (21.9)	74 (100) (25.0)
Over 64	41 (54.0) (22.5)	35 (46.0) (30.7)	76 (100) (25.7)
Total	182 (61.5) (100)	114 (38.5) (100)	296 (100) (100)

* Percentage of row total
 ** Percentage of column total

Table 4: Tuberculosis Cases by Age Group and Race/Ethnicity: Arizona, 1997

Age Group	White, Not Hispanic (NH) # (%)* (%)**	African-American, Not Hispanic # (%)* (%)**	Hispanic, All Races **** # (%)* (%)**	Native American, Not Hispanic **** # (%)* (%)**	Asian/Pacific Islander, Not Hispanic # (%)* (%)**	Unknown # (%)* (%)**	Total Cases # (%)* (%)**
Under 5	2 (14.3) (2.3)	0	10 (71.4) (7.7)	1 (7.1) (2.0)	1 (7.1) (5.3)	0	14 (100) (4.7)
5 - 14	1 (5.9) (1.1)	0	14 (82.4) (10.8)	1 (5.9) (2.0)	1 (5.9) (5.3)	0	17 (100) (5.7)
15 - 24	2 (10.5) (2.3)	0	13 (68.4) (10.0)	2 (10.5) (4.1)	2 (10.5) (10.5)	0	19 (100) (6.4)
25 - 44	28 (29.2) (32.2)	3 (3.1) (27.3)	52 (54.2) (40.0)	7 (7.3) (14.3)	6 (6.3) (31.6)	0	96 (100) (32.4)
45 - 64	29 (39.2) (33.3)	4 (5.4) (36.4)	15 (20.3) (11.5)	20 (27.0) (40.8)	6 (8.1) (31.6)	0	74 (100) (25.0)
Over 64	25 (32.9) (28.7)	4 (5.3) (36.4)	26 (34.2) (20.0)	18 (23.7) (36.7)	3 (3.9) (15.8)	0	76 (100) (25.7)
Total	87 (29.4) (100)	11 (3.7) (100)	130 (43.9) (100)	49 (16.6) (100)	19 (6.4) (100)	0	296 (100) (100)
1997 Population	3,072,763	158,423	947,077	251,306	91,158	NA	NA
Rate/100,000***	2.8	6.9	13.7	19.5	20.8	NA	NA

* Percentage of row total

** Percentage of column total

*** Rates based on 1997 population estimates (due to methodological limitations, estimates by race/ethnicity do not total general population projections)

**** Three cases self-described Native American race and Hispanic ethnicity (due to denominator limitations they were classified as Native American, NH)

Selected Clinical Characteristics

Table 5: Tuberculosis Cases by Form of Disease and Vital Status at Diagnosis: Arizona, 1997

Form of Disease	Cases Alive at Diagnosis # (%)* (%)**	Cases Diagnosed after Death*** # (%)* (%)**	Total Cases # (%)* (%)**
Pulmonary Only ****	234 (96.3) (82.1)	9 (3.7) (81.8)	243 (100) (82.1)
Pulmonary & Extra-pulmonary (includes miliary TB)	11 (91.7) (3.9)	1 (8.3) (9.1)	12 (100) (4.1)
Extra-pulmonary Only	40 (97.6) (14.0)	1 (2.4) (9.1)	41 (100) (13.9)
Total	285 (96.3) (100)	11 (3.7) (10.0)	296 (100) (100)

* Percentage by row

** Percentage by column

*** It is unknown if TB was the underlying cause of death

**** The classification of Pulmonary TB includes laryngeal TB

Table 6: Tuberculosis Cases Resistant to INH and Other Anti-TB Drugs: Arizona, 1993 - 1997

Year Reported*	Cases	Number of Culture Confirmed Cases with Initial Drug Sensitivity Test Results	INH Resistant** # (%)***	Multiple Drug Resistant**** # (%)***	Other Drug Resistance**** # (%)***	Total Cases with Drug Resistance # (%)***
1993	228	193	11 (5.7)	3 (1.6)	17 (8.8)	31 (16.1)
1994	247	204	15 (7.4)	4 (2.0)	17 (8.3)	36 (17.6)
1995	317	231	8 (3.5)	3 (1.3)	29 (12.6)	40 (17.3)
1996	282	223	5 (2.2)	7 (3.1)	24 (10.8)	36 (16.1)
1997	296	219	18 (8.2)	2 (0.9)	16 (7.3)	36 (16.4)
Total	1,370	1,070	57 (5.3)	19 (1.8)	103 (9.6)	179 (16.7)

