



## Monthly summary report

Hospital Based Human Influenza Surveillance in Bangladesh

**September 2022**

**Hospital based influenza surveillance**  
**Monthly enrollment by different wards (Medicine, Pediatrics and CCU)**  
**September 2022**

| Hospital | District    | Medicine ward |          |          | Pediatrics ward (≤12 years of age) |          |            | Coronary Care Unit (CCU) |          |          |
|----------|-------------|---------------|----------|----------|------------------------------------|----------|------------|--------------------------|----------|----------|
|          |             | Sample        | Flu      | Flu %    | Sample                             | Flu      | Flu %      | Sample                   | Flu      | Flu %    |
| JIMCH    | Kishoregonj | 26            | 0        | 0        | 45                                 | 0        | 0          | 2                        | 0        | 0        |
| RMCH     | Rajshahi    | 29            | 0        | 0        | 36                                 | 0        | 0          | 0                        | 0        | 0        |
| CuMCH    | Cumilla     | 25            | 0        | 0        | 44                                 | 0        | 0          | 1                        | 0        | 0        |
| KMCH     | Khulna      | 19            | 0        | 0        | 42                                 | 1        | 2          | 0                        | 0        | 0        |
| JGH      | Jashore     | 19            | 0        | 0        | 38                                 | 0        | 0          | 1                        | 0        | 0        |
| JRRMCH   | Sylhet      | 10            | 0        | 0        | 39                                 | 0        | 0          | 1                        | 0        | 0        |
| SBMCH    | Barishal    | 11            | 0        | 0        | 65                                 | 0        | 0          | 1                        | 0        | 0        |
| CMCH     | Chattogram  | 35            | 0        | 0        | 50                                 | 1        | 2          | 1                        | 0        | 0        |
| MARMCH   | Dinajpur    | 11            | 0        | 0        | 37                                 | 0        | 0          | 1                        | 0        | 0        |
|          |             | <b>185</b>    | <b>0</b> | <b>0</b> | <b>396</b>                         | <b>2</b> | <b>0.5</b> | <b>8</b>                 | <b>0</b> | <b>0</b> |

**Hospital based influenza surveillance**  
**Monthly hospitalwise influenza lab results**  
**September 2022**

| 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/<br>(H1N1)pdm09 | Flu B<br>Yamagata<br>lineage | Flu B<br>Victoria<br>lineage |
|----------|-------------|------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|-----------------------|------------------------------|------------------------------|
| JIMCH    | Kishoregonj | 73         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| RMCH     | Rajshahi    | 65         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| CuMCH    | Cumilla     | 70         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| KMCH     | Khulna      | 61         | 1        | 2          | 1        | 0        | 0        | 0        | 1        | 0        | 0        | 0                     | 0                            | 0                            |
| JGH      | Jashore     | 58         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| JRRMCH   | Sylhet      | 50         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| SBMCH    | Barishal    | 77         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
| CMCH     | Chattogram  | 86         | 1        | 1          | 1        | 0        | 0        | 0        | 1        | 0        | 0        | 0                     | 0                            | 0                            |
| MARMCH   | Dinajpur    | 49         | 0        | 0          | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0                     | 0                            | 0                            |
|          |             | <b>589</b> | <b>2</b> | <b>0.3</b> | <b>2</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>2</b> | <b>0</b> | <b>0</b> | <b>0</b>              | <b>0</b>                     | <b>0</b>                     |

