NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

week 45 of 2022
(07.11.22 - 13.11.22)

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 (71.3 per 10 000 of population) was higher than national baseline (70.0) by 1.9%.

Etiology of ILI & ARI. Among 3751 patients investigation 39 (**1.0%**) respiratory samples were positive for influenza, including 26 cases of influenza A(H1N1)pdm09 in 10 cities and 13 cases of influenza B in 3 cities.

2 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Moscow (1) and Saint-Petersburg (1).

Antigenic characterization. Since the beginning of the season, 1 influenza A(H1N1)pdm09 has been antigenically characterized by the NICs (Moscow). Virus was 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 **27.8%** (PCR).

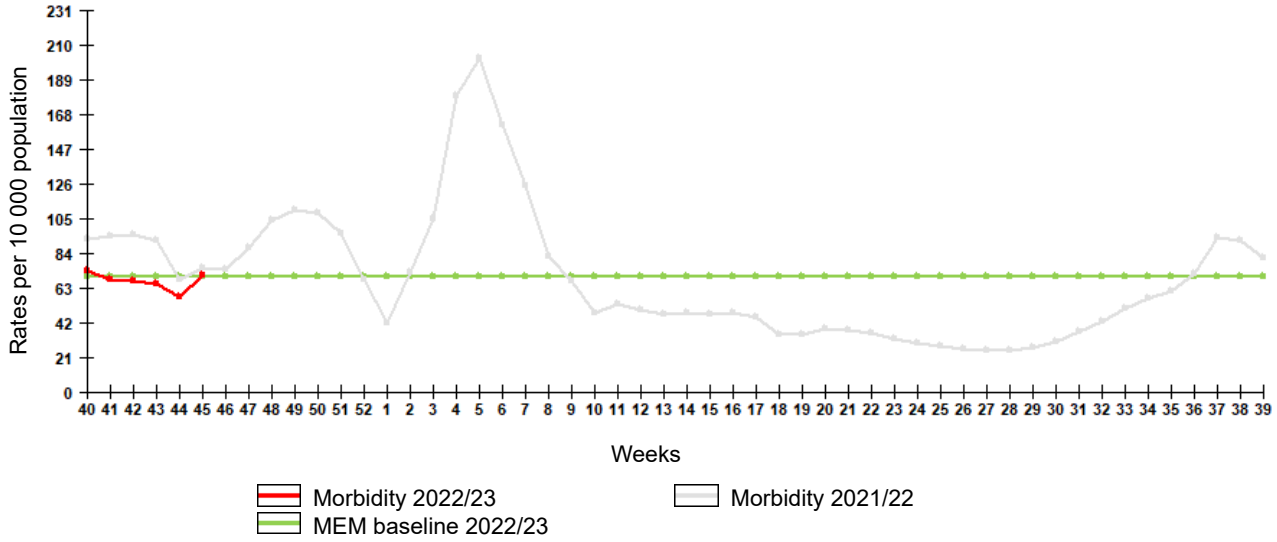
In sentinel surveillance system clinical samples from 49 SARI patients were investigated by rRT-PCR for influenza, among them no positive cases recognized. 39 SARI patients were investigated for ARVI by rRT-PCR, among them 15 (**38.5%**) cases of ARVI recognized including 1 case of PIV, 3 cases of ADV, 1 case of RSV, 4 cases of RhV, 2 cases of CoV and 4 cases of BoV infection. 3 (**6.8%**) of 44 SARI patients were positive for coronavirus SARS-CoV-2.

Clinical samples from 26 ILI/ARI patients were investigated for influenza by rRT-PCR, among them no positive cases recognized. Among 21 ILI/ARI samples 4 (**19.0%**) cases positive for ARVI detected including 2 cases of ADV infection and 2 cases of RhV. 26 ILI/ARI patients were investigated for SARS-CoV-2 by rRT-PCR, among them no positive cases recognized.

COVID-19. Totally 21 514 341 cases and 391 212 deaths associated with COVID-19 were registered in Russia including 5 380 cases and 63 deaths in last 24 hours (on 12:00 of 16.11.2022). According to the data obtained by NIC in Saint-Petersburg totally 9 392 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 560 (**6.0%**) cases.

