



# TB Infection Control

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# Objectives

**At the completion of this presentation participants will be able to:**

- ✓ Describe the three levels of controls in a TB infection control program.
- ✓ Describe the role of the TB Program Manager in the development, implementation, and evaluation of TB infection control.

# *M. tuberculosis*: Infection Control

**PROTECT**



*them from*

**TUBERCULOSIS**

**Keep them away from sick people**  
**Insist on plenty of rest**  
**Train them in health habits**  
**Consult the doctor regularly**

This campaign made possible through the sale of Christmas Seals

# We've Come A Long Way ....

## Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005

Department of Health and Human Services

Centers for Disease Control and Prevention

# A Caveat: Guidelines vs. Rules

## Guidelines

- Recommendations only
- Not enforceable
- TB Control Guidelines
  - CDC
  - National TB Center
  - American Institutes of Architects

## Rules

- Actual Rules
- Enforceable
- Key Rules
  - OSHA
  - Governmental Codes
  - Institutional Policies

# Purpose of 2005 Guidelines

- Update/replace 1994 guidelines
- Reduce threat to health-care workers
- Expand guidelines to include ‘nontraditional’ settings
- Simplify procedures for assessing risk
- Promote vigilance and expertise needed to avert TB resurgence

Global Tuberculosis Institute (2007)

# Infection Control Hierarchy



## Administrative Controls

Reduce risk of exposure via effective IC program



## Environmental Controls

Prevent the spread and reduce concentration of droplet nuclei



## Respiratory Protection

Further reduce risk of exposure in special areas and circumstances



# Fundamentals

## 1. Administrative Controls:

Reduce risk of exposure through an effective infection control program

## 2. Environmental Controls:

Prevent spread and reduce concentration of droplet nuclei

## 3. Respiratory Protection:

Further reduce risk of exposures

# Administrative Controls

- Assign responsibility of TB IC Plan
- Conduct TB risk assessment
- Develop written TB IC Plan
  - Recognize and transfer TB suspects
  - Isolate TB suspects from others

# Administrative Controls

- Provide TB screening for healthcare workers
- Train health-care workers about TB IC Plan
- Ensure timely lab processing, reporting, and proper cleaning of equipment
- Use appropriate signage advising respiratory hygiene and cough etiquette

# Environmental Controls

- Control source of infection
- Dilute and remove contaminated air
- Local and general exhaust ventilation
- Control airflow (clean air to less than clean air)

# Respiratory Protection (RP)

- Implement RP program
- Train healthcare workers in RP
- Train patients in respiratory hygiene

# TB Risk Classifications

All settings should perform risk classification as part of risk assessment to determine need for and frequency of an HCW testing program, regardless of likelihood of encountering persons with TB disease.

# TB Risk Classifications

- Low Risk – Persons with TB disease are not expected to be encountered, exposure unlikely.
- Medium Risk – Persons with TB disease are expected to be encountered, exposure possible.
- Potential ongoing transmission – Temporary classification for any settings with evidence of person to person transmission.

# TB Risk Classifications

<b>INPATIENT SETTINGS</b>	<b>LOW</b>	<b>MEDIUM</b>	<b>POTENTIAL ONGOING TRANSMISSION</b>
< 200 beds	< 3 TB patients/yr	≥ 3 TB patients/yr	Evidence of ongoing transmission, regardless of setting
≥ 200 beds	< 6 TB patients/yr	≥ 6 TB patients/yr	

# TB Risk Classifications

<b>OUTPATIENT SETTINGS</b>	<b>LOW</b>	<b>MEDIUM</b>	<b>POTENTIAL ONGOING TRANSMISSION</b>
TB treatment facilities, medical offices, ambulatory care settings	< 3 TB patients/yr	≥ 3 TB patients/yr	Evidence of ongoing transmission, regardless of setting

# TB Risk Classifications

NONTRADITIONAL FACILITY-BASED SETTINGS	LOW	MEDIUM	POTENTIAL ONGOING TRANSMISSION
<p>Emergency medical service (EMS), medical settings in correctional facilities, outreach care, long-term care facilities</p>	<p>Only patients with LTBI treated</p> <p>No cough-inducing procedures are performed in setting</p> <p>System to detect/triage persons with TB symptoms</p>	<p>Settings where TB patients are expected to be encountered</p>	<p>Evidence of ongoing transmission regardless of setting</p>

# TB Testing Frequency

<b>RISK CLASSIFICATION</b>	<b>FREQUENCY</b>
<b>Low</b>	Baseline on hire; further testing not needed unless exposure occurs
<b>Medium</b>	Baseline, then annually
<b>Potential ongoing transmission</b>	Baseline, then every 8–10 weeks until evidence of transmission has ceased

# Role of the Local TB Program

- Provide data
- Provide consultation
- Provide education
- Provide environmental assessments
- Program development, implementation, and evaluation

# FAQs

- Two-step TST
- QFT-Gold
- Treatment for LTBI
- Risk assessment
- Environmental controls
- Respiratory protection

# Other References

Presentation: January 2007, Global TB Institute,  
Infection Control, Paul Jensen, PhD

Presentation: May 2007, SNTC – Program Manager’s  
Training, Karen Farrell

Presentation: May 2007, CDC – TB 101, Abermathy

