



Surveillance of influenza-like illness in Israel

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

Summary: Influenza-like illness rates are low and currently resemble rates observed between influenza seasons.

In the community: Clinic visit rates due to influenza-like illness and pneumonia are low and seasonally expected.

In hospitals: Decrease in the percentage of visits to internal medicine emergency rooms due to pneumonia; in pediatric emergency rooms- no significant change.

Decrease in hospital bed occupancy rates in departments of internal medicine.

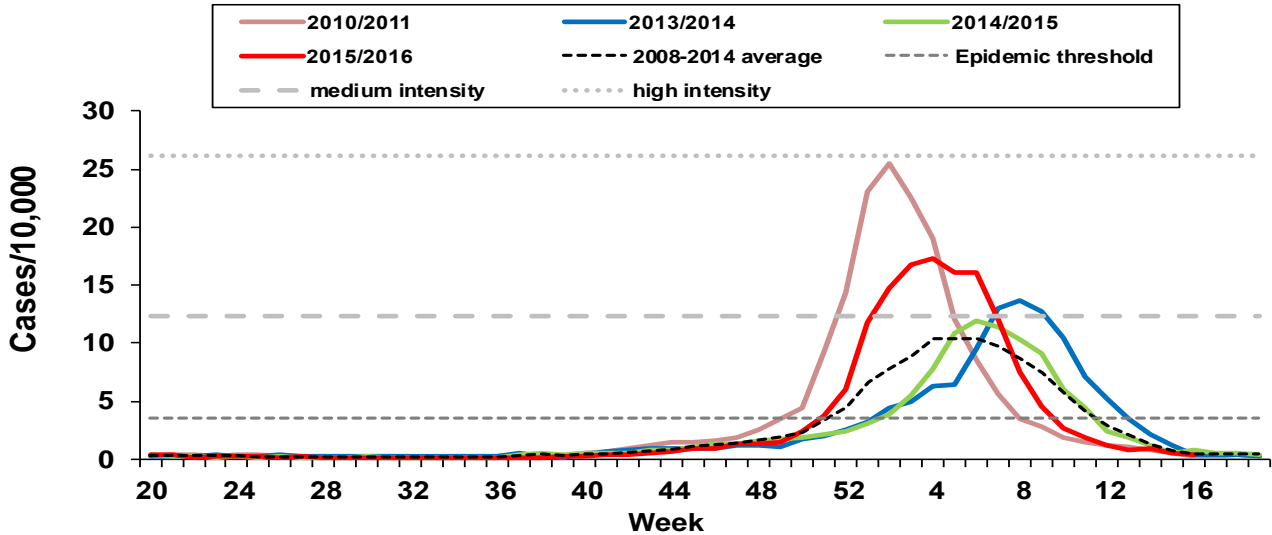
Laboratory: Neither of the two specimens collected during the past week from the sentinel clinics were found to be positive for influenza.

Morbidity

- **Influenza-like morbidity (Figures 1-3): In the community:** Both the crude visit rate and the age-specific visit rates to "Maccabi Healthcare Services" clinics due to influenza-like illness are below the baseline level, and resemble the levels seen 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 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.

