

COVID-19 & FLU EXPRESS



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 Dec 20, 2023)

Reporting period: Dec 10 – Dec 16 2023 (Week 50)

- The latest surveillance data showed that the overall local activity of COVID-19 is beginning to rise slightly, although still at a relatively low level.
- Concerning the monitoring of SARS-CoV-2 variants, a decrease in the prevalence of XBB and its descendant lineages was observed in both the sewage samples and specimens from human COVID-19 cases sent for genetic characterisation. At the same time, increasing prevalence of BA.2.86 and its descendant lineages (including JN.1 which was newly classified as a Variant of Interest (VOI) by the World Health Organization (WHO)) was observed. However, the current evidence does not suggest JN.1 will cause a more severe disease than the previous prevalent XBB and its descendant lineages.
- 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. High risk people (e.g. persons with underlying medical conditions or persons who are immunocompromised) should adopt additional measures to protect themselves such as wearing mask properly when going to public places. For other details, please visit the COVID-19 information page (<https://www.chp.gov.hk/en/healthtopics/content/24/102466.html>).
- Members of the public are advised to take note of the latest recommendations on the use of COVID-19 vaccines in Hong Kong to protect themselves from serious outcomes of COVID-19. High-risk priority groups are recommended to receive a dose of COVID-19 vaccine at least six months since the last dose or infection before a possible COVID-19 winter surge in the coming months, regardless of the number of doses received previously. For more details, please visit (https://www.chp.gov.hk/files/pdf/consensus_interim_recommendations_on_the_use_of_covid19_vaccines_in_hong_kong_11oct.pdf).
- For the latest information on COVID-19 and prevention measures, please visit the thematic website of COVID-19 (<https://www.coronavirus.gov.hk/eng/index.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 50, the weekly number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus was 120 as compared to 87 in the preceding week. (Figure 1.1)

In the first 4 days of week 51 (Dec 17 – Dec 20), the daily number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus ranged from 19 to 39.

Since Jan 30, 2023, the cumulative number of positive nucleic acid test laboratory detections was 48,467 (as of Dec 20, 2023).

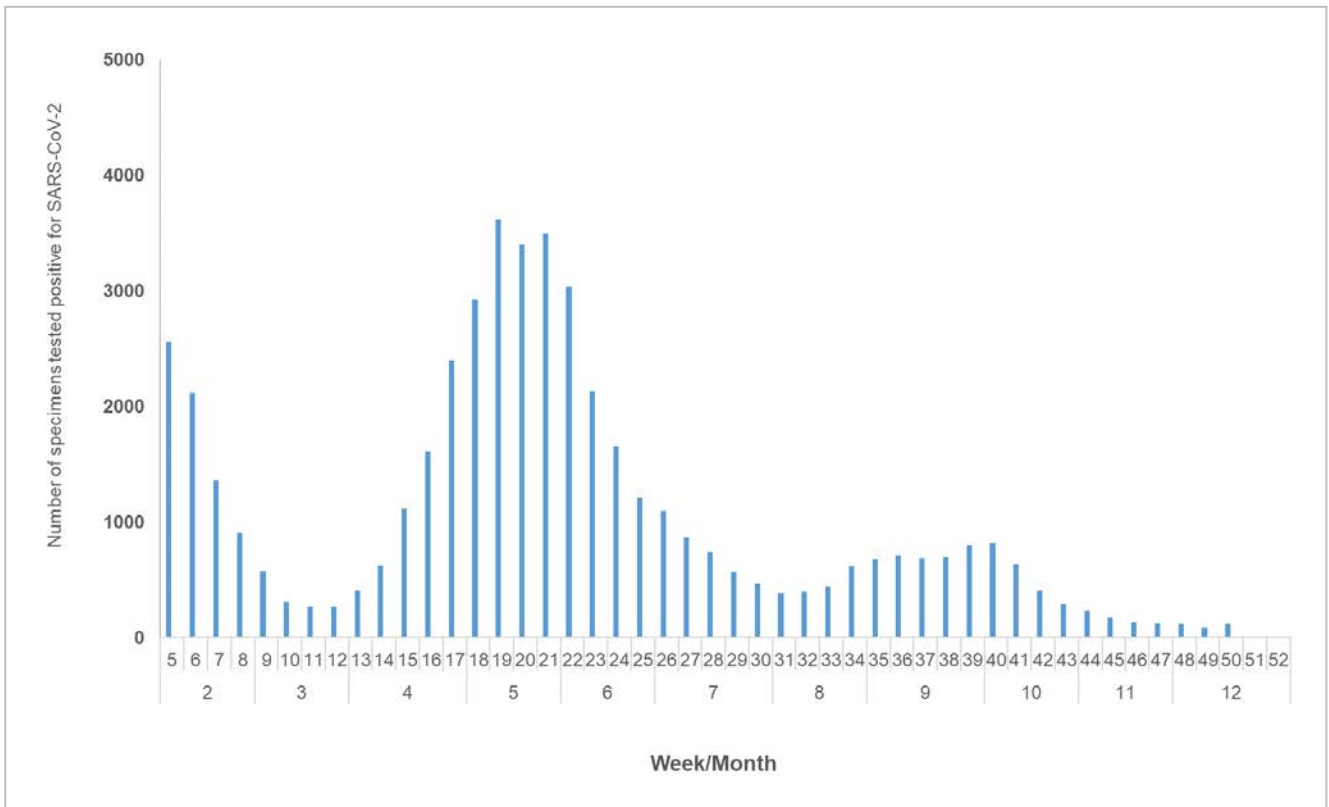


Figure 1.1 Weekly number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus

Positive detection rate of specimens tested positive for SARS-CoV-2 virus at the Public Health Laboratory Services Branch

Among the 5,881 respiratory specimens received by the Public Health Laboratory Services Branch (PHLSB) in week 50, 115 (1.96%) were tested positive for SARS-CoV-2 virus as compared to 84 (1.44%) in the preceding week. (Figure 1.2)