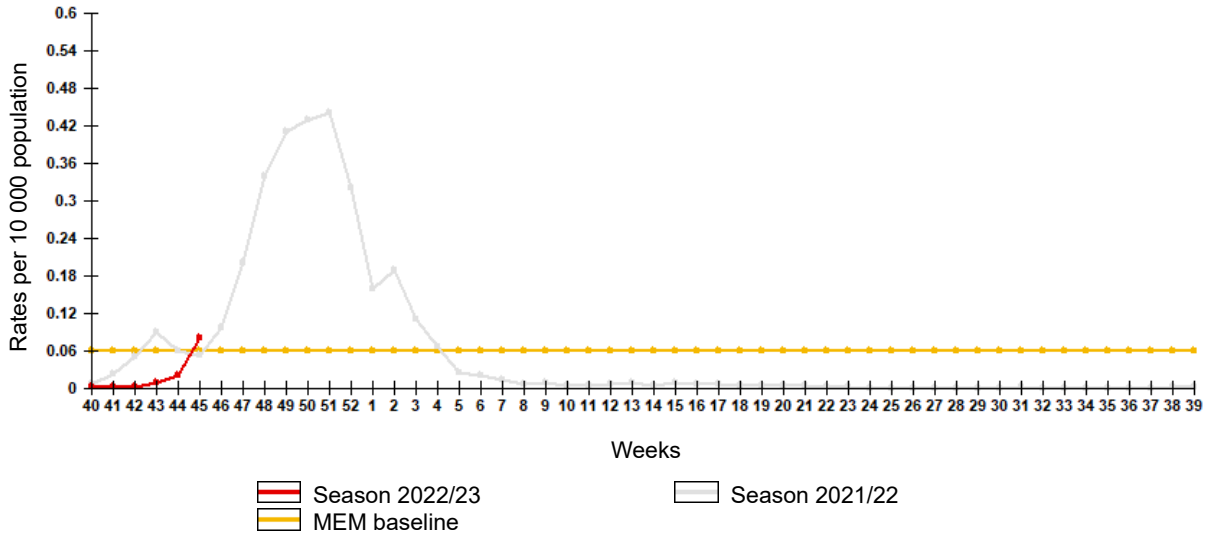
Influenza and ARI morbidity data

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



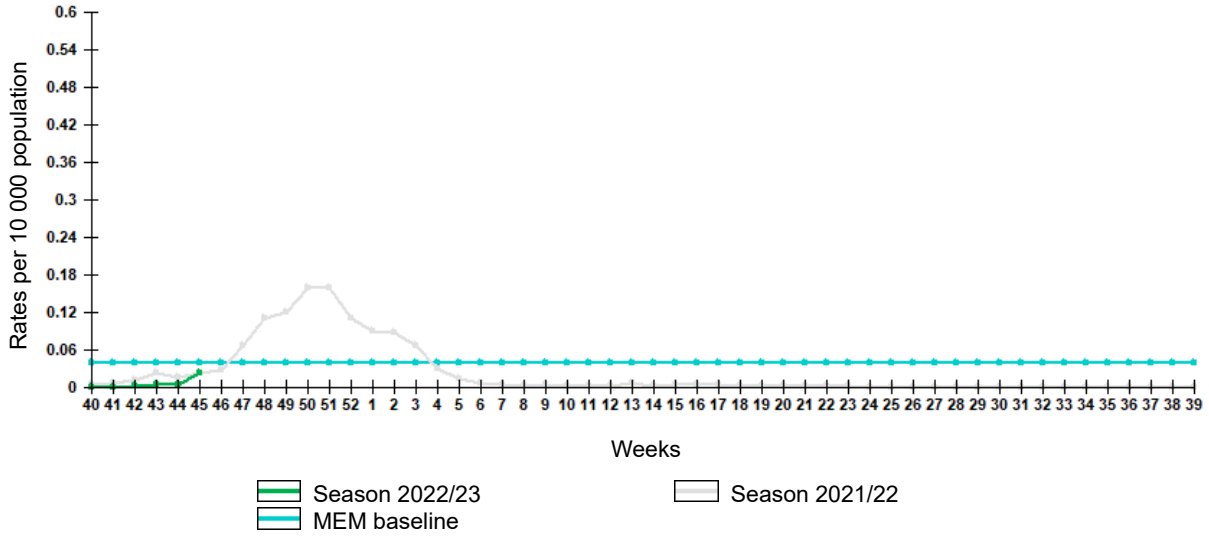
Epidemiological data showed increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (71.3 per 10 000 of population) was higher than national baseline (70.0) by 1.9%.

