**Flu Express** is a weekly report produced by Surveillance Division of the Communicable Disease Branch of the Centre for Health Protection. It monitors and summarizes the latest local and global influenza activities.

### Local Situation of Influenza Activity (as of Oct 30, 2019)

**Reporting period: Oct 20 - 26, 2019 (Week 43)**

- The overall local seasonal influenza activity was at a low level. The latest surveillance data showed that both the percentage of respiratory specimens tested positive for seasonal influenza viruses and influenza-associated hospitalisation rate in public hospitals remained below the baseline thresholds.

- The number of influenza-like illness (ILI) outbreaks remained at a low level. In the past four weeks, the ILI outbreaks mainly occurred in primary schools (10), followed by kindergartens/child care centres (6), residential care home for the elderly (1) and residential care home for persons with disabilities (1).

- The 2019/20 seasonal influenza vaccination programmes, including Vaccination Subsidy Scheme (VSS) and Government Vaccination Programme (GVP), have been launched on 9 and 23 October respectively. In the 2019/20 season, VSS continues to provide subsidised seasonal influenza vaccination (SIV) to children aged 6 months to under 12 years, persons aged 50 years or above, pregnant women, persons with intellectual disabilities and recipients of Disability Allowance. Under GVP, eligible groups for free vaccination are also the same as that of 2018/19. Under the Residential Care Home Vaccination Programme (RVP), SIV services have been expanded to all residential child care centres. The SIV school outreach has been regularised to allow all primary schools to join, and extended to kindergartens, child care centres, and kindergarten-cum-child care centres as pilot. For details, please refer to the webpage [http://www.chp.gov.hk/en/view_content/17980.html](http://www.chp.gov.hk/en/view_content/17980.html)

### Influenza-like-illness surveillance among sentinel general outpatient clinics and sentinel private doctors, 2015-19

In week 43, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 5.2 ILI cases per 1,000 consultations, which was higher than 3.3 recorded in the previous week (Figure 1, left). The average consultation rate for ILI among sentinel private medical practitioners (PMP) was 27.2 ILI cases per 1,000 consultations, which was lower than 29.4 recorded in the previous week (Figure 1, right).

![Figure 1 ILI consultation rate at sentinel GOPC (left) and PMP (right), 2015-19](http://www.chp.gov.hk/en/view_content/17980.html)
Laboratory surveillance, 2015-19

Among the respiratory specimens received in week 43, the positive percentage of seasonal influenza viruses was 1.73%, which was below the baseline threshold of 10.3% and was higher than 1.47% recorded in the previous week (Figure 2). The 82 influenza viruses detected last week included 53 (65%) influenza A(H1), 19 (23%) influenza A(H3), 9 (11%) influenza B and 1 (1%) influenza C.

Figure 2 Percentage of respiratory specimens tested positive for influenza viruses, 2015-19 (upper: overall positive percentage, lower: positive percentage by subtypes)

(Note: The baseline threshold is 1.96 standard deviation above the average weekly positive percentage during non-season periods from 2014-2018.)
Influenza-like illness outbreak surveillance, 2015-19

In week 43, nine ILI outbreaks occurring in schools/institutions were recorded (affecting 55 persons), as compared to four outbreaks recorded in the previous week (affecting 26 persons) (Figure 3). In the first 4 days of week 44 (Oct 27 to 30), four ILI outbreaks in schools/institutions were recorded (affecting 17 persons).

<table>
<thead>
<tr>
<th>Type of institutions</th>
<th>Week 42</th>
<th>Week 43</th>
<th>First 4 days of week 44 (Oct 27 to 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten/child care centre (CCC/KG)</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Primary school (PS)</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Secondary school (SS)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Residential care home for the elderly</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Residential care home for persons with disabilities</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total number of outbreaks</strong></td>
<td>4</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total number of persons affected</strong></td>
<td>26</td>
<td>55</td>
<td>17</td>
</tr>
</tbody>
</table>

*Figure 3 ILI outbreaks in schools/institutions, 2015-19*
Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2015-19

In week 43, the overall admission rates in public hospitals with principal diagnosis of influenza was 0.03 (per 10,000 population), which was below the baseline threshold of 0.23 and was lower than 0.04 recorded in the previous week. The influenza-associated admission rates for persons aged 0-5 years, 6-11 years, 12-17 years, 18-49 years, 50-64 years and 65 years or above were 0.27, 0.11, 0.03, 0.01, 0.02 and 0.03 cases (per 10,000 people in the age group) respectively, as compared to 0.27, 0.03, 0.03, 0.01, 0.04 and 0.05 cases in the previous week (Figure 4).

Figure 4 Influenza-associated hospital admission rates, 2015-19 (upper: overall rate, lower: rates by age groups)

[Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014-2018.]
## Rate of ILI syndrome group in accident and emergency departments, 2015-19

In week 43, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 156.0 (per 1,000 coded cases), which was higher than the rate of 154.5 in the previous week (Figure 5).

*Note: This syndrome group includes codes related to ILI such as influenza, upper respiratory tract infection, fever, cough, throat pain, and pneumonia.*

<table>
<thead>
<tr>
<th>Month</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Figure 5 Rate of ILI syndrome group in AEDs, 2015-19

## Fever surveillance at sentinel child care centres/ kindergartens, 2015-19

In week 43, 0.94% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 0.93% recorded in the previous week (Figure 6).

**Figure 6 Percentage of children with fever at sentinel CCCs/KGs, 2015-19**

## Fever surveillance at sentinel residential care homes for the elderly, 2015-19

In week 43, 0.08% of residents in the sentinel residential care homes for the elderly (RCHEs) had fever (38°C or above), compared to 0.10% recorded in the previous week (Figure 7).

