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COVID-19 & FLU EXPRESS

衞生防護中心 Centre for Health Protection
保障市民健康 Protecting Hong Kong's health

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 13, 2023)

Reporting period: Dec 3 – Dec 9 2023 (Week 49)

- The latest surveillance data showed that local COVID-19 activity remained stable.
- 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 who have never been vaccinated or infected with COVID-19 before should adopt additional hygiene measures to protect themselves such as avoid going to crowded places, wear mask properly and maintain hand hygiene. For more 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 49, the weekly number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus was 87 as compared to 120 in the preceding week. (Figure 1.1)

In the first 4 days of week 50 (Dec 10 – Dec 13), the daily number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus ranged from 10 to 21.

Since Jan 30, 2023, the cumulative number of positive nucleic acid test laboratory detections was 48,292 (as of Dec 13, 2023).

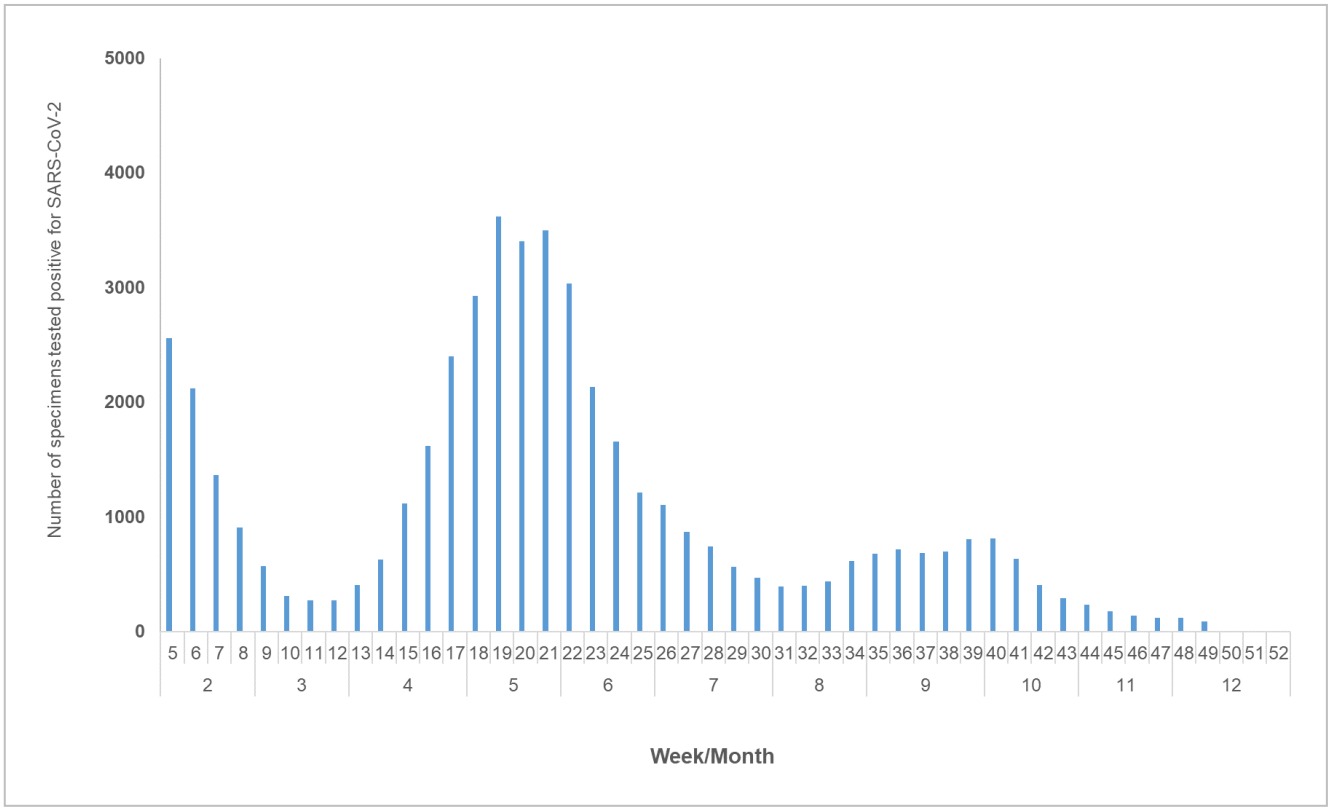

Figure 1.1 Weekly number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus

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

Among the 5,828 respiratory specimens received by the Public Health Laboratory Services Branch (PHLSB) in week 49, 84 (1.44%) were tested positive for SARS-CoV-2 virus. (Figure 1.2)

