



NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

week 47 of 2022
(21.11.22 - 27.11.22)

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 ((96.3 per 10 000 of population) was higher than national baseline (70.0) by 37.6%.

Etiology of ILI & ARI. Among 5038 patients investigation 326 (6.5%) respiratory samples were positive for influenza, including 288 cases of influenza A(H1N1)pdm09 in 32 cities, 5 cases of influenza A(H3N2) in 4 cities and 22 cases of influenza B in 8 cities.

10 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Astrakhan (2), Moscow (4) and Saint-Petersburg (3). Since the beginning of the season, 13 viruses A(H1N1)pdm09 and 1 virus B have been isolated.

Antigenic characterization. Since the beginning of the season, 7 influenza A(H1N1)pdm09 have been antigenically characterized by the NICs, including: Moscow (6) and Saint-Petersburg (1). 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 20.6% (PCR).

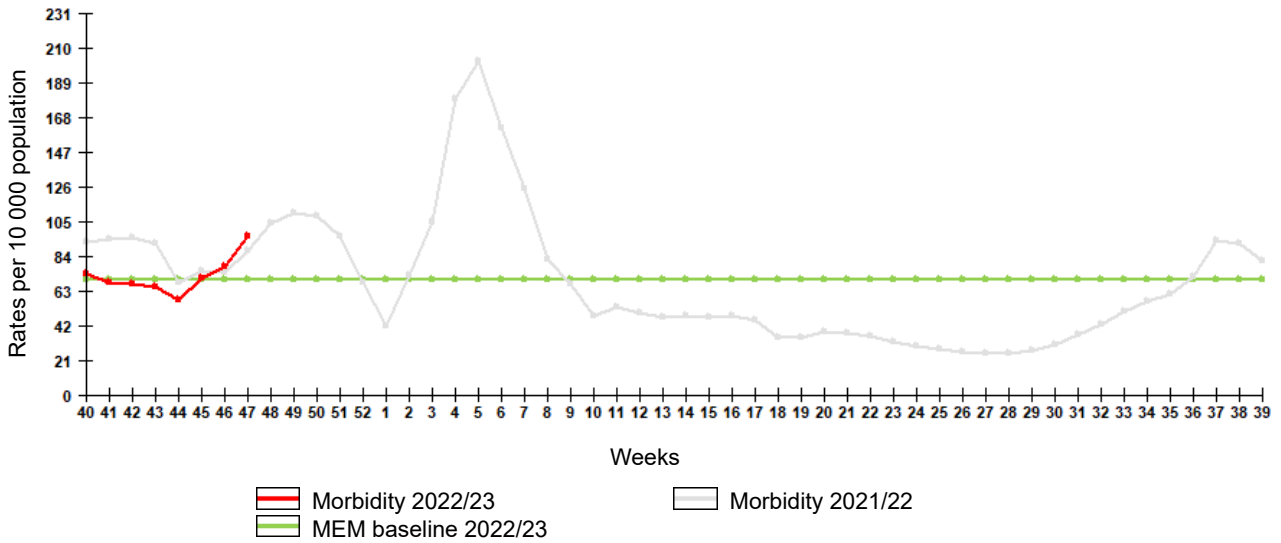
In sentinel surveillance system clinical samples from 83 SARI patients were investigated by rRT-PCR for influenza, among them 17 (20.5%) cases of influenza A(H1N1)pdm09. 73 SARI patients were investigated for ARVI by rRT-PCR, among them 16 (21.9%) cases of ARVI recognized including 1 case of PIV, 3 cases of ADV, 4 cases of RSV, 2 cases of RhV, 1 case of CoV, 3 cases of MPV and 2 cases of BoV infection. 1 (1.2%) of 83 SARI patients was positive for coronavirus SARS-CoV-2.

Clinical samples from 48 ILI/ARI patients were investigated for influenza by rRT-PCR, among them no positive cases recognized. Among 34 ILI/ARI samples 11 (32.4%) cases positive for ARVI detected including 1 case of PIV, 2 cases of ADV, 3 cases of RhV, 3 cases of CoV and 2 cases of MPV infection. 3 (7.7%) of 39 ILI/ARI patients were positive for coronavirus SARS-CoV-2.

