Surveillance of influenza-like illness in Israel

Weekly update report for Week 16, ending 20-Apr-13

Summary: Low influenza activity.

Clinically: In the community: Visit rates due to influenza-like illness are now stabilizing at low levels seen between influenza seasons. Decrease in visit rates due to pneumonia. In hospitals: Decreases in the percentage of visits to internal medicine emergency rooms due to pneumonia and in hospital bed occupation rates in internal medicine and pediatric departments.

Laboratory: One specimen of the 10 specimens (10%) collected from the sentinel clinics during the past week was found to be positive for influenza B.

Morbidity

- Influenza-like morbidity (Figures 1-3): In the community: Visit rates to "Maccabi Healthcare Services" clinics due to influenza-like illness are now stabilizing at low levels seen between influenza seasons. A similar picture arises from data from "Clalit" Health Services.
**Pneumonia morbidity (Figures 4-5): In the community:** In the past week, a decrease has been observed in the crude visit rate to "Maccabi Healthcare Services" clinics due to pneumonia. This decrease is expressed for adults aged 19 years and over. In the group of infants, children and youths aged 2-18 years, no significant change was observed. A similar picture arises from data from "Clalit" Health Services.
In hospitals: The decrease in the percentage of visits to internal medicine emergency rooms due to pneumonia is continuing. There is no significant change in the percentage of visits to pediatric emergency rooms. The percentages of visits to internal medicine and pediatric emergency rooms are below the multi-annual average.
Hospitalizations (Figure 8): In the past week, decreases have been observed in the hospital bed occupancy rate in pediatric departments (84%, compared to 87% in the previous week) and in internal medicine departments (110%, compared to 114% in the previous week). The occupancy rates are within the seasonally expected range.

Fig. 8: Weekly average bed occupancy, internal and pediatric departments, all hospitals, 2013-2010
Mortality

- **Figures 9-10**: Figure 9 is updated for Week 11 (ending 16-Mar-13), and shows the number of deaths throughout Israel, as compared to the multi-annual average. In the last two weeks shown in the Figure (Weeks 10 and 11), the level of deaths for all reasons is higher than seasonally expected. It arises from Figure 10, based on data from the Epidemiology Division updated until Week 4 (ending 26-Feb-13), that the percentage of mortality that is due to pneumonia is around the seasonally expected level.

![Figure 9: Total deaths, all causes, 2010-2013, compared to annual average](image1)

![Figure 10: Percentage of pneumonia-related deaths of all deaths, 2010-2012, compared to seasonal prediction](image2)
Laboratory

Findings of the Sentinel Clinic Network (Figures 11-12): Results of tests by the Central Virology Laboratory for the current week are summarized in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Week 16 (14-Apr-13 – 20-Apr-13)</th>
<th>Cumulative Data since Week 41 (ending 13-Oct-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of specimens</td>
<td>10</td>
<td>1,588</td>
</tr>
<tr>
<td>No. of RSV-positive specimens</td>
<td>0</td>
<td>212 (13.3%)</td>
</tr>
<tr>
<td>No. of influenza-positive specimens</td>
<td>1</td>
<td>515 (32.4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>No. of specimens</th>
<th>Cumulative Data since</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A influenza</td>
<td></td>
<td>479 (93%)</td>
</tr>
<tr>
<td>- A (H1N1)pdm 09</td>
<td>0</td>
<td>260 (54.3%)</td>
</tr>
<tr>
<td>- A/unsubtyped*</td>
<td>0</td>
<td>1 (0.2%)</td>
</tr>
<tr>
<td>- A/H3</td>
<td>0</td>
<td>218 (45.5%)</td>
</tr>
<tr>
<td>- A/H1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type B influenza</td>
<td>1 (10%)</td>
<td>36 (7%)</td>
</tr>
</tbody>
</table>

*Specimens that were found to be positive for type A influenza, but could not be subtyped due to small amount of virus.

All specimens found positive for influenza subtype A/H3 that have been tested thus far were antigenically identified as A/victoria/361/2011 (H3N2)-like, and those positive for A (H1N1) pdm09 were identified as A/California/7/2009 (H1N1)-like, which resemble the strains included in this season's vaccine.
All specimens found positive for influenza B that have been tested thus far were antigenically identified as B/Wisconsin/1/2010, which belongs to the Yamagata lineage and resembles the strain included in this season's vaccine.

**Fig. 11: Positive influenza samples out of total samples collected by sentinel network, 2012/13**

**Fig. 12: Percentage of positive influenza and RSV samples out of total samples collected by sentinel network, 2012/13**
Data from hospitalized patients diagnosed at the Central Virology Laboratory at the Sheba Medical Center, Tel Hashomer

Fig 13: Percentage of positive samples for respiratory viruses from patients hospitalized at the Sheba Medical Center, Tel Hashomer (The Central Virulogy Laboratory)

- Flu
- RSV
- hMPV
- Adenovirus
- Parainfluenza 3

Year, month & week

Percentage

2012 2013
41 43 45 47 49 51 1 3 5 7 9 11 13 15
0 5 10 15 20 25 30 35 40
International influenza activity

**Europe:** Updated for Week 15 (ending 14-Apr-13): The decrease in influenza activity in European countries is continuing. Most countries are reporting low respiratory illness rates, below baseline levels, or rates that are at similar levels to those seen between influenza seasons. The percentage of isolations positive for influenza from the sentinels and from non-sentinel sources is continuing to decrease. This week, positive specimens are comprised primarily of influenza B-positive specimens.

**USA:** Updated for Week 15 (ending 13-Apr-13): Decreased influenza activity in the USA. The percentage of specimens positive for influenza is continuing to decrease. There is combined activity of influenza subtype A/H3N2, A/H1N1 2009 and influenza B, influenza subtype A/H3 being the dominant strain, although in recent weeks, there has been an increase in specimens positive for influenza B.