MINISTRY OF HEALTH
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Medical Technologies, Information and Research Division

Israel Center for Disease Control

Summary Report of Surveillance on Respiratory Viruses Morbidity 2023/2024

Weeks 40/2023-19/2024

(1/10/23-11/5/24)

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1. Main findings

Influenza

- In the 2023/2024 season in Israel, the dominant influenza virus was the A/H3N2 subtype. This subtype was identified among approximately 86% of all positive influenza samples collected from the community sentinel clinics, with type B influenza identified among approximately 1.8% of these samples. A similar distribution of influenza types was observed among hospitalized patients.
- The 2023/2024 season was a late season, compared with the three preceding seasons.
- The peak rate of visits to physicians in the community due to influenza-like illness was higher at its peak than the multi-year average.

Respiratory syncytial virus (RSV)

- The seasonal pattern of the RSV virus's activity matched the multi-year pattern observed prior to the COVID-19 pandemic.

Other respiratory viruses

- In the 2023/2024 season, the samples from the sentinel clinics and the hospitals were also examined for the presence of other respiratory viruses: SARS-CoV-2, rhinovirus, adenovirus, parainfluenza, human metapneumovirus (hMPV). Positive samples of these viruses were identified in some of the samples. Apart from the influenza and RSV viruses, the rhinovirus was identified as the most common virus.

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Deaths

- The death rate from all causes was higher than the multi-year average during weeks 7-12 of 2024.
- During the 2023/2024 season, the percentage of deaths from pneumonia was around the seasonal prediction.
- The total number of deaths among hospitalized patients confirmed to have influenza in the 2023/2024 season was 512. The majority of deaths were in adults in the 75-84 and 85 and over age groups.

Influenza vaccinations

- In the 2023/2024 season, 1,468,109 people, insured by the HMOs, were vaccinated against the seasonal influenza (approximately 15% of the entire Israeli population).
- The immunization coverage in the elderly group aged 65 years and over reached approximately 52%. Immunization coverage of infants and children aged 6-59 months reached approximately 9%.

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2. Background

Respiratory viruses surveillance in Israel is managed and carried out by the Israel Center for Disease Control (ICDC) at the Ministry of Health. The surveillance includes two branches: Laboratory surveillance and syndromic surveillance based on clinical diagnoses.

Laboratory surveillance includes two platforms. One is based on nasopharyngeal samples taken from patients visiting one of the sentinel clinics with influenza-like illness, and tested for the presence of influenza viruses and the respiratory syncytial virus (RSV). Likewise, the laboratory tests for the presence of additional respiratory viruses, such as SARS-CoV-2, adenovirus, rhinovirus, parainfluenza and hMPV.

The other platform is based on data received from the country's general hospitals' laboratories, regarding samples tested for respiratory viruses among hospitalized patients (the samples are taken based on the medical team's decision).

Syndromic surveillance (clinical surveillance) includes two platforms. One is based mostly on diagnoses given within the framework of patients' visits to community clinics and include influenza-like illness, upper respiratory tract infection and pneumonia. The other is based on diagnoses given in hospitals' emergency medicine departments and include pneumonia and bronchiolitis.

The ICDC's Infectious Diseases Unit's team processes the information from the different sources and summarizes it in reports issued once a week, from week 40 of each year and up to April of the following year. During the other weeks, reports are issued as needed. Reports are distributed to the Ministry's management and to dedicated physician groups. Likewise, the reports can be

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viewed online at the Ministry of Health's website, in Hebrew and in English: https://www.gov.il/he/pages/unit-infectious-diseases

The goals of surveilling respiratory viruses morbidity are to present an updated picture of respiratory viruses morbidity and its complications, describe the burden this morbidity creates on the healthcare system, and characterize active influenza and RSV strains.

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3. Laboratory surveillance

3.1 Laboratory surveillance of respiratory viruses in the community

In the 2023/2024 fall-winter season, the surveillance network consisted of 36 clinics nationwide, from Ar'ara BaNegev in the south to Kiryat Shmona in the north. This surveillance was carried out from week 40 of 2023 to week 17 of 2024.

The medical team in the clinics was instructed to take nasopharyngeal samples from patients who meet the definition of a case of influenza-like illness (fever of 37.8°C or higher and/or one or more of the following signs/symptoms: Cough, sore throat, muscle pain, runny nose, chills, etc.).

These samples are refrigerated at the clinics and transported every week to the Central Virology Laboratory (constituting one of the public health laboratories), where they are examined for the presence of influenza viruses, the RSV virus and additional respiratory viruses.

At the laboratory, influenza viruses are characterized by type (A or B), and subtype (influenza A) or lineage (influenza B). In addition, genomic characterization of influenza viruses is performed and compared to the influenza viruses represented in the seasonal vaccine and to the influenza viruses prevalent worldwide during the same season.

The details of the samples received from the sentinel clinics network are presented by epidemiological week in Tables 1 and 2 and in Figures 1 and 2.

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Table 1. Number of samples positive for influenza and RSV identified at the sentinel clinics network, by epidemiological week, 2023/2024 season

Year	Week	Number of samples	Number of samples positive for influenza	Number of samples positive for RSV
2023	40	2	0	0
2023	41	9	0	2
2023	42	18	0	0
2023	43	11	1	1
2023	44	18	1	1
2023	45	30	1	1
2023	46	40	1	6
2023	47	42	1	4
2023	48	32	0	5
2023	49	50	0	5
2023	50	49	0	11
2023	51	57	4	13
2023	52	72	3	29
2024	1	96	7	35
2024	2	88	9	19
2024	3	97	19	20
2024	4	116	29	18
2024	5	109	48	9
2024	6	137	67	12
2024	7	98	52	7
2024	8	109	62	0
2024	9	83	31	5
2024	10	61	26	0
2024	11	61	20	1
2024	12	41	7	1
2024	13	25	5	0
2024	14	30	3	0
2024	15	25	1	0
2024	16	10	0	0
2024	17	3	0	0
Total		**1,619**	**398**	**205**

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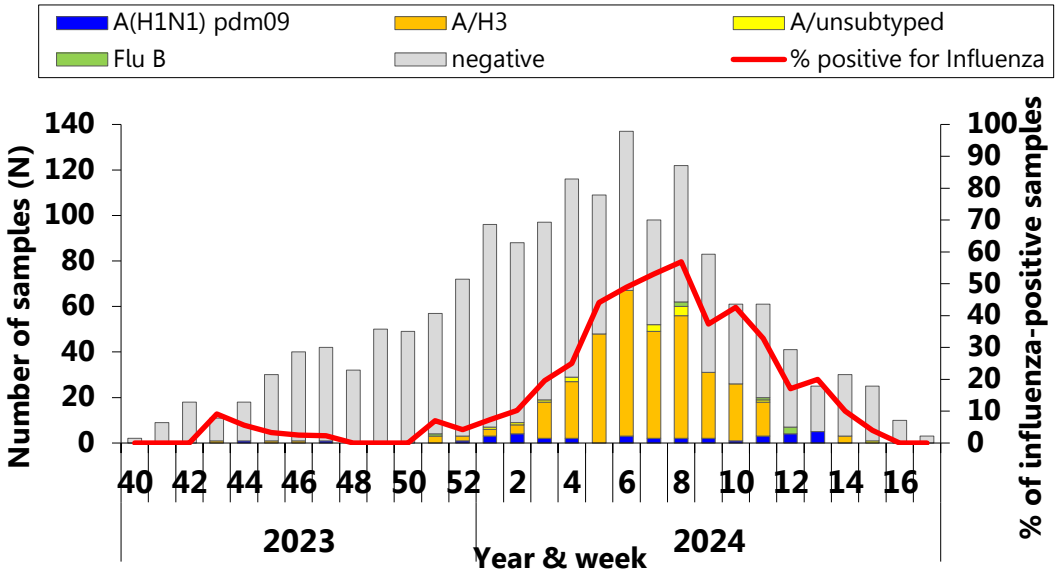
Figure 1. Nasopharyngeal samples collected at the sentinel clinics network, according to laboratory finding of the influenza virus and week of sampling, 2023/2024 season. (Numbers and percentage positive for influenza)



The percentage of samples positive for the influenza virus from the sentinel clinics crossed 10% in week 2 of 2024, and peaked in week 8 of 2024, with 57% positive samples of the total samples collected that week.

