



NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

week 46 of 2022
(14.11.22 - 20.11.22)

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 (77.8 per 10 000 of population) was higher than national baseline (70.0) by 11.1%.

Etiology of ILI & ARI. Among 3620 patients investigation 105 (2.9%) respiratory samples were positive for influenza, including 90 cases of influenza A(H1N1)pdm09 in 19 cities, 2 cases of influenza A(H3N2) in 2 cities and 13 cases of influenza B in 8 cities.

2 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Moscow (1) and Saint-Petersburg (1). Since the beginning of the season, 4 viruses A(H1N1)pdm09 have been isolated.

Antigenic characterization. Since the beginning of the season, 3 influenza A(H1N1)pdm09 have been antigenically characterized by the NICs (Moscow and Saint-Petersburg). All viruses were antigenically similar to reference strain A/Victoria/2570/2019 (H1N1)pdm09.

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 20.5% (PCR).

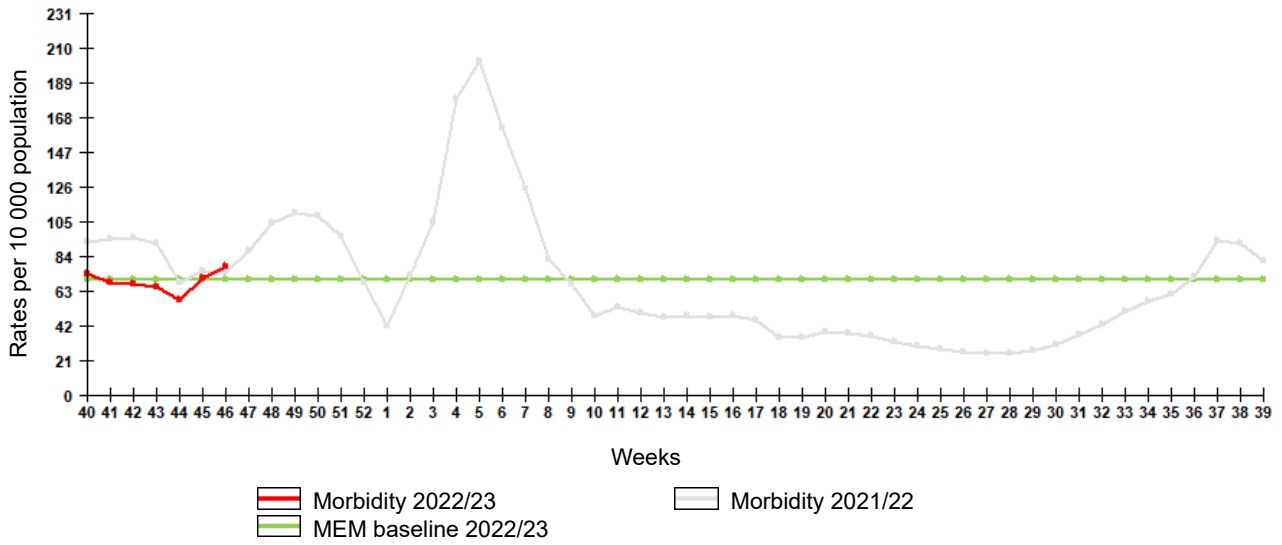
In sentinel surveillance system clinical samples from 75 SARI patients were investigated by rRT-PCR for influenza, among them 11 (14.7%) cases of influenza recognized including 9 cases of A(H1N1)pdm09 influenza and 2 cases of B influenza. 62 SARI patients were investigated for ARVI by rRT-PCR, among them 16 (25.8%) cases of ARVI recognized including 1 case of PIV, 5 cases of ADV, 3 cases of RSV, 4 cases of RhV, 1 case of CoV, 1 case of MPV and 1 case of BoV infection. 67 SARI patients were investigated for SARS-CoV-2 by rRT-PCR, among them no positive cases recognized.

Clinical samples from 40 ILI/ARI patients were investigated for influenza by rRT-PCR, among them no positive cases recognized. Among 29 ILI/ARI samples 14 (48.3%) cases positive for ARVI detected including 2 cases of PIV, 1 case of ADV, 1 case of RSV, 4 cases of RhV, 4 cases of CoV, 1 case of MPV and 1 case of BoV infection. 2 (5.9%) of 34 ILI/ARI patients were positive for coronavirus SARS-CoV-2.

