COVID-19 & 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 COVID-19 and influenza activities.

Local Situation of COVID-19 Activity (as of Jul 26, 2023)

- Reporting period: Jul 16 – Jul 22, 2023 (Week 29)

  - The latest surveillance data showed that the local COVID-19 activity has dropped.
  - Members of the public are advised to maintain strict personal and environmental hygiene at all times for personal protection against COVID-19 infection and prevention of the spread of the disease in the community. For more details, please visit the COVID-19 information page (https://www.chp.gov.hk/en/healthtopics/content/24/102466.html).
Laboratory surveillance for COVID-19 cases

Positive nucleic acid test laboratory detections for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus

In week 29, the weekly number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus was 567 as compared to 742 in the preceding week. (Figure 1.1)

In the first 4 days of week 30 (Jul 23 – Jul 26), the daily number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus ranged from 63 to 93.

Since Jan 30, 2023, the cumulative number of positive nucleic acid test laboratory detections was 39,607 (as of Jul 26, 2023).

![Figure 1.1 Weekly number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus](image-url)
Positive detection rate of specimens tested positive for SARS-CoV-2 virus at community testing centres/stations\(^\text{5}\#\) and the Public Health Laboratory Services Branch

Among the 5,081 respiratory specimens received by the Public Health Laboratory Services Branch (PHLSB) in week 29, 436 (8.58\%) were tested positive for SARS-CoV-2 virus. (Figure 1.2)

\[\begin{array}{c}
\text{Figure 1.2 Percentage of specimens tested positive for SARS-CoV-2 virus at CTC and PHLSB}
\end{array}\]

\(^5\)Since April 29, 2023, pre-departure PCR testing was no longer required for travelling to some areas outside Hong Kong and it might result in the significant reduction in number of specimens collected from CTC. Interpretation of related trends and comparison with past data should be made with caution.

\(^\#\)With effect from May 13, 2023, the existing COVID-19 community testing centres and community testing stations (CTC/CTSs) ceased operation.
Laboratory surveillance on genetic characterisation for COVID-19 cases

PHLSB of the Centre for Health Protection (CHP) conducts genetic characterisation on a sample of specimens positive for SARS-CoV-2 as well as reported severe and death cases for COVID-19. Between Jul 20 and Jul 26, 2023, XBB and its descendant lineages comprised 99.1% of all characterised specimens during the period, as compared to the 96.6% in Week 26. (Figure 1.3 & 1.4)

Figure 1.3 Proportion of variants among specimens tested positive for SARS-CoV-2 virus by PHLSB

Figure 1.4 Proportion of variants among specimens tested positive for SARS-CoV-2 virus by PHLSB in the past 4 weeks

* Excluding BF.7, BN.1, CH.1.1, XBB, other recombinant sublineages and their descendant lineages

^ Among them, some were confirmed to be BA.2.75 sublineages other than CH.1.1.

@ Including XAY, XBC and XBF

Include XBL (recombinant of XBB.1 and BA.2.75) and some XBB specimens pending their descendant lineage information
COVID-19 outbreak surveillance

In week 29, 1 COVID-19 outbreak occurring in schools/institutions was recorded (affecting 3 persons), as compared to 3 outbreaks recorded in the previous week (affecting 16 persons). (Figure 1.5)

In the first 4 days of week 30 (Jul 23 – Jul 26), 0 COVID-19 outbreak occurring in schools/institutions was recorded (affecting 0 persons).

<table>
<thead>
<tr>
<th>Type of institutions</th>
<th>Week 28</th>
<th>Week 29</th>
<th>First 4 days of week 30 (Jul 23 – Jul 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child care centre/ kindergarten (CCC/KG)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Primary school (PS)</td>
<td>0</td>
<td>0</td>
<td>0</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>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Residential care home for persons with disabilities</td>
<td>1</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>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total number of persons affected</strong></td>
<td>16</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
Surveillance of severe and fatal COVID-19 cases
(Note: The data reported are provisional figures and subject to further revision.)

In week 29, the weekly number of severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 was 43 as compared to 55 in the preceding week. (Figure 1.6)

In the first 4 days of week 30 (Jul 23 – Jul 26), 17 severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 were recorded.

Since Jan 30, 2023, the cumulative number of fatal cases with cause of death preliminarily assessed to be related to COVID-19 was 822 (as of Jul 26, 2023).

