Contact Investigations: Measles & TB

Monica Czapla, MPH
Infectious Disease Program Manager
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Outline

• Foundation Public Health Services
• TB Contact Investigation
• Measles Contact Investigation
Foundational Public Health Services

Foundational Capability:
Prevention and Control of Communicable Disease and Other Notifiable Conditions

Mitigate risk of disease transmission to protect the public by:

• Ensure disease surveillance systems are in place.
• Maintain well trained staff resources to investigate and respond to control communicable disease and outbreak events.
• Maintain strong partnerships (community, providers, state, etc.)
• Provide technical assistance to providers.
What is TB:

• Disease caused by bacteria (*Mycobacterium tuberculosis*) spread from person to person through the air. TB usually affects the lungs, but it can affect any organ of the body.

Transmission:

• Spread from person to person through the air when people with TB cough, sneeze or spit, they propel the TB germs into the air.

<table>
<thead>
<tr>
<th>Latent Infection</th>
<th>Active Disease</th>
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<tbody>
<tr>
<td>• Not sick – no symptoms</td>
<td>• Sick with symptoms</td>
</tr>
<tr>
<td>• Not contagious</td>
<td>• Contagious</td>
</tr>
<tr>
<td>• Needs treatment for infection to prevent disease.</td>
<td>• Needs treatment to treat TB disease.</td>
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Treatment:
• TB disease treated by taking several drugs for 6 to 12 months by directly observed therapy (DOT).

Complications of TB disease:
• TB disease can be fatal if not treated early.

Risk of infection progressing to disease:
• Without treatment, about 5 -10% of infected persons will develop TB disease at some time in their lives.
• About half of those people who develop TB will do so within the first 2 years of infection.
TB Contact Investigation - Overview

Goal:
Contact investigations identify persons at greatest risk of having been infected with TB by a contagious case and who are at higher risk for developing TB disease.

Process:
1. Determine the infectious and exposure periods.
2. Identify close contacts (and concentric circles).
3. Determine testing and evaluation plan.
4. Evaluate and manage contacts.
5. Recommend LTBI treatment for contacts with TB infection.
# TB Contact Investigation - What’s involved

<table>
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<tr>
<th>Investigation period:</th>
<th>July 1, 2017 - May 2, 2018</th>
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| Exposure locations evaluated: | • Home and other close contacts  
• 3 Health care facilities *(in progress)*  
• 1 Domestic flight  
• Work place *(in progress)*  
• School |
| Total # of contacts identified: | 353 |
| Total # of contacts tested: | 201 *(175 tested directly by CCPH)*  
90 *(82 tested directly by CCPH)* |
| Total # of infections identified: | 2 |
| Involved partnerships: | • School  
• Workplace  
• Case’s care team  
• Health care facilities  
• Partnering counties  
• CDC  
• Community providers |
What is measles:

• Highly contagious virus that lives in the nose and through mucus.

Transmission:

• Can be spread ~4 days before through 4 days after the rash appears through the air when an infected person coughs or sneezes.

• Virus can live for up to 2 hours in the air. If people breathe the contaminated air or touch an infected surface, then touch their eyes, nose, or mouth, they can become infected.

Complications:

• **Common:** ear infections and diarrhea.

• **Severe:** pneumonia (infection of the lungs), encephalitis (swelling of the brain), premature birth in pregnant women, low-birth weight, and death.
Measles Contact Investigation - Overview

Goal:
Contact investigations identify persons who are at greatest risk of having been infected with measles by a confirmed case and who PEP is recommended.

Process:
1. Determine the infectious and exposure periods.
2. Identify people who may have been exposed.
3. Develop contact notification plan.
4. Evaluate contact immunity status & PEP recommendations.
5. Determine 21 day contact monitoring plan (active vs passive).
6. Monitor for additional cases.
Determine immunity status:

• Conduct record review
• Recommend testing if no documented records

Determine monitoring plan for each contact:

• **Passive**: Provide education about measles, monitoring timeframe (21 days since last exposure) and instruct to call CCPH CD immediately if symptoms develop.
• **Active**: Daily calls from CCPH to conduct symptom checks for 21 days since last exposure.
# Measles Contact Investigation - Summary

<table>
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<th>Index case:</th>
<th>Multnomah County resident confirmed on June 27.</th>
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</table>
| **Total # of Clark County contacts identified:** | 10  
1 required active monitoring |
| **Secondary case:** | Clark county resident, reported on July 3. |
| **Public exposure locations identified:** | 3 stores  
1 healthcare facility (plus shared public space) |
| **Total # of contacts identified:** | 47 contacts, 39 Clark County residents  
*not including public exposures*  
7 required active monitoring |
| **Communications:** | Provider Advisory  
Press Release |
| **Involved partnerships:** | • Case’s care team  
• Health care facilities  
• Partnering counties  
• DOH  
• Community providers |
Thank you!

Comments and questions

Clark County Public Health

1601 E Fourth Plain Blvd., Bldg 17

Vancouver, WA 98661