COVID-19. Totally 21 550 982 cases and 391 622 deaths associated with COVID-19 were registered in Russia including 5 631 cases and 54 deaths in last 24 hours (on 12:00 of 23.11.2022). According to the data obtained by NIC in Saint-Petersburg totally 9 957 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 765 (7.7%) cases.

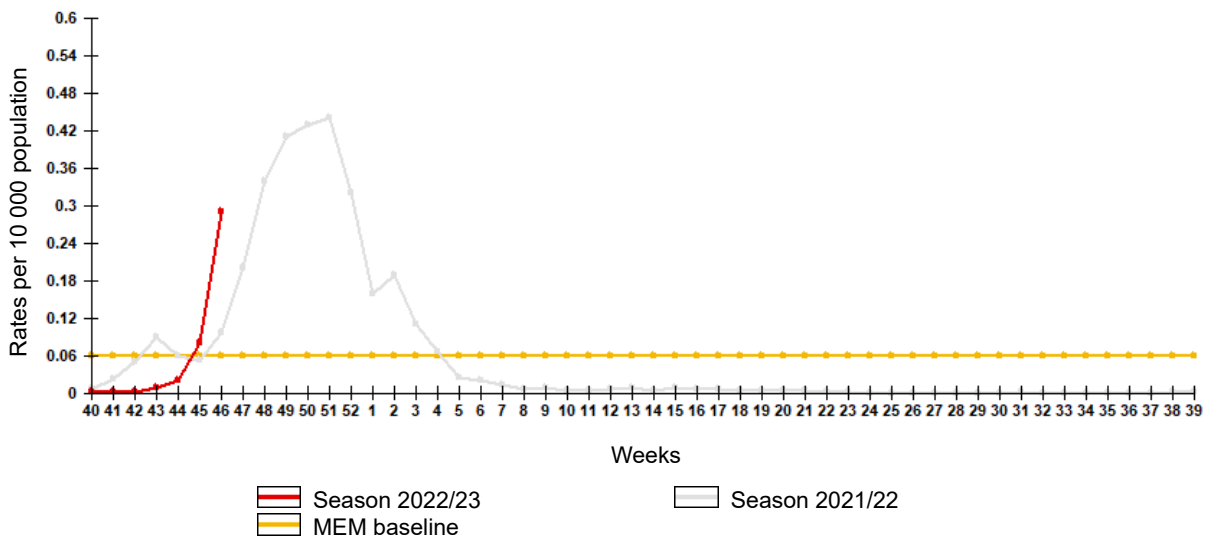
Influenza and ARI morbidity data

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



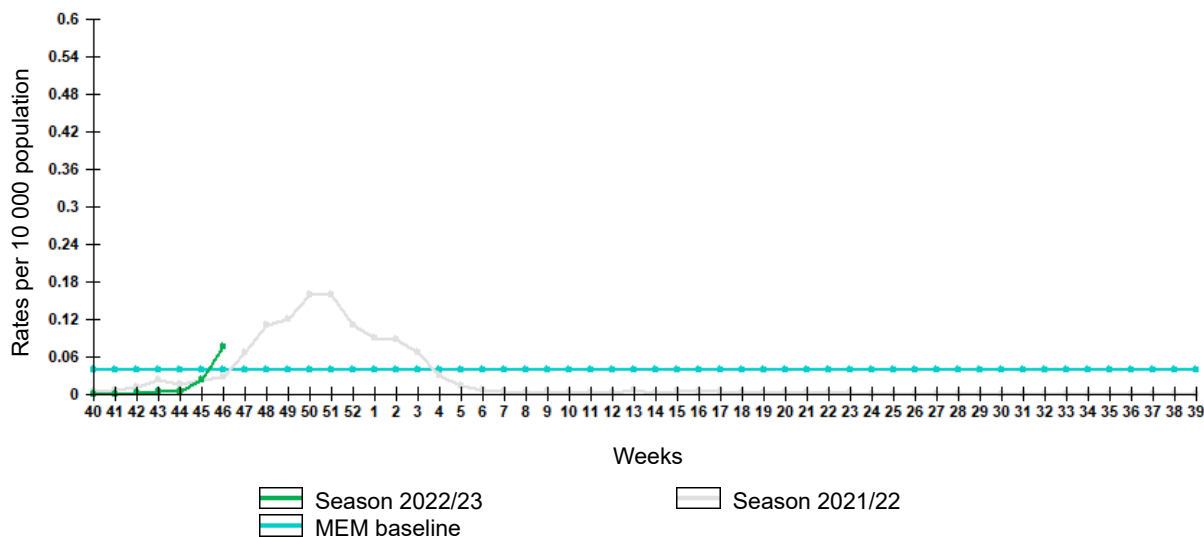
Epidemiological data showed increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (77.8 per 10 000 of population) was higher than national baseline (70.0) by 11.1%.

