

Contact Investigation

Concepts, Scenarios, Issues and Ideas

TB Nurse Training
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Norfolk, VA

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OBJECTIVES

- PRIORITIZE CASES BASED ON TRANSMISSION POTENTIAL
- DETERMINE POTENTIAL TRANSMISSION RISK WITHIN AN EMPLOYMENT FACILITY
- CALCULATE POTENTIAL INFECTIOUS PERIOD
- COMPLETION OF FORM TB-502

CI SCENARIOS

- You return to work after Veterans Day - 11/11/13
- Waiting on your desk are three new AFB reports from specimens you collected last week

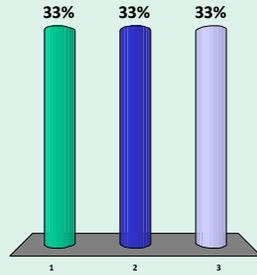
You investigate, and find that they are:

- 32 y/o male with 4+ AFB, works in manufacturing
- 14 y/o male with 1+ AFB, student in local middle school
- 82 y/o female with 3+ AFB, resident in nursing home

ALL MTD RESULTS ARE MTB (+)

Prioritize these suspects based on potential impact to society using this information only:

1. 32 y/o male with 4+ AFB, works in manufacturing
2. 14 y/o male with 1+ AFB, student in local middle school
3. 82 y/o female with 3+ AFB, resident in nursing home



Factors Determining Transmission

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

Infectiousness of Case

Smear Results (Carbolfuchin 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

Environmental Exposure Limits

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

Environmental Conditions

- Size of Environment
- Amount of ventilation
- Number of air exchanges

Susceptibility of Contact

- Current Immune Status
- Immuno-suppressive Medication
- Some Illegal Drugs
- HIV Status
- Malnutrition

Bedrock Nursing Home - CI

What Do We Need to Know?

- NH DON, Medical provider
- Patient name, medical conditions?
- Patient length of time in facility?
- Room number, room mates?
- Ambulatory?
- Group situations?

Bedrock Nursing Home - CI

- Patient is 82 y/o Sandy Stonefield
- 3+ AFB, small cavity RUL
- At facility for three years. Now hospitalized
- Alzheimers diagnosis
- Room 23, Bed B wing "A"
- Is ambulatory, but usually goes to "B" wing to visit a friend
- 20 lb wt loss over past 4 months
- Always had cough

Slab Rock Middle School - CI

- Rocky Bolder, 14 y/o Male, 1+ AFB sputum
- Rode morning bus to school, activity bus home
- Attends 4 classes per day, no absences
- Cough for 3 weeks, no wt. loss or fever
- After school practice for debate team.

Slab Rock Middle School - CI

What Do We Need to Know?

- Ride bus?
- Classes attended
- Days missed
- Symptoms? Type, Duration
- After school activities

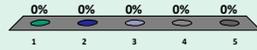
What is the beginning of infectious period at Slab Rock Middle School?

1. September
2. August 1
3. July 1
4. June 1
5. May 1



Who do you test initially at Slab Rock Middle School?

1. Bus, debate team, all four classes
2. Bus and classes only
3. Debate team, and bus and students 2 rows away
4. The entire school
5. Entire school and classes from last year



Slab Rock Middle School - CI

Potential Issues

- Cafeteria
- Study hall
- ESL
- Airflow in classroom—test following classes
- After...after..school activities

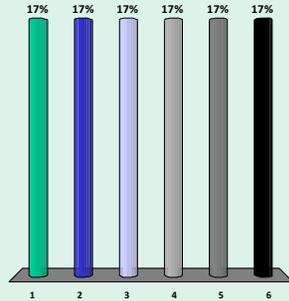
Granite Manufacturing - CI

- Peter Pebble, 34 y/o male 4+AFB cough x 3 months
- Employed for 4 years, worked day shift, 31 employees
- 17,000 sq ft facility, 20' H ceilings
- Only 2 loading docks, doors open only when needed
- No air conditioning except in break room
- Break room measures 15' x 22' x 10'H. 1 return, 3 output vents.
- All lunches eaten between 12p-1:30p.
- Total of 10 workstations, 3 people per station, 1 fan per station.

Granite Manufacturing - CI

When is the start of the infectious period?

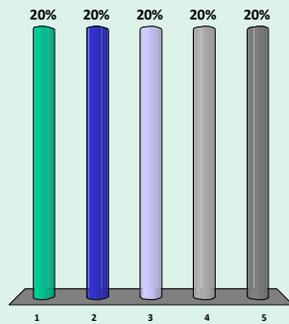
1. August 1
2. July 1
3. June 1
4. May 1
5. June 15
6. May 15



Granite Manufacturing - CI

Who do you test?

1. Everyone in facility
2. Line coworkers only
3. Line coworkers and 1 line over in each direction
4. Line coworkers and lunch room breakers
5. Lunch room breakers only



Granite Manufacturing - CI

Notable Observations

- Position of fans in plant area
- All breaks and lunches in lunch room?
- Any carpooling?