**Hospital based influenza surveillance**  
**Monthly enrollment by different surveillance groups**  
**September 2022**

| Hospital | District    | SARI (aged ≥ 5 years) |          |          | SARI (aged < 5 years) |          |            |
|----------|-------------|-----------------------|----------|----------|-----------------------|----------|------------|
|          |             | Sample                | Flu      | Flu %    | Sample                | Flu      | Flu %      |
| JIMCH    | Kishoregonj | 32                    | 0        | 0        | 41                    | 0        | 0          |
| RMCH     | Rajshahi    | 32                    | 0        | 0        | 33                    | 0        | 0          |
| CuMCH    | Cumilla     | 29                    | 0        | 0        | 41                    | 0        | 0          |
| KMCH     | Khulna      | 25                    | 0        | 0        | 36                    | 1        | 3          |
| JGH      | Jashore     | 26                    | 0        | 0        | 32                    | 0        | 0          |
| JRRMCH   | Sylhet      | 19                    | 0        | 0        | 31                    | 0        | 0          |
| SBMCH    | Barishal    | 31                    | 0        | 0        | 46                    | 0        | 0          |
| CMCH     | Chattogram  | 44                    | 0        | 0        | 42                    | 1        | 2          |
| MARMCH   | Dinajpur    | 16                    | 0        | 0        | 33                    | 0        | 0          |
|          |             | <b>254</b>            | <b>0</b> | <b>0</b> | <b>335</b>            | <b>2</b> | <b>0.6</b> |

**Hospital based influenza surveillance  
Influenza results by different age groups  
September 2022**

| Age groups  | September 2022        |          |          |                       |          |            | Initiation - September 2022 |              |           |                  |              |           |                       |             |          |
|-------------|-----------------------|----------|----------|-----------------------|----------|------------|-----------------------------|--------------|-----------|------------------|--------------|-----------|-----------------------|-------------|----------|
|             | 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     | -                     | -        | -        | 203                   | 2        | 1          | -                           | -            | -         | 2665             | 189          | 7         | 9,299                 | 505         | 5        |
| 1-4 Years   | -                     | -        | -        | 132                   | 0        | 0          | -                           | -            | -         | 4217             | 601          | 14        | 3,865                 | 508         | 13       |
| 5-14 Years  | 66                    | 0        | 0        | -                     | -        | -          | 4308                        | 907          | 21        | 2317             | 547          | 24        | -                     | -           | -        |
| 15-24 Years | 31                    | 0        | 0        | -                     | -        | -          | 4673                        | 1071         | 23        | 2167             | 413          | 19        | -                     | -           | -        |
| 25-39 Years | 48                    | 0        | 0        | -                     | -        | -          | 5059                        | 957          | 19        | 1916             | 299          | 16        | -                     | -           | -        |
| 40-59 Years | 66                    | 0        | 0        | -                     | -        | -          | 6411                        | 1015         | 16        | 1245             | 201          | 16        | -                     | -           | -        |
| ≥ 60 Years  | 43                    | 0        | 0        | -                     | -        | -          | 6573                        | 1019         | 16        | 400              | 46           | 12        | -                     | -           | -        |
|             | <b>254</b>            | <b>0</b> | <b>0</b> | <b>335</b>            | <b>2</b> | <b>0.6</b> | <b>27,024</b>               | <b>4,969</b> | <b>18</b> | <b>14,927</b>    | <b>2,296</b> | <b>15</b> | <b>13,164</b>         | <b>1013</b> | <b>8</b> |

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

**Hospital based influenza surveillance**  
**Hospitalwise influenza lab results**  
**Surveillance initiation - September 2022**

