Smorodintsev Research Institute of Influenza

NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

week 16 of 2025 (14.04.25 - 20.04.25)

Summary

Influenza and ARI incidence data. Influenza and other ARI activity in Russia decreased in comparison with previous week. The nationwide ILI and ARI morbidity level (57.8 per 10 000 of population) was lower than national baseline (89.9) by 35.7%.

Etiology of ILI & ARI. Among 9993 patients investigation 1390 (**13.9%**) respiratory samples were positive for influenza, including 218 cases of unsubtyped influenza A in 6 cities, 276 cases of influenza A(H1N1)pdm09 in 32 cities, 44 cases of influenza A(H3N2) in 14 cities and 852 cases of influenza B in 40 cities.

59 influenza viruses were isolated on MDCK cell culture, including 18 cases of influenza A(H1N1)pdm09 in Vladivostok (1), Yekaterinburg (4), Novosibirsk (2), Saint-Petersburg (10), Ulan-Ude (1); 3 cases of influenza A(H3N2) in Yekaterinburg (2), Moscow (1) and 38 cases of influenza B in Vladivostok (5), Yekaterinburg (4), Novosibirsk (6), Saint-Petersburg (21), Ulan-Ude (2). Since the beginning of the season 860 influenza viruses, including: 407 A(H1N1)pdm09 viruses, 32 - A(H3N2) and 421 influenza B viruses.

Antigenic characterization. Since the beginning of the season 352 influenza have been antigenically characterized by the NICs, including: 218 influenza A(H1N1)pdm09, 8 influenza A(H3N2) and 126 influenza B viruses. 216 A(H1N1)pdm09 viruses were similar to the reference strain A/Victoria/4897/22 recommended in the vaccines for the Northern Hemisphere countries for the 2024-2025 season, 2 A(H1N1)pdm09 strain reacted to a 1:8 homologous titer with serum to the vaccine strain. 7 A(H3N2) strain was similar to the vaccine strain A/Thailand/8/22, one interacted to 1:8 homologous titer with serum to the A/Thailand/8/22 vaccine strain. 124 influenza B viruses were similar to the vaccine strain B/Austria/1359417/2021, 2 strains were drift variants and reacted to 1:8 homologous titer with serum to the vaccine strain.

Genetic analysis. Sequencing of 386 influenza A(H1N1)pdm09 viruses of the season 2024-2025 showed that all of them fell within clade 6B.1A.5a.2a, subclade C.1.9. 12 influenza A(H3N2) viruses belonged to clade 3c.2a1b.2a.2a.3a.1 (vaccine virus A/Thailand/8/2022-like), subclade J.2. 63 influenza B strains belonged to Victoria lineage, subclade V1A.3a.2 (B/Austria/1359417/2021-like). By genotypic testing all 461 influenza A and B viruses were susceptible to oseltamivir and zanamivir.

Susceptibility to antivirals. Since the beginning of the season 2024-2025, the sensitivity of 292 influenza viruses to neuraminidase inhibitors (oseltamivir, zanamivir) was studied in NIC Saint-Petersburg, including: 171 A(H1N1)pdm09 influenza viruses, 9 A(H3N2) influenza viruses and 112 influenza B viruses. All studied viruses were sensitive to neuraminidase inhibitors.

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 **13.9%** (PCR).

In sentinel surveillance system clinical samples from 19 SARI patients were investigated by rRT-PCR for influenza, among them 1 (**5.3%**) case of influenza B was recognized. Among 19 SARI patients no positive cases of coronavirus SARS-CoV-2 recognized. Among 19 SARI samples 1 (**5.3%**) case of RSV was detected.

