



**Communicable Disease and Epidemiology News**

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Shelly McKeirnan, RN, MPH, Editor (shelly.mckeirnan@kingcounty.gov)

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**March 2008**

- **World TB Day March 24, 2008: Tuberculosis (TB) in King County**
- **Monthly Influenza Update**

**Tuberculosis (TB) in King County**

World TB Day is March 24, 2008. In 2007, King County reported 161 cases of active tuberculosis (TB) disease, representing an 11% increase from the 2006 count and a 29% increase from the 2005 count (Figure 1). King County has not seen this number of cases in over thirty years. The rate of TB in King County for 2007 was 8.6 cases per every 100,000 individuals; this rate remains higher than the national rate (4.4 per 100,000 in 2007) (Table 1).

**Age, Race, and Ethnicity**

The median age of TB cases in 2007 was 36 years. There were 13 pediatric cases (age 0-14 years), 11 of whom were diagnosed through contact investigations (i.e., of family members with active TB), and two were diagnosed soon after immigrating from their countries of birth.

All non-white race and ethnicities continue to have disproportionately high rates of TB, e.g., blacks have a rate of 46.2 cases per 100,000 (Table 2). Of the 51 blacks diagnosed with tuberculosis in King County in 2007, 38 (75%) were born outside the United States (Table 2).

**Country of Origin**

In 2007, 76% of King County cases were born outside the United States. Of these 122 individuals, 70 (57%) came from five countries: Vietnam, Somalia, Ethiopia, India, and the Marshall Islands (Table 3).

**Outbreak Among Marshall Islanders**

The TB Control Program investigated an outbreak of TB cases in the King County Marshallese community. Since February 2007, there have been 14 cases of TB in the Puget Sound area among families from the Marshall Islands. Eleven cases were diagnosed in King County; eight of the 11 King County cases were born in the Marshall Islands. With the help of a Marshallese Outreach Worker, 161 contacts were identified in King County, 143 of whom were evaluated.

**TB-Human Immunodeficiency Virus Co-infection**

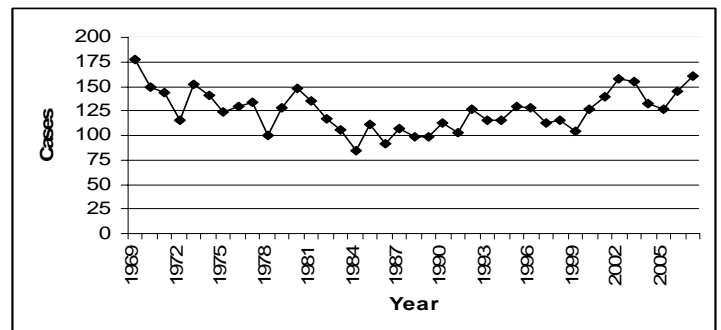
It is important to know the Human Immunodeficiency Virus (HIV) status of every TB case to provide the necessary complex medical care and to minimize morbidity and mortality. In 2007, HIV test results were obtained for 93% of cases in King County. Among this group, 9 of the TB cases were co-infected with HIV, representing 6% of all TB cases. Nationwide, 67% of cases have HIV test results with 7% infected.

**Homelessness**

There were 15 cases of TB diagnosed among the homeless in 2007. The number of homeless cases has decreased since its peak in 2002 through 2003, when there was an outbreak in the homeless community with 65

cases. Cases associated with the homeless outbreak are still being seen in King County.

**Figure 1. TB Cases, King County, 1969-2007**



**Table 1. Demographics, 2005-2007**

	2005	2006	2007
<b>Cases</b>	<b>125</b>	<b>145</b>	<b>161</b>
<b>Rate/100,000</b>	<b>6.9</b>	<b>7.9</b>	<b>8.6</b>
	Count (%)	Count (%)	Count (%)
Gender-Male	78 (62)	88 (61)	99 (61)
Non-U.S.-born	95 (76)	116 (80)	122 (76)
Homeless	23 (18)	16 (11)	15 (9)

**Table 2. Race/Ethnicity Rates, 2005-2007**

	2005	2006	2007
<b>Rate/100,000</b>			
Race			
Am Indian or AK Native	17.2	17.2	22.9
Asian/Pacific Islander	21.9	30.6	30.2
Black or African American	24.0	26.3	46.2
White	1.9	2.7	2.3
Ethnicity-Hispanic	9.1	16.1	17.0

**Table 3. Trends in Country of Origin, 2005-2007**

Country	2005	2006	2007
	Count (%)	Count (%)	Count (%)
Vietnam	12 (13)	15 (13)	21 (17)
Somalia	8 (8)	8 (7)	17 (14)
Ethiopia	9 (10)	12 (10)	14 (11)
India	8 (8)	12 (10)	11 (9)
Marshall Islands	0 (0)	0 (0)	8 (7)

**Drug Resistant TB**

In 2007, 20 (12%) TB cases in King County were drug-resistant to at least one TB medication. Multi-drug resistant TB (MDR-TB), resistance to at least isoniazid and rifampin, is exceedingly costly and difficult to treat. King County reported 2 cases of MDR-TB in 2007. Three cases of MDR-TB were reported in 2006. Additionally, 2 cases of MDR-TB were diagnosed in other US health

jurisdictions in 2007, and transferred to continue treatment in King County. In 2007, no cases of extreme-drug resistant TB (XDR-TB) were reported in King County.

**TB Treatment**

No cases have been lost or refused to complete treatment. Of the 160 cases in 2007 that began treatment, 71 (44%) have completed therapy (one individual was diagnosed post mortem). Treatment for TB, on average, takes 6 to 9 months and can take 18 to 24 months or even longer for complex cases.