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 0.29 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 0.076 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 3620 patients investigation 105 (2.9%) respiratory samples were positive for influenza, including 90 cases of influenza A(H1N1)pdm09 in 19 cities, 2 cases of influenza A(H3N2) in 2 cities and 13 cases of influenza B in 8 cities.

2 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Moscow (1) and Saint-Petersburg (1). Since the beginning of the season, 4 viruses A(H1N1)pdm09 have been isolated.

Antigenic characterization. Since the beginning of the season, 3 influenza A(H1N1)pdm09 have been antigenically characterized by the NICs (Moscow and Saint-Petersburg). All viruses were antigenically similar to reference strain A/Victoria/2570/2019 (H1N1)pdm09.

Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 46 of 2022

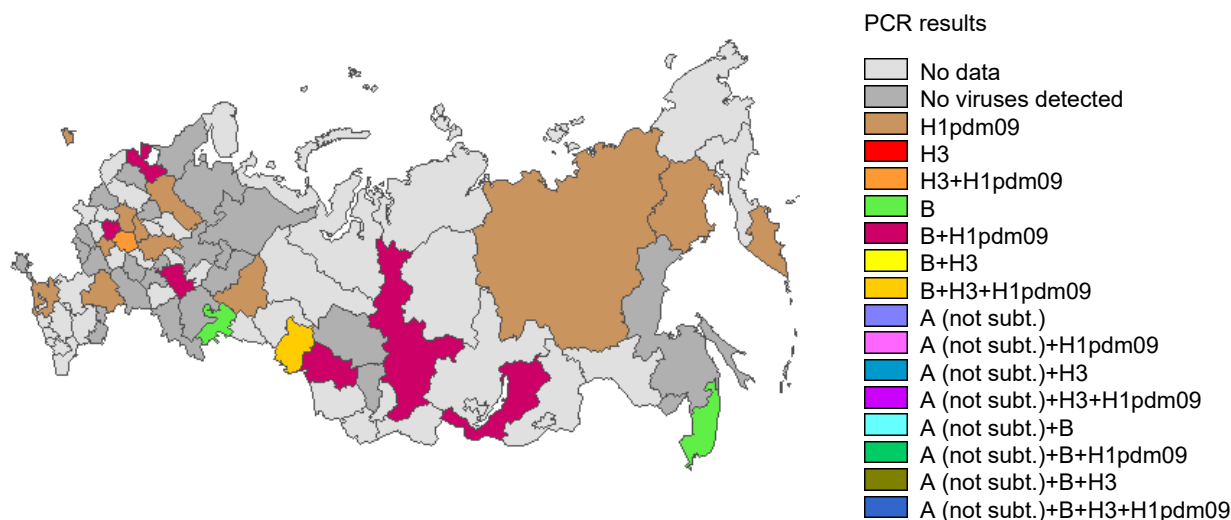


Fig. 5. Monitoring of influenza viruses detection by RT-PCR in Russia, season 2022/23