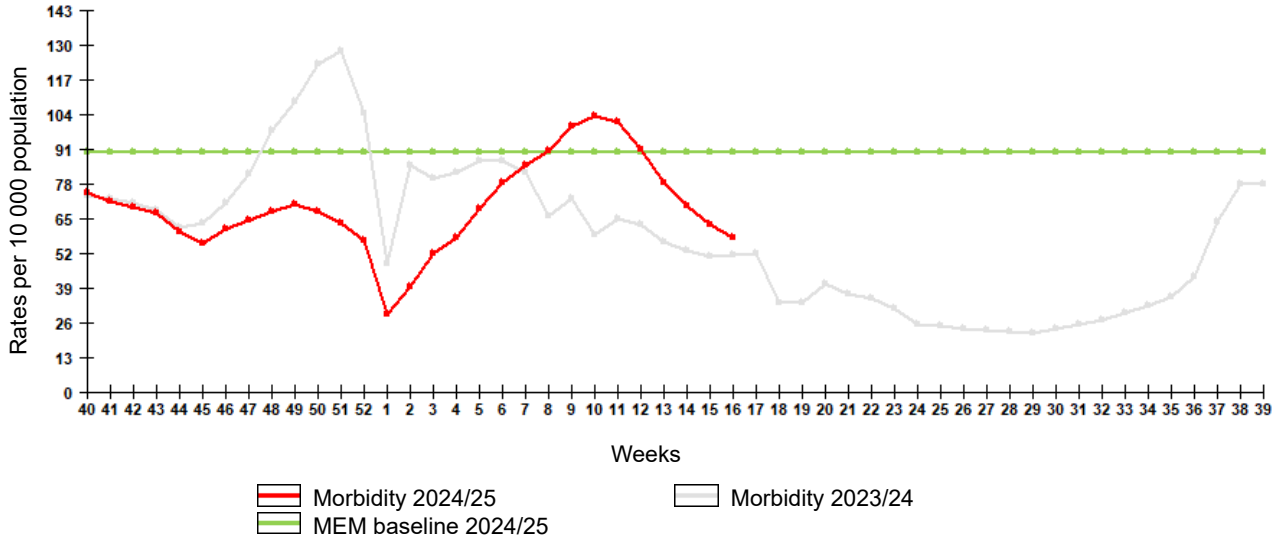
Clinical samples from 20 ILI/ARI patients no positive cases of influenza were recognized. Among 18 ILI/ARI samples 2 (**11.1%**) cases of RhV were detected. Among 18 ILI/ARI patients no positive cases of coronavirus SARS-CoV-2 recognized.

COVID-19. The Federal Operational Headquarters for Combating the Novel Coronavirus Infection has discontinued the publication of weekly COVID-19 morbidity reports starting from epidemiological week 12. This decision is due to the stabilization of the epidemiological situation regarding COVID-19 and the transition of the virus to the category of seasonal respiratory infections.

According to the data obtained by NIC in Saint-Petersburg totally 12018 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 31 (**0.3%**) cases.