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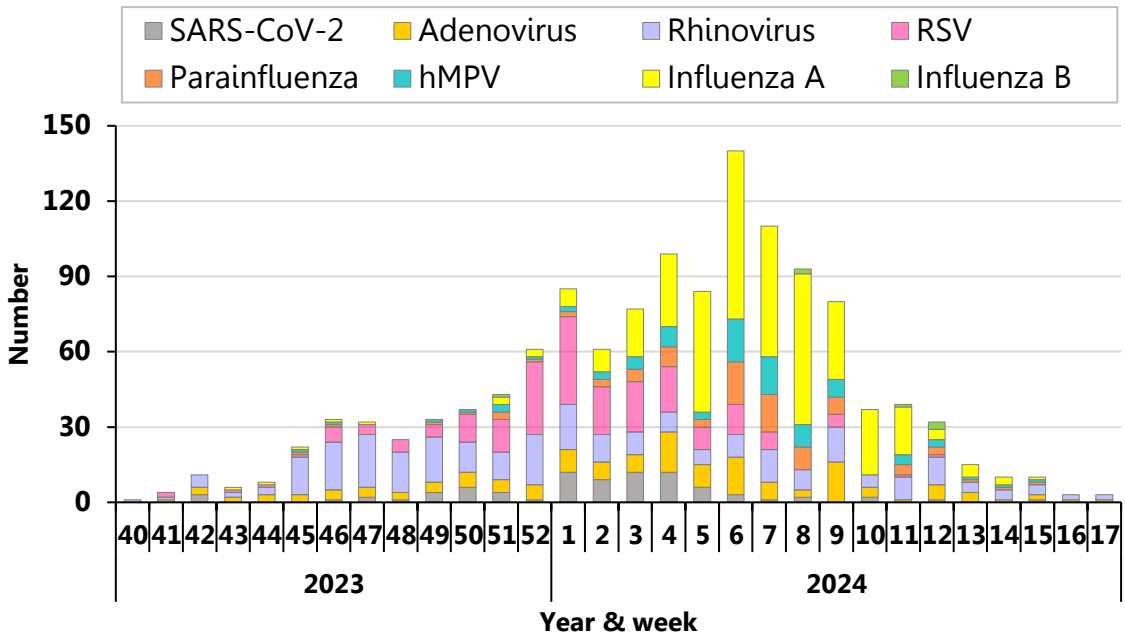
Table 2. Nasopharyngeal samples positive for influenza by type and subtype, 2023/2024 season

Influenza virus type	Influenza virus subtype	Number	%
Type A influenza		**391**	**98.2**
	A/H1N1 2009pdm	36	9.2
	A/H3N2	341	87.2
	Unsubtyped	14	3.6
Type B influenza		**7**	**1.8**
Total positive samples		**398**	**100**

Figure 2. Positive samples for respiratory viruses out of all samples collected by the community surveillance network, 2023/2024



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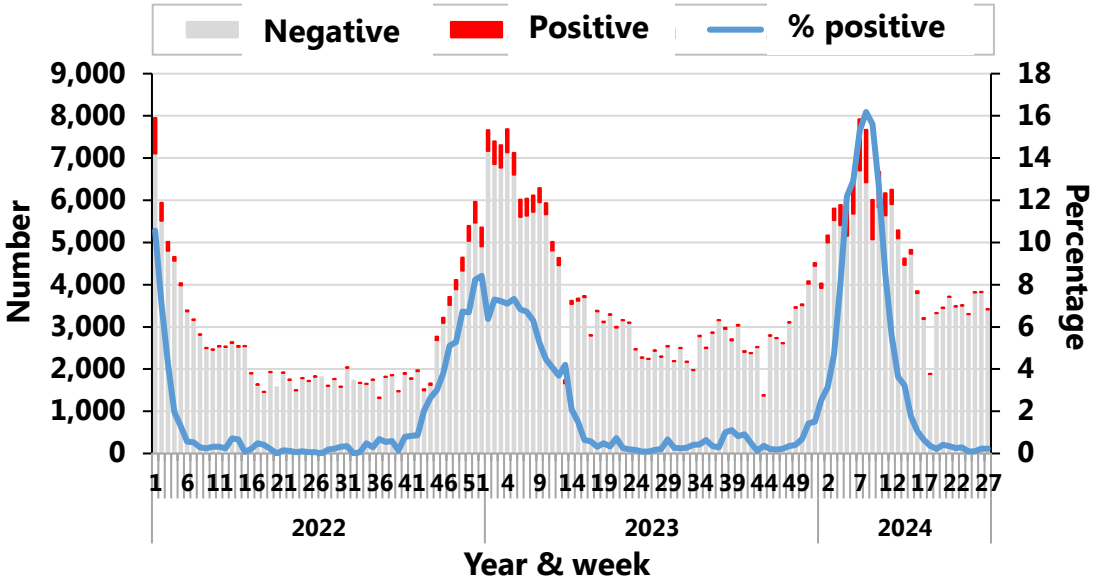
3.2 Laboratory surveillance of respiratory viruses among hospitalized patients

3.2.1 Influenza viruses

Figure 3 presents the results of influenza viruses' samples among new patients hospitalized in Israeli general hospitals. The samples were sent according to the medical team's discretion.

Figure 3. Samples tested for influenza viruses in hospitalized patients, 2023/2024 season



Between week 36 of 2023 and week 20 of 2024, 8,528 new hospitalized patients with a positive sample for the influenza virus were reported.

The percentage of influenza positive samples among hospitalized patients peaked at week 8 of 2024, constituting 16.2% of all samples collected that week.

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Figure 4. Types and subtypes of influenza among hospitalized patients, 2023/2024 season, Hadassah and Sheba Medical Centers

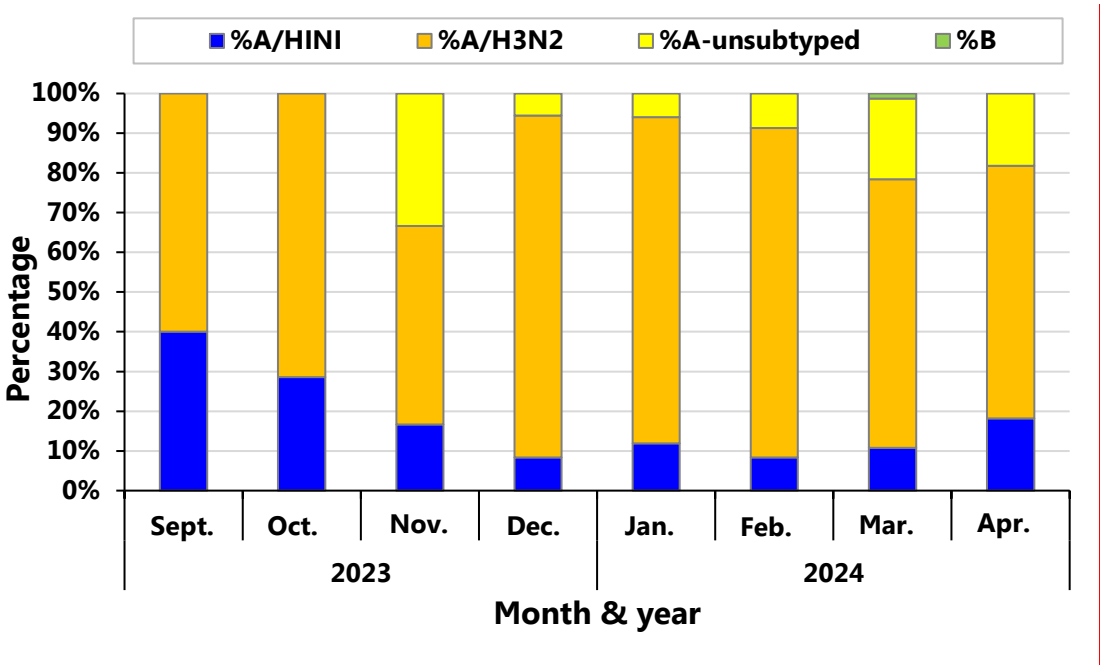

Figure 4 presents types and subtypes of the influenza activity among hospitalized patients from September 2023 to April 2024.

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Table 3. Hospitalized patients confirmed for influenza by hospitalization department (weeks 36/2023-20/2024)

Category	Total cases positive for influenza	% of total	Department during sampling	Total cases positive for influenza	% of category
Adults	6,084	71.3%	Internal	5,765	94.8%
			Intensive care - adults	186	3.1%
			Enhanced care - adults	78	1.3%
			Oncology - adults	55	0.9%
Children	1,875	22.0%	Pediatrics	1,757	93.7%
			Intensive care - pediatrics	70	3.7%
			Oncology - pediatrics	48	2.6%
Pregnant women	250	2.9%	Maternity	148	59.2%
			High-risk pregnancy	102	40.8%
Unknown	319	3.7%	Unreported department	319	
Total	8,528	100.0%	Total	8,528	

Table 3 shows the number of newly hospitalized patients confirmed to have influenza during the 2023/2024 season by hospitalization department.

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Table 4. Deaths in hospitalized patients with laboratory confirmation of influenza virus by age group, 2023/2024 season (weeks 36/2023-20/2024)

Age groups (years)	Deaths (N)	Positive for influenza virus	Deaths (%)
0-1	1	652	0.15
2-4	1	471	0.21
5-12	2	420	0.48
13-18	0	226	0.00
19-34	3	740	0.41
35-49	2	522	0.38
50-64	27	966	2.79
65+	476	4160	11.44
Total	**512**	**8,157**	**6.27**
65-74	82	1409	5.82
75-84	159	1590	10.00
85+	235	1161	20.24
Total 65+	**476**	**4,160**	**6.27**

Table 4 shows the number of deaths that occurred within 30 days of laboratory confirmation of influenza. The total number of deaths among hospitalized patients confirmed to have influenza in the 2023/2024 season was 512. The highest mortality rates were in adults aged 65 and older. The deaths occurred on average within 10 days of laboratory confirmation (with a median of 7 days). It is unknown whether influenza was the primary cause of death in these hospitalized patients or not.