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 0.081 per 10 000 of population, it was higer 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 decreased comparing to previous week and amounted to 0.023 per 10 000 of population, it was lower 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 3751 patients investigation 39 (**1.0%**) respiratory samples were positive for influenza, including 26 cases of influenza A(H1N1)pdm09 in 10 cities and 13 cases of influenza B in 3 cities.

2 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Moscow (1) and Saint-Petersburg (1).

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Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 45 of 2022

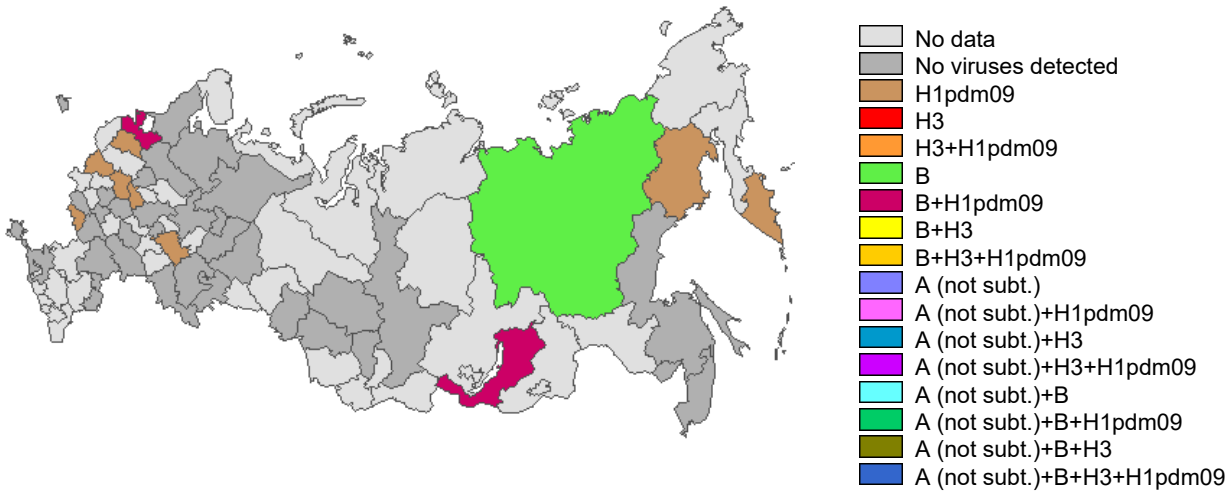


Fig. 5. Monitoring of influenza viruses detection by RT-PCR in Russia, season 2022/23