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

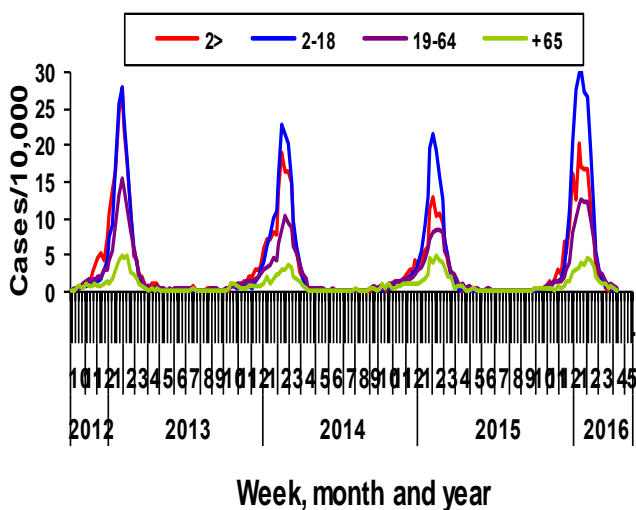
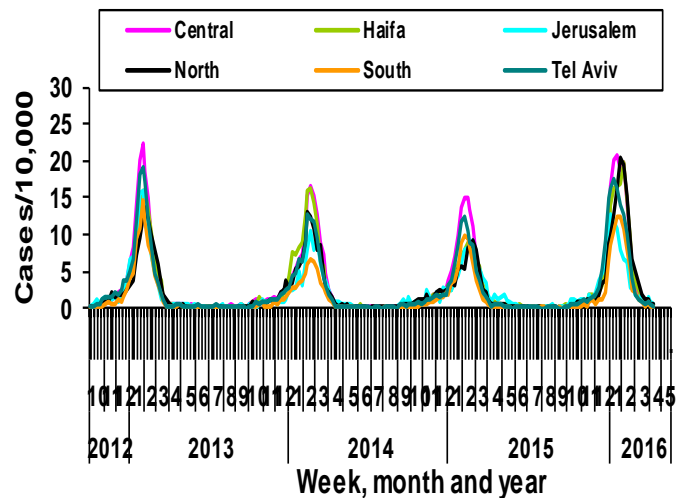


Fig. 3: Weekly visits to community clinics due to influenza-like illness, by district, 2012-2015





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- Pneumonia morbidity (Figures 4-5): In the community:** In the past week, a decrease was observed in the crude rate of visits to "Maccabi Healthcare Services" clinics due to pneumonia. This decrease is manifest in all age groups. A similar picture arises from "Clalit" Health Services.

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

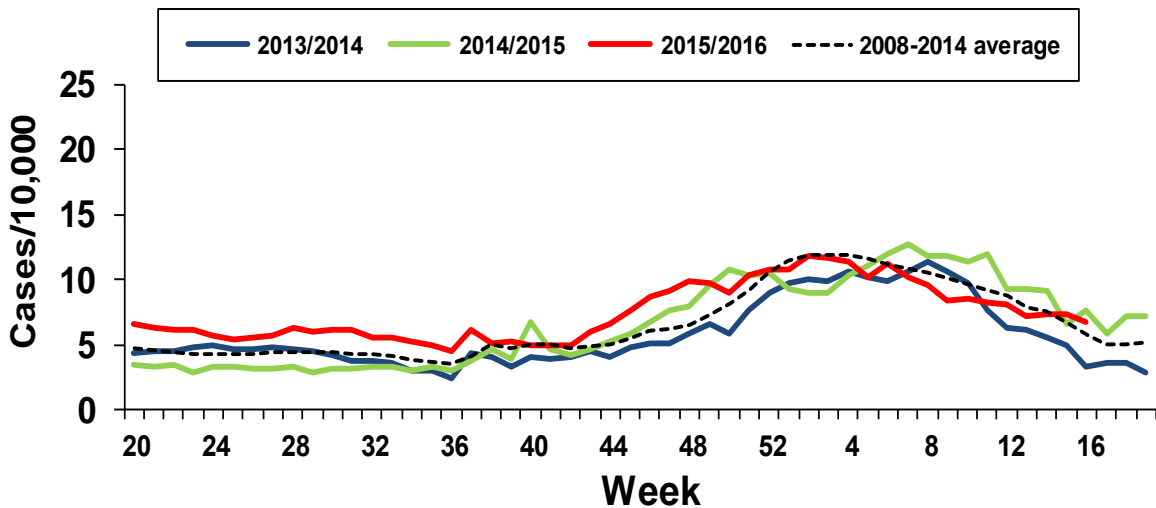
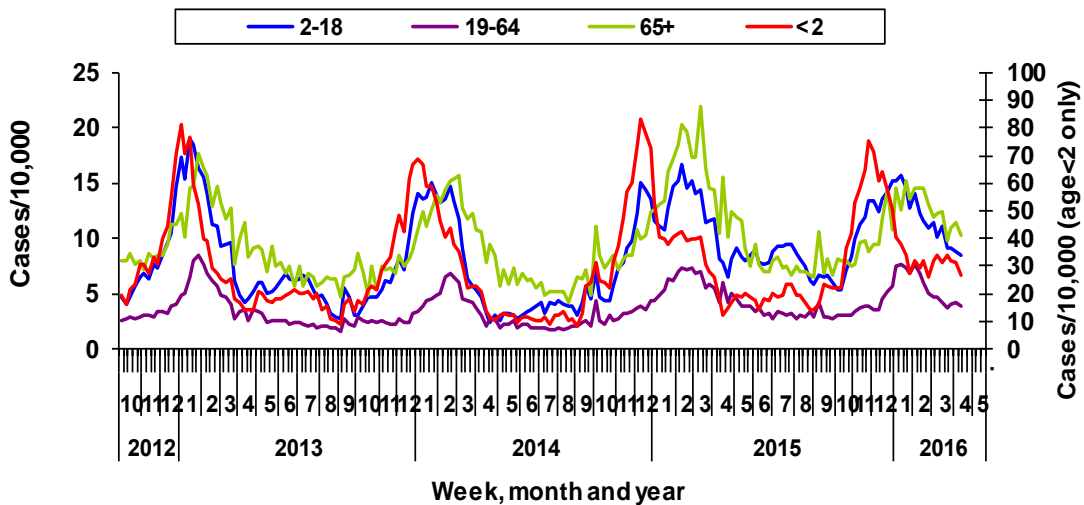


