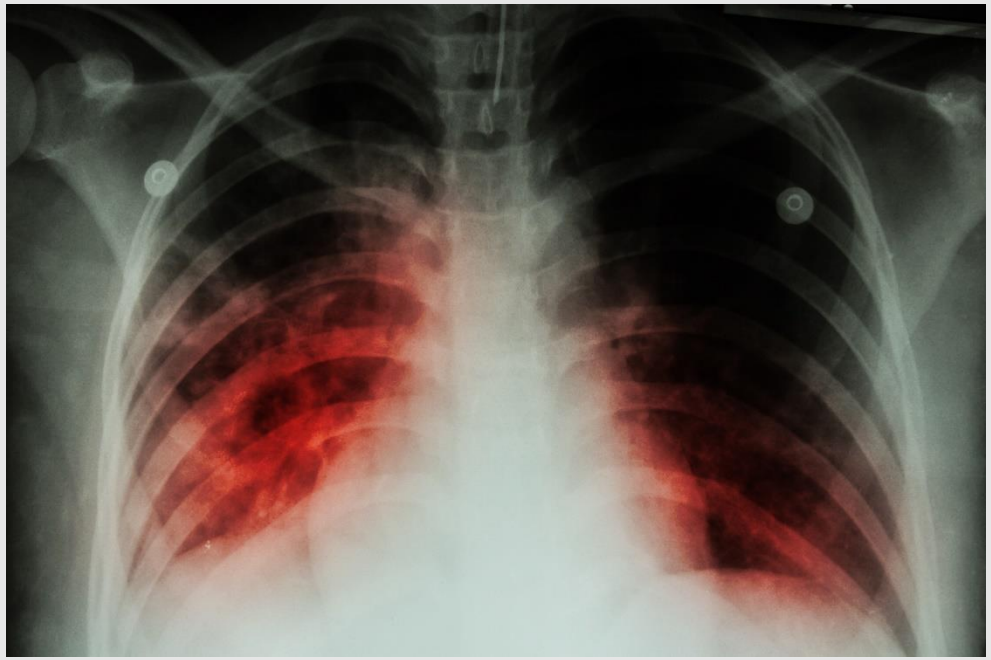
TUBERCULOSIS NURSE CASE MANAGEMENT

TRAINING TUESDAYS

WISCONSIN DEPARTMENT *of* HEALTH SERVICES

What is it?
Basics of Tuberculosis (TB) Nurse Case Management



There are a lot of things to know about TB.

There are a lot of things to know about TB case management.

What is TB Nurse Case Management?

Public health workers in TB programs and other facilities play an integral role in helping patients complete TB treatment through the use of a strategy referred to as case management.

The strategy's goal is to provide patient-centered care for completion of treatment and to ensure all public health activities related to stopping TB transmission are completed.

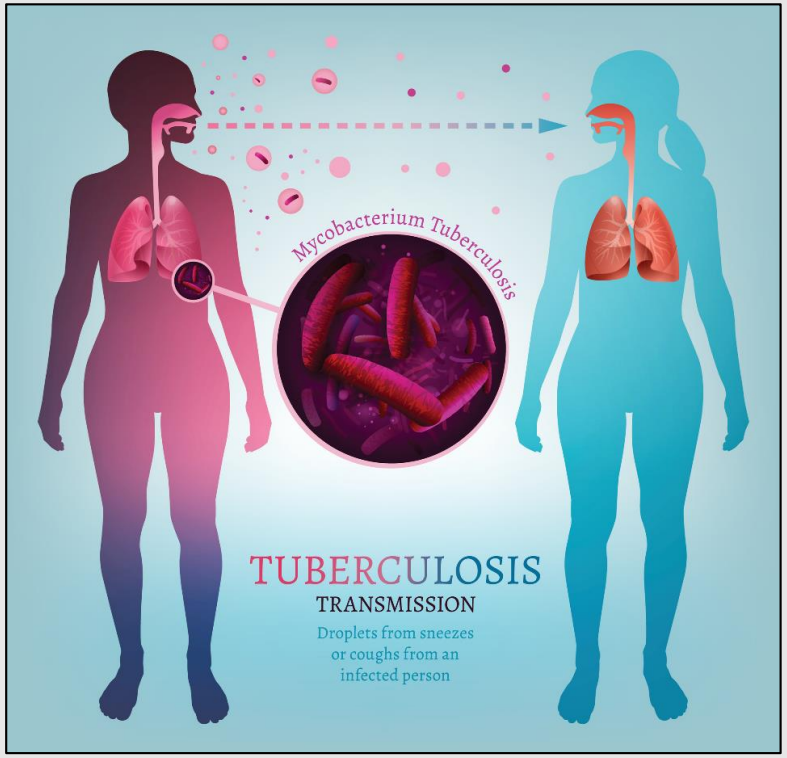
Basics TB Nurse Case Management

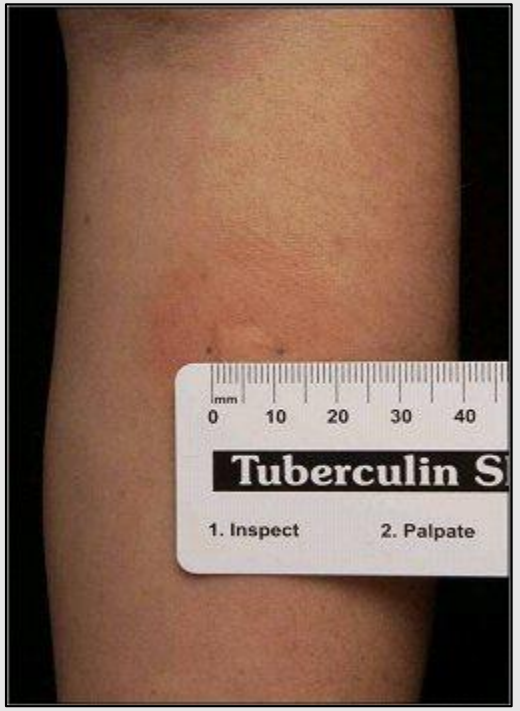
Assign case manager for team effort.