COVID-19. Totally 21 597 613 cases and 392 060 deaths associated with COVID-19 were registered in Russia including 6 785 cases and 58 deaths in last 24 hours (on 12:00 of 01.12.2022). According to the data obtained by NIC in Saint-Petersburg totally 11 819 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 901 (7.6%) cases.

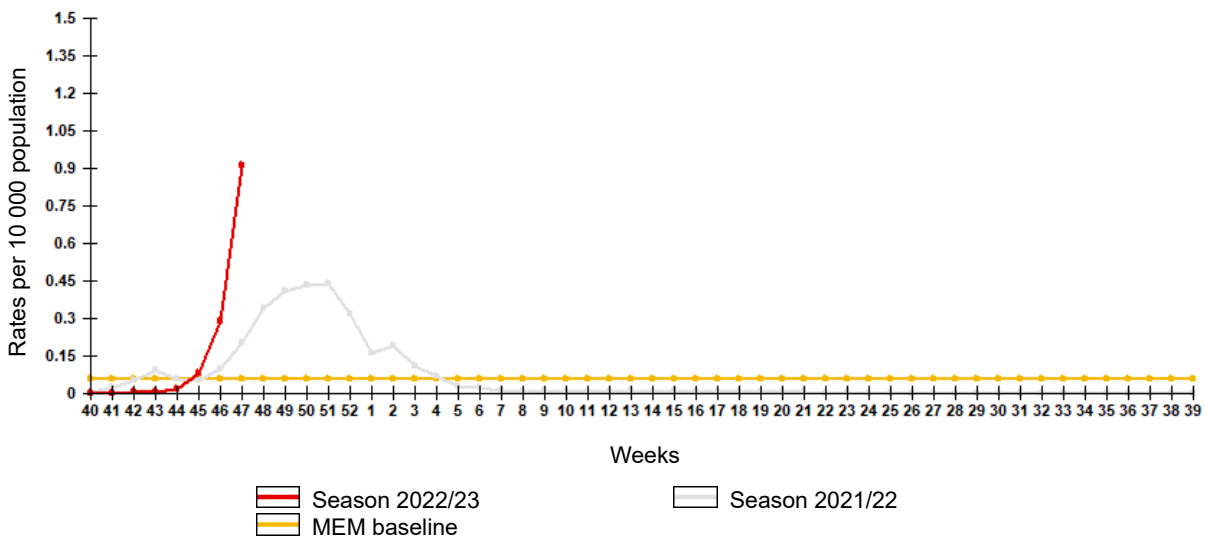
Influenza and ARI morbidity data

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



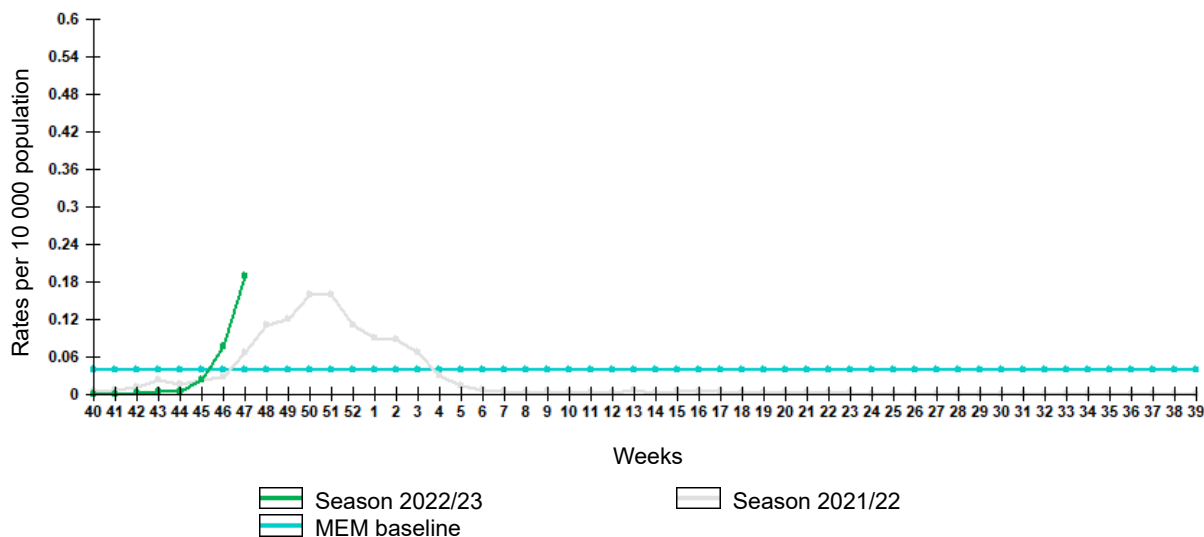
Epidemiological data showed increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (96.3 per 10 000 of population) was higher than national baseline (70.0) by 37.6%.

