



TB Case Management in Practice – 3

Focus on Adherence



How Do We Define “Adherence”?

- **Is adherence...**
 - The number of pills taken?
 - The number of doses remembered?
 - The percentage of time medications taken correctly?
- **Is adherence always about pill-taking?**
 - Are there different ways to be adherent?



Problems With Adherence To TB Medication Are Common

- **Non adherence to medications: 20% to 80% (avg. of 50%)**
- **Rates comparable to treatments for other chronic diseases**

Williams & Friedland, 1997; Chesney, 2000; Eldin, 2001.

 **Reasons for Non-Adherence**

- Patients feel better
- Lack of knowledge or understanding of treatment regimen
- Personal or cultural beliefs
- Lack of skills or resources
- Lack of access to care
- Language barriers
- Poor relationships with health care provider(s)
- Lack of motivation

 **2003 TB Treatment Guidelines**

- **The healthcare provider is responsible for successful treatment, not the patient**
 - Prescribing appropriate regimen
 - Ensuring successful completion of therapy
- **Focus on patient-centered care utilizing case management and directly observed therapy (DOT)**

 **Case Management**

- **System is patient focused and involves:**
 - Assignment of responsibility
 - Systematic review of patient progress
 - Adherence plan
 - Continuity of care
- **Case manager should ensure:**
 - Treatment plan is established
 - Patient is educated
 - Therapy and follow-up are continuous
 - Contacts are evaluated

 **Provider-Patient Relationship**

- **Provide accurate, current TB health information**
 - Anticipated side-effects and management
 - When and how to contact provider
- **Communicate goals of medical care**
 - Reasonable and acceptable for patient
 - Small steps over time
 - Put it all on the table (no hidden agendas)
 - Consequences of failing to adhere
- **Anticipate and address other medical or lifestyle issues**
- **Ask about non-medical issues**
 - Support mechanisms and advocates

 **Prioritizing for DOT**

- Pulmonary TB with + sputum smears
- Past treatment failure
- Exposure to drug resistant case
- Case of relapse
- Co-infected with HIV
- Current or prior substance use issues, psychiatric illness, memory impairment
- Non-adherence to therapy
- Children and adolescents
- Close contacts of case of TB disease
- Immunocompromised

MMWR, June 20, 2003

 **Interventions for Adherence**

- Many different types of interventions
- Can be tailored to address specific challenges patient may face
- Best approach is multi-level strategy that addresses:
 - Patient
 - Regimen
 - Provider

 Variables to Consider

- **Treatment Variables**
- **Patient variables**
- **Disease Variables**
- **Organizational Variables**

 Examples of Treatment Variables

- **Complexity of treatment**
 - Need for injectable medications or infusion therapy
 - Expense involved
- **Management of medication side effects**
 - Interaction with other medications
 - Expected side effects i.e., GI symptoms
 - Adverse drug reactions
- **Duration of treatment**
 - Tx LTBI for 9 mo. with INH or 4 mo. with RIF
 - Tx TB disease for 6 months with 2-4 drugs

 Examples of Patient Variables

- **Lack of social support system**
- **Fear**
- **Stigma**
- **Language barriers**
- **Residential instability**
- **Knowledge deficit**
- **Mental status**
- **Lifestyle issues i.e., substance or alcohol abuse**

 **Examples of Disease Variables**

- **Co-infection or co-morbidity**
- **Extent of disease**
- **Drug susceptible or resistant**
- **Symptom improvement and non-adherence**

 **Examples of Organizational Variables**

- **Lack of transportation**
- **Fragmented services**
- **Inconvenient or infrequent TB clinic hours**
- **Culturally competent staff**
- **Access to interpreter services**

 **Summary**

 Skills and Knowledge

- Knowledge of community resources
- Excellent written and oral communication
- Critical thinking to identify and prioritize problems
- Good organizational skills

 Patient-Focused Interventions

- Individualize based on patient's knowledge, attitudes, and beliefs about TB
- Provide education and information
- Use interpreters, when possible
- Medication scheduling and cues (e.g., at meal times or when brushing teeth, etc.)
- Adherence gadgets (e.g., pill boxes, timers, etc.)
- DOT



 Why DOT?

- DOT enables early identification of non-adherence, adverse drug reactions, and clinical worsening of TB
- Can lead to reductions in relapse and acquired drug resistance
- Studies show DOT together with incentives and enablers produces the highest treatment completion rates (in excess of 90%)

 **Directly Observed Therapy -1**

Directly observed therapy (DOT) involves a healthcare or outreach worker watching as a patient swallows their anti-tuberculosis medications

 **Directly Observed Therapy -2**

DOT can be provided almost anywhere...