Provide education, monitoring, and patient support.

Assure adherence and successful treatment completion.

Nurse Case Management (NCM)





Initial Steps in TB NCM

1. Assign TB nurse case manager
2. Contact provider or hospital for basic information
3. Review information (treatment, transmission, and control)
4. Receive and process Initial Request for Medication (IRM)
5. Conduct home or hospital visit and initial interview
6. Develop and implement treatment plan
7. Assess progress and need for adjustments
8. Consider motivation, adherence, need for incentives, or enablers

Requirements for TB NCM

Who is a TB case manager?

- Trained in TB case management
- Trained in TB contact investigations
- Fit-tested for N95 respirator or mask

What training is required?

- TB 101 (CDC online course)
- Module 6 (CDC course)
- TB NCM Core Competencies National TB Controllers Association (NTCA)

TB 101 for Health Care Workers | Web-Based Courses & Webinars | TB | CDC

Self-Study Modules - Continuing Education Activities | Self-Study Modules on Tuberculosis 6 - 9 | TB | CDC

TB Nurse Case Manager | National Tuberculosis Controllers Association (tbcontrollers.org)

Basic Information

- Patient demographics
- TB testing: Immune Gamma Release Assay (IGRA) and/or Tuberculin Skin Test (TST)
- Medical notes including lab results
- Radiography reports
- Sputum smear and culture result
- Molecular test result

The forms will help to know what information to obtain.

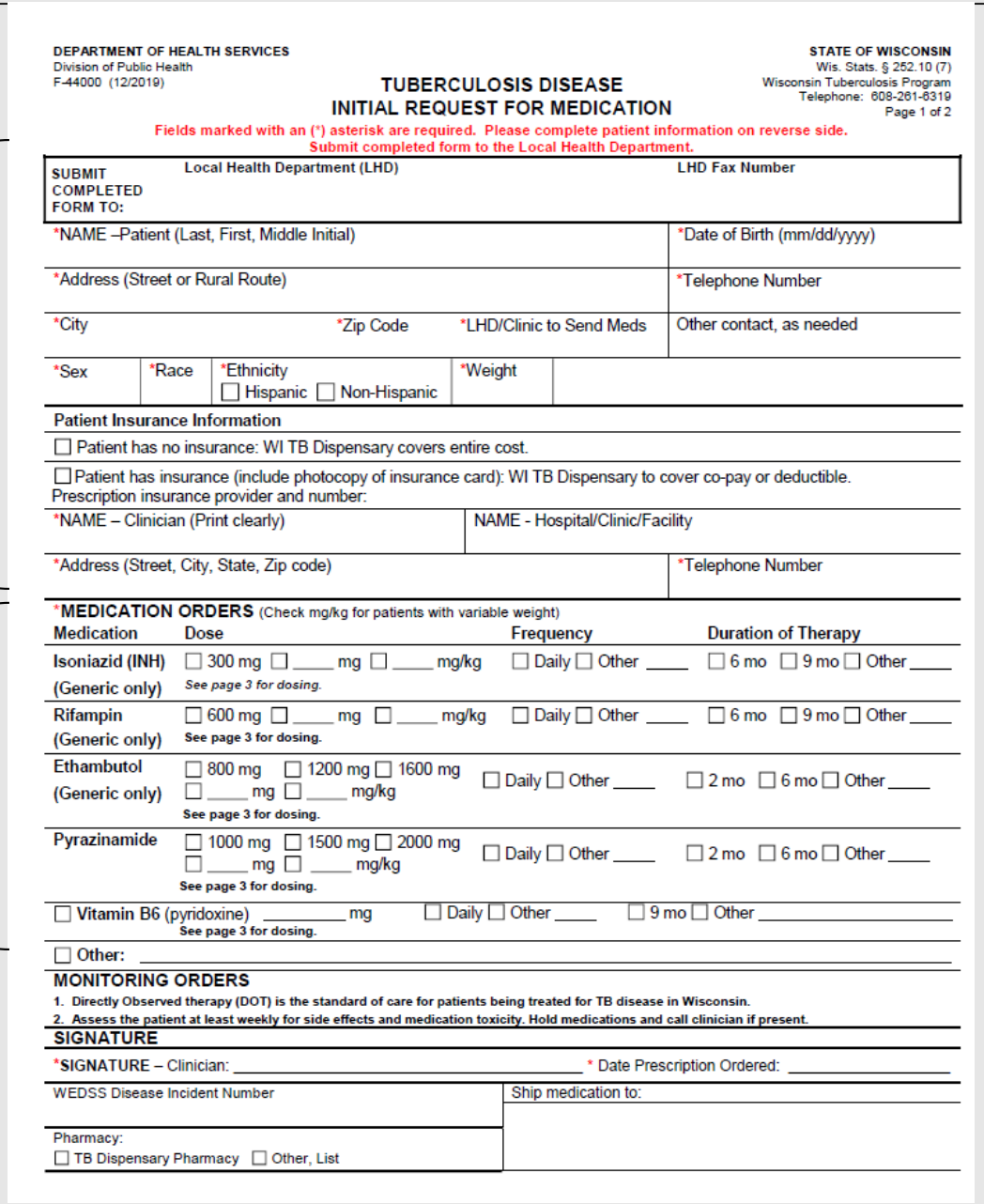
Initial Request for Medication (F-44000)

