

## Monthly summary report

# Hospital Based Human Influenza Surveillance in Bangladesh

**December 2019**

**Hospital based influenza surveillance**  
**Monthly enrollment by different wards (Medicine, Pediatrics and CCU)**  
**December 2019**

Hospital	District	Medicine ward			Pediatrics ward ( $\leq 12$ years of age)			Coronary Care Unit (CCU)		
		Sample	Flu	Flu %	Sample	Flu	Flu %	Sample	Flu	Flu %
JIMCH	Kishoregonj	7	0	0%	7	1	14%	2	0	0%
RMCH	Rajshahi	9	1	11%	6	0	0%	4	1	25%
CuMCH	Cumilla	11	0	0%	6	0	0%	4	0	0%
KMCH	Khulna	11	1	9%	5	1	20%	2	0	0%
JGH	Jashore	7	0	0%	5	0	0%	2	0	0%
JRRMCH	Sylhet	3	0	0%	8	0	0%	3	1	33%
SBMCH	Barishal	13	0	0%	7	0	0%	3	2	67%
CMCH	Chattogram	7	1	14%	9	0	0%	6	0	0%
MARMCH	Dinajpur	6	0	0%	6	0	0%	2	1	50%
		<b>74</b>	<b>3</b>	<b>4%</b>	<b>59</b>	<b>2</b>	<b>3%</b>	<b>28</b>	<b>5</b>	<b>18%</b>

**Hospital based influenza surveillance**  
**Monthly hospitalwise influenza lab results**  
**December 2019**

Hospital	District	Sample	Flu	Flu %	Flu A	Flu B	Flu A+B	Flu A/H1	Flu A/H3	Flu A/H5	Flu A/H7	Flu A/ (H1N1)pdm09	Flu B Yamagata lineage	Flu B Victoria lineage
JIMCH	Kishoregonj	16	1	6%	1*	0	0	0	0	0	0	0	0	0
RMCH	Rajshahi	19	2	11%	2*	0	0	0	0	0	0	0	0	0
CuMCH	Cumilla	21	0	0%	0	0	0	0	0	0	0	0	0	0
KMCH	Khulna	18	2	11%	2*	0	0	0	0	0	0	0	0	0
JGH	Jashore	14	0	0%	0	0	0	0	0	0	0	0	0	0
JRRMCH	Sylhet	14	1	7%	1*	0	0	0	0	0	0	0	0	0
SBMCH	Barishal	23	2	9%	2*	0	0	0	0	0	0	0	0	0
CMCH	Chattogram	22	1	5%	1	0	0	0	0	0	0	1	0	0
MARMCH	Dinajpur	14	1	7%	1*	0	0	0	0	0	0	0	0	0
		<b>161</b>	<b>10</b>	<b>6%</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

\*Nine samples (one each from JIMCH, JRRMCH and MARMCH and two each from RMCH, KMCH and SBMCH) were not true positive for influenza A and were considered as inconclusive result. The result will be confirmed with further test through viral culture.

**Hospital based influenza surveillance**  
**Monthly enrollment by different surveillance groups**  
**December 2019**

Hospital	District	SARI (aged ≥ 5 years)			SARI (aged < 5 years)		
		Sample	Flu	Flu %	Sample	Flu	Flu %
JIMCH	Kishoregonj	11	0	0%	5	1	20%
RMCH	Rajshahi	14	2	14%	5	0	0%
CuMCH	Cumilla	16	0	0%	5	0	0%
KMCH	Khulna	13	1	8%	5	1	20%
JGH	Jashore	9	0	0%	5	0	0%
JRRMCH	Sylhet	9	1	11%	5	0	0%
SBMCH	Barishal	18	2	11%	5	0	0%
CMCH	Chattogram	17	1	6%	5	0	0%
MARMCH	Dinajpur	9	1	11%	5	0	0%
		<b>116</b>	<b>8</b>	<b>7%</b>	<b>45</b>	<b>2</b>	<b>4%</b>