3.2.2 RSV samples tested in general hospitals in Israel

Figure 5 presents the results of RSV virus samples in patients hospitalized in general hospitals in Israel. It can be seen that the percentage of RSV-positive samples peaked in week 1 of 2024, when it stood at 19%.

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Figure 5. Samples tested for RSV in hospitalized patients, 2023/2024 season

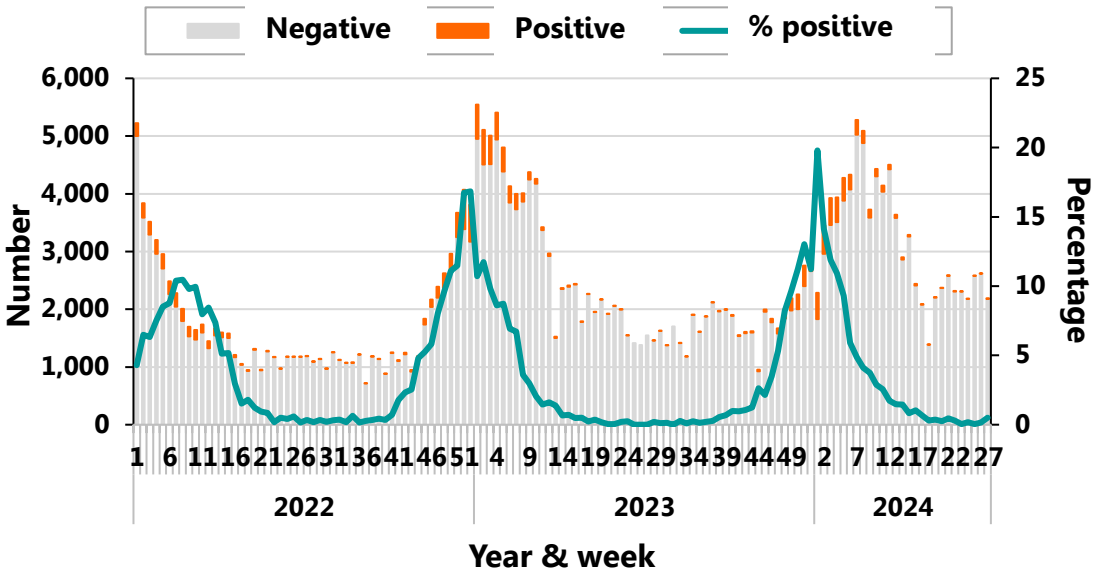

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Table 5. Hospitalized patients confirmed for RSV by hospitalization department (weeks 36/2023-20/2024)

Category	Total cases positive for RSV	% of total	Department during sampling	Total cases positive for RSV	% of category
Adults	1,448	27.9%	Internal	1,352	93.4%
			Intensive care - adults	54	3.7%
			Enhanced care - adults	15	1.0%
			Oncology - adults	27	1.9%
Children	3,569	68.8%	Pediatrics	3,372	94.5%
			Intensive care - pediatrics	159	4.5%
			Oncology - pediatrics	38	1.1%
Pregnant women	13	0.3%	Maternity	8	61.5%
			High-risk pregnancy	5	38.5%
Unknown	158	3.0%	Unreported department	158	
Total	5,188	100%	Total	5,188	

Table 5 shows the number of newly hospitalized patients confirmed to have RSV during the 2023/2024 season by hospitalization department.

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Table 6. Deaths in hospitalized patients with laboratory confirmation of RSV by age group, 2023/2024 season (weeks 36/2023-20/2024)

Age groups (years)	Deaths (N)	Positive for RSV virus	Deaths (%)
0	0	2,239	0.00
1	1	582	0.17
2-4	1	338	0.30
5-12	1	120	0.83
13-18	0	32	0.00
19-34	1	75	1.33
35-49	4	85	4.71
50-59	4	122	3.27
60+	155	1,152	13. 45
Total	**167**	**4,743**	**3.52**
60-69	21	229	9.17
70-79	52	402	12.93
80+	82	521	15.74
Total 60+	**155**	**1,152**	**13.45**

Table 6 shows the number of deaths that occurred within 30 days of laboratory confirmation of RSV. The total number of deaths among hospitalized patients with confirmed RSV in the 2023/2024 season was 167. The highest mortality rates were in adults aged 60 years and older. Deaths occurred on average within 10 days of laboratory confirmation (with a median of 8 days). It is unknown whether RSV was the primary cause of primary mortality in these hospitalized patients.

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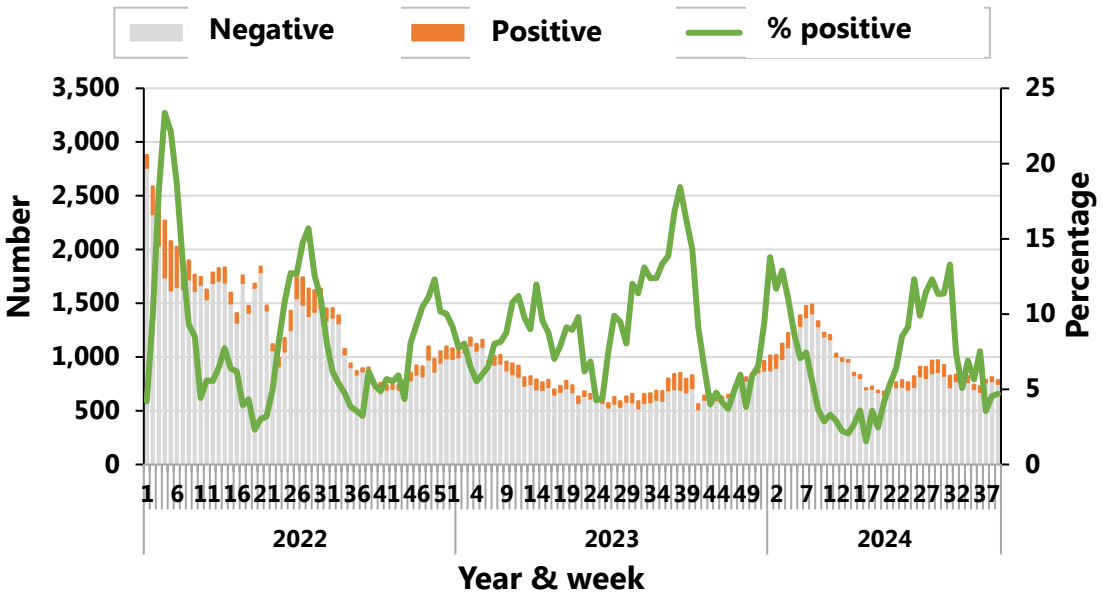
3.2.3 Hospitalized patients with positive samples for SARS-CoV-2 in general hospitals in Israel

Figure 6. Number of new SARS-CoV-2-positive hospitalized patients in general hospitals, 2023/2024



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3.3.3 Positive samples for respiratory viruses in hospitalized patients, 2023/2024 season

Figure 7. Percentage of positive samples for respiratory viruses in hospitalized patients, 2023/2024 patients

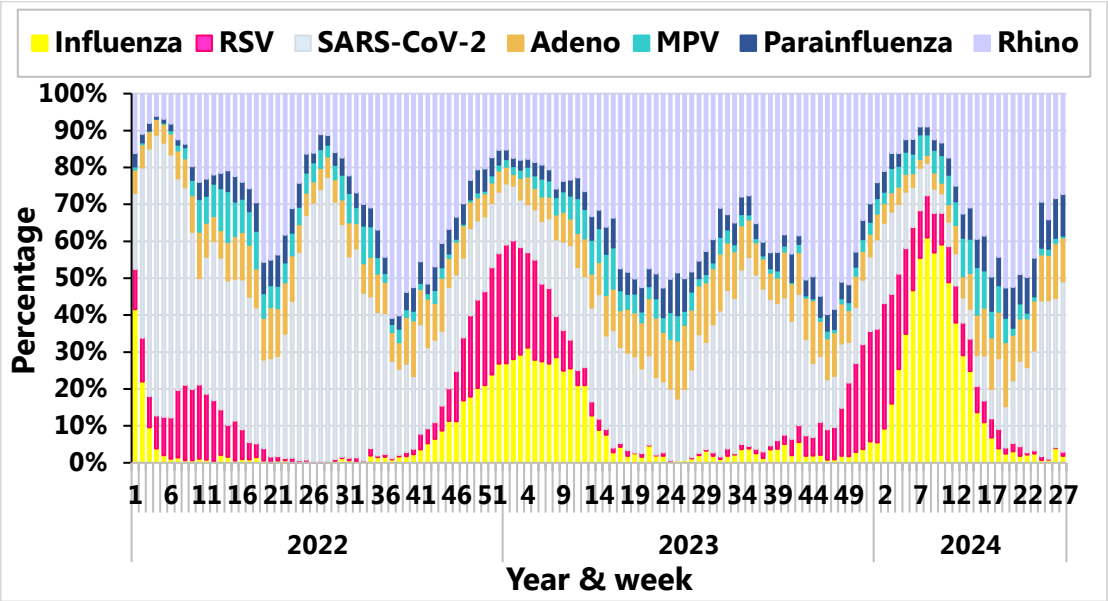

Figure 7 presents the activity of respiratory viruses among new hospitalized patients from 13 general hospitals during the 2023/2024 season (and the 2022/2023 season).