Fill out form completely:

- Weight
- Insurance (card)
- Dosing
- Provider signature

Demographics

Medications



DEPARTMENT OF HEALTH SERVICES
Division of Public Health
F-44000 (12/2019)

STATE OF WISCONSIN
Wis. Stats. § 252.10 (7)
Wisconsin Tuberculosis Program
Telephone: 608-261-6319
Page 1 of 2

TUBERCULOSIS DISEASE
INITIAL REQUEST FOR MEDICATION

Fields marked with an (*) asterisk are required. Please complete patient information on reverse side.
Submit completed form to the Local Health Department.

SUBMIT COMPLETED FORM TO:	Local Health Department (LHD)	LHD Fax Number

*NAME –Patient (Last, First, Middle Initial)			*Date of Birth (mm/dd/yyyy)
*Address (Street or Rural Route)			*Telephone Number
*City	*Zip Code	*LHD/Clinic to Send Meds	Other contact, as needed

*Sex	*Race	*Ethnicity ☐ Hispanic ☐ Non-Hispanic	*Weight

Patient Insurance Information

☐ Patient has no insurance: WI TB Dispensary covers entire cost.

☐ Patient has insurance (include photocopy of insurance card): WI TB Dispensary to cover co-pay or deductible.
Prescription insurance provider and number:

*NAME – Clinician (Print clearly)	NAME - Hospital/Clinic/Facility
*Address (Street, City, State, Zip code)	*Telephone Number

***MEDICATION ORDERS** (Check mg/kg for patients with variable weight)

Medication	Dose	Frequency	Duration of Therapy
Isoniazid (INH) (Generic only)	☐ 300 mg ☐ ____ mg ☐ ____ mg/kg *See page 3 for dosing.*	☐ Daily ☐ Other ____	☐ 6 mo ☐ 9 mo ☐ Other ____
Rifampin (Generic only)	☐ 600 mg ☐ ____ mg ☐ ____ mg/kg **See page 3 for dosing.**	☐ Daily ☐ Other ____	☐ 6 mo ☐ 9 mo ☐ Other ____
Ethambutol (Generic only)	☐ 800 mg ☐ 1200 mg ☐ 1600 mg ☐ ____ mg ☐ ____ mg/kg **See page 3 for dosing.**	☐ Daily ☐ Other ____	☐ 2 mo ☐ 6 mo ☐ Other ____
Pyrazinamide	☐ 1000 mg ☐ 1500 mg ☐ 2000 mg ☐ ____ mg ☐ ____ mg/kg **See page 3 for dosing.**	☐ Daily ☐ Other ____	☐ 2 mo ☐ 6 mo ☐ Other ____

☐ Vitamin B6 (pyridoxine) _____ mg **See page 3 for dosing.** ☐ Daily ☐ Other ____ ☐ 9 mo ☐ Other _____

☐ Other: _____

MONITORING ORDERS

1. **Directly Observed therapy (DOT) is the standard of care for patients being treated for TB disease in Wisconsin.**
2. **Assess the patient at least weekly for side effects and medication toxicity. Hold medications and call clinician if present.**

SIGNATURE

***SIGNATURE** – Clinician: _____ * Date Prescription Ordered: _____

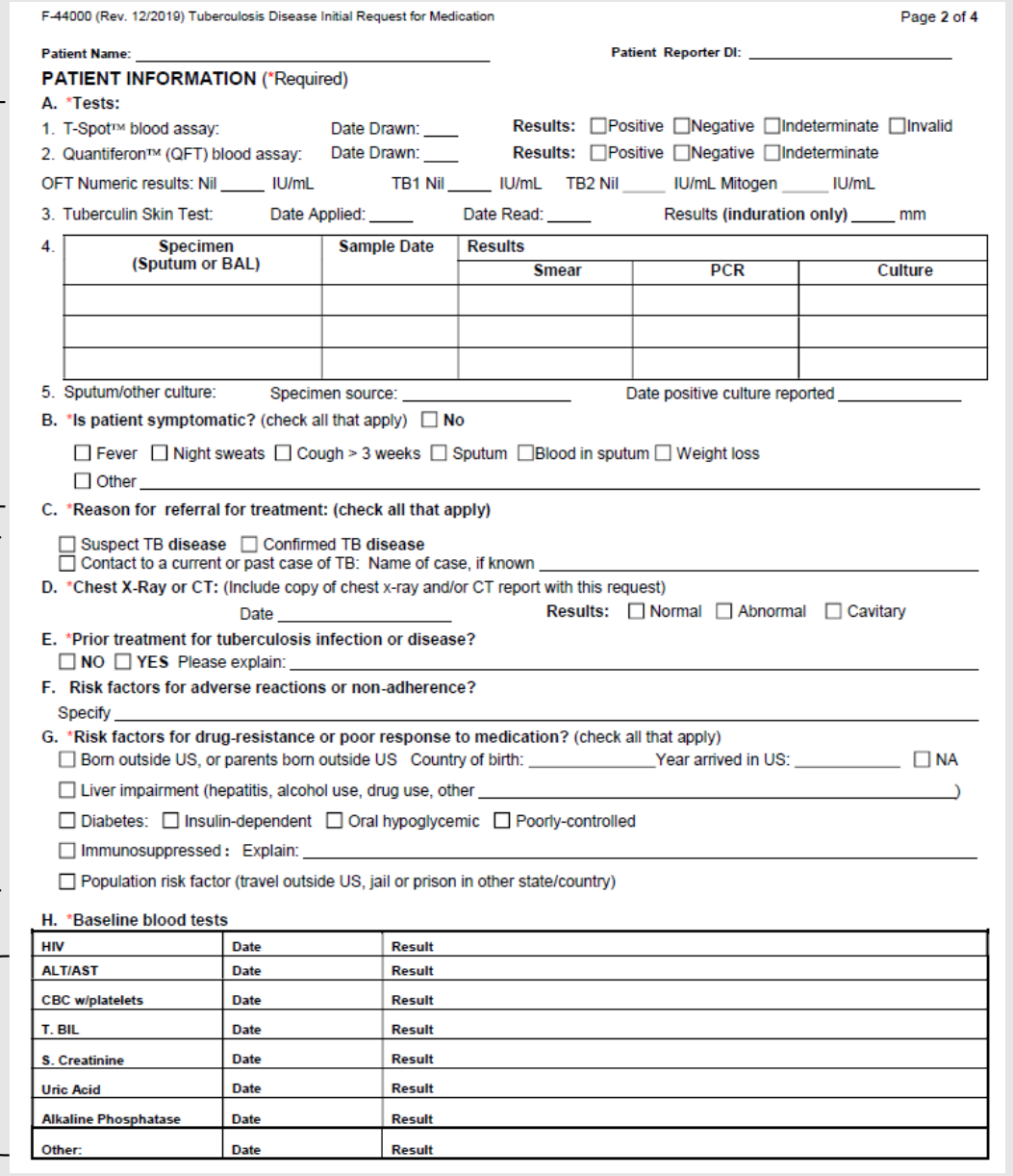
WEDSS Disease Incident Number	Ship medication to:
Pharmacy: ☐ TB Dispensary Pharmacy ☐ Other, List	