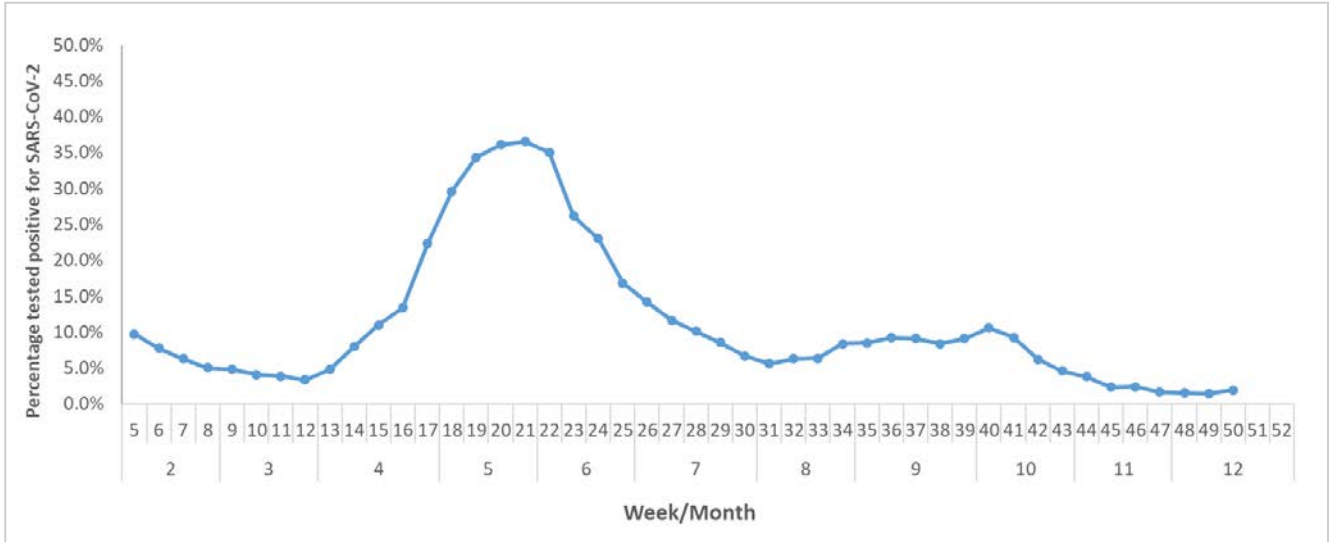


Figure 1.2 Percentage of specimens tested positive for SARS-CoV-2 virus at PHLSB

COVID-19 outbreak surveillance

In week 50, 2 COVID-19 outbreaks occurring in schools/institutions were recorded (affecting 12 persons), as compared to 1 outbreak recorded in the previous week (affecting 5 persons). (Figure 1.3)

In the first 4 days of week 51 (Dec 17 – Dec 20), 1 COVID-19 outbreak occurring in schools/institutions was recorded (affecting 4 persons).

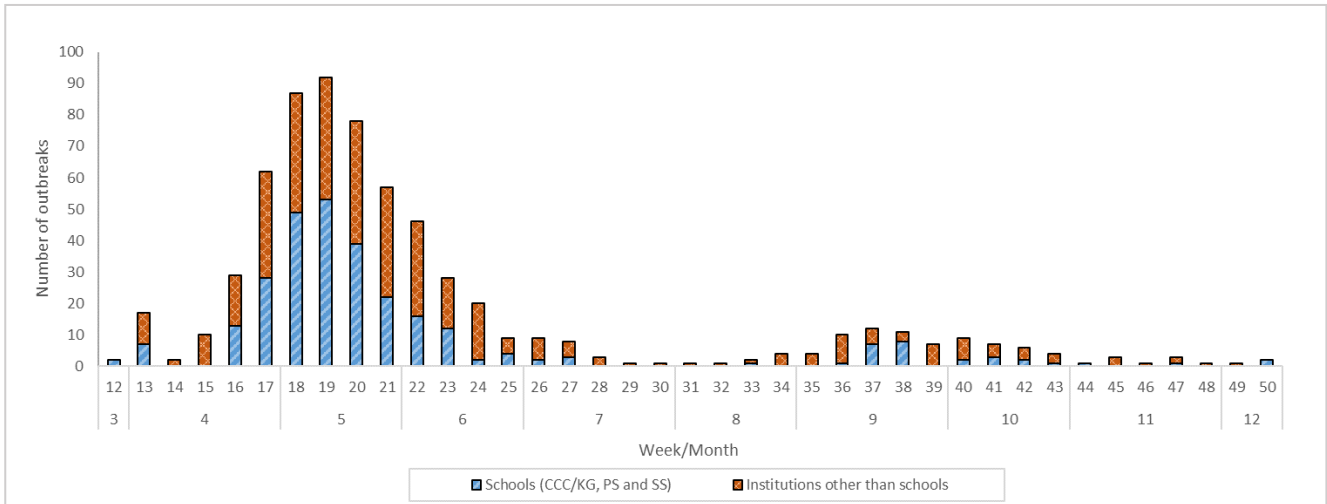


Figure 1.3 COVID-19 outbreaks in schools/institutions

Type of institutions	Week 49	Week 50	First 4 days of week 51 (Dec 17 – Dec 20)
Child care centre/ kindergarten (CCC/KG)	0	0	0
Primary school (PS)	0	2	0
Secondary school (SS)	0	0	0
Residential care home for the elderly	1	0	1
Residential care home for persons with disabilities	0	0	0
Others	0	0	0
<i>Total number of outbreaks</i>	1	2	1
<i>Total number of persons affected</i>	5	12	4

Surveillance of severe and fatal COVID-19 cases

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

In week 50, the weekly number of severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 was 0 as compared to 5 in the preceding week. (Figure 1.4)

Since Jan 30, 2023, the cumulative number of fatal cases with cause of death preliminarily assessed to be related to COVID-19 was 1,005 (as of Dec 16, 2023).

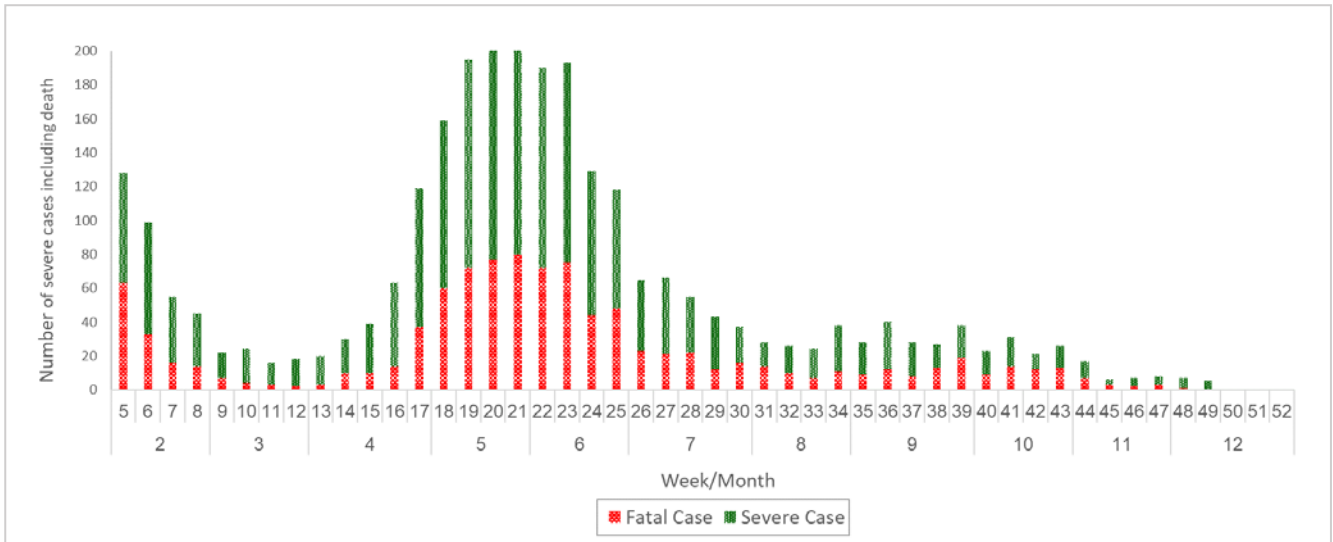


Figure 1.4 Weekly number of severe COVID-19 cases including deaths

Sewage surveillance of SARS-CoV-2 virus

In week 50, the 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance was around 106,000 copy/L as compared to around 85,000 copy/L in the preceding week. (Figure 1.5)