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4. Syndromic surveillance

Syndromic surveillance is based on several sources of information:

- Data of people insured by the two largest HMOs in Israel (Maccabi Health Services and Clalit Health Services) visiting community physicians and clinically diagnosed with influenza-like illness (ILI), upper respiratory tract infection or pneumonia. Individual, de-identified information about these patients is transferred to the ICDC daily and stored in a dedicated database.
- Weekly data on the number of patients who visited the emergency medicine departments of the eight Clalit Health Services general hospitals and were diagnosed with pneumonia or bronchiolitis.

4.1 Syndromic surveillance in the community

4.1.1 Surveilling influenza-like illness in the community

Figure 8 shows weekly rates of patients' visits to Maccabi Health Services physicians in the community that resulted in a diagnosis of influenza-like illness from May 2023 to May 2024. This figure also includes the corresponding period in the four previous fall-winter seasons (2019/2020, 2020/2021, 2021/2022, and 2022/2023). In addition, a line representing the multi-year average is presented, demonstrating the average rate of visits due to influenza-like illness in the community in Israel, from 2010 to 2022.

The figure also presents the baseline level that is supposed to mark the beginning of the influenza season and the levels of intensity of influenza activity. The baseline level and intensity levels were calculated using an algorithm developed as part of the European Respiratory Virus Surveillance Summary (ERVISS), and are based on past data on visits to Maccabi Health

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Services clinics due to influenza-like illness, collected and analyzed at the ICDC.

The 2023/2024 season was a late season compared to the other seasons presented in the figure. Peak mortality was observed in week 7 of 2024 [mid-February 2024] (Figure 8).

Visits rates due to influenza-like illness in the 2023/2024 season were higher than those of the previous four seasons, with the highest visits rates observed among children in the 2-5 and 6-11 age groups (Figure 9).

The rate of visits to community physicians due to influenza-like illness crossed the epidemic threshold in the first week of 2024 and at the end of the season, in week 14 of 2024. The peak visits rate reached the very high intensity threshold (Figure 9).

Figure 8. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of influenza-like illness, 2023/2024 season: Rates per 10,000 insured persons

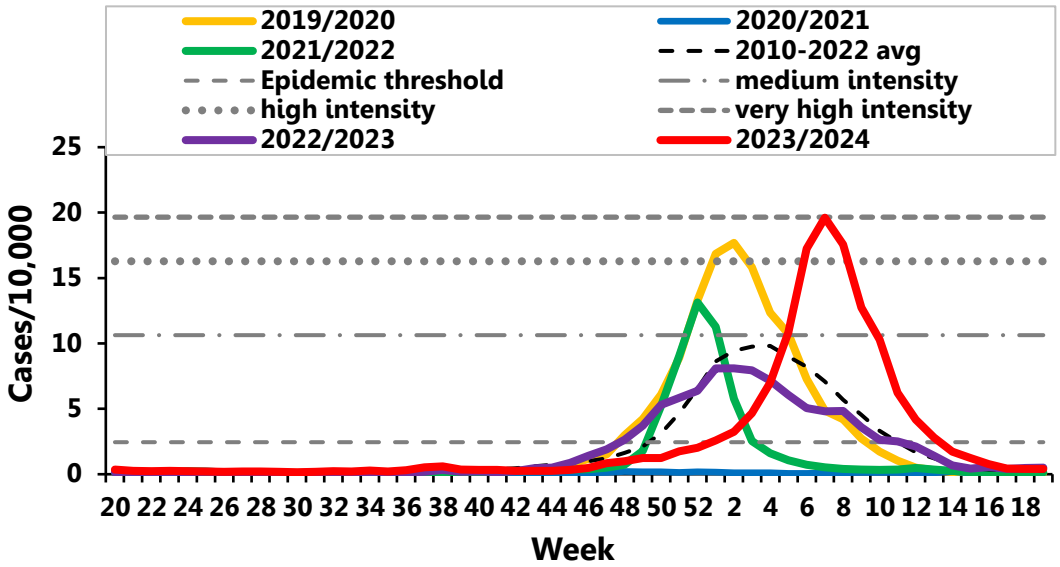

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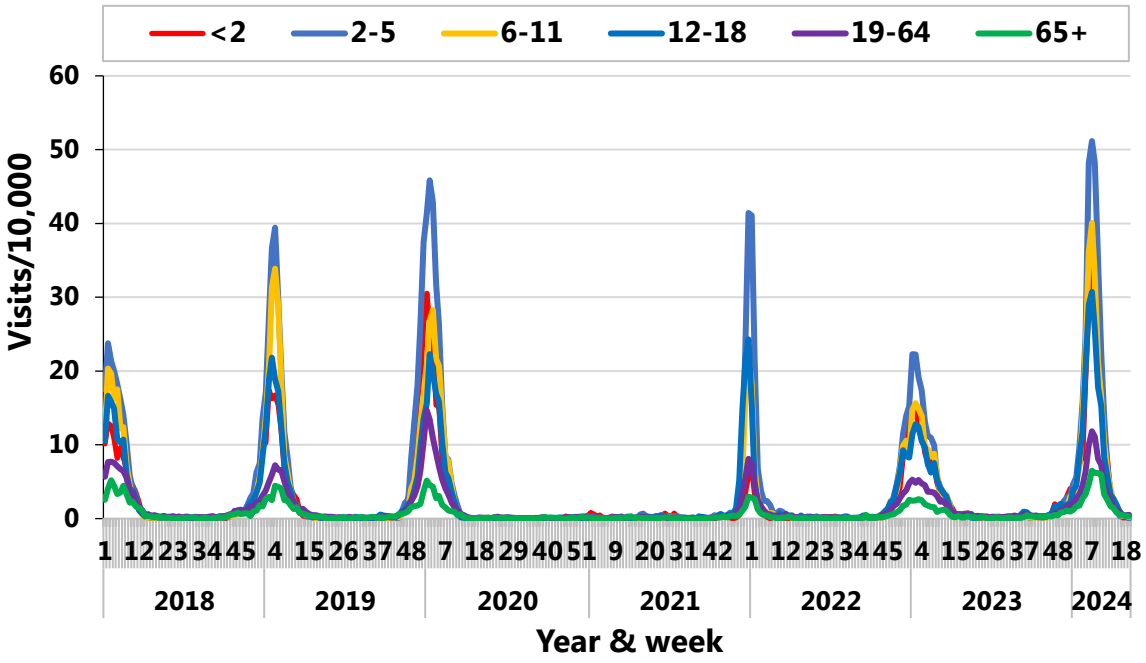
Figure 9. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of influenza-like illness, by age group, 2023/2024 season: Rates per 10,000 insured persons in each age group



4.1.2 Surveilling morbidity due to upper respiratory tract infections (URI) in the community

Figure 10 presents weekly rates of patients' visits to Maccabi Health Services physicians in the community that resulted in diagnosis of upper respiratory tract infection from May 2023 to May 2024. This figure also includes the corresponding period in the four previous fall-winter seasons (2019/2020, 2020/2021, 2021/2022, and 2022/2023). In addition, a line representing the multi-year average is presented, demonstrating the average rate of visits due to influenza-like illness in the community in Israel, from 2010 to 2022.

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Gross morbidity rates in the 2023/2024 season were below the multi-year average throughout the season. The peak incidence was observed in week 7 of 2024 [mid-February 2024] (Figure 10).

Rates of visits due to influenza-like illness in the 2023/2024 season were high among infants in the 0-2 age group and children aged 2-5 years (Figure 11).

