NATIONAL WEEKLY INFLUENZA BULLETIN OF THE RUSSIAN FEDERATION

week 45 of 2021
(08.11.21 - 14.11.21)

Summary

Influenza and ARI incidence data. Influenza and other ARI activity increased in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (75.6 per 10 000 of population) was higher than national baseline (70.0) by 8.0%.

Etiology of ILI & ARI. Among 2797 investigated patients 65 (**2.3%**) respiratory samples positive for influenza A(H3N2) detected in 19 cities.

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 **13.6%** (PCR).

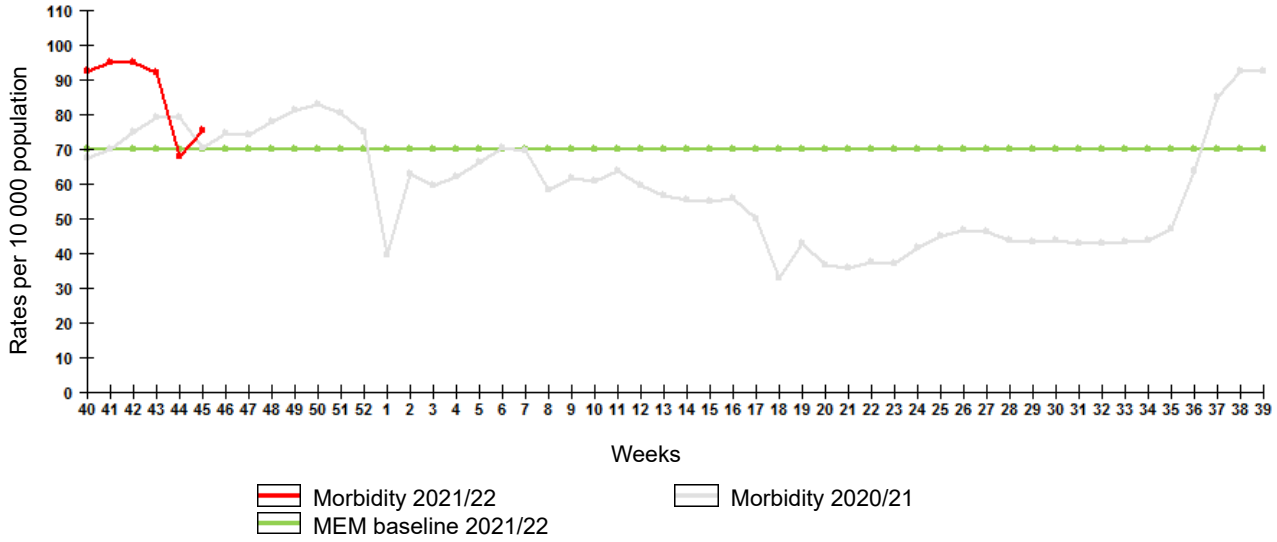
In sentinel surveillance system clinical samples from 55 SARI patients were investigated by rRT-PCR, among them 2 (**3.6%**) cases of influenza A(H3N2) recognized. Among clinical samples from 37 ILI/ARI patients one (**2.7%**) influenza A(H3N2) case detected. Among 45 SARI patients 7 (**15.6%**) cases were positive for ARVI, including one case of PIV, 4 cases of RSV, one case of CoV and one case of BoV infection. Among 32 ILI/ARI patients 5 (**15.6%**) cases were positive for ARVI, including one case of RSV, 2 cases of RhV, one case of CoV and one case of MpV infection. 16 (**32.0%**) of 50 SARI patients were positive for coronavirus SARS-CoV-2. Among 151 ILI/ARI patients 22 (**14.6%**) cases positive for coronavirus SARS-CoV-2 recognized.

Antigenic characterization. Antigenic analysis of 6 influenza (H3N2) viruses in the NIC (Moscow) showed that three of them were antigenically related to vaccine strain A/Cambodia/e0826360/20 (H3N2), however three strains isolated in Moscow and Yaroslavl were poorly recognized (1/16 of the titer) by rat antiserum to vaccine strain.

COVID-2019. Totally 9 219 912 cases and 260 335 deaths associated with COVID-2019 were registered in Russia including 37 374 cases and 1251 deaths in last 24 hours (on 12:00 of 18.11.2021). According to the data obtained by NIC in Saint-Petersburg totally 17898 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 4909 (**27.4%**) cases.