Initial Request for Medication (F-44000)

Diagnostic tests
Symptoms

Reason for treatment, risk factors (resistance, adverse reactions)

Baseline tests



F-44000 (Rev. 12/2019) Tuberculosis Disease Initial Request for Medication — Page 2 of 4

Patient Name: _____ Patient Reporter DI: _____

PATIENT INFORMATION (*Required)

A. ***Tests:**

1. T-Spot™ blood assay: Date Drawn: ___ **Results:** ☐Positive ☐Negative ☐Indeterminate ☐Invalid
2. Quantiferon™ (QFT) blood assay: Date Drawn: ___ **Results:** ☐Positive ☐Negative ☐Indeterminate

OFT Numeric results: Nil ____ IU/mL TB1 Nil ____ IU/mL TB2 Nil ____ IU/mL Mitogen ____ IU/mL

3. Tuberculin Skin Test: Date Applied: ____ Date Read: ____ Results **(induration only)** ____ mm

4.

Specimen (Sputum or BAL)	Sample Date	Results		
		Smear	PCR	Culture

5. Sputum/other culture: Specimen source: _____ Date positive culture reported _____

B. ***Is patient symptomatic?** (check all that apply) ☐ **No**

☐ Fever ☐ Night sweats ☐ Cough > 3 weeks ☐ Sputum ☐Blood in sputum ☐ Weight loss

☐ Other _____

C. ***Reason for referral for treatment: (check all that apply)**

☐ Suspect TB **disease** ☐ Confirmed TB **disease**
☐ Contact to a current or past case of TB: Name of case, if known _____

D. ***Chest X-Ray or CT:** (Include copy of chest x-ray and/or CT report with this request)

Date _____ **Results:** ☐ Normal ☐ Abnormal ☐ Cavitary

E. ***Prior treatment for tuberculosis infection or disease?**

☐ **NO** ☐ **YES** Please explain: _____

F. **Risk factors for adverse reactions or non-adherence?**

Specify _____

G. ***Risk factors for drug-resistance or poor response to medication?** (check all that apply)

☐ Born outside US, or parents born outside US Country of birth: _____Year arrived in US: _____ ☐ NA

☐ Liver impairment (hepatitis, alcohol use, drug use, other _____)

☐ Diabetes: ☐ Insulin-dependent ☐ Oral hypoglycemic ☐ Poorly-controlled

☐ Immunosuppressed: Explain: _____

☐ Population risk factor (travel outside US, jail or prison in other state/country)

H. ***Baseline blood tests**

HIV	Date	Result
ALT/AST	Date	Result
CBC w/platelets	Date	Result
T. BIL	Date	Result
S. Creatinine	Date	Result
Uric Acid	Date	Result
Alkaline Phosphatase	Date	Result
Other:	Date	Result

Activity	Baseline	Month of Treatment Completed 1	2	3	4	5	6	7	8	End of Treatment Visit
MICROBIOLOGY										
Sputum smears and culture[1]	☐	☐	☐	☐	☐					☐
Drug susceptibility testing[2]	☐			☐						
IMAGING										
Chest radiograph or other imaging[3]	☐		☐							☐
CLINICAL ASSESSMENT										
Weight[4]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Symptom and adherence review[5]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Vision assessment[6]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
LABORATORY TESTING										
AST, ALT, bilirubin, alkaline phosphate[7]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Platelet count[8]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Creatinine[8]	☐	☐	☐	☐	☐	☐	☐	☐	☐	
HIV[9]	☐									
Hepatitis B and C screen[10]	☐									
Diabetes Screen[11]	☐									

From: Executive Summary: Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis

Clin Infect Dis. 2016;63(7):853-867. doi:10.1093/cid/ciw566

Home or Hospital Visit

Initial interview:

- When were they sick?
- Who are they?
- Where have they been?
- What do they do?
- Who do they know?
- What do they know?

