

*Public Health - Seattle & King County
Tuberculosis Control Program*

*Epidemiological Profile
Supplement*

2010

Public Health
Seattle & King County 

*Published November 2011
Please see our annual report
www.kingcounty.gov/health/TB*

PROGRAM EVALUATION

Table 1. Washington state and national TB objectives for 2010/2015 with performance by King County in 2010

Objective	WA 2010 Target	US 2015 Target	Seattle & King County 2010 Performance
Treatment completion within 12 months	85.0	93.0	88.6*
Incidence**			
Among US-born	1.4	0.7	1.1
Among foreign-born	23.0	14.0	25.8
Among US-born non-Hispanic blacks	5.3	1.3	4.5
Among children younger than 5 years of age	1.8	0.4	2.5
Contacts identified to sputum smear positive cases	100.0	100.0	96.5
Contacts evaluated to sputum smear positive cases	80.0	93.0	73.9
Contacts newly diagnosed starting LTBI treatment	73.0	88.0	69.6
Contacts completing LTBI treatment among newly diagnosed	50.0	79.0	50.0
Initial drug susceptibility results reported for culture-positive cases	99.0	100.0	100.0
Treatment initiation within 7 days of specimen collection for sputum smear-positive cases	87.0	n/a	83.9
Sputum culture conversion documented within 60 days of treatment initiation for sputum culture-positive cases	62.0	61.5	75.9
Completeness of core RVCT data variables	99.0	99.2	98.9*
Started on recommended initial 4-drug regimen when suspected of having TB	92.0	93.4	88.8
Reporting of genotype results for culture-confirmed cases	94.0	94.0	96.1
Reporting of HIV status	85.0	88.7	80.7
Evaluation initiation for Class B immigrants within 30 days of arrival	31.0	n/a	***
Evaluation completion for Class B immigrants within 90 days of arrival	80.0	n/a	***
Reporting of sputum-culture results in cases age 12 or older with pleural or respiratory site of disease	95.0	95.7	93.4

All units are in percent except where otherwise indicated. Seattle & King County's 2010 performance data is from the Centers for Disease Control and Prevention's National Tuberculosis Indicators Project where available (as of 8/30/11); all other data derived from PHIMS or program databases.

*Data is from 2009 cases as treatment regimen is not completed for some 2010 cases

**Case rate per 100,000 people

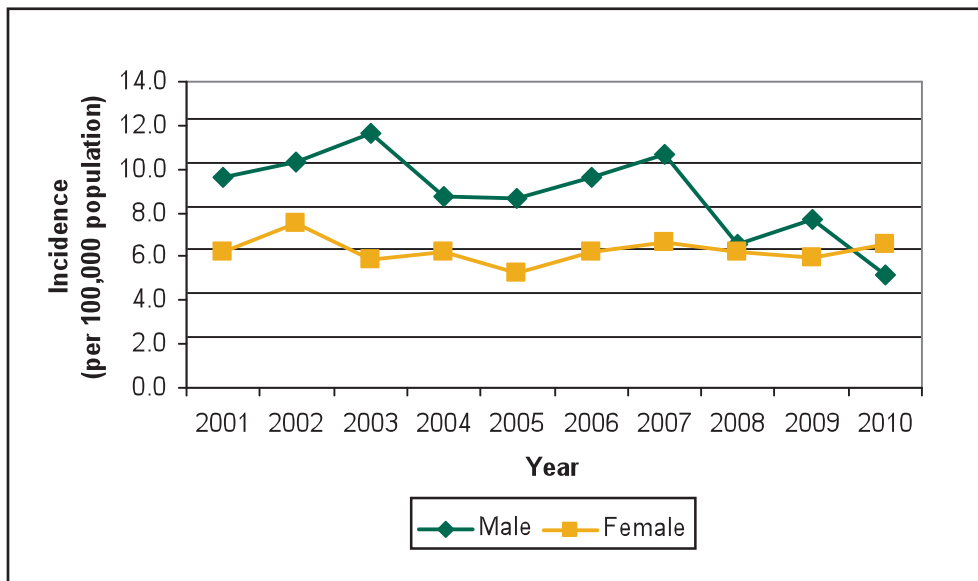
***Data under review

10 YEAR SUMMARY

Table 2. TB case counts by gender and year, 2001-2010, King County, Washington

	Male n (%)	Female n (%)	Total n
2001	84 (60)	55 (40)	139
2002	91 (58)	67 (42)	158
2003	103 (66)	52 (34)	155
2004	78 (58)	56 (42)	134
2005	78 (62)	48 (38)	126
2006	88 (61)	57 (39)	145
2007	99 (61)	62 (39)	161
2008	62 (51)	59 (49)	121
2009	73 (56)	57 (44)	130
2010	50 (44)	64 (56)	114

