Laboratory Update

Richard Oatis, Supervisor, Maryland State TB Laboratory

September 29, 2022
Uniting for Ukraine

- Our lab is available to offer testing required for the program (QFT, smear/culture/GeneXpert, etc.)
- CDC is requiring the laboratory to report workload data for Uniting for Ukraine.
- Please write “U4U” in the top right hand corner of all lab requisitions sent as part of the program.
- We will be able to provide some extra tubes to ensure testing availability.
### Example:

**Infectious Agents: Culture/Detection**

<table>
<thead>
<tr>
<th>BACTERIOLOGY</th>
<th>MYCOBACTEROLOGY/AFB/TB</th>
<th>SPECIAL BACTERIOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPECIMEN SOURCE CODE</strong></td>
<td><strong>SPECIMEN SOURCE CODE</strong></td>
<td><strong>SPECIMEN SOURCE CODE</strong></td>
</tr>
<tr>
<td>Bacterial Culture - Routine</td>
<td>AFB/TB Culture and Smear</td>
<td>Legionella Culture</td>
</tr>
<tr>
<td>Addt Specimen Codes:</td>
<td>AFB/TB Referred Isolate for ID</td>
<td>Leptospira</td>
</tr>
<tr>
<td>Bordetella pertussis</td>
<td>M. tuberculosis referred Isolate for genotyping</td>
<td>Mycoplasma (Outbreak Investigation Only)</td>
</tr>
<tr>
<td>Group A Strep</td>
<td>Nuclear Acid Amplification Test for</td>
<td></td>
</tr>
<tr>
<td>Group B Strp Screen</td>
<td>M. tuberculosis/Complex (GermXpert)</td>
<td></td>
</tr>
<tr>
<td>C. difficile Toxin</td>
<td></td>
<td>Pre-approved submitters only</td>
</tr>
<tr>
<td>Diphteria</td>
<td>Blood Parasites:</td>
<td>Chlamydya trachomatis/GC NAAT</td>
</tr>
<tr>
<td>Foodborne Pathogens</td>
<td>Country visited outside US:</td>
<td><strong>Nonvirus</strong> (See comment on reverse)</td>
</tr>
<tr>
<td>(O. asym, O. perforigoeae, S. aureus)</td>
<td>Ova &amp; Parasites</td>
<td>QuantiFERON</td>
</tr>
<tr>
<td>Gonorrhoea Culture:</td>
<td>Immigrant:</td>
<td>Incubation: Time began: a.m./p.m.</td>
</tr>
</tbody>
</table>

**State Lab**

**Use Only**

**Infectious Agents: Culture/Detection**

- **Infected Care Provider:**
  - Last Name:
  - M.I.:
  - Date of birth (mm/dd/yyyy):
- **Address:**
  - City:
  - County:
  - State:
  - Zip Code:
- **Contact Name:**
  - City:
  - County:
  - Zip Code:
- **Phone #:**
- **Fax #:**
- **Test Request Authorized by:**
  - Sex: Male, Female, Transgender M to F, Transgender F to M
  - Ethnicity: Hispanic or Latino Origin?
  - Race: American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/Other Pacific Islander, White
- **NRN/Case #:**
- **DOC #:**
- **Outbreak #:**
- **Submitter Lab #:**
- **Date Collected:**
- **Time Collected:**
- **Onset Date:**
- **Reason for Test:**
  - Screening, Diagnosis, Contact, Test of Cure, 2-3 Months Post Rx
  - Suspected Carrier, Isolate for ID, Release
- **Therapy/Drug Treatment:**
  - No, Yes
  - Therapy/Drug Type:
  - Therapy/Drug Date:

**Specimen Source Code**

- **Bacteriology**
- **Mycobacteriology/AFB/TB**
- **Special Bacteriology**

**Restriction Tests**

- **Pre-approved submitter only**

**Parasitology**

- **Chlamydya trachomatis/GC NAAT**
- **Nonvirus** (See comment on reverse)
- **QuantiFERON**
- **Incubation:** Time began: a.m./p.m.
- **Time ended:** a.m./p.m.
PCR for culture ID of TB - Update

- AccuProbe DNA probes will be discontinued by the end of 2022.
- Our laboratory is implementing an in-house developed real-time PCR for the ID of *M. tuberculosis* and *M. avium* complex from culture.
- Proof of concept has been completed and validation is in process.
- There should be no real noticeable change for you.
4 Month Regimen

- Baseline molecular DSTs for INH, PZA, RIF, and fluoroquinolones.
- Phenotypic DSTs for RIF, INH, PZA, and MOX.
Phenotypic DST changes

- Our lab plans to implement Sensititre for second line DST.
- Additionally, we will look into validating the most critical second line drugs (including Moxifloxacin) in MGIT.
Molecular DST

- We are currently working with the Division of Molecular Biology to bring sequencing in-house.
- The Core Sequencing Unit is working on the necessary QA measures to be compliant with CLIA regulations.
- We are looking into using GeneXpert to perform the necessary molecular testing.
Questions?

- Rich’s office: 443-681-3944
- Main Lab extension: 443-681-3950
- Email: richard.oatis@maryland.gov