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HEALTH ADVISORY: Oregon Trends in Advanced HIV Infection & HIV/TB Co-Infection

February 22, 2024

Dear Colleagues,

Benton County is sharing an Oregon Health Authority (OHA) Health Alert Network (HAN) advisory. The OHA HAN is related to trends in advanced HIV infection and HIV/TB co-infection. To date (02/22/2024), 3 cases of concurrent advanced HIV and pulmonary or disseminated tuberculosis (TB) disease have been reported in Oregon.

The HAN can be reviewed below.

We appreciate your diligence in maintaining the health and safety of our collective communities.

Respectfully,

Carolina Amador, MD, MPH, Public Health Officer

April Holland, Public Health Administrator

Trends in advanced HIV infection and HIV/TB co-infection

In late 2023 to early 2024, the proportion of people with newly diagnosed HIV in Oregon who had advanced HIV (CD4 count < 200 cells/mm^3) either concurrently or within 6 months of initial HIV diagnosis exceeded 30% compared to 20-24% previously. In this context, three people with advanced HIV were diagnosed with pulmonary or disseminated tuberculosis (TB) disease. Concurrent diagnoses of advanced HIV and TB disease is rare in Oregon. Two of the three cases were born in the United States without a history of travel to a TB endemic area. One case (33%) subsequently died.

Evaluation for TB disease in people with advanced HIV infection

For patients with respiratory symptoms and advanced HIV, the evaluation for TB should include chest imaging and collection of 3 sputum for AFB smear, nucleic acid amplification (NAA) test (e.g., GeneXpert, PCR) and culture for *M. tuberculosis*. In people with CD4 counts <200 cells/mm^3, normal chest radiography may occur despite sputum cultures being positive for *M. tuberculosis*. Chest radiographic findings of pulmonary TB may be markedly different, with infiltrates showing no predilection for the upper lobes, and cavitation being uncommon. Thoracic CT may show mild reticulonodular infiltrates despite normal chest radiography.

With increasing degrees of immunodeficiency, extrapulmonary or disseminated TB are more common. When patients are markedly immune-suppressed, TB can be a severe systemic disease with high fevers, rapid progression, and features of sepsis. If there is clinical suspicion for extrapulmonary involvement pleural fluid, pericardial fluid, ascites, blood, and/or cerebrospinal fluid should be sampled for acid fast bacilli (AFB) culture and *M. tuberculosis* NAA testing in addition to chest imaging and sputum collection. TB skin tests, QuantiFERON or TSPOT blood tests should be used primarily to screen for latent TB infection (LTBI). These tests may be falsely negative when a person has TB disease or there is immunodeficiency since the tests measure a person's immune reactivity to *M. tuberculosis*; they should not be used to rule out TB disease.

Evaluation for latent TB infection (LTBI) in people with HIV infection

All persons should be tested for LTBI at the time of HIV diagnosis regardless of their TB risk. Persons with negative diagnostic tests for LTBI, advanced HIV infection ($CD4^+$ count <200 cells/μL) should be re-tested for LTBI once they start antiretroviral therapy (ART) and attain a $CD4^+$ count $\geq$200 cells/μL.

HIV treatment in people with TB

All patients with probable or confirmed TB disease should receive an HIV test as part of the diagnostic process.
HIV treatment should not be withheld until completion of TB treatment. Co-treatment of HIV and TB is complex due to adherence demands of multidrug therapy for two infections, drug–drug interactions between the rifamycins and many anti-retroviral drugs, overlapping side effect profiles and the risk of

immune reconstitution inflammatory syndrome (IRIS), particularly with TB meningitis. In general, HIV treatment should be initiated within 2 weeks of starting TB treatment for patients with CD4 counts <50 cells/mm^3 and within 8 weeks for patients with higher CD4 counts with close monitoring for drug-related toxicities and IRIS.

HIV/TB co-infection should be managed with experts in both TB and HIV medicine.
Obtain clinical consultation by contacting your local public health department or the OHA HIV/STD/TB Program at 503-358-8516 or heidi.behm@oha.oregon.gov.

Unless otherwise noted, feel free to share this HAN notification with:
- Others within your organization.
- Professionals within your health, preparedness, and response affiliations.

Oregon 24/7 disease reporting: 971-673-1111