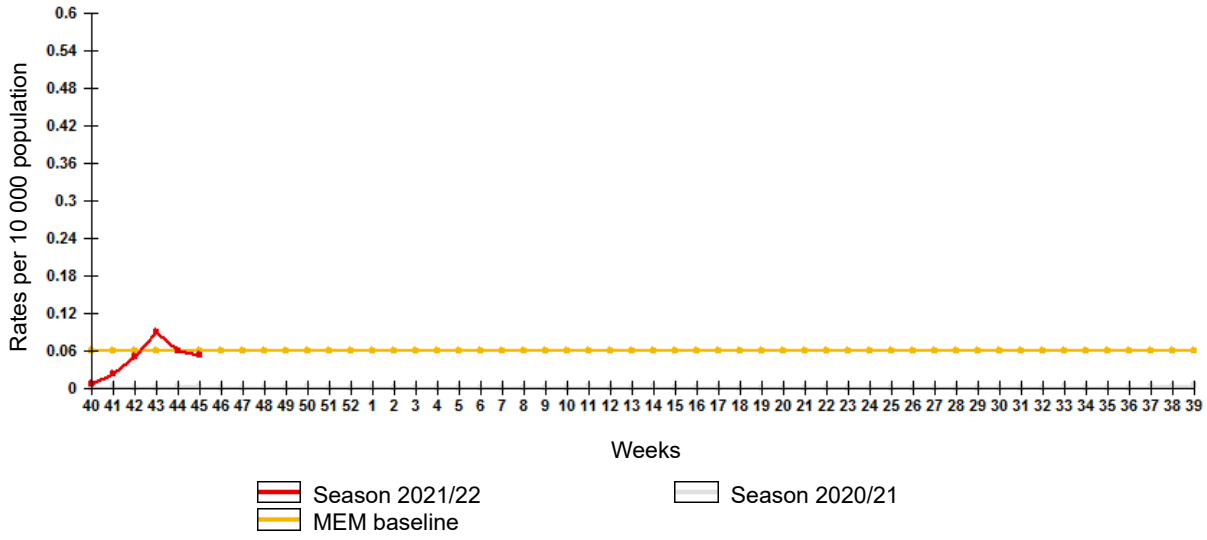
Influenza and ARI morbidity data

Fig. 1. Influenza and ARVI morbidity in 61 cities under surveillance in Russia, seasons 2020/21 and 2021/22



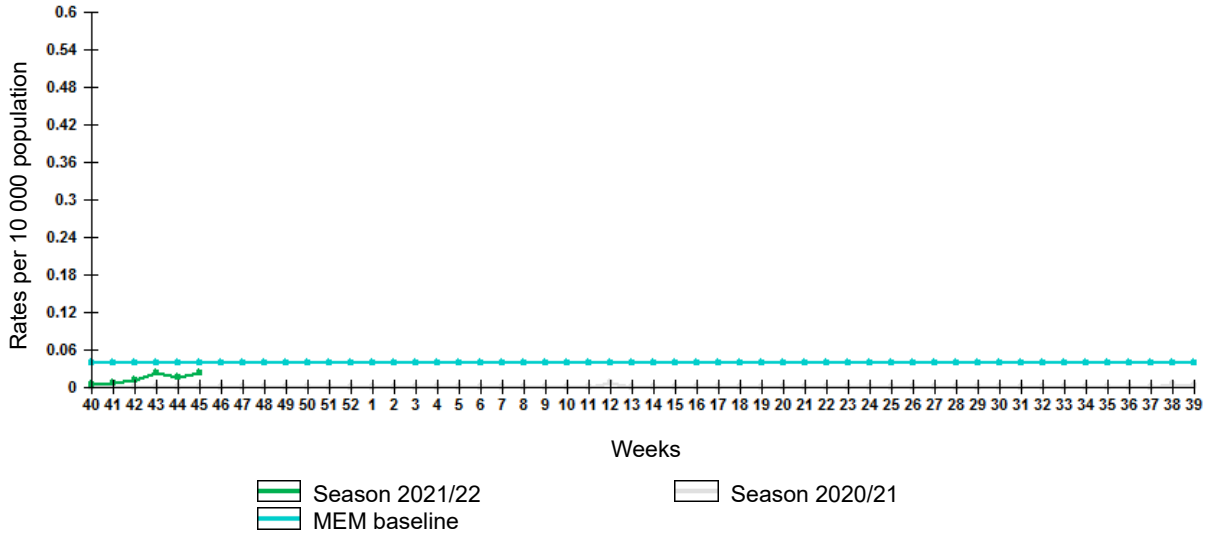
Epidemiological data showed increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI and ARI morbidity level (75.6 per 10 000 of population) was higher than national baseline (70.0) by 8.0%.

