Year: 2017 | Week: 51 | Period: 11.12.2017-17.12.2017

Influenza and ARI morbidity data

Epidemiological data show increase of influenza and other ARI activity in Russia in comparison with previous week. The nationwide ILI & ARI morbidity level (68.5 per 10 000 of population) was lower than the national baseline (69.5) by 1.4%.
ILI and ARI epidemic thresholds were exceeded in two of 61 cities collaborating with two WHO NICs in Russia.

Exceeding of morbidity epidemic thresholds for overall population

- No data
- less 20%
- 20 - 49%
- 50% and more

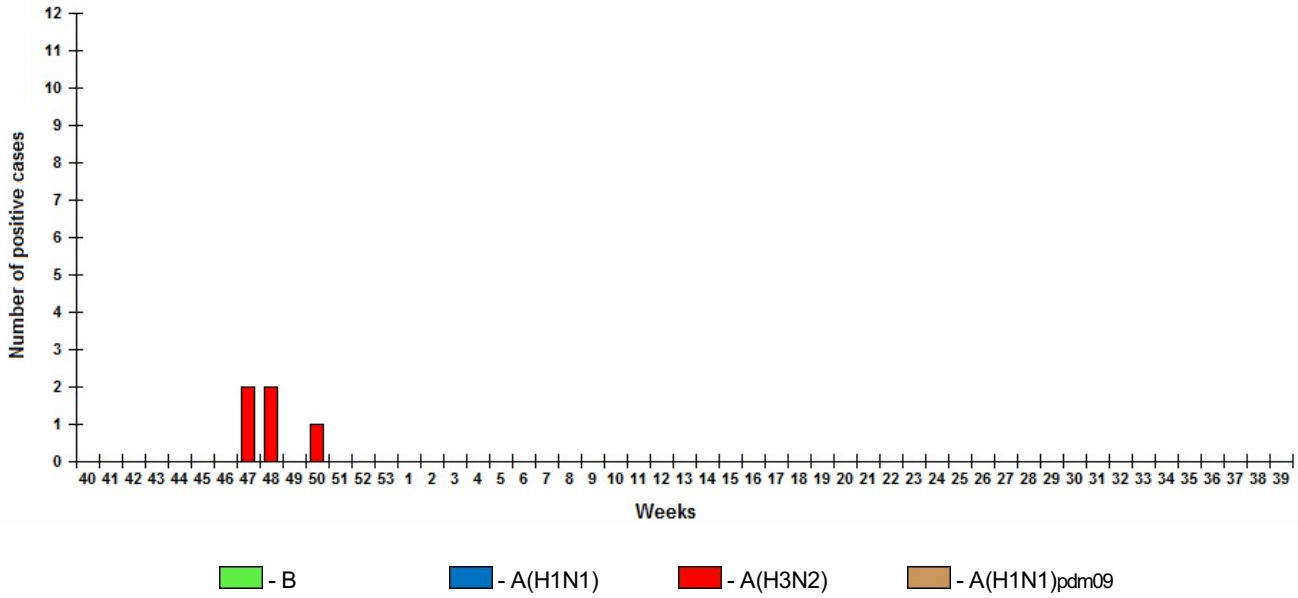
Cumulative number of diagnosed influenza cases

Cumulative results of influenza laboratory diagnosis by different tests were submitted by 54 RBLs and two WHO NICs. According to these data as a result of 2160 patients investigation the overall proportion of respiratory samples positive for influenza was estimated as **0.3%**, including 0.2% for influenza A(H3N2) virus and 0.05% for influenza type A virus.