![Figure 1.6 Weekly number of severe COVID-19 cases including deaths](image)

*Figure 1.6 Weekly number of severe COVID-19 cases including deaths*
Sewage surveillance of SARS-CoV-2 virus

In week 29, the 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance was around 294,000 copy/L as compared to around 424,000 copy/L in the preceding week. (Figure 1.7)

![Figure 1.7 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance since May 1, 2022](image-url)
COVID-19 surveillance among sentinel general out-patient clinics and sentinel private medical practitioner clinics

In week 29, the average consultation rate for COVID-19 among sentinel general out-patient clinics (GOPC) and sentinel private medical practitioner clinics were 67.7 (Figure 1.8) and 18.9 (Figure 1.9) COVID-19 cases per 1,000 consultations, respectively.

Figure 1.8 Average consultation rate of COVID-19 cases in GOPC

Figure 1.9 Average consultation rate of COVID-19 cases in private medical practitioner clinics
Global situation of COVID-19 activity

- According to the World Health Organization (WHO), as of Jul 16, 2023, over 768 million confirmed cases and over 6.9 million deaths have been reported globally. Over 836,000 new cases and over 4500 deaths were reported in the last 28 days (Jun 19 to Jul 16, 2023) globally.

- The highest numbers of new 28-day cases were reported from Korea, Brazil, Australia, Singapore and New Zealand. The highest numbers of new 28-day deaths were reported from Brazil, Australia, Peru, Russia and Italy.

- WHO commented that current trends in reported COVID-19 cases were underestimates of the true number due to the reduction in testing and delays in reporting in many countries. Therefore, related data should be interpreted with caution.

- WHO has updated its tracking system and working definitions for variants of SARS-CoV-2. From Mar 15 2023, the tracking system classifies Omicron sublineages as variants under monitoring (VUMs), variants of interest (VOIs), or variant of concern (VOCs). Currently WHO is monitoring two VOIs, which are XBB.1.5 and XBB.1.16, and seven VUMs, which are BA.2.75, CH.1.1, XBB, XBB.1.9.1, XBB.1.9.2, XBB.2.3 and EG.5.

- Between Jun 26 to Jul 2 2023, the prevalence of XBB.1.16 was 20.7%, similar to the 20.2% between May 29 to Jun 4, 2023. During the same period, the prevalence of XBB.1.5 decreased from 23.5% to 15.8%. Among the VUMs, the prevalence of XBB.1.9.2 showed increasing trends (12.0% to 17.4%). Other VUMs presented stable or declining trends.

Sources:
Information will be extracted from the following sources when updates are available: World Health Organization Weekly epidemiological update on COVID-19
Local Situation of Influenza Activity (as of Jul 26, 2023)

Reporting period: Jul 16 – 22, 2023 (Week 29)

- The latest surveillance data showed the overall influenza activity continued to increase.
- Influenza can cause serious illnesses in high-risk individuals and even healthy persons. Given that seasonal influenza vaccines are safe and effective, all persons aged 6 months or above except those with known contraindications are recommended to receive influenza vaccine to protect themselves against seasonal influenza and its complications, as well as related hospitalisations and deaths.
- People who aged six months or above and have not yet received the seasonal influenza vaccination in the 2022/23 season can still receive the vaccine to enhance personal protection. For details about influenza vaccination, please refer to the webpage (https://www.chp.gov.hk/en/features/17980.html).
- Apart from getting influenza vaccination, members of the public should always maintain good personal and environmental hygiene.
- For the latest information on seasonal influenza and its prevention, please visit the Centre for Health Protection’s Seasonal Influenza page (http://www.chp.gov.hk/en/view_content/14843.html).

Influenza-like-illness surveillance among sentinel general out-patient clinics and sentinel private medical practitioner clinics, 2019-23

In week 29, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 2.3 ILI cases per 1,000 consultations, which was lower than 3.2 recorded in the previous week (Figure 2.1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 33.9 ILI cases per 1,000 consultations, which was higher than 24.7 recorded in the previous week (Figure 2.1, right).