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 0.91 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 0.19 per 10 000 of population, it was higher than pre-epidemic MEM baseline (0.040).

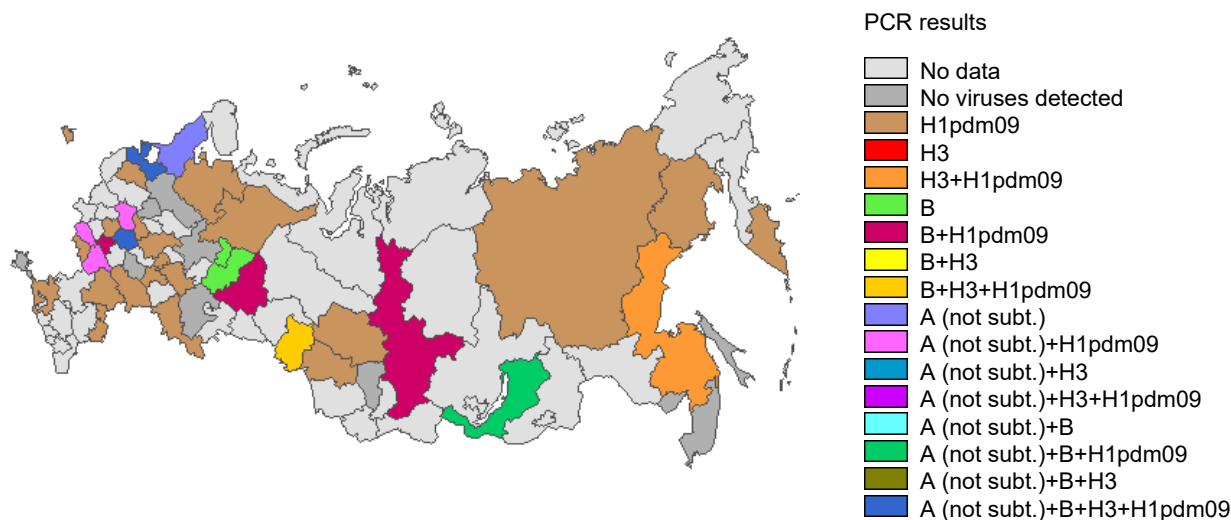
Influenza and ARVI laboratory testing results

Cumulative results of influenza laboratory diagnosis by rRT-PCR were submitted by 44 RBLs and two WHO NICs. According to these data as a result of 5038 patients investigation 326 (6.5%) respiratory samples were positive for influenza, including 288 cases of influenza A(H1N1)pdm09 in 32 cities, 5 cases of influenza A(H3N2) in 4 cities and 22 cases of influenza B in 8 cities.

10 influenza A(H1N1)pdm09 viruses were isolated on MDCK cell culture, including: in Astrakhan (2), Moscow (4) and Saint-Petersburg (3). Since the beginning of the season, 13 viruses A(H1N1)pdm09 and 1 virus B have been isolated.