Figure 1. TB incidence (per 100,000 population) by gender and year, 2001-2010, King County, Washington



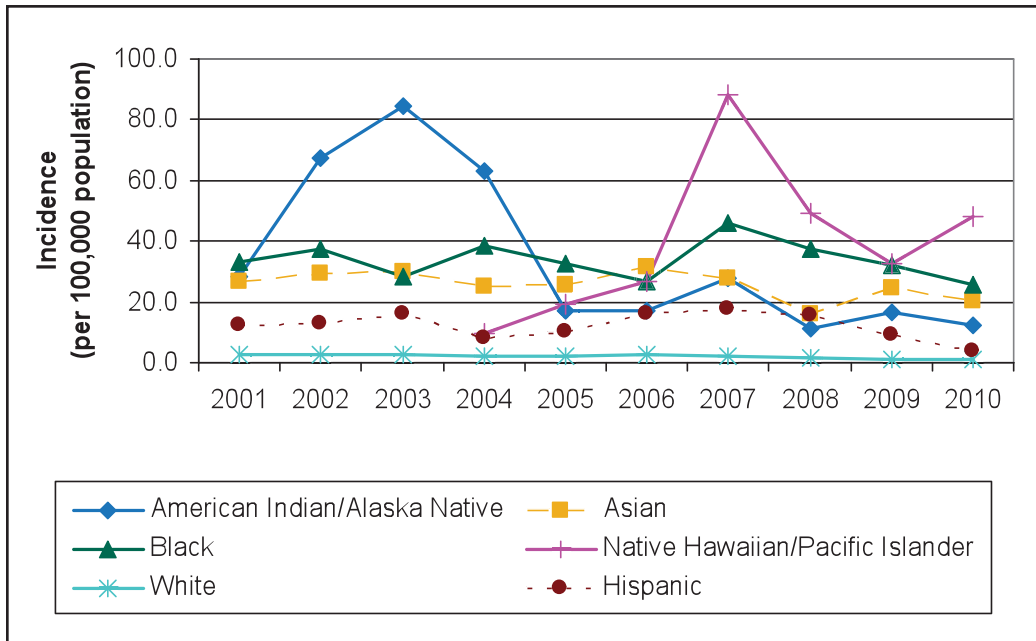
10 YEAR SUMMARY

Table 3. TB incidence (per 100,000 population) by race or ethnicity and year, 2001-2010, King County, Washington

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
American Indian/ Alaska Native	28.2	67.6	84.3	63.2	17.1	17.0	27.9	11.1	16.5	12.4
Asian	26.7	29.7	30.1	24.9	25.7	31.3	27.9	15.9	24.5	20.2
Black	33.0	37.3	28.5	38.4	32.5	26.6	46.2	37.5	32.0	25.9
Native Hawaiian/ Pacific Islander	*	*	*	9.7	19.3	26.8	88.3	49.2	32.5	48.3
White	2.7	2.5	2.5	2.1	2.2	2.7	2.2	1.7	1.1	1.1
Hispanic	12.5	13.1	15.9	8.2	10.0	16.1	17.6	15.7	9.3	3.5

*Population data not available

Figure 2. TB incidence (per 100,000 population) by race or ethnicity and year, 2001-2010, King County, Washington



CHARACTERISTICS OF FOREIGN-BORN CASES BY REGION OF BIRTH

Table 4. Characteristics of TB cases born in Southeast Asia, 2006-2010, King County, Washington

Year	2006	2007	2008	2009	2010
Total n Foreign-Born	n=115	n=123	n=99	n=110	n=97
Southeast Asia	n(%)	n(%)	n(%)	n(%)	n(%)
n, (% of foreign-born)	42 (36)	32 (26)	21 (21)	40 (36)	35 (36)
Male	23 (55)	18 (56)	11 (52)	24 (60)	16 (46)
Female	19 (45)	14 (44)	10 (48)	16 (40)	19 (54)
Age Group					
0-4 years	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5-14 years	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
15-24 years	2 (5)	1 (3)	2 (10)	6 (15)	3 (9)
25-44 years	14 (33)	15 (47)	5 (24)	15 (38)	9 (26)
45-64 years	12 (29)	11 (34)	7 (33)	11 (28)	11 (31)
65 years and older	14 (33)	5 (16)	7 (33)	8 (20)	12 (34)
Length of US Residency					
<1 year	5 (12)	6 (20)	1 (5)	9 (23)	3 (9)
1-4 years	6 (14)	3 (9)	1 (5)	8 (20)	4 (11)
5+ years	31 (74)	23 (72)	19 (90)	23 (58)	28 (80)
Country of Origin					
Burma	0 (0)	1 (3)	0 (0)	5 (13)	4 (11)
Cambodia	2 (5)	3 (9)	3 (14)	0 (0)	4 (11)
Indonesia	1 (2)	0 (0)	0 (0)	1 (3)	2 (6)
Laos	2 (5)	4 (13)	0 (0)	1 (3)	1 (3)
Malaysia	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)
Philippines	20 (48)	3 (9)	9 (43)	20 (50)	12 (34)
Thailand	2 (5)	0 (0)	0 (0)	2 (5)	1 (3)
Vietnam	14 (33)	21 (66)	9 (43)	11 (28)	11 (31)