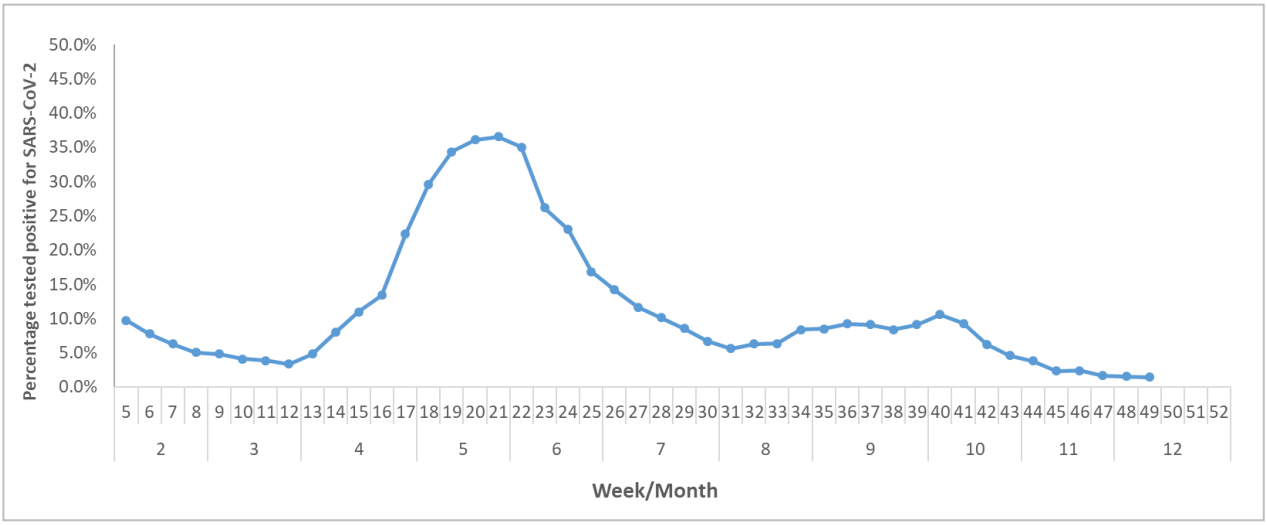

Figure 1.2 Percentage of specimens tested positive for SARS-CoV-2 virus at PHLSB

COVID-19 outbreak surveillance

In week 49, 0 COVID-19 outbreak occurring in schools/institutions was recorded (affecting 0 persons), as compared to 1 outbreak recorded in the previous week (affecting 14 persons). (Figure 1.3)

In the first 4 days of week 50 (Dec 10 – Dec 13), 1 COVID-19 outbreak occurring in schools/institutions was recorded (affecting 4 persons).