Figure 2.1 ILI consultation rates at sentinel GOPC (2020-23) (left) and PMP clinics (2019-23) (right)

Note: The CHP has started to use electronic data on diagnosis coding of patients of the Hospital Authority's GOPC for sentinel surveillance since January 2020, replacing manual data collection in the past.
Laboratory surveillance, 2019-23

Among the 6,110 respiratory specimens* received in week 29, 524 (8.58%) were tested positive for seasonal influenza A or B viruses. Among the subtyped influenza detections, there were 69 (13%) influenza A(H1), 445 (86%) influenza A(H3) and 4 (1%) influenza B viruses. The positive percentage (8.58%) was below the baseline threshold of 9.21% but was higher than 7.70% recorded in the previous week (Figure 2.2).

Figure 2.2 Percentage of respiratory specimens tested positive for influenza viruses, 2019-23 (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 week 49 to 2019 week 48.]

Remarks: Some specimens may contain vaccine strains from people with recent history of receiving live-attenuated influenza vaccine

Surveillance of oseltamivir resistant influenza A and B viruses

- In May 2023, there were no new reports of oseltamivir (Tamiflu) resistant influenza A and B viruses.
- For the results of previous months, please refer to the following webpage:  

* Including 5,081 specimens received by Public Health Laboratory Services Branch, Centre for Health Protection and 1,029 specimens received by the Hospital Authority
Influenza-like illness outbreak surveillance, 2019-23

In week 29, 8 ILI outbreaks occurring in schools/institutions were recorded (affecting 57 persons), as compared to 7 outbreaks recorded in the previous week (affecting 43 persons) (Figure 2.3). In the first 4 days of week 30 (Jul 23 to 26), 2 ILI outbreak occurring in schools/institutions were recorded (affecting 14 persons).

![Figure 2.3 ILI outbreaks in schools/institutions, 2019-23](image)

<table>
<thead>
<tr>
<th>Type of institutions</th>
<th>Week 28</th>
<th>Week 29</th>
<th>First 4 days of Week 30 (Jul 23 – 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child care centre/ kindergarten (CCC/KG)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Primary school (PS)</td>
<td>0</td>
<td>0</td>
<td>0</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>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Residential care home for persons with disabilities</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total number of outbreaks** | 7       | 8       | 2

**Total number of persons affected** | 43      | 59      | 14
Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2019-23

In week 29, the overall admission rates in public hospitals with principal diagnosis of influenza was 0.28 (per 10,000 population), which was above the baseline threshold of 0.25 but was lower than 0.35 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 2.00, 1.01, 0.49, 0.07, 0.07, and 0.46 cases (per 10,000 people in the age group) respectively, as compared to 2.04, 1.27, 0.07, 0.07, 0.08 and 0.63 cases in the previous week (Figure 2.4).

![Influenza-associated hospital admission rates, 2019-23](image)

*Figure 2.4 Influenza-associated hospital admission rates, 2019-23 (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 week 49 to 2019 week 48.]
Rate of ILI syndrome group in accident and emergency departments, 2019-23

In week 29, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 161.4 (per 1,000 coded cases), which was higher than the rate of 155.6 in the previous week (Figure 2.5).

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

Fever surveillance at sentinel residential care homes for the elderly, 2019-23

In week 29, 0.16% of residents in the sentinel residential care homes for the elderly (RCHEs) had fever (38°C or above), compared to 0.08% recorded in the previous week (Figure 2.7).

Influenza-like illness surveillance among sentinel Chinese medicine practitioners, 2019-23

In week 29, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 0.69 ILI cases per 1,000 consultations as compared to 0.76 recorded in the previous week (Figure 2.8).

Fever surveillance at sentinel child care centres/ kindergartens, 2019-23

In week 29, 1.39% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 1.09% recorded in the previous week (Figure 2.6).
Surveillance of severe influenza cases

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

**Surveillance for intensive care unit (ICU) admission/death 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 29, 16 adult cases of ICU admission/deaths with laboratory confirmation of influenza were recorded (including 8 deaths) as compared to 8 cases (including 6 deaths) recorded in the previous week.

<table>
<thead>
<tr>
<th>Week</th>
<th>A(H1)</th>
<th>A(H3)</th>
<th>B</th>
<th>A (pending subtype)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 28</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Week 29</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

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

- In week 29 and the first 4 days of week 30 (Jul 23 – 26), there was 1 case of severe paediatric influenza-associated complication/death.