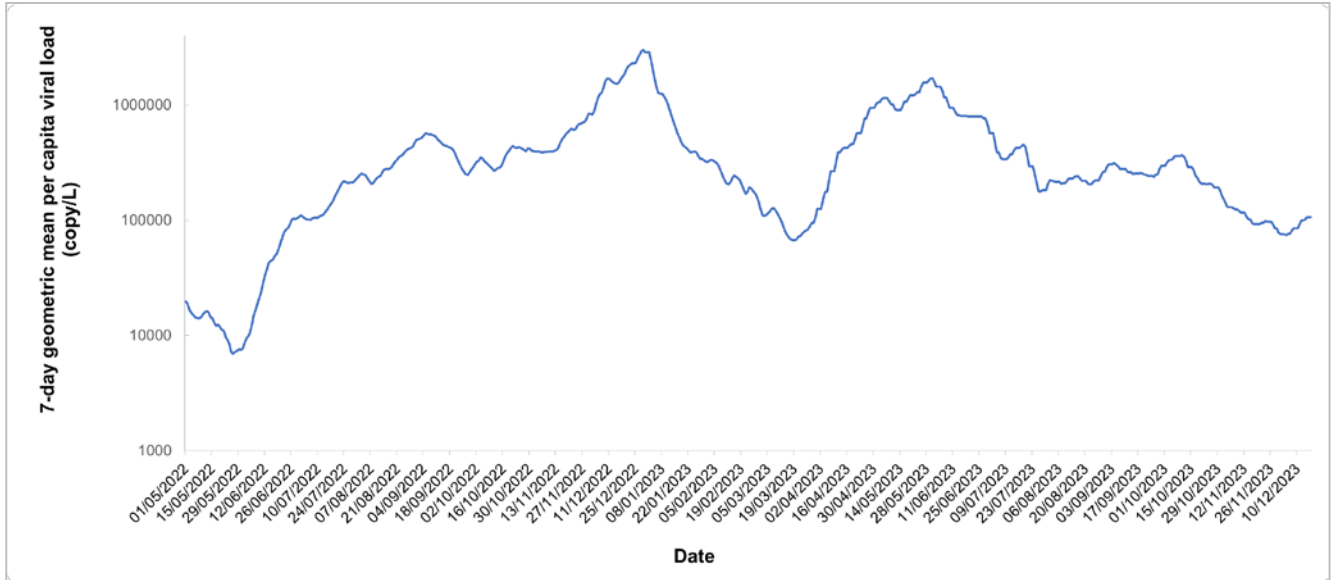


Figure 1.5 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance since May 1, 2022

COVID-19 surveillance among sentinel general out-patient clinics and sentinel private medical practitioner clinics

In week 50, the average consultation rate for COVID-19 among sentinel general out-patient clinics (GOPC) and sentinel private medical practitioner clinics were 9.1 (Figure 1.6) and 3.7 (Figure 1.7) COVID-19 cases per 1,000 consultations, respectively.

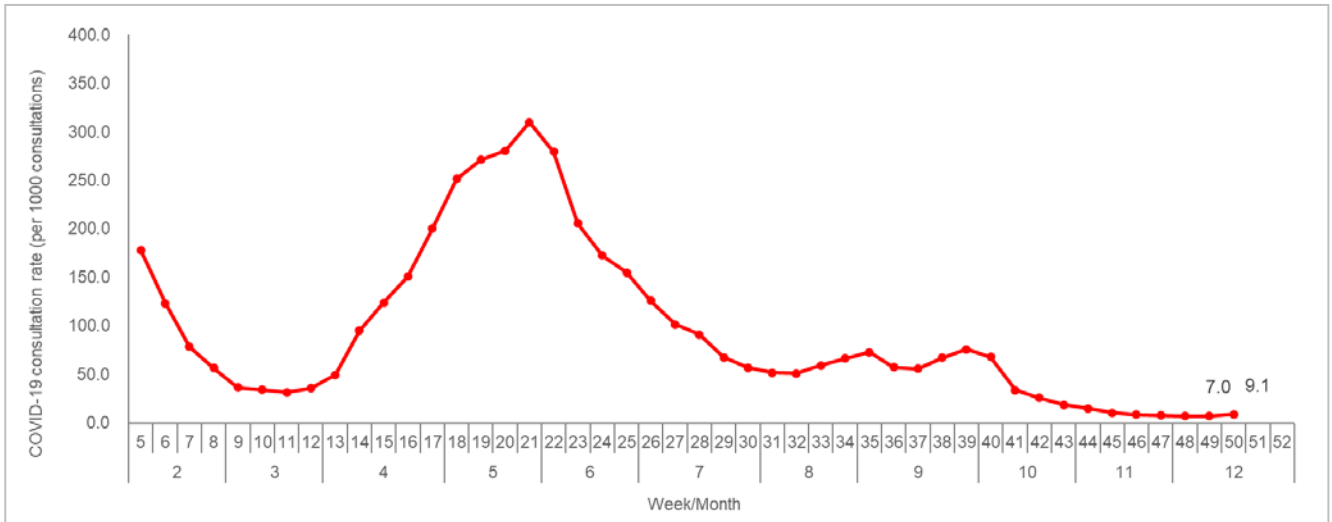


Figure 1.6 Average consultation rate of COVID-19 cases in GOPC

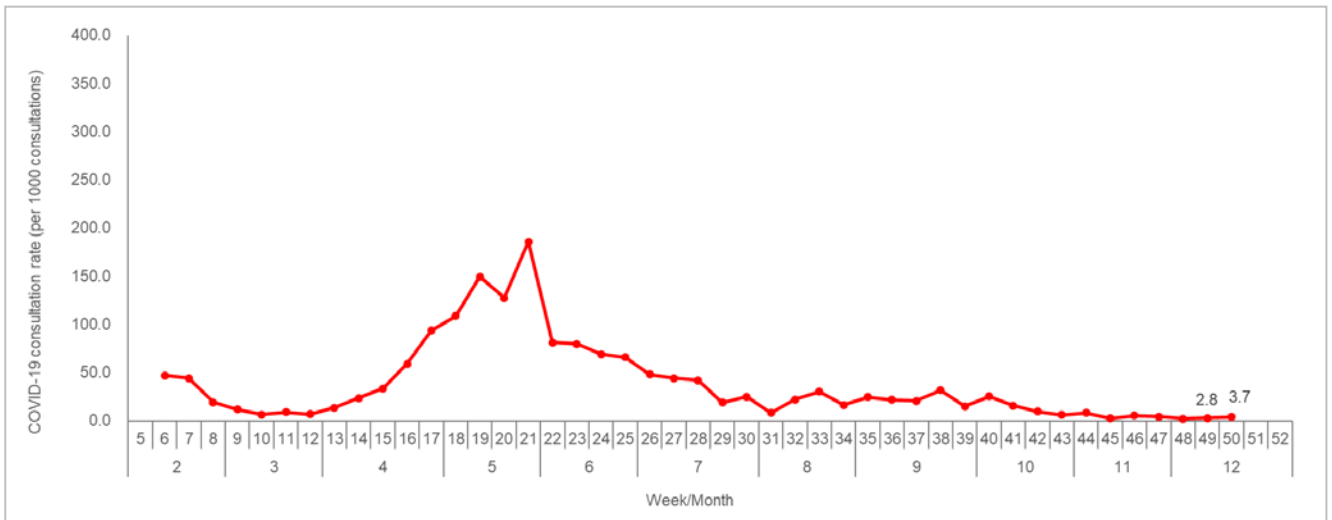


Figure 1.7 Average consultation rate of COVID-19 cases in private medical practitioner clinics

