



# NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

*week 50 of 2022*  
(12.12.22 - 18.12.22)

## Summary.

**Influenza and ARI incidence data.** Influenza and other ARI activity increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (161.3 per 10 000 of population) was higher than national baseline (70.0) by 130.4%.

**Etiology of ILI & ARI.** Among 9668 patients investigation 2436 (25.2%) respiratory samples were positive for influenza, including 2094 cases of influenza A(H1N1)pdm09 in 45 cities, 26 cases of influenza A(H3N2) in 5 cities, 180 cases of influenza A untyped in 9 cities and 136 cases of influenza B in 25 cities.

75 influenza viruses were isolated on MDCK cell culture, including: 64 influenza A(H1N1)pdm09 viruses in Astrakhan (3), Vladivostok (7), Yekaterinburg (2), Kaliningrad (2), Moscow (3), Samara (6) and Saint-Petersburg (25), Khabarovsk (16), 2 influenza A(H3N2) viruses in Khabarovsk and 9 influenza B viruses in Saint-Petersburg (2), Khabarovsk (2), Cheboksary (5). Since the beginning of the season, 215 viruses A(H1N1)pdm09, 2 viruses A(H3N2) and 23 viruses B have been isolated.

**Antigenic characterization.** Since the beginning of the season, 35 influenza A(H1N1)pdm09 have been antigenically characterized by the NICs, including: Moscow (24) and Saint-Petersburg (11) and 7 influenza B, including: Moscow (1) and Saint-Petersburg (6). All viruses A(H1N1)pdm09 were antigenically similar to reference strain A/Victoria/2570/2019 (H1N1)pdm09. 6 influenza B viruses were antigenically similar to reference strain B/Austria/1359417/2021 and 1 influenza B virus reacted with the reference virus antiserum to a 1:8 homologous titer.

**ARVI detections.** The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) was estimated in total as 16.1% (PCR).

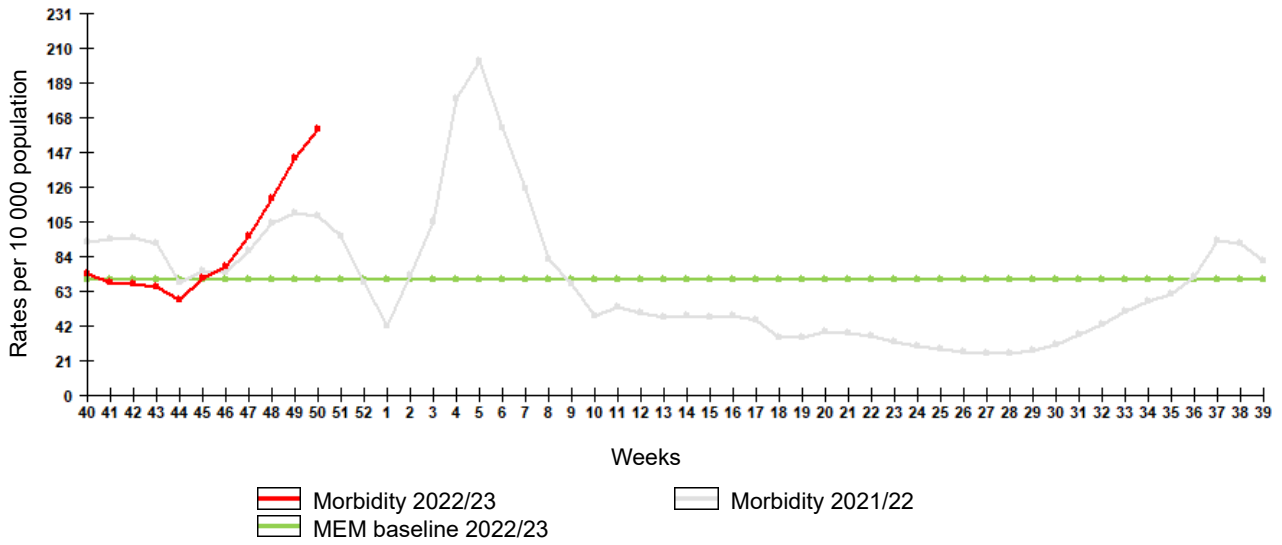
**In sentinel surveillance system** clinical samples from 71 SARI patients were investigated by rRT-PCR for influenza, among them 29 (40.8%) cases of influenza, including 20 cases of influenza A(H1N1)pdm09, 6 cases influenza A untyped and 3 cases of influenza B. 61 SARI patients were investigated for ARVI by rRT-PCR, among them 8 (13.1%) cases of ARVI recognized including 3 cases of RSV, 1 case of RhV, 1 case of CoV, 2 cases of MPV and 1 case of BoV infection. Among 66 SARI patients no cases positive for coronavirus SARS-CoV-2 recognized.

