Surveillance and Immunization Update for ICLAC, October 23, 2014

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LA County Department of Public Health
# VPD Cases Reported 2009 – 2014

<table>
<thead>
<tr>
<th>VPD</th>
<th>2014 (as of 8/31/14)</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
<th>2009</th>
<th>2009-2013 5-yr average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>H. flu, all serotypes &lt;15 yrs</td>
<td>6</td>
<td>11</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>11</td>
<td>11.8</td>
</tr>
<tr>
<td>H. flu, type B &lt;15 yrs</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Measles</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>1</td>
<td>5.2</td>
</tr>
<tr>
<td>Mumps*</td>
<td>1</td>
<td>9</td>
<td>13</td>
<td>3</td>
<td>20</td>
<td>7</td>
<td>10.4</td>
</tr>
<tr>
<td>Pertussis**†</td>
<td>751</td>
<td>296</td>
<td>154</td>
<td>453</td>
<td>972</td>
<td>156</td>
<td>406</td>
</tr>
</tbody>
</table>

* Includes probable cases
† Pertussis data in this table are not comparable to case counts released by CDPH.
### VPD Cases Reported 2009 – 2014, Continued

<table>
<thead>
<tr>
<th>VPD</th>
<th>2014 (as of 6/30/14)</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
<th>2009</th>
<th>2009-2013 5-yr average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polio</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rubella (Acute)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1*</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>Rubella (Congenital)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1*</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>Tetanus</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>Varicella (Hospitalized)*</td>
<td>10</td>
<td>7</td>
<td>12</td>
<td>15</td>
<td>20</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>Varicella (Fatal)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Varicella (Outbreaks)</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

* Includes probable cases
Pertussis Morbidity in LA County, Received Year-To-Date Each Year to October 15th, 2010-02014 (Provisional for 2014, as of October 15th)

<table>
<thead>
<tr>
<th>Confirmed /Probable by Age Group</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 1 year</td>
<td>160</td>
<td>38</td>
<td>26</td>
<td>122</td>
<td>186</td>
</tr>
<tr>
<td>1 through 10 yrs</td>
<td>293</td>
<td>43</td>
<td>37</td>
<td>133</td>
<td>266</td>
</tr>
<tr>
<td>11 through 18 yrs</td>
<td>272</td>
<td>28</td>
<td>18</td>
<td>67</td>
<td>96</td>
</tr>
<tr>
<td>Over 18 yrs</td>
<td>77</td>
<td>41</td>
<td>31</td>
<td>68</td>
<td>130</td>
</tr>
<tr>
<td>CASE TOTAL</td>
<td>802</td>
<td>150</td>
<td>112</td>
<td>360</td>
<td>678</td>
</tr>
<tr>
<td>Suspects</td>
<td>723</td>
<td>27</td>
<td>48</td>
<td>166</td>
<td>205</td>
</tr>
<tr>
<td>Cases + Suspects</td>
<td>1525</td>
<td>177</td>
<td>160</td>
<td>556</td>
<td>883</td>
</tr>
</tbody>
</table>
Tdap Vaccine Efficacy

• ACIP reviewed data from the 2012 pertussis resurgence in Washington State for persons who received all prior pertussis doses as “acellular” and found Tdap effectiveness within 1 yr of Tdap to be 75%

• Vaccine effectiveness declined to 40% by 2 to 4 years post vaccination

• Conclusion -- In this outbreak setting and for this “acellular” group (received childhood series in 1997 or later) Tdap was modestly effective but showed waning of effectiveness over time
But The Vaccine Does Something!!!