Fig. 2. Comparative data on incidence rate of clinically diagnosed influenza, seasons 2020/21 and 2021/22



Incidence rate of clinically diagnosed influenza decreased comparing to previous week and amounted to 0.053 per 10 000 of population, it was 11.7% lower than pre-epidemic MEM baseline (0.060).

Fig. 3. Comparison of hospitalization rate with clinical diagnosis of influenza, seasons 2020/21 and 2021/22



Hospitalization rate of clinically diagnosed influenza increased comparing to previous week and amounted to 0.023 per 10 000 of population, it was 1.7 times 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 2797 patients investigation 65 (**2.3%**) respiratory samples positive for influenza A(H3N2) were detected in 19 cities.

Antigenic characterization. Antigenic analysis of 6 influenza (H3N2) viruses in the NIC (Moscow) showed that three of them were antigenically related to vaccine strain A/Cambodia/e0826360/20 (H3N2), however three strains isolated in Moscow and Yaroslavl were poorly recognized (1/16 of the titer) by rat antiserum to vaccine strain.

Fig. 4. Geographic distribution of RT-PCR detected influenza viruses in cities under surveillance in Russia, week 45 of 2021

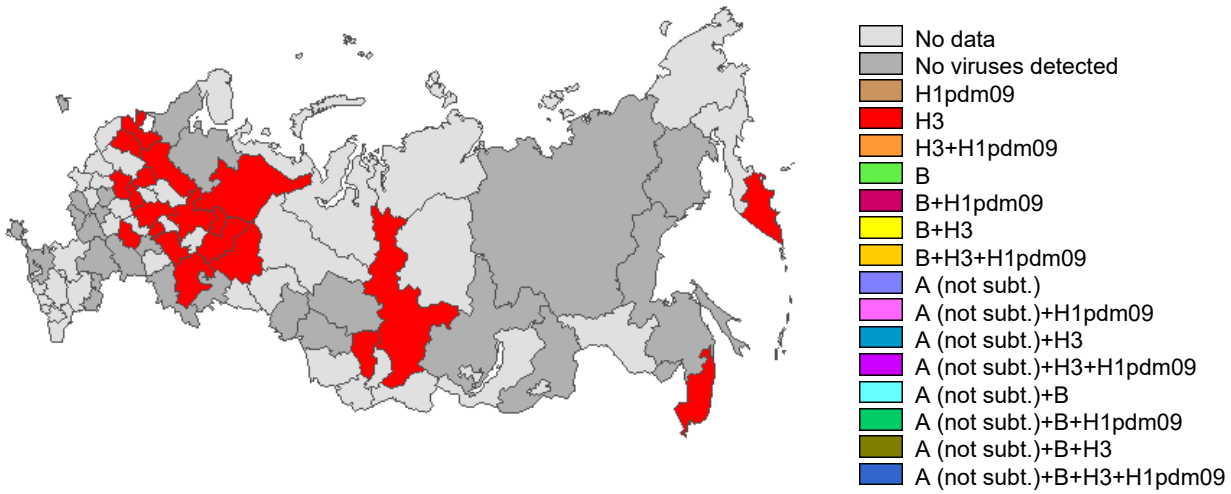


Fig. 5. Monitoring of influenza viruses detection by RT-PCR in Russia, season 2021/22

