

# Release From Isolation:

## Focus on Tuberculosis

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## Disclosures

- I have no disclosures or conflicts of interest
- This presentation does not discuss off-label or unapproved drugs or devices

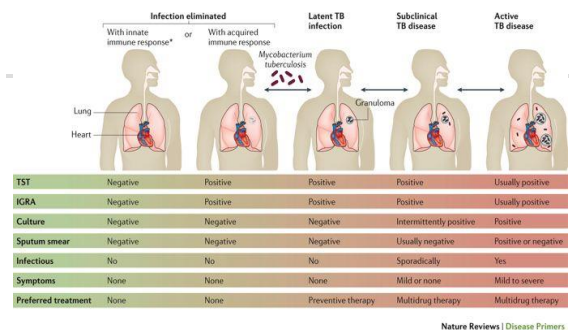
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## Objectives

- Identify infectiousness of TB patients
- Discuss criteria for isolation clearance in
  - Ohio Revised Code
  - Ohio Administrative Code
    - Core Curriculum on TB
    - MMWR
  - Chapter 16, Ohio TB Manual

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## Review – Disease Progression



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## Airborne Isolation & Tuberculosis



## Ohio Revised Code 3701-3-13

Measure	ORC 3701-3-13
AFB Smear Negative	3 Consecutive
TB Authority clears	TB Control Unit
Response to Treatment	Significant clinical response to therapy
Treatment Method	
Treatment Duration	
TB risk	
Policy	Refers to OAC 3701-15

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## Ohio Administrative Code 3701-15-3

Measure	OAC 3701-15
AFB Smear Negative	
TB Authority clears	TB Control Unit
Response to Treatment	
Treatment Method	
Treatment Duration	
TB risk	
Policy	Refers to Core Curriculum

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## Core Curriculum on TB

Measure	Core Curriculum*
AFB Smear Negative	3 Consecutive
TB Authority clears	
Response to Treatment	Significant clinical response to therapy
Treatment Method	Provided via DOT
Treatment Duration	2 weeks or longer
TB risk	
Policy	

\* Table 7.2

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## Ohio TB Manual

Measure	ODH TB Manual - chapter 16
AFB Smear Negative	3 Consecutive
TB Authority clears	Required
Response to Treatment	Significant clinical response to therapy
Treatment Method	Provided via DOT
Treatment Duration	At least 2 weeks
TB risk	low/unlikely or alternate diagnosis is made
Policy	Refers to Core Curriculum

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## Hospital Infection Control

Measure	Hospital
AFB Smear Negative	Infection Control Officer
TB Authority clears	
Response to Treatment	
Treatment Method	
Treatment Duration	low/unlikely or alternate diagnosis is made
TB risk	OAC 3701-15 Refers to MMWR 2005
Policy	

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## MMWR 2005 Health Care Settings

Measure	MMWR 2005 HC Facilities
AFB Smear Negative	3 Consecutive
TB Authority clears	Required
Response to Treatment	
Treatment Method	Provided via DOT
Treatment Duration	
TB risk	
Policy	Infection control plan

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## Health Care Settings

- Risk assessment determines testing protocol (appendix B of 2005 MMWR)
  - Based on case rates
    - National ~ 2.8/100,000 population
    - Ohio ~1.5/100,000 population
    - Most Ohio counties <1.4/100,000 population
    - Franklin County ~6/100,000 population
  - Number of TB patients in facility in 1 year
  - Number of patients (beds)
  - Does facility have triage/infection control plan
  - Has there been an MDR-TB patient in facility in previous 5 years?

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## Nucleic Acid Amplification Test

NAA	AFB	Recommendation
+	+	Start treatment. PPV >95% NAA in AFB + cases
+	–	Repeat NAA test. Presume TB if NAA (+)
–	+	Repeat NAA. Test for inhibitors, if none detected presumes nontuberculous mycobacteria (NTM)
–	–	<ul style="list-style-type: none"> <li>• Use clinical judgement</li> <li>• NAA sensitivity 50-80% in detection AFB (-) Culture (+) pulmonary TB</li> </ul>

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## Case Study #1

- 35 YO male from Nepal w/ pulmonary TB
- Initially NAA +, and later culture positive
- MDDR – no mutation
- DST – pan susceptible
- RIPE x 4 weeks via DOT
- Weight gain 3 lbs., decreased cough
- Persistently AFB +, 3<sup>rd</sup> wk. cultures pending

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## Case Study # 2

- 63 YO U.S.-born, African American female
- Retired health care worker
- S&S: cough x3 mos., wt. loss, fatigue
- CXR: RUL infiltrate/cavity
- AFB +, MDDR/NAA not done, culture pending
- RIPE initiated 2 weeks ago
- History *M. Avium*

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## Case Study #3

- 23 YO female from Somalia
- C/O cough, wt. loss, night sweats
- Sputum: AFB +/NAA +, culture pending
- MDDR – not done
- RIPE X 3 weeks
  - Decreased cough
- AFB-, AFB+, AFB+, AFB-, AFB-

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## Case Study #4

- 35 YO male from Mexico
- Fatigue, 25 lb. wt. loss, cough x 5 mos, bilateral upper lobe cavities, pleural effusion
- AFB+, NAA+, Culture +, pan susceptible
- Culture converted at 15 weeks
- Drug levels within range
- Repeat DSTs week 12 sputum
- RIPE x 10 weeks, RI x 52 weeks

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## PARTICIPANT QUESTIONS



What is the most common factor that contributes to TB transmission in Ohio?



## Resources

Controlling TB in the United States

<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5412a1.htm>

Updated Guidelines for Using Interferon Gamma Release Assays to Detect Mycobacterium tuberculosis Infection --- United States, 2010

[https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5905a1.htm?s\\_cid=rr5905a1\\_e](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5905a1.htm?s_cid=rr5905a1_e)

Core Curriculum on Tuberculosis: What the Clinician Should Know

<https://www.cdc.gov/tb/education/corecurr/index.htm>

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## Resources (2)

Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings

[https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm?s\\_cid=rr5417a1\\_e](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm?s_cid=rr5417a1_e)

Ohio Revised Code 3701-3-13

<http://codes.ohio.gov/oac/3701-3>

Ohio Administrative Code 3701-15-03

<http://codes.ohio.gov/oac/3701-15-03>

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