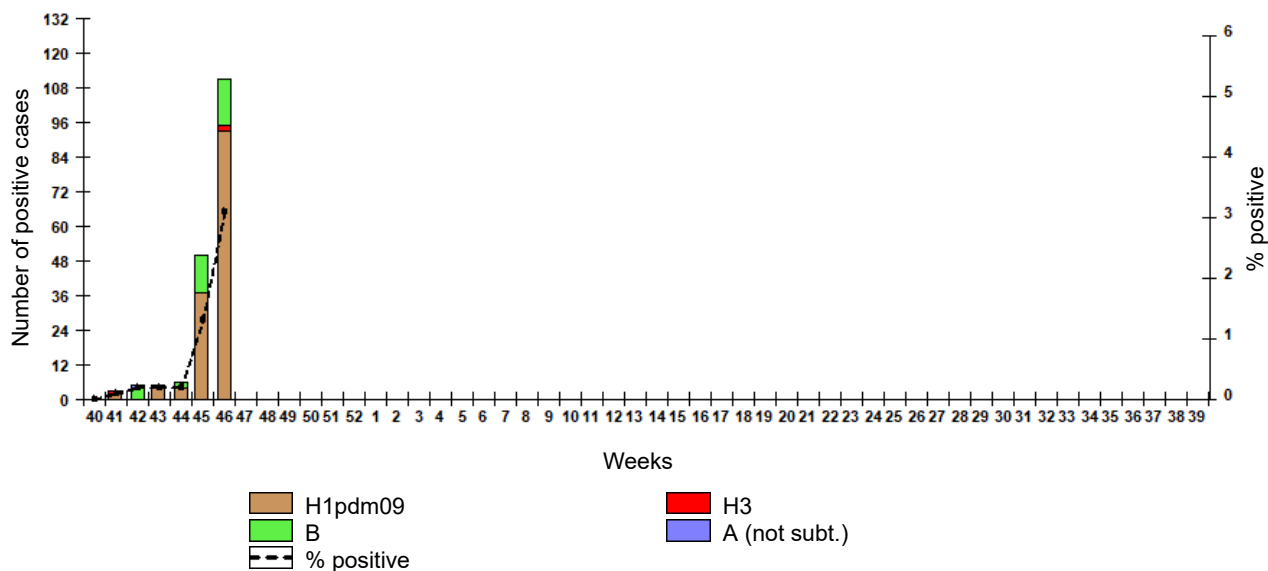
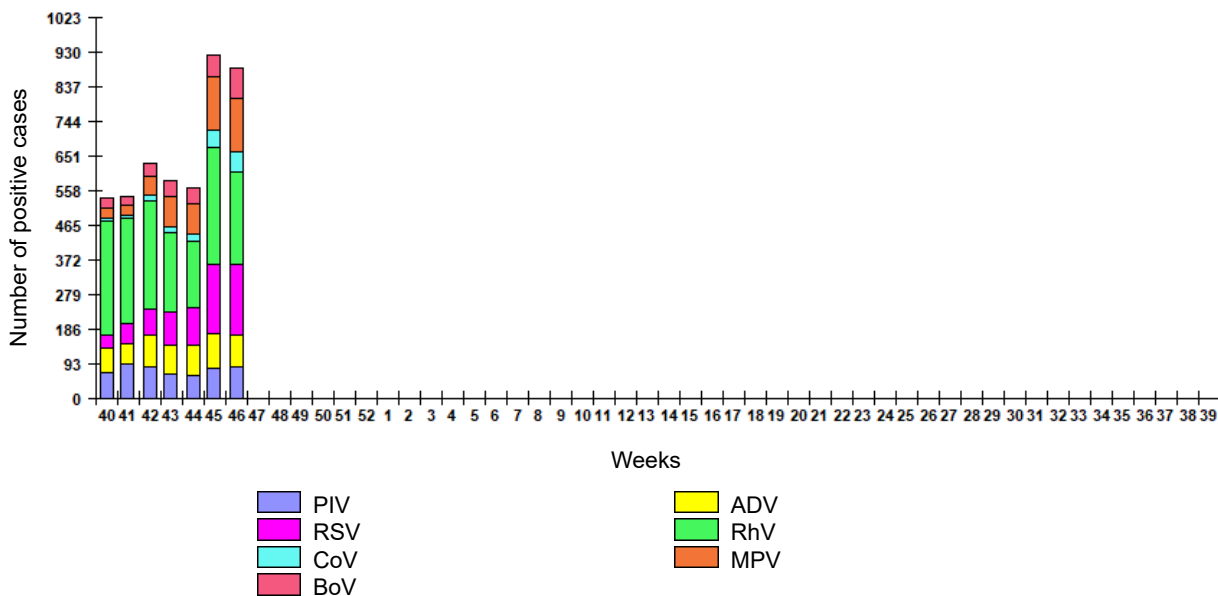