CHARACTERISTICS OF FOREIGN-BORN CASES BY REGION OF BIRTH

Table 5. Characteristics of TB cases born in East Africa, 2006-2010, King County, Washington

Year	2006	2007	2008	2009	2010
Total n Foreign-Born	n=115	n=123	n=99	n=110	n=97
East Africa	n(%)	n(%)	n(%)	n(%)	n(%)
n, (% of foreign-born)	21 (18)	35 (28)	34 (34)	31 (28)	24 (25)
Male	12 (57)	16 (46)	18 (53)	15 (48)	9 (38)
Female	9 (43)	19 (54)	16 (47)	16 (52)	15 (63)
Age Group					
0-4 years	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)
5-14 years	1 (5)	3 (9)	4 (12)	0 (0)	0 (0)
15-24 years	6 (29)	12 (34)	9 (26)	5 (16)	3 (13)
25-44 years	8 (38)	13 (37)	15 (44)	20 (65)	11 (46)
45-64 years	4 (19)	4 (11)	4 (12)	2 (6)	6 (25)
65 years and older	2 (9)	3 (9)	2 (6)	3 (10)	4 (17)
Length of US Residency					
<1 year	4 (19)	10 (29)	5 (15)	7 (23)	3 (13)
1-4 years	8 (38)	15 (43)	20 (59)	11 (35)	10 (42)
5+ years	9 (43)	10 (29)	9 (26)	13 (42)	11 (46)
Country of Origin					
Eritrea	0 (0)	0 (0)	0 (0)	1 (3)	1 (4)
Ethiopia	12 (57)	14 (40)	12 (35)	13 (42)	13 (54)
Kenya	1 (5)	3 (9)	6 (18)	2 (6)	3 (13)
Somalia	8 (38)	17 (49)	16 (47)	15 (48)	7 (29)
Tanzania	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)

CHARACTERISTICS OF FOREIGN-BORN CASES BY REGION OF BIRTH

Table 6. Characteristics of TB cases born in Central America, 2006-2010, King County, Washington

Year	2006	2007	2008	2009	2010
Total n Foreign-Born	n=115	n=123	n=99	n=110	n=97
Central America	n(%)	n(%)	n(%)	n(%)	n(%)
n, (% of foreign-born)	17 (15)	14 (11)	15 (15)	9 (8)	6 (6)
Male	9 (53)	10 (71)	9 (60)	4 (44)	3 (50)
Female	8 (47)	4 (29)	6 (40)	5 (55)	3 (50)
Age Group					
0-4 years	0 (0)	0 (0)	0 (0)	1 (11)	0 (0)
5-14 years	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
15-24 years	6 (35)	5 (36)	3 (20)	0 (0)	2 (33)
25-44 years	8 (67)	5 (36)	8 (53)	7 (77)	3 (50)
45-64 years	2 (12)	2 (14)	3 (20)	1 (11)	1 (17)
65 years and older	1 (9)	2 (14)	1 (11)	0 (0)	0 (0)
Length of US Residency					
<1 year	2 (12)	1 (7)	1 (11)	0 (0)	0 (0)
1-4 years	7 (41)	6 (43)	4 (27)	3 (33)	1 (17)
5+ years	8 (67)	7 (50)	10 (67)	6 (67)	5 (83)
Country of Origin					
El Salvador	0 (0)	2 (14)	0 (0)	0 (0)	0 (0)
Guatemala	0 (0)	3 (21)	0 (0)	3 (33)	0 (0)
Honduras	5 (29)	1 (7)	1 (11)	0 (0)	1 (17)
Mexico	12 (71)	7 (50)	14 (93)	6 (67)	5 (83)
Nicaragua	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)