This is the beginning of a contact investigation.

Assess barriers levels of knowledge.

Visit Work Setting

Inform supervisors or human resources of investigation.

Assess:

- Space (large-small)
- Proximity of workers (close or far apart)
- Air flow (exchange per hour)
- Schedules of index patient (shifts how many hours)
- Work friendships
- Break or lunch space

Case Manager Responsibility

- Establish trusting relationship
- Educate patient about TB and treatment
- Develop treatment and monitoring plan
- Ensure adherence
- Conduct systematic review of patient progress

Get to Know the Patient

- Medical health history
- Knowledge, attitudes, and belief of TB
- Ability to follow the TB treatment plan
- Resources (e.g., family, other social support, finances)
- Anticipated barriers (e.g., lack of transportation) and perceived barriers (e.g., TB medications will be very expensive) to treatment
- History of adherence to previous TB treatment regimens or other medication

Open-Ended Questions

- What are some of the difficulties you have taking medication?
- How do your family members or close friends feel about your TB?
- How to do you feel about taking your TB medication?
- How severe do you think your illness is?
- What problems has your illness caused for you?
- What are the most important results you hope to get from this treatment?

Open-Ended Questions

- What do you know about TB and what causes TB?
- What do you think TB does to your body?
- What treatment do you think you should receive for TB?
- What caused you to go to the doctor who diagnosed your TB?
- What did you think when you were told you had TB?
- How do you think you got TB?

Building Trust and Rapport

- Recognize it develops over time but foundation starts immediately
- Use effective communication:
  - Active listening
  - Appropriate nonverbal communication
  - Patient-level communication

Building Trust and Rapport

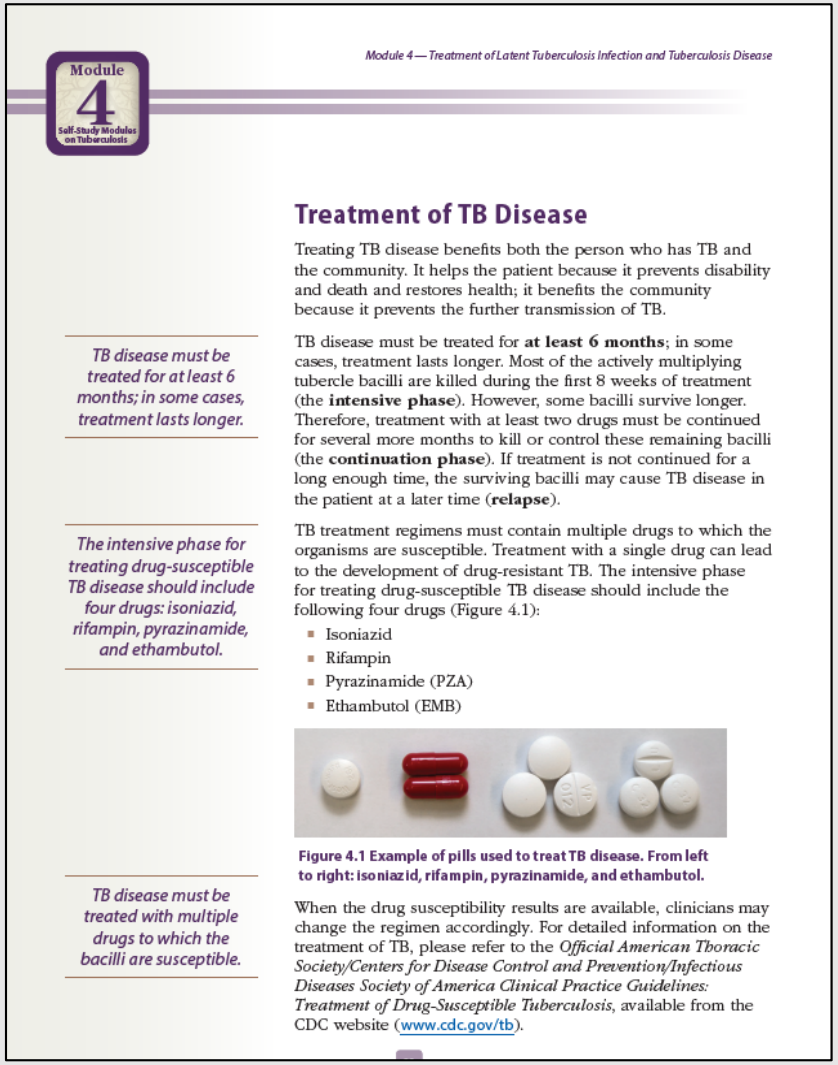
- Find common ground.
- Involve the patient in the development of treatment plan.
- Be open about the patient's cultural beliefs.
- Understand and fulfill the patient's expectations about treatment when possible.
- Be consistent in what you do and say to the patient.
- Display respect and empathy.

Effective Communication

- Use simple, nonmedical terms.
- Use the appropriate language level.
- Limit the amount of information.
- Discuss the most important topic first and last.
- Repeat important information.
- Listen to feedback and questions.
- Use concrete examples.
- Make interactions with the patient as positive as possible.
- Provide patient education materials.