Surveillance on SARS-CoV-2 variants

The Centre for Health Protection (CHP) conducts surveillance on SARS-CoV-2 variants from sewage samples. The latest surveillance data (as of Dec 20, 2023) showed that XBB and its descendant lineages continued to be the most prevalent variant, comprising around 70% of all characterised specimens, but the proportion has dropped when compared with the previous weeks.

At the same time, the prevalence of BA.2.86 and its descendant lineages increased, comprising about 25% of all specimens. WHO’s newly designated variant of interest JN.1 constituted about 15% of all specimens, while non-JN.1 sublineages of BA.2.86 accounted for about 10%. (Figure 1.8)

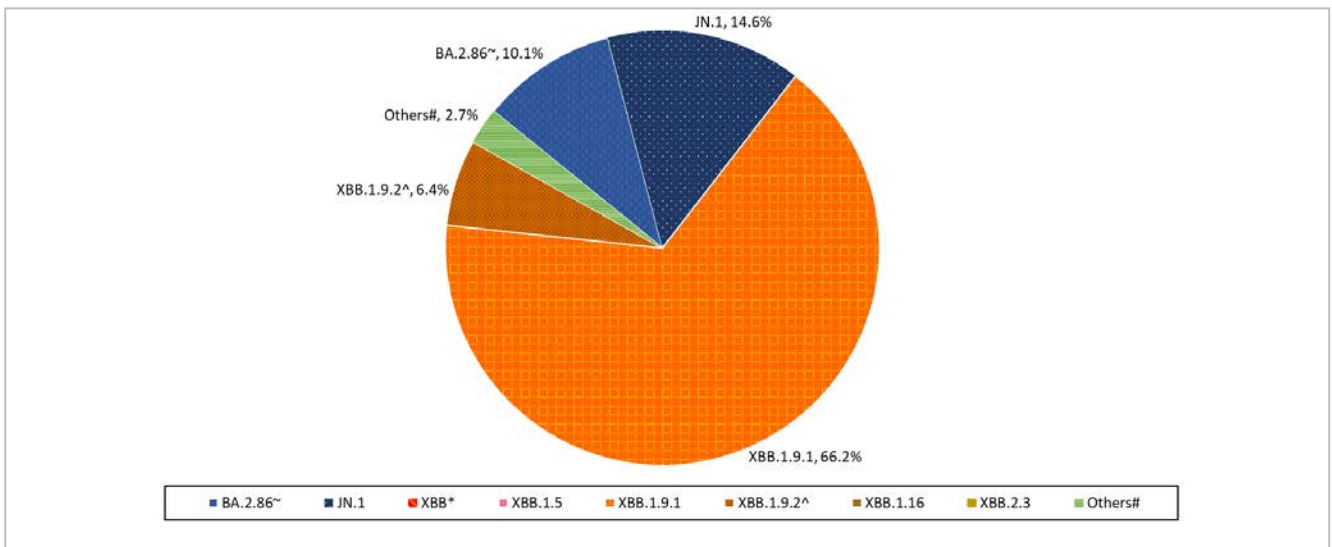


Figure 1.8 Estimated proportion of variants among sewage samples

~ Excluding JN.1 and its descendant lineages

* Includes descendant lineages, except those individually specified elsewhere in the graph

^ Including EG.5 and its descendant lineages

Those SARS-CoV-2 variants not classified as Variants of Interest (VOIs)/ Variants Under Monitoring (VUMs) by World Health Organisation (WHO)

CHP also conducted genetic characterisation of 17 specimens obtained from reported severe and fatal cases of COVID-19 between Nov 28 and Dec 20, 2023. The results showed that XBB and its descendant lineages continued to be the most prevalent variant, comprising around 82% of all characterised specimens, but the proportion has dropped when compared with the previous weeks.

At the same time, the prevalence of BA.2.86 and its descendant lineages increased, comprising about 18% of all specimens. JN.1 constituted about 6% of all specimens (1 severe case), while non-JN.1 sublineages of BA.2.86 accounted for about 12%. (Figure 1.9)

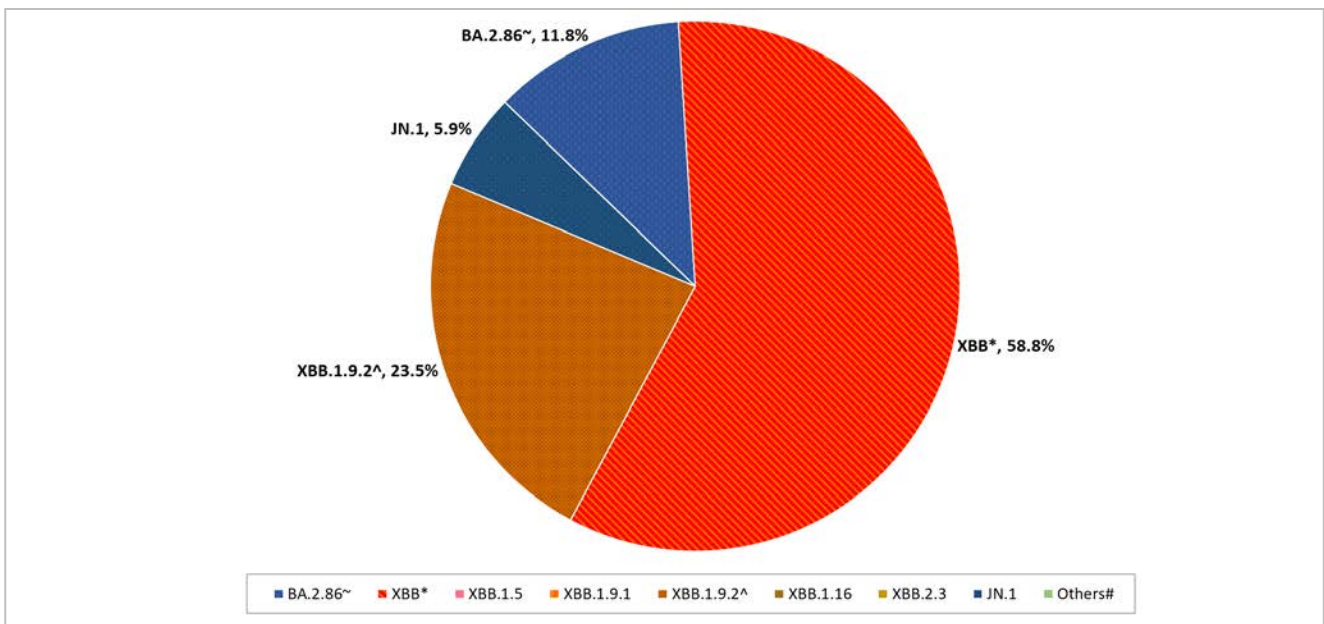


Figure 1.9 Proportion of variants among specimens obtained from reported severe and death cases for COVID-19

~ Excluding JN.1 and its descendant lineages

* Includes descendant lineages, except those individually specified elsewhere in the table.

