

# Tuberculosis

Seattle & King County, Washington, 2016

**The mission of Public Health Seattle & King County's Tuberculosis (TB) Control Program is to interrupt the transmission of TB in Seattle & King County**

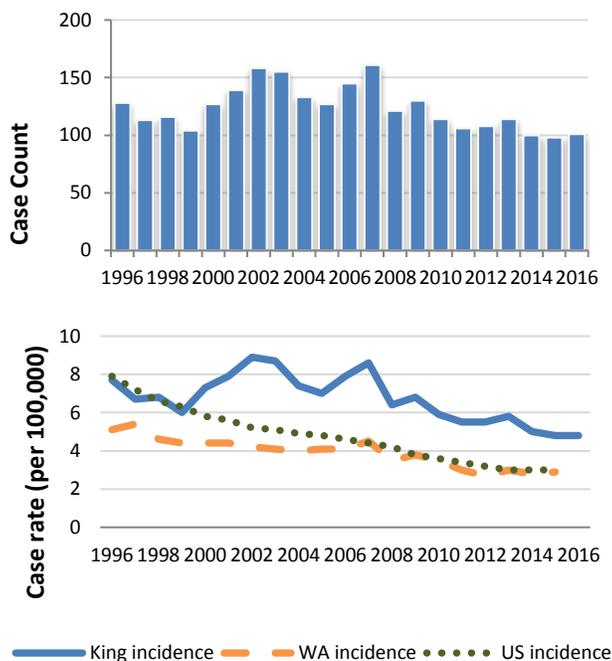
## TAKEAWAYS:

- Tuberculosis continues to disproportionately affect vulnerable populations in King County.
- On average, two cases of tuberculosis disease are diagnosed in King County each week. Another 100,000 residents are infected with TB, but the microbe lies dormant.
- Rates of TB disease are at an all-time low in King County, but as a crossroads for global trade and migration, we have higher rates of TB disease than state and national averages.

## OVERVIEW

In 2016, 101 new cases of TB were reported in King County, for an incidence of 4.8 cases per 100,000 population. In 2015, 98 cases were reported. From 2011 to 2015 there were 1-4 deaths related to TB disease per year in King County. In 2016, there were three deaths related to TB disease in King County.

TB case count and rate per 100,000 population, 1996-2016, King County, WA\*



\*US and WA State incidence for 2016 not yet available

## GENDER AND AGE

Historically, males comprise 55-65% of TB cases in King County. In 2016, 58% of TB cases were male. Cases ranged from one to 93 years of age with a median age of 41 years. The highest rate of TB was among individuals 65 years of age and older, 8.8 cases per 100,000 population.

TB case rate per 100,000 population by age group, 2012-2016, King County, WA

	2012	2013	2014	2015	2016
0-17	3.1	1.2	1.9	1.4	1.6
18-44	6.0	5.4	5.8	5.3	5.3
45-64	3.8	7.5	4.5	3.3	4.6
65+	12.3	10.9	8.5	11.8	8.8

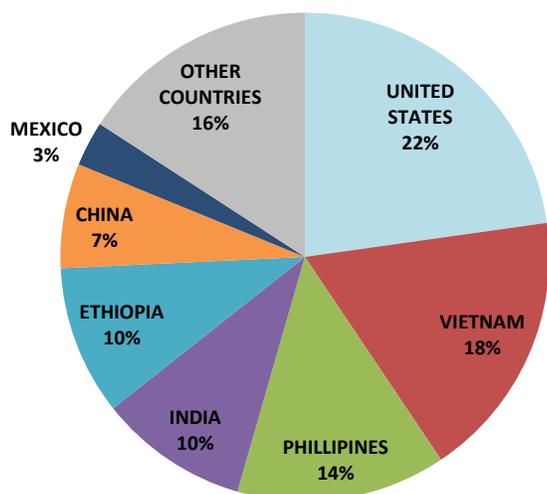
## PLACE OF BIRTH AND RACE/ETHNICITY

A total of 78 (77%) cases reported in 2016 were born outside the US. These individuals were born in 20 countries. More than half of cases born outside the US came from just four countries: Vietnam, Philippines, India, and Ethiopia. In King County, the rate of TB among persons born outside the US was 17.5 per 100,000 population in 2016, which is 12.5 times the rate of TB in US born individuals in King County (1.4 per 100,000 population).