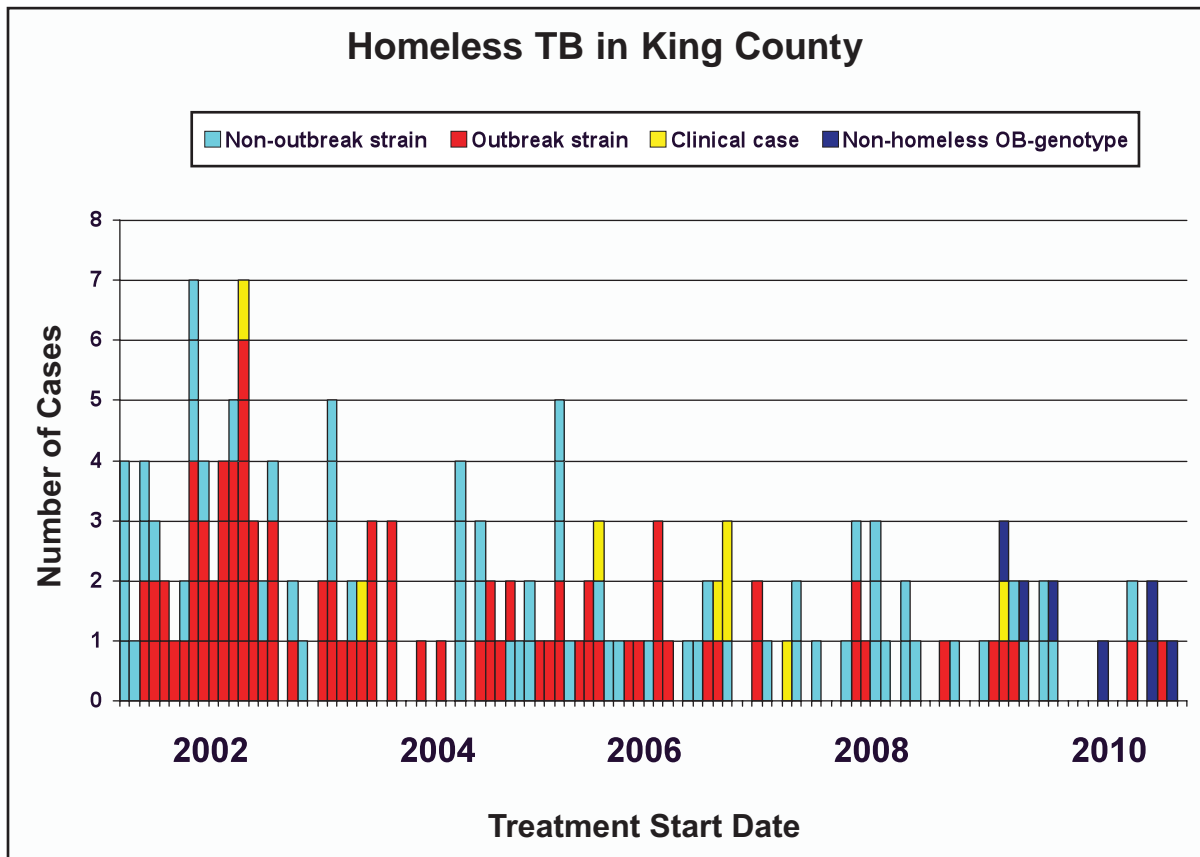
CHARACTERISTICS OF CASES AMONG THE HOMELESS

Table 7. Characteristics of homeless people diagnosed with TB, 2001-2010, King County, Washington

Year	2001 (n=12)	2002 (n=29)	2003 (n=35)	2004 (n=25)	2005 (n=25)	2006 (n=22)	2007 (n=15)	2008 (n=13)	2009 (n=7)	2010 (n=6)
	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)
Gender										
Male	12 (100)	25 (86)	28 (80)	22 (88)	23 (92)	21 (95)	11 (73)	13 (100)	7 (100)	2 (33)
Female	0 (0)	4 (14)	7 (20)	3 (12)	2 (8)	1 (5)	4 (27)	0 (0)	0 (0)	4 (67)
Age group										
0-4 years	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
5-14 years	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)
15-24 years	0 (0)	0 (0)	2 (6)	7 (28)	1 (4)	0 (0)	0 (0)	1 (8)	0 (0)	0 (0)
25-44 years	4 (33)	16 (55)	15 (43)	7 (28)	8 (32)	9 (41)	4 (27)	8 (62)	2 (29)	2 (33)
45-64 years	7 (58)	13 (45)	16 (46)	10 (40)	15 (60)	13 (59)	10 (67)	3 (23)	5 (71)	4 (67)
65+ years	1 (8)	0 (0)	2 (6)	1 (4)	1 (4)	0 (0)	0 (0)	1 (8)	0 (0)	0 (0)
Race										
White	8 (67)	6 (21)	11 (31)	4 (16)	10 (40)	14 (64)	3 (20)	7 (54)	2 (29)	1 (17)
Black	2 (17)	11 (38)	10 (29)	12 (48)	11 (44)	5 (23)	8 (53)	3 (23)	3 (43)	3 (50)
Asian	1 (8)	0 (0)	0 (0)	1 (4)	1 (4)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)
American Indian/ Alaska Native	1 (8)	11 (38)	14 (40)	8 (32)	1 (4)	3 (14)	3 (20)	2 (15)	0 (0)	1 (17)
Native Hawaiian/ Pacific Islander	0 (0)	1 (3)	0 (0)	0 (0)	2 (8)	0 (0)	0 (0)	0 (0)	1 (14)	1 (17)
Ethnicity										
Hispanic	2 (17)	3 (10)	4 (11)	1 (4)	5 (20)	6 (27)	2 (13)	7 (54)	1 (14)	0 (0)
Birthplace										
US-born	8 (67)	24 (83)	32 (91)	13 (52)	14 (56)	14 (64)	12 (80)	5 (38)	3 (43)	4 (67)
Foreign-born	4 (33)	5 (17)	3 (9)	12 (48)	11 (44)	8 (36)	3 (20)	8 (62)	4 (57)	2 (33)
HIV Positive	3 (25)	9 (31)	2 (6)	0 (0)	3 (12)	4 (18)	2 (13)	4 (31)	1 (14)	1 (17)