Clinical samples from 68 ILI/ARI patients were investigated for influenza by rRT-PCR, among them 19 (27.9%) cases of influenza A(H1N1)pdm09. Among 55 ILI/ARI samples 10 (18.2%) cases positive for ARVI detected including 1 case of PIV, 3 cases of ADV, 1 case of RhV, 3 cases of CoV and 2 cases of MPV infection. 2 (3.3%) of 61 ILI/ARI patients were positive for coronavirus SARS-CoV-2.

**COVID-19.** Totally 21 743 302 cases and 393 220 deaths associated with COVID-19 were registered in Russia including 7 451 cases and 54 deaths in last 24 hours (on 12:00 of 22.12.2022). According to the data obtained by NIC in Saint-Petersburg totally 20 467 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 1379 (6.7%) cases.

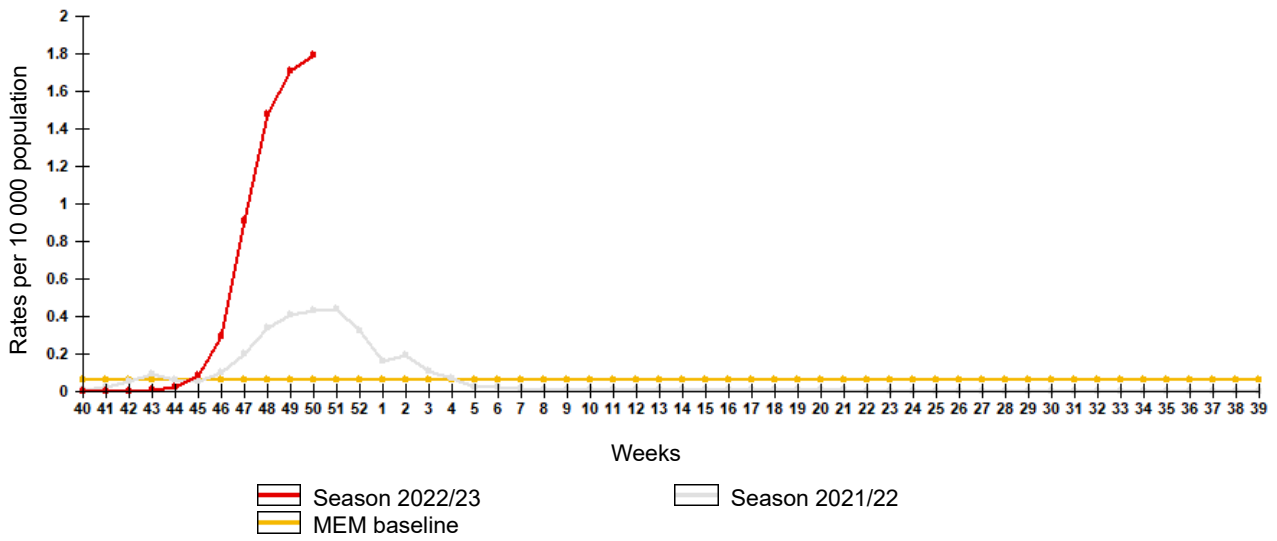
# Influenza and ARI morbidity data

Fig. 1. Influenza and ARI morbidity in 61 cities under surveillance in Russia, seasons 2021/22 and 2022/23