Fig. 5: Weekly visits to community clinics due to pneumonia, by age, 2012-2015





In hospitals (based on the Ministry of Health database administered by the Health Information Division):
Pneumonia (Figures 6-7): In the past week, a decrease was observed in the percentage of visits to internal medicine emergency rooms due to pneumonia. This percentage is varying about the multi-annual average. In pediatric emergency rooms, the percentage of emergency room visits is below the multi-annual average.

Fig. 6: Percentage of visits to adult ERs due to pneumonia out of total visits, Clalit hospitals, 2012-2015, compared to annual average

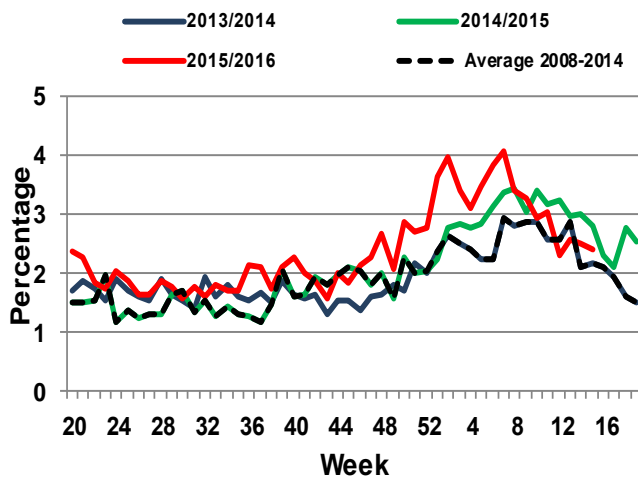
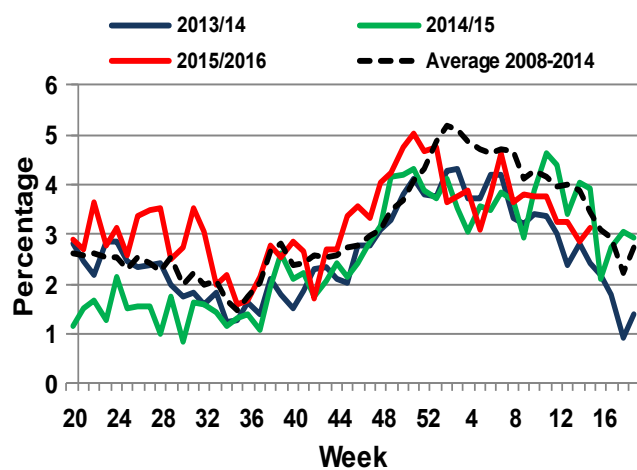