| 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/<br>(H1N1)pdm09 | Flu B<br>Yamagata<br>lineage | Flu B<br>Victoria<br>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   | 6665          | 1225         | 18        | 831 <sup>ι</sup>   | 394                | 0                    | 9          | 444          | 0        | 0        | 376                   | 64                           | 160                          |
| RMCH                | Rajshahi    | May 2007   | 4646          | 540          | 12        | 362 <sup>ι</sup>   | 178                | 0                    | 14         | 207          | 0        | 0        | 139                   | 39                           | 78                           |
| 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   | 6055          | 722          | 12        | 489 <sup>*</sup>   | 230                | 3                    | 9          | 257          | 0        | 0        | 222                   | 28                           | 52                           |
| KMCH                | Khulna      | Jul 2007   | 3982          | 518          | 13        | 371 <sup>*ι</sup>  | 147                | 0                    | 16         | 188          | 0        | 0        | 163                   | 17                           | 69                           |
| JGH <sup>γ1</sup>   | Jashore     | Sep 2007   | 4836          | 937          | 19        | 605                | 331                | 1                    | 10         | 322          | 0        | 0        | 273                   | 26                           | 167                          |
| JRRMCH              | Sylhet      | Jul 2007   | 4849          | 769          | 16        | 498 <sup>ι</sup>   | 270                | 1                    | 16         | 254          | 0        | 0        | 227                   | 34                           | 93                           |
| SBMCH               | Barishal    | Aug 2007   | 6934          | 974          | 14        | 636 <sup>ι</sup>   | 334                | 4                    | 9          | 312          | 0        | 0        | 313                   | 56                           | 129                          |
| CMCH                | Chattogram  | Apr 2014   | 4007          | 649          | 16        | 465                | 181                | 3                    | 0          | 197          | 0        | 0        | 268                   | 41                           | 120                          |
| MARMCH <sup>2</sup> | Dinajpur    | Apr 2014   | 2551          | 408          | 16        | 270 <sup>ι</sup>   | 138                | 0                    | 0          | 145          | 0        | 0        | 122                   | 28                           | 89                           |
|                     |             |            | <b>55,115</b> | <b>8,278</b> | <b>15</b> | <b>5,563</b>       | <b>2,702</b>       | <b>13</b>            | <b>137</b> | <b>2,856</b> | <b>1</b> | <b>0</b> | <b>2,553</b>          | <b>395</b>                   | <b>1,013</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>ι</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>2</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.

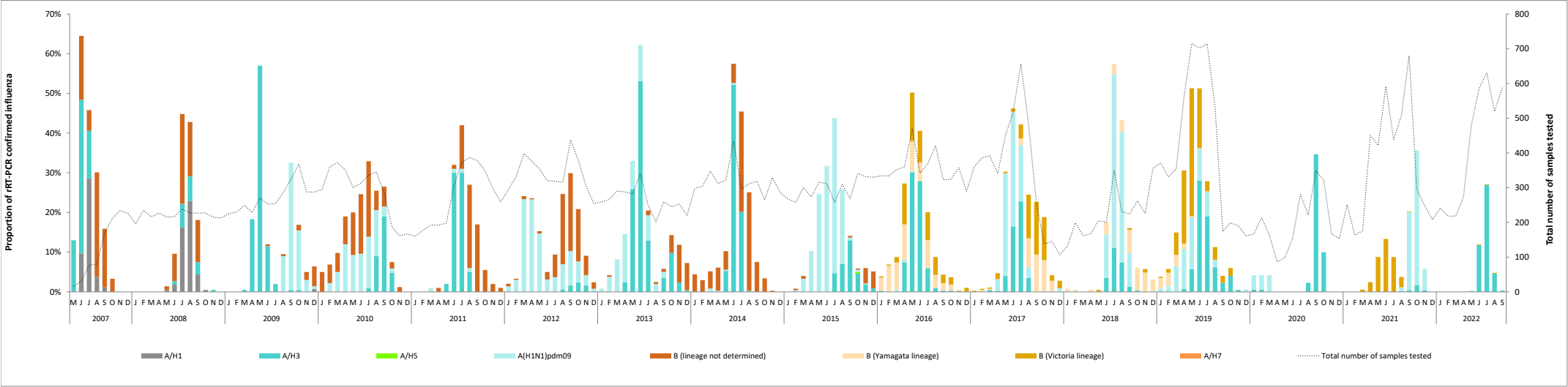
<sup>\*</sup>One sample from CuMCH (Cumilla) and two samples from KMCH (Khulna) collected in November 2019 were not true positive for influenza A and were considered as inconclusive result. The result will be confirmed with further test through viral culture.

<sup>ι</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 - September 2022



Note: Influenza B typing initiated in January 2016