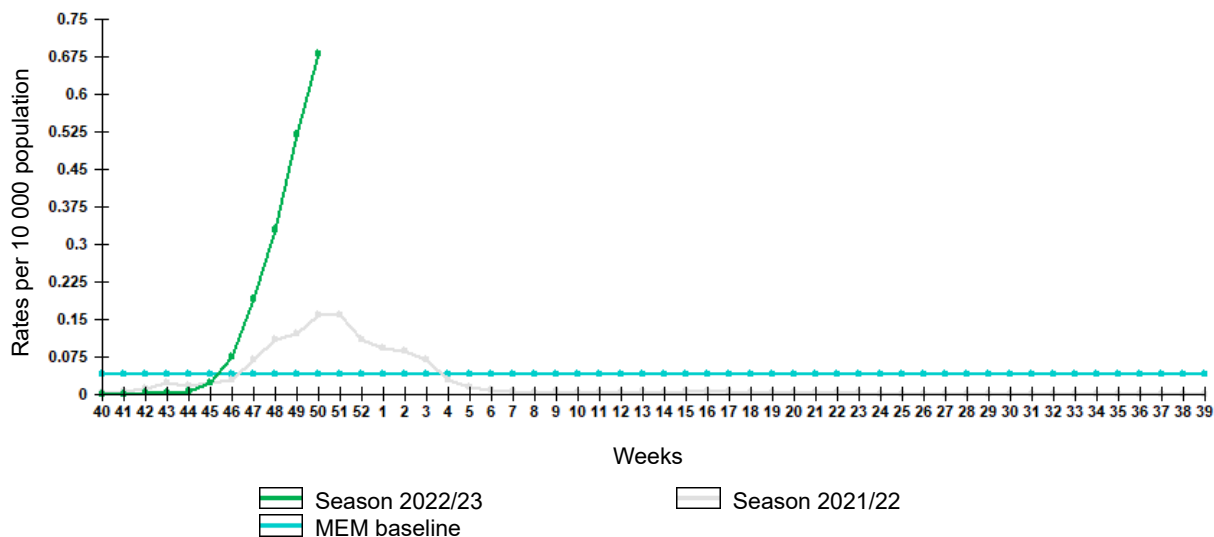
Epidemiological data showed increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (161.3 per 10 000 of population) was higher than national baseline (70.0) by 130.4%.

Fig. 2. Comparative data on incidence rate of clinically diagnosed influenza, seasons 2021/22 and 2022/23



Incidence rate of clinically diagnosed influenza increased comparing to previous week and amounted to 1.79 per 10 000 of population, it was higher than pre-epidemic MEM baseline (0.060).

Fig. 3. Comparison of hospitalization rate with clinical diagnosis of influenza, seasons 2021/22 and 2022/23



Hospitalization rate of clinically diagnosed influenza increased comparing to previous week and amounted to 0.68 per 10 000 of population, it was higher than pre-epidemic MEM baseline (0.040).

## Influenza and ARVI laboratory testing results

Cumulative results of influenza laboratory diagnosis by rRT-PCR were submitted by 45 RBLs and two WHO NICs. According to these data as a result of 9668 patients investigation 2436 (25.2%) respiratory samples were positive for influenza, including 2094 cases of influenza A(H1N1)pdm09 in 45 cities, 26 cases of influenza A(H3N2) in 5 cities, 180 cases of influenza A untyped in 9 cities and 136 cases of influenza B in 25 cities.

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Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 50 of 2022

