Indiana Department of Health

TB PREVENTION & CASE MANAGEMENT –CORE SERVICE & ISOLATION UPDATES

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OUR MISSION:

To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.

Learning Objectives

- Review tuberculosis (TB) Prevention & Case Management Core Services
- Discuss strategies to meeting TB core services
- Review TB State KPI & local KPI options
- Discuss changes to isolation recommendations for patients with TB

TB Prevention & Case Management Core Services

- LHDs should **provide or ensure case management** for those with **suspected or confirmed TB disease**, including investigation and specimen collection, enforcing isolation, providing directly observed therapy, and coordinating clinical and social needs
- LHDs should **conduct investigations** for those diagnosed with **infectious TB disease**, including contact identification, education, testing, and treatment (as needed)
- LHDs should **coordinate clinical follow-up** for those designated with a **Class B immigration status** and provide or ensure case management and directly observed therapy for TB if needed
- LHDs should work with IDOH to **identify and treat latent TB infection (LTBI)** according to the IDOH TB Elimination Plan
- LHDs should be aware of the socioeconomic, environmental, and behavioral factors that place individuals in their communities at risk, such as housing/crowding, sexual behaviors, and underrepresented/underserved individuals

TB Prevention & Case Management at LHDs

- Establish TB case manager (and backup)
  - Generally, the public health nurse (PHN) will serve as the TB case manager
  - Case manager serves as the liaison linking all involved in patient's care together
  - Case manager provides a variety of duties depending on the patient
- Ensure TB case manager has received TB training from IDOH
  - Contact your TB Regional Nurse Consultant for training
  - Phlebotomy training from IDOH or other sources
  - FIT testing
- Have supplies on-hand
  - Sputum containers
  - N95s
  - Incentives/enablers
  - Educational materials for families/public
  - Testing supplies (TST & IGRA)

TB case manager duties

- Conducts initial investigation, including patient interview, and medical record review
- Ensures/coordinates clinical evaluation
- Enforces isolation
- Obtains TB medication through Purdue Pharmacy
- Provides treatment via directly observed therapy (DOT)
- Collects laboratory specimens
- Monitors clinical progress and provides reports to provider/IDOH
- Documents all case management and treatment within state's surveillance system, NBS
- Provide education to patients and families
- Conducts a contact investigation, including notification, testing, documentation, and treatment
- Supports/coordinates social needs, including housing, food, health insurance, etc.

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Class B Immigration Follow-Ups

- IDOH will notify LHD if a person with a Class B designation is in your jurisdiction
- LHD is responsible for:
  - **Locating individual**
  - Educating them on TB and reason for Class B status
  - **Coordinating** clinical evaluation, including TST/IGRA, chest imaging, sputum collection (if needed)
  - Providing LTBI or TB treatment, if needed
  - Reporting back results to CDC via IDOH

Preparation ahead of patient with TB disease

- Written plan for coverage of case management duties
  - DOT coverage and backup
- Obtain sputum containers from the IDOH Lab via Limsnet
- Ensure staff are FIT tested for N-95s and order supply of properly sized masks
- Have DOT and isolation agreements, other documents prepared
- Have a list of community partnerships/resources established

Community partnerships

- Important to have established partnerships for TB-related services including clinical and social needs
- Clinical care
  - Provider comfortable prescribing TB disease medication
  - Radiology to provide low-cost chest x-rays
  - Laboratory for IGRA testing (if not in-house)
- Housing that will meet isolation requirements (i.e., motels vs hotels)
- Food pantries/food resources
- Mental health and substance use resources

Interpretation

- Providing services to a person in their language of choice is the ethical and legal thing to do
- Likely to encounter individuals who prefer to converse in another language while providing TB services
- Certified interpreters should be used/available for all interactions
  - It is not appropriate to utilize family members/friends to provide interpretation
  - Google Translate is not an acceptable tool
- Several vendors available for in-person or telephonic interpretation
  - Partner with local hospitals/community groups

IDOH TB program resources

IDOH TB program resources

- Clinical consultation
  - TB Regional Nurse Consultants
  - TB Medical Consultant – Dr. Brad Allen
  - TB Center of Excellence (Rutgers)
- Case management and technical support/consultation
- Contact investigation consultation and site visit support
- Training and education for new LHD staff
- Training and education resources for providers, patients, etc.
- Assistance with data entry for large investigations

IDOH TB program resources

- Laboratory TB testing via IDOH Laboratory
  - IGRA, AFB smear, PCR, culture, drug sensitivity testing, pyrosequencing, genotyping
  - Testing of hospital-collected samples by request
- TB medications via Purdue Pharmacy
  - TB disease
  - LTBI
- Reimbursement for enablers and incentives via Hoosier Uplands
  - Groceries, phone minutes, transportation, housing, etc.

TB Prevention & Case Management State KPI

- Number of counties with established partnerships for housing, food security, and interpretation services to assist in case management services for patients with TB and latent TB infection in their communities

TB Prevention & Case Management Local KPIs

Potential KPI Data for TB Prevention & Case Management :

- Number of patients with laboratory-confirmed TB disease with treatment started within seven days of specimen collection
- Number of patients with TB disease with known HIV status
- Number of adult patients with pulmonary TB disease with sputum cultures
- Number of contacts to patients with infectious TB disease who are examined for infection and disease
- Number of patients with LTBI who start and complete treatment
- Number of individuals with a Class B immigration status with a completed TB evaluation

TB Isolation Updates

Glossary of Terms

RIR=Respiratory Isolation Restrictions. Restrictions placed on persons with communicable condition with the goal of preventing transmission of illness. More inclusive than Isolation Precautions.