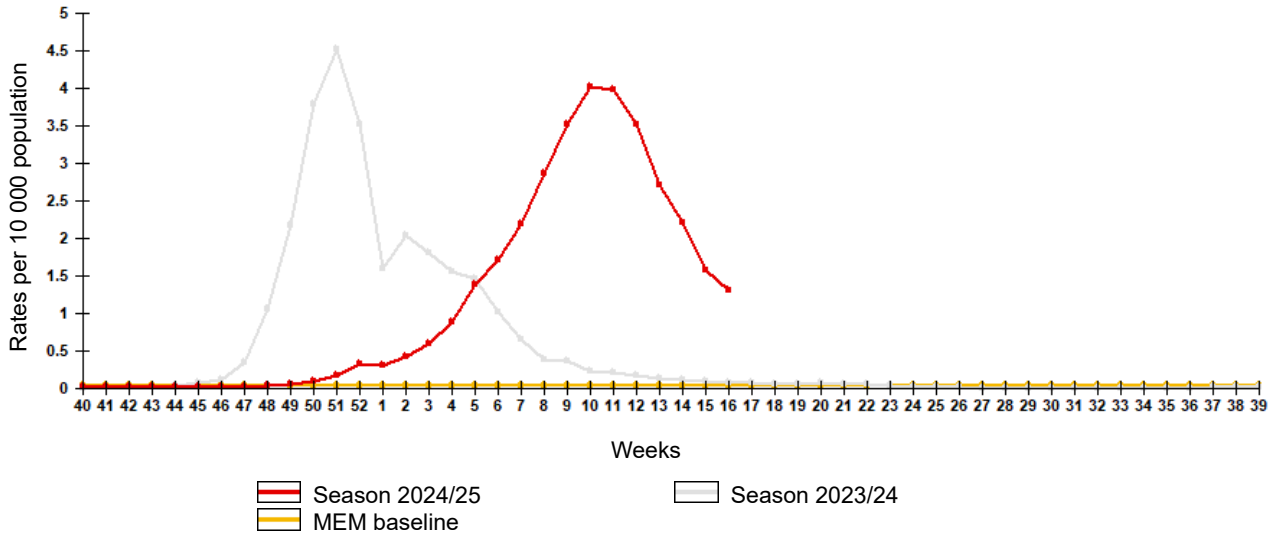
Influenza and ARI morbidity data

Fig. 1. Influenza and ARVI morbidity in 61 cities under surveillance in Russia, seasons 2023/24 and 2024/25



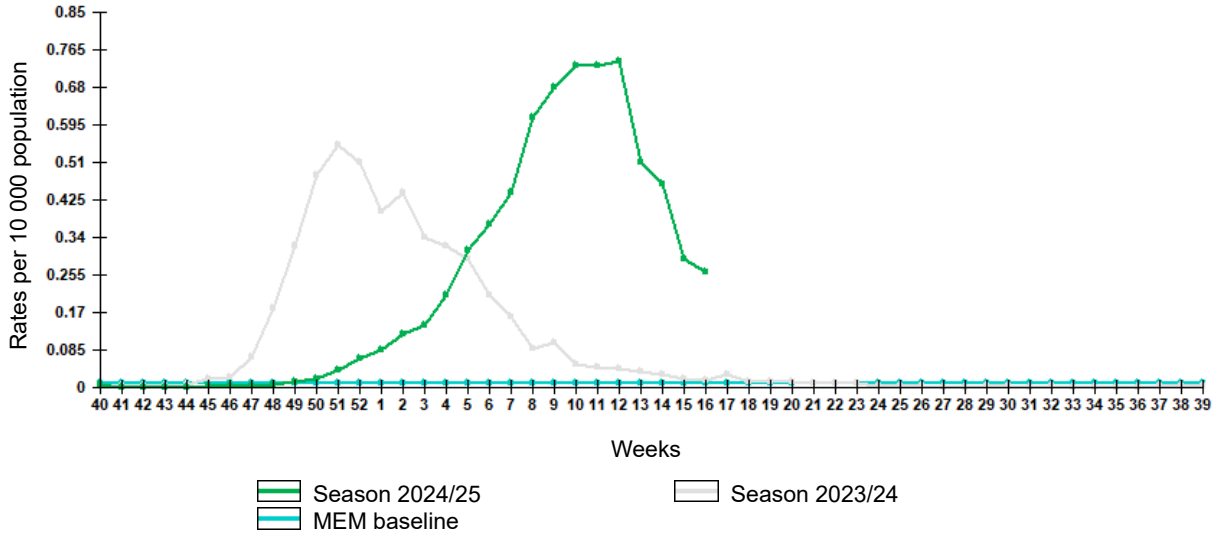
Epidemiological data showed decrease of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (57.8 per 10 000 of population) was lower than national baseline (89.9) by 35.7%.

Fig. 2. Comparative data on incidence rate of clinically diagnosed influenza, seasons 2023/24 and 2024/25



Incidence rate of clinically diagnosed influenza decreased comparing to previous week and amounted to 1.31 per 10 000 of population, it was higher than pre-epidemic MEM baseline (0.040).

Fig. 3. Comparison of hospitalization rate with clinical diagnosis of influenza, seasons 2023/24 and 2024/25



Hospitalization rate of clinically diagnosed influenza decreased comparing to previous week and amounted to 0.26 per 10 000 of population, it was higher than pre-epidemic MEM baseline (0.010).

Influenza and ARVI laboratory testing results

Cumulative results of influenza laboratory diagnosis by rRT-PCR were submitted by 46 RBLs and two WHO NICs. According to these data as a result of 9993 patients investigation 1390 (**13.9%**) respiratory samples were positive for influenza, including 218 cases of unsubtyped influenza A in 6 cities, 276 cases of influenza A(H1N1)pdm09 in 32 cities, 44 cases of influenza A(H3N2) in 14 cities and 852 cases of influenza B in 40 cities.