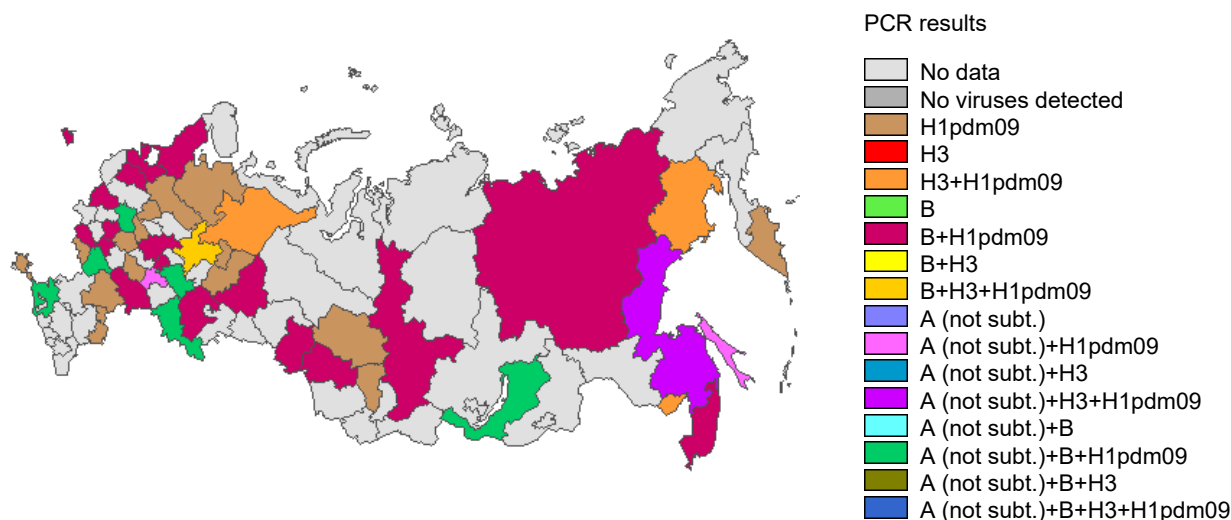


Fig. 5. Monitoring of influenza viruses detection by RT-PCR in Russia, season 2022/23

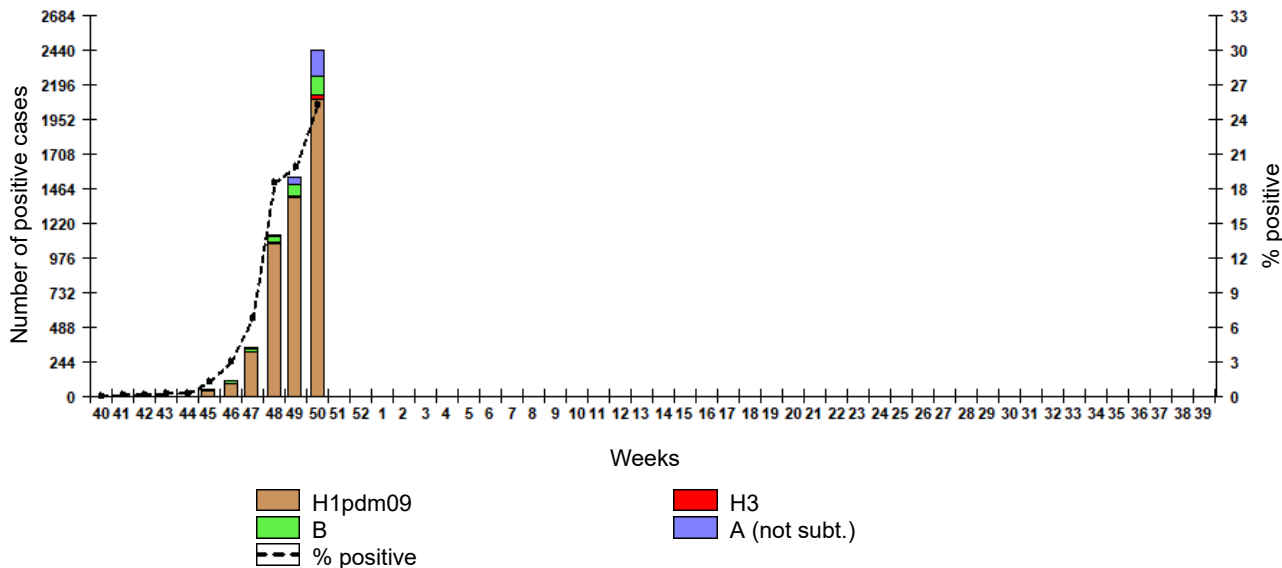
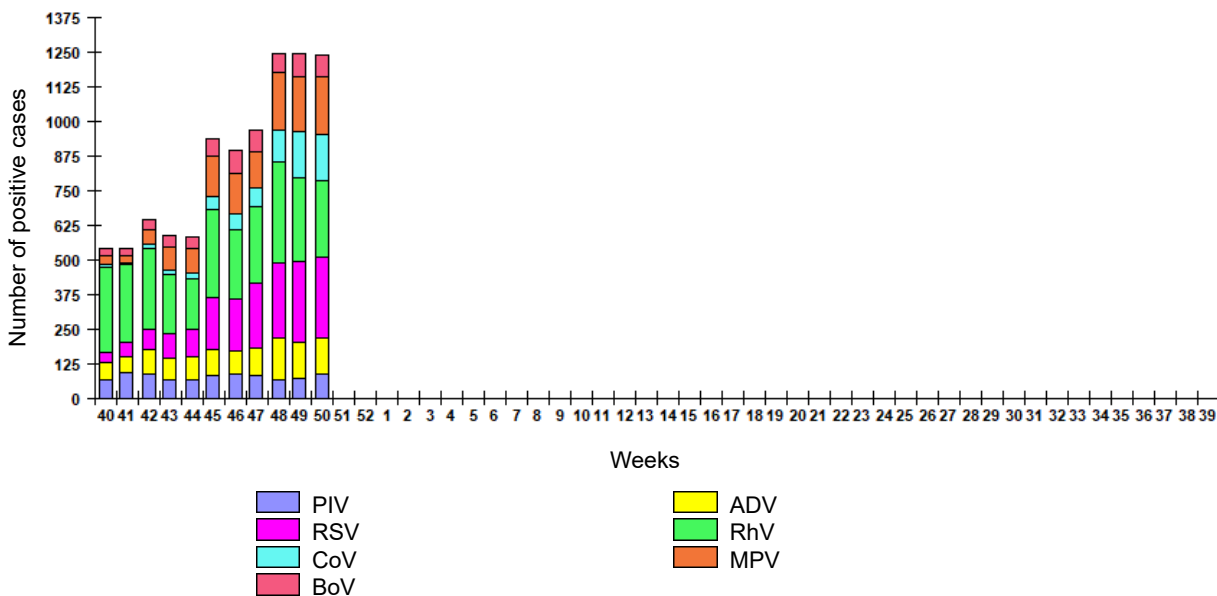