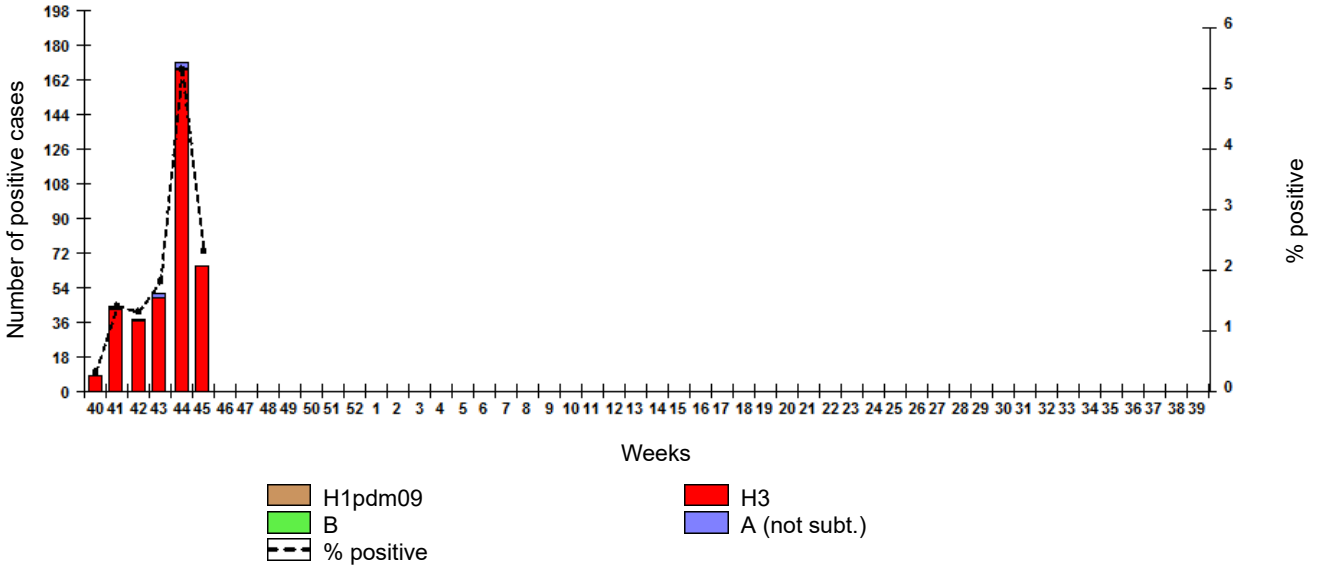
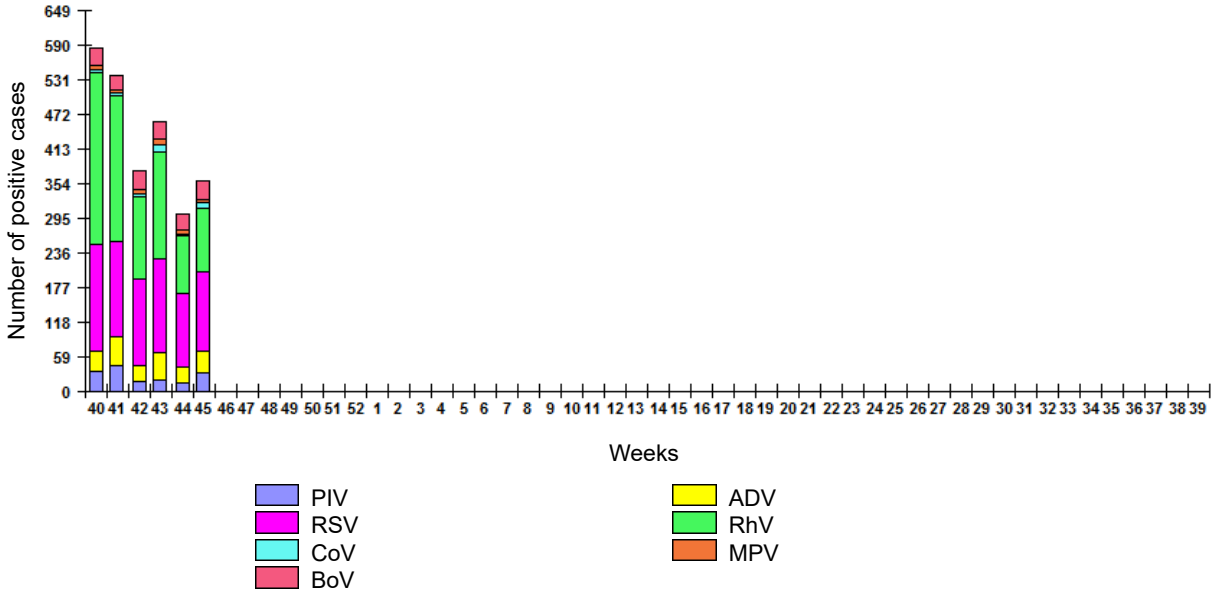


Fig. 6. Monitoring of ARVI detection by RT-PCR in Russia, season 2021/22



ARVI detections. The overall proportion of respiratory samples tested positive for other ARVI (PIV, ADV, RSV, RhV, CoV, MPV, BoV) estimated as **13.6%** of investigated samples by PCR.