^ Including EG.5 and its descendant lineages

Those SARS-CoV-2 variants not classified as VOIs/VUMs by WHO

Besides, CHP conducted genetic characterisation for the specimens obtained from some non-severe cases of COVID-19 during the same period. While the results showed that XBB and its descendant lineages continued to be the most prevalent variant, comprising around 65% of all characterised specimens, but the proportion has dropped when compared with almost 100% in the previous weeks. The prevalence of BA.2.86 and its descendant lineages increased, comprising about 35% of all characterised specimens. JN.1 constituted about 20% of all specimens, while non-JN.1 sublineages of BA.2.86 accounted for about 15%.

Global situation of COVID-19 activity

- Globally, as of Dec 19, 2023, there have been 772,838,745 confirmed cases of COVID-19, including 6,988,679 deaths, reported to WHO.
- WHO announced classification of JN.1 as a VOI on Dec 19, 2023 and published an initial risk evaluation on the same day.
 - ◆ JN.1 is a descendant lineage of BA.2.86, with the earliest sample detected on Aug 25, 2023. In recent weeks, the prevalence of JN.1 has been rapidly increasing globally and now represents the vast majority of BA.2.86 descendant lineages. As of Dec 16, 2023, there were 7,344 JN.1 detections received from 41 countries, and its prevalence surged from 3.3% in the week ending on Nov 5, 2023 to 27.1% in the week ending on Dec 3, 2023.
 - ◆ Based on its genetic features, JN.1 may possess some antigenic advantage, evading previous immunity. It is anticipated that this variant may cause an increase in SARS-CoV-2 cases amid surge of infections of other viral and bacterial infections, especially in countries entering the winter season.
 - ◆ However, the available evidence on JN.1 does not suggest additional public health risk or a higher associated disease severity relative to other currently circulating Omicron descendant lineages. It is suggested that protection by XBB.1.5 monovalent vaccines is likely to be effective against JN.1.

Sources:

1. [WHO COVID-19 dashboard](#), accessed on Dec 21, 2023
2. [WHO's initial risk assessment on JN.1](#)

Local Situation of Influenza Activity (as of Dec 20, 2023)

Reporting period: Dec 10 – 16, 2023 (Week 50)

- The latest surveillance data showed that the overall local activity of seasonal influenza is beginning to rise slightly, although still at a relatively low level.
- Influenza can cause serious illnesses in high-risk individuals and even healthy persons. Although this summer influenza season has ended, based on historical data, influenza season usually arrives in winter months (in late 2023 to early 2024). 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.
- The Seasonal Influenza Vaccination Subsidy Scheme (VSS) 2023/24 has been launched since September 28, whereas the Government Vaccination Programme (GVP), Seasonal Influenza Vaccination School Outreach (Free of Charge) Programme and the Residential Care Home Vaccination Programme have been launched since October 5. The public may visit the CHP's Vaccination Schemes page for more details of the vaccination programmes (<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 50, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 5.4 ILI cases per 1,000 consultations, which was lower than 6.0 recorded in the previous week (Figure 2.1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 44.4 ILI cases per 1,000 consultations, which was higher than 34.4 recorded in the previous week (Figure 2.1, right).

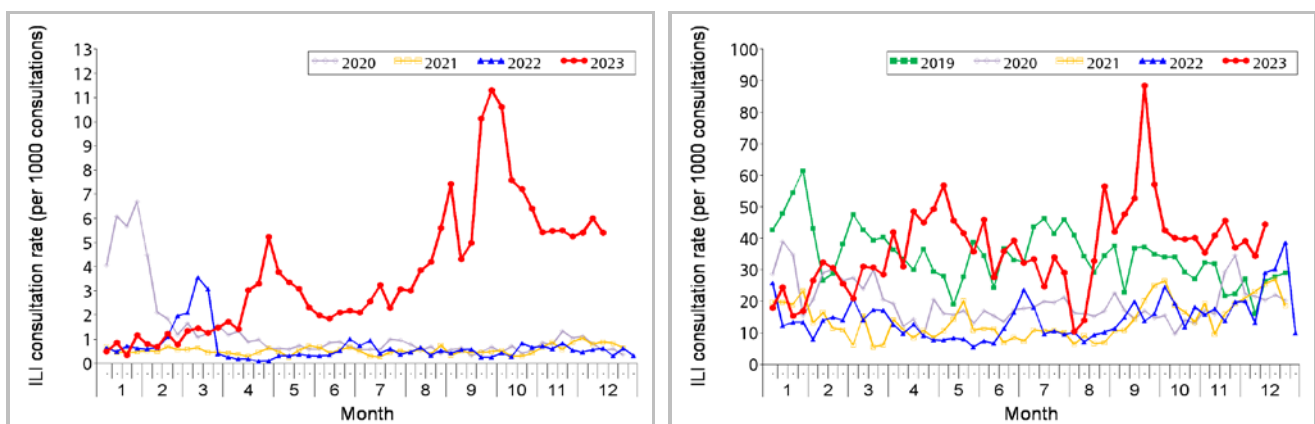


Figure 2.1 ILI consultation rates at sentinel GOPC (2020-23) (left) and PMP clinics (2019-23) (right)

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 7,476 respiratory specimens received in week 50*, 366 (4.90%) were tested positive for seasonal influenza A or B viruses. Among the subtyped influenza detections, there were 30 (8%) influenza A(H1), 280 (79%) influenza A(H3) and 43 (12%) influenza B viruses. The positive percentage (4.90 %) was below the baseline threshold of 9.21% but was higher than 3.76% recorded in the previous week (Figure 2.2).