• Study of vaccinated children and adolescents in Oregon, 2010 - 2012 found that ever-vaccinated persons (aged 6 weeks -18 years) were “significantly” less likely to be hospitalized or develop severe pertussis (Barlow et al. Clin Infect Dis 2014; 58:1523-9)

• Study of 287 students ≥ 11 years of age during single campus (nursery-12th grade) school fall –winter 2007 pertussis outbreak in St.Croix, Virgin Islands – for those fully vaccinated with DTaP and Tdap, Vaccine efficacy was 61.3% (95% C.I. 52.5% to 90.2%) against confirmed or probable pertussis and 68% against lab-confirmed pertussis [Stanley et al., Clin Infect Dis 2010;51(3):315-321]]
Influenza Trends To-Date and Key Messages

• Seasonal Influenza activity is mild at this point in the U.S. and there have been no pediatric deaths
• What is being seen, as reported by the laboratory influenza reporting system, is mostly H3N2, with some Bs, but no H1N1s
• As of October 3, nearly 99 million doses of flu vaccine have been distributed in U.S., out of expected 151 – 159 million doses
• For this year, ACIP gives priority to the use of LAIV for immunizing children 2 years through 8 years of age, if it is available and there are no contraindications for its use, because it is a better “immunizer” in children compared to inactivated influenza vaccine [MMWR August 15, 2014 vol 63 (32);691-697]
Los Angeles County Health Officer Order
Influenza Vaccination or Masking of Healthcare Personnel

• Requires licensed acute care hospitals, skilled nursing facilities, and intermediate care facilities to require healthcare personnel to be vaccinated against influenza or wear a mask during the flu season

- Excludes Long Beach and Pasadena
  ○ The City of Long Beach Health Officer issued a supporting letter in 2013.

- Includes employees, volunteers, residents/interns, and physicians with hospital/facility privileges

- Mask must be worn when in contact with patients or when working in patient-care areas

- In effect from November 1 - March 31, annually
Los Angeles County Health Officer Order Resources

Health Officer Order
Influenza Vaccination and Masking for Healthcare Personnel

Health Officer Order Resources
- Los Angeles County Health Officer Order: Influenza Vaccination and Masking for Healthcare Personnel
- Continuation of the Los Angeles County Health Officer Order for the 2014-2015 Influenza Season
- Updated Supporting Rationale for Requiring Influenza Vaccination or Masking for Healthcare Personnel
- Updated Health Officer Order Frequently Asked Questions
- Influenza Vaccination for Healthcare Personnel Fact Sheet
- Frequently Asked Questions about Influenza Vaccinations
- Customizable Poster Regarding Masking

Influenza Vaccination Information and Educational Materials for Healthcare Personnel
- 2014-2015 Influenza Vaccination Recommendations, ACIP
- Vaccination Recommendations for Healthcare Personnel, ACIP
- Influenza Vaccination Coverage Among Healthcare Personnel, 2013-14 Influenza Season
- Influenza Vaccine Information Statements IV LAIV
- Influenza Vaccination Information for Healthcare Personnel, CDC
- Influenza Vaccination for Healthcare Personnel Poster, CDC

www.publichealth.lacounty.gov/ip/flu_order.htm
PCV13 and PPSV23 in Adults ≥ 65 Years of Age

• ACIP now recommends that all persons ≥ 65 years of age receive both PCV13 and PPSV23 [MMWR September 19, 2014 vol. 63 (37) 822-25]

• Persons of that age group who never received a pneumococcal vaccine should receive PCV13 first, then PPSV23, 6 – 12 months later

• Persons of that age group who have previously received one or more doses of PPSV23 should receive a dose of PCV13 if it’s been at least one year since the last dose of PPSV23
Final Remarks

• Nation-Wide outbreak of Enterovirus D-68 is probably waning
• D-68 is associated with severe respiratory distress in some children (first recognized in Ca. in 1962)
• D-68 detected in specimens from four patients who died and had samples submitted for testing
• D-68 has been found in CSF of some children with neurologic illnesses
• The extent to which this is contributing to the “acute flaccid paralysis” of unknown etiology is unknown
Final Remarks (2) Ebola

• Caused by a pleomorphic virus that can be seen in branched, circular or coiled shapes on electron microscope preparations, (a member of the Filoviridae family of viruses)
• Causes hemorrhagic fever
• Ebola – soon to be a vaccine-preventable disease???
• Without a vaccine and without sufficient quantities of promising treatment therapies such as Z-Mapp, all we can do is work towards early identification and supportive treatment of cases, establish procedures to reduce exposure of the public and health care workers to patients' extremely infectious bodily fluids, and identify and monitor/quarantine/restrict activities of contacts when indicated....basic public health activities!
The End!

• Questions? Comments?