Fig. 7. Monitoring of influenza viruses isolation in Russia, season 2021/22

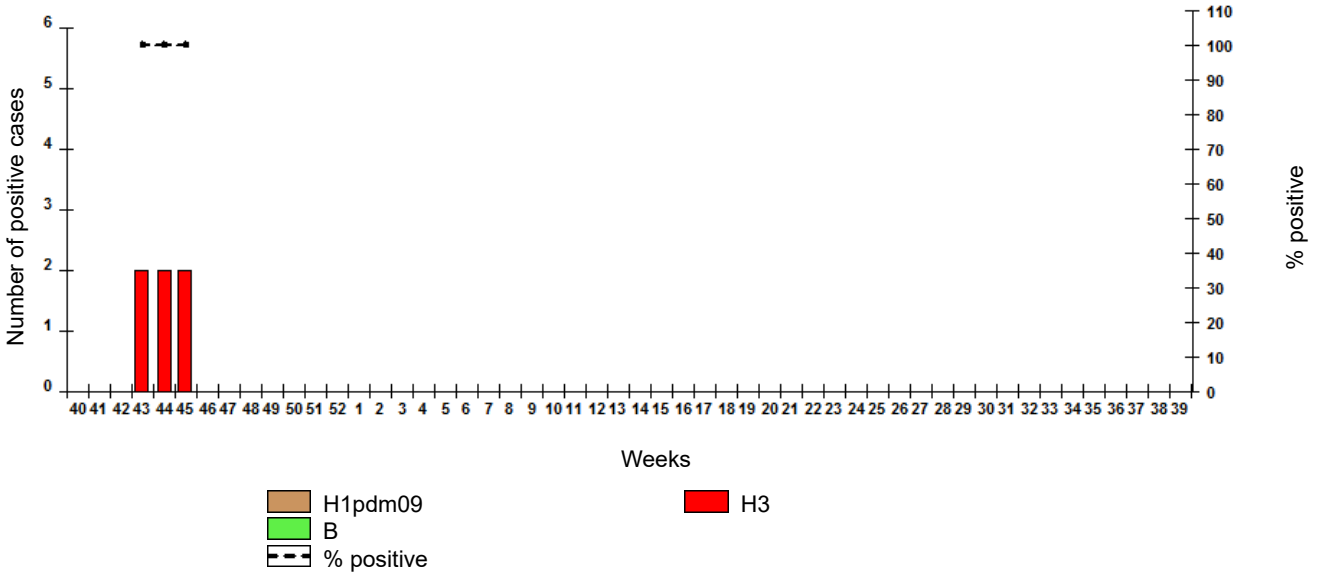


Table 1. Results of influenza and other ARVI detection by RT-PCR in Russia, week 45 of 2021

	Number of specimens / number of positive cases	% positive
Influenza		
Number of specimens tested for influenza	*2797*	-
Influenza A (not subt.)	*0*	*0,0%*
Influenza A(H1)pdm09	*0*	*0,0%*
Influenza A(H3)	*65*	*2,3%*
Influenza B	*0*	*0,0%*
All influenza	*65*	*2,3%*
Other ARVI		
Number of specimens tested for ARVI	*2653*	-
PIV	*32*	*1,2%*
ADV	*38*	*1,4%*
RSV	*134*	*5,1%*
RhV	*109*	*4,1%*
CoV	*9*	*0,3%*
MPV	*5*	*0,2%*
BoV	*33*	*1,2%*
All ARVI	*360*	*13,6%*
SARS-CoV-2 (COVID-19)		
Number of specimens tested for SARS-CoV-2	*17898*	-
SARS-CoV-2	*4909*	*27,4%*

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

COVID-2019. Totally 9 219 912 cases and 260 335 deaths associated with COVID-2019 were registered in Russia including 37 374 cases and 1251 deaths in last 24 hours (on 12:00 of 18.11.2021). According to the data obtained by NIC in Saint-Petersburg totally 17898 clinical samples were PCR investigated in last week. Among them coronavirus SARS-CoV-2 detected in 4909 (**27.4%**) cases.