PWTB=Person with TB.

RIPE=Typical four-drug therapy for pansensitive/presumed pan-sensitive MTB. RIF/INH/PZA/EMB. Sometimes noted as **HRZE**

AFB= Acid fast bacilli, which M. TB is a type of

Genotypic/Molecular Drug Susceptibility Testing=Testing done to rapidly detect mutations in the patient's specific strain of TB that could indicate drug resistance. "Mutation detected" may indicate resistance. "Mutation Not Detected" may indicate drug susceptibility. Final DST results require phenotypic/growth-based testing.

- inhA and katG=results related to INH.
- rpoB=results related to RIF
- Xpert MTB/RIF detects presence of MTB DNA and RIF resistance simultaneously

Review of Current TB Isolation Guidance

- Goal of TB isolation is to prevent/reduce transmission in a community
- TB isolation policies vary across the US
  - Generally positive sputum smear = infectious and needs to be in isolation
  - Removal of isolation is dependent on sputum smear status, sputum culture status, other factors
- Indiana Administrative Code (Communicable Disease Rule) currently requires patients with infectious TB (sputum smear positive) to be in isolation
  - To be released from isolation, patient must have all three:
    - Three consecutive smear negative sputa
    - 14 days of anti-TB meds
    - Clinical improvement

Why change now?

PWTB bears the burden of restrictions to potentially benefit community.

This can cause harm to PWTB (financial, social stigma, mental health, family).

Is there a way to protect the community and minimize or eliminate harm to PWTB?

Why change now?

New body of knowledge shows:

- Once effective regimen is initiated, rRNA synthesis of MTB quickly altered, decreasing pathogenicity within hours to a couple days
- Once an effective regimen has been initiated, potential for transmission rapidly decreases
- Most contacts who convert to TB positive exposed prior to initiation of treatment
- Sputum smears not predictive of infectiousness after treatment started

Conclusion: Once adequate treatment is started, risk of transmission rapidly decreases within hours to a few days.

TB Isolation Changes Summary

- Flexible levels of Respiratory Isolation Restrictions (RIR) versus strict one-size-fits-all TB isolation
- More frequent review of RIR in place to allow PWTB faster return to their usual activities
- Removal of RIR is no longer dependent on sputum smear status

Updated guidance applies to community settings only- NOT healthcare, congregate or other high-risk settings.

TB RIR in Community Settings Breakdown

- Should RIR be used for this patient?
- What level of RIR should be used?
- When should RIR be reassessed?
- When should RIR be discontinued?

Should RIR be used for this patient?

- Does the patient have pulmonary or laryngeal disease?
  - Extrapulmonary disease (only) does not need RIR
- Is the patient infectious and at high risk of transmission in the community?
- Assess potential harms of RIR for PWTB
  - Discussion of this WITH the patient
- Assess support services for patient

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Factors Related to Infectiousness/Transmission

Patient Factors:

- Pulmonary or laryngeal disease
- Cavitary disease associated with higher likelihood of transmission
- Cough: More coughing=more likely to infect others
- Sputum AFB burden:
  - Presence of AFB on microscopy=possibility of transmission prior to treatment
  - Higher burden of AFB=higher likelihood of transmission
- Treatment with effective regimen has not been initiated

Environmental Factors:

- Closer proximity
- Poorer ventilation
- Longer duration of exposure
- Congregate settings and other situations that include high risk individuals

What level of RIR should be used?

- Three defined levels of RIR: **Extensive, Moderate, None**
- Least restrictive level of RIR should always be used
- At a basic level:
  - Extensive RIR = In TB isolation (previous definition)
  - No RIR/None = Out of TB isolation
- Discuss RIR with patient and discuss needed support services
  - Consider written RIR agreement with patient

When should RIR be reassessed?

- RIR levels and duration of restrictions should be assessed regularly, at least **weekly**
- Use individual considerations/changing circumstances
  - Change of living situation/presence of high-risk contacts
  - Clinical changes
  - Receipt of TB lab results (especially drug sensitivity results)
  - Change to DOT status/compliance

When should RIR be discontinued?

- Discontinuation of RIR should be based on individual circumstances and discussions
- Generally, RIR *may* be discontinued if patient has been on **effective therapy** for at least **five days**
- Use individual considerations/changing circumstances
  - Change of living situation/presence of high-risk contacts
  - Clinical changes
  - Receipt of TB lab results (especially drug sensitivity results)
  - Change to DOT status/compliance

Effective Therapy

Effective therapy must include:

- Use of appropriate multidrug medication regimen (i.e. RIPE)
- Doses appropriate for patient weight
- Reasonable assurance drug resistance is not a concern
  - Rapid molecular DST (pyrosequencing, GeneXpert, etc.) results for at least rpoB (Rifampin)
  - No known exposure to drug-resistant TB
- Doses given via Directly Observed Therapy (DOT)
- Tolerating medications
- Clinical improvement noted

Implementing Changed TB Isolation Policy

- IDOH TB program providing a detailed webinar on **October 23, 2024**
- Ensure LHD TB staff and leadership are aware of changing guidance
- Discuss individual PWTB RIR with TB regional nurse consultants
- IDOH working to update communicable disease rule (IAC) to align with new guidance

Summary

- Ensure your LHD has trained TB case manager to provide TB core services
- Community partnerships are important for providing TB core services
- Updated TB isolation guidance will allow greater flexibility for avoiding harms to PWTB
- Local health officer makes final decisions about public health orders and actions including RIR
- IDOH TB Prevention & Care team is available for consultation on use of RIR and local implementation at both individual and policy level

Questions?

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