Situation

Since the COVID-19 pandemic began in March 2020, there has been a stark decline in the number of active tuberculosis cases detected worldwide per the WHO. In Riverside County, there were 65 new active TB cases identified in 2018 and 76 new cases in 2019, but as of August 2020 only 40 cases reported, with 18 weeks left in the year. Thus, at current rates, Riverside County will also see a drop in overall TB case detection. Although social distancing and facial coverings may reduce TB transmission as well as COVID-19, not all of this drop can easily be attributed to COVID-19 control measures. As many of the symptoms of active TB disease overlap with those of COVID-19 infection, there is concern that the decline in TB case detection may be from a lack of health care provider suspicion for TB, delayed diagnosis and/or treatment, and fewer patients seeking medical evaluation.

The World Health Organization has modeled that if the COVID-19 pandemic led to a global reduction of expected TB detection of 25% over 3 months, we could expect a 13% increase in TB deaths between 2020 and 2025, and an additional 1.4 million TB deaths could be registered as a direct consequence of the COVID-19 pandemic. This could even be a conservative estimate given that it does not factor in other impacts of the COVID-19 pandemic on TB transmission such as treatment interruption and poorer outcomes for those with TB who are co-infected with COVID-19. Although modelling studies have not been done at the national or state level, this information is particularly relevant for California as it remains the 3rd highest ranked state for TB case rate per population as of the CDC’s 2018 statistics.

Finding and treating those with TB remain the fundamental pillars of TB prevention and care. It is thus imperative to maintain appropriate clinical suspicion for TB, ensure uninterrupted services, and facilitate the diagnosis and treatment of TB infected individuals during the COVID-19 pandemic.
Clinical Recommendations for TB Workup During COVID-19

• Simultaneous testing for both TB and COVID-infection would generally be indicated for three main reasons:
  1. Clinical features that are common to both diseases; or
  2. Simultaneous exposure to both diseases; or
  3. Presence of risk factors for poor outcomes of either disease. Per the CDC, these risks include type 2 diabetes, immunocompromised state (such as solid organ transplant recipients), cancer, and severe kidney disease.

• Other considerations for TB testing in the setting of COVID-19 infection include:
  • Unresolving symptoms that extend the typical 2-4-week duration of COVID-19 infection.
  • High clinical suspicion in TB-vulnerable populations (foreign-born, homeless, recent, or active incarceration, immunocompromised, exposure history, etc.).
  • Unusual radiographic findings such as cavitation, which are much less typical of COVID-19.
  • Symptoms unusual for COVID-19 infection but typical of TB infection (see below).

<table>
<thead>
<tr>
<th>Finding</th>
<th>Active TB Disease</th>
<th>COVID-19 Infection</th>
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</thead>
<tbody>
<tr>
<td>Common Symptoms</td>
<td>Cough (with sputum production, hemoptysis), fever, weight loss, night sweats, anorexia, lymphadenopathy</td>
<td>Dry cough, fever, malaise, shortness of breath, loss of taste/smell, diarrhea, GI upset, myalgias, congestion, sore throat</td>
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<tr>
<td>Symptom Onset after Exposure</td>
<td>Rarely abrupt, can insidiously occur over several months</td>
<td>2-14 days unless asymptomatic carrier</td>
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Recommendations for Providers

• Clinicians are asked to remain alert for potential cases of TB among persons presenting with respiratory or constitutional symptoms that may represent active TB infection and perform appropriate evaluation as early as possible.
• TB treatment should be initiated promptly once an active case is identified, at the discretion of the treating physician.
• Physicians should be aware that commonly used medications for TB treatment (INH, rifampin, pyrazinamide, rifapentine, rifabutin) may have drug-drug interactions with medications used to treat COVID-19 (including remdesivir and lopinavir/ritonavir).
• Ensure TB services are not disrupted during the COVID-19 response.