Table 2. Results of influenza viruses isolation in Russia, week 45 of 2021

	Number of specimens / number of viruses	% isolated viruses
Number of specimens	*2*	-
Influenza A(H1)pdm09	*0*	*0,0%*
Influenza A(H3)	*2*	*100,0%*
Influenza B	*0*	*0,0%*
All influenza	*2*	*100,0%*

Sentinel influenza surveillance

Clinical samples from 55 SARI patients were investigated by rRT-PCR for influenza, among them 2 (**3.6%**) cases of influenza A(H3N2) recognized. 45 SARI patients were investigated for ARVI by rRT-PCR, among them 7 (**15.6%**) cases were positive for ARVI, including one case of PIV, 4 cases of RSV, one case of CoV and one case of BoV infection. 16 (**32.0%**) of 50 SARI patients were positive for coronavirus SARS-CoV-2.

Clinical samples from 37 ILI/ARI patients were investigated for influenza and ARVI by rRT-PCR, among them one (**2.7%**) influenza A(H3N2) case recognized. 5 (**15.6%**) of 32 ILI/ARI cases were positive for ARVI, including one case of RSV, 2 cases of RhV, one case of CoV and one case of MpV infection. 22 (**14.6%**) of 151 ILI/ARI patients were positive for SARS-CoV2.

Fig. 9. Monitoring of influenza viruses detection by RT-PCR among SARI patients in sentinel hospitals, season 2021/22

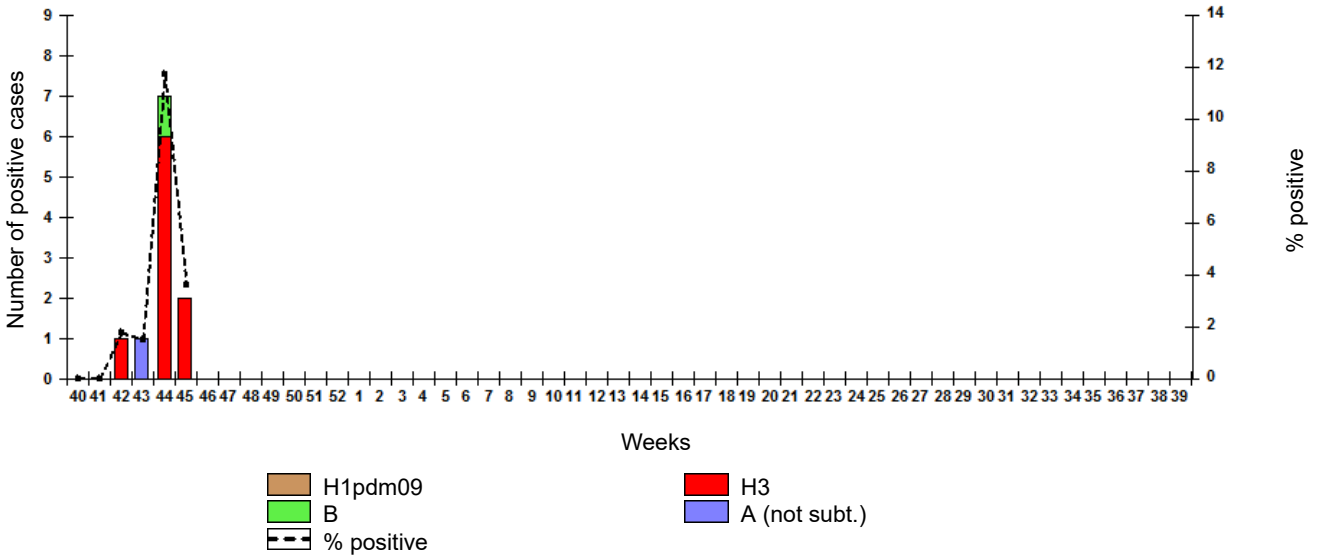


Fig. 10. Monitoring of influenza viruses detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2021/22