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Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 16 of 2025

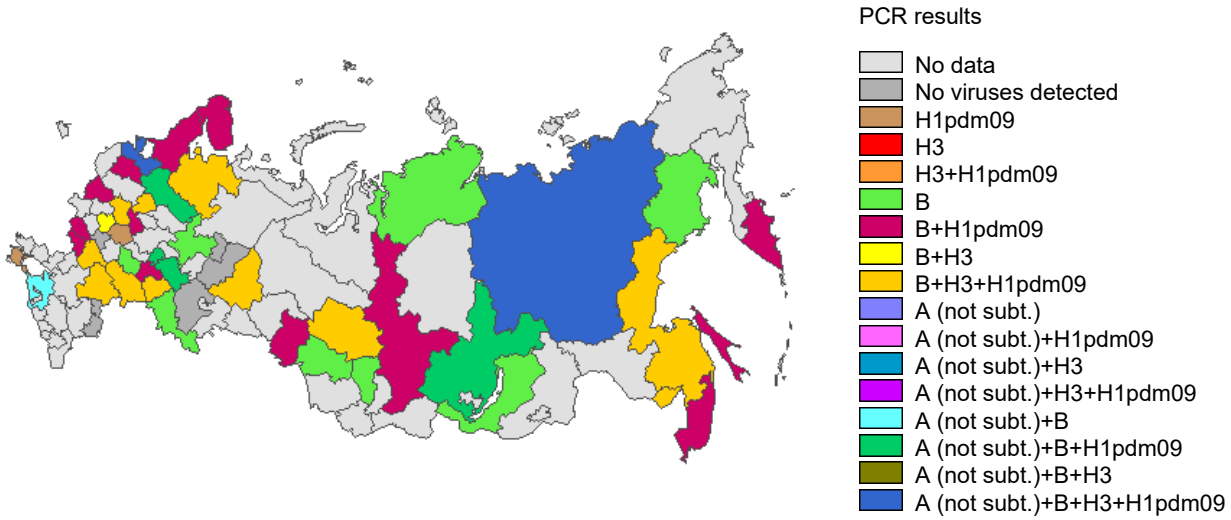


Fig. 5. Monitoring of influenza viruses detection by RT-PCR in Russia, season 2024/25

