TB Outbreak in a Homeless Shelter
Objectives

- Epidemiology of Outbreak
- Population Health Interventions
- Population Health Goals
2007

- One active case identified
- Less than compliant
- Prolonged recovery
- Contact investigation: no active household members identified; no other active cases identified at shelter
- No testing for Latent TB conducted
Two Years Later

- November: Case #1 identified at hospital
- December: Case #2 identified
- Knew we had a problem
TB Outbreak Screening

- April 2009 - November 2010 there were approximately 760 persons identified as exposed to TB at the shelter.
- Approximately 360 (47.5%) persons were screened once for TB.
February

Shelter A

Cases Pending Genotyping Results
Culture Negative Clinical Case

Case Matches Genotype Cluster IL_214
March

Shelter A

Cases Pending Genotyping Results
Culture Negative Clinical Case

Case Matches Genotype Cluster IL_214

1 4 7
2 5 6

0 3

X

April 2007
November 2009
December 2010
February 2011
March 2011
April 2011
May 2011
June 2011
July 2011
August 2011
September 2011
October 2011
November 2011
*Note 1 case counted in July 2010 linked to this outbreak was counted in downstate county.
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Kane County TB Outbreak
April 2007-April 2012
Based on Treatment Start date, Cases n=33, Suspects n=1

- Index Case
- Genotypically Link
- Clinical case
- Epidemiological Link-Pending Genotyping Results
- Suspect Case
TB Outbreak

- Total cases associated with the Kane County homeless shelter outbreak remains at 33 active cases. First case was reported in 2007.
- No new cases related to TB outbreak since November 2011.
- 30 cases were counted by Kane County Health Department TB Program and 3 cases counted by other counties (Chicago-2009 case genotypically linked; McLean County-2011 case; Will County-2011 case).
- There is one suspect TB case reported in 2012 also with a known Epi-Link to the shelter.

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<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Total</th>
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<td>0</td>
<td>2(McLean, Will)</td>
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TB Outbreak-Therapy Completion Rates

- Twenty eight cases have completed therapy, three remain on treatment, one is lost to follow up and one is deceased.
- Of 146 latent (at high risk of breakdown to active in two years) cases reported, ten have completed treatment.
- New regimen 3HP for LTBI cases.
## TB Outbreak-Therapy Completion Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Total cases #</th>
<th>Cases counted for Kane #</th>
<th>Cases counted for other counties #</th>
<th>Cases completed therapy # (%)</th>
<th>Cases ongoing therapy # (%)</th>
<th>Cases lost during therapy # (%)</th>
<th>Cases deceased # (%)</th>
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<tr>
<td>2007</td>
<td>1</td>
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<td>1(100%)</td>
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<td>2009</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2(100%)</td>
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<td>2010</td>
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<td>15</td>
<td>1</td>
<td>14(93%)</td>
<td>1(7%)</td>
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<td>2011</td>
<td>15</td>
<td>13</td>
<td>2</td>
<td>11(73%)</td>
<td>3(20%)</td>
<td>1(7%)</td>
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<td>2012</td>
<td>0</td>
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Total completion rates: 33 cases counted for Kane, 30 cases counted for other counties, 3 cases completed therapy, 28 cases ongoing therapy (85%), 3 cases lost during therapy (9%), 1 case deceased (3%).
TB Outbreak-Therapy Completion Rates

- Completion rate approaching 91%
  - 28 cases completed therapy
  - 2 cases will complete therapy next month (May, 2012)

- One case moved to another county for treatment; one case lost to follow up; one case deceased.
Population Health Interventions

- Monitor health status of homeless shelter residents to identify potential cases
- Diagnose and treat active and latent TB cases, including daily observational therapy
- Investigate contacts to active cases
- Educate shelter staff and residents

Your Health, Our Commitment
Kane County Health Department
Population Health Interventions Continued

- Enforce compliance for active cases
- Develop shelter policies and plans that support breaking transmission of disease
- Link residents to needed health services
- Mobilize community partnerships
- Evaluate effectiveness of program
Impact on Kane County Health Department

- Staffing
- Financial
- Time
- IDPH involvement
- CDC and NIOSH involvement
Thank You to our Partners

- Kane County Health Department - Disease Prevention and Emergency and Preparedness Staff
- Illinois Department of Public Health
- Illinois Department of Public Health Laboratory
- Hesed House
- CDC
- Provena Mercy Medical Center
- Rush Copley Medical Center
- Provena St. Joseph Hospital, Elgin
- Open Door Clinic
- Dr. James McAuley, Rush Medical Center
- University of Illinois Laboratory
- Cellestis, Inc.
- Chicago Portable X-Ray
- City of Aurora
- NIOSH
- Cook County Department of Public Health- TB Control
- City of Chicago Department of Public Health- TB Control
- Lake County Health Department
- DuPage County Health Department
- McHenry County Health Department
- Heartland Alliance
- Heartland National TB Center, Tyler, Texas
- Aunt Martha’s FQHC