## CHECK OUT: TB ECHO

A collaborative model of medical education and care management providing primary care clinicians with the knowledge and support they need to manage patients with TB infection. More information: <http://depts.washington.edu/fnwtbc/tb-echo>

Proportion of TB cases by country of origin, 2016, King County, WA



Races and ethnicities other than non-Hispanic white in King County continue to have disproportionately high rates of TB. Asians had the highest proportion of cases in King County (56%) and Native Hawaiian/Pacific Islander had the highest rate of TB cases in King County with 28.5 cases per 100,000 population.

**COMORBIDITIES**

In 2016, 3% of TB cases were also infected with HIV whereas <1% of the King County general population are presumed living with HIV infection. Of these three co-infected cases, all were born outside the United States. Diabetes mellitus is also a concerning risk factor for tuberculosis. Twelve percent of TB patients also had a diagnosis of diabetes.

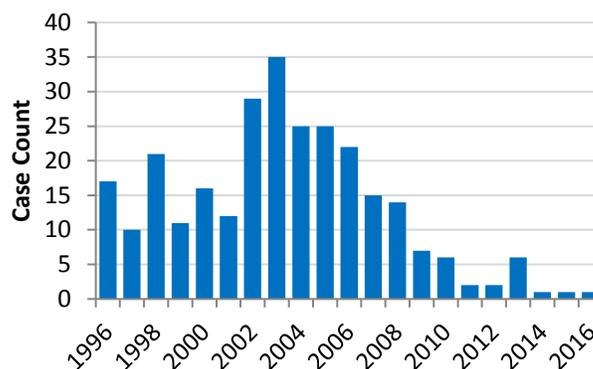
**Co-infection with HIV, 2012-2016, King County, WA**

	2012	2013	2014	2015	2016
	N (%)	N (%)	N (%)	N (%)	N (%)
Negative	93 (86)	101 (89)	78 (78)	81 (83)	90 (89)
Positive	3 (3)	5 (4)	6 (6)	3 (3)	3 (3)
Refused	1 (1)	2 (2)	2 (2)	1 (1)	0 (0)
Other	11 (10)	6 (5)	14 (14)	13 (13)	8 (8)

**HOMELESS**

Across the US tuberculosis continues to disproportionately affect those experiencing homelessness. One case of active TB was diagnosed in 2016 among persons experiencing homelessness. The number of active TB cases among those experiencing homelessness has decreased since its peak in 2002-2003 (64 active TB cases in these two years, where a single “outbreak strain” was responsible for 66% of homeless cases).

**TB cases among people experiencing homelessness, 1996-2016, King County, WA**



**DRUG RESISTANCE**

Of the 84 TB cases with drug susceptibility testing, 16 (19%) were resistant to at least one TB medication. There were no cases diagnosed with multidrug-resistant (MDR) TB. However, due to its lengthy treatment, we are still managing a MDR TB case diagnosed prior to 2016. Approximately 5 percent of global TB cases are now MDR.

**WANT TO KNOW MORE?**

Public Health – Seattle & King County  
Tuberculosis Control Program,  
[www.kingcounty.gov/health/TB](http://www.kingcounty.gov/health/TB)

Centers for Disease Control and Prevention  
Division of Tuberculosis Elimination,  
<http://www.cdc.gov/tb/>

1-In Washington State health care providers, laboratories and health care facilities are legally required to notify public health authorities at their local health jurisdiction of suspected or confirmed cases of tuberculosis. Case counts are calculated using these reports.

2-Rates are calculated with population data from the Washington State Office of Financial Management with the exception of foreign born rate. <http://www.ofm.wa.gov/pop/>

3-Rate of foreign born cases is calculated with population data from the U.S. Census Bureau: State and County QuickFacts. <http://quickfacts.census.gov/>