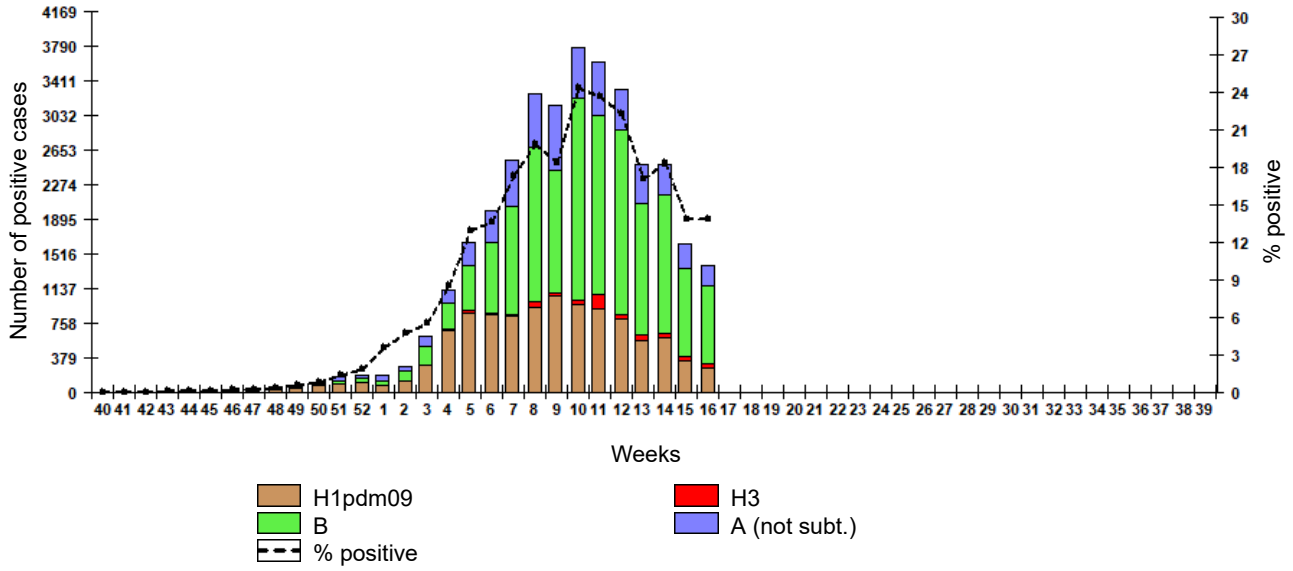
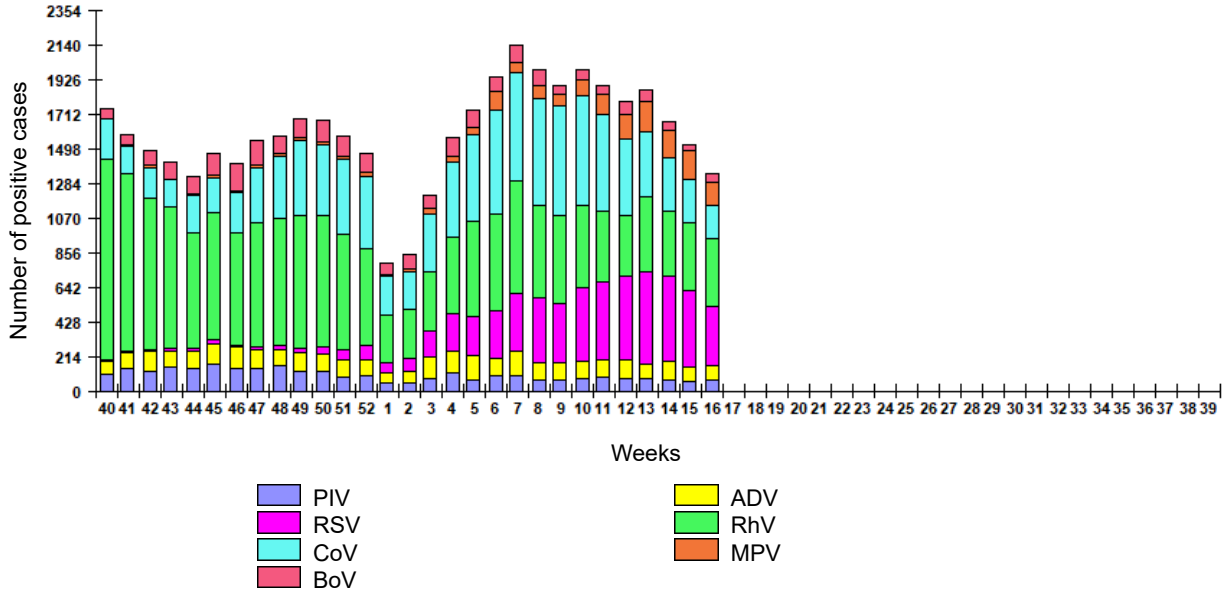


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2024/25



ARVI detections. The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **13.9%** of investigated samples by PCR.

