Respiratory Outbreaks in Oregon

• ORS 333-018-0015 authorizes local health departments (LHDs) to investigate all outbreaks by requiring health care providers to report all suspected outbreaks immediately

• Outbreak defined as 2 or more cases of similar illness clustered in time and space
  – For example: 3 residents with influenza like illness develop over 2 days

• Communicable Disease Nurses at LHDs will assist facilities to help control the outbreak
Respiratory Outbreak Management

- During the course of a respiratory outbreak LHDs will facilitate:
  - Collection of basic information about symptom profile and who is affected
    - Line list
  - Collection of specimens for testing at the Oregon State Public Health Laboratory
    - 2 positive specimens necessary for confirmed outbreaks
  - Implementation of control measures
    - Hand hygiene/Respiratory etiquette
    - Isolation of ill patients/ill staff remain at home
    - Prophylaxis/Flu vaccination clinics
    - Environmental cleaning assessment
- We are here to help!

Influenza Outbreaks: 2011-2016*

*outbreaks as of 8/15/2016
Seasonality of Influenza

Reported Influenza Outbreaks: 2011-2016*

Respiratory Outbreaks: 2011-2016*

<table>
<thead>
<tr>
<th>Year</th>
<th>Confirmed, Influenza</th>
<th>Confirmed, other pathogens</th>
<th>Etiology unknown</th>
<th>Total number of outbreaks</th>
<th>Proportion confirmed flu (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>6</td>
<td>11</td>
<td>2</td>
<td>19</td>
<td>31.6</td>
</tr>
<tr>
<td>2012</td>
<td>12</td>
<td>16</td>
<td>0</td>
<td>28</td>
<td>42.9</td>
</tr>
<tr>
<td>2013</td>
<td>44</td>
<td>21</td>
<td>9</td>
<td>74</td>
<td>59.5</td>
</tr>
<tr>
<td>2014</td>
<td>13</td>
<td>17</td>
<td>4</td>
<td>32</td>
<td>40.6</td>
</tr>
<tr>
<td>2015</td>
<td>66</td>
<td>36</td>
<td>8</td>
<td>110</td>
<td>60.0</td>
</tr>
<tr>
<td>2016</td>
<td>20</td>
<td>14</td>
<td>8</td>
<td>42</td>
<td>47.6</td>
</tr>
</tbody>
</table>

- ACDP receives reports of other respiratory illness outbreaks
- Confirmed influenza outbreaks account from a 1/3 to 2/3 of outbreaks
- Most common pathogen after influenza: pertussis
Influenza Outbreaks by Subtype

*outbreaks as of 8/15/2016

Healthcare associated outbreaks

*outbreaks as of 8/15/2016
ACUTE AND COMMUNICABLE DISEASE PREVENTION PROGRAM
OREGON PUBLIC HEALTH DIVISION

HEALTHCARE FACILITY INFLUENZA OUTBREAKS

ALF-Assisted Living Facility, NF-Nursing Facility, SNF-Skilled Nursing Facility, RC-Residential Care

Healthcare Facility Staff and Resident Vaccination Rates

- Only SNF are required to report healthcare worker influenza vaccination rates

- We ask local health departments to ask facilities for staff and resident vaccination rates
  - Not all facilities track vaccination rates

- For 2011-2016 confirmed influenza outbreaks occurring in LTCFs:
  - Average proportion of staff flu vaccination:
    - 62.5% (range: 0-100%, n=41)
  - Average proportion of resident flu vaccination:
    - 78.2% (range: 10-100%, n=42)
The majority of facilities have staff flu vaccination rates >50%
- The majority of facilities have resident flu vaccination rate >75%
- 18 facilities with >90% resident influenza vaccination rate
- 7 facilities with >90% staff vaccination rate

<table>
<thead>
<tr>
<th>% vaccinated</th>
<th>Staff (n=41)</th>
<th>Resident (n=42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25%</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>26-50%</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>51-75%</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>&gt;75%</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>

Influenza Outbreak Control Measures

- Control Measures are reported by LHDs

<table>
<thead>
<tr>
<th>Control Measures</th>
<th># of Facilities</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droplet Precautions</td>
<td>108</td>
<td>78.8%</td>
</tr>
<tr>
<td>Prophylaxis</td>
<td>105</td>
<td>76.6%</td>
</tr>
<tr>
<td>Isolation of Ill Patients</td>
<td>105</td>
<td>76.6%</td>
</tr>
<tr>
<td>Respiratory Etiquette Education</td>
<td>100</td>
<td>73.0%</td>
</tr>
<tr>
<td>Re-offered Vaccine</td>
<td>49</td>
<td>35.8%</td>
</tr>
<tr>
<td>Cohort Ill Residents</td>
<td>33</td>
<td>24.1%</td>
</tr>
<tr>
<td>Cohort Nursing Staff</td>
<td>27</td>
<td>19.7%</td>
</tr>
<tr>
<td>No Intervention</td>
<td>7</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
Why vaccinate staff and residents?

- Influenza is more likely to cause severe disease in people >65 years
- CDC reports that, with a good match, flu vaccination is 90% effective in preventing disease in young, healthy folks.
- In the elderly, flu vaccine is 50-60% effective in preventing hospitalization and 80% effective in preventing death
- Decreased lost work time for staff members
- Helps prevent influenza outbreaks
  - If staff members are sick with influenza, LTCF residents have a high risk of being exposed

Increasing Influenza Vaccination Rates in LTCF: Pilot Project

- Pilot project between Yamhill County Public Health Department and Oregon Public Health department
- Project objectives:
  - Develop tools that LHDs can use to increase staff flu rates in under-immunized LTCFs
  - Ensure the approach is scalable and requires minimal LHD time and resources.
  - Provide easy method through which LHDs can identify under-immunized LTCFs.
  - Build capacity of LTCFs to provide vaccine, or other medical counter measures, efficiently to their staff and residents.
Increasing Influenza Vaccination Rates in LTCF: Methods

Using survey data collected by OPHD, we identified a LTCF with staff vaccination rates below 60% (n=1)

- LHD contacted LTCF and offered support to improve staff flu vaccination rates.
- LHD met with LTCF Nursing Supervisor, reviewed current vaccination strategy, and developed plan to incorporate best practices.
- LHD staff presented at LTCF all-staff meeting to explain rationale for staff flu vaccination.
- LHD supplied LTCF Nursing Supervisor with vaccine declination forms in English and Spanish.

Increasing Influenza Vaccination Rates in LTCF: Best Practices

- Use of mobile carts to take vaccine to staff members during their shifts
- Use of a form requiring that a staff member actively decline influenza vaccination if he or she chooses not to be immunized
- Provide vaccine at no charge
- Mask required during influenza season if not vaccinated
- Signage or reminders about benefits of vaccination
- Incentives (for example, a gift card) for staff who get vaccinated

Vaccination rates rose from 48% in 2014 to 66% in 2015, a 37% relative increase.
Increasing Influenza Vaccination Rates in LTCF: Tools

Tools to implement the program
• Draft agenda for LHD meeting with LTCF Nursing Director, including best practices
• PowerPoint for presentation to LTCF staff
• Vaccine declination forms in English and Spanish
• Report with LTCF staff flu vaccination rates

• CDC Long Term Care Facility Flu Vaccination toolkit: http://www.cdc.gov/flu/toolkit/long-term-care/index.htm

• Contact Richard Leman (Richard.F.Leman@state.or.us) or me if you are interested in learning more!

Thank You!

http://public.health.oregon.gov
alexia.y.zhang@state.or.us