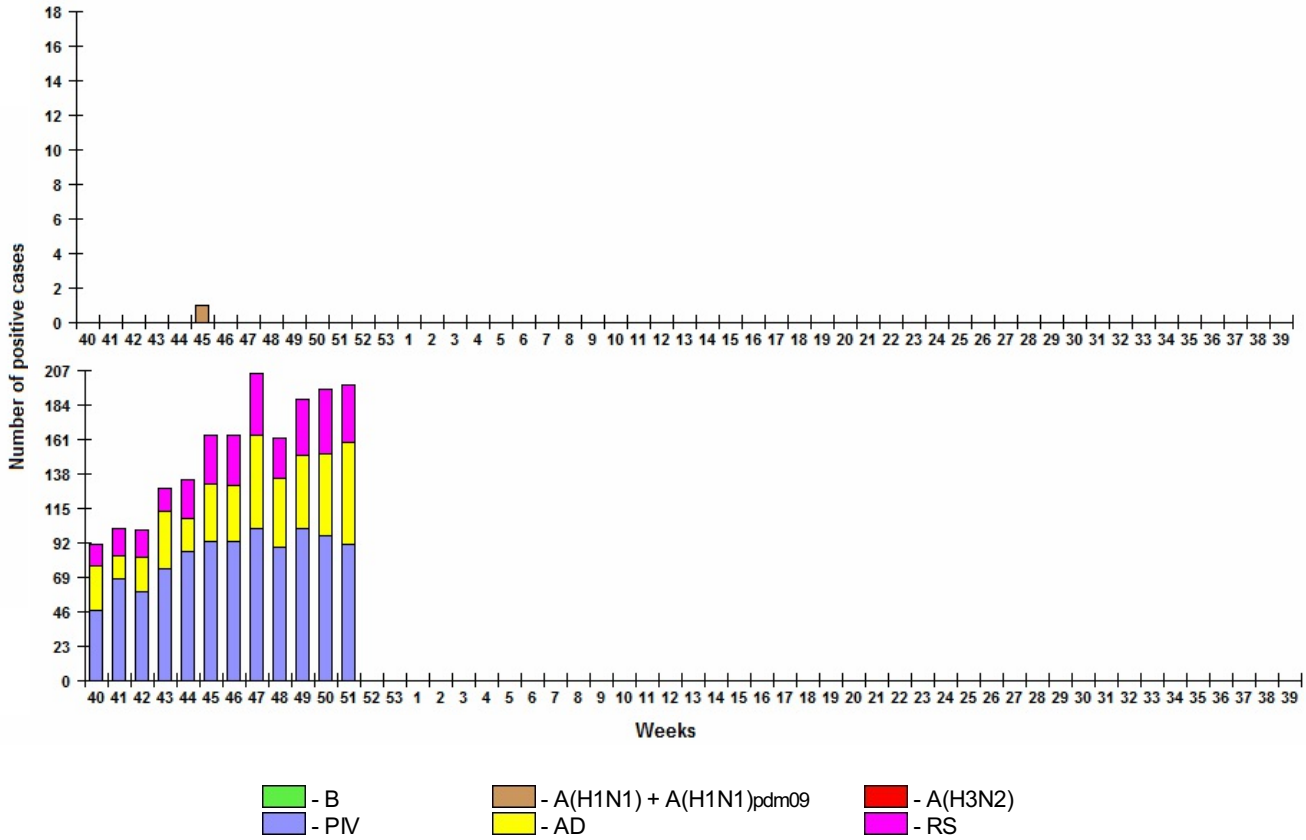
Results of influenza diagnosis

- No data
- No detection
- H1pdm09
- H1pdm09+H1
- H1pdm09+B
- H1pdm09+B+H1
- H1pdm09+H3
- H1pdm09+H3+H1
- H1pdm09+H3+B
- H1pdm09+H3+H1+B
- H1
- B
- B+H1
- H3
- H3+H1
- H3+B
- H3+H1+B

Influenza Virus Isolation



Influenza Virus Antigen Detection by Immunofluorescence Assay (IFA)