- Home or home of babysitter
- Daycare
- School
- Health department
- Workplace

 **Directly Observed Therapy - 3**

Can be supervised by:

- Physician
- Health Department Nurse
- Trained Outreach Worker
- School Nurse

Should *not* be supervised by:

- Parents or other close family member

 **Impact of DOT on Treatment Completion Rates**

• Non-supervised therapy	61%
• Modified DOT	79%
• DOT	86%
• Enhanced DOT	91%

JAMA 1998; 279: 9743-948

 **Regimen-Focused Interventions**

- Manage side effects
- Reduce pill burden
- Dietary interventions
- Provide medication fact sheets
- Provide dosing instruction sheets
- Utilize tricks of the trade
- Peer support
- Pain management (e.g., parenteral administration)

 **Provider-Focused Interventions**

- Multi-disciplinary team with knowledge of TB management
- Adherence-related policies or protocols
- Prompt and frequent follow-up
- Medical advocacy
- Contracting between patient and provider
- Active patient role



TB Patients may have different healing experiences



TB Progressive Interventions for Non-adherent Patients

Advise TB patient of importance of adherence to treatment, consequences of failure to adhere, and possible implications of involuntary confinement for nonadherence to TB treatment

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graph TD; A[Advise TB patient of importance of adherence to treatment, consequences of failure to adhere, and possible implications of involuntary confinement for nonadherence to TB treatment] --> B[Learn the reasons for nonadherence]; B --> C[Address identified problems of nonadherence (convinces, enablers, DOT if not already on DOT)]; C --> D{DOT agreement form, Home isolation form or Voluntary orders}; D -- adherence --> E[Completion of treatment]; D -- nonadherence --> F{Court-ordered DOT (optional)}; F -- adherence --> G[Completion of treatment]; F -- nonadherence --> H[Court-ordered involuntary isolation/confinement for inpatient treatment];
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TB Incentives & Enablers

- Incentives – Small rewards given to patients to encourage them to adhere to treatment or keep appointments
- Enablers – Things that make it possible or easier to receive treatment
- Both should be appropriate and valued by the patient
- Find sources of both (e.g., ALA, community groups, local stores, volunteers)

Examples

Incentives	Enablers
<ul style="list-style-type: none">• Food and beverages• Clothing• Automotive supplies• Hobby/craft items• Household items• Laundry services• Seasonal/holiday treats• Movie passes• Restaurant/fast food vouchers• Toys• Personal care items	<ul style="list-style-type: none">• Transportation<ul style="list-style-type: none">• Bus pass• Cab fare• Battery for patient's car• Gas• Fee for driver's license• Childcare• Obtaining and transporting specimens for the patient• Assisting the client to get medication refills• Rent assistance• Assisting the client to complete paperwork to get food/housing assistance• Assisting the client to get substance treatment

Washington State TB Services Manual

Promoting Adherence in Children & Adolescents

Tricks of the Trade



1 2 3

For babies & young children, pills can be crushed & dissolved in a teaspoon of water

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This can then be mixed with a small amount of food such as apple sauce, mashed bananas, yogurt, etc.

 **Assessing Adherence Barriers of Parents**

- **Adherence can be influenced by:**
 - Parenting skills
 - Motivation
 - Personal health beliefs, stigma
 - Other competing life circumstances

 **Assessing Adherence Barriers of Children and Adolescents**

Adherence in children and adolescents can be influenced by:

- Developmental level
- Behavioral characteristics

 **Additional Factors that May Affect Adherence**

Reactions to medication administration vary depending on:

- Length of medication regimen
- Relationships with caregiver or person administering medication
- Medication side effects
- Reactions of others

 Removing Barriers to Adherence -1

General tips for medication administration

- Administer medication at same time every day
- Start off on positive note
- Avoid distractions
- Ignore behaviors that interfere with administration

 Removing Barriers to Adherence – 2

General tips for administering medications to children unable to swallow pills or capsules

- Crush and mix with spoonful of food
- Sprinkle contents of capsule on food
- Use smallest amount of food possible
- Follow with plain food or liquid

 Removing Barriers to Adherence - 3

General tips for administering medications to infants

- Dissolve medication in 1 tablespoon of warm water
- Mix with small amount of breast milk or formula
- Place in a nipple for administration
- Schedule at a time when infant is hungry





Age-Specific Strategies for Adherence

Age	Strategy
Infant	Educate parent about the importance of treatment
1 year	
Toddler	Use distraction
1-3 years	Give simple explanations Use incentives for each dose if necessary
Preschooler	Give simple directions or explanations
3-5 years	Allow child to have some choices – be consistent Offer verbal praise and rewards
School Age	Discuss treatment plan with child
5-12 years	Provide simple and accurate information
Adolescent	Involve adolescent in decision-making
12-18 years	Maintain confidentiality Provide rewards that are meaningful

 **Take-Home Points**

- Individualize treatment plans to each patient's needs
- Recognize specific challenges of working with TB
- Use knowledge and tools to overcome challenges and to advocate for patients
- Carefully monitor for treatment failure even with DOT
- Explore opportunities to link with providers across disciplines to strengthen adherence support

 **Summary**

DOT
+
individualized case management
+
enablers/incentives

= Best Treatment Results