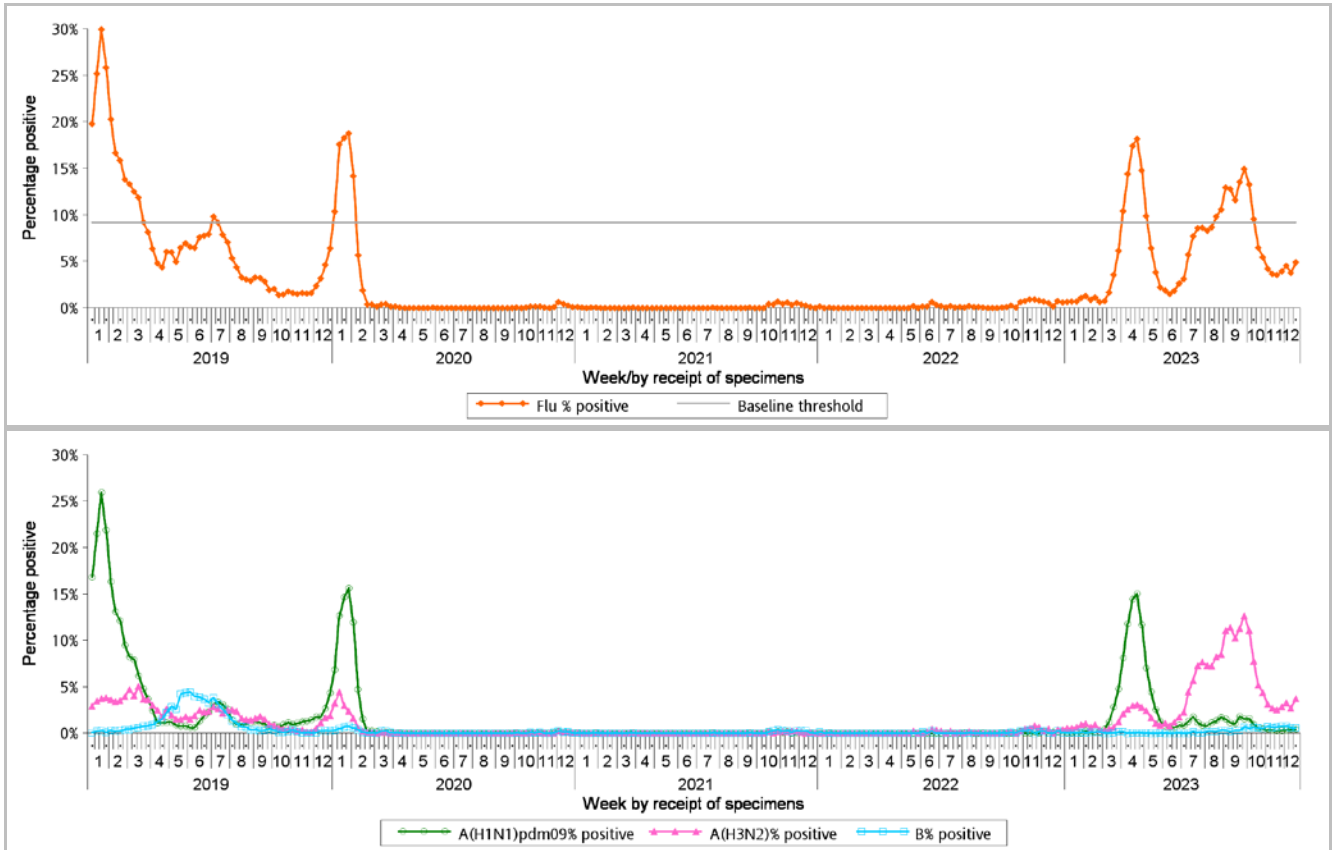


Figure 2.2 Percentage of respiratory specimens tested positive for influenza viruses, 2019-23 (upper: overall positive percentage, lower: positive percentage by subtypes)

[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 October 2023, there was 1 new report of oseltamivir (Tamiflu) resistant influenza A(H1) virus.
- For the results of previous months, please refer to the following webpage:
<https://www.chp.gov.hk/en/statistics/data/10/641/695/7035.html>

* Including 5,881 specimens received by Public Health Laboratory Services Branch, Centre for Health Protection and 1,595 specimens received by the Hospital Authority

Influenza-like illness outbreak surveillance, 2019-23

In week 50, 14 ILI outbreaks occurring in schools/institutions were recorded (affecting 70 persons), as compared to 12 outbreaks recorded in the previous week (affecting 52 persons) (Figure 2.3). In the first 4 days of week 51 (Dec 17 to 20), 6 ILI outbreaks occurring in schools/institutions were recorded (affecting 42 persons).

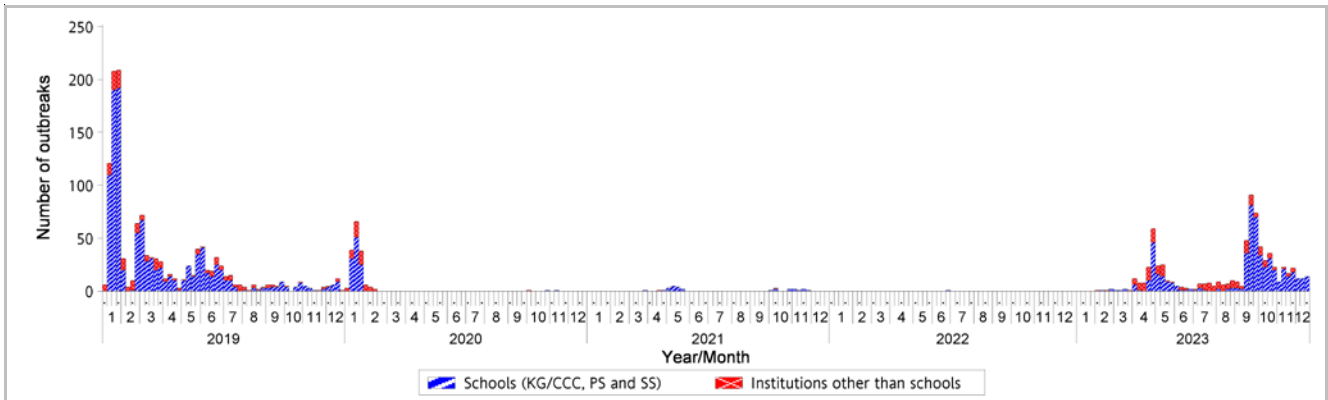


Figure 2.3 ILI outbreaks in schools/institutions, 2019-23

Type of institutions	Week 49	Week 50	First 4 days of week 51 (Dec 17 – 20)
Child care centre/ kindergarten (CCC/KG)	0	3	0
Primary school (PS)	9	8	5
Secondary school (SS)	3	3	0
Residential care home for the elderly	0	0	1
Residential care home for persons with disabilities	0	0	0
Others	0	0	0
<i>Total number of outbreaks</i>	12	14	6
<i>Total number of persons affected</i>	52	70	42

Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2019-23

In week 50, the overall admission rate in public hospitals with principal diagnosis of influenza was 0.23 (per 10,000 population), which was below the baseline threshold of 0.25 but was higher than 0.16 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 0.95, 0.55, 0.29, 0.12, 0.07 and 0.40 cases (per 10,000 people in the age group) respectively, as compared to 0.84, 0.43, 0.26, 0.08, 0.04 and 0.24 cases in the previous week (Figure 2.4).