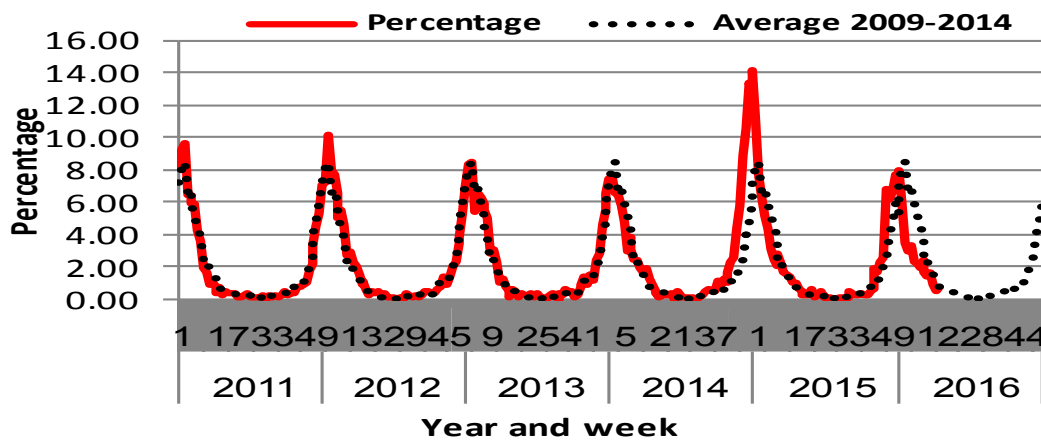
Fig. 7: Percentage of visits to pediatric ERs due to pneumonia out of total visits, Clalit hospitals, 2012-2015, compared to annual average





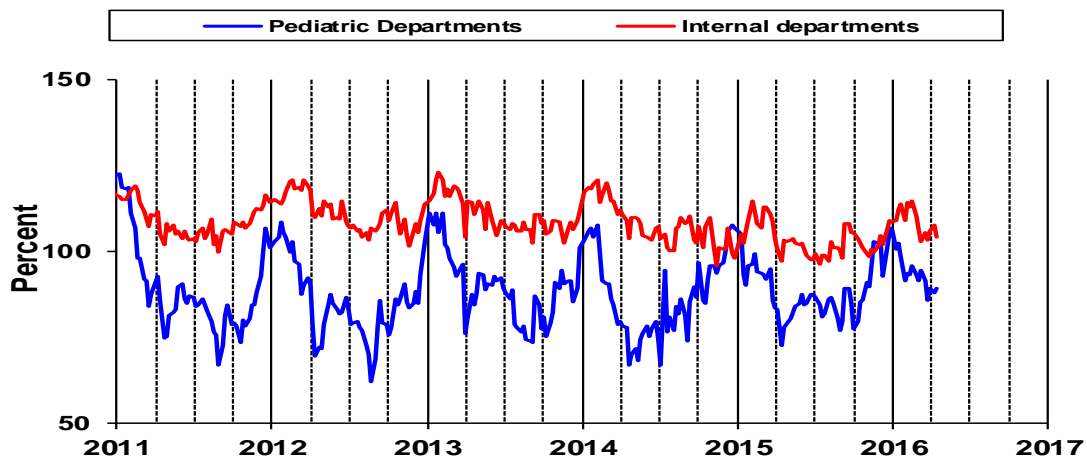
Bronchiolitis (Figure 8): The percentage of visits of 0-2 year olds to pediatric emergency rooms due to bronchiolitis is low and seasonally expected.

Fig. 8: Percentage of visits to pediatric ERs, ages 0-2 due to Bronchiolitis out of total visits, Clalit hospitals, 2001-2015 compared to annual average



- Hospitalizations (Figure 9):** In the past week, a decrease was observed in hospital bed occupancy rates in internal medicine departments (104%, as compared to 107% in the previous week). In pediatric departments, no significant change was observed (approximately 89%). Occupancy rates are within the seasonally expected range.

Fig. 9: Weekly average bed occupancy, internal and pediatric departments, all hospitals, 2011-2015



Mortality

- Figures 10-11:** Figure 10 shows the number of deaths throughout Israel as compared to the multi-annual average (updated for Week 10, ending 12-Mar-16). It arises from this figure that the total number of deaths has recently decreased, and currently resembles the multi-annual average. It arises from Figure 11, based on data from the Epidemiology Division updated until Week 12 (ending 26-Mar-16), that the percentage of mortality that is due to pneumonia is within the seasonally expected range.