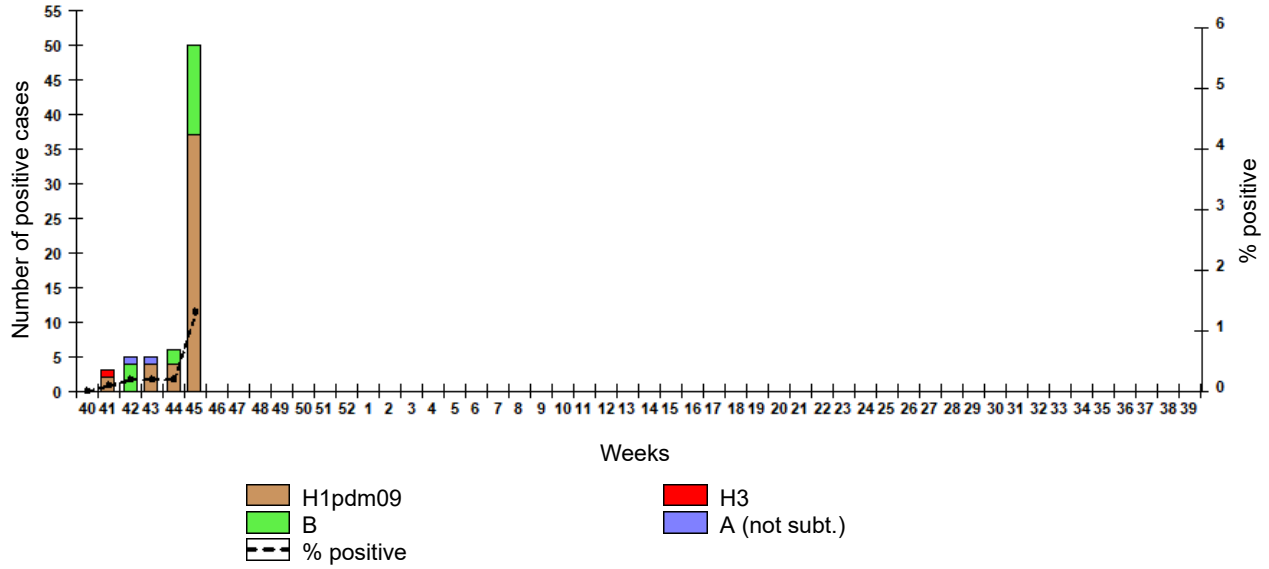
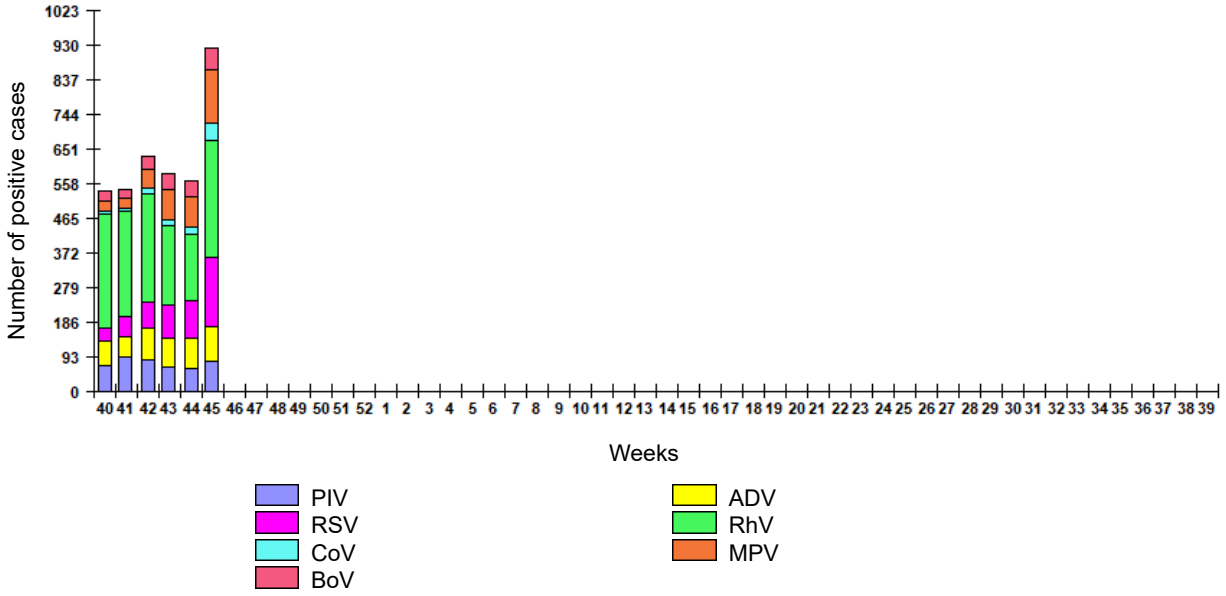


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2022/23



ARVI detections. The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **27.8%** of investigated samples by PCR.

