



Developing a TB Patient Care Plan

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Introduction to TB Nurse Case Management Online • January 7 – January 28, 2026
Online Training from San Antonio, Texas



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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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What is a Care Plan?

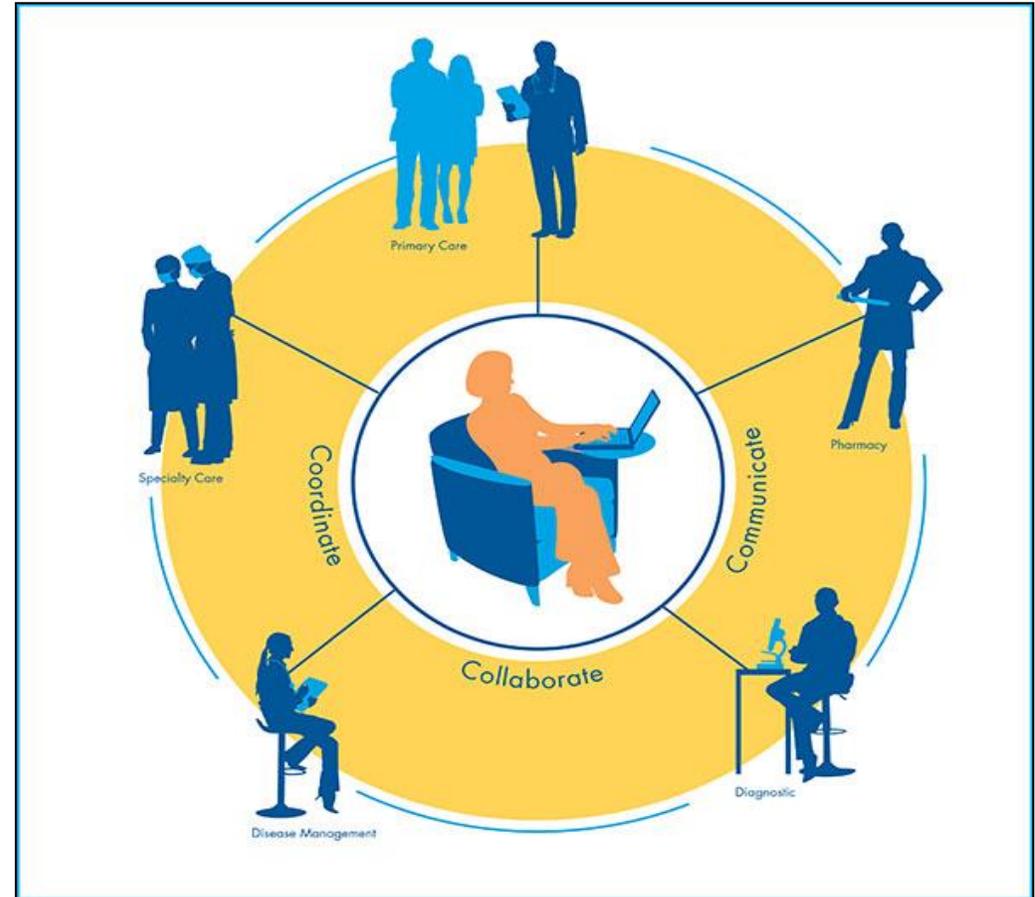
1. A formal process that

- provides direction
- helps to identify existing needs
- recognize potential needs or risks.

2. Main focus

- facilitate standardized, evidence-based and holistic care.

3. Provide a means of communication to achieve health care outcomes.



Objective: Have TB Nurse Case Manager develop a TB Patient Care Plan

- By understanding the following:
 - ✓ Description of treatment regimen
 - ✓ Methods of monitoring for adverse reactions
 - ✓ Methods of assessing and ensuring adherence to treatment
 - ✓ Methods for evaluating treatment response



TB Treatment Goals:

1. Cure the patient
2. Prevent death, disability or drug resistance
3. Prevent further transmission



Patient-Centered Care

“Patient-centered care is providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions.”

- Institute of Medicine (IOM)



Patient Education Topics:

- Tuberculosis disease process
- What medication should be taken, how much and how often
- Possible adverse reactions to the medications
- When to seek necessary medical attention
- Consequences of not taking their medicine correctly
- Tuberculosis infection, restriction measures, and isolation precautions



Understand Your Patient

- Patient's perception and knowledge of tuberculosis
- Sociocultural influences
- Home and work habits
- Patient's support system



TREATMENT REGIMEN

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IDS A GUIDELINE



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

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CDC Recommendation for Treatment of Drug-Susceptible TB is a 4 drug regimen, aka **RIPE**:

Rifampin – RIF

Isoniazid – INH

Pyrazinamide – PZA

Ethambutol - EMB

Doses are based on weight and age of patient



Dosing Recommendations for Adult Patients with Drug-Susceptible Organisms

Drug	Normal Renal Function	Change in Frequency for Reduced Renal Function?	Creatinine Clearance <30 mL/min*
Ethambutol	<u>Standard dose</u> ^b : 15-20 mg/kg once daily	Yes	20-25 mg/kg 3x/weekly (not daily)
Isoniazid	<u>Standard dose</u> : 5 mg/kg daily (max 300 mg) Vitamin B6 daily 25-50 mg <u>Intermittent dose</u> : 15 mg/kg (max 900 mg) <u>High dose therapy</u> : 13-18 mg/kg daily	No	No dose adjustment
Pyrazinamide	<u>Standard dose</u> ^b : 25-35 mg/kg daily	Yes	25-35 mg/kg (maximum 3000 mg) 3x/weekly (not daily)
Rifabutin	<u>Standard dose</u> : 300 mg daily	No	Monitor drug concentrations to avoid toxicity
Rifampin	<u>Standard dose</u> : 10 mg/kg daily	No	No dose adjustment

*Including adult patients receiving hemodialysis

^bBased on estimated lean body weight. Optimal doses for obese patients are not established.