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2022/23



ARVI detections. The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **20.5%** of investigated samples by PCR.

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

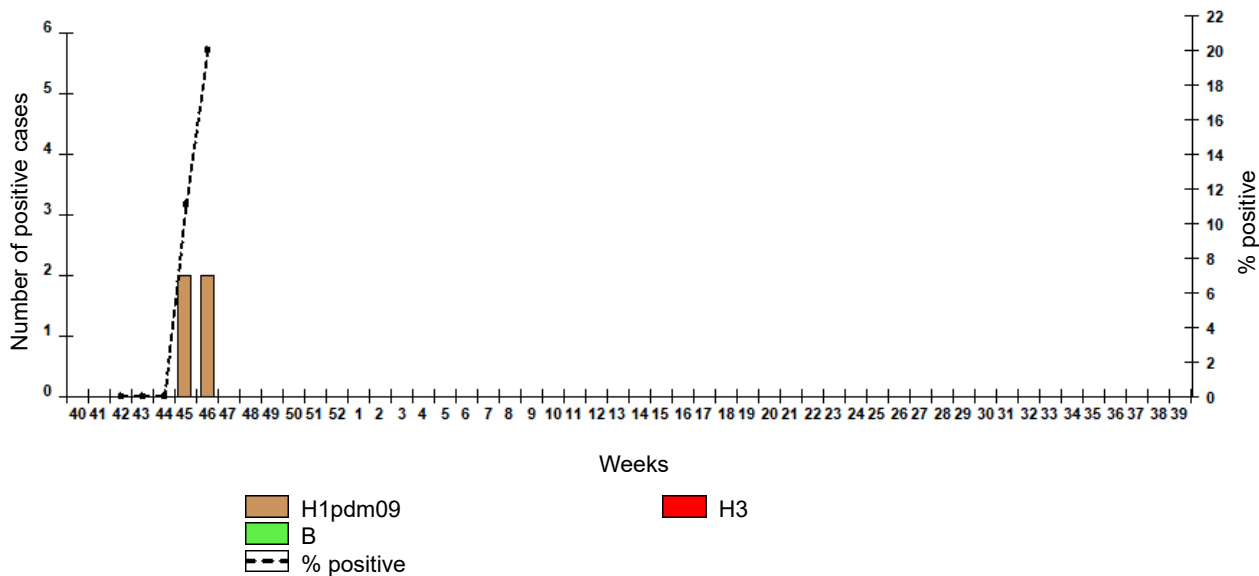


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 46 of 2022

	Number of specimens / number of positive cases	% positive
<u>Influenza</u>		
Number of specimens tested for influenza	3639	-
Influenza A (not subt.)	0	0,0%
Influenza A(H1)pdm09	93	2,6%
Influenza A(H3)	2	0,05%
Influenza B	16	0,4%
All influenza	111	3,1%
<u>Other ARVI</u>		
Number of specimens tested for ARVI	4323	-
PIV	84	1,9%
ADV	84	1,9%
RSV	189	4,4%
RhV	249	5,8%
CoV	53	1,2%
MPV	142	3,3%
BoV	81	1,9%
All ARVI	882	20,4%
<u>SARS-CoV-2 (COVID-19)</u>		
Number of specimens tested for SARS-CoV-2	9976	-
SARS-CoV-2	765	7,7%

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



COVID-19. Totally 21 550 982 cases and 391 622 deaths associated with COVID-19 were registered in Russia including 5 631 cases and 54 deaths in last 24 hours (on 12:00 of 23.11.2022). According to the data obtained by NIC in Saint-Petersburg totally 9 957 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 765 (7.7%) cases.