**Figure 7 Percentage of residents with fever at sentinel RCHEs, 2015-19**

## Influenza-like illness surveillance among sentinel Chinese medicine practitioners, 2015-19

In week 43, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 1.83 ILI cases per 1,000 consultations as compared to 1.85 recorded in the previous week (Figure 8).

**Figure 8 ILI consultation rate at sentinel CMPs, 2015-19**
Surveillance of severe influenza cases

(Note: The data reported are provisional figures and subject to further revision.)

**Surveillance for intensive care unit (ICU) admissions/deaths with laboratory confirmation of influenza among adult patients (Aged 18 years or above)**

Since 2018, the Centre for Health Protection (CHP) has collaborated with the Hospital Authority and private hospitals to monitor ICU admissions and deaths with laboratory confirmation of influenza among adult patients regularly. For surveillance purpose, the cases refer to laboratory-confirmed influenza patients who required ICU admission or died within the same admission of influenza infection. Their causes of ICU admission or death may be due to other acute medical conditions or underlying diseases.

- In week 43, three adult cases of ICU admission/death with laboratory confirmation of influenza (including two deaths) were recorded, as compared to one fatal case in the previous week.

<table>
<thead>
<tr>
<th>Week</th>
<th>A(H1)</th>
<th>A(H3)</th>
<th>B</th>
<th>C</th>
<th>A (pending subtype)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 42</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Week 43</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Surveillance of severe paediatric influenza-associated complication/death (Aged below 18 years)**

- In week 43 and the first 4 days of week 44 (Oct 27 to 30), there were no cases of severe paediatric influenza-associated complications/deaths.
- In 2019, 38 paediatric cases of influenza-associated complication/death were recorded, in which one of them was fatal (as of Oct 30). About 73% had not ever received the influenza vaccine for the respective seasons.

![Weekly number of severe influenza cases by age groups, 2015-19](image_url)

*Figure 9 Weekly number of severe influenza cases by age groups, 2015-19 (the percentage positive for influenza viruses in Figure 2 is also shown in this graph)*

*Note: The surveillance system for severe influenza cases among adult patients aged 18 years or above was only activated intermittently during influenza seasons before 2018.*
Surveillance of oseltamivir resistant influenza A(H1N1)pdm09 virus infection

- In week 43 and the first 4 days of week 44 (Oct 27 to 30), there were no new reports of oseltamivir (Tamiflu) resistant influenza A(H1N1)pdm09 virus infection. There are totally 48 reports of oseltamivir resistant influenza A(H1N1)pdm09 virus detected in Hong Kong since 2009.

Global Situation of Influenza Activity

In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels in most countries. In Southern Asia, influenza activity was low across reporting countries. In South East Asia, influenza activity increased in Lao PDR and the Philippines in recent weeks. In the temperate zones of the southern hemisphere, influenza activity was low in most countries, though influenza B virus detections continued to be reported in Chile. Worldwide, seasonal influenza A viruses continued to account for the majority of detections, though the proportion of influenza B viruses increased in recent weeks.

- In the United States (week ending Oct 19, 2019), influenza activity increased slightly, but remained low. The proportion of outpatient visits for ILL was 1.7%, which was below the national baseline of 2.4%. The percentage of respiratory specimens testing positive for influenza was 2.4%, which was lower than that in the previous week.
- In Canada (week ending Oct 19, 2019), influenza activity remained at interseasonal levels. The percentage of tests positive for influenza was 1.9% in week 42. Influenza A(H3N2) was the most common influenza virus circulating.
- In the United Kingdom (week ending Oct 20, 2019), all influenza activity indicators were below baseline. The positivity of influenza detection was 2.2%, below the baseline threshold of 9.7%. The most common influenza viruses detected were influenza A(H3).
- In Europe (week ending Oct 20 2019), influenza activity was low. Influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to medical care. Both influenza A and B type viruses were detected.
- In Mainland China (week ending Oct 20, 2019), influenza activity in both northern and southern provinces were at interseasonal levels. Only few influenza viruses were detected in both northern and southern provinces, which included influenza A(H3N2) and B(Victoria).
- In Macau (week ending Oct 19, 2019), the overall ILL cases and positive detections for influenza viruses were both on an increasing trend. Influenza A(H3) was the predominant influenza virus circulating.
- In Taiwan (week ending Oct 19, 2019), influenza activity slightly decreased, and was below the seasonal threshold. In the recent four weeks, influenza A(H1N1) was the predominant strain (82.8%) in the community.
- In Japan (week ending Oct 20, 2019), the average number of reported ILL cases per sentinel site decreased to 0.72 last week from 0.90 in the previous week, below the baseline level. The most frequently detected influenza virus was influenza A(H1)pdm09 (90%) in the past five weeks, followed by influenza A(H3) (5%) and influenza B (5%).
- In Korea (week ending Oct 19, 2019), the weekly ILL rate was 4.6, which was higher than 4.2 recorded in the previous week. The proportion of influenza detections was 3.4%, and the most common detected viruses were influenza A(H1)pdm09.

Sources:
Information have been extracted from the following sources when updates are available: World Health Organization, United States Centers for Disease Control and Prevention, Public Health Agency of Canada, Public Health England, Joint European Centre for Disease Prevention and Control-World Health Organization/Flu News Europe, Chinese National Influenza Center, Health Bureau of Macao Special Administrative Region, Taiwan Centres for Disease Control, Japan Ministry of Health, Labour and Welfare and Korean Centers for Disease Control and Prevention.