

**Adherence to TB Medication**

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27 September 2010

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Field Services and Evaluation Branch (FSEB)  
Division of Tuberculosis Elimination (DTBE)/NCHHSTP/CDC



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**Outline**

- Overview of recommendations for adherence to TB medication
- Barriers and facilitators for adherence to TB medication
- Patient-centered care approach to adherence
- Next steps



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**What is Adherence to Medication?**

- Active role of the patient in self-management of treatment and important cooperation between patient and provider (**Sumartojo 1993**)
- The extent to which a person's behavior – taking medication - corresponds with agreed recommendations from a health-care provider (**WHO 2003**)
- The extent to which patients take medications as prescribed by their health care providers (**Osterberg 2005**)



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### What is Adherence to Medication (Cont)?

- The term self-management is preferred over adherence or compliance to reflect the role of agency and self-determination involved in health-promoting or disease management behaviors (National Cancer Institute 2008)



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### What is Patient-Centered Approach?

- In the disease-centered model, physicians make almost all treatment decisions based largely on clinical experience and data from various medical tests.
- In a patient-centered model, patients become active participants in their own care and receive services designed to focus on their individual needs and preferences, in addition to advice and counsel from health professionals. (Stanton-AHRQ 2002)



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### Overview of Adherence to TB Medication



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## What Indicators are Commonly Used for Adherence?

For patients with newly diagnosed TB for whom 12 months or less of treatment is indicated

- proportion of patients who complete treatment within 12 months
- proportion of patients who complete treatment on directly observed therapy (DOT)



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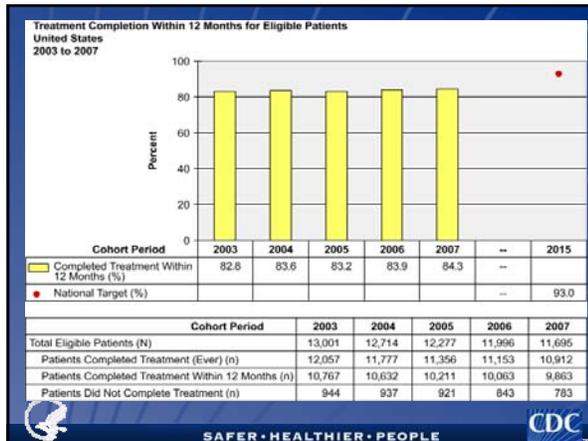
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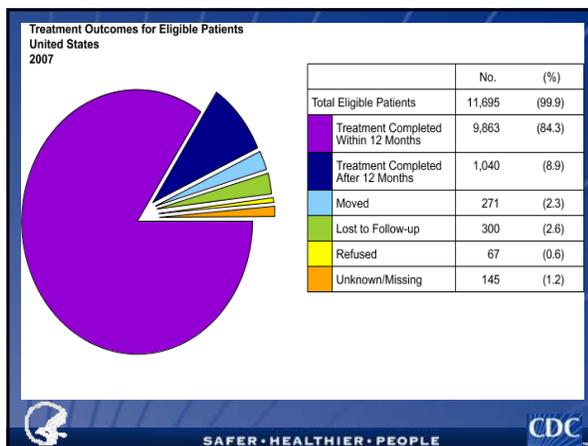
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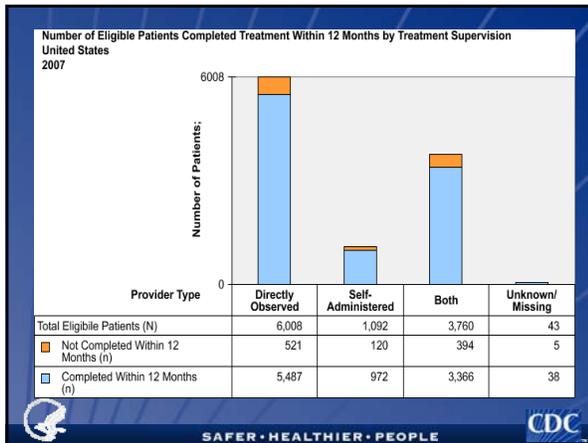
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**What does the Treatment Guideline Recommend for Adherence to Medication?**

- Responsibility for successful treatment assigned to public health program or private physician, not to the patient
- Provide patient-centered care regardless of the source of supervision
- Develop adherence plan with DOT
  - patients are observed to ingest each dose of antituberculosis medications, to maximize the likelihood of completion of therapy

CDC 2003

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**What does the Treatment Guideline Recommend for Adherence to Medication (Cont)?**

- Provide individualized management plan for each patient
- Include measures that facilitate adherence to the drug regimen
- social service support
- treatment incentives and enablers
- housing assistance
- referral for treatment of substance abuse
- coordination of TB services with those of other providers

CDC 2003

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### What is Direct Observation (DOT) of Medication?