**Hospital based influenza surveillance  
Influenza results by different age groups  
December 2019**

Age groups	December 2019						Initiation - December 2019								
	SARI (aged ≥ 5 years)			SARI (aged < 5 years)			SARI (aged ≥ 5 years)			ILI <sup>‡</sup>			SARI (aged < 5 years)		
	Sample	Flu	Flu %	Sample	Flu	Flu %	Sample	Flu	Flu %	Sample	Flu	Flu %	Sample	Flu	Flu %
<1 Year	-	-	-	32	1	3%	-	-	-	2665	189	7%	6,583	383	6%
1-4 Years	-	-	-	13	1	8%	-	-	-	4217	601	14%	2,397	362	15%
5-14 Years	17	0	0%	-	-	-	3357	786	23%	2317	547	24%	-	-	-
15-24 Years	16	1	6%	-	-	-	4044	965	24%	2167	413	19%	-	-	-
25-39 Years	24	1	4%	-	-	-	3937	829	21%	1916	299	16%	-	-	-
40-59 Years	27	2	7%	-	-	-	4593	883	19%	1245	201	16%	-	-	-
≥ 60 Years	32	4	13%	-	-	-	4716	875	19%	400	46	12%	-	-	-
	<b>116</b>	<b>8</b>	<b>7%</b>	<b>45</b>	<b>2</b>	<b>4%</b>	<b>20,647</b>	<b>4,338</b>	<b>21%</b>	<b>14,927</b>	<b>2,296</b>	<b>15%</b>	<b>8,980</b>	<b>745</b>	<b>8%</b>

<sup>‡</sup>Outpatient ILI surveillance discontinued in October 2017.

**Hospital based influenza surveillance**  
**Hospitalwise influenza lab results**  
**Surveillance initiation - December 2019**

Hospital	District	Initiation	Sample	Flu	Flu %	Flu A <sup>ψ</sup>	Flu B <sup>λ</sup>	Flu A+B <sup>‡</sup>	Flu A/H1	Flu A/H3	Flu A/H5	Flu A/H7	Flu A/ (H1N1)pdm09	Flu B Yamagata lineage	Flu B Victoria lineage
DNMCH <sup>γ</sup>	Dhaka	Jun 2007	2061	312	15%	201	111	0	15	84	0	0	102	13	7
CBMCH <sup>γ</sup>	Mymensingh	Oct 2007	2053	302	15%	206	96	0	7	107	1	0	91	16	10
JIMCH	Kishoregonj	Sep 2007	5352	1084	20%	737 <sup>‡</sup>	347	0	9	386	0	0	340	64	113
RMCH	Rajshahi	May 2007	3425	481	14%	315 <sup>‡</sup>	166	0	14	177	0	0	122	39	66
SZRMCH <sup>γ</sup>	Bogura	Sep 2007	3865	653	17%	439	213	1	12	256	0	0	170	29	39
LAMB <sup>†</sup>	Dinajpur	Oct 2007	1171	112	10%	72	40	0	7	41	0	0	24	1	0
BBMH <sup>†</sup>	Chattogram	Aug 2007	1440	157	11%	118	39	0	13	42	0	0	63	3	0
CuMCH <sup>‡</sup>	Cumilla	Oct 2007	4936	632	13%	414 <sup>*</sup>	215	3	9	220	0	0	184	28	37
KMCH	Khulna	Jul 2007	2931	452	15%	315 <sup>*‡</sup>	137	0	16	153	0	0	142	17	59
JGH <sup>γ‡</sup>	Jashore	Sep 2007	3853	820	21%	512	307	1	10	257	0	0	245	26	143
JRRMCH	Sylhet	Jul 2007	3789	669	18%	414 <sup>‡</sup>	254	1	16	199	0	0	198	34	77
SBMCH	Barishal	Aug 2007	5554	858	15%	538 <sup>‡</sup>	316	4	9	258	0	0	268	56	111
CMCH	Chattogram	Apr 2014	2493	492	20%	334	155	3	0	128	0	0	206	41	94
MARMCH <sup>‡</sup>	Dinajpur	Apr 2014	1631	355	22%	222 <sup>‡</sup>	133	0	0	111	0	0	108	28	84
			<b>44,554</b>	<b>7,379</b>	<b>17%</b>	<b>4,837</b>	<b>2,529</b>	<b>13</b>	<b>137</b>	<b>2,419</b>	<b>1</b>	<b>0</b>	<b>2,263</b>	<b>395</b>	<b>840</b>

<sup>λ</sup>Influenza B typing initiated in January 2016.

<sup>ψ</sup>rRT-PCR result of four samples were equivocal positive for Influenza A.

<sup>ψ</sup>One sample collected in June 2013 and another sample collected in June 2017 were co-infected with both A(H3) and A(H1N1)pdm09.

<sup>λ</sup>Three samples were co-infected with both Influenza B (Yamagata lineage) and Influenza B (Victoria lineage), another ten samples were unsubtypeable.

<sup>‡</sup>Three samples were co-infected with both Influenza A(H1N1)pdm09 and Influenza B (Victoria lineage).