* Year reported reflects the year a case was counted by ADHS

** Resistant to at least INH **without** resistance to RIF

*** Percent of total cases with sensitivity testing

**** Resistant to **at least** INH and RIF

***** Resistance to drugs **other than** INH

Risk Factor Information

Table 7: Tuberculosis Cases by Selected Characteristics: Arizona, 1993 - 1997

Risk Factor (RF)	1993 Cases with RF # (% of all 1993 cases)	1994 Cases with RF # (% of all 1994 cases)	1995 Cases with RF # (% of all 1995 cases)	1996 Cases with RF # (% of all 1996 cases)	1997 Cases with RF # (% of all 1997 cases)
Occupation					
Correctional Facility Worker	0	0	0	0	0
Health Care Worker	3 (1.3)	6 (2.4)	8 (2.5)	2 (0.7)	3 (1.0)
Migrant Farm Worker	5 (2.2)	7 (2.8)	4 (1.3)	9 (3.2)	2 (0.7)
Reported Behaviors					
Injectable Drug User*	8 (3.5)	4 (1.6)	17 (5.4)	12 (4.3)	11 (3.7)
Non-injectable Drugs ONLY*	9 (4.0)	5 (2.0)	14 (4.4)	13 (4.6)	17 (5.7)
Excessive Alcohol Use*	22 (9.7)	28 (11.3)	43 (13.6)	37 (13.1)	45 (15.2)
Type of Residence					
Long Term Care Facility	5 (2.2)	10 (4.0)	16 (5.0)	15 (5.3)	13 (4.4)
Correctional Facility	6 (2.6)	6 (2.4)	16 (5.0)	18 (6.4)	23 (7.8)
Homeless*	31 (13.6)	26 (10.5)	45 (14.2)	34 (12.1)	25 (8.4)
Country of Birth					
Foreign Born	75 (32.9)	88 (35.6)	121 (38.2)	107 (37.9)	109 (36.8)
Underlying Disease					
Known HIV/AIDS**	16 (7.0)	14 (5.7)	28 (8.8)	16 (5.7)	11 (3.7)

* Within the year before TB diagnosis (routine collection of information began Jan. 1, 1993)

** Due to the lag in HIV/AIDS reporting, the data on HIV/AIDS and TB co-morbidity may be incomplete

Table 8: Tuberculosis Cases Among Foreign-born Persons by Length of Time in the United States: Arizona, 1997

Area of Origin	Years in the United States Before Tuberculosis Report				
	Less than Two Years # (%)* (%)**	Two to Three Years # (%)* (%)**	Four or More # (%)* (%)**	Unknown # (%)* (%)**	Total Cases # (%)* (%)**
Asia/Pacific Islands	3 (13.0) (10.7)	10 (43.5) (23.3)	10 (43.5) (31.3)	0	23 (100) (21.1)
Mexico	24 (33.3) (85.7)	23 (31.9) (53.5)	20 (27.8) (62.5)	5 (7.0) (83.3)	72 (100) (66.1)
Other Central and South American Countries	0	3 (50.0) (7.0)	2 (33.3) (6.2)	1 (16.7) (16.7)	6 (100) (5.5)
Europe and the Former Soviet States	1 (16.7) (3.6)	5 (83.3) (11.6)	0	0	6 (100) (5.5)
Other	0	2 (100) (4.6)	0	0	2 (100) (1.8)
Total	28 (25.7) (100)	43 (39.4) (100)	32 (29.4) (100)	6 (5.5) (100)	109 (100) (100)

* Percentage of row total

** Percentage of column total

County of Residence

Table 9: Tuberculosis Cases by County of Residence and Selected Characteristics: Arizona, 1997

County of Residence	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma	Total Cases
Cases	19	6	4	2	3	2	1	165	6	10	38	18	0	2	20	296
Rate per 100,000 Population*	29.1	5.1	3.5	4.3	9.3	22.9	5.3	6.1	4.5	11.7	4.8	12.1	0	1.4	15.6	6.4
Race/Ethnicity																
White, Not Hispanic	0	2	0	1	0	1	1	55	0	0	18	1	0	2	6	87
African-American, Not Hispanic	0	1	0	0	0	0	0	7	0	0	3	0	0	0	0	11
Hispanic, All Races	0	2	0	0	2	1	0	81	5	1	10	15	0	0	13	130
Native American, Not Hispanic	19	0	4	1	1	0	0	9	0	8	5	2	0	0	0	49
Asian/Pacific Islander, Not Hispanic	0	1	0	0	0	0	0	13	1	1	2	0	0	0	1	19
Sex/Age																
All Sexes, Children <= 14 years	1	0	0	0	0	0	0	22	0	1	0	1	0	0	6	31
Females, >14 years	9	3	0	0	1	0	0	58	3	3	13	4	0	0	2	96
Males, > 14 years	9	3	4	2	2	2	1	85	3	6	25	13	0	2	12	169
Type of Residence																
Correctional Facility	0	1	0	1	0	0	0	9	0	1	2	7	0	0	2	23
Long Term Care Facility	2	1	0	0	0	0	0	8	0	0	2	0	0	0	0	13
Homeless**	1	0	0	0	0	0	0	15	0	0	6	2	0	0	1	25
Country of Birth																
Foreign-born	0	2	0	0	0	0	0	71	2	1	13	11	0	0	9	109
Drug Resistance																
INH Resistance***	0	1	0	0	0	0	0	11	2	1	1	2	0	0	0	18
MDR****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2

* Based on 1997 population projections (August 1997)

** Within the year before TB diagnosis.

*** Resistance to at least INH **without** resistance to RIF

**** Resistance to at least INH and RIF

***** Three cases self-described Native American Race and Hispanic ethnicity (due to denominator limitations they were classified as Native American, NH)

Note: The data in this report are provisional.

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