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

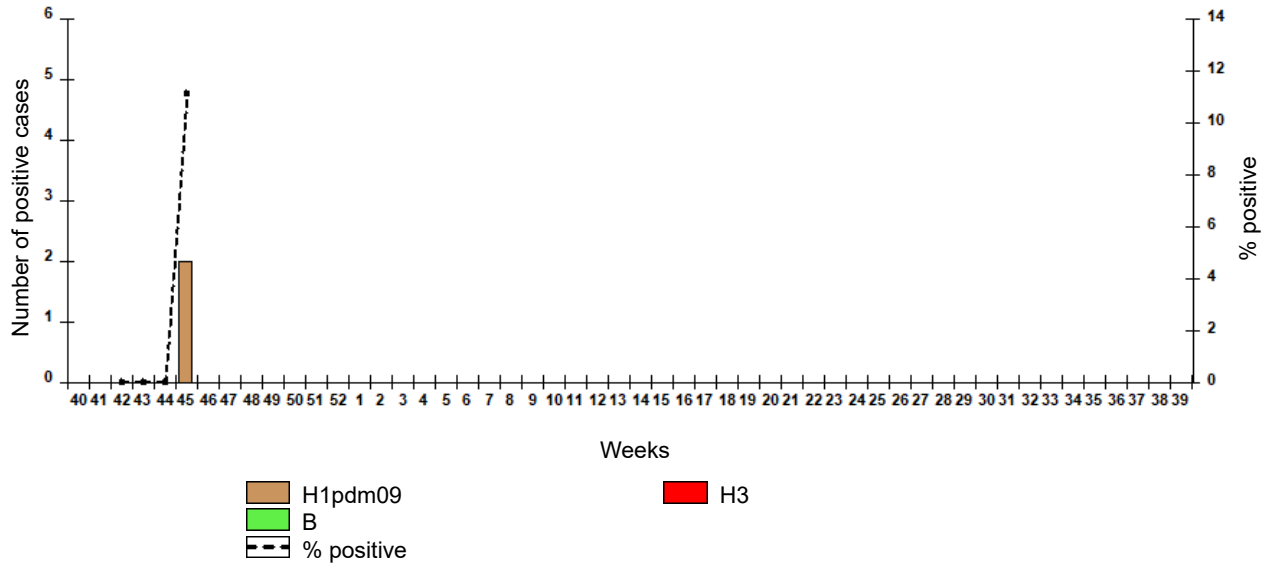


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 45 of 2022

	Number of specimens / number of positive cases	% positive
Influenza		
Number of specimens tested for influenza	*3831*	-
Influenza A (not subt.)	*0*	*0,0%*
Influenza A(H1)pdm09	*37*	*1,0%*
Influenza A(H3)	*0*	*0,0%*
Influenza B	*13*	*0,3%*
All influenza	*50*	*1,3%*
Other ARVI		
Number of specimens tested for ARVI	*3380*	-
PIV	*80*	*2,4%*
ADV	*93*	*2,8%*
RSV	*187*	*5,5%*
RhV	*314*	*9,3%*
CoV	*47*	*1,4%*
MPV	*142*	*4,2%*
BoV	*60*	*1,8%*
All ARVI	*923*	*27,3%*
SARS-CoV-2 (COVID-19)		
Number of specimens tested for SARS-CoV-2	*9472*	-
SARS-CoV-2	*561*	*5,9%*

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

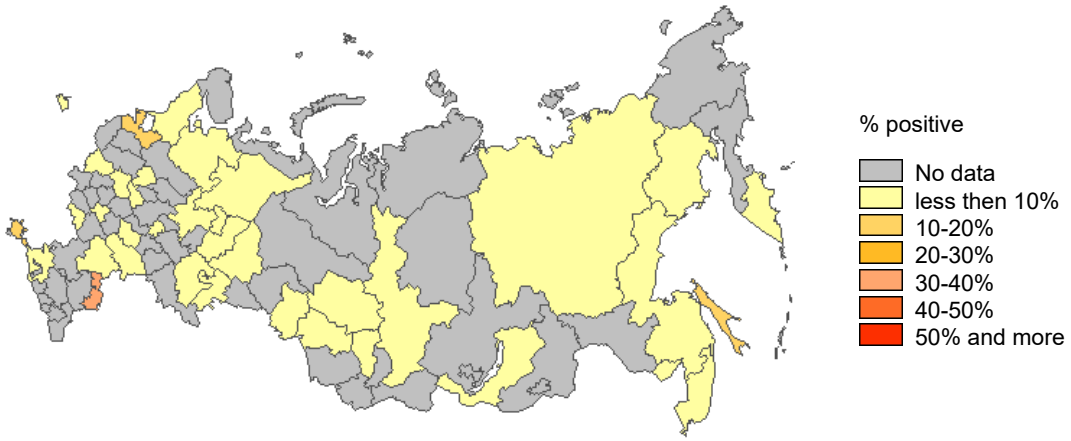


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Table 2. Results of influenza viruses isolation in Russia, week 45 of 2022

