Surveillance of influenza-like illness in Israel

Weekly update report for Week 16, ending 18-Apr-15

Summary: The influenza-like illness rate now resembles rates observed between influenza seasons.

Clinically: In the community: The crude clinic visit rate due to influenza-like illness is low and resembles the level observed between influenza seasons; the crude clinic visit rate due to pneumonia has not changed significantly.

In hospitals: Decreases in the percentages of visits to pediatric and internal medicine emergency rooms due to pneumonia.

Laboratory: No specimen from the sentinel clinics was found to be positive for influenza.

Note: All data in this report are up-to-date as of the time that it is issued, and could change with updates to the databases.

Morbidity

- Influenza-like morbidity (Figures 1-3): In the community: The crude rate of visits to "Maccabi Healthcare Services" clinics due to influenza-like illness is below baseline level, and now resembles levels observed between influenza seasons. A similar picture arises from data from "Clalit" Health Services.
Fig. 1: Weekly visits to community clinics due to influenza-like illness, by year 2012-2015, compared to annual average

*The baseline level is intended to indicate the beginning of the influenza season. This baseline level was calculated using an algorithm that was developed in the framework of the European influenza surveillance project (EuroFlu), based on past data accumulated at the ICDC regarding visits to "Maccabi Healthcare Services" clinics due to influenza-like illness.

Fig. 2: Weekly visits to community clinics due to influenza-like illness, by age, 2012-2015

Fig. 3: Weekly visits to community clinics due to influenza-like illness, by district, 2012-2015
Pneumonia morbidity (Figures 4-7): In the community: The decrease in the rate of visits of 0-18 year olds to "Maccabi Healthcare Services" clinics due to pneumonia is continuing. In the past week, an increase in visit rates was observed for the elderly aged 65 years and over. The crude visit rate and the visit rates for the remaining age groups did not change significantly. A similar picture arises from data from "Clalit" Health Services.

Fig. 4: Weekly visits to community clinics due to pneumonia, by year, 2012-2015, compared to annual average

Fig. 5: Weekly visits to community clinics due to pneumonia, by age, 2012-2015
In hospitals (based on the Ministry of Health database administered by Health Information Division): Pneumonia (Figures 6-7): In the past week, decreases were observed in the percentages of visits to pediatric and internal medicine emergency rooms due to pneumonia. These percentages are now below the multi-annual average.

Bronchiolitis (Figure 8): In the past week, some increase was observed in the percentage of visits of 0-2 year olds to pediatric emergency rooms due to bronchiolitis.
• **Hospitalizations (Figure 9):** In the past week, no significant changes were observed in hospital bed occupancy rates in internal medicine departments (approximately 102%) or in pediatric departments (approximately 77%). Occupancy rates are within the seasonally expected range.

![Fig. 9: Weekly average bed occupancy, internal and pediatric departments, all hospitals, 2015-2010](image)

**Mortality**

• **Figures 10-11:** Figure 10 shows the number of deaths throughout Israel as compared to the multi-annual average (updated for Week 11, ending 14-Mar-15). It arises from this figure that the total number of deaths has recently continued to decrease, and is still above the multi-annual average. It arises from Figure 11, based on data from the Epidemiology Division updated until Week 10 (ending 7-Mar-15), that the percentage of mortality that is due to pneumonia has recently been above the epidemic threshold.
Fig. 10: Total deaths, all causes, 2011-2015, compared to annual average

Deaths 2007-2012 average

Fig. 11: Percentage of pneumonia-related deaths of all deaths, 2012-2015, compared to seasonal prediction
Laboratory

Findings of the Sentinel Clinic Network (Figures 12-13): 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 (12-Apr-15 - 18-Apr-15)</th>
<th>Cumulative Data since Week 40 (ending 4-Oct-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Specimens</td>
<td>1</td>
<td>1,142</td>
</tr>
<tr>
<td>No. of RSV-positive specimens</td>
<td>0</td>
<td>149 (13%)</td>
</tr>
<tr>
<td>No. of influenza-positive specimens</td>
<td>0</td>
<td>327 (28.6%)</td>
</tr>
<tr>
<td>No. of influenza-positive specimens by type/ subtype</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type A influenza</td>
<td>0</td>
<td>297 (90.8%)</td>
</tr>
<tr>
<td>- A (H1N1)pdm 09</td>
<td>0</td>
<td>19 (6.5%)</td>
</tr>
<tr>
<td>- A/unsubtyped*</td>
<td>0</td>
<td>4 (1.3%)</td>
</tr>
<tr>
<td>- A/H3</td>
<td>0</td>
<td>274 (92.2%)</td>
</tr>
<tr>
<td>- A/H1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type B influenza</td>
<td>0</td>
<td>30 (9.2%)</td>
</tr>
</tbody>
</table>

* Specimens that were found to be positive for type A influenza, but were non-subtypeable.
Fig 12: Positive influenza samples out of total samples collected by sentinel network, 2014/2015

Fig 13: Percentage of positive influenza and RSV samples out of total samples collected by sentinel network, 2014/2015
Data from hospitalized patients diagnosed at the Central Virology Laboratory at the Sheba Medical Center, Tel Hashomer (Figure 14)

From hospitalized patients diagnosed at the Central Virology Laboratory during the past week, 13 specimens (8.2%, as compared to 9.3% in the previous week) were found to be positive for influenza: one specimen was positive for influenza A/H1N1 2009, 8 specimens were positive for influenza B and one specimen was positive for influenza A.
International influenza activity

Europe (FluNewsEurope): Updated for Week 15, ending 12-Apr-15: The decrease in influenza activity is continuing in most European countries, in parallel with a decrease in the percentage of specimens positive for influenza from the sentinel network. There is combined activity of influenza A/H3N2, influenza A/H1N1 2009 and influenza B, the dominant of these being influenza B.

USA (CDC): Updated for Week 14, ending 11-Apr-15: The decrease in influenza activity in the USA is continuing. The percentage of clinic visits that are due to influenza-like illness is currently below the baseline level. 1,076 of 11,189 specimens were found to be positive for influenza (9.6%). Of these, 139 (12.9%) were found to be positive for influenza A: 46 (33.1%) were positive for influenza A/H3, 3 specimens (2.2%) were positive for influenza A/H1N1 2009 and 90 (64.7%) were not yet subtyped. 937 specimens (87.1%) were found to be positive for influenza B.