Figure 10. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of morbidity due to upper respiratory tract infections in the community, 2023/2024 season: Rates per 10,000 insured persons

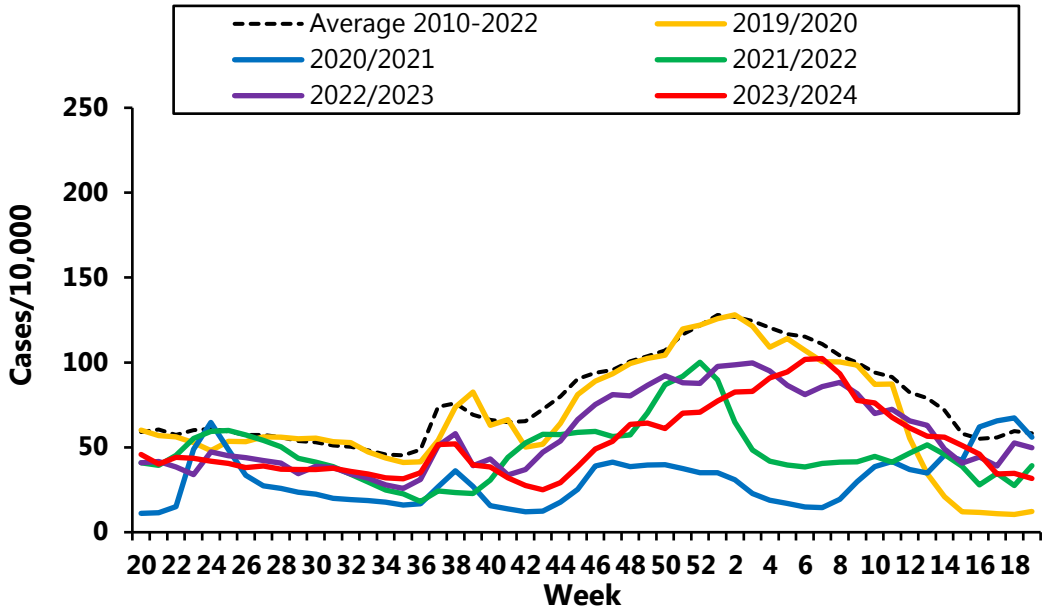

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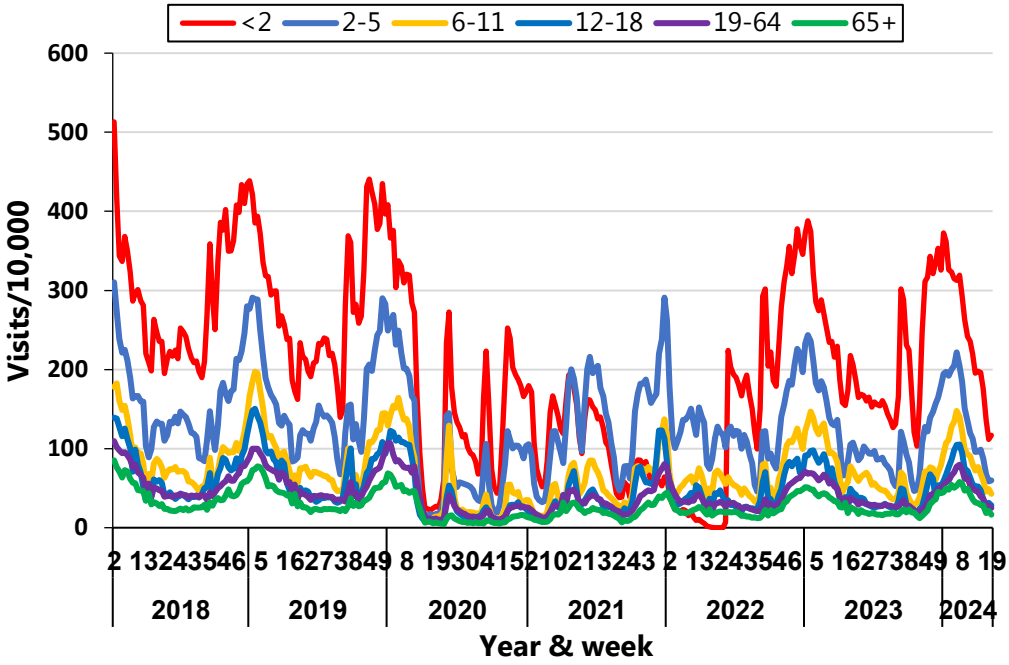
Figure 11. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of morbidity due to upper respiratory tract infections in the community, by age group, 2023/2024 season: Rates per 10,000 insured persons in each age group



4.1.3 Surveilling pneumonia morbidity in the community

Figure 12 presents weekly rates of patients' visits to Maccabi Health Services physicians that resulted in diagnosis of pneumonia from May 2023 to May 2024. This figure also includes the previous 4 fall-winter seasons (2019/2020, 2020/2021, 2021/2022 and 2023/2024) with a comparison to the multi-year average (2010-2022).

Starting in week 51 of 2023, there was an increase in rates of visits due to pneumonia, with the peak of morbidity observed in week 7 of 2024. Until week 4 of 2024, morbidity rates were lower than the multi-year average and the morbidity rates in the 2019/2020 season, and, at the same time, higher than the

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2020/2021 and 2021/2022 seasons (Figure 12). Following this, morbidity rates were higher than the other seasons presented in the figure, as well as the multi-year average (Figure 12).

The rate of visits due to pneumonia among toddlers under the age of two reached a peak of approximately 48 per 10,000 insured persons in week 1 of 2024. In the 2-5 age group, a peak of approximately 30 visits per 10,000 insured persons was observed in week 6 of 2024. In the other age groups, the rates were lower (Figure 13).

Figure 12. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of pneumonia, 2023/2024 season: Rates per 10,000 insured persons

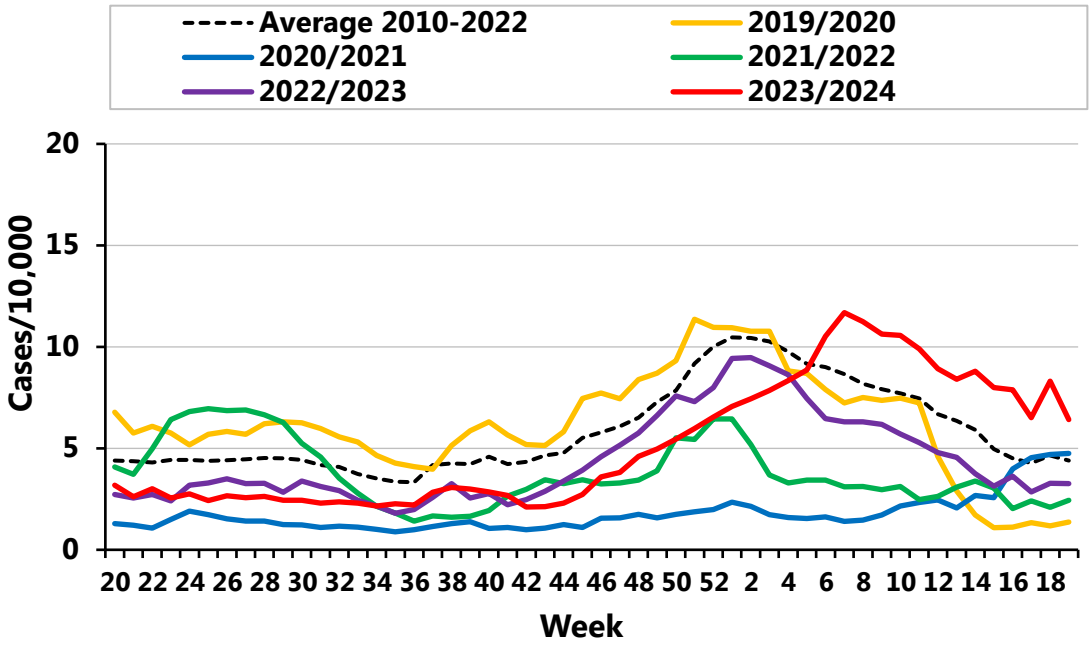

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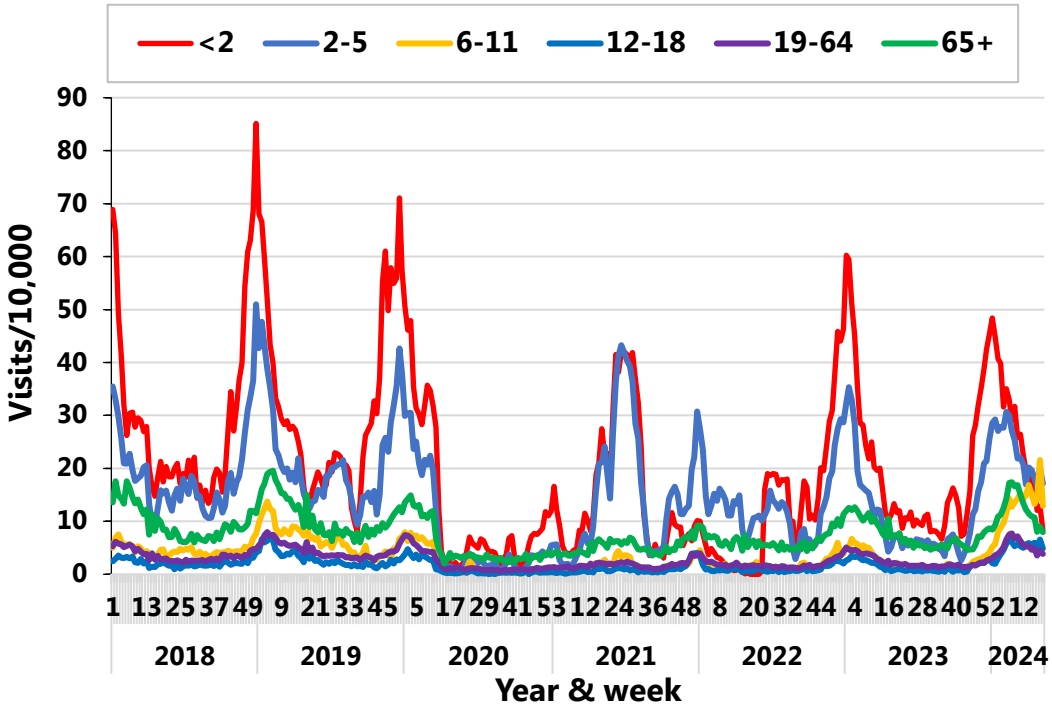
Figure 13. Weekly visits to Maccabi Health Services clinics that resulted in diagnosis of pneumonia, by age group, 2023/2024 season: Rates per 10,000 insured persons in each age group



4.2 Emergency medicine departments

4.2.1 Surveilling visits to emergency medicine departments for adults that resulted in diagnosis of pneumonia

Figure 14 presents the percentage of visits that resulted in diagnosis of pneumonia, out of all visits that resulted in any diagnosis in adult (internal) intensive care units, in the eight Clalit Health Services general hospitals.