Fig. 10: Total deaths, all causes, 2012-2016, compared to annual average

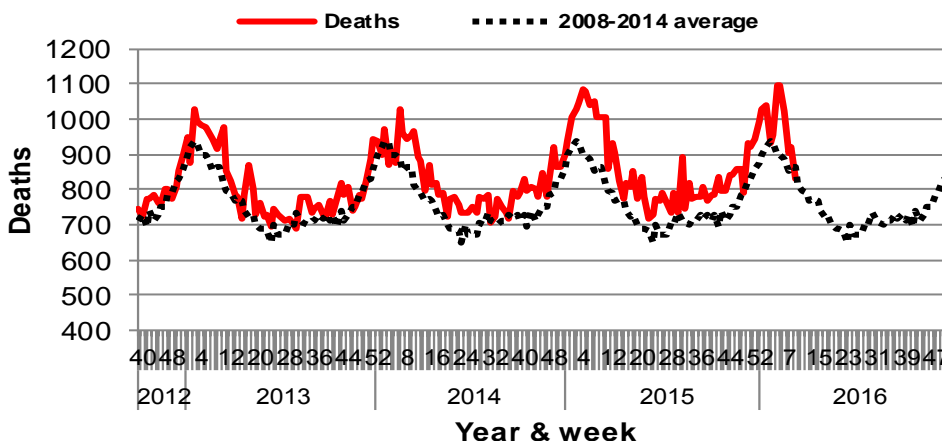
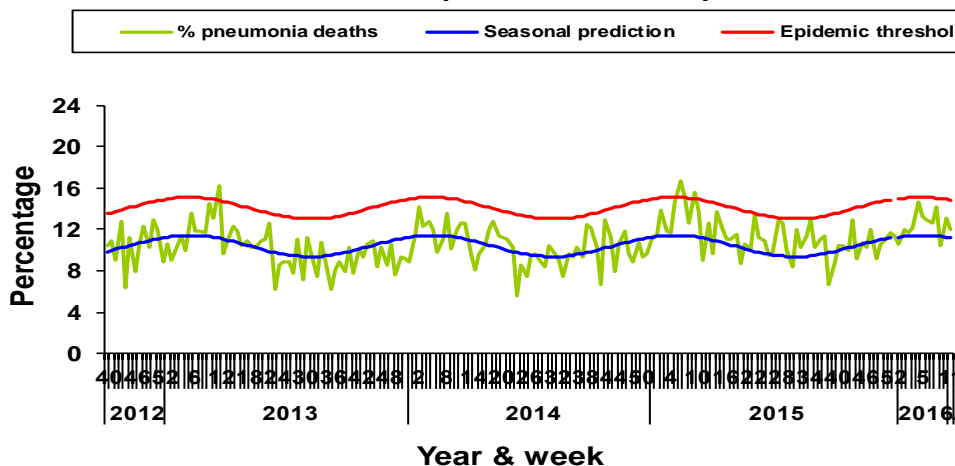


Fig. 11: Percentage of pneumonia-related of all deaths, 2012-2015, compared to seasonal prediction





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:

	Week 15 (10-Apr-16 - 16-Apr-16)	Cumulative Data since Week 40 (ending 3-Oct-15)
No. of Specimens	2	1,919
No. of RSV-positive specimens	0	178 (9.3%)
No. of influenza-positive specimens	0	845 (44.0%)
No. of influenza-positive specimens by type/ subtype		
Type A influenza	0	368 (43.6%)
– A (H1N1)pdm 09	0	362 (98.3%)
– A/unsubtyped*	0	0
– A/H3	0	6 (1.7%)
– A/H1	0	0
Type B influenza	0	477 (56.4%)