Influenza Virus RNA Detection by RT-PCR

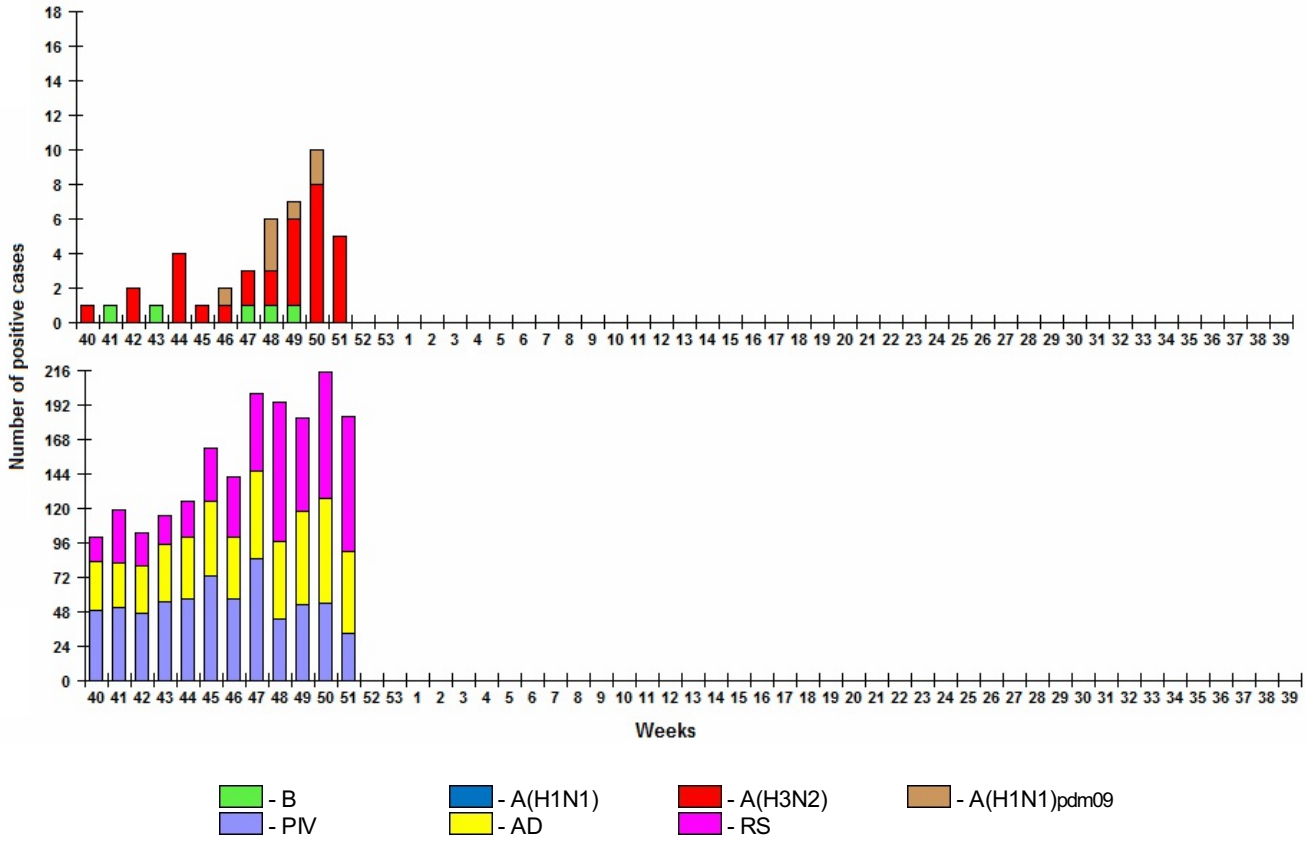


Table N1. Influenza Virus Isolation

Base lab.	Number of investigated patients	Number of viruses isolated					
		H1	H3	B	H1pdm09	Untyped virus	Total
BL of RII	40	0	0	0	0	0	0
(%)		0,0	0,0	0,0	0,0	0,0	0,0
BL of IV	0	0	0	0	0	0	0
(%)		-	-	-	-	-	-
TOTAL	40	0	0	0	0	0	0
(%)		0,0	0,0	0,0	0,0	0,0	0,0