According to Figure 14, it can be seen that throughout most of the season the percentage of visits to the internal emergency room due to pneumonia was high compared to the 2020/2021 season and lower than the 2019-2020 season (Figure 14).

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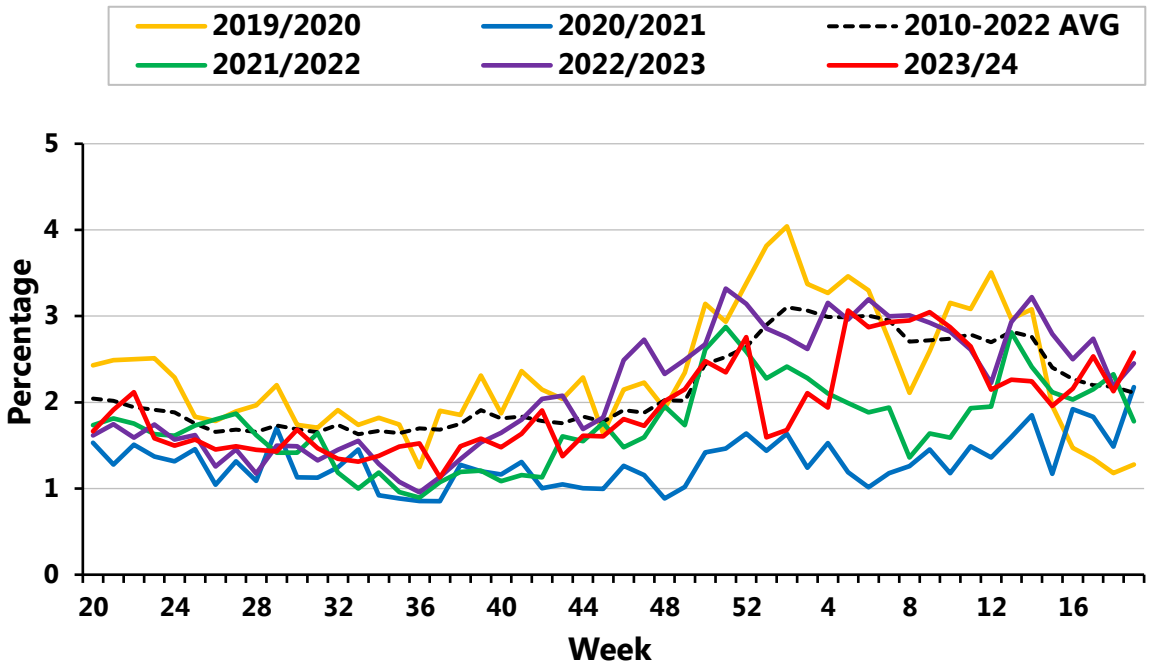
Figure 14. Percentage of visits to emergency medicine departments (adults-internal) in Clalit Health Services hospitals that resulted in diagnosis of pneumonia



4.2.2 Surveilling visits to emergency medicine departments for children that resulted in diagnosis of pneumonia

Figure 15 presents the percentage of visits that resulted in diagnosis of pneumonia, out of all visits that resulted in any diagnosis in the pediatric emergency medicine department.

According to Figure 15, it can be seen that throughout most of the season the percentage of visits to the pediatric emergency medicine department due to pneumonia was below the multi-year average. The percentage of visits in the 2023/2024 season was higher throughout the season than the percentage of visits in the 2020/2021 winter season and lower than the 2019-2020 season.

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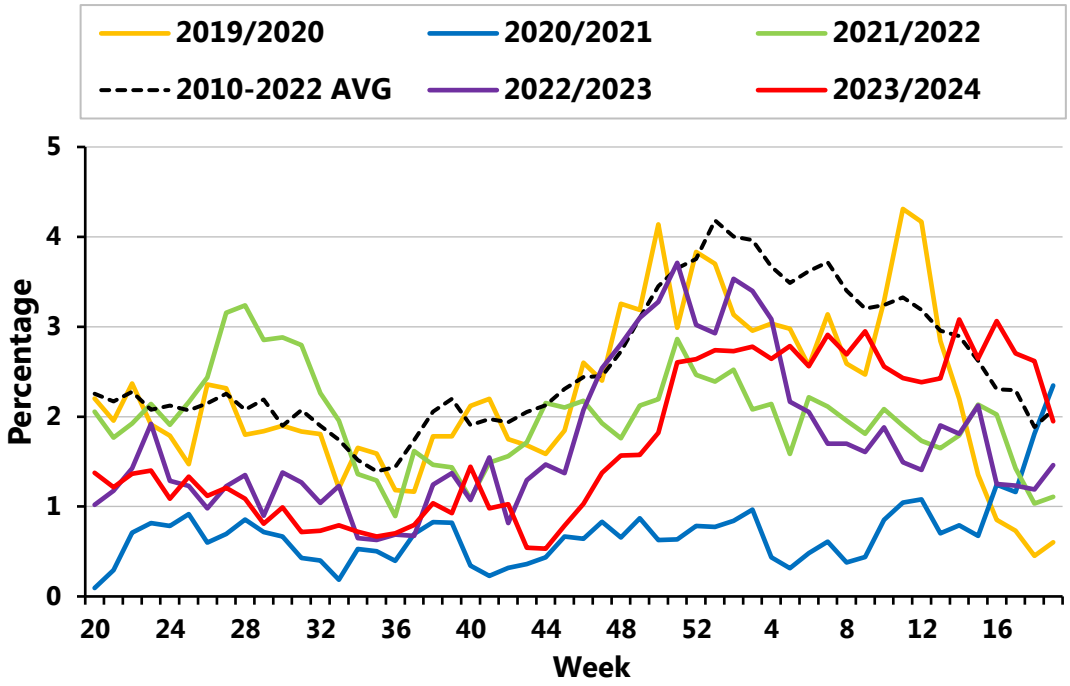
Figure 15. Percentage of visits to emergency medicine departments (children) in Clalit Health Services hospitals that resulted in diagnosis of pneumonia



4.2.3 Surveilling visits to emergency medicine departments (children) that resulted in diagnosis of bronchiolitis

Figure 16 shows the percentage of visits by infants under 2 years of age to the pediatric emergency medicine department due to bronchiolitis in 2018-2024. It can be seen that the fall-winter morbidity wave of the 2023/2024 season began in week 52 of 2023 and peaked in week 2 of 2024, and the seasonal pattern was similar to the multi-year average pattern.

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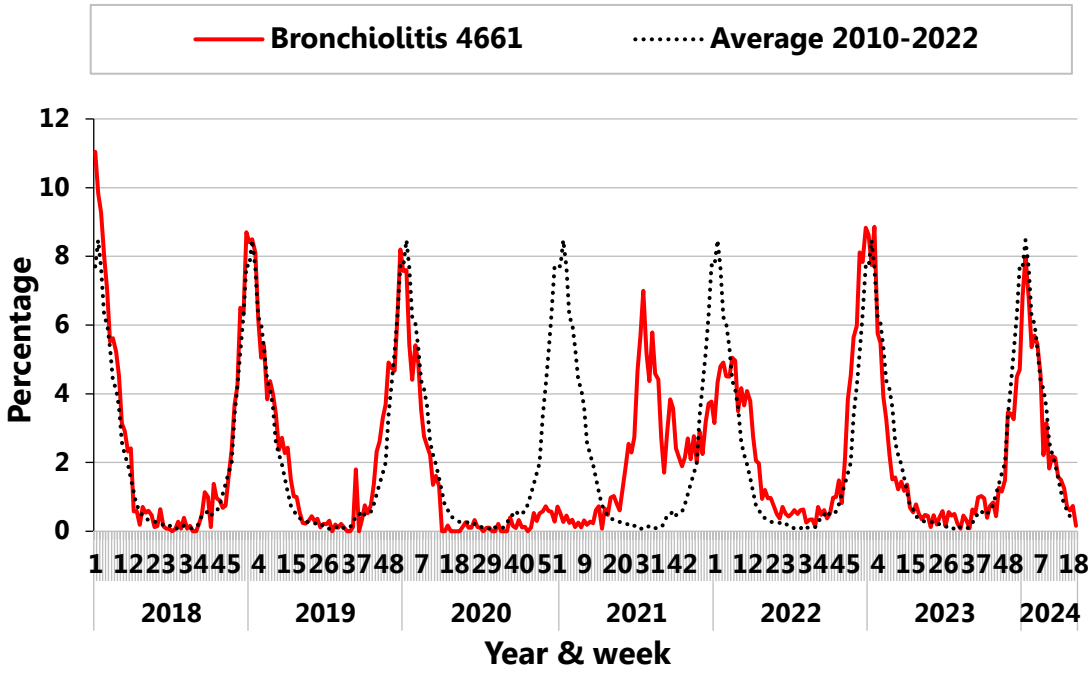
Figure 16. Percentage of visits to emergency medicine departments (children) in Clalit Health Services hospitals that resulted in diagnosis of bronchiolitis