* 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, 2015/2016

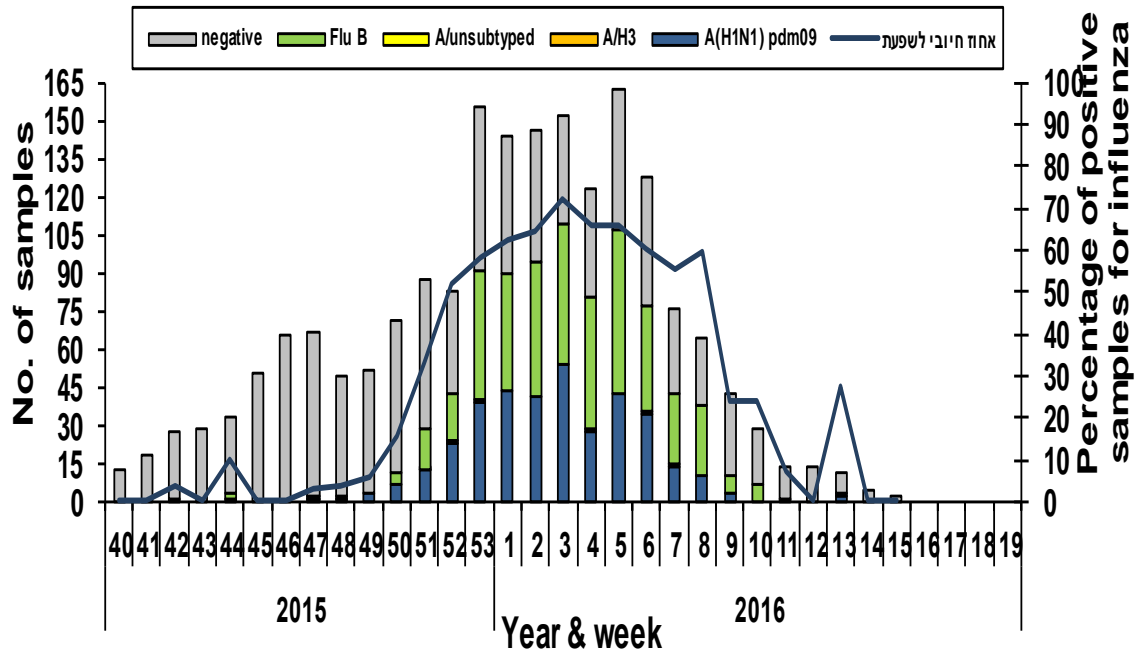
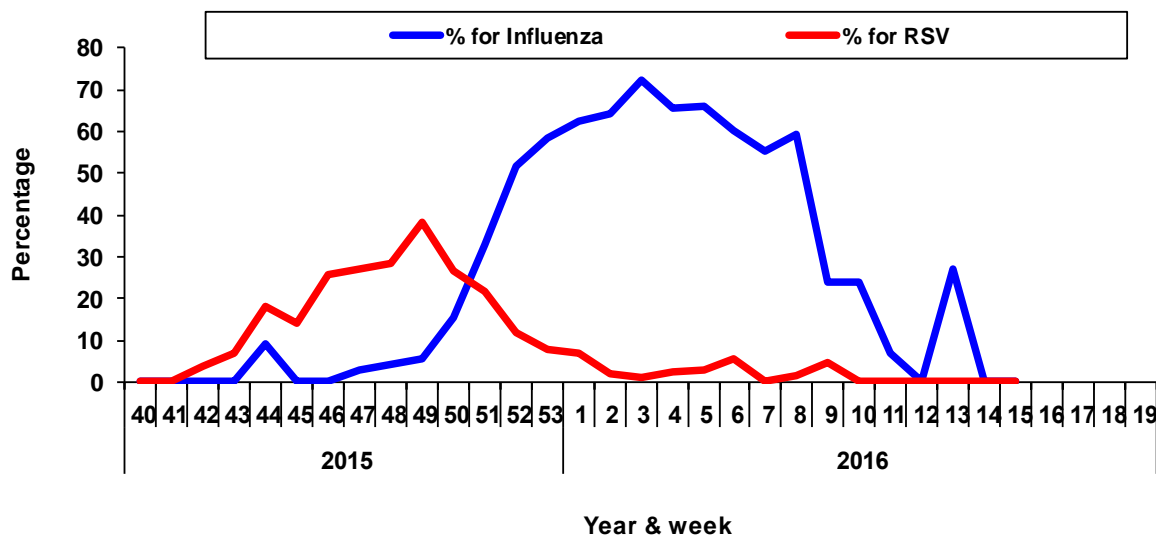


