Adolescent chlamydia cases rates: Impact of screening heterogeneity

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Rates of Reported Cases of Chlamydia, United States, 2000–2011

- Rates increased 5.5% annually  
- Likely a result of  
  - ↑ reporting  
  - ↑ use of more sensitive tests  
  - ↑ screening  

↑ case rate = a good thing

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Rates of Reported Cases of Chlamydia Among 15–19 Year Old Females, United States, 2000–2014

- During 2005–2011: Rates: ↑ 4.2% per year  
- During 2011–2014: Rates: ↑ 5.5% per year

One interpretation….  
- Chlamydia incidence is decreasing among adolescent females.
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- Chlamydia incidence is decreasing among adolescent females.
  - Assume reporting completeness has not decreased
  - Assume NAAT use has not decreased
  - Assume screening has not decreased
  - ??

Has reporting completeness decreased?

- Hopefully not! But maybe.
  - Jurisdictions switching to new information systems

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    - Jurisdictions switching to new information systems
  - Is it happening in all geographic areas?

Jurisdictions where chlamydia case rates among females aged 15–19 years decreased during 2011–2014 (n=43)

- Has reporting completeness decreased?
  - Hopefully not! But maybe.
    - Jurisdictions switching to new information systems
  - Is it happening in all geographic areas?
    - 43/51 jurisdictions reported decreases during 2011–2014
  - Is it happening in all age groups?
Has reporting completeness decreased?

- Hopefully not! But maybe.
  - Jurisdictions switching to new information systems
- Is it happening in all geographic areas?
  - 43/51 jurisdictions reported decreases during 2011–2014
- Is it happening in all age groups?
  - No
- Is it happening among all race/ethnicities?
  - Yes, but not at the same slope

One interpretation….

- Chlamydia incidence is decreasing among adolescent females.
  - Assume reporting completeness has not decreased **Probably true**
  - Assume NAAT use has not decreased
  - Assume screening has not decreased
  - ??
Has NAAT use decreased?

- No current data available

One interpretation:

- Chlamydia incidence is decreasing among adolescent females.
  - Assume reporting completeness has not decreased **Probably true**
  - Assume NAAT use has not decreased **Probably true**
  - Assume screening has not decreased
  - ??

Measuring chlamydia screening

What we want to measure (screening coverage)

- # of females tested
- # of sexually-active females

What we actually measure (screening uptake)

- # of females tested
- # of sexually-active females who saw a provider

Number of female enrollees aged 16–20 years tested for chlamydia and proportion tested in commercial plans, HEDIS, 2009–2013 (among continuously contributing plans, n=272)

- 2009: 100,000
- 2010: 110,000
- 2011: 120,000
- 2012: 130,000
- 2013: 140,000

Proportion of female enrollees tested:

- 2009: 50%
- 2010: 52.5%
- 2011: 55%
- 2012: 57.5%
- 2013: 60%

Number of female enrollees aged 16–20 years tested for chlamydia and proportion tested in Medicaid plans, HEDIS, 2009–2013 (among continuously contributing plans, n=101)

- 2009: 50,000
- 2010: 49,000
- 2011: 48,000
- 2012: 47,000
- 2013: 46,000

Proportion of female enrollees tested:

- 2009: 20%
- 2010: 20%
- 2011: 20%
- 2012: 20%
- 2013: 20%
One interpretation...

Chlamydia incidence is decreasing among adolescent girls

- Assume reporting completeness has not decreased: **Probably true**
- Assume NAAT use has not decreased: **Probably true**
- Assume screening has not decreased: ??
- ??

What if prevalence was constant, but screening coverage decreased annually by 5%...

<table>
<thead>
<tr>
<th>Year</th>
<th>Observed Case Rate</th>
<th>Hypothetical Case Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>7,000</td>
<td>7,000</td>
</tr>
<tr>
<td>2013</td>
<td>6,500</td>
<td>6,500</td>
</tr>
<tr>
<td>2014</td>
<td>6,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

*2014 data are preliminary; Among the 43 jurisdictions reporting in OMB compliant categories

Conclusions

- Still a fair amount of unknowns
  - Limited data on screening coverage
  - Limited data on screening uptake by race
- Denominators matter
- What can we do
  - Look where we have screening estimates
  - Think about a paradigm shift—what should we be measuring

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