Table 2. Results of influenza viruses isolation in Russia, week 46 of 2022

	Number of specimens / number of viruses	% isolated viruses
Number of specimens	10	-
Influenza A(H1)pdm09	2	20,0%
Influenza A(H3)	0	0,0%
Influenza B	0	0,0%
All influenza	2	20,0%

Sentinel influenza surveillance

Clinical samples from 75 SARI patients were investigated by rRT-PCR for influenza, among them 11 (14.7%) cases of influenza recognized including 9 cases of A(H1N1)pdm09 influenza and 2 cases of B influenza. 62 SARI patients were investigated for ARVI by rRT-PCR, among them 16 (25.8%) cases of ARVI recognized including 1 case of PIV, 5 cases of ADV, 3 cases of RSV, 4 cases of RhV, 1 case of CoV, 1 case of MPV and 1 case of BoV infection. 67 SARI patients were investigated for SARS-CoV-2 by rRT-PCR, among them no positive cases recognized.

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

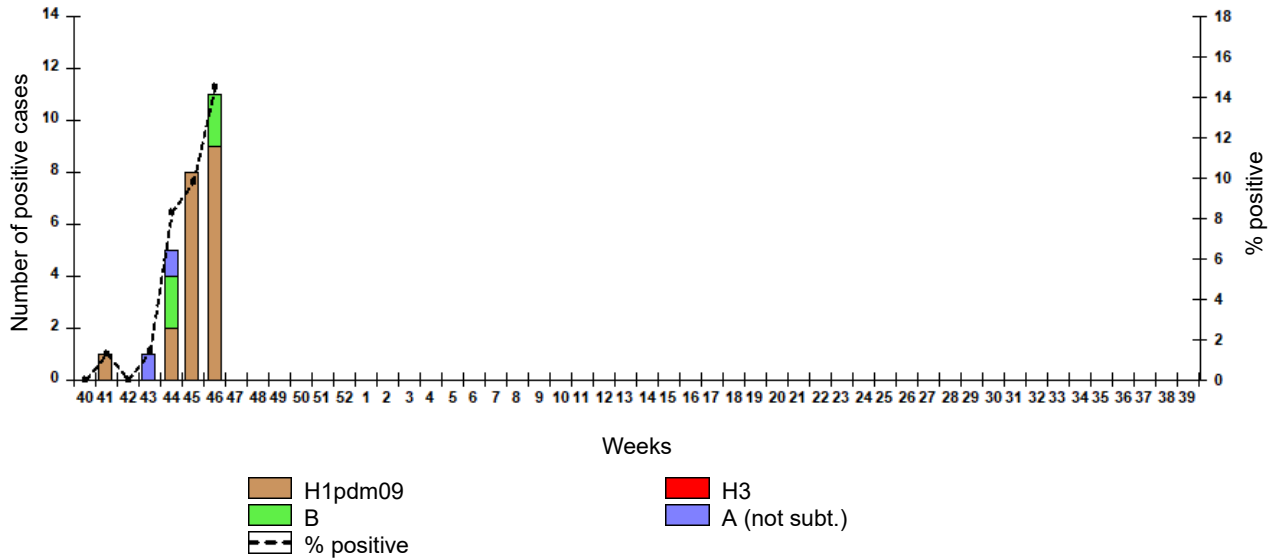


Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

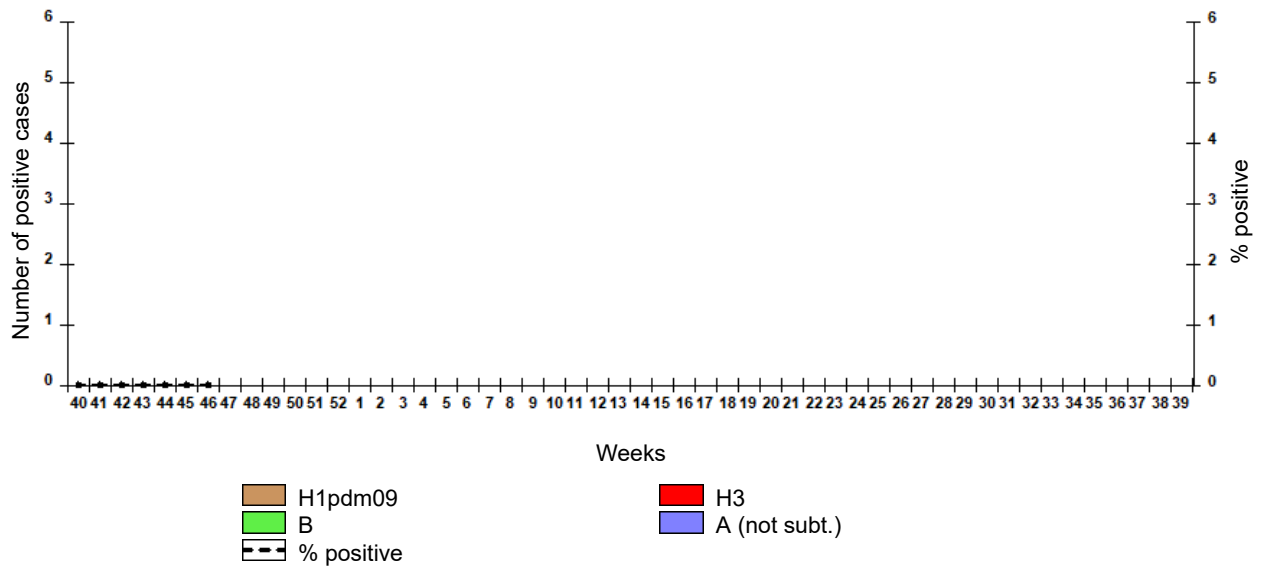


Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2022/23

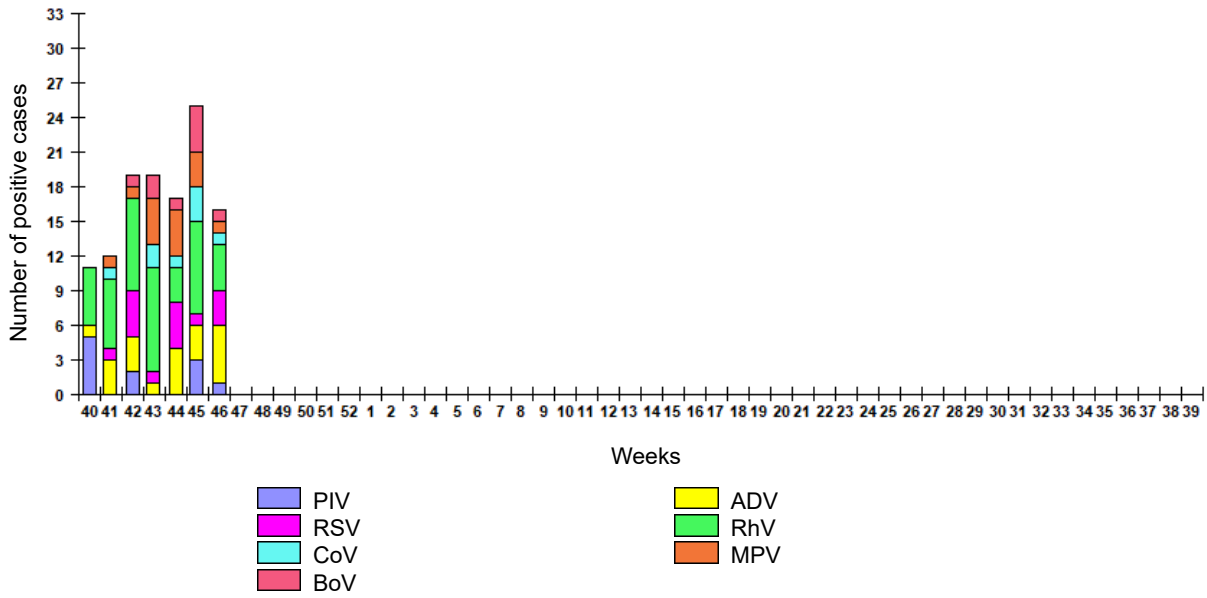


Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

