Mycobacterium tuberculosis: Assessing Your Laboratory

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Audience

- *Mycobacterium tuberculosis: Assessing Your Laboratory* is intended for laboratories that perform TB testing in the United States
  - Clinical/Hospitals
  - Public health
  - Commercial

- Tool written by representatives of U.S. clinical, public health, and commercial laboratories
Versions

• 1995
  – Liquid culture
  – Rapid culture ID

• 2009
  – Major revision
  – Molecular detection of Mtb & drug resistance
  – Online version available through APHLs TB Homepage

• 2013
  – Molecular and bibliography update
What does the Tool Assess?

• Designed to be a self-assessment tool
• Assists in assessing the quality of TB diagnostic practices
• Scores are not compiled
• Information is intended for your laboratory’s own self-improvement
• Intended to provide information on best-practices in the laboratory
How does the Tool Work?

The tool consists of a series of 94 questions (yes/no/na) divided into the following sections:

• General Specimen Collection and Handling
• Safety
• General Laboratory Practice
• Smears from Clinical Specimens
• Public Health and Epidemiology
• Specimen Processing and Decontamination
• Inoculation and Growth Detection
• Susceptibility Testing
• Direct Detection
How does the Tool Work?

• Laboratories answer only the questions in the sections that correspond with services that their mycobacteriology laboratory provides

• Suggested that several individuals within the mycobacteriology laboratory participate in the self-assessment process
Questions & Guidance

• All questions answered with Yes, No, or Not Applicable

• Critical Questions
  – **Yellow Questions** (n=5) – A negative answer to a yellow question indicates a gap in the quality systems of the laboratory.
  – **Red Questions** (n=19) – A negative answer to a red question indicates a severe gap in safety or quality

• All questions include guidance with explanation and references
Once you finish using the tool, what is the end product? How can you use the end product?

• Opportunity to review procedures
• Utilize targeted guidance and references provided for each question
• Assign priorities and adopt a plan to update and improve laboratory practices as needed
• The addition of the electronic version allows APHL periodic analysis of user performance which is useful for the development of future TB laboratory training tools
Next Steps for the Tool and Lessons Learned

• Future Updates:
  – With the emerging technologies being utilized in the laboratory (MALDI-TOF, Xpert), best practices will need to be reassessed and incorporated.
  – As the advancement in rapid access molecular testing begins to alter the TB diagnostic landscape, the resulting effects on testing programs will need to be addressed in future editions

• Laboratories prefer flexibility of using hard copy version of the tool. How can the online version be modified or utilized better to capture trends?
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