Treatment and Monitoring Plan

- Develop plan within one week of diagnosis
- Develop specifically for each patient
- Plan should include descriptions of:
  - Treatment regimen
  - Monitoring plan (adverse reactions)
  - Adherence strategies
  - Evaluation (treatment and response)
  - CDC Self-Study Module 4: Treatment of Latent Tuberculosis Infection and Tuberculosis Disease



Module 4 — Treatment of Latent Tuberculosis Infection and Tuberculosis Disease

Module 4 Self-Study Modules on Tuberculosis

Treatment of TB Disease

Treating TB disease benefits both the person who has TB and the community. It helps the patient because it prevents disability and death and restores health; it benefits the community because it prevents the further transmission of TB.

TB disease must be treated for at least 6 months; in some cases, treatment lasts longer.

TB disease must be treated for **at least 6 months**; in some cases, treatment lasts longer. Most of the actively multiplying tubercle bacilli are killed during the first 8 weeks of treatment (the **intensive phase**). However, some bacilli survive longer. Therefore, treatment with at least two drugs must be continued for several more months to kill or control these remaining bacilli (the **continuation phase**). If treatment is not continued for a long enough time, the surviving bacilli may cause TB disease in the patient at a later time (**relapse**).

The intensive phase for treating drug-susceptible TB disease should include four drugs: isoniazid, rifampin, pyrazinamide, and ethambutol.

TB treatment regimens must contain multiple drugs to which the organisms are susceptible. Treatment with a single drug can lead to the development of drug-resistant TB. The intensive phase for treating drug-susceptible TB disease should include the following four drugs (Figure 4.1):

- Isoniazid
- Rifampin
- Pyrazinamide (PZA)
- Ethambutol (EMB)

Figure 4.1 Example of pills used to treat TB disease. From left to right: isoniazid, rifampin, pyrazinamide, and ethambutol.

TB disease must be treated with multiple drugs to which the bacilli are susceptible.

When the drug susceptibility results are available, clinicians may change the regimen accordingly. For detailed information on the treatment of TB, please refer to the *Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis*, available from the CDC website (www.cdc.gov/tb).

Contact Investigation

- Begins on day one
- Is a skill or art more than it is a science
- Is a process that continues throughout treatment
- Takes time and experience
- Requires good communication skills and cultural competency

Close Contact

- First or highest priority
- Household and family
- Close friends and visitors
- Young children
- Hospital staff
- Congregate settings

Contact Investigation

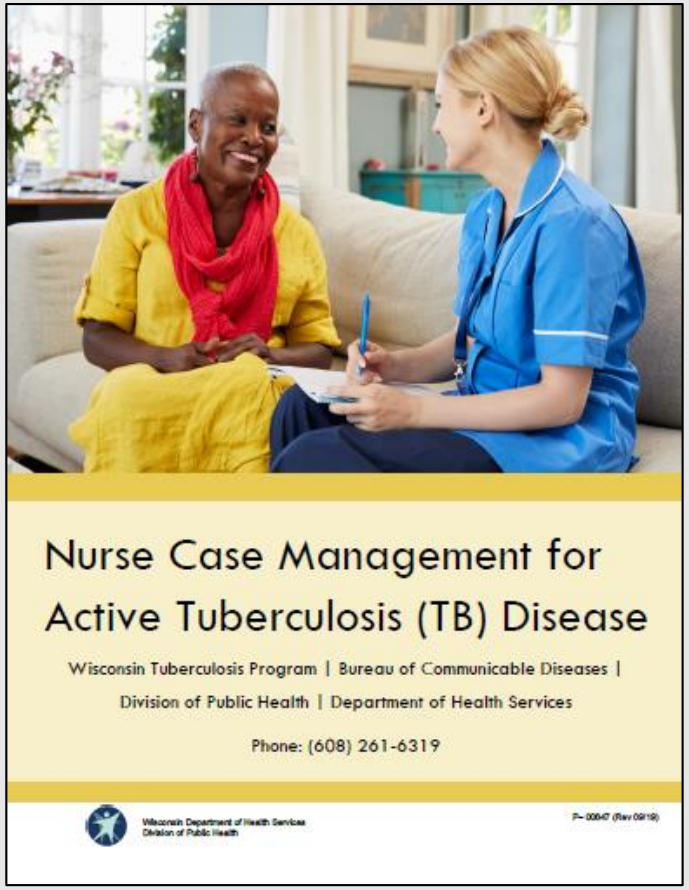
- Can involve schools or public spaces
- May get media attention
- It is critical to communicate and collaborate with other partners
- Could require additional staffing and funding

Health Setting Contact

- Can be problematic
- Must have good prior relationships
- Do not identify too many contacts
- Use same principles apply to these settings as apply to other settings
- Must report to local health department

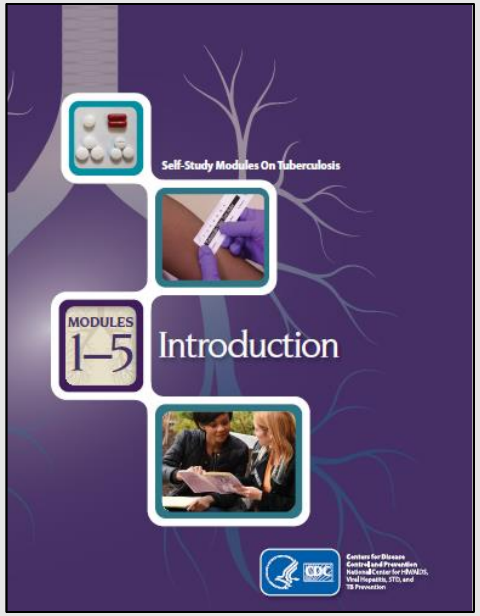
Wisconsin Timeline

- Is available online
- Can help you in the process of NCM
- Does NOT substitute for experience—it is a tool that can help you along the way
- Call us with questions or help
- Learn what you can now
  - The hardest way to do TB NCM is to wait until you have a case because you need to know a lot of things…



