

Tuberculosis (TB) Update in Orange County

Quick Summary

- Active tuberculosis (TB) is an illness caused by the bacterium *Mycobacterium tuberculosis*.
- TB is the world's deadliest infectious disease. TB is a problem in the U.S. and a global epidemic.
- TB usually affects the lungs and spreads through the air when a person with active TB disease coughs.
- Those with latent TB infection are most likely to develop active TB disease within the first two years after becoming infected or when conditions challenge their immune system, like diabetes, smoking, HIV, or simply aging.

Overview

In 2017, Orange County reported 186 new active TB cases, compared with 165 cases in 2016. The Orange County annual TB incidence was 5.8 cases per 100,000 persons, which is more than double the national incidence rate of 2.8. Persons born outside the U.S. bear a significant TB burden. The Orange County TB rate among persons born outside of the U.S. (17.4 per 100,000) was nearly 20 times higher than the rate among U.S.-born persons (0.9 per 100,000). In 2017, 89.2% of Orange County's TB cases occurred in persons who were born outside the U.S. Persons born in Vietnam, Mexico, Philippines, India and Korea accounted for 88.6% of TB cases in non-U.S.-born persons (see figure 1).

Racial/ethnic disparities persist. In 2017, the Orange County TB rate among Asians (21.5 per 100,000) was 5 times higher than the rate among Hispanics (4.3 per 100,000) and 43 times higher than the rate among Whites (0.5 per 100,000).

The highest burden of TB disease continues to be among older adults. The Orange County TB rate among persons aged 65 years and older (13.1 cases per 100,000) was nearly 8 times higher than the rate among persons aged 19 years and younger (1.7 per 100,000). In 2017, there were only five pediatric (under 15 years of age) TB cases.

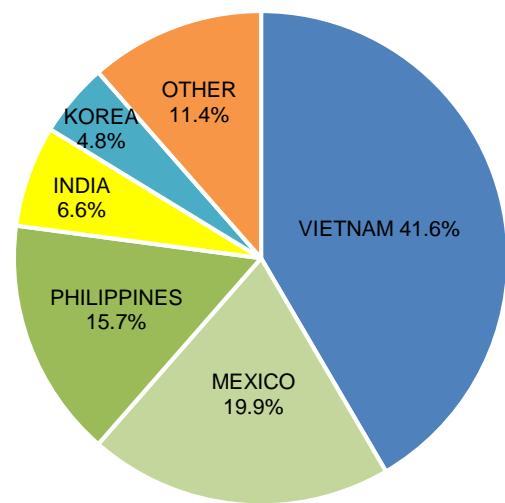
Overall, Orange County TB cases were more likely to be non-U.S.-born, Asian, 65 years of age and older, and male.

For more information about tuberculosis, please visit <http://www.ochealthinfo.com/phs/about/dcepi/tb>.

Drug Resistance

Multidrug-resistant (MDR) TB is TB resistant to the two most potent first line drugs, isoniazid and rifampin. Extensively drug-resistant (XDR) TB is MDR-TB additionally resistant to the two most potent classes of second line drugs, fluoroquinolones and injectables. In 2017, there were four (2.5%) MDR-TB and no XDR-TB cases in Orange County. Patients with MDR-TB and XDR-TB generally have poorer outcomes because the most effective TB drugs are ineffective against their disease.

Figure 1. Non-U.S.-born Tuberculosis Cases by Country of Birth, Orange County, 2017



Medical Comorbidities

Medical comorbidities such as diabetes mellitus, end stage renal disease, HIV infection, or use of immunosuppressing drugs can increase the risk of progression from latent TB infection to active TB disease. The most common medical comorbidity in Orange County TB cases was diabetes mellitus (29.9% of adult cases). In 2017, nearly one-third (31.7%) of adult, non-U.S.-born Orange County TB cases had diabetes as a comorbidity; this is in comparison to 7.7% of adult, U.S.-born cases.

Key Points in Screening and Treating Latent Tuberculosis Infection (LTBI)

In California, 1 in 17 persons are infected with TB, and 80% of active TB disease cases arise from latent TB infection. Risk assessment tools are available for use by medical providers to identify persons at risk for LTBI for screening and treatment: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/TB-Risk-Assessment.aspx>.

Who should I test for LTBI?

Patients with:

- Close contact to someone with infectious TB disease during their lifetime
- Immunosuppression, current or planned (HIV infection, organ transplant recipient, treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone \geq 15 mg/day for \geq 1 month) or other immunosuppressive medication)
- Birth or travel/residence ($>$ 1 month) in a country with an elevated TB rate (Any country besides the U.S., Canada, Australia, New Zealand, or Western or Northern Europe)

How should I test for LTBI?

- For patients born outside the U.S., use an IGRA (Interferon-Gamma Release Assay)
- For U.S.-born patients, use either a TB skin test (TST) or IGRA

How should I treat LTBI?

- 12-dose* isoniazid (INH) and rifapentine; PREFERRED regimen for most patients
*1 dose per week x 12 weeks
- 4 months of rifampin (RIF) daily
- 9 months of isoniazid (INH) daily; often safest regimen for those with HIV-infection

Who Can I Call with Questions?

County of Orange Health Care Agency
Pulmonary Disease Services
(714) 834-8790

How Do I Report a Suspected or Confirmed Case of Active TB?

Report a TB case or suspect within 24-hours of:

- Chest radiograph consistent with active TB; and/or
- Positive acid-fast smear or culture; and/or
- Initiating multiple-drug TB treatment

By Phone: (714) 834-8790

By Fax: (714) 834-7956

Link to Confidential Morbidity Report (CMR) form:

<http://www.ochealthinfo.com/phs/about/dcepi/epi/physprov/report>