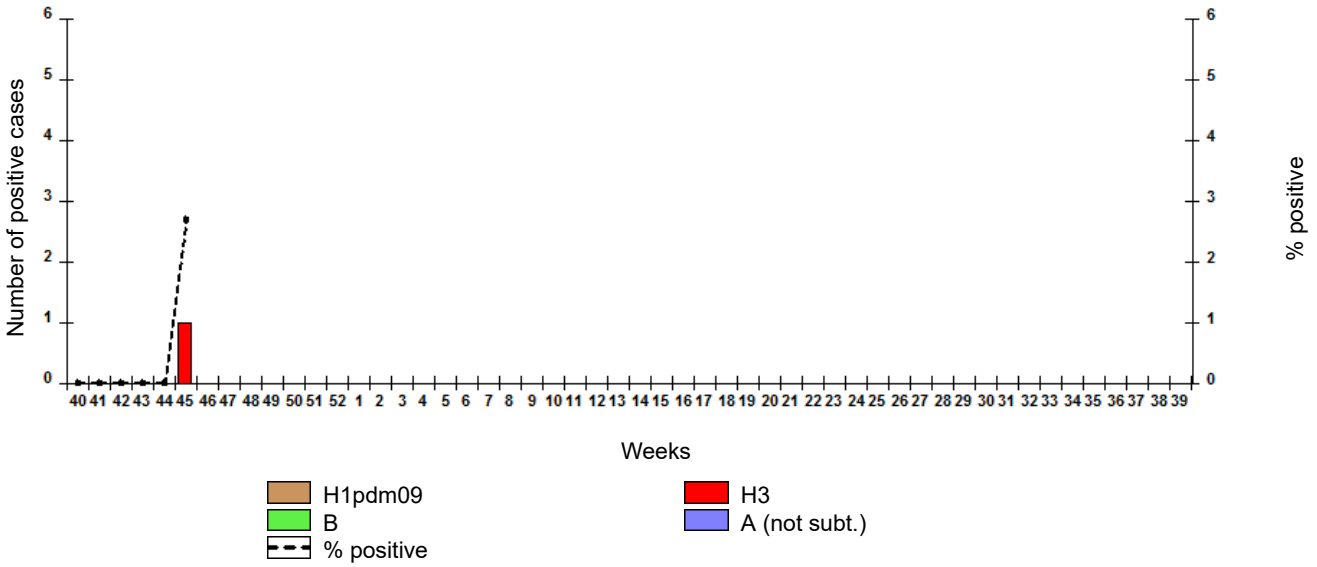


Fig. 11. Monitoring of ARVI detection by RT-PCR among SARI patients in sentinel hospitals, season 2021/22

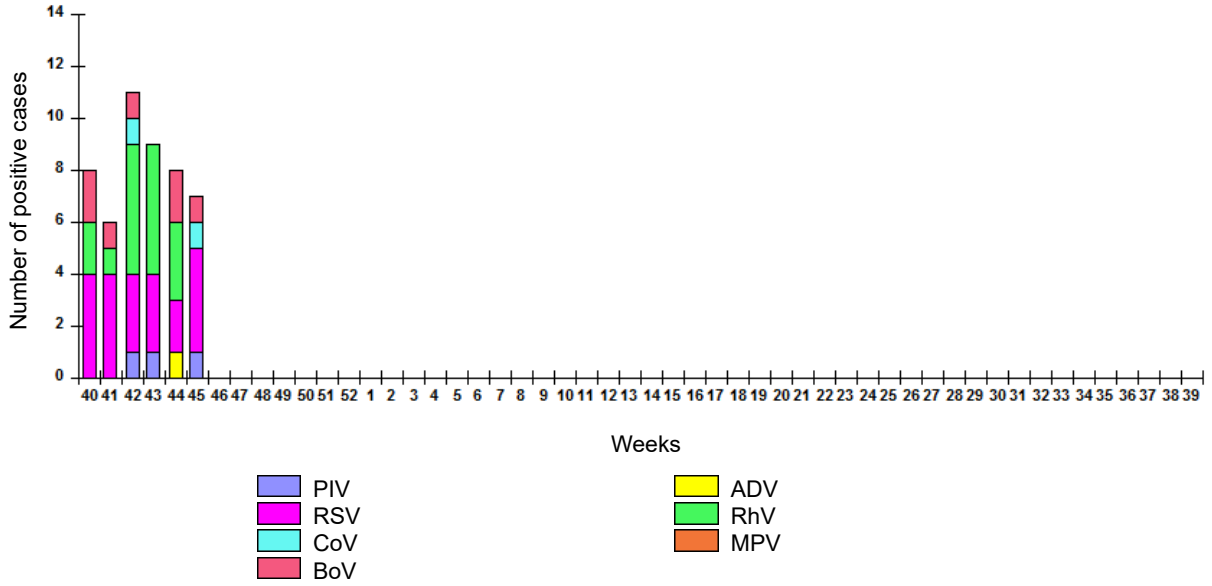


Fig. 12. Monitoring of ARVI detection by RT-PCR among ILI/ARI patients in sentinel polyclinics, season 2021/22