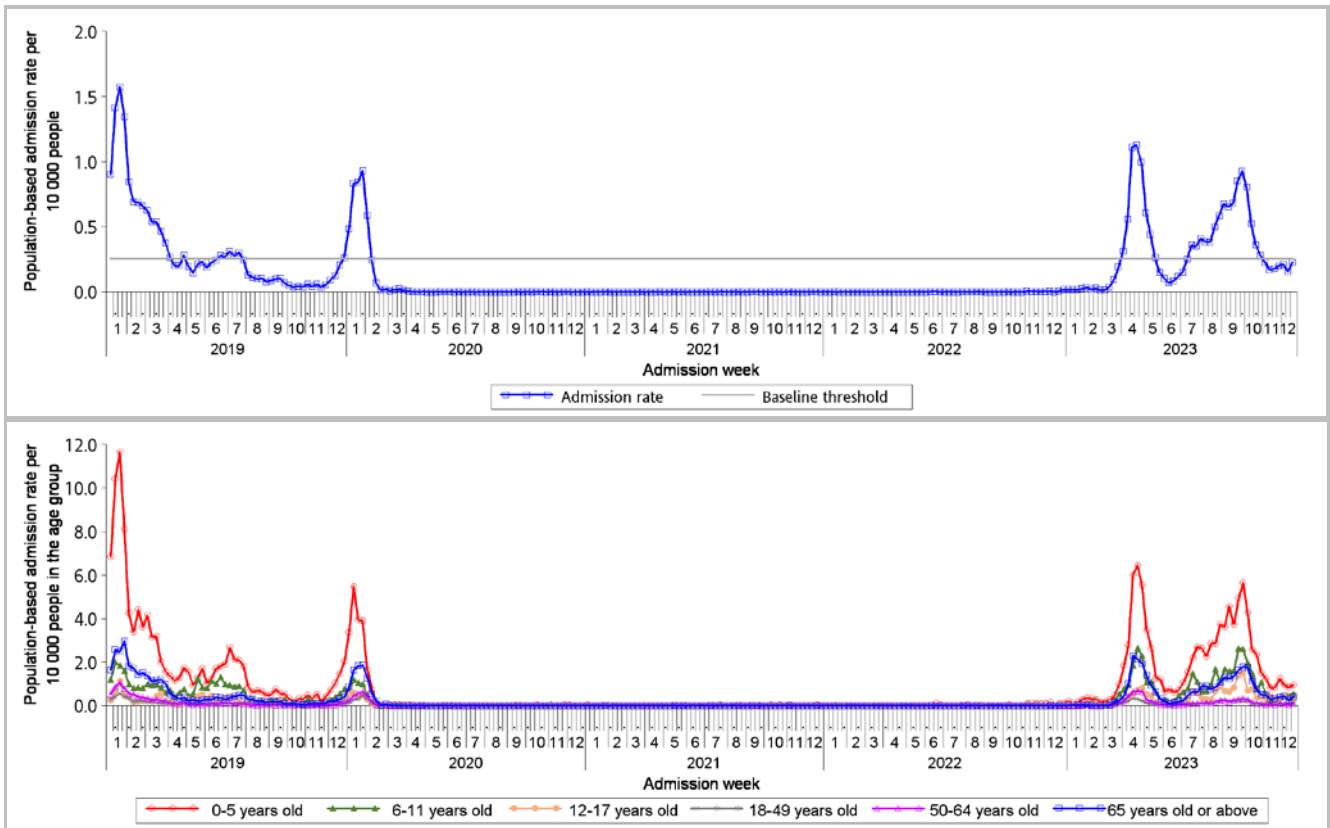


Figure 2.4 Influenza-associated hospital admission rates, 2019-23 (upper: overall rate, lower: rates by age groups)
 [Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014 week 49 to 2019 week 48.]

Rate of ILI syndrome group in accident and emergency departments, 2019-23[#]

In week 50, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 182.7 (per 1,000 coded cases), which was higher than the rate of 179.6 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.

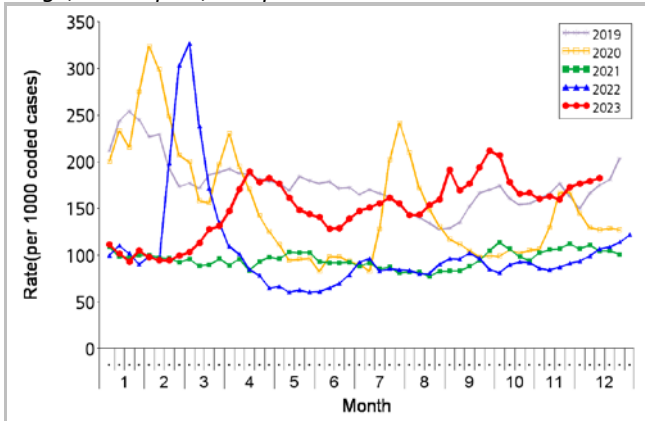


Figure 2.5 Rate of ILI syndrome group in AEDs, 2019-23

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

In week 50, 1.36% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 1.19% recorded in the previous week (Figure 2.6).

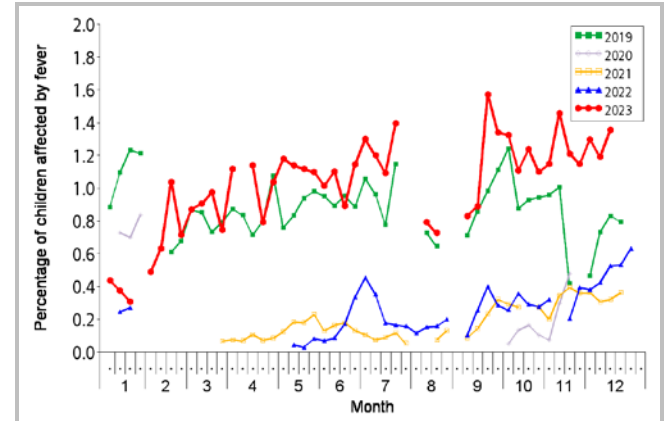


Figure 2.6 Percentage of children with fever at sentinel CCCs/KGs, 2019-23

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

In week 50, 0.10% of residents in the sentinel residential care homes for the elderly (RCHes) had fever (38°C or above), compared to 0.11% recorded in the previous week (Figure 2.7).

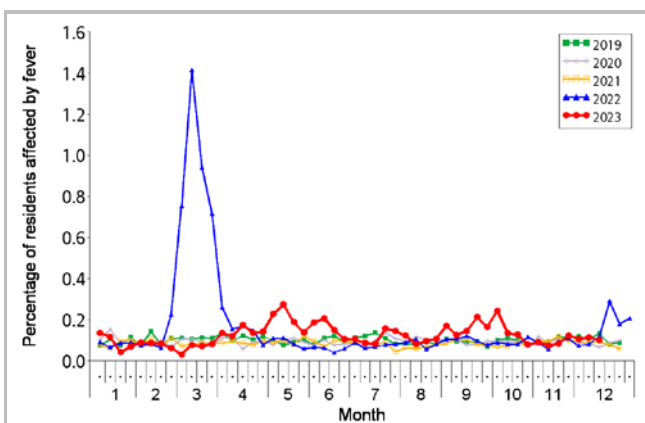


Figure 2.7 Percentage of residents with fever at sentinel RCHes, 2019-23

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

In week 50, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 0.75 ILI cases per 1,000 consultations as compared to 1.13 recorded in the previous week (Figure 2.8).