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5. Mortality surveillance

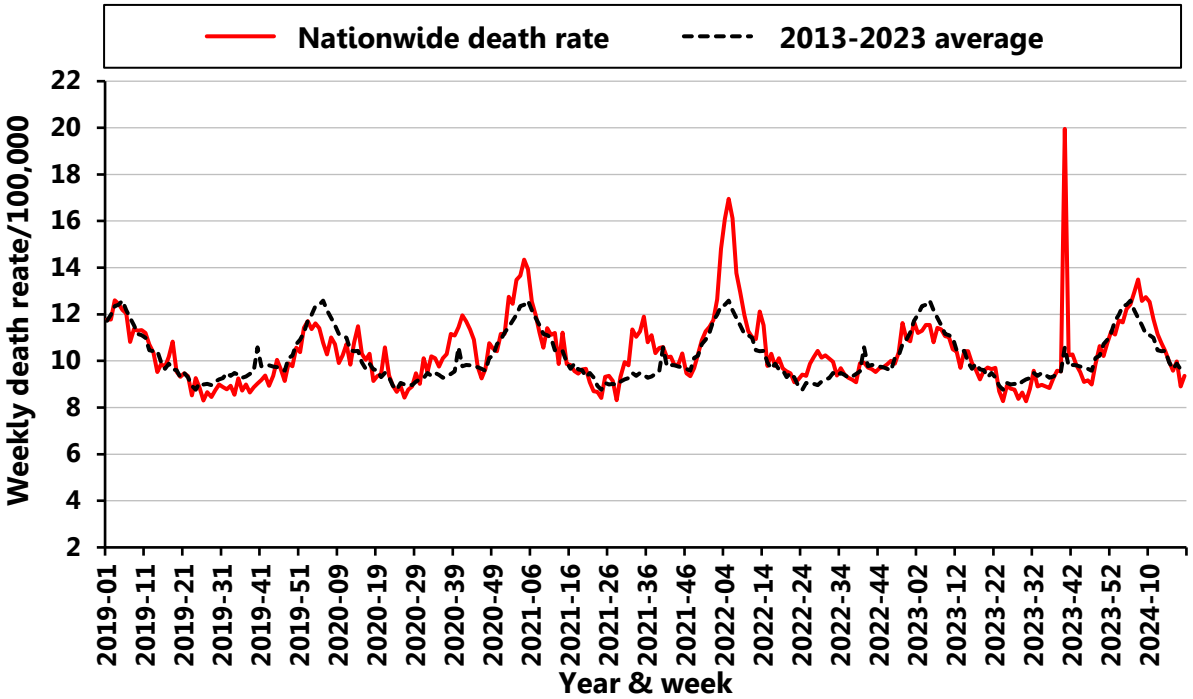
For the purpose of surveilling mortality during the influenza season, two indicators are used: The mortality rate from all causes and the percentage of mortality from pneumonia out of the total deaths in Israel.

5.1 Mortality from all causes during the 2023/2024 season

The death rate from all causes was similar to the multi-year average during weeks 49 of 2023 through week 6 of 2024. During weeks 7-12 of 2024, the death rate was above the multi-year average (Figure 17).

The sharp increase in the death rate observed in week 40 of 2023 corresponds with the timing of the events of October 7 of that year.

Figure 17. Weekly death rate from all causes compared to the multi-year average (2013-2023): Rates per 100,000



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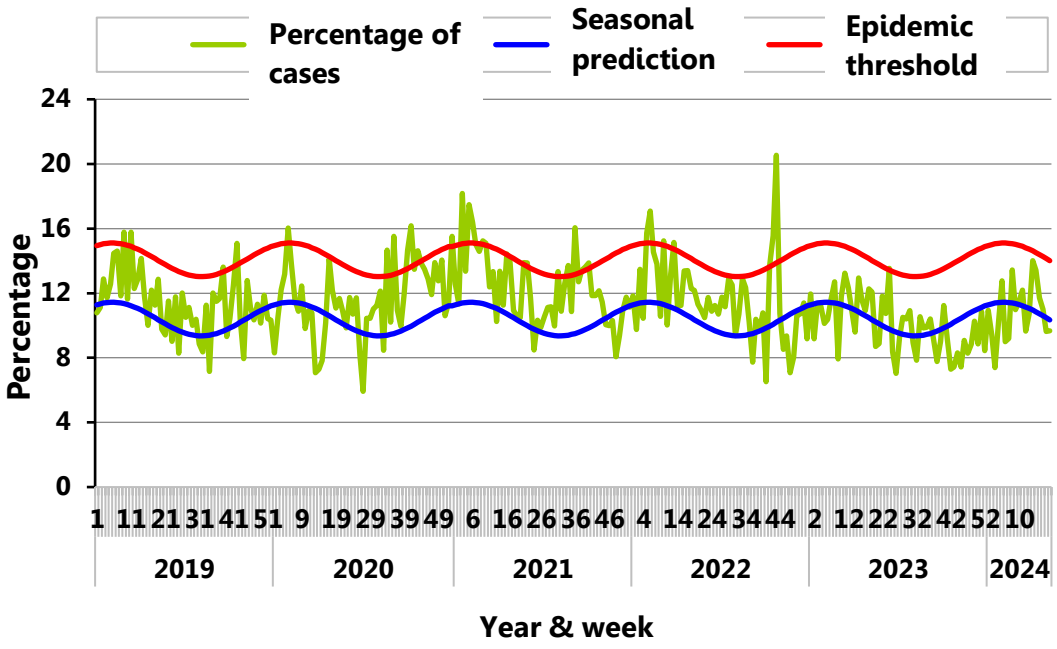
5.2 Pneumonia mortality during the 2023/2024 season

During the 2023/2024 season, the percentage of deaths from pneumonia fluctuated around the seasonal prediction (Figure 18).

Figure 18. Weekly deaths from pneumonia compared to the multi-year prediction, 2019-2024: Percentage of total deaths



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6. Influenza vaccination

6.1 Vaccine composition

Since 2011, there has been a recommendation for the entire population over the age of 6 months to be vaccinated against influenza. Detailed information about the influenza vaccine can be found in the Epidemiology Division's vaccination briefing (https://www.gov.il/he/Departments/policies/influenza).
In the 2023/2024 season, the influenza vaccines used in Israel represented four strains, as follows:

- A/Victoria/4897/2022 (H1N1)pdm09-like virus
- A/Darwin/9/2021 (H3N2)-like virus
- B/Austria/1359417/2021 (B/Victoria lineage)-like virus
- B/Phuket/3073/2013 (B/Yamagata lineage)-like virus

6.2 Population vaccination

In the 2023/2024 season, 1,468,109 people insured by the HMOs were vaccinated against the seasonal influenza (approximately 15% of the total Israeli population). Vaccination coverage in the elderly group aged 65 years and over reached approximately 52%. Vaccination coverage of infants and children aged 6-59 months reached approximately 9% (Figure 19).

The percentages of those vaccinated out of all insured persons from all HMOs and by age/risk groups in the 2023/2024 season compared to the percentages recorded in the previous three seasons are presented in Figure 19.

