



Monthly summary report

Hospital Based Human Influenza Surveillance in Bangladesh

July 2019

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

| 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 | 32 | 9 | 28% | 52 | 4 | 8% | 5 | 2 | 40% |
| RMCH | Rajshahi | 52 | 38 | 73% | 40 | 19 | 48% | 6 | 1 | 17% |
| CuMCH | Cumilla | 18 | 2 | 11% | 46 | 6 | 13% | 4 | 0 | 0% |
| KMCH | Khulna | 38 | 9 | 24% | 16 | 2 | 13% | 2 | 0 | 0% |
| JGH | Jashore | 36 | 26 | 72% | 23 | 11 | 48% | 6 | 3 | 50% |
| JRRMCH | Sylhet | 19 | 8 | 42% | 41 | 11 | 27% | 4 | 1 | 25% |
| SBMCH | Barishal | 43 | 6 | 14% | 52 | 5 | 10% | 2 | 0 | 0% |
| CMCH | Chattogram | 43 | 3 | 7% | 54 | 1 | 2% | 6 | 2 | 33% |
| MARMCH | Dinajpur | 31 | 10 | 32% | 40 | 18 | 45% | 3 | 2 | 67% |
| | | 312 | 111 | 36% | 364 | 77 | 21% | 38 | 11 | 29% |

Hospital based influenza surveillance
Monthly hospitalwise influenza lab results
July 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 | 89 | 15 | 17% | 15 | 0 | 0 | 0 | 11 | 0 | 0 | 4 | 0 | 0 |
| RMCH | Rajshahi | 98 | 58 | 59% | 54 | 4 | 0 | 0 | 44 | 0 | 0 | 10 | 1 | 3 |
| CuMCH | Cumilla | 68 | 8 | 12% | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| KMCH | Khulna | 56 | 11 | 20% | 10 | 1 | 0 | 0 | 8 | 0 | 0 | 2 | 0 | 1 |
| JGH | Jashore | 65 | 40 | 62% | 34 | 6 | 0 | 0 | 20 | 0 | 0 | 14 | 0 | 6 |
| JRRMCH | Sylhet | 64 | 20 | 31% | 17 | 3 | 0 | 0 | 16 | 0 | 0 | 1 | 0 | 3 |
| SBMCH | Barishal | 97 | 11 | 11% | 10 | 1 | 0 | 0 | 8 | 0 | 0 | 2 | 0 | 1 |
| CMCH | Chattogram [†] | 103 | 6 | 6% | 5 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 |
| MARMCH | Dinajpur | 74 | 30 | 41% | 27 | 3 | 0 | 0 | 16 | 0 | 0 | 11 | 0 | 3 |
| | | 714 | 199 | 28% | 180 | 19 | 0 | 0 | 136 | 0 | 0 | 44 | 1 | 18 |

Hospital based influenza surveillance
Monthly enrollment by different surveillance groups
July 2019

| Hospital | District | SARI (aged ≥ 5 years) | | | SARI (aged < 5 years) | | |
|----------|-------------|-----------------------|------------|------------|-----------------------|-----------|------------|
| | | Sample | Flu | Flu % | Sample | Flu | Flu % |
| JIMCH | Kishoregonj | 43 | 12 | 28% | 46 | 3 | 7% |
| RMCH | Rajshahi | 60 | 41 | 68% | 38 | 17 | 45% |
| CuMCH | Cumilla | 26 | 4 | 15% | 42 | 4 | 10% |
| KMCH | Khulna | 41 | 10 | 24% | 15 | 1 | 7% |
| JGH | Jashore | 47 | 32 | 68% | 18 | 8 | 44% |
| JRRMCH | Sylhet | 34 | 12 | 35% | 30 | 8 | 27% |
| SBMCH | Barishal | 49 | 8 | 16% | 48 | 3 | 6% |
| CMCH | Chattogram | 52 | 5 | 10% | 51 | 1 | 2% |
| MARMCH | Dinajpur | 51 | 21 | 41% | 23 | 9 | 39% |
| | | 403 | 145 | 36% | 311 | 54 | 17% |

