Shigella sonnei Outbreak Among Men Who Have Sex with Men and Homeless Persons Oregon, 2015–2016

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Overview

- Multistate Shigella sonnei outbreak
  - 175 infections
    - 58% in Oregon
  - Men who have sex with men (MSM)
  - Homeless people

Shigella

- 500,000 infections per year
  - S. sonnei most common
- Person-to-person, contaminated food or water
- Incubation period 1–3 days
- Bloody diarrhea
- Outbreaks
  - Children, returning travelers, MSM, people infected with human immunodeficiency virus (HIV)
  - Refugees and internally displaced persons

Objectives

- Identify risk factors
- Implement control measures
- Prevent further cases

Methods

- Identification through routine lab reporting
- Case definition
  - Culture-confirmed S. sonnei matching outbreak strain
  - Oregon
  - June 2015–April 2016
- Interview and medical chart review

Shigella Outbreak

- 102 confirmed cases as of 5/16/16
- 7 Oregon counties
- Median age: 43 years old (range 18–90)
- 38* (40%) with bloody diarrhea
- 46 (45%) hospitalized
- 0 deaths

*Among persons whose symptoms are known
**Public Health Response: Early Outbreak**
- Outbreak questionnaire developed with input from STI
- Notifications to health officers
- Alerts to clinicians caring for MSM and HIV-positive patients
- Posters posted in STD clinics, adult bookstores, and bathhouses

**Oregon Patient Characteristics** (June 2015–April 2016)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td>Men</td>
<td>77</td>
<td>75</td>
</tr>
<tr>
<td>MSM</td>
<td>38**</td>
<td>68</td>
</tr>
<tr>
<td>Homeless</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Contact with homeless</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>HIV-positive</td>
<td>24</td>
<td>37</td>
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<tr>
<td>Drug or alcohol use</td>
<td>42</td>
<td>62</td>
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</tbody>
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*Among persons with known values
**Women excluded

**Epidemiologic Shift**

- PR_{MM} = 3.3
- PR_{H} = 0.3
- PR_{HMM} = 3.6

*Three cases were MSM and homeless

**Public Health Response: Late Outbreak**
- Alerts to public health and clinicians
- Environmental health inspections
- Hand sanitizer distribution
- Public restroom redesign
**Discussion and Recommendations**

- Unexpected event led to appreciation of epidemiologic shift
  - Frequently review epidemiologic data
- Homeless people are another group at high risk for Shigella
  - Add question about homelessness to standard Shigella questionnaires

**Summary**

- Largest Shigella outbreak in Oregon
- Began among MSM, shifted into homeless people
- Heavy precipitation may have contributed to the shift

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