CHARACTERISTICS OF CASES AMONG THE HOMELESS

Figure 3. Genotypic strains of TB among homeless people, by treatment start date, 2002-2010, King County, Washington



TB DISEASE CHARACTERISTICS AND TREATMENT

Table 8. Disease characteristics, 2006-2010, King County, Washington

Year	2006	2007	2008	2009	2010
	n=144	n=161	n=121	n=130	n=114
	n(%)	n(%)	n(%)	n(%)	n(%)
<i>Exclusively Pulmonary</i>	82 (57)	72 (45)	55 (45)	71 (55)	54 (47)
<i>Both Pulmonary and Extrapulmonary</i>	21 (14)	36 (22)	25 (21)	17 (13)	19 (17)
<i>Exclusively Extrapulmonary</i>	41 (28)	53 (33)	41 (34)	42 (32)	41 (36)
<i>Sputum smear-positive*</i>	57 (55)	44 (41)	39 (49)	31 (35)	29 (40)
<i>Sputum smear-negative*</i>	41 (40)	54 (50)	38 (48)	52 (59)	36 (50)
Disease Site**					
Pulmonary	100 (69)	126 (78)	80 (66)	88 (68)	73 (64)
Pleural	13 (9)	11 (7)	12 (10)	12 (9)	12 (11)
Lymphatic	32 (22)	44 (27)	27 (22)	25 (19)	26 (23)
Bone and/or Joint	8 (6)	10 (6)	7 (6)	2 (2)	7 (6)
Genitourinary	2 (2)	3 (2)	2 (2)	3 (2)	3 (3)
Meningeal	1 (1)	3 (2)	1 (<1)	0 (0)	2 (2)
Peritoneal	5 (4)	2 (1)	1 (<1)	6 (5)	3 (3)
Other	4 (3)	4 (2)	17 (14)	15 (12)	8 (7)
Health Care Provider if pulmonary disease*					
Health Department	92 (89)	97 (90)	51 (64)	73 (83)	59 (81)
Private/Other	4 (4)	3 (3)	3 (4)	4 (5)	10 (14)
Both	7 (7)	6 (6)	16 (20)	10 (11)	4 (5)
Health Care Provider if pulmonary disease*, sputum smear positive					
Health Department	50 (88)	39 (89)	28 (72)	28 (90)	27 (93)
Private/Other	3 (5)	1 (2)	2 (5)	1 (3)	2 (7)
Both	4 (7)	2 (5)	6 (15)	2 (6)	0 (0)
Health Care Provider if pulmonary disease*, sputum smear negative					
Health Department	37 (90)	51 (94)	22 (58)	42 (81)	27 (75)
Private/Other	1 (2)	1 (2)	1 (3)	2 (4)	6 (17)
Both	3 (7)	2 (4)	10 (27)	8 (15)	3 (8)
Health Care Provider if extrapulmonary disease					
Health Department	30 (73)	35 (66)	13 (32)	11(26)	7 (17)
Private/Other	5 (12)	13 (25)	5 (12)	2 (5)	30 (73)
Both	7 (17)	5 (9)	16 (39)	29 (69)	4 (10)

*Of cases with any pulmonary disease.