<sup>‡</sup>One sample collected in May 2019 was co-infected with both Influenza A(H3) and Influenza B (Victoria lineage).

<sup>†</sup>Surveillance activities ended at LAMB (Dinajpur) and BBMH (Chittagong) in May 2016.

<sup>γ</sup>Surveillance activities ended at DNMCH (Dhaka), CBMCH (Mymensingh), SZRMCH (Bogra) and JGH (Jessore) in October 2017.

<sup>‡</sup>Surveillance activities reinitiated at Cumilla Medical College Hospital (CuMCH), Cumilla in January 2018.

<sup>‡</sup>Surveillance activities reinitiated at Jashore 250 bed General Hospital (JGH), Jashore in December 2018.

<sup>‡</sup>Dinajpur Medical College Hospital (DjMCH) has been renamed as M Abdur Rahim Medical College Hospital (MARMCH).

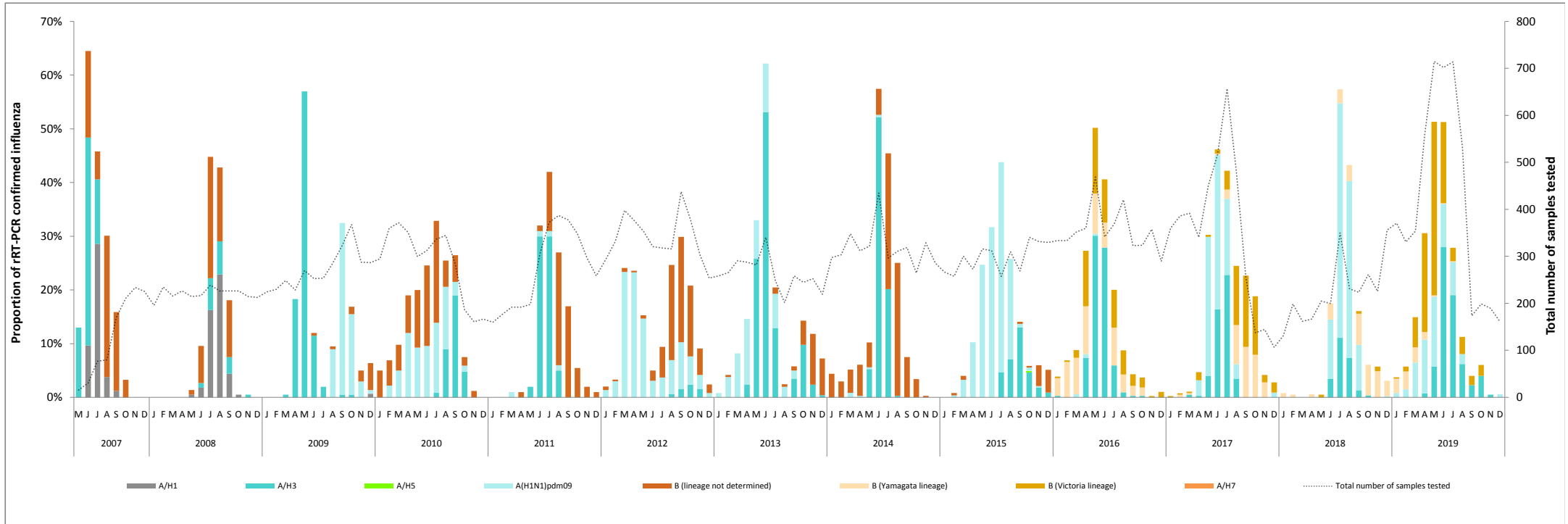
Note: Surveillance activities extended to the intensive care units (ICU) and coronary care unit (CCU) of the participating hospitals in January 2018.

<sup>φ</sup> Intensive care units (ICU) surveillance discontinued in January 2019.

\*One sample from CuMCH (Cumilla) and two samples from KMCH (Khulna) collected in November 2019 were not true positive for influenza A and were considered as inconclusive result. The result will be confirmed with further test through viral culture.

<sup>‡</sup>Nine samples (one each from JIMCH, JRRMCH and MARMCH and two each from RMCH, KMCH and SBMCH) collected in December 2019 were not true positive for influenza A and were considered as inconclusive result. The result will be confirmed with further test through viral culture.

**Hospital based influenza surveillance**  
**Influenza seasonality graph**  
**May 2007 - December 2019**



Note: Influenza B typing initiated in January 2016

**Hospital based influenza surveillance**  
**Influenza seasonality graph**  
**Week 01 of 2019 to week 52 of 2019**

