



New(er) Testing Offered by the Texas DSHS Mycobacteriology Laboratory

Benjamin Alpers, BA

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Has the following disclosures to make:

- No conflict of interests
- No relevant financial relationships with any commercial companies pertaining to this activity





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**Texas Department of State
Health Services**

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*World TB Day
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Presented by:
Ben Alpers, TB Reference Team Lead

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Objectives

- Describe recently added diagnostic processes available at or through the DSHS Laboratory
 - Urine cultures
 - Next-Generation Whole Genome Sequencing
 - Detection of *M. bovis* and *M. bovis* BCG

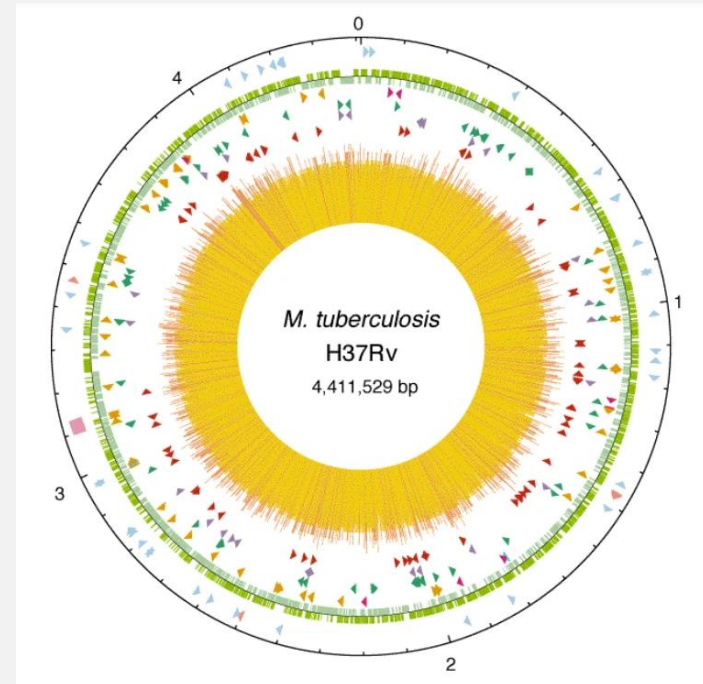


AFB Smear and Culture for Urine

- City of Houston Laboratory performs this testing
 - Sample needs to be shipped cold to DSHS lab with submission form clearly marked as urine specimen type
 - Houston requires receipt within 7 days of collection (DSHS can only ship Monday-Thursday 1:00 pm)
- DSHS Laboratory can perform unofficial Xpert
 - Result delivered by phone or email, no official reporting available

Molecular Drug Susceptibility Testing Using NG Whole Genome Sequencing

- WGS looks at entire DNA profile of *MTB complex*
- Performed on culture only
- Originally instated to obtain PZA results
 - Results also available for Isoniazid, Rifampin, Ethambutol and Fluoroquinolones
 - Reports list specific mutation(s) detected and interpret whether susceptible or resistant



WGS for Genotyping

- Same technique although data analyzed differently
 - Used to establish relatedness of different isolates
 - Most often used for epidemiological investigation
- Previously performed at Michigan Department of Health and Human Services
 - DSHS will begin submitting data directly to CDC in April
 - Little to no change from submitter's viewpoint
 - May see a decrease in turnaround time for both genotyping results and molecular DST pipeline results

Speciation of the MTB complex

- PCR test that can differentiate *M. bovis* and *M. bovis* BCG from the MTB complex
- Specimens were previously sent to CDC but testing could take months
 - Performed when genotyping suggests *bovis* or BCG
 - Performed by special request for submitters nationwide (CDC no longer offers this test)

Thank You!



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