**Categories not mutually exclusive; one case may have multiple sites of disease.

TB DISEASE CHARACTERISTICS AND TREATMENT

Table 9. Treatment of TB disease, 2006-2010, King County, Washington

Year	2006 n=144	2007 n=161	2008 n=121	2009 n=130	2010 n=114
	n(%)	n(%)	n(%)	n(%)	n(%)
Treatment					
Initiation of Four Drug Therapy*	132 (92)	142 (88)	110 (91)	119 (92)	101 (89)
Drug Resistance					
Any Initial Resistance	16 (11)	14 (9)	6 (5)	19 (15)	20 (18)
Multi-Drug Resistance**	3 (2)	2 (1)	3 (2)	0 (0)	2 (2)
Deaths					
Dead at Diagnosis	3 (2)	1 (1)	2 (2)	1 (1)	1 (1)
Died During Treatment	11 (8)	6 (4)	6 (5)	6 (5)	9 (8)
Treatment Completion***					
Ever Completed	113 (90)	142 (95)	105 (96)	116 (93)	85 (83)
Completed Within 12 months	102 (82)	134 (90)	97 (89)	110 (89)	82 (80)
Lost to Follow-up/Moved/Refused	12 (10)	7 (5)	4 (4)	8 (7)	1 (1)
Method of Treatment†					
Directly Observed Therapy Only	81 (72)	94 (66)	58 (55)	73 (63)	53 (62)
Directly Observed Therapy & Self Administration	19 (17)	27 (19)	25 (24)	15 (13)	2 (2)
Self Administration Only	13 (12)	21 (15)	22 (21)	27 (23)	30 (35)

*Recommended initial treatment with isoniazid, rifampin, pyrazinamide, and ethambutol

**Resistant to at least isoniazid and rifampin

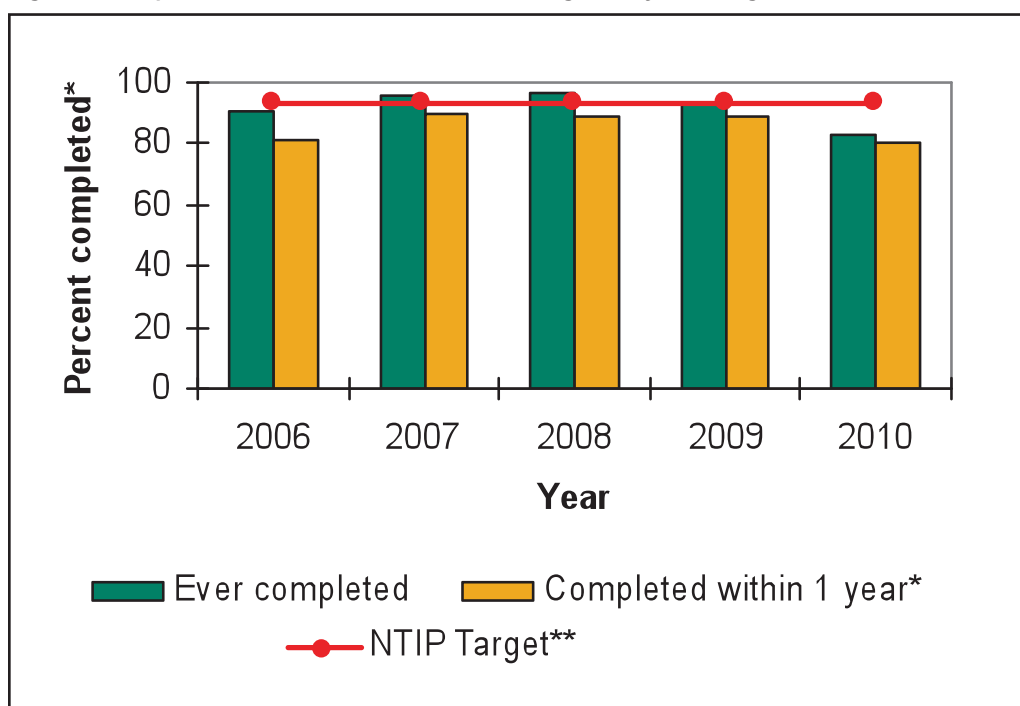
***Per CDC National Tuberculosis Indicators Project (NTIP), this includes all TB patients, for whom 12 months of treatment or less is recommended, alive at diagnosis, initiated treatment with one or more drugs, and counted in the year of interest. Patients with any rifampin-resistant TB or meningeal TB, and children age 14 or younger with disseminated TB are excluded. Disseminated TB is defined by having "miliary" checked in RVCT form as a major site of disease or a positive blood culture. Patients who died during treatment are excluded.

†Among those who completed treatment

Note: Treatment for patients from 2010 may still be ongoing.