What You Need To Know About TB

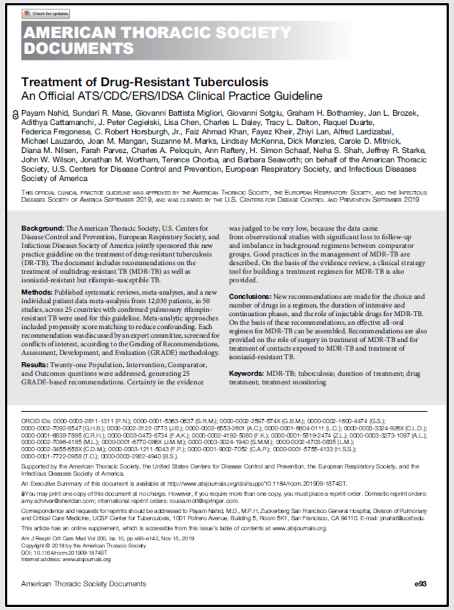
- Nature of *M. tuberculosis*
- Pathophysiology of tuberculosis (infection and disease)
- TB prevention and vaccination
- TB diagnosis (latent and active)
- TB treatment (latent and active)
- Drug resistant TB
- TB control
- TB reporting and laws
- TB contact investigation



Self-Study Modules On Tuberculosis

MODULES 1–5

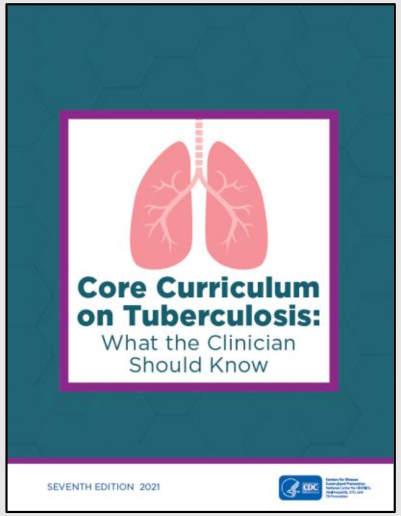
Introduction



AMERICAN THORACIC SOCIETY DOCUMENTS

Treatment of Drug-Resistant Tuberculosis

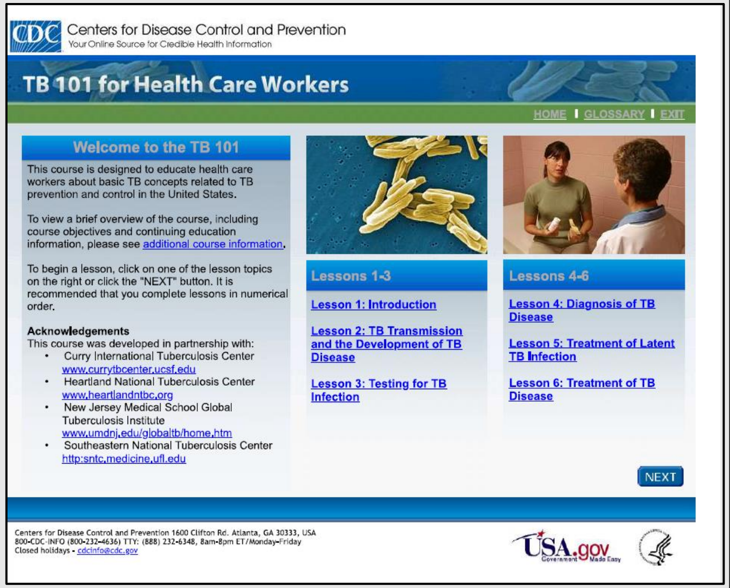
An Official ATS/CDC/ERS/IDSA Clinical Practice Guideline



Core Curriculum on Tuberculosis:

What the Clinician Should Know

SEVENTH EDITION 2021



Centers for Disease Control and Prevention

Your Online Source for Credible Health Information

TB 101 for Health Care Workers

HOME | GLOSSARY | EXIT

Welcome to the TB 101

This course is designed to educate health care workers about basic TB concepts related to TB prevention and control in the United States.

To view a brief overview of the course, including course objectives and continuing education information, please see additional course information.

To begin a lesson, click on one of the lesson topics on the right or click the "NEXT" button. It is recommended that you complete lessons in numerical order.

Acknowledgements

This course was developed in partnership with:

- Curry International Tuberculosis Center www.currytbcenter.ucsf.edu
- Heartland National Tuberculosis Center www.heartlandntbc.org
- New Jersey Medical School Global Tuberculosis Institute www.umdnj.edu/globaltb/home.htm
- Southeastern National Tuberculosis Center http:sntc.medicine.ufl.edu