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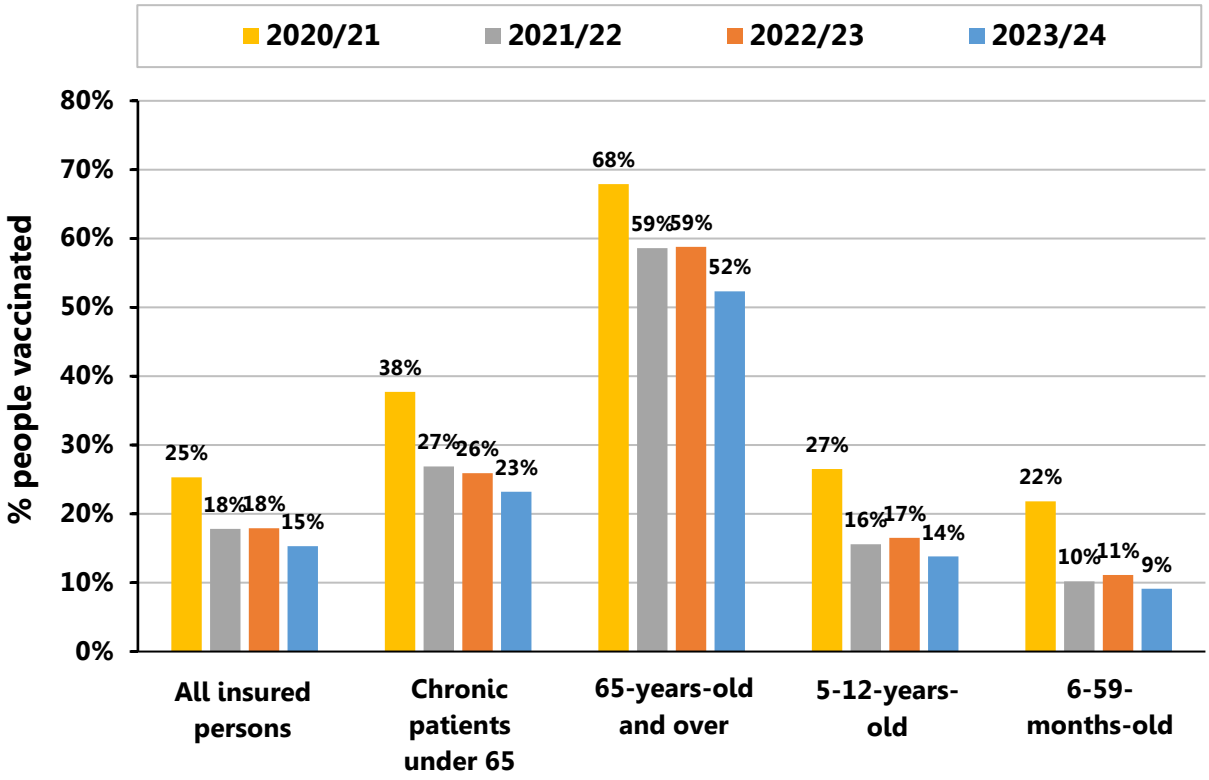
Figure 19. Vaccination percentages in the HMOs in the 2023/2024 season compared to the previous three seasons. All insured persons, and by age/risk groups



6.3 School vaccination

During the 2023/2024 season, students in grades 2, 3, 4, and 1-6 of the special education received one dose of the quadrivalent influenza vaccine, through the Student Healthcare Services. Within this framework, approximately 30% of second-grade students, approximately 24% of third-grade students, approximately 22% of fourth-grade students, and approximately 23% of special education students in grades 1-6, were vaccinated against influenza.

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7. International review - influenza

7.1 Northern Hemisphere 2023/2024

7.1.1 USA[1]

During the 2023/24 season, the influenza A(H1N1) virus was the most dominant subtype (approximately 42% of seasonal sequences), A(H3N2) accounted for approximately 23% of seasonal sequences, and type B accounted for about 22.7% of seasonal sequences.

Influenza-like illness (ILI): The increase in the percentage of visits to clinics due to influenza-like illness in the 2023/24 winter season began slightly earlier than in recent years, but relatively later than the previous season, at the end of October 2023 (week 44). The ILI morbidity graph crossed the national baseline level (2.9%) in week 44 (2023) and remained above it until week 15 of 2024 (early April). The peak was 6.8% in week 52/2023 (late December). In the 2023/2024 season, the peak value was high compared to the 2018/2019, 2020/2021 and 2021/2022 seasons, similar to the peak value in the 2019/2020 season, and lower than the peak value in the 2022/23 season.

Hospitalizations: In the 2023/2024 season, 25,456 hospitalizations of patients with influenza were reported (according to laboratory testing). The peak of hospitalizations with influenza were in week 52 (2023) at a rate of 8.9 per 100,000.

Mortality: From week 40 of 2023 (early October 2023) to week 39 of 2024 (late September), 201 influenza-related deaths in children were reported across the United States.

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Laboratory surveillance: According to data from public health laboratories in the United States, from week 40 of 2023 to week 39 of 2024 (ending on 28/9/2024), a total of 135,556 samples were collected. Of these, 40,874 (30.1%) were found to be positive for influenza. Of the influenza-positive samples, 31,580 (77.3%) were found to be positive for influenza A, with 17,284 (64.6%) of them found to be positive for influenza A(H1N1), 9,474 (35.4%) found to be positive for influenza A(H3N2)pdm09, and 9,294 (22.7%) samples found to be positive for type B influenza, of the Victoria lineage. In addition, 4,806 samples were not classified into a subtype.

7.1.2 Europe[2]

The 2023/24 season began in week 49 of 2023 (early December 2023), with positive influenza samples crossing the 10% threshold (a late start compared to previous seasons). The peak morbidity for this season occurred in week 52/2023 (late December 2023), with approximately 39% positive influenza samples. A decrease in influenza activity was then observed until week 2/2024, when 29% of samples were positive, after which the percentage of positive samples increased to approximately 35% in weeks 3-6, 2024. A decrease below 10% was observed in week 12/2024 (late March 2024). This season was relatively short compared to previous seasons, lasting 15 weeks (based on crossing the 10% positive samples threshold), compared to 25 weeks in the two seasons preceding it. Throughout the season, in samples from clinics and hospitals, influenza A accounted for 91% of the samples and influenza B for 4% of the samples. A total of 22% of the influenza A samples were tested for subtype: The A/H1 subtype accounted for approximately 72% of the samples tested, and the A/H3 subtype for approximately 28% of the samples. As previously mentioned, type B influenza was identified in approximately 4% of the samples during the

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season, and in all samples tested for lineage (20% of the samples) the viruses were found to belong to the Victoria lineage. Among hospitalized patients with a case definition of severe acute respiratory infection (SARI), type A influenza was more common (28%) than influenza B (1%), with 70% of samples not tested for influenza type. Of the influenza A-positive samples tested for subtype, subtype A/H1 accounted for approximately 72% of cases and influenza A/H3 accounted for approximately 28% of cases. The influenza B-positive samples tested for subtype were from the Victoria lineage.

7.2 Southern Hemisphere 2024

Most countries experienced levels of activity similar to those observed in the pre-COVID-19 (2017-2019) and post-COVID-19 (2022-2023) seasons. However, two countries in South America and South Africa experienced very high influenza virus detection rates, and three countries in South America experienced earlier activity compared to the pre-COVID-19 period[3].

7.2.1 South America[3]:

The majority of influenza activity was caused by A(H3N2) viruses, but A(H1N1) and B viruses were also reported. Compared to the pre-COVID-19 period, Argentina, Chile and Uruguay experienced an earlier start of the 2024 influenza season. However, compared to the 2023 season, no country experienced an earlier start this year. Chile, Ecuador and Uruguay experienced high rates of severe influenza morbidity, including hospitalizations. In most other South American countries, activity levels remained moderate or low, similar to previous seasons. The season ended earlier than usual in Argentina, Chile, Paraguay, Uruguay and Bolivia.

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7.2.2 Africa[3]:

The A(H1N1) virus was dominant in Africa, but in the final weeks of the season there was an increase in the detection of influenza B viruses. Zambia experienced an earlier start to the season compared to the previous season, and experienced very high influenza activity and very high rates of severe morbidity and hospitalizations. High hospitalization rates were reported in South Africa. Influenza viruses' activity levels remained low to moderate in most other countries in the continent.

7.2.3 Oceania[3]:

In Australia, which provides the majority of data for this region, A(H3N2) viruses were the dominant of the viruses classified. The 2024 season began in the same week as 2023 and the seasons preceding the COVID-19 pandemic. Influenza viruses' detection rates reached moderate levels.

Sources of information

1. https://www.cdc.gov/fluview/surveillance/2024-week-39.html
2. https://www.ecdc.europa.eu/en/publications-data/seasonal-influenza-annual-epidemiological-report-20232024
3. https://www.cdc.gov/flu/whats-new/2024-2025-southern-hemisphere.html

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8. COVID-19 worldwide summary

The number of positive tests for the SARS CoV-2 virus worldwide at the beginning of July 2023 was 3,400 tests, which accounted for about 6% of the total samples tested[1]. Since then, a moderate upward trend began in the number of positive tests reported, until its peak in February 2024, when 25,000 (about 20%) positive tests were reported, constituting 20.6% of the total samples tested and reported[1]. After that, a downward trend began, and in April 2024, 2,700 positive tests were reported, constituting 4.5% of the total samples tested and reported worldwide[1].

The Omicron variant was the most prevalent variant during this period (September 2023 to May 2024). The Omicron subvariants (and their derivatives) that were prevalent during that period are EG, XBB, JN[2].

Sources of information

1. https://data.who.int/dashboards/covid19/circulation?n=o
2. https://www.gisaid.org

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