Hospital based influenza surveillance
Influenza results by different age groups
July 2019

| Age groups | July 2019 | | | | | | Initiation - July 2019 | | | | | | | | |
|-------------|-----------------------|------------|------------|-----------------------|-----------|------------|------------------------|--------------|------------|------------------|--------------|------------|-----------------------|------------|-----------|
| | SARI (aged ≥ 5 years) | | | SARI (aged < 5 years) | | | SARI (aged ≥ 5 years) | | | ILI [‡] | | | SARI (aged < 5 years) | | |
| | Sample | Flu | Flu % | Sample | Flu | Flu % | Sample | Flu | Flu % | Sample | Flu | Flu % | Sample | Flu | Flu % |
| <1 Year | - | - | - | 210 | 24 | 11% | - | - | - | 2665 | 189 | 7% | 6,280 | 372 | 6% |
| 1-4 Years | - | - | - | 101 | 30 | 30% | - | - | - | 4217 | 601 | 14% | 2,266 | 352 | 16% |
| 5-14 Years | 68 | 33 | 49% | - | - | - | 3224 | 774 | 24% | 2317 | 547 | 24% | - | - | - |
| 15-24 Years | 91 | 31 | 34% | - | - | - | 3871 | 950 | 25% | 2167 | 413 | 19% | - | - | - |
| 25-39 Years | 75 | 21 | 28% | - | - | - | 3766 | 814 | 22% | 1916 | 299 | 16% | - | - | - |
| 40-59 Years | 87 | 33 | 38% | - | - | - | 4405 | 864 | 20% | 1245 | 201 | 16% | - | - | - |
| ≥ 60 Years | 82 | 27 | 33% | - | - | - | 4560 | 864 | 19% | 400 | 46 | 12% | - | - | - |
| | 403 | 145 | 36% | 311 | 54 | 17% | 19,826 | 4,266 | 22% | 14,927 | 2,296 | 15% | 8,546 | 724 | 8% |

[‡]Outpatient ILI surveillance discontinued in October 2017.

Hospital based influenza surveillance
Hospitalwise influenza lab results
Surveillance initiation - July 2019

| Hospital | District | Initiation | Sample | Flu | Flu % | Flu A ^ψ | Flu B ^λ | 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 |
|---------------------|-------------|------------|---------------|--------------|------------|--------------------|--------------------|----------------------|------------|--------------|----------|----------|-----------------------|------------------------------|------------------------------|
| DNMCH ^γ | Dhaka | Jun 2007 | 2061 | 312 | 15% | 201 | 111 | 0 | 15 | 84 | 0 | 0 | 102 | 13 | 7 |
| CBMCH ^γ | Mymensingh | Oct 2007 | 2053 | 302 | 15% | 206 | 96 | 0 | 7 | 107 | 1 | 0 | 91 | 16 | 10 |
| JIMCH | Kishoregonj | Sep 2007 | 5191 | 1078 | 21% | 736 | 342 | 0 | 9 | 386 | 0 | 0 | 340 | 64 | 108 |
| RMCH | Rajshahi | May 2007 | 3267 | 465 | 14% | 304 | 161 | 0 | 14 | 169 | 0 | 0 | 121 | 39 | 61 |
| SZRMCH ^γ | Bogura | Sep 2007 | 3865 | 653 | 17% | 439 | 213 | 1 | 12 | 256 | 0 | 0 | 170 | 29 | 39 |
| LAMB [†] | Dinajpur | Oct 2007 | 1171 | 112 | 10% | 72 | 40 | 0 | 7 | 41 | 0 | 0 | 24 | 1 | 0 |
| BBMH [†] | Chattogram | Aug 2007 | 1440 | 157 | 11% | 118 | 39 | 0 | 13 | 42 | 0 | 0 | 63 | 3 | 0 |
| CuMCH | Cumilla | Oct 2007 | 4802 | 624 | 13% | 409 | 212 | 3 | 9 | 216 | 0 | 0 | 184 | 28 | 34 |
| KMCH | Khulna | Jul 2007 | 2804 | 438 | 16% | 304 | 134 | 0 | 16 | 146 | 0 | 0 | 142 | 17 | 56 |
| JGH ^{γ†} | Jashore | Sep 2007 | 3733 | 800 | 21% | 495 | 304 | 1 | 10 | 241 | 0 | 0 | 244 | 26 | 140 |
| JRRMCH | Sylhet | Jul 2007 | 3675 | 665 | 18% | 411 | 253 | 1 | 16 | 198 | 0 | 0 | 197 | 34 | 76 |
| SBMCH | Barishal | Aug 2007 | 5393 | 849 | 16% | 529 | 316 | 4 | 9 | 254 | 0 | 0 | 266 | 56 | 111 |
| CMCH | Chattogram | Apr 2014 | 2330 | 490 | 21% | 333 | 154 | 3 | 0 | 128 | 0 | 0 | 205 | 41 | 93 |
| MARMCH ² | Dinajpur | Apr 2014 | 1514 | 341 | 23% | 211 | 130 | 0 | 0 | 106 | 0 | 0 | 103 | 28 | 81 |
| | | | 43,299 | 7,286 | 17% | 4,768 | 2,505 | 13 | 137 | 2,374 | 1 | 0 | 2,252 | 395 | 816 |

^λInfluenza B typing initiated in January 2016.

