



## Monthly summary report

# Hospital-Based Human Influenza Surveillance in Bangladesh

**August 2023**

**Hospital based influenza surveillance**  
**Monthly enrollment by different wards (Medicine, Pediatrics and CCU)**  
**August 2023**

| 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 | 88            | 50         | 57        | 50                                 | 31         | 62        | 1                        | 0        | 0        |
| RMCH     | Rajshahi    | 36            | 14         | 39        | 29                                 | 11         | 38        | 0                        | 0        | 0        |
| CuMCH    | Cumilla     | 23            | 12         | 52        | 35                                 | 14         | 40        | 1                        | 0        | 0        |
| KMCH     | Khulna      | 29            | 20         | 69        | 41                                 | 8          | 20        | 0                        | 0        | 0        |
| JGH      | Jashore     | 88            | 61         | 69        | 53                                 | 39         | 74        | 0                        | 0        | 0        |
| JRRMCH   | Sylhet      | 56            | 26         | 46        | 53                                 | 23         | 43        | 1                        | 0        | 0        |
| SBMCH    | Barishal    | 40            | 12         | 30        | 54                                 | 21         | 39        | 0                        | 0        | 0        |
| CMCH     | Chattogram  | 63            | 27         | 43        | 85                                 | 34         | 40        | 0                        | 0        | 0        |
| MARMCH   | Dinajpur    | 36            | 25         | 69        | 57                                 | 28         | 49        | 0                        | 0        | 0        |
|          |             | <b>459</b>    | <b>247</b> | <b>54</b> | <b>457</b>                         | <b>209</b> | <b>46</b> | <b>3</b>                 | <b>0</b> | <b>0</b> |

**Hospital based influenza surveillance**  
**Monthly hospitalwise influenza lab results**  
**August 2023**

| Hospital | District    | Sample     | Flu        | Flu %     | Flu A      | Flu B      | 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 |
|----------|-------------|------------|------------|-----------|------------|------------|----------------------|----------|------------|----------|----------|-----------------------|------------------------------|------------------------------|
| JIMCH    | Kishoregonj | 139        | 81         | 58        | 45         | 36         | 0                    | 0        | 28         | 0        | 0        | 17                    | 0                            | 36                           |
| RMCH     | Rajshahi    | 65         | 25         | 38        | 18         | 7          | 0                    | 0        | 15         | 0        | 0        | 3                     | 0                            | 7                            |
| CuMCH    | Cumilla     | 59         | 26         | 44        | 18         | 8          | 0                    | 0        | 13         | 0        | 0        | 5                     | 0                            | 8                            |
| KMCH     | Khulna      | 70         | 28         | 40        | 15         | 12         | 1                    | 0        | 9          | 0        | 0        | 6                     | 0                            | 12                           |
| JGH      | Jashore     | 141        | 100        | 71        | 59         | 41         | 0                    | 0        | 49         | 0        | 0        | 10                    | 0                            | 41                           |
| JRRMCH   | Sylhet      | 110        | 49         | 45        | 27         | 22         | 0                    | 0        | 11         | 0        | 0        | 16                    | 0                            | 22                           |
| SBMCH    | Barishal    | 94         | 33         | 35        | 24         | 9          | 0                    | 0        | 11         | 0        | 0        | 13                    | 0                            | 9                            |
| CMCH     | Chattogram  | 148        | 61         | 41        | 36         | 25         | 0                    | 0        | 20         | 0        | 0        | 16                    | 0                            | 25                           |
| MARMCH   | Dinajpur    | 93         | 53         | 57        | 13         | 40         | 0                    | 0        | 4          | 0        | 0        | 9                     | 0                            | 40                           |
|          |             | <b>919</b> | <b>456</b> | <b>50</b> | <b>255</b> | <b>200</b> | <b>1</b>             | <b>0</b> | <b>160</b> | <b>0</b> | <b>0</b> | <b>95</b>             | <b>0</b>                     | <b>200</b>                   |

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

**Hospital based influenza surveillance**  
**Monthly enrollment by different surveillance groups**  
**August 2023**

| Hospital | District    | SARI (aged ≥ 5 years) |            |           | SARI (aged < 5 years) |           |           | ILI <sup>‡</sup> |            |           |
|----------|-------------|-----------------------|------------|-----------|-----------------------|-----------|-----------|------------------|------------|-----------|
|          |             | Sample                | Flu        | Flu %     | Sample                | Flu       | Flu %     | Sample           | Flu        | Flu %     |
| JIMCH    | Kishoregonj | 68                    | 41         | 60        | 21                    | 12        | 57        | 50               | 28         | 56        |
| RMCH     | Rajshahi    | 40                    | 16         | 40        | 25                    | 9         | 36        | -                | -          | -         |
| CuMCH    | Cumilla     | 35                    | 13         | 37        | 24                    | 13        | 54        | -                | -          | -         |
| KMCH     | Khulna      | 36                    | 23         | 64        | 34                    | 5         | 15        | -                | -          | -         |
| JGH      | Jashore     | 75                    | 53         | 71        | 16                    | 10        | 63        | 50               | 37         | 74        |
| JRRMCH   | Sylhet      | 41                    | 17         | 41        | 19                    | 8         | 42        | 50               | 24         | 48        |
| SBMCH    | Barishal    | 56                    | 19         | 34        | 38                    | 14        | 37        | -                | -          | -         |
| CMCH     | Chattogram  | 54                    | 19         | 35        | 44                    | 13        | 30        | 50               | 29         | 58        |
| MARMCH   | Dinajpur    | 27                    | 16         | 59        | 26                    | 11        | 42        | 40               | 26         | 65        |
|          |             | <b>432</b>            | <b>217</b> | <b>50</b> | <b>247</b>            | <b>95</b> | <b>38</b> | <b>240</b>       | <b>144</b> | <b>60</b> |