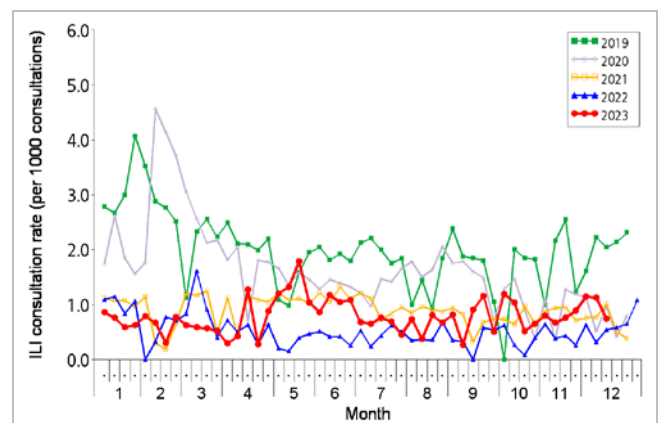


Figure 2.8 ILI consultation rate at sentinel CMPs, 2019-23

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 50, 11 adult cases of ICU admission/death with laboratory confirmation of influenza were recorded (including 9 deaths) as compared to 12 cases (including 7 deaths) recorded in the previous week.

Week	Influenza type			
	A(H1)	A(H3)	B	A (pending subtype)
Week 49	1	6	1	4
Week 50	2	7	0	2

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

- In week 50 and the first 4 days of week 51 (Dec 17 – 20), there were no cases of severe paediatric influenza-associated complication/death.
- In 2023, 27 paediatric cases of severe influenza-associated complication/death were recorded, in which 5 of them were fatal (as of Dec 20, 2023).

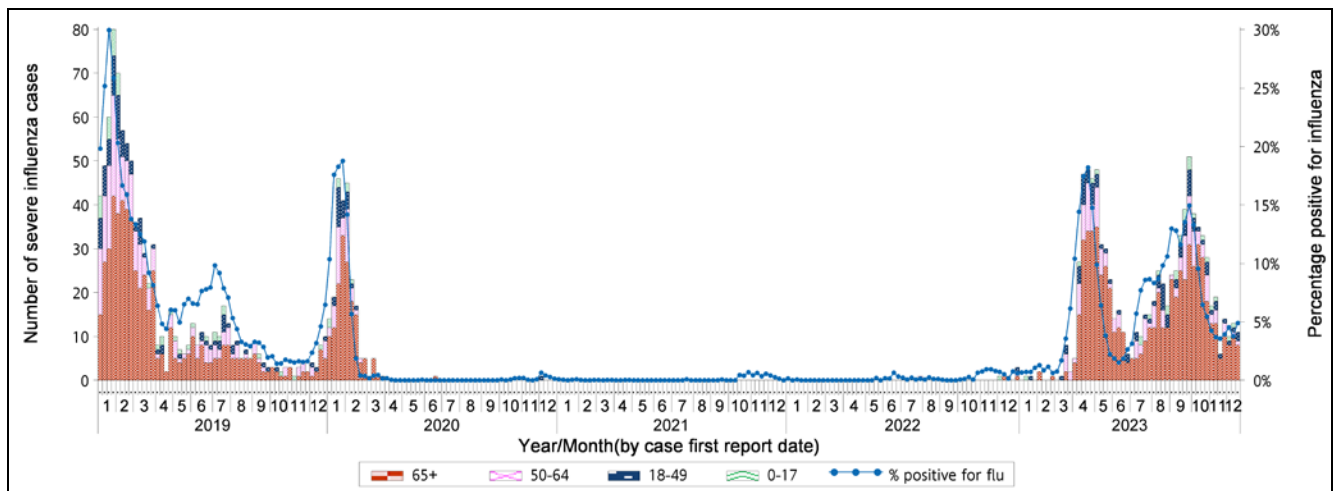


Figure 2.9 Weekly number of severe influenza cases by age groups, 2019-23 (the percentage positive for influenza viruses in Figure 2.2 is also shown in this graph)

Global Situation of Influenza Activity

Influenza detections increased due to increases in parts of the temperate Northern hemisphere, including parts of Europe and Central Asia, North America, and Eastern and Western Asia (data up to Nov 26, 2023).

- In the United States (week ending Dec 9, 2023), influenza activity was elevated in most parts of the country. The percentage of specimens tested positive for influenza continued to increase to 10.2%. The percentage of out-patient visits for ILI also increased to 4.4%, which was above the national baseline of 2.9%. Majority of the influenza detections were influenza A(H1), followed by influenza A(H3) viruses.
- In Canada (week ending Dec 9, 2023), influenza season started in late November. Influenza activity had continued to increase with most indicators increasing but within expected levels typical of this time of year. The weekly percentage of tests positive for influenza continued to increase to 13.2% in week 49. Majority of the influenza detections were influenza A(H1) viruses.
- In the United Kingdom (week ending Dec 10, 2023), influenza activity increased. Influenza positivity increased to 5.6% in week 49 as compared to 2.4% in the preceding week. The weekly ILI consultation rate in England increased to 5.3 from 4.6 per 100,000 population in preceding week, but was within baseline activity levels.
- In Europe (week ending Dec 10, 2023), influenza activity had an increasing trend. The percentage of sentinel specimens tested positive for influenza was below the 10% epidemic threshold at 8%.
- In Mainland China (week ending Dec 10, 2023), influenza surveillance data showed that influenza detections in both southern and northern provinces continued to increase. The percentage of specimens tested positive for influenza in the southern and northern provinces were 54.1% and 43.9% respectively. Influenza A(H3) viruses were predominating, followed by influenza B/Victoria viruses.
- In Taiwan (week ending Dec 16, 2023), influenza was in an epidemic period. The number of out-patient visits for ILI was on a decreasing trend. The percentage of specimens tested positive for influenza in week 48 was 7.9%. Most of the influenza detections in the 4 weeks from week 45 to 48 were influenza A(H3N2) (56.8%), followed by influenza B (33.8%) viruses.
- In Japan (week ending Dec 10, 2023), the average number of reported ILI cases per sentinel site increased to 33.72 from 26.72 in the preceding week, and was above the baseline level of 1.00. Influenza A(H3) viruses predominated, and followed by influenza A(H1).
- In Korea (week ending Dec 9, 2023), the weekly ILI rate continued to increase. The rate in week 49 was 61.3 per 1,000 out-patient visits, which was above the season epidemic threshold of 6.5. In week 49, 42.2% of tests were positive for influenza (including 18.9% influenza A(H1N1)pdm09, 16.3% influenza A(H3N2) and 7.0% influenza B).
- In Singapore (week ending Dec 16, 2023), the average daily number of consultations for acute respiratory infection remained elevated. The overall positivity rate for influenza among ILI samples in the community was 10.7% in the past 4 weeks. Majority of the influenza detections in November were influenza A(H3N2) viruses (62.2%), followed by influenza A(H1N1) (25.2%), and influenza B viruses (12.6%).

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](#), [European Centre for Disease Prevention and Control \(ECDC\)](#) and [WHO Regional Office for Europe \(WHO Euro\)](#), [Chinese National Influenza Center](#), [Taiwan Centers for Disease Control](#), [Japan Ministry of Health, Labour and Welfare](#), [Korean Disease Control and Prevention Agency](#) and [Singapore Ministry of Health](#).