Fig. 7. Monitoring of influenza viruses isolation in Russia, season 2024/25

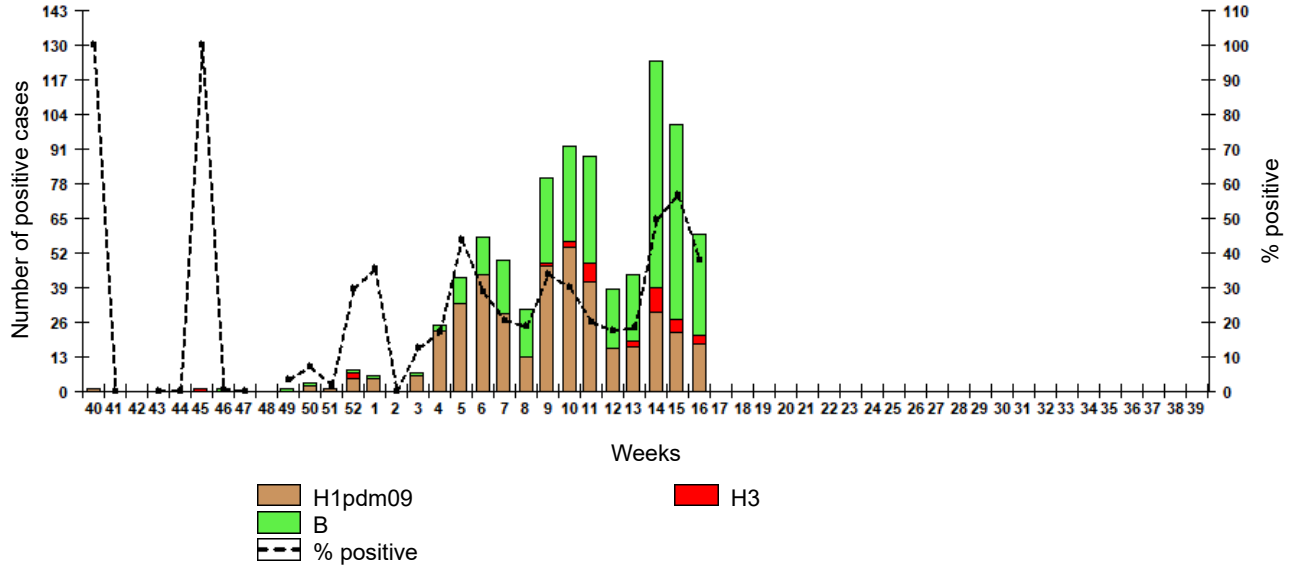
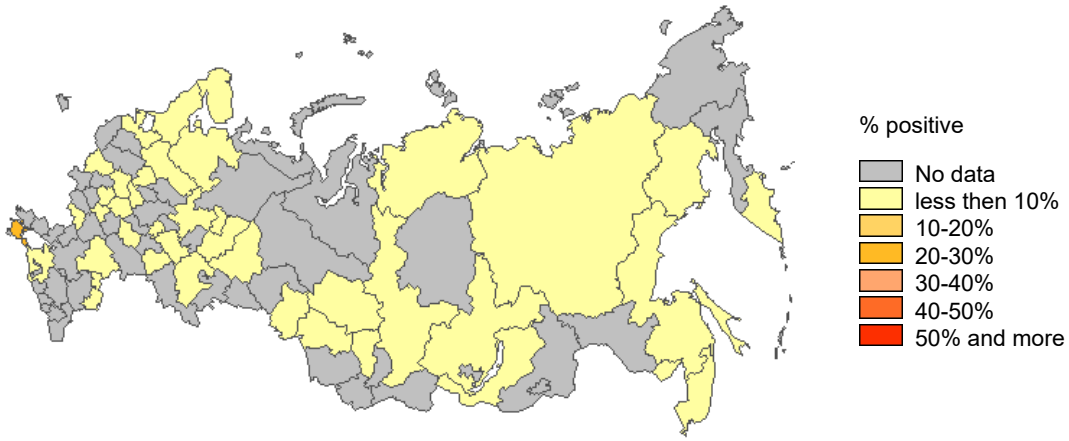


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 16 of 2025

	Number of specimens / number of positive cases	**% positive**
Influenza		
Number of specimens tested for influenza	*9993*	-
Influenza A (not subt.)	*218*	*2,2%*
Influenza A(H1)pdm09	*276*	*2,8%*
Influenza A(H3)	*44*	*0,4%*
Influenza B	*852*	*8,5%*
All influenza	*1390*	*13,9%*
Other ARVI		
Number of specimens tested for ARVI	*9716*	-
PIV	*71*	*0,7%*
ADV	*91*	*0,9%*
RSV	*370*	*3,8%*
RhV	*417*	*4,3%*
CoV	*206*	*2,1%*
MPV	*142*	*1,5%*
BoV	*51*	*0,5%*
All ARVI	*1348*	*13,9%*
SARS-CoV-2 (COVID-19)		
Number of specimens tested for SARS-CoV-2	*12018*	-
SARS-CoV-2	*31*	*0,3%*

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



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According to the data obtained by NIC in Saint-Petersburg totally 12018 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 31 (**0.3%**) cases.

