OHIO UNIVERSITY HERITAGE COLLEGE OF OSTEOPATHIC MEDICINE
TUBERCULOSIS SCREENING POLICY

Purpose:
To provide guidelines for tuberculosis (TB) screening of Heritage College students in accordance with Ohio University policy 21.001, and TB screening of students who attend summer programs involving clinical activities through Heritage College.

Guidelines for Students in Health Professions:

1. All students in Health Professions who will be working with patients and thus at increased risk for exposure to TB infection will be screened for tuberculosis.

2. Students with previous positive tuberculosis testing results from outside facilities will follow the guidelines below:

   - A student who has had a prior positive TB skin test will be required to complete a symptom screen and IGRA blood test.
   - A student who has had a prior positive IGRA blood test will be required to complete a symptom screen and a PA CXR.
   - A student who has completed a course of LTBI therapy will be required to receive symptom screening annually. A PA CXR will be ordered at the discretion of the TB Prevention Clinic or health care provider.

3. Students with a history of BCG vaccination will be screened for tuberculosis infection, preferably via an IGRA blood test (e.g. T-SPOT.TB or QuantiFERON Gold In-Tube). This recommendation for IGRA blood testing is in accordance with Centers for Disease Control (CDC) recommendations for persons who have received the BCG vaccine.

   - All INITIAL positive IGRA blood tests will undergo a PA chest x-ray, which will be interpreted by a radiologist.
   - “Borderline” IGRA blood test results will be repeated at least once immediately after the borderline test result is received. If a second IGRA blood test is borderline, follow-up testing will be determined in consultation with the student and the TB Prevention Clinic or health care provider.

4. If a student with a history of BCG vaccination requests a TB skin test in place of an IGRA blood test, they may proceed with this method of screening. However all positive TB skin tests will be evaluated with an IGRA blood test and a PA CXR. A POSITIVE skin test is ≥ 10 mm, unless other risk factors are present. See appendix A.

5. Students with no prior TB testing or with previous negative tuberculosis testing results will be required to have an initial screening via a two-step TB skin test performed and read by OU-HCOM designated providers.

   - ≥10 mm = Positive, unless KNOWN exposure to TB, in which case ≥5 mm will be used as the cut-off for a positive result. See Appendices A, B, and C.
6. In subsequent years, a single TB skin test will be sufficient.
   - \( \geq 10 \text{ mm} = \text{Positive, unless KNOWN exposure to TB in which case } \geq 5 \text{ mm} \) will be used as the cut-off for a positive result. See Appendices A and B.

7. In subsequent years, an IGRA may be used as a screening test (based on student preference, due to history of BCG vaccine, or prior positive TB skin test). Or, they may use a TB skin test if they have not previously tested positive via a TB skin test.

8. A student may request an IGRA blood test in place of a TB skin test, with the understanding of the associated costs of this test.

9. ALL students who screen POSITIVE for Tuberculosis infection (via either TB skin test or an IGRA blood test) but have NO symptoms and have a NEGATIVE CXR will be offered treatment for LTBI.
   a) Students who decline treatment for LTBI are required to sign a letter declining treatment. Treatment for LTBI may be initiated at any time regardless of signing this form. This letter will be placed in the student’s file and uploaded to E*Value.
   b) A letter of completion must be submitted after the student has completed treatment for LTBI; this letter will be placed in the student’s file and uploaded to E*Value.
   c) Students with positive IGRA blood tests results or PPD results (whether they take treatment for LTBI or not) will be screened annually for exposure and symptoms. They do not need to have repeat TB Skin testing nor repeat IGRA testing. A chest x-ray will be ordered at the discretion of the healthcare provider.

10. All students who screen POSITIVE for tuberculosis infection (via either TB skin test or an IGRA blood test) and have POSITIVE findings on CXR and/or POSITIVE symptoms for tuberculosis will be referred to the local health department or health care provider for management of ACTIVE Tuberculosis infection.