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2022/23



**ARVI detections.** The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **16.1%** of investigated samples by PCR.

Fig. 7. Monitoring of influenza viruses isolation in Russia, season 2022/23

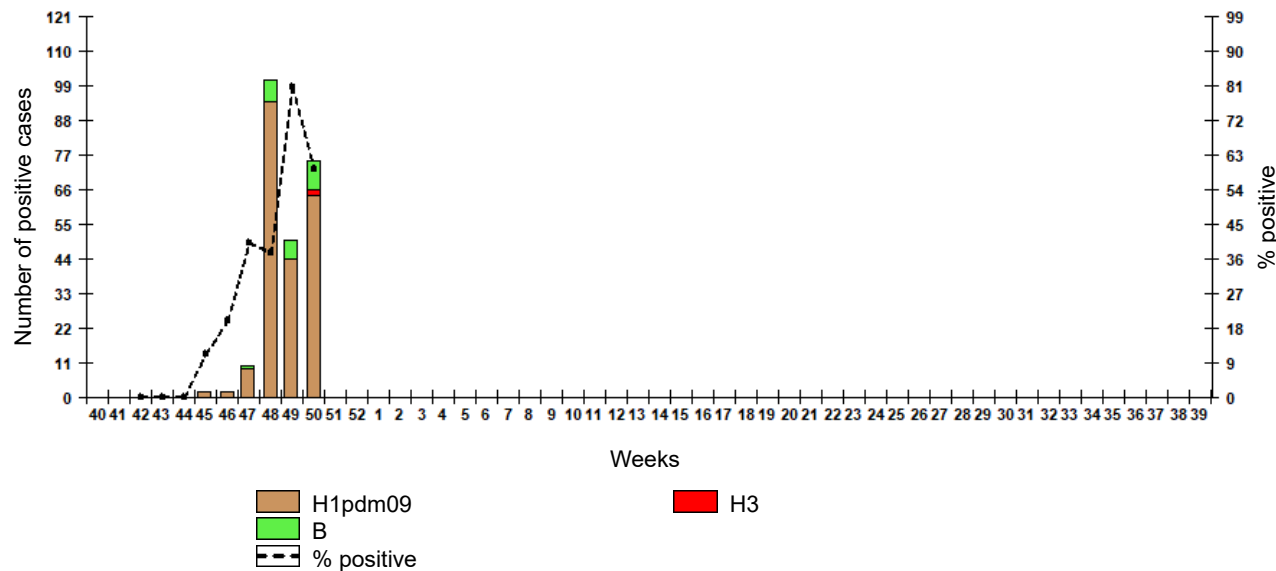


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 50 of 2022

	Number of specimens / number of positive cases	% positive
<u>Influenza</u>		
Number of specimens tested for influenza	9668	-
Influenza A (not subt.)	180	1,9%
Influenza A(H1)pdm09	2094	21,7%
Influenza A(H3)	26	0,3%
Influenza B	136	1,4%
All influenza	2436	25,2%
<u>Other ARVI</u>		
Number of specimens tested for ARVI	7699	-
PIV	87	1,1%
ADV	130	1,7%
RSV	293	3,8%
RhV	275	3,6%
CoV	167	2,2%
MPV	208	2,7%
BoV	77	1,0%
All ARVI	1237	16,1%
<u>SARS-CoV-2 (COVID-19)</u>		
Number of specimens tested for SARS-CoV-2	20467	-
SARS-CoV-2	1379	6,7%