Table N2. Influenza Virus Antigen Detection by Immunofluorescence assay (IFA)

Base lab.	Number of investigated patients	Influenza			Parainfluenza			AD	RS	Total
		H1+H1pdm09	H3	B	I	II	III			
BL of RII	708	0	0	0	17	13	35	58	33	156
(%)		0,0	0,0	0,0	2,4	1,8	4,9	8,2	4,7	22,0
BL of IV	114	0	0	0	6	3	17	10	5	41
(%)		0,0	0,0	0,0	5,3	2,6	14,9	8,8	4,4	36,0
TOTAL	822	0	0	0	23	16	52	68	38	197
(%)		0,0	0,0	0,0	2,8	1,9	6,3	8,3	4,6	24,0

Table N3. Influenza Virus RNA detection by RT-PCR

Base lab.	Number of investigated patients	Influenza						PIV	AD	RS
		A (not subtyped)	H1	H3	H5	B	H1pdm09			
BL of RII	1392	1 / 1602	0 / 445	4 / 654	0 / 435	0 / 1392	0 / 696	31 / 1020	42 / 1008	82 / 999
(%)		0,06	0,0	0,6	0,0	0,0	0,0	3,0	4,2	8,2
BL of IV	236	0 / 236	0 / 58	1 / 58	0 / 58	0 / 236	0 / 58	2 / 177	15 / 177	12 / 177
(%)		0,0	0,0	1,7	0,0	0,0	0,0	1,1	8,5	6,8
TOTAL	1628	1 / 1838	0 / 503	5 / 712	0 / 493	0 / 1628	0 / 754	33 / 1197	57 / 1185	94 / 1176
(%)		0,05	0,0	0,7	0,0	0,0	0,0	2,8	4,8	8,0

Table N4. Cumulative Number of Diagnosed Influenza Cases

Base lab.	Number of investigated patients	Number of diagnosed influenza cases						
		H1	H1+H1pdm09 (IFA)	H3	A (not subtyped)	B	H1pdm09	Total
BL of RII	1884	0	0	4	1	0	0	5
(%)		0,0	0,0	0,2	0,05	0,0	0,0	0,3
BL of IV	276	0	0	1	0	0	0	1
(%)		0,0	0,0	0,4	0,0	0,0	0,0	0,4
TOTAL	2160	0	0	5	1	0	0	6
(%)		0,0	0,0	0,2	0,05	0,0	0,0	0,3

Conclusion

Influenza and ARI morbidity data. Increased influenza and other ARI activity was registered during the week 50.2017 in traditional surveillance system in Russia. The nationwide ILI & ARI morbidity level (68.5 per 10 000 of population) was lower than the national baseline by 1.4%.

Etiology of ILI & ARI morbidity. The overall proportion of respiratory samples tested positive for influenza was estimated as **0.3%**, including 0.2% for influenza A(H3N2) virus and 0.05% for influenza type A virus. Percent of positive ARI cases of non-influenza etiology (PIV, adeno- and RSV) was estimated as **24.0%** of investigated patients by IFA and **15.6%** by PCR.

Antigenic characterization. Five influenza A(H3N2) strains were antigenically related to influenza A/Hong Kong/4801/2014 virus.

Genetic characterization. One influenza A(H3N2) virus was characterized in Saint-Petersburg NIC. Virus belonged to genetic subgroup 3C.2a1 and was like A/Bolzano/07/2016 referens virus. 4 influenza A(H3N2) strains from clinical samples were characterized in Saint-Petersburg NIC. Viruses belonged to genetic subgroup 3C.2a and were like A/HongKong/4801/2014 referens virus.

In sentinel surveillance system clinical samples from 137 SARI and ILI/ARI patients were investigated by rRT-PCR. Only one influenza A(H3N2) case was detected among ILI/ARI patients.

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