**Contact Investigations**

Contact investigations were conducted for all individuals considered infectious. Over 750 household contacts were screened in 2007. In addition to household contact investigations, 18 worksite, school, and nursing/medical facility investigations were initiated. More than 350 contacts were identified at these sites, with over 80% of contacts evaluated. There were 6 additional investigations in congregate settings associated with homeless cases.

**TB Control Program**

The program continues to face many ongoing challenges. These challenges include a high proportion of TB patients who live in poverty, patients from diverse backgrounds, and the transient and migratory nature of many individuals at high-risk for TB.

Due to the large pool of individuals with latent TB infection – an estimated 100,000 people in King County, and one third of the world’s population – and the lack of convenient preventive medications or an effective TB vaccine, it is unlikely that TB will be eliminated in the near future.

To manage this disease with the tools currently available, the King County TB Control Program focuses on three fundamental principals:

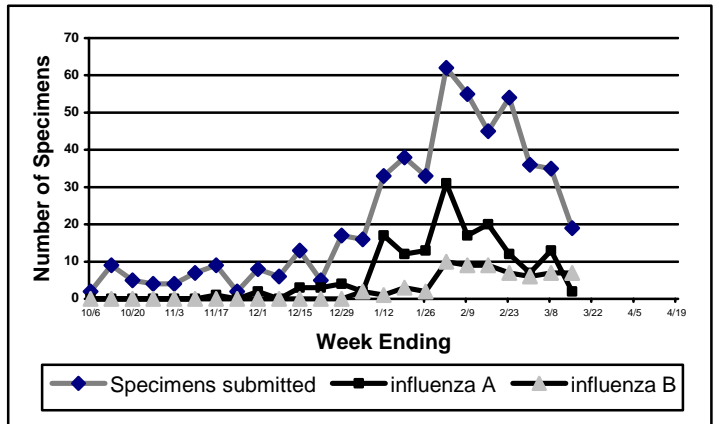
- (1) case management of patients with active TB disease in order to ensure the cure of all TB cases, stop further transmission of TB, and prevent development of multi-drug resistant TB;
- (2) timely and thorough contact investigations around active TB cases to identify, evaluate, and treat those who were exposed and/or recently infected; and
- (3) collaborative efforts with a number of public health and community partners, particularly to enhance targeted TB testing and treatment of latent TB infection.

More information available at: [www.metrokc.gov/health/tb/](http://www.metrokc.gov/health/tb/)

**Monthly Influenza Update**

As of the end of week 11 (ending 3/15/2008), influenza is still circulating at high levels in the community, though all surveillance indicators suggest that flu activity has peaked and is declining. Several long-term care facilities have reported residents with influenza-like illness during the past five weeks. See figure 2 below for laboratory confirmed influenza isolates submitted by sentinel providers. More information is available online<sup>1</sup>.

**Figure 2. Public Health - Seattle & King County Sentinel Provider Influenza Surveillance Laboratory Confirmed Isolates, 2007-2008**



**Disease Reporting**

AIDS/HIV ..... (206) 296-4645  
 STDs..... (206) 744-3954  
 TB ..... (206) 744-4579  
 All Other Notifiable Communicable Diseases (24 hours a day)..... (206) 296-4774  
 Automated reporting line for conditions not immediately notifiable ..... (206) 296-4782

**Hotlines**

Communicable Disease..... (206) 296-4949  
 HIV/STD ..... (206) 205-STD5

**Public Health-Seattle & King County**

**Online Resources**

**Home Page:** [www.metrokc.gov/health/](http://www.metrokc.gov/health/)  
**The EPI-LOG:** [www.metrokc.gov/health/providers](http://www.metrokc.gov/health/providers)  
**Communicable Disease listserv (PHSKC INFO-X) at:** [mailman.u.washington.edu/mailman/listinfo/phskc-info-x](mailto:mailman.u.washington.edu/mailman/listinfo/phskc-info-x)

**Influenza Surveillance Update<sup>1</sup>:**  
[www.metrokc.gov/health/immunization/fluactivity.htm](http://www.metrokc.gov/health/immunization/fluactivity.htm)

**Reported Cases of Selected Diseases, Seattle & King County 2008**

	Cases Reported in February		Cases Reported Through February	
	2008	2007	2008	2007
Campylobacteriosis	21	15	41	38
Cryptosporidiosis	2	1	6	2
Chlamydial infections*	526	416	1084	1009
Enterohemorrhagic E. coli (non-O157)	0	0	0	2
E. coli O157: H7	1	1	1	4
Giardiasis	3	17	13	27
Gonorrhea*	120	103	237	284
Haemophilus influenzae (cases <6 years of age)	2	0	2	0
Hepatitis A	2	1	5	1
Hepatitis B (acute)	4	4	8	5
Hepatitis B (chronic)	110	60	165	133
Hepatitis C (acute)	1	1	3	2
Hepatitis C (chronic, confirmed/probable)	78	113	210	228
Hepatitis C (chronic, possible)	33	28	61	59
Herpes, genital (primary)*	52	52	85	48
HIV and AIDS (new diagnoses only)	31	43	47	57
Measles	0	0	0	0
Meningococcal Disease	1	1	1	1
Mumps	0	0	0	1
Pertussis	3	8	17	11
Rubella	0	0	0	0
Rubella, congenital	0	0	0	0
Salmonellosis	12	22	25	33
Shigellosis	6	4	10	8
Syphilis*	9	16	38	12
Syphilis, congenital*	0	0	0	0
Syphilis, late*	7	7	13	9
Tuberculosis	2	19	6	25

The EPI-LOG is available in alternate formats upon request.

\*All STD case numbers other than STD numbers reported in February 2007 are based on date of diagnosis (not date of report).