- Effective case management via direct observation of treatment by an independent and trained third party
- Rigorous monitoring of all patients on treatment
- Rapid response to ensure patients who interrupt treatment return to care
- Outcome is relapse-free cure rates and prevention of drug resistance
- Maximizes convenience of and respectful interactions with patients
- Uses patient-centered approach

Frieden 2007



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### Why is Observation of Treatment a Public Health Intervention?

- Ethical and legal responsibility for ensuring treatment completion & cure of CD belongs to PH system & community, not individual patient
- The self-administered therapy (SAT) approach means patients fail treatment, default, relapse, develop and spread drug resistance, and die

Frieden 2007



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### Why is Observation of Treatment a Public Health Intervention (Cont)?

- One third of patients do not take medication regularly as prescribed
- HC providers cannot predict accurately which patients will not adhere to treatment
- Treatment observer must be accountable to health system
- Self-administration should never be an option

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### How does Direct Observation (DOT) and Patient-Centered Approach Work?

- View DOT as part of complex, context-specific, and lengthy set of interventions
- Incorporate equity approach
  - discuss individual patients' needs
  - promote relationship between patient and provider
- Address incentives and enablers

Macq 2003



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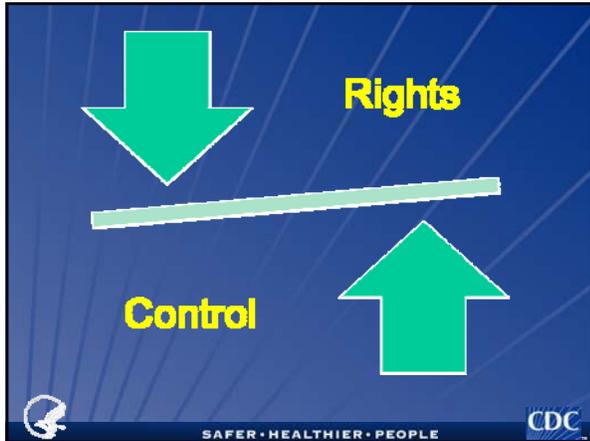
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### How Satisfied are Patient's with Direct Observation?

- Most important aspect of TB DOT was opportunity to receive good medical care
- Supportiveness of DOT staff was significant
- Less statistically important was receiving incentives to encourage participation
- Half reported being better off with DOT than with self-supervised care

Davidson 1999 (Survey NYC)



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## Barriers and Facilitators for Medication Adherence



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### What Factors Contribute to Non-Adherence?

- Cultural and linguistic barriers to cooperation
- Lifestyle differences, homelessness, substance abuse, mental illness
- Patient priorities that compete with taking treatment for TB
- Cryptic non-adherence (spitting out or deliberately regurgitating pills)
- Failure of the health care system to reliably deliver the drugs

CDC 2003



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### What Facilitators Improved Completion of Therapy with DOT Intervention?

<u>Barrier</u>	<u>Facilitator</u>
<ul style="list-style-type: none"> <li>• Inspectorial observation</li> <li>• Single world-wide intervention</li> </ul>	<ul style="list-style-type: none"> <li>• Supportive observation</li> <li>• Person-centered, locally tailored intervention</li> </ul>
<ul style="list-style-type: none"> <li>• DOT interventions designed by professionals for patients</li> </ul>	<ul style="list-style-type: none"> <li>• DOT interventions designed by patients in qualitative study</li> </ul>

Noyes 2007



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## What Facilitators Improved Completion of Therapy with DOT Intervention (Cont)?

### Barrier

- Failure to listen / respond to lay knowledge

### Facilitator

- Effective exchange of expertise / knowledge
- Value experiential knowledge from people with TB
  - Debilitating effects of TB, TB medication
  - Meaning of side effects of medication
- Know how people use knowledge to modify own treatment

Noyes 2007



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## How does Use of Legal Action Ensure Treatment of TB – NYC?

- Commissioner of health can issue orders compelling a person to
  - be examined for TB
  - complete treatment
  - receive treatment under direct observation
  - be detained for treatment
- Patients evaluated based on TB history, not social characteristics
- Detention, last resort to cure, highly successful in ensuring COT

Gasner 1999



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## "Health Officials Detain Patient with TB" Seattle Times (09.03.10)

- Public Health Seattle & King County (PHSKC) took the unusual step of securing a court order to detain and treat a person with an active case of TB.
- This is only the second time since 1986 that PHSKC has sought a court order to detain a patient who resisted treatment.