Fig. 8. Results of PCR detections of SARS-CoV-2 in Russia



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Table 2. Results of influenza viruses isolation in Russia, week 50 of 2022

	Number of specimens / number of viruses	% isolated viruses
Number of specimens	127	-
Influenza A(H1)pdm09	64	50,4%
Influenza A(H3)	2	1,6%
Influenza B	9	7,1%
All influenza	75	59,1%

## Sentinel influenza surveillance

Clinical samples from 71 SARI patients were investigated by rRT-PCR for influenza, among them 29 (40.8%) cases of influenza, including 20 cases of influenza A(H1N1)pdm09, 6 cases influenza A untyped and 3 cases of influenza B. 61 SARI patients were investigated for ARVI by rRT-PCR, among them 8 (13.1%) cases of ARVI recognized including 3 cases of RSV, 1 case of RhV, 1 case of CoV, 2 cases of MPV and 1 case of BoV infection. Among 66 SARI patients no cases positive for coronavirus SARS-CoV-2 recognized.

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Fig. 9. Monitoring of influenza viruses detection by RT-PCR among SARI patients in sentinel hospitals, season 2022/23

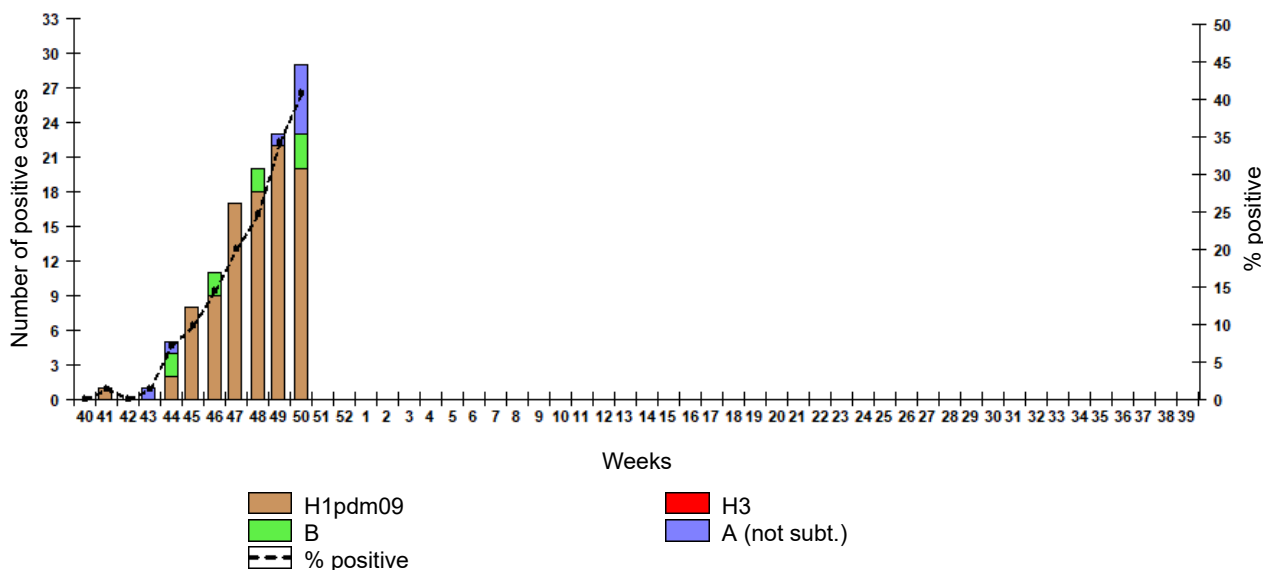


Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

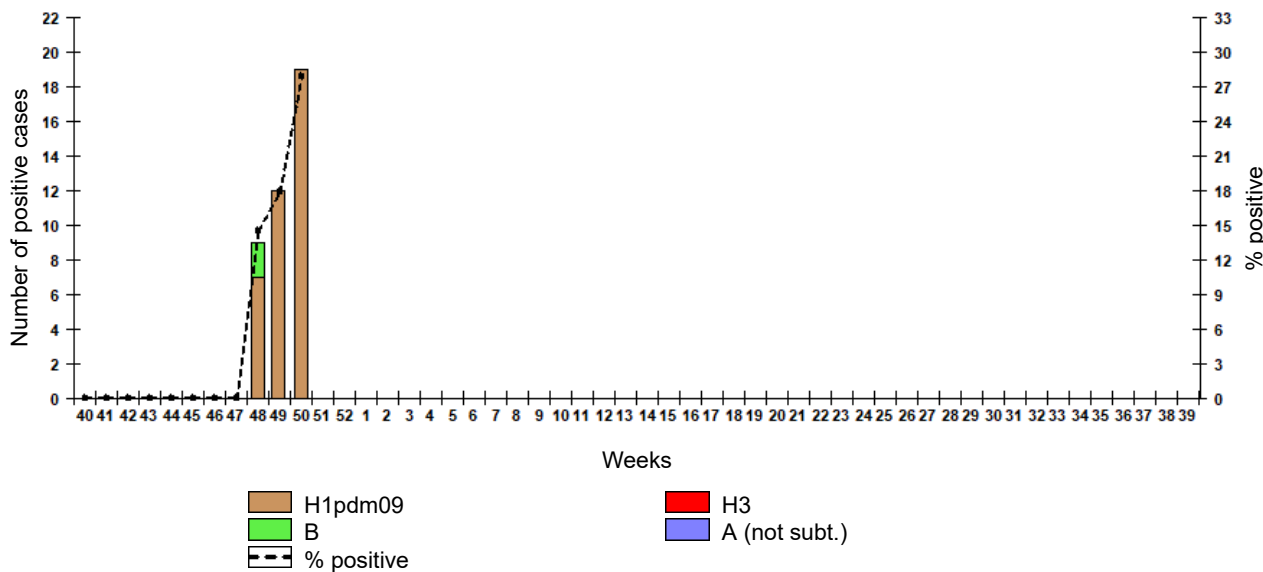


Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2022/23

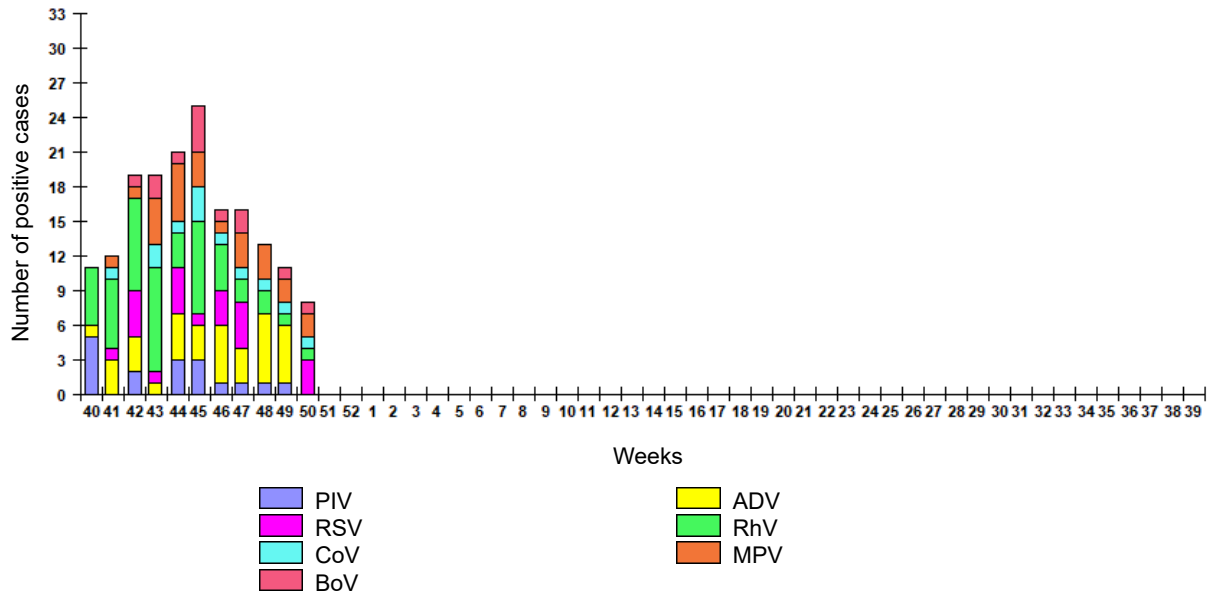


Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

