

## Facility Assessment

### Tuberculosis Contact Investigation

Timothy Epps  
Tuberculosis Program Consultant

## Factors Determining Transmission

- Infectiousness of Case
- Duration of Exposure
- Environmental Conditions
- Susceptibility of Contact



## Infectiousness of Case

### Smear Results (Carbolfuchsin stain)

- Negative No AFB Seen
- +/- 1 – 2 AFB/300 Fields
- 1+ 1-9 AFB/100 Fields
- 2+ 1-9 AFB/10 Fields
- 3+ 1-9 AFB/Field
- 4+ >9 AFB/Field

## Infectiousness of Case

### Smear Results (Fluorochrome stain)

- Negative No AFB Seen
- +/- 1–2 AFB/30 Fields
- 1+ 1-9 AFB/10 Fields
- 2+ 1-9 AFB/Field
- 3+ 10-90 AFB/Field
- 4+ >90 AFB/Field

## Duration of Exposure

### Exposure Limits -High Priority

- 8 hrs very small space
- 24 hrs small-medium space
- 50 hrs medium-large space
- 100 hrs large space

## Environmental Conditions

- Size of environment
- Amount of ventilation
- Location of vents
- Percentage of fresh air exchanged

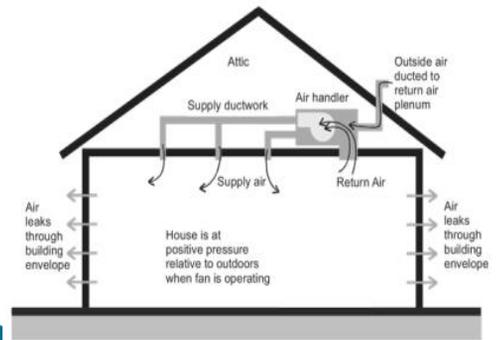
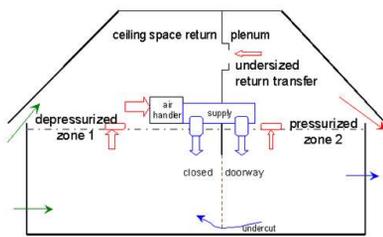


## Susceptibility of Contact

- Current immune status
- Immunosuppressive medication
- Some illegal drugs
- HIV status
- Malnutrition
- Extreme fatigue/lack of sleep

## Facility Assessment: Ventilation

- Standard air handler
- Re-circulating air
- 5% - 10% fresh air mix
- Many output vents
- Few return vents
- Direct duct or ceiling plenum



## Facility Assessment Office

- Individual offices vs cubicles
- Location of return vents
- Location of doors and windows
- Ceiling height



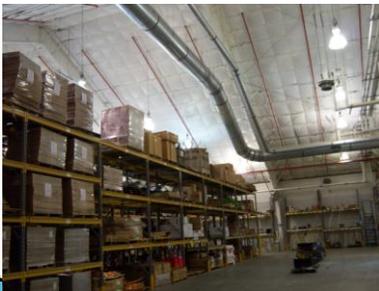
## Facility Assessment Office



## Facility Assessment Warehouse

- Very large spaces
- Often open loading bay doors
- Look for area fans
- Most important area is break room

## Facility Assessment Warehouse



## Facility Assessment Warehouse





## Facility Assessment Classroom

- “Classroom” vs lecture hall
- Avoid testing for “political reasons”, if possible
- Never forget school bus
- Labs sometimes under negative pressure



## Facility Assessment Classroom



## Facility Assessment Classroom



## Facility Assessment Nursing Home

- Most have individual A/C units in Rooms
- Usually have standard vents in hall ceiling
- “Zones” often ventilate single wing
- Check dining room, therapy rooms





## Facility Assessment Church

- Check for “favorite” seats
- Make note of any directional ventilation
- Start investigation with contacts one row distant



## Facility Assessment Conclusion

- Remember four elements affecting communicability
- Remember TB is airborne
- Air currents within open spaces