**Surveillance of influenza-like illness in Israel**

**Weekly update report for Week 2, ending 11/1/2020**

**Summary:** Over the past week, influenza activity has been moderated.

**Clinically:** Continued increase in referral rates for clinics due to influenza-like illness, although the increase has been relatively moderate over the past week. In the past week, there was a decrease in the gross referral rate due to pneumonia. **In hospitals:** A continued increase in the percentage of visits to internal medicine and departments due to pneumonia; without a significant change in the percentage of visits of 0-2 year old to the pediatric emergency room for bronchiolitis.

**Laboratory:** 71 of 112 samples (63%) collected from the Sentinel clinics were found positive for influenza: 46 samples tested positive for sub-type A/N1H1 09 influenza, 2 samples were found positive for sub-type A/H3, and 23 samples were found positive for type B influenza. 11 additional samples were found positive for RSV.

**Morbidity**

- **Influenza-like illness (Figure 1-3): In the community:** Continued increase in raw rate of referrals to Maccabi Health Services clinics due to influenza-like illness. However, during the past week, the increase is relatively moderate. The increase is mainly reflected in children and adolescents aged 2-18 years. During the past week, there was a decrease in clinic referral rates among other age groups. "Clalit" data reveals a different picture: In the past week, clinic referral rates decrease. The decrease is reflected mainly in infants under two years of age. With regards to the other age groups - no significant change was observed.
The baseline level and the influenza activity intensities were 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.

- **Pneumonia Morbidity (Figures 4-5): In the Community**: In the past week, there was some decrease in the rate of referrals to clinics due to pneumonia at the Maccabi Health Services clinics. The decrease is mainly reflected in children and adolescents aged 0-18 years. With regards to the other age groups - no significant change was observed. A similar situation is shown by the data of Clalit Health Services.
Fig. 4: Weekly rate of visits due to pneumonia, 2017-2020, compared to multi-annual average

Fig. 5: Weekly rate of visits due to pneumonia, by age and year, 2017-2020
In hospitals (based on the Ministry of Health’s data base managed by the Information Division) pneumonia (Figures 6-7): In the past week there was an increase in the percentage of visits to the internal medicine emergency room due to pneumonia. The percentage of visits to the internal medicine emergency room is now above the multi-annual average, however, the percentage of visits to the pediatric emergency is low and is below the multi-annual average.
**Bronchiolitis (Figure 8):** During the last week, there was no significant change in the percentage of visits of 0-2 year olds to pediatric emergency room due to lower respiratory tract bronchiolitis, as expected in the season.

![Fig. 8: Percentage of visits of ages 0-2 year old infants to pediatric ERs in Clalit hospitals due to bronchiolitis, 2017-2020](image)

- **Hospitalization (Figure 9):** In the past week, bed occupancy in the pediatric wards has decreased (about 107% compared to 113% last week). In the internal medicine wards - no significant change was observed (about 109%).

![Fig. 9: Weekly average bed occupancy rate, internal and pediatric departments, all hospitals 2017-2020](image)
Mortality

- **Figure 10-11:** Figure 10 shows the overall national mortality rate, as compared to the multi-annual average (updated for Week 48, ending 30/11/19). It arises from this figure that recently, that the total number of deaths is low and ranges around the multi-annual average. It arises from Figure 11, based on data from the Epidemiology Division updated until Week 51 (ending 21/12/19), that the percentage of mortality due to pneumonia is within the seasonally expected range.
**Laboratory**

Sentinel Community Clinic Network Findings: Findings of the Sentinel Community 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>Number of Samples</th>
<th>Week 2 (5/1/20-11/1/20)</th>
<th>Accumulated Data from Week 40 (29/9/19-5/10/19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Samples</td>
<td>112</td>
<td>1,241</td>
</tr>
<tr>
<td>Number of RSV positive</td>
<td>11 (9.8)</td>
<td>145 (11.7)</td>
</tr>
<tr>
<td>Number of Samples positive for Influenza</td>
<td>71 (63.4)</td>
<td>591 (47.6)</td>
</tr>
</tbody>
</table>