TB DISEASE CHARACTERISTICS AND TREATMENT

Figure 4. Completion of TB treatment, 2006-2010, King County, Washington



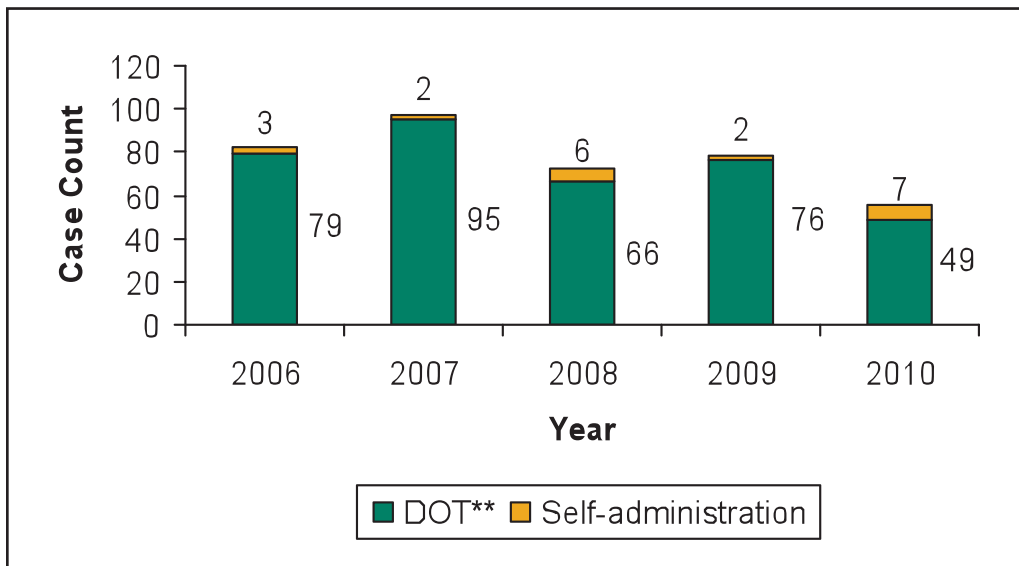
*Per CDC National Tuberculosis Indicators Project (NTIP), this includes all TB patients, for whom 12 months of treatment or less is recommended, alive at diagnosis, initiated treatment with one or more drugs, and counted in the year of interest. Patients with any rifampin-resistant TB or meningeal TB, and children age 14 or younger with disseminated TB are excluded. Disseminated TB is defined by having "miliary" checked in RVCT form as a major site of disease or a positive blood culture. Patients who died during treatment are excluded.

**NTIP 2015 goal is 93% completion within one year or less.

Note: Treatment for patients from 2010 may still be ongoing.

TB DISEASE CHARACTERISTICS AND TREATMENT

Figure 5. Pulmonary* TB cases by treatment method, 2006-2010, King County, Washington

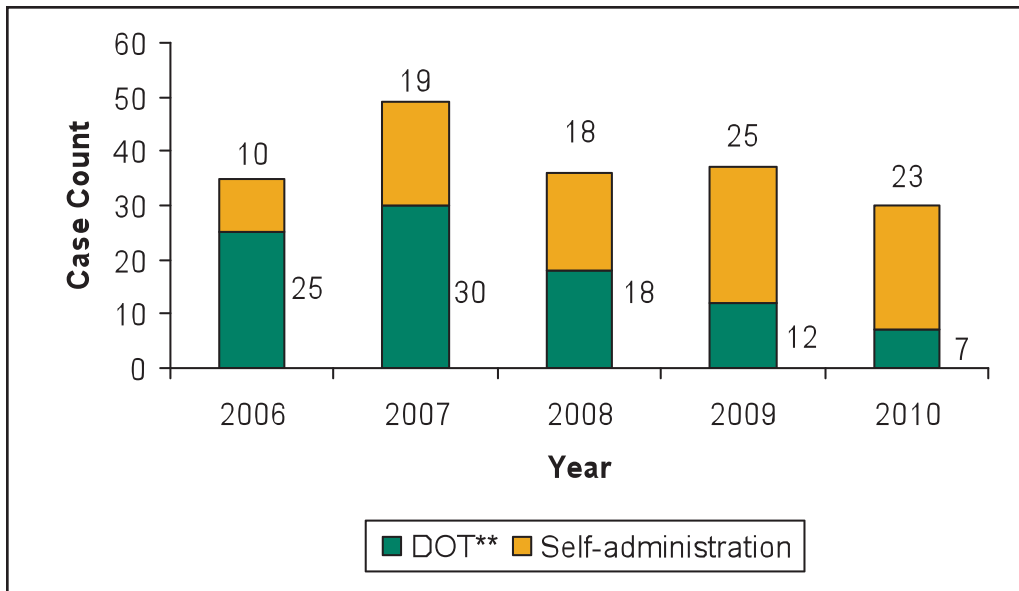


*Includes patients with only a pulmonary site of disease or pulmonary and extra-pulmonary sites of disease.

**Includes patients treated with DOT only and a combination of DOT and self-administered therapy

Note: Treatment for patients from 2010 may still be ongoing.

Figure 6. Extrapulmonary* TB cases by treatment method, 2006-2010, King County, Washington



*Includes patients with only an extra-pulmonary site of disease.

**Includes patients treated with DOT only and a combination of DOT and self-administered therapy.

Note: Treatment for patients from 2010 may still be ongoing.