**Recommendations for students and faculty who travel to high-prevalence areas:**

Pre-travel and post-travel TB screening is required for Ohio University students and faculty who plan to travel to a high-prevalence area (Africa, Asia, Eastern Europe, Central or South America, etc.) and who will come in contact routinely with at risk populations.

For a list of high burden countries and profiles of these countries, see the Stop TB Partnership website: [http://www.stoptb.org/countries/tbdata.asp](http://www.stoptb.org/countries/tbdata.asp) – Note that the ranking of countries changes yearly.

The general recommendation is that people at low risk for TB, which includes most travelers, do not need to be screened before or after travel.

Screening may occur via TB skin testing or an IGRA blood test. If the student or faculty member has received a BCG vaccine in the past, an IGRA blood test is preferred. Otherwise, a TB skin test may be utilized.

Pre-travel TB screening should occur within 2 months of departure.
Post-travel TB screening should occur 8-10 weeks after their return from travel.
Summary of Testing and Follow-up Actions:

Students with a history of BCG vaccination:

Initial preferred testing: IGRA blood test (e.g. T-SPOT.TB)

<table>
<thead>
<tr>
<th>RESULT</th>
<th>FOLLOW-UP ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE IGRA blood test</td>
<td>PA CXR, and follow up appointment to TB Prevention Clinic or health care provider</td>
</tr>
<tr>
<td>NEGATIVE IGRA blood test</td>
<td>No further testing or appointments needed. Annual screening via IGRA (preferred) or PPD</td>
</tr>
<tr>
<td>BORERLINE IGRA blood test</td>
<td>Repeat IGRA blood test</td>
</tr>
</tbody>
</table>

If IGRA blood testing is deferred and TB skin test used (Two step for first test, single step test in subsequent years):

<table>
<thead>
<tr>
<th>RESULT</th>
<th>FOLLOW-UP ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE TB Skin test</td>
<td>IGRA blood test and PA CXR</td>
</tr>
<tr>
<td>NEGATIVE TB Skin test</td>
<td>No further testing or appointments needed. Annual screening via IGRA or PPD</td>
</tr>
</tbody>
</table>

Students without a history of BCG vaccination:

Initial testing: Two-step TB Skin test
Subsequent testing: A single step TB skin test or IGR blood test

<table>
<thead>
<tr>
<th>RESULT</th>
<th>FOLLOW-UP ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE TB skin test</td>
<td>IGRA blood test and PA CXR</td>
</tr>
<tr>
<td>NEGATIVE TB skin Test</td>
<td>No further testing or appointments needed; annual screening via IGRA or PPD</td>
</tr>
</tbody>
</table>

If TB skin testing is deferred and IGRA blood test (e.g. T-SPOT.TB) used:

<table>
<thead>
<tr>
<th>RESULT</th>
<th>FOLLOW-UP ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE IGRA blood test</td>
<td>PA CXR and follow up appointment with TB Prevention Clinic or healthcare provider</td>
</tr>
<tr>
<td>NEGATIVE IGRA blood test</td>
<td>No further testing or appointments needed; annual screening via IGRA or PPD</td>
</tr>
<tr>
<td>BORERLINE IGRA blood test</td>
<td>Repeat IGRA blood test</td>
</tr>
</tbody>
</table>
## Appendix A

### How Are TST Reactions Interpreted?

Skin test interpretation depends on two factors:

- Measurement in millimeters of the induration
- Person’s risk of being infected with TB and of progression to disease if infected

#### Classification of the Tuberculin Skin Test Reaction

| An induration of 5 or more millimeters is considered positive in |
|----------------------------------|-------------------|
| HIV-infected persons             |                   |
| A recent contact of a person with TB disease |                   |
| Persons with fibrotic changes on chest radiograph consistent with prior TB |                   |
| Patients with organ transplants  |                   |
| Persons who are immunosuppressed for other reasons (e.g., taking the equivalent of >15 mg/day of prednisone for 1 month or longer, taking TNF-α antagonists) |                   |

| An induration of 10 or more millimeters is considered positive in |
|----------------------------------|-------------------|
| Recent immigrants (< 5 years) from high-prevalence countries |                   |
| Injection drug users             |                   |
| Residents and employees of high-risk congregate settings |                   |
| Mycobacteriology laboratory personnel |                   |
| Persons with clinical conditions that place them at high risk |                   |
| Children < 4 years of age        |                   |
| Infants, children, and adolescents exposed to adults in high-risk categories |                   |

| An induration of 15 or more millimeters is considered positive in any person, including persons with no known risk factors for TB. However, targeted skin testing programs should only be conducted among high-risk groups. |
|----------------------------------|-------------------|