[CDC News] CDC HIV/Hepatitis/STD/TB Prevention  
News Update 09/07/2010



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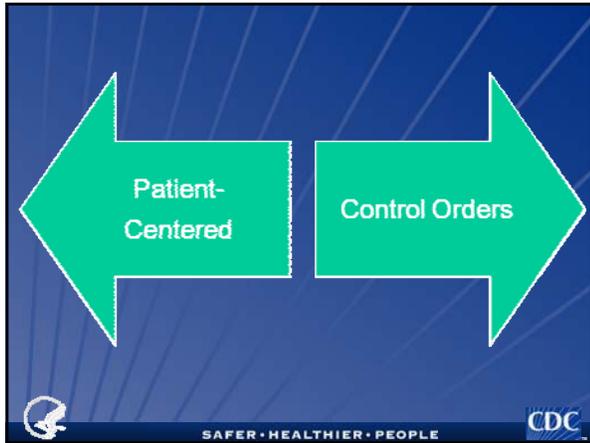
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**Patient-Centered Approach to Adherence and DOT**

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**How does the Patient-Centered Approach Work?**

- Treatment tailored and supervision based on each patient's clinical and social circumstances
- Utilize case management with an adherence plan that emphasizes DOT
- Treatment administered in the context of patient-centered programs that are based on individual patient characteristics and needs

**CDC 2003**

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### How does the Patient-Centered Approach Work?

“The Patient’s Charter sets out the ways in which patients, the community, health providers (both private and public), and governments can work as partners in a positive and open relationship with a view to improving TB care and enhancing the effectiveness of the healthcare process. It allows for all parties to be held more accountable to each other, fostering mutual interaction and a positive partnership.”

World Care Council 2006



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### What Issues were Identified for Observation of Treatment ?

- DOT may discount notions of patient autonomy, self-care, right to privacy
- Importance of negotiation and accommodation within the provider-patient relationship
- Moral response should be sustainable, curtail disease spread, minimize cost to individual rights
- Policies need to focus on
  - context of implementation
  - development of care, integration, and flexibility

Bayer 1995; Booker 1996; Lerner 1997; Porter 2001; Noyes 2007



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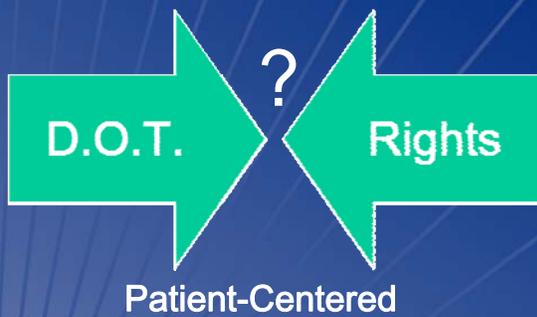
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## Next Steps?



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## Shared Decision Making Approach

- Clinicians and patients communicate together using best available evidence for making decisions
- Patients supported to
  - deliberate about the possible attributes and consequences of options
  - arrive at informed preferences in making a determination about the best action and which respects patient autonomy, where this is desired, ethical and legal



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## What Patient-Centered Adherence Outcome Indicators Could be Considered?

Patient

- Knows about disease process and treatment regimen (understands information)
- Participates in health care decisions (makes choices)
- Believes he/she is able to perform tasks (processes the information)
- Uses social support
- Controls his/her fears

Nursing Outcomes Classification (NOC) 2008



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### TB Patient's Understanding

- TB is life-threatening illness
- Treatment is available with reasonable chance of cure
- The patient's reaction / approach
  - Understands the information
  - Appreciates the application
  - Processes the information
  - Makes choices

Dr. Jesus Ortiz SE RTMCC



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### Equitable Approaches to Treatment Adherence: Systematic Methods

How do you -

- Know patient's needs / perspective
- Facilitate supportive relationship with provider
- Value patient's experiential knowledge
- Know how patient uses knowledge to modify treatment



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### New Proposed Project

Evaluation of Adherence Factors that Influence TB Treatment Outcomes: Directly Observed Therapy (DOT) and Patient-Centered Care Model



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### LEADS Objectives

- Identify factors associated with delayed completion of the 26-week observed treatment regimen using TB surveillance data (RVCT) and health departments' medical records.
- Define context of DOT intervention
  - Describe effectiveness and efficiency of DOT intervention
  - Describe acceptability of the patient-centered approach to adherence (how perceived attitudes convey adherence support, rights protection, and disease control)



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### Anticipated Project Outcomes

- Indicators to measure how patient-centered care influences treatment outcomes
- Factors associated with delayed or failed completion of therapy
- DOT procedures and training, position descriptions, and observer characteristics and supervision
- Patient-centered approach attitudes and legal adherence directives experienced by patients, providers, and team members



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### Summary

- We reviewed
- Recommendations for adherence to TB medication
  - Barriers and facilitators for adherence to TB medication
  - Patient-centered care approach to adherence
  - Next steps for systematic equitable indicators



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### Acknowledgements

- FSEB's ongoing support for nursing research
- Program Evaluation Team (PET) colleagues who encourage me
- National TB Nurse Consultants (NTNC) who report issues about patient adherence to TB treatment



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