WHO NIC at Research Institute of Influenza and D.I. Ivanovsky Institute of Virology

INTEGRATED DATA OF INFLUENZA MORBIDITY AND DIAGNOSIS

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Year: 2018
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Week: 2

Period: 08.01.2018-14.01.2018

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 (51.4 per 10 000 of population) was lower than the new national baseline (calculated in country) for 2017-2018 season (72.6) by 29.2%.

ILI and ARI epidemic thresholds were exceeded in 12 of 61 cities collaborating with two WHO NICs in Russia.



Cumulative number of diagnosed influenza cases

Cumulative results of influenza laboratory diagnosis by different tests were submitted by 51 RBLs and two WHO NICs. According to these data as a result of 1668 patients investigation the overall proportion of respiratory samples positive for influenza was estimated as **2.8%**, including 0.5% for influenza A(H1N1)pdm09 virus, 1.3% for influenza A(H3N2) virus, 0.06% for influenza type A virus and 0.9% for influenza type B virus.







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Table N1.	Influenza Virus Isolation									
	Number of investigated patients	Number of viruses isolated								
Base lab.		н	H3	В	H1pdm09	Untyped virus	Total			
BL of RII	46	0	0	0	0	0	0			
(%)		0,0	0,0	0,0	0,0	0,0	0,0			
BL of IV	4	0	0	0	0	0	0			
(%)		0,0	0,0	0,0	0,0	0,0	0,0			
TOTAL	50	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)									
	Number of	Influenza				Parainfluenza	l			
Base lab.	patients	H1+H1pdm09	H3	В	1	Ш	Ш	AD	RS	lotal
BL of RII	437	1	2	0	9	4	14	26	35	91
(%)		0,2	0,5	0,0	2,1	0,9	3,2	5,9	8,0	20,8
BL of IV	89	0	0	0	6	2	8	7	9	32
(%)		0,0	0,0	0,0	6,7	2,2	9,0	7,9	10,1	36,0
TOTAL	526	1	2	0	15	6	22	33	44	123
(%)		0,2	0,4	0,0	2,9	1,1	4,2	6,3	8,4	23,4

Table N3.		Influenza Virus RNA detection by RT-PCR								
Base lab.	Number of investigated patients	Influenza								
		A (not subtyped)	H1	H3	H5	в	H1pdm09	PIV	AD	RS
BL of RII	1179	1 / 1179	0 / 510	19 / 792	0 / 502	9 / 1179	5 / 731	16 / 939	47 / 939	125 / 931
(%)		0,08	0,0	2,4	0,0	0,8	0,7	1,7	5,0	13,4
BL of IV	173	0 / 182	0 / 44	1 / 103	0 / 44	6 / 182	2 / 103	0 / 130	1 / 130	15 / 130
(%)		0,0	0,0	1,0	0,0	3,3	1,9	0,0	0,8	11,5
TOTAL	1352	1 / 1361	0 / 554	20 / 895	0 / 546	15 / 1361	7 / 834	16 / 1069	48 / 1069	140 / 1061
(%)		0,07	0,0	2,2	0,0	1,1	0,8	1,5	4,5	13,2

Table N4.	Cumulative Number of Diagnosed Influenza Cases									
Base lab.	Number of investigated patients	Number of diagnosed influenza cases								
		HI	H1+H1pdm09 (IFA)	H3	A (not subtyped)	В	H1pdm09	Total		
BL of RII	1437	0	1	21	1	9	6	37		
(%)		0,0	0,07	1,5	0,07	0,6	0,4	2,6		
BL of IV	231	0	0	1	0	6	2	9		
(%)		0,0	0,0	0,4	0,0	2,6	0,9	3,9		
TOTAL	1668	0	1	22	1	15	8	46		
(%)		0,0	0,06	1,3	0,06	0,9	0,5	2,8		

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Conclusion

Influenza and ARI morbidity data. Increased influenza and other ARI activity was registered during the week 02.2018 in traditional surveillance system in Russia. The nationwide ILI & ARI morbidity level (51.4 per 10 000 of population) was lower than the national baseline by 29.2%.

Etiology of ILI & ARI morbidity. The overall proportion of respiratory samples tested positive for influenza was estimated as **2.8%**, including 0.5% for influenza A(H1N1)pdm09 virus, 1.3% for influenza A(H3N2) virus, 0.06% for influenza A virus and 0.9% for influenza type B virus. Percent of positive ARI cases of non-influenza etiology (PIV, adeno- and RSV) was estimated as **22.9%** of investigated patients by IFA and **19.2%** by PCR.

Antigenic characterization. 7 influenza viruses were characterized antigenically including 5 influenza A(H3N2) strains and 2 influenza type B strains. All influenza A(H3N2) strains were related to influenza A/Hong Kong/4801/2014 virus. All influenza type B strains were belonged to Yamagata line and were like B/Phuket/3073/2013 reference 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 reference 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/Hong Kong/4801/2014 reference virus.

In sentinel surveillance system clinical samples from 87 SARI and ILI/ARI patients were investigated by rRT-PCR. 5 influenza cases were detected among SARI patients, including 1 influenza A(H1N1)pdm09 case, 3 influenza A(H3N2) cases and 1 influenza B case. Among ILI/ARI patients 5 influenza cases were detected, including 1 influenza A(H1N1)pdm09 case, 1 influenza A(H3N2) case and 3 influenza B cases.

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