GENOTYPING

TB genotyping identifies links between TB culture isolates from different TB patients. If two TB patients have isolates with non-matching genotypes, they are unlikely to have been involved in the same chain of recent transmission. If isolates have matching genotypes, then genotyping, when combined with epidemiologic data, helps to distinguish TB patients who may be involved in the same chain of recent transmission, or whose disease is the result of reactivation of a remote TB infection.

Genotyping of specimens has taken place at a CDC or CDC-affiliated laboratory since 2000. However, until the start of Universal Genotyping (UG) in 2004, only a partial sample of culture-positive specimens were submitted for genotyping. Since UG was implemented in 2004, all culture-positive specimens have been submitted to the CDC-affiliated laboratory in Berkeley, California for genotyping.

The following table summarizes the results of all specimens tested from King County by count date (Table 10). Clustering is defined as matching both spacer oligonucleotide typing (spoligotyping) and 12-locus mycobacterial interspersed repetitive unit variable number of tandem repeats (MIRU-VNTR).

Table 10. Genotype Summary

Year	Number Culture-positive	Proportion genotyped*	Proportion clustering
2004	112	88%	49%
2005	109	95%	56%
2006	124	98%	57%
2007	130	98%	56%
2008	102	97%	57%
2009	108	97%	48%
2010	102	97%	53%
2004-2010	787	96%	54%

*Genotyping was not performed on all culture-positives

TECHNICAL NOTES

Since TB is a reportable disease, all 2010 cases are assumed to have been included in this report. For detailed reporting requirements, see the TB Control Program Resource Guide found on our website. Case verification is determined by the Washington state Department of Health using TB case classifications defined by the Centers for Disease Control and Prevention (CDC). The case count for 2010 presented in this summary differs from earlier publications by King County and Washington State, as two cases previously counted were removed upon preparation of this report due to a determination that they were not true cases of TB.

All 2009-2010 case data came from the Public Health Information Management System database (PHIMS). All data before 2009 came from the Tuberculosis Information Management System database (TIMS). These databases were designed to allow counties and states to report TB surveillance data to the CDC. TIMS and PHIMS use data from the Report of Verified Case of Tuberculosis (RVCT) case report form, submitted by all reporting areas.

Washington state 2010 performance indicators are courtesy of the Washington State TB Epidemiological Report, 2010.
<http://www.doh.wa.gov/cfh/TB/publications/state2010.pdf>

National 2010 performance indicators and data are courtesy of the Centers for Disease Control and Prevention, Division of Tuberculosis Elimination National Tuberculosis Indicators Project (NTIP).
<http://www.cdc.gov/tb/programs/Evaluation/Indicators/default.htm>

Patient-level genotyping data came from the Centers for Disease Control and Prevention's Genotyping Information Management System (GIMS) database.
<http://www.cdc.gov/tb/programs/genotyping/default.htm>

King County 2010 population, age, gender, race and ethnicity are from the 2010 Census (DP-1 - King County, Washington: Profile of General Population and Housing Characteristics: 2010).
http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/10_DP/DPDP1/0400000US53.05000

King County 2001-2009 total population, age and gender are from the Washington State Office of Financial Management Intercensal and Postcensal Estimates of April 1 County Population by Age and Sex: 1990-2010.
<http://www.ofm.wa.gov/pop/coagemf/default.asp>

2001-2009 Race/ethnicity are from the Washington State Community Health Assessment Tool (1990-2009 Population Estimates: Population Estimates for Public Health Assessment, Washington State Department of Health and Krupski Consulting, December 2009).

U.S./Foreign-Born black are from the American Community Survey Selected Population Profiles (1 yr estimates), 2001-2009. 2010 ACS data are replicated from 2009 numbers, which are the most recent data available.
http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=&_lang=en&_ts=http://www.kingcounty.gov/healthservices/health.aspx

Hispanic ethnicity is of any race. Race is single race only, regardless of ethnicity. Race definitions are changed from previous years' reports, which used "Black alone or in combination with one or more other races" (all ethnicities) and may result in a change in rates reported in previous years.

All charts and tables are from TB Control Program, Public Health - Seattle & King County.

Data reported for previous years may change slightly from what was reported in the respective year's summary, as population data are updated with current statistics upon preparation of this report.

Some percentages may not sum to 100 percent due to rounding.

ACKNOWLEDGEMENTS

We express gratitude to our community-based medical colleagues for their diagnosis, reporting, and collaboration in the management of TB cases, as well as to the various institutions and agencies that support our case management and contact investigation efforts. We also acknowledge the

staff of Public Health - Seattle & King County TB Control Program for their dedication to providing high-quality patient service in order to prevent transmission of TB in King County.

This report is prepared by the Tuberculosis (TB) Control Program, Public Health - Seattle & King County,
www.kingcounty.gov/health/TB