**Number of samples positive for Influenza by type/sub type**

<table>
<thead>
<tr>
<th>type of Influenza</th>
<th>Week 2 (5/1/20-11/1/20)</th>
<th>Accumulated Data from Week 40 (29/9/19-5/10/19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A influenza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– A (H1N1) pdm 09</td>
<td>46 (95.8)</td>
<td>474 (98.2)</td>
</tr>
<tr>
<td>– *A/unsubtyped</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>– A/H3</td>
<td>2 (4.2)</td>
<td>9 (1.8)</td>
</tr>
<tr>
<td>– A/H1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Type B influenza</td>
<td>23 (32.4)</td>
<td>108 (18.3)</td>
</tr>
</tbody>
</table>

*Samples found positive for influenza A but cannot be classified into a sub-type.
Fig. 12: Specimens positive for influenza out of total specimens collected by sentinel network, 2019/2020

Fig. 13: Percentage of specimens positive for influenza and RSV in the sentinel network, 2017-2020

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Data from inpatients meeting the Severe Acute Respiratory Infection (SARI) case definition in the influenza monitoring network in hospitalized patients* (Figure 14)

The SARI case definition was determined by the World Health Organization. As part of this monitoring, samples are taken from inpatients exhibiting a temperature of C380 and above (or reported fever) and cough within 10 days of onset.

As of week 1 (ending on 4/1/20), 29 samples were found positive for type A influenza and 4 samples were found positive for Type B influenza among SARI patients, it appears that the increase in influenza activity among these patients is continued.

*On the network are selected departments from 2 medical centers (Shiba and Rambam).
Data from inpatients diagnosed in the Central Virus Laboratory at Sheba Medical Center, Tel Hashomer (Figure 15)

During the past week, 132 (about 24%) samples were found positive for influenza out of the 558 samples collected from inpatients: 102 samples were positive for A/H1N1 09, 6 samples were found positive for Type A influenza, and 24 samples were found positive for Type B influenza. About 9% were found to be positive for RSV. About 6% of the samples were found positive for RSV.

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Vaccination against seasonal influenza in the HMOs

Up to January 1, 2020, about 1,965,000 people have vaccinated against seasonal influenza (about 22% of Israel’s population, compared to about 18% in the same period of last year). Immune coverage in the elderly group aged 65 and over reaches about 58% (compared to 56% in the same period of last year). Immune coverage of infants and children 6-59 months of age reached approximately 22% (compared to 16% in the same period of last year).

International Influenza Activity

Europe (fluNewsEurope): As of week 1 (ending 5/1/20), there is a continued increase in influenza activity. The Sentinel Clinic Network reported about 38% of the samples as positive for A/H3 influenza, about 26% of the samples as positive for A/H1 influenza, and about 33% of the samples as positive for type B influenza.

USA (CDC): As of week 1 (ending 4/1/20), high influenza activity was reported. The percentage of visits to clinics due to influenza-like illness is now below the baseline. Out of 1,459 samples, 941 (about 65%) were found positive for influenza. Of these, 487 (approximately 52%) were positive for type A influenza: 411 (93%) were positive for influenza A/H1N1 2009, 32 samples (7.2%) were positive for influenza A/H3 and 44 samples (9%) were not yet classified. 454 additional samples (about 48%) were found positive for type B influenza.

England: As of week 2 (ending 9/1/20), continued increase in influenza activity, ILI morbidity rates are higher than the baseline. Virologically speaking - out of 712 samples positive for influenza, 419 samples were found positive for A/H3 influenza, 223 samples were positive for type A influenza not yet broken into sub-types, and 42 samples positive for A/H1N1 09 influenza. 28 additional samples were found to be positive for type B influenza.

Canada: As of week 1 (ending 4/1/20), there is a continued increase in influenza activity. There is a mixed activity of A/H3 influenza, A/H1N1 09 and type B influenza. While the A/H3 subtype is the most dominant in Canada, there appears to be an increase in the positive isolation rate related to A/H1N1 influenza.

Hong-Kong: As of week 1 (ending 4/1/20), there is a continued increase in influenza activity. In addition, it was reported that out of 5,711 samples, 576 (10.1%) were found positive for influenza: 380 samples (66%) were
tested positive for A/H1 influenza, 178 (31%) of the samples were tested positive for A/H3 influenza, and 18 (4%) of the samples tested positive for type B influenza.