

PERSONAL INFECTION CONTROL

Tuberculosis 101
May 30, 2007

Objectives

- ▣ Describe current tuberculosis infection control regulations and guidelines
- ▣ Describe how healthcare workers can protect themselves from being infected with *M. tuberculosis* (TB)

Infection Control Hierarchy



Administrative Controls



Environmental Controls



Respiratory Protection

Fundamentals of Infection Control

- ❑ **Administrative controls:** reduce risk of exposure via effective Infection Control (IC) program and work practices
- ❑ **Environmental controls:** prevent spread and reduce concentration of droplet nuclei
- ❑ **Respiratory protection:** last resort to further reduce risk of exposure

Administrative Controls

- ❑ Assign responsibility for TB IC Plan (ICP)
- ❑ Conduct TB risk assessment
- ❑ Develop written TB ICP
- ❑ Provide TB screening for healthcare workers (HCWs)
- ❑ Train HCWs about TB IC
- ❑ Use appropriate signage and train patients in respiratory hygiene and cough etiquette

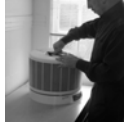
Environmental Controls

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



Room Air Cleaners

High efficiency particulate air (HEPA) filtration



Ultraviolet germicidal irradiation (UVGI)



Respiratory Protection (RP)

- ▣ Implement RP program
 - Need formal written plan
 - Baseline fit testing required
 - Annual fit
 - ▣ Enforced by Cal OSHA
 - ▣ Not enforced by Federal OSHA
- ▣ Train HCWs in RP
 - Check the seal every time
 - Refit when needed



Personal Protective Equipment

- ▣ Respirators (N-95) must be worn indoors in the presence of an unmasked TB patient, when entering an isolation room or sputum induction booth, when changing air handling filters for isolation rooms/booths, and in vehicles when transporting TB patients
- ▣ Standard precautions apply - use gowns, gloves, and eye protection when you anticipate contact with body fluids

TB Risk Assessment

Settings Expecting to Encounter TB Patients

- ☐ Review community TB profile
- ☐ Review number of TB patients encountered
- ☐ Determine which HCWs to include in both TB screening and RP program
- ☐ Assess number of Airborne Infection Isolation rooms needed
- ☐ Determine types of environmental controls needed

TB Risk Assessment (2)

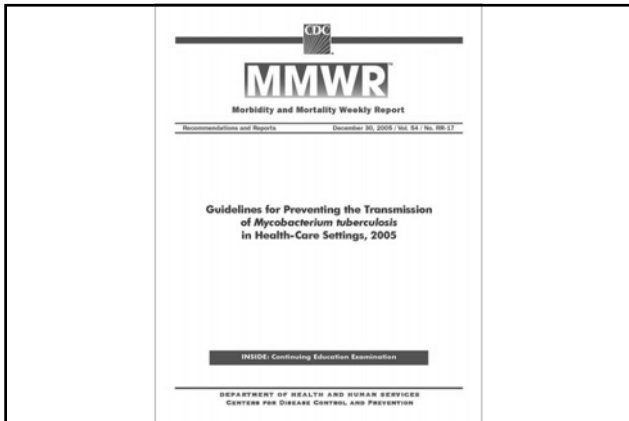
Settings Expecting to Encounter TB Patients

- ☐ Identify and address areas with increased transmission risk
- ☐ Ensure prompt recognition and evaluation of *M. tuberculosis* transmission in setting
- ☐ Conduct periodic reassessments
 - Gap Analysis - identify gaps between policy and practice
- ☐ Correct lapses in IC

Guidelines vs. Rules

- | | |
|--|---|
| <ul style="list-style-type: none">☐ Guidelines are recommendations only - not enforceable☐ Key Guidelines for TB Control<ul style="list-style-type: none">▪ CDC▪ National TB Center▪ American Institute of Architects (AIA) | <ul style="list-style-type: none">☐ Rules are enforceable<ul style="list-style-type: none">▪ Carry the weight of law☐ Key Rules<ul style="list-style-type: none">▪ OSHA (Federal & State)▪ Governmental Codes |
|--|---|

NOTE: Rules often rely on and refer to guidelines!



TB Risk Classification Definitions

- ☐ **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
- ☐ **Potential ongoing transmission** - Temporary classification for any settings with evidence of person-to-person transmission of *M. tuberculosis*

TB Risk Classification (2)

Outpatient Settings	Low	Medium	Potential Ongoing Transmission
TB treatment facilities, medical offices, ambulatory care settings	< 3 TB patients/yr	≥ 3 TB patients/yr	Evidence of ongoing transmission, regardless of setting

TB Testing Frequency

Risk classification	Frequency
Low	Baseline on hire; further testing not needed unless exposure occurs
Medium	Baseline, then annually
Potential ongoing transmission	Baseline, then every 8-10 weeks until evidence of transmission has ceased

Rule Makers

- ▣ www.osha.gov
 - Great resources, easy to navigate
- ▣ www.dir.ca.gov
 - Go to "Regulations" (left menu), then "Policy and Procedures for Enforcement" (left menu), then down the list to C-47, Interim TB Control Enforcement Guidelines



Questions?