

Transmission of *M. tuberculosis*

1. TB is transmitted through the air by a person with TB disease of the lungs or larynx
2. Droplets containing *M. tb* are released into the air by coughing, sneezing, talking, or breathing
3. For TB transmission to occur, 3 things are required: a TB patient, an air path, and a susceptible person
4. Characteristics of TB transmission include the following:
 - A single TB droplet may be able to cause infection
 - It is relatively difficult to become infected with TB
 - The source of TB infection may not be identified

Transmission of *M. tuberculosis*

(continued)

The chances of TB transmission occurring depend on three factors:

1. Source patient
2. Exposure time
3. Environment

Work Practice Controls

A. When transporting patients:

1. Provide and instruct the patient to wear a surgical mask over his/her mouth and nose. The patient should not wear a respirator
2. Have enough surgical masks available for the entire journey. Have patient change masks when wet or torn
3. Let the facility or department where you are going know in advance that the patient is arriving. Advise the facility or department in advance of the appropriate precautions and treatment needs of the patient
4. Wear an N-95 respirator during the entire journey

Work Practice Controls (continued)

A. When transporting patients:

5. Drive additional passengers and staff members in a separate vehicle
6. Set ventilation controls to the fresh air or vent setting, rather than the recirculation setting
7. Set any fan(s) to a high setting
8. Open as many windows as possible
9. Leave the vehicle unoccupied with the windows open for at least an hour after the end of the journey

Work Practice Controls (continued)

B. When working in institutions at high risk for TB transmission:

1. Conduct as much work as possible in non-patient/resident care areas
2. Keep doors and windows open as much as possible
3. Give several tissues to a potentially infectious person and instruct him/her to cover his/her nose and mouth when coughing or sneezing

Work Practice Controls (continued)

C. When conducting home visits with a suspected or confirmed infectious patient:

1. Explain the precautions taken to prevent transmission of TB and ask for patient's cooperation
2. When appropriate, conduct the visit outdoors
3. Give the patient several tissues and instruct him/her to cover his/her nose and mouth when coughing or sneezing
4. Open a window and sit near it if indoors
5. Conduct the visit as efficiently as possible in order to reduce exposure time

Work Practice Controls (continued)

D. When assisting a patient in the collection of sputum specimens in the field:

1. If possible, avoid being present during sputum induction or explain the precautions to be taken and ask for cooperation
2. Take patient outside or to sputum induction room, if available
3. Wear a powered air-purifying respirator

Review Questions

1. What are five ways to reduce personal safety hazards in the field?
2. What are two factors that affect the risk of *M. tb* transmission?
3. What are three ways TB control staff can protect themselves and others from exposure to active, infectious TB?
4. What are three requirements for using respirators (masks) properly?