Please note: Standard doses are given unless there is intolerance; there should be careful monitoring of neurotoxicity; the medications should be given after hemodialysis on the day of hemodialysis; and monitoring of serum drug concentrations should be considered.



Tuberculosis Treatment Guidelines

Drug Regimens for Microbiologically Confirmed Pulmonary Tuberculosis Caused by Drug-Susceptible Organisms

Dosing Recommendations for Adult Patients with Drug-Susceptible Organisms

Adapted from the Official American Thoracic Society, Centers for Disease Control and Prevention, Infectious Disease Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis Clinical Infectious Diseases • 2016

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2 Phases of Treatment

Initial phase + continuation phase = length of treatment

8 weeks + 18 weeks = 6 months of treatment

8 weeks + 31 weeks = 9 months of treatment



Initial Phase of Treatment

RIPE + B6

24 doses if receiving 3 times/week

40 doses if receiving 5 days/week

56 doses if receiving 7 days/week

8 weeks

This phase must be completed before proceeding to the continuation phase



Continuation Phase of Treatment

RIF + INH + B6

54/93 doses if receiving 3 days/week

90/155 doses if receiving 5 days/week

126/217 doses if receiving 7 days/weeks

18 weeks or 31 weeks



Why Directly Observed Therapy (DOT)?

1. Provides visual evaluation/observation of patient tolerance of medication
2. Provides visual evaluation/observation of patient response to treatment
3. Provides daily opportunity for patient education



Side Effect vs. Adverse Drug Reaction (ADR)

Side Effect:

- a less precise term, often refers to milder, predictable effects of taking a medication.
- Examples:
 - discolored body fluids from Rifampin
 - decrease effectiveness of birth control pills/implants from Rifampin

Adverse Drug Reaction (ADR):

- As defined by the World Health Organization (WHO), an Adverse Drug Reaction is a response to a drug that is noxious and unintended and occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of a disease.
- Examples:
 - Hepatitis
 - Rash



MONITORING FOR ADVERSE REACTION

- Patient education
- Daily by healthcare worker
 - Observation
 - Toxicity screen
- Monthly or as ordered by licensed healthcare worker
 - Observation
 - Toxicity assessment
 - Labs



Blood Analysis:

- Baseline
- Monthly
- Complaint or adverse reaction
- Special situations



ADHERENCE TO TB TREATMENT

- **Assessing Adherence > daily case manager's duty**
 - Designated place and time for DOT
 - Appointments met or rescheduled
- **Ensuring Adherence > possible challenge**
 - Incentives (rewards given to patients to encourage taking DOT or attend clinic appointments, such as food, clothing or personal products)
 - Enablers (ex. helps patient receive treatment, such as transportation vouchers to get to the clinic, appointment reminders and social service assistance)



EVALUATING TREATMENT RESPONSE

- Clinical
- Bacteriological
- Radiographic



Clinical

- Medication tolerance
- Tuberculosis symptom improvement
- Appetite status
- Activity level
- Affect – mental status



Bacteriological

- Acid-fast bacilli (AFB) smear
- Acid-fast bacilli (AFB) culture/susceptibilities

Texas Department of State Health Services
Tuberculosis Bacteriology Monitoring Log

Name: _____ DOB ____ / ____ / ____ MRN/SSN: _____

Genotype Number: _____

Specimen			Results				Drug Susceptibility Studies										
Date/ Time	Source	Lab No	Smear*	NAA/ PCR	Prelim ID	Final ID	INH	EMB	RIF	SM	PZA	ETH	KM	CAP	RBT	OF	Other



Radiographic Imaging

- After 2 months of tuberculosis medication
 - CXR or CT (depending on site of disease)
 - Improved from baseline?
- At end of tuberculosis treatment
 - CXR or CT (depending on site of disease)
 - Improved from previous image
- As needed based on patient findings



Indicators of poor response to Treatment

- Clinically - no improvement
- Bacteriologically – minimal to no improvement
- Radiologically – no improvement or worsening



Reasons for Poor Response

- Poor medication adherence
- Patient vomiting after taking tuberculosis medication
- Poor absorption of medications. For additional information see - https://www.dshs.texas.gov/sites/default/files/LID_S-TB/forms/TherapeuticDrugMonitoringProcess.pdf
- Development of Drug Resistance
- Patient “Cheeking” Pills



Patient Centered Care

- Build a relationship with your patient
- Educate your patient and their family
- Provide the right drugs, right dosage, and right number of doses
- Perform baseline evaluations
- Use logs and graphs to monitor progress
- Document and communicate with the tuberculosis team
- Screen regularly for medication side effects and adverse reactions.
- Evaluate for improvement clinically and diagnostically



Questions?



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