Fig 13: Percentage of positive influenza and RSV samples out of total samples collected by sentinel network, 2015/2016



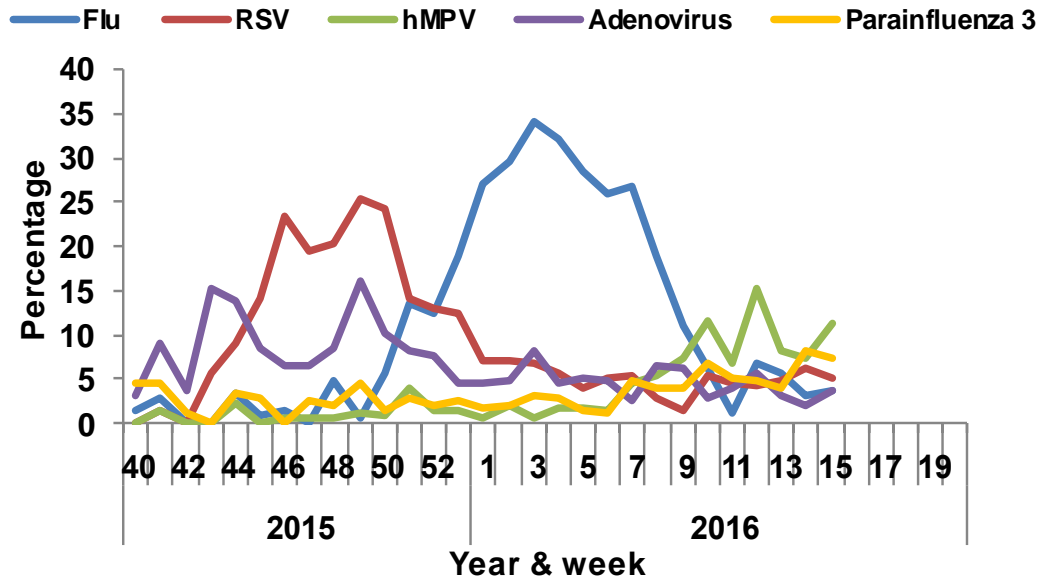


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Data from hospitalized patients diagnosed at the Central Virology Laboratory at the Sheba Medical Center, Tel Hashomer (Figure 14)

Fig 14: Percentage of positive samples for respiratory viruses from patients hospitalized at the Sheba Medical Center, Tel Hashomer (The Central Virology Laboratory)



Three specimens (3.8%) taken from hospitalized patients were found to be positive for influenza: two specimens were found to be positive for influenza A/H1N1 2009 and one specimen was positive for influenza B.



International influenza activity

Europe (FluNewsEurope): As of Week 14 (ending 10-Apr-16), a decrease in influenza activity is reported in most European countries. In the sentinel network, a decrease in the percentage of isolations positive for influenza, and dominance of influenza B, were reported. The number of cases of severe illness was small, and was linked to influenza A/H1N1 2009 among patients aged 15-64 years.

USA (CDC): As of Week 14 (ending 9-Apr-16), a decrease in influenza activity was reported in the USA. The percentage of clinic visits that are due to influenza-like illness is now similar to the baseline level. 379 of 955 specimens (39.71%) were found to be positive for influenza. Of these, 240 (63.3%) were found to be positive for influenza A: 42 (17.5%) were positive for influenza A/H3, 176 specimens (73.3%) were found to be positive for influenza A/H1N1 2009 and 22 type A specimens (9.2%) were not yet subtyped. 139 specimens (36.7%) were found to be positive for influenza B.

As regards sensitivity to antiviral medications, influenza A/H1N1 2009, influenza A/H3 and influenza B were found to be sensitive to the following medications: Zanamivir, Oseltamivir and Peramivir. In contrast, influenza A/H1N1 2009 and influenza A/H3 were found to be resistant to medications from the adamantane group.