Cracking the Case

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Agenda

• Background
• Interviewing and Re-interviewing
• Contact Investigation Activities
Background Information

- Infant with TB meningitis diagnosed spring 2020
  - US-born
  - Mother non-US-born
  - Pandemic “shut-down” happened around the same time

- Source case investigation did not reveal a TB case
  - Mother diagnosed with LTBI, treated
  - Repeated contact with the others identified
    - Did not keep appointments for testing
    - Denied TB symptoms during phone conversations

- Genotyping results for infant did not reveal a source case
  - CDC searched WGS results nation-wide

- Genotyping results 5 months later
  - Another case in a different county

- 7 additional cases that match by genotype
Epidemiologic Curve of Cluster

- Maryland Cases
- State A
Demographic Information

• Multi-jurisdictional residence of cases
  • 2 counties in Maryland
  • 2 counties in State A

• Age range
  • < 1 year old – 65+

• Countries of Birth
  • United States
  • Haiti
  • Guatemala

• 70% Male

• No other risk factors reported
Genotyping

21RF3282

20RF3640, 20RF5767, 21RF2846, 22RF1592, 22RF2883, MRCA

20RF6658, 21RF2173

22RF2065

State A
Maryland
Locations

Index case (IC)

• Lived in 2-3 different places during infectious period
  • 2 different states
  • 2 different counties in MD
• Attended church
• Carpoooled to work and church
Pre-Interview

• 29-year-old male from Guatemala
• Hospitalized with cough, hemoptysis, fever, night sweats, weight loss
• Pulmonary, Cavitary, miliary, disseminated TB
• RIPE started 8/28/2020
• Interviewed by LHD 9/3/20
Establish Rapport
Basic questions
Who do you live with?
Work? Church?
Establish infectious period
Household and Apartment Complex

Contact Investigation
Household contacts: Index case

- Wife (LTBI)
- Child (5yr) Culture negative TB
- New-born Window tx
- Lymph node TB
- Adults & 1 child LTBI
Apartment Complex

Shared laundry in basement.
2 More Cases - Same Apartment Building

• Mother and Son lived in adjacent apartment

• 69-year-old female from Haiti
  • Pulmonary, Cavitary TB
  • French and English Speaking
  • Started on RIPE on 9/6/2020

• 39-year-old male from Haiti
  • Pleural TB
  • RIPE started 1/19/2021
  • Interviewed for possible links to index case
    • None identified
Apartment complex Contact Investigation

- Collaborate with building manager
- Visualize building structure
- Shared spaces, HVAC system
- Identify other residents
- Establish connections
- Expand contact investigation
- Social gatherings
Apartment complex: Contact investigation

• DOT worker
• Spanish speaking
• Did testing onsite at Apartment Complex
• Flexibility, Drew blood before 6 am
Additional Cases Identified

• Re-interviewing
• Additional information about family obtained
• Church listed as a common place
• Other cases named the index case during interviews
  • Provided additional information about church activities
Contact investigation for time period June 2019-February 2020

Church closed March 2020 through September 2020 due to COVID-19

2 site visits conducted

Testing done onsite and at clinic
  • 80 tested to-date
Challenges

- Height of Covid
- Mistrust
- Invasion of Privacy
- Limited information
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<th>Strengths</th>
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<tr>
<td>Ongoing essential services</td>
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<tr>
<td>Experience &amp; Flexibility</td>
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<tr>
<td>Collaboration</td>
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<td>Bilingual services</td>
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<td>Good rapport</td>
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Summary

- Ongoing outbreak started during pandemic “shut-down” in Spring 2020
  - Difficulty with onsite contact investigations during this time
  - Delayed diagnosis of cases leading to long infectious period
    - Due to COVID-19 pandemic?
- Cases and contacts reluctant to share information
  - Information gathered over time from different sources
- Developing rapport and building trust are key!
- Collaboration with States and Counties
Questions
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