<sup>‡</sup>Outpatient ILI surveillance reinitiated at JRRMCH (Sylhet), CMCH (Chattogram) and MARMCH (Dinajpur) in November 2022 and JIMCH (Kishoregonj) and JGH (Jashore) in December 2022.

**Hospital based influenza surveillance  
Influenza results by different age groups  
August 2023**

| Age groups  | August 2023           |            |           |                  |            |           |                       |           |           | Initiation - August 2023 |              |           |                  |              |           |                       |              |          |
|-------------|-----------------------|------------|-----------|------------------|------------|-----------|-----------------------|-----------|-----------|--------------------------|--------------|-----------|------------------|--------------|-----------|-----------------------|--------------|----------|
|             | SARI (aged ≥ 5 years) |            |           | ILI <sup>‡</sup> |            |           | 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 %     | Sample                | Flu          | Flu %    |
| <1 Year     | -                     | -          | -         | 2                | 1          | 50        | 134                   | 39        | 29        | -                        | -            | -         | 2,805            | 192          | 7         | 10,346                | 580          | 6        |
| 1-4 Years   | -                     | -          | -         | 35               | 21         | 60        | 113                   | 56        | 50        | -                        | -            | -         | 4,548            | 642          | 14        | 4,456                 | 614          | 14       |
| 5-14 Years  | 133                   | 68         | 51        | 61               | 37         | 61        | -                     | -         | -         | 5,001                    | 1,048        | 21        | 2,750            | 632          | 23        | -                     | -            | -        |
| 15-24 Years | 79                    | 48         | 61        | 69               | 45         | 65        | -                     | -         | -         | 5,094                    | 1,176        | 23        | 2,664            | 519          | 19        | -                     | -            | -        |
| 25-39 Years | 76                    | 36         | 47        | 43               | 25         | 58        | -                     | -         | -         | 5,444                    | 1,052        | 19        | 2,254            | 359          | 16        | -                     | -            | -        |
| 40-59 Years | 76                    | 34         | 45        | 22               | 11         | 50        | -                     | -         | -         | 6,868                    | 1,080        | 16        | 1,474            | 222          | 15        | -                     | -            | -        |
| ≥ 60 Years  | 68                    | 31         | 46        | 8                | 4          | 50        | -                     | -         | -         | 7,029                    | 1,073        | 15        | 493              | 52           | 11        | -                     | -            | -        |
|             | <b>432</b>            | <b>217</b> | <b>50</b> | <b>240</b>       | <b>144</b> | <b>60</b> | <b>247</b>            | <b>95</b> | <b>38</b> | <b>29,436</b>            | <b>5,429</b> | <b>18</b> | <b>16,988</b>    | <b>2,618</b> | <b>15</b> | <b>14,802</b>         | <b>1,194</b> | <b>8</b> |

<sup>‡</sup> Outpatient ILI surveillance reinitiated at JRRMCH (Sylhet), CMCH (Chattogram) and MARMCH (Dinajpur) in November 2022 and JIMCH (Kishoregonj) and JGH (Jashore) in December 2022.

**Hospital based influenza surveillance**  
**Hospitalwise influenza lab results**  
**Surveillance initiation - August 2023**