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Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 47 of 2022



- PCR results
- No data
 - No viruses detected
 - H1pdm09
 - H3
 - H3+H1pdm09
 - B
 - B+H1pdm09
 - B+H3
 - B+H3+H1pdm09
 - A (not subt.)
 - A (not subt.)+H1pdm09
 - A (not subt.)+H3
 - A (not subt.)+H3+H1pdm09
 - A (not subt.)+B
 - A (not subt.)+B+H1pdm09
 - A (not subt.)+B+H3
 - A (not subt.)+B+H3+H1pdm09

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

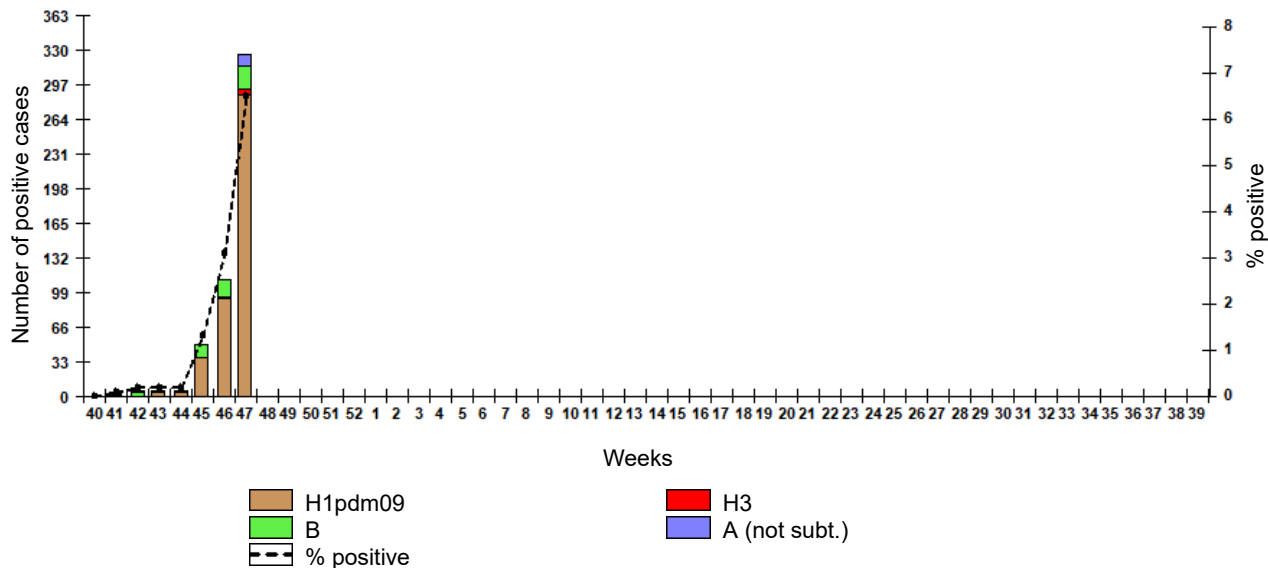
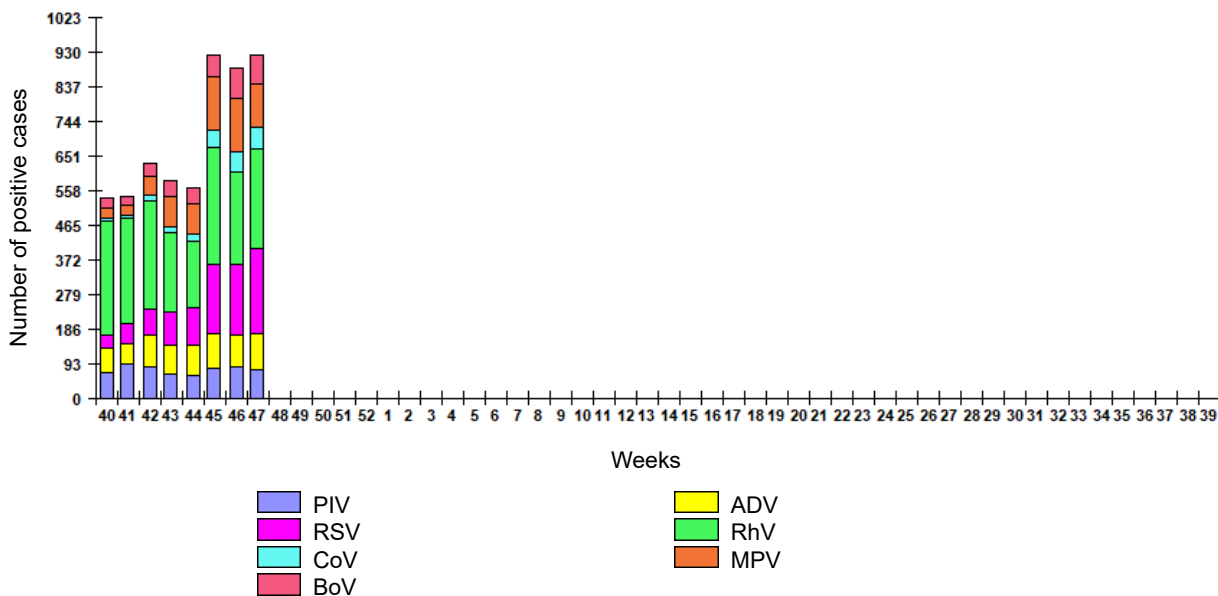