	Number of specimens / number of viruses	% isolated viruses
Number of specimens	*18*	-
Influenza A(H1)pdm09	*2*	*11,1%*
Influenza A(H3)	*0*	*0,0%*
Influenza B	*0*	*0,0%*
All influenza	*2*	*11,1%*

Sentinel influenza surveillance

Clinical samples from 49 SARI patients were investigated by rRT-PCR for influenza, among them no positive cases recognized. 39 SARI patients were investigated for ARVI by rRT-PCR, among them 15 (**38.5%**) cases of ARVI recognized including 1 case of PIV, 3 cases of ADV, 1 case of RSV, 4 cases of RhV, 2 cases of CoV and 4 cases of BoV infection. 3 (**6.8%**) of 44 SARI patients were positive for coronavirus SARS-CoV-2.

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

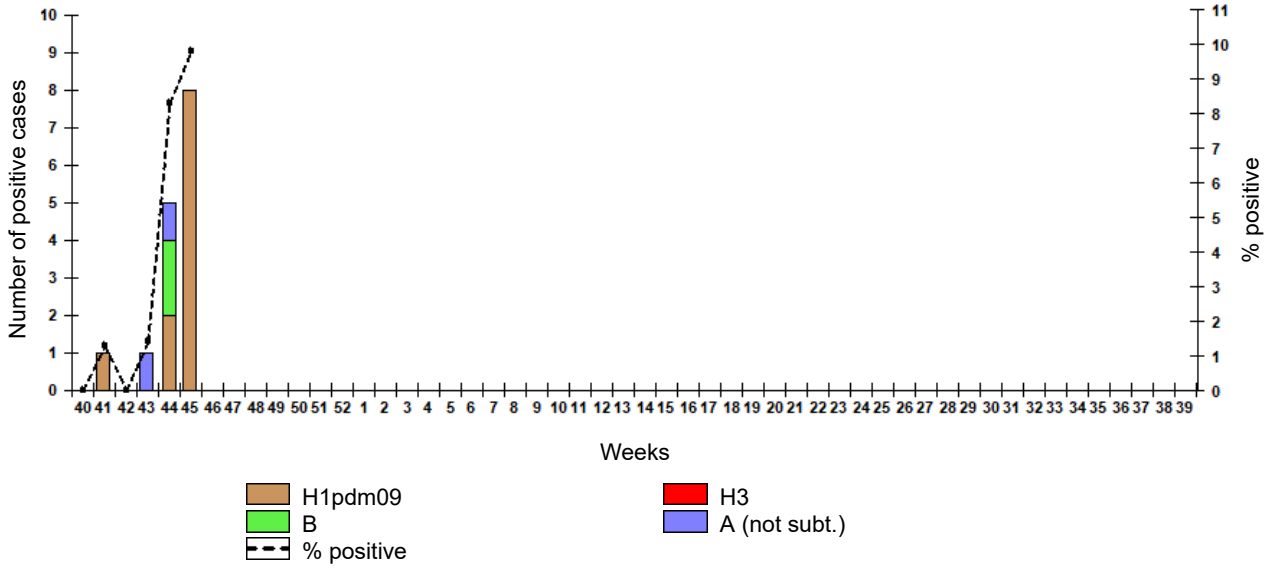

Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

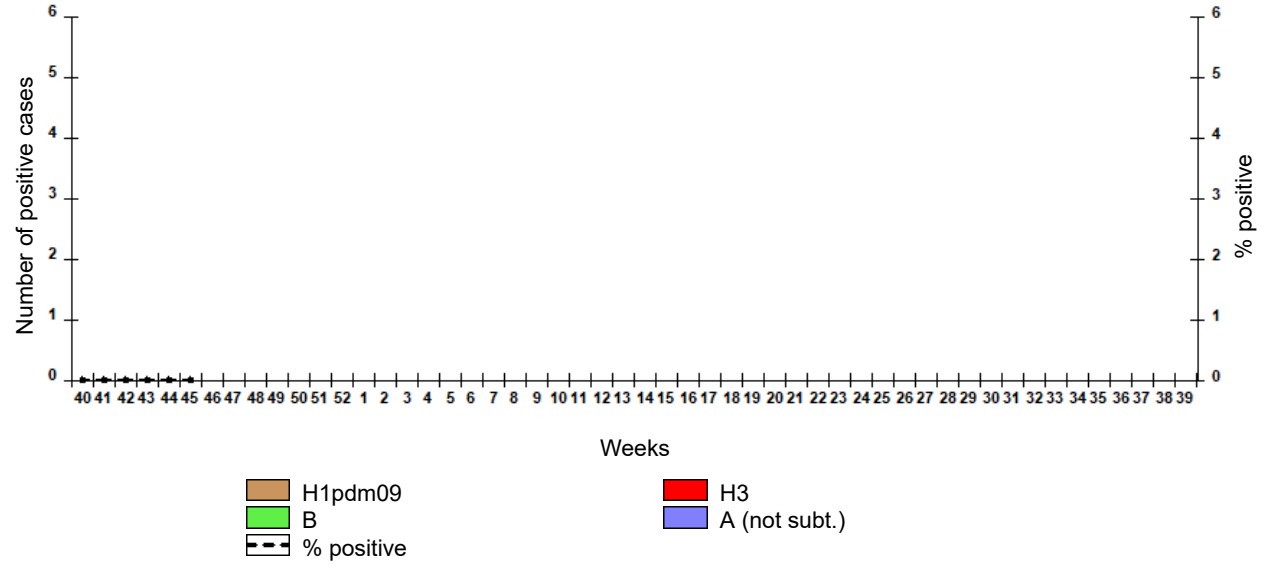

Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2022/23

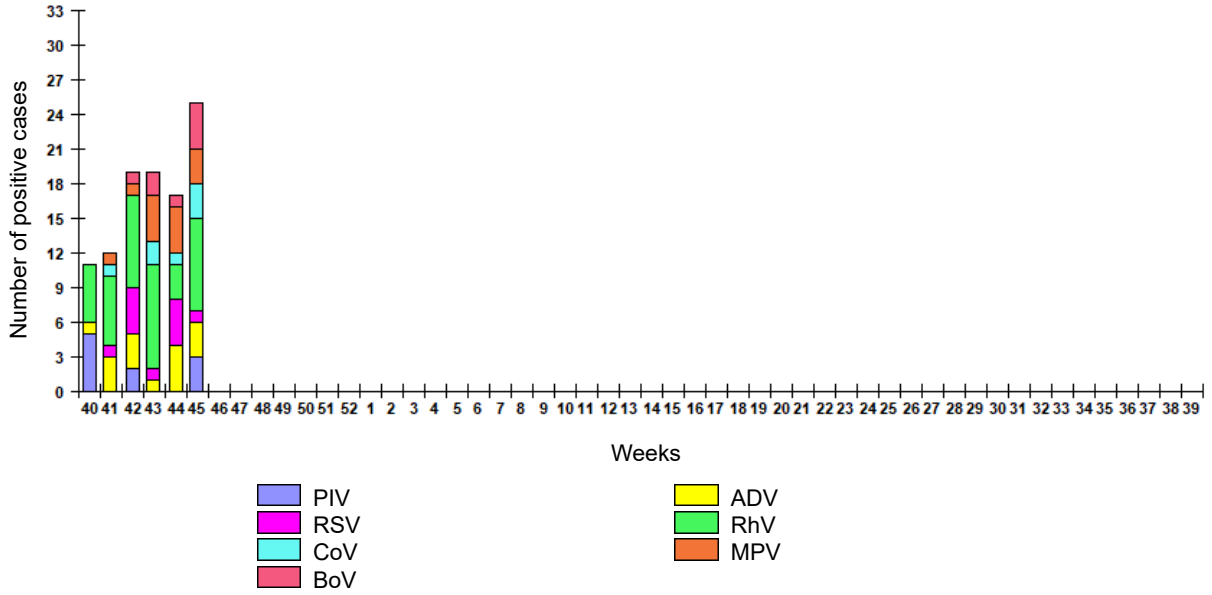

Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23