^ψrRT-PCR result of four samples were equivocal positive for Influenza A.

^ψOne sample collected in June 2013 and another sample collected in June 2017 were co-infected with both A(H3) and A(H1N1)pdm09.

^λThree samples were co-infected with both Influenza B (Yamagata lineage) and Influenza B (Victoria lineage), another ten samples were unsubtypeable.

[‡]Three samples were co-infected with both Influenza A(H1N1)pdm09 and Influenza B (Victoria lineage).

^γOne sample collected in May 2019 was co-infected with both Influenza A(H3) and Influenza B (Victoria lineage).

[†]Surveillance activities ended at LAMB (Dinajpur) and BBMH (Chittagong) in May 2016.

^γSurveillance activities ended at DNMCH (Dhaka), CBMCH (Mymensingh), SZRMCH (Bogra) and JGH (Jessore) in October 2017.

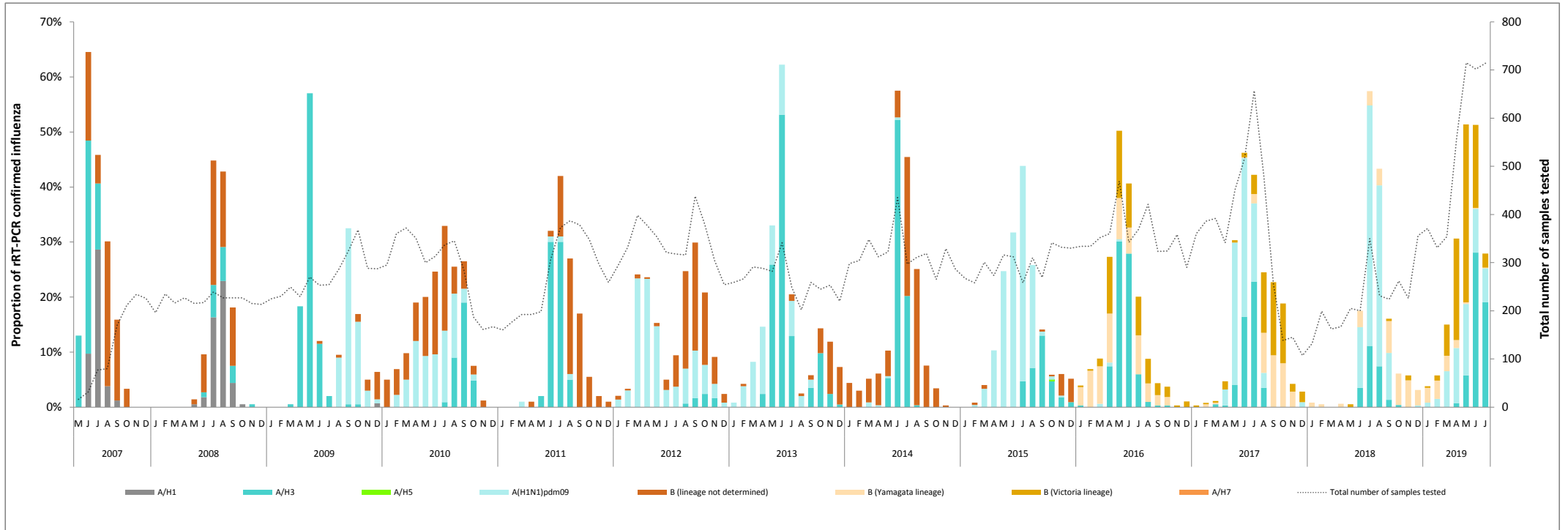
[†]Surveillance activities reinitiated at Jashore 250 bed General Hospital (JGH), Jashore in December 2018.

²Dinajpur 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.

^φ Intensive care units (ICU) surveillance discontinued in January 2019.

Hospital based influenza surveillance
Influenza seasonality graph
May 2007 - July 2019



Note: Influenza B typing initiated in January 2016

Hospital based influenza surveillance
Influenza seasonality graph
Week 31 of 2018 to week 30 of 2019