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2022/23



ARVI detections. The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **20.6%** of investigated samples by PCR.

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

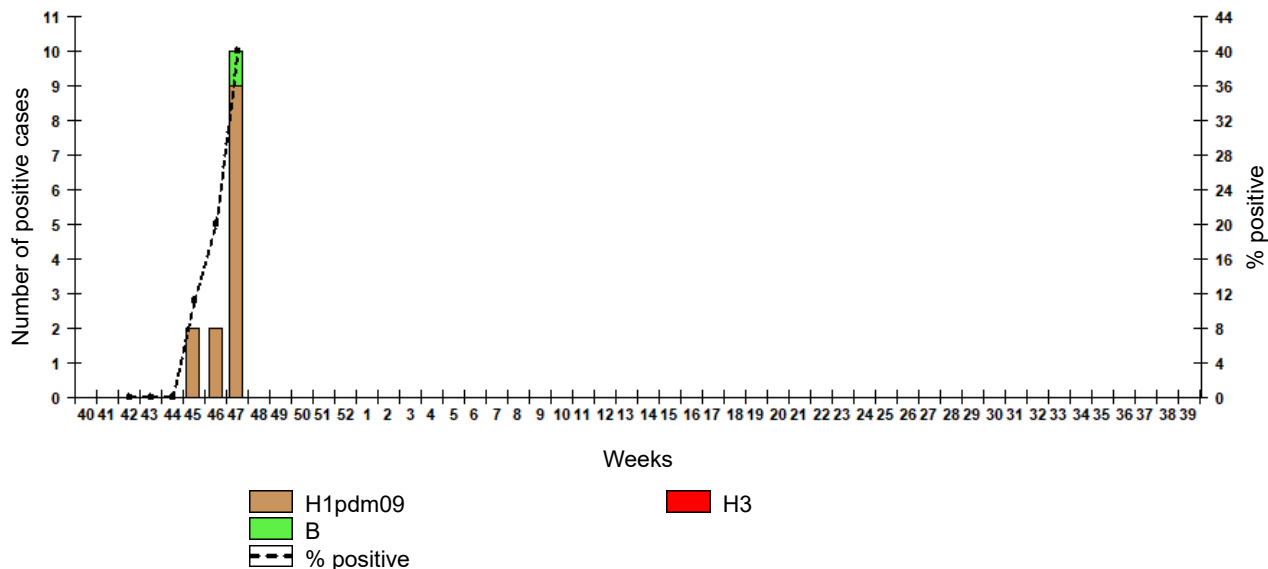


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 47 of 2022

	Number of specimens / number of positive cases	% positive
<u>Influenza</u>		
Number of specimens tested for influenza	5038	-
Influenza A (not subt.)	11	0,2%
Influenza A(H1)pdm09	288	5,7%
Influenza A(H3)	5	0,10%
Influenza B	22	0,4%
All influenza	326	6,5%
<u>Other ARVI</u>		
Number of specimens tested for ARVI	4479	-
PIV	76	1,7%
ADV	96	2,1%
RSV	229	5,1%
RhV	268	6,0%
CoV	59	1,3%
MPV	116	2,6%
BoV	77	1,7%
All ARVI	921	20,6%
<u>SARS-CoV-2 (COVID-19)</u>		
Number of specimens tested for SARS-CoV-2	11819	-
SARS-CoV-2	901	7,6%

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



COVID-19. Totally 21 597 613 cases and 392 060 deaths associated with COVID-19 were registered in Russia including 6 785 cases and 58 deaths in last 24 hours (on 12:00 of 01.12.2022). According to the data obtained by NIC in Saint-Petersburg totally 11 819 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 901 (7.6%) cases.