Appendix B

What is the positive cut-point baseline TST result for Health Care Workers?

Additional resources: http://www.cdc.gov/tb/publications/guidelines/infectioncontrol.htm

When making decisions for the diagnosis and treatment of latent tuberculosis infection (LTBI), setting-based risk factors (e.g., the prevalence of TB disease) and personal risk factors (e.g., having an immunocompromising condition or known contact with a TB case) should be assessed when choosing the cut point for a positive TST result.

“For HCWs who are at low risk (e.g., those from low incidence settings), a baseline result of >15 mm of induration (instead of >10 mm) might possibly be the cut point. When 15 mm is used as the cut point, TST results of 10–14 mm can be considered clinically negative. These HCWs should not have repeat TST, and the referring physician might not recommend treatment for latent tuberculosis infection (LTBI).” (p. 47)

For HCWs who are at medium risk, a baseline TST result of >10 mm is considered positive. For HCWs who are known contacts to a person with infectious TB disease (i.e., HCWs who are tested during contact investigations), and for HCWs who are infected with HIV, a TST result of >5 mm is considered positive.

Appendix C

Two-Step Tuberculin Skin Test (TST) Method

<table>
<thead>
<tr>
<th>1st TST</th>
<th>2nd TST</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>Negative</td>
<td>Repeat TST in 1–3 weeks</td>
</tr>
<tr>
<td>Positive</td>
<td></td>
<td>Person probably does not have infection</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>Boosted reaction due to infection in the past</td>
</tr>
</tbody>
</table>
TB Screening at Ohio University Heritage College of Osteopathic Medicine

No HX of Positive TB Skin Test

2-Step TB Skin Test

Negative

Positive

No future testing
Continue Annual IGRA

History of BCG Vaccine

IGRA Blood

Negative

Positive

No future testing
Continue Annual IGRA

Symptom Screen
- IGRA Blood Test (If not already done; borderline IGRA requires repeated IGRA)
- PA Chest X-Ray
- Refer to TB Prevention Clinic or healthcare provider

HX of Positive TB Skin Test and/or Positive IGRA

Positive IGRA, Negative Symptom Screen
Negative

Refer to TB Prevention Program or HC Provider for Consideration of LTBI treatment

Positive PA Chest X-Ray
And/or positive symptoms
Negative or Positive IGRA

Refer to Local Health Dept. for Assessment of Active Tuberculosis

Hx of LTBI; Documented prescription

Annual Symptom Screen
PA Chest X-Ray at the discretion of the TB Clinic or HC Provider

IGRA Blood Test (If not already done; borderline IGRA requires repeated IGRA)

PA Chest X-Ray
Refer to TB Prevention Clinic or healthcare provider

Refer to Local Health Dept. for Assessment of Active Tuberculosis

No future testing
Continue Annual 1-step TB Skin Test unless travel abroad requires additional testing (see policy)

Hx of positive TB Skin Test was likely a false positive. However, if there is concern that TB Skin Test was true positive and IGRA is a false negative, can offer Referral to HC Provider or TB Prevention Program for discussion

Neg. Symptom Screen
Neg. IGRA
Neg. Chest

Positive IGRA, Negative Symptom Screen
Negative

Refer to TB Prevention Program or HC Provider for Consideration of LTBI treatment

Positive PA Chest X-Ray
And/or positive symptoms
Negative or Positive IGRA

Refer to Local Health Dept. for Assessment of Active Tuberculosis

4/22/2015 kjk/km