Pertussis in New Mexico

Pertussis Planning and Response Group
New Mexico Department of Health
June 20, 2012
Pertussis: the basics

- *Bordetella pertussis*: Gram negative bacillus
- Humans are only known reservoir
- Highly contagious (~80-90% attack rate among non-immune household contacts)
- Droplet transmission
- Incubation: 4-21 days (avg. 7-10)
- 3 stages: catarrhal, paroxysmal, convalescent
- Infants suffer disproportionate burden of illness
Pertussis surveillance

Clinical Case Definition: >2 weeks cough with any of the following: paroxysmal cough, inspiratory whoop, or post-tussive vomiting

- **Confirmed:** cough of any duration + culture or case meeting clinical case definition with +PCR
- **Epi-linked Confirmed:** meets clinical case definition and is linked to confirmed case
- **Probable:** meets clinical case definition
- **Suspect:** e.g., positive serologies in a person who doesn’t meet clinical case definition
U.S. Reported Pertussis Cases, 1922-2009

CDC, National Notifiable Diseases Surveillance System and Supplemental Pertussis Surveillance System and 1922-1949, passive reports to the Public Health Service
Pertussis rates by year, New Mexico and United States, 2000-2011*

**2011 U.S. rate is provisional and subject to change; updated 11 June, 2012**
Pertussis cases by year, New Mexico, 1990 to 2012*

*2012 case count as of 11 June 2012
Pertussis by age group, New Mexico, 2006-2008

2006-2008 total = 314
Pertussis by age group, New Mexico, 2009-2011

2009-2011 total = 506
Pertussis by age group, New Mexico, 2012*

2012 total as of 11 June = 232
Age-specific pertussis rates by age group, New Mexico, 2006-2008, 2009-2011 and 2012*

*2012 annualized estimate based on cases reported as of 11 June, 2012
Pertussis rates infants < 6 months of age, New Mexico, 2007-2012*

*Annualized estimated rate for 2012 based on cases <6 months of age reported as of 11 June, 2012.
Pertussis rates by county, New Mexico, 2006-2008 and 2009-2011

2006-2008

2009-2011 (maps from NM Indicator-Based Information System)
Pertussis rates by county, New Mexico, 2012 as of 15 June, 2012

2012 (so far…)

[Map showing pertussis rates by county in New Mexico as of 15 June, 2012]
### Ranked pertussis rates* per 100,000 pop. by select county, New Mexico

<table>
<thead>
<tr>
<th></th>
<th>2006-2008</th>
<th>2009-2011</th>
<th>2012 as of 15 June</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Santa Fe Co. = 19.8</td>
<td>1. San Miguel Co. = 22.7</td>
<td>1. Valencia Co. = 92.4</td>
</tr>
<tr>
<td>2.</td>
<td>Taos Co. = 15.6</td>
<td>2. Taos Co. = 25.3</td>
<td>2. San Miguel Co. = 64.7</td>
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<tr>
<td>4.</td>
<td>Bernalillo Co. = 5.5</td>
<td>4. Eddy Co. = 13.6</td>
<td>4. McKinley Co. = 14.0</td>
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<tr>
<td>5.</td>
<td>McKinley Co. = 5.5</td>
<td>5. Cibola Co. = 12.3</td>
<td>5. Bernalillo Co. = 11.7</td>
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<tr>
<td>Statewide</td>
<td>5.3</td>
<td>Statewide = 8.3</td>
<td>Statewide = 11.3</td>
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</tbody>
</table>

*Rates from New Mexico Indicator-Based Information System; only stable county rates included
What is the role of vaccine exemptors*?

*Data from the New Mexico Immunization Program
<table>
<thead>
<tr>
<th>Year</th>
<th>Region 1</th>
<th>Region 2</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Region 5</th>
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<tbody>
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<td>2003</td>
<td>1.3</td>
<td>9.3</td>
<td>2.5</td>
<td>1.2</td>
<td>1.6</td>
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<tr>
<td>2004</td>
<td>2.2</td>
<td>11.7</td>
<td>4.0</td>
<td>2.0</td>
<td>2.2</td>
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<tr>
<td>2005</td>
<td>2.6</td>
<td>12.9</td>
<td>4.2</td>
<td>1.8</td>
<td>2.3</td>
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<tr>
<td>2006</td>
<td>2.5</td>
<td>14.1</td>
<td>4.4</td>
<td>2.5</td>
<td>2.1</td>
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<tr>
<td>2007</td>
<td>2.7</td>
<td>14.3</td>
<td>4.2</td>
<td>2.6</td>
<td>3.2</td>
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<tr>
<td>2008</td>
<td>3.2</td>
<td>16.9</td>
<td>4.7</td>
<td>2.8</td>
<td>3.2</td>
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<tr>
<td>2009</td>
<td>4.0</td>
<td>18.3</td>
<td>5.8</td>
<td>3.6</td>
<td>3.9</td>
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<tr>
<td>2010</td>
<td>3.4</td>
<td>15.7</td>
<td>4.6</td>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>2011</td>
<td>4.2</td>
<td>15.7</td>
<td>5.5</td>
<td>3.5</td>
<td>3.6</td>
</tr>
<tr>
<td>Mean</td>
<td>2.9</td>
<td><strong>14.3</strong></td>
<td><strong>4.4</strong></td>
<td><strong>2.6</strong></td>
<td><strong>2.8</strong></td>
</tr>
</tbody>
</table>

*Data for rate calculations from New Mexico Immunization Program and New Mexico Indicator-Based Information System*
Thank You!

Questions?

Chad.Smelser@state.nm.us
Walter.Selvage@state.nm.us
505-827-0080