| 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   | 2,061         | 312          | 15        | 201                | 111                | 0                    | 15         | 84           | 0        | 0        | 102                   | 13                           | 7                            |
| CBMCH <sup>γ</sup>  | Mymensingh  | Oct 2007   | 2,053         | 302          | 15        | 206                | 96                 | 0                    | 7          | 107          | 1        | 0        | 91                    | 16                           | 10                           |
| JIMCH               | Kishoregonj | Sep 2007   | 7,613         | 1,387        | 18        | 896                | 491                | 0                    | 9          | 483          | 0        | 0        | 402                   | 64                           | 257                          |
| RMCH                | Rajshahi    | May 2007   | 5,063         | 573          | 11        | 383                | 190                | 0                    | 14         | 225          | 0        | 0        | 142                   | 39                           | 90                           |
| SZRMCH <sup>γ</sup> | Bogura      | Sep 2007   | 3,865         | 653          | 17        | 439                | 213                | 1                    | 12         | 256          | 0        | 0        | 170                   | 29                           | 39                           |
| LAMB <sup>†</sup>   | Dinajpur    | Oct 2007   | 1,171         | 112          | 10        | 72                 | 40                 | 0                    | 7          | 41           | 0        | 0        | 24                    | 1                            | 0                            |
| BBMH <sup>†</sup>   | Chattogram  | Aug 2007   | 1,440         | 157          | 11        | 118                | 39                 | 0                    | 13         | 42           | 0        | 0        | 63                    | 3                            | 0                            |
| CuMCH <sup>‡</sup>  | Cumilla     | Oct 2007   | 6,494         | 780          | 12        | 515                | 262                | 3                    | 9          | 276          | 0        | 0        | 229                   | 28                           | 84                           |
| KMCH                | Khulna      | Jul 2007   | 4,317         | 593          | 14        | 404                | 188                | 1                    | 16         | 215          | 0        | 0        | 169                   | 17                           | 110                          |
| JGH <sup>γ†</sup>   | Jashore     | Sep 2007   | 5,657         | 1126         | 20        | 703                | 420                | 3                    | 10         | 402          | 0        | 0        | 291                   | 26                           | 256                          |
| JRRMCH              | Sylhet      | Jul 2007   | 5,630         | 897          | 16        | 562                | 333                | 2                    | 16         | 270          | 0        | 0        | 275                   | 34                           | 156                          |
| SBMCH               | Barishal    | Aug 2007   | 7,516         | 1046         | 14        | 677                | 365                | 4                    | 7          | 333          | 0        | 0        | 333                   | 56                           | 160                          |
| CMCH                | Chattogram  | Apr 2014   | 5,031         | 809          | 16        | 548                | 257                | 4                    | 0          | 260          | 0        | 0        | 288                   | 41                           | 196                          |
| MARMCH <sup>²</sup> | Dinajpur    | Apr 2014   | 3,315         | 494          | 15        | 289                | 205                | 0                    | 0          | 153          | 0        | 0        | 133                   | 28                           | 156                          |
|                     |             |            | <b>61,226</b> | <b>9,241</b> | <b>15</b> | <b>6,013</b>       | <b>3,210</b>       | <b>18</b>            | <b>135</b> | <b>3,147</b> | <b>1</b> | <b>0</b> | <b>2,712</b>          | <b>395</b>                   | <b>1,521</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>γ</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>Eight samples were 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 (Bogura) 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.

\*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.

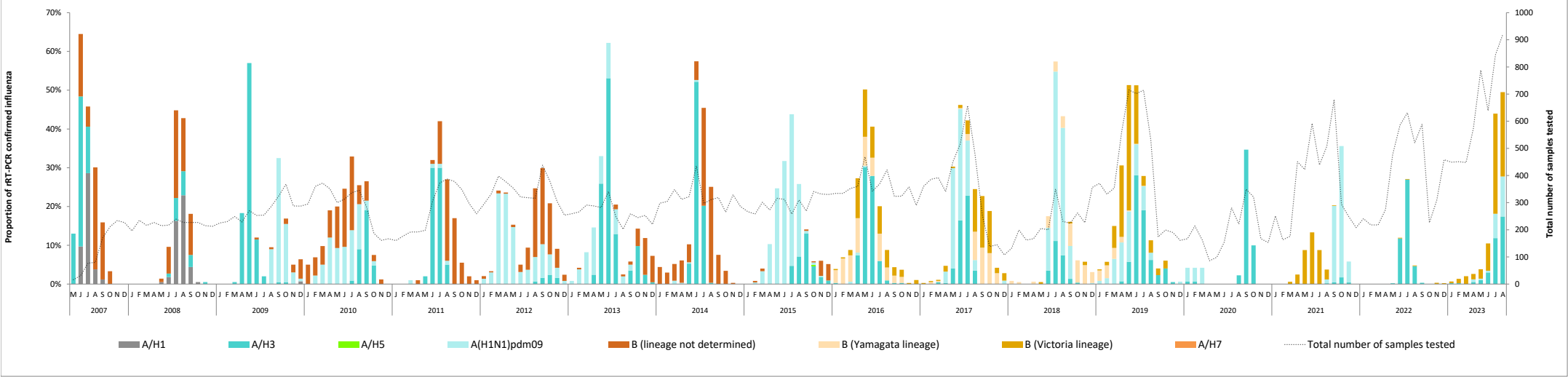
Outpatient ILI surveillance reinitiated at JRRMCH (Sylhet), CMCH (Chattogram) and MARMCH (Dinajpur) in November 2022.

Outpatient ILI surveillance reinitiated at JIMCH (Kishoregonj) and JGH (Jashore) in December 2022.

# Hospital based influenza surveillance

## Influenza seasonality graph

### May 2007 - August 2023



**Hospital based influenza surveillance**  
**Influenza seasonality graph**  
**Week 35 of 2022 to week 34 of 2023**