Table 2. Results of influenza viruses isolation in Russia, week 16 of 2025

	Number of specimens / number of viruses	**% isolated viruses**
Number of specimens	*156*	-
Influenza A(H1)pdm09	*18*	*11,5%*
Influenza A(H3)	*3*	*1,9%*
Influenza B	*38*	*24,4%*
All influenza	*59*	*37,8%*

Sentinel influenza surveillance

Clinical samples from 19 SARI patients were investigated by rRT-PCR for influenza, among them 1 (**5.3%**) case of influenza B was recognized. Among 19 SARI patients no positive cases of coronavirus SARS-CoV-2 recognized. Among 19 SARI samples 1 (**5.3%**) case of RSV was detected.

Among 20 ILI/ARI patients no positive cases of influenza were recognized. Among 18 ILI/ARI samples 2 (**11.1%**) cases of RhV were detected. Among 18 ILI/ARI patients no positive cases of coronavirus SARS-CoV-2 recognized.

Fig. 9. Monitoring of influenza viruses detection by RT-PCR among SARI patients in sentinel hospitals, season 2024/25

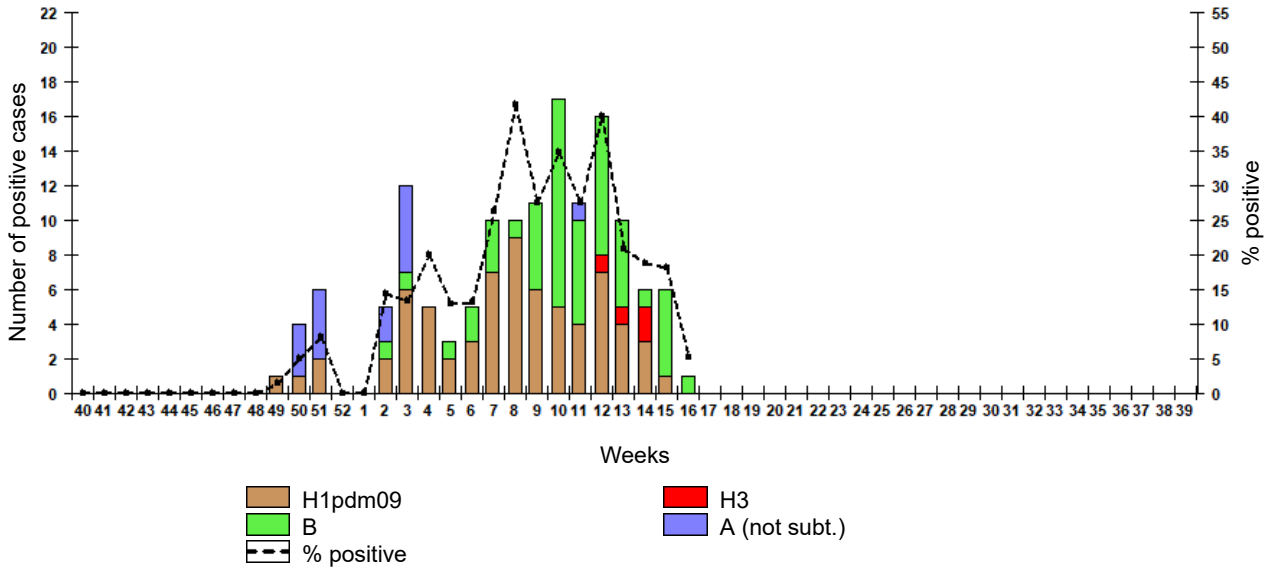

Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2024/25

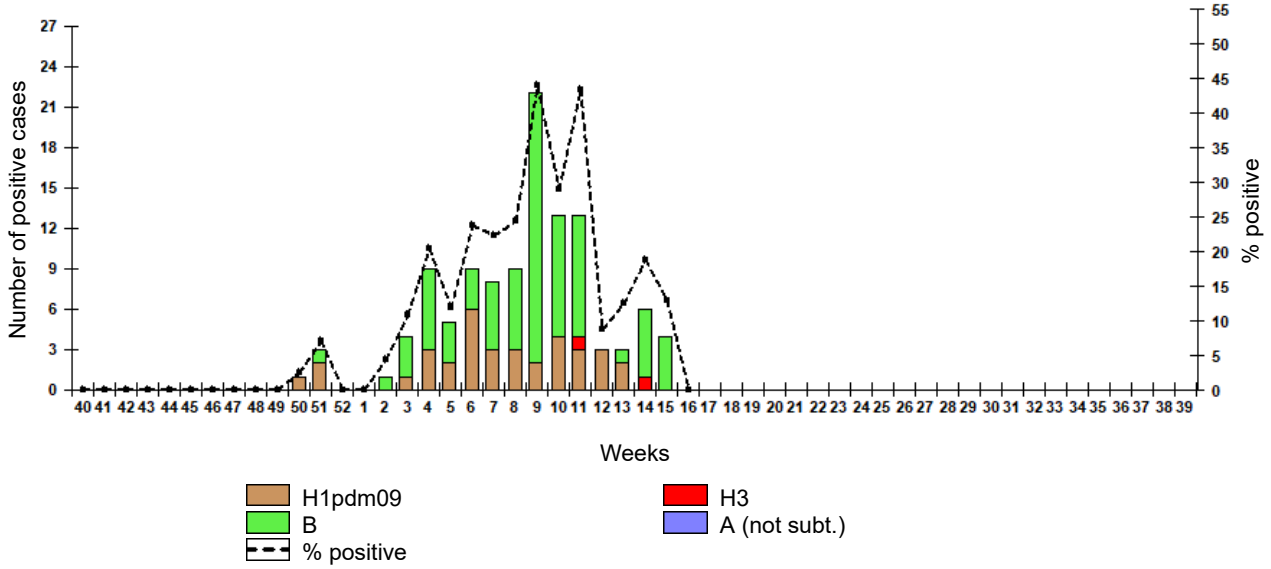

Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2024/25

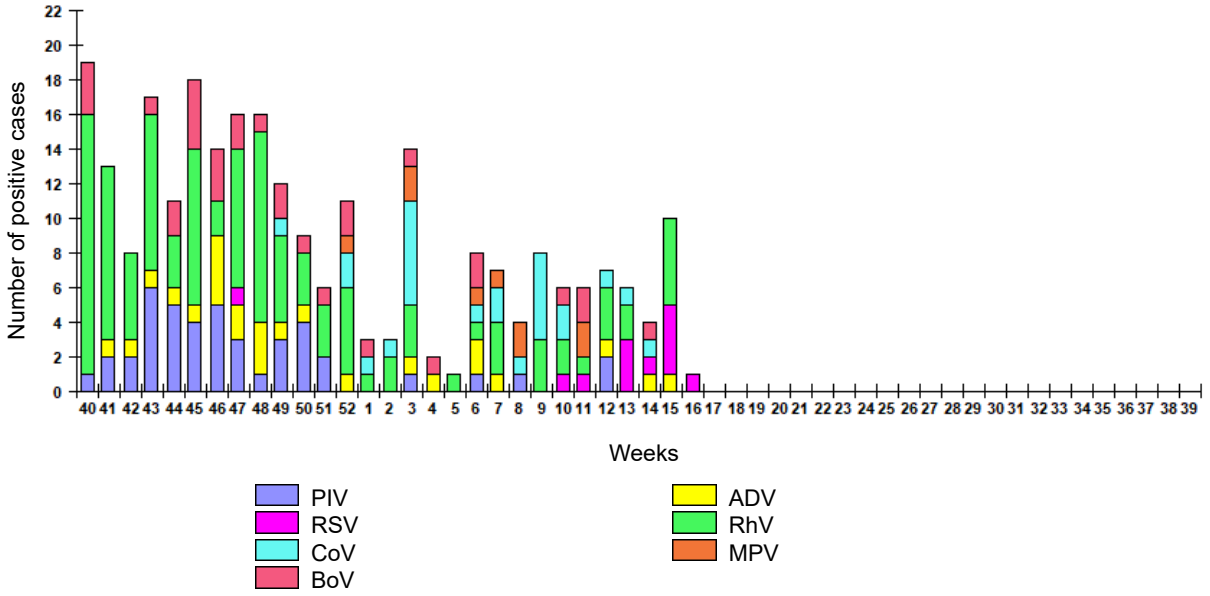

Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2024/25