Table 2. Results of influenza viruses isolation in Russia, week 47 of 2022

	Number of specimens / number of viruses	% isolated viruses
Number of specimens	25	-
Influenza A(H1)pdm09	9	36,0%
Influenza A(H3)	0	0,0%
Influenza B	1	4,0%
All influenza	10	40,0%

Sentinel influenza surveillance

Clinical samples from 83 SARI patients were investigated by rRT-PCR for influenza, among them 17 (20.5%) cases of influenza A(H1N1)pdm09. 73 SARI patients were investigated for ARVI by rRT-PCR, among them 16 (21.9%) cases of ARVI recognized including 1 case of PIV, 3 cases of ADV, 4 cases of RSV, 2 cases of RhV, 1 case of CoV, 3 cases of MPV and 2 cases of BoV infection. 1 (1.2%) of 83 SARI patients was 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

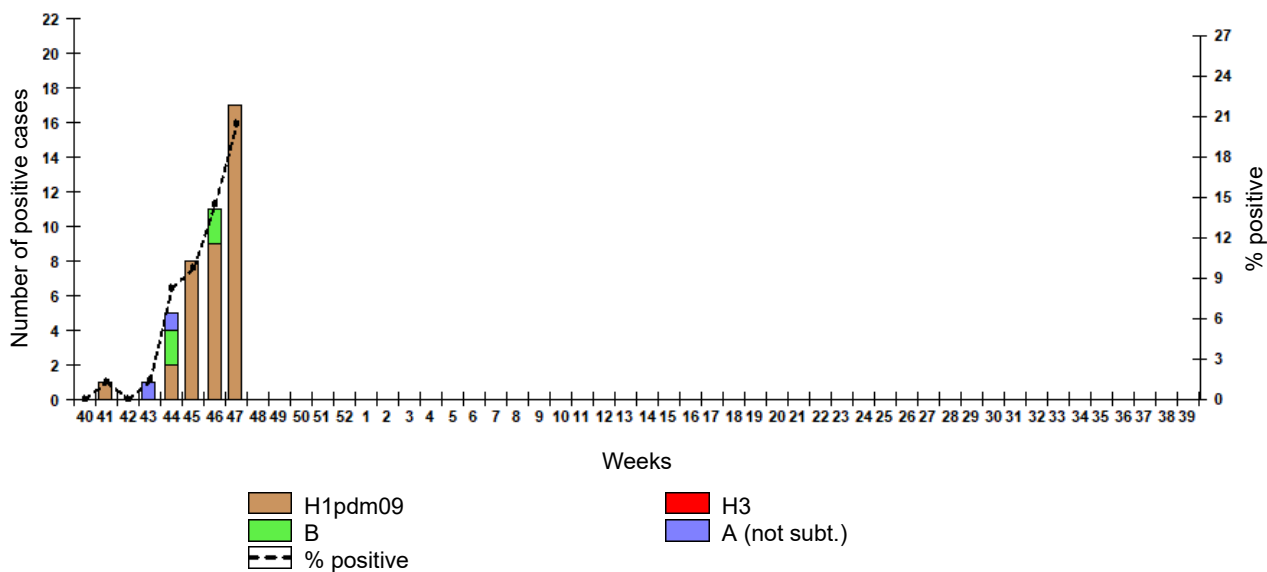


Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

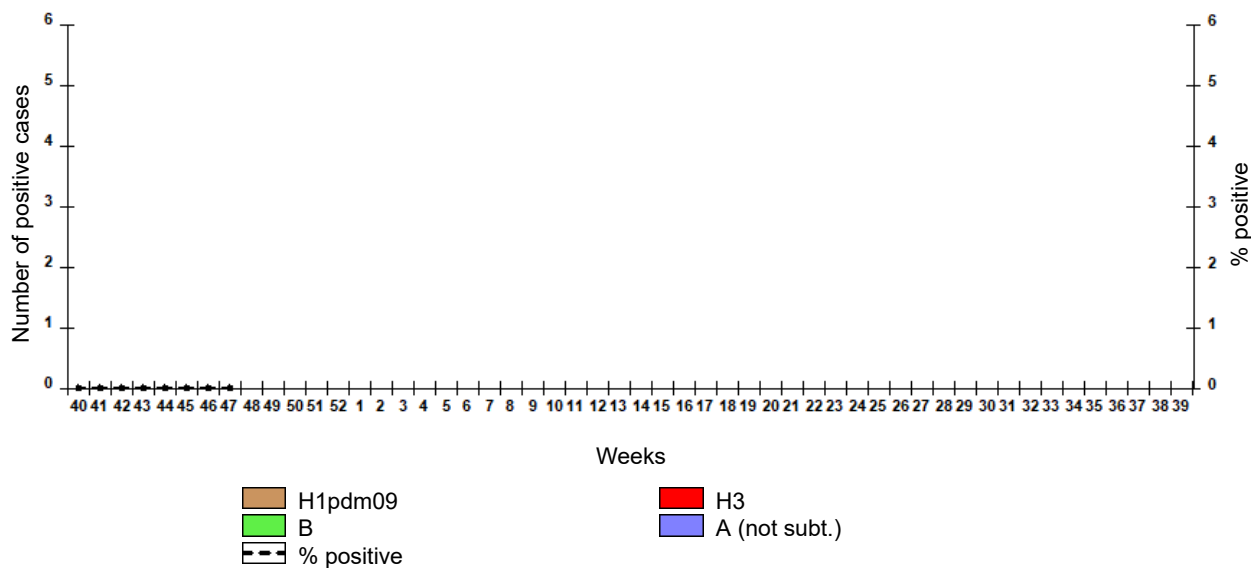


Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2022/23

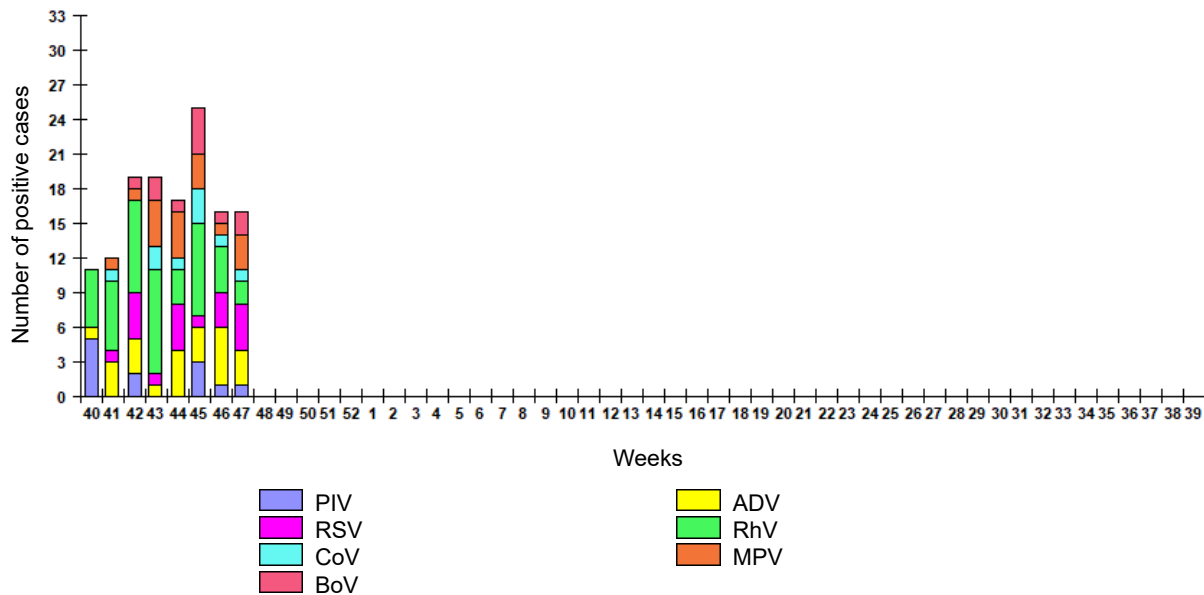


Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2022/23