<table>
<thead>
<tr>
<th>Reporting week</th>
<th>Age</th>
<th>Sex</th>
<th>Complication</th>
<th>Fatal case?</th>
<th>Influenza subtype</th>
<th>History of receiving influenza vaccine for this season</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>25 months</td>
<td>Male</td>
<td>Acute necrotising encephalopathy of childhood complicated with respiratory failure</td>
<td>No</td>
<td>Influenza A (H3)</td>
<td>No</td>
</tr>
</tbody>
</table>

- In 2023, 7 paediatric cases of severe influenza-associated complication/death were recorded, in which 3 of them were fatal (as of Jul 26, 2023).

*Figure 2.9 Weekly number of severe influenza cases by age groups, 2019-23 (the percentage positive for influenza viruses*
Global Situation of Influenza Activity

Globally, influenza detections remained low, but in southern hemisphere, some countries reported variable changes in influenza detections in recent weeks while detections in other countries seemed to have peaked.

- In the United States (week ending Jul 15, 2023), influenza activity remained low. The percentage of specimens tested positive for influenza remained low (0.9%). The percentage of out-patient visits for ILI was 1.2%, which was below the national baseline of 2.5%.
- In Canada (week ending Jun 17, 2023), influenza activity had been stable and remained at inter-seasonal levels. The weekly percentage of tests positive for influenza was 1.0%.
- In the United Kingdom (week ending Jul 16, 2023), influenza activity remained low. Influenza positivity remained low and stable at 0.8%. The weekly ILI consultation rate in England remained stable and was within baseline activity levels.
- In Europe (week ending Jun 19, 2023), the influenza activity remained at inter-seasonal level. In week 25, the percentage of specimens tested positive for influenza remained low (1%).
- In Mainland China (week ending Jul 16, 2023), influenza surveillance data showed that influenza activities in the northern and southern provinces were at low levels. The percentage of specimens tested positive for influenza remained low (less than 0.5%).
- In Taiwan (week ending Jul 22, 2023), influenza activity had a decreasing trend. The percentage of specimens tested positive for influenza in week 27 was 12.3%. Influenza A(H1N1) and A(H3N2) viruses were co-circulating.
- In Japan (week ending Jul 16, 2023), the average number of reported ILI cases per sentinel site slightly increased to 1.76 from 1.66 in the preceding week, and was above the baseline level of 1.00. Influenza A(H3) viruses were predominating.
- In Korea (week ending Jul 15, 2023), the weekly ILI rate remained higher than epidemic threshold (4.9 cases per 1,000 outpatients). The rate in week 28 was 16.9 per 1,000 out-patient visits as compared to 16.3 in the preceding week. In week 28, 21 out of 333 respiratory specimens (6.3%) were tested positive for influenza (including 6 influenza A(H3N2) and 14 influenza A(H1N1)pdm09).
- In Singapore (week ending Jul 22, 2023), the average daily number of consultations for acute respiratory infection remained low. The overall positivity rate for influenza among ILI samples in the community was 24.7% in the past 4 weeks. Majority of the influenza detections in June were influenza A(H3N2) viruses (58.5%), followed by influenza A(H1N1) (34.1%) and influenza B viruses (6.8%).
- In Australia (fortnight ending Jul 9, 2023), influenza activity in the community were stable. This fortnight (Jun 26 to Jul 9), the ILI consultation rate among sentinel general practitioners was 8.5 cases per 1,000 consultations, as compared to 8.7 in the previous fortnight. Among the 23,636 samples tested across sentinel laboratories, 12.9% were positive for influenza, compared to 10.8% in the previous fortnight. Influenza A(H1N1) and influenza B viruses were co-circulating.
- In New Zealand (week ending Jul 16, 2023), ILI activity in the community remains moderately elevated in line with expected seasonal trends, but it remained lower than that at the same time in 2022. The ILI consultation rate was lower than that observed at the same time in 2022 and 2015–2019. Influenza A(H1N1) and influenza B viruses had been the most commonly detected viruses in the community in recent weeks.

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, UK Health Security Agency, Joint European Centre for Disease Prevention and Control-World Health Organization/Flu News Europe, Chinese National Influenza Center, Taiwan Centers for Disease Control, Japan Ministry of Health, Labour and Welfare, Korean Centers for Disease Control and Prevention, Singapore Ministry of Health, Australian Department of Health and Aged Care and New Zealand Ministry of Health.