Lessons 1-3

Lesson 1: Introduction

Lesson 2: TB Transmission and the Development of TB Disease

Lesson 3: Testing for TB Infection

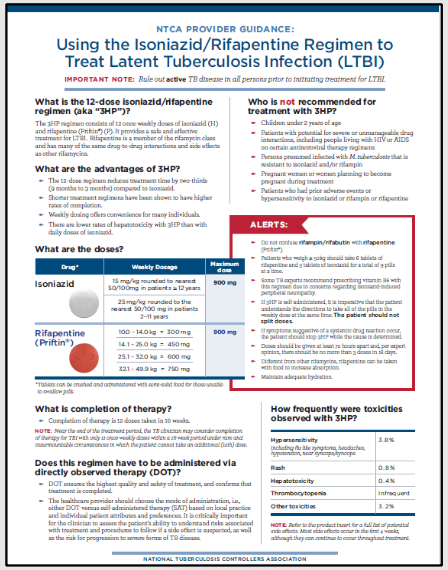
Lessons 4-6

Lesson 4: Diagnosis of TB Disease

Lesson 5: Treatment of Latent TB Infection

Lesson 6: Treatment of TB Disease

NEXT



NTCA PROVIDER GUIDANCE:

Using the Isoniazid/Rifapentine Regimen to Treat Latent Tuberculosis Infection (LTBI)

What is the 12-dose isoniazid/rifapentine regimen (aka "3HP")?

Who is not recommended for treatment with 3HP?

What are the advantages of 3HP?

What are the doses?

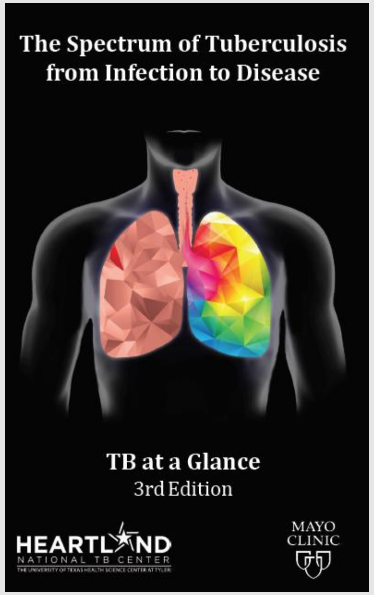
ALERTS:

What is completion of therapy?

How frequently were toxicities observed with 3HP?

Does this regimen have to be administered via directly observed therapy (DOT)?

NATIONAL TUBERCULOSIS CONTROLLERS ASSOCIATION



The Spectrum of Tuberculosis from Infection to Disease

TB at a Glance

3rd Edition

HEARTLAND NATIONAL TB CENTER

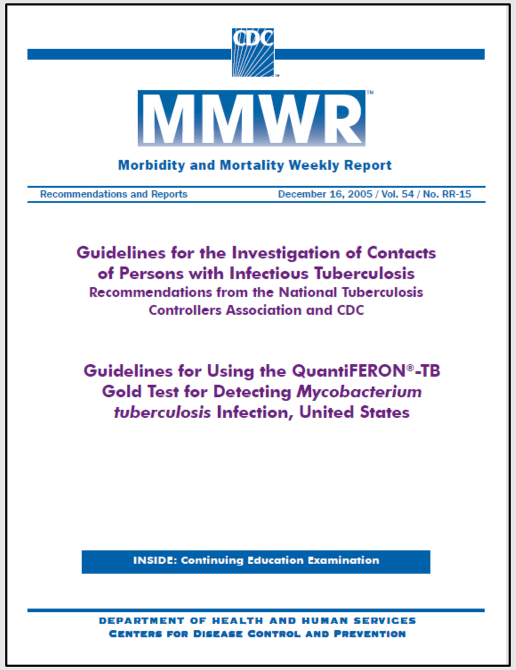
MAYO CLINIC

Clinical Infectious Diseases

IDSA GUIDELINE

Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis

EXECUTIVE SUMMARY



MMWR

Morbidity and Mortality Weekly Report

Recommendations and Reports

December 16, 2005 / Vol. 54 / No. RR-15

Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis

Recommendations from the National Tuberculosis Controllers Association and CDC

Guidelines for Using the QuantiFERON®-TB Gold Test for Detecting *Mycobacterium tuberculosis* Infection, United States

INSIDE: Continuing Education Examination

DEPARTMENT OF HEALTH AND HUMAN SERVICES

CENTERS FOR DISEASE CONTROL AND PREVENTION

What You Need to Know About TB NCM

- Laws regarding public health and TB (infectiousness and isolation)
- TB reporting and use of Wisconsin Electronic Surveillance System (WEDSS)
- TB control (in works settings, healthcare settings, residential settings)
- Local TB epidemiology (who has TB where you live?)
- Assessment and screening of persons with TB

What You Need to Know About TB NCM

- TB testing (tuberculin skin test and Interferon gamma release assay)
- TB drugs (dosages, side-effects, adverse reactions)
- Directly observed therapy (DOT) and treatment adherence
- Interviewing and communication skills (including using an interpreter)
- Training and education of local population
- Cultural awareness and sensitivity of local population (e.g., Hmong)

TUBERCULOSIS NURSING:

A COMPREHENSIVE GUIDE TO PATIENT CARE

SECOND EDITION

Published and Distributed by:

AN OVERVIEW OF ESSENTIAL KNOWLEDGE
FOR COMMUNITY AND PUBLIC HEALTH NURSES

Tuberculosis Nurse Case Management: Core Competencies

A SECTION OF NTCA
National Tuberculosis Nurse Coalition

Self-Study Modules on Tuberculosis, 6-9

Module 6
Managing Tuberculosis Patients and Improving Adherence

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Tuberculosis Elimination
Atlanta, Georgia
2014

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Recommendations and Reports / Vol. 69 / No. 1
February 14, 2020

Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Nursing Guide for Managing Side Effects to Drug-resistant TB Treatment

International Council of Nurses
The global voice of nursing
Curry International Tuberculosis Center
UCSF
University of California San Francisco
Stop TB Partnership
TB REACH

Questions?