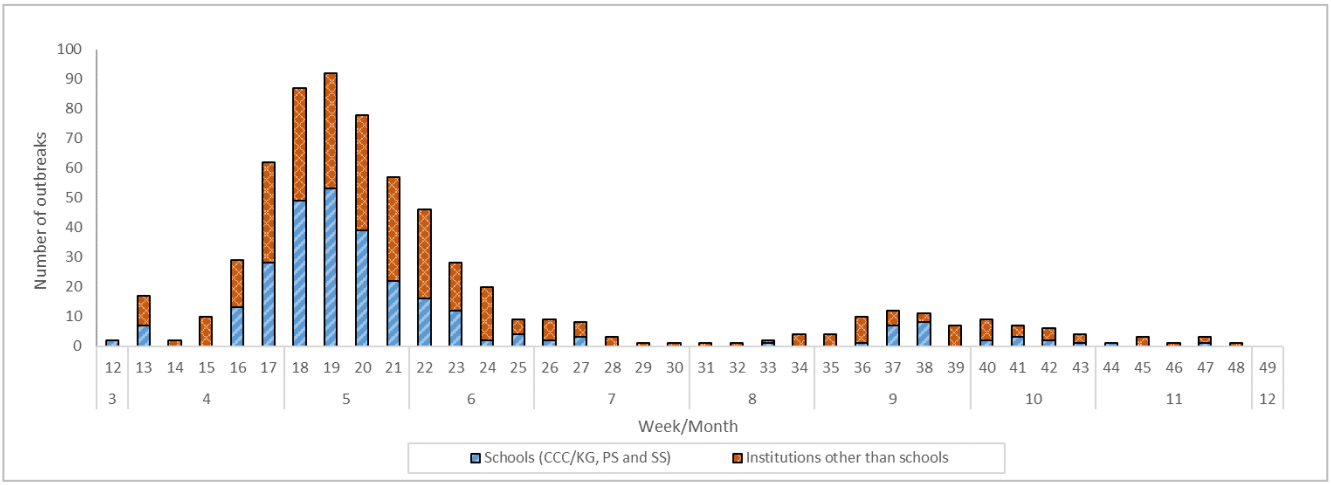

Figure 1.3 COVID-19 outbreaks in schools/institutions

Type of institutions	Week 48	Week 49	First 4 days of week 50 (Dec 10 – Dec 13)
Child care centre/ kindergarten (CCC/KG)	0	0	0
Primary school (PS)	0	0	1
Secondary school (SS)	0	0	0
Residential care home for the elderly	0	0	0
Residential care home for persons with disabilities	0	0	0
Others	1	0	0
Total number of outbreaks	1	0	1
Total number of persons affected	14	0	4

Surveillance of severe and fatal COVID-19 cases

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

In week 49, the weekly number of severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 was 5 (including 1 paediatric severe case) as compared to 7 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 9, 2023).

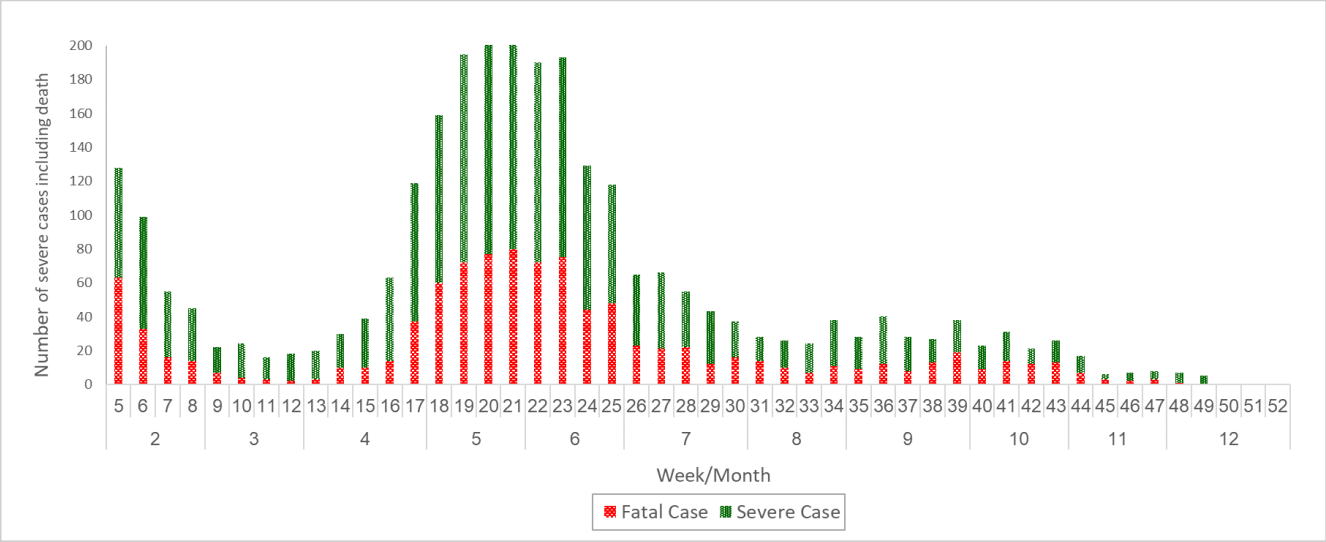

Figure 1.4 Weekly number of severe COVID-19 cases including deaths

Sewage surveillance of SARS-CoV-2 virus

In week 49, the 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance was around 85,000 copy/L as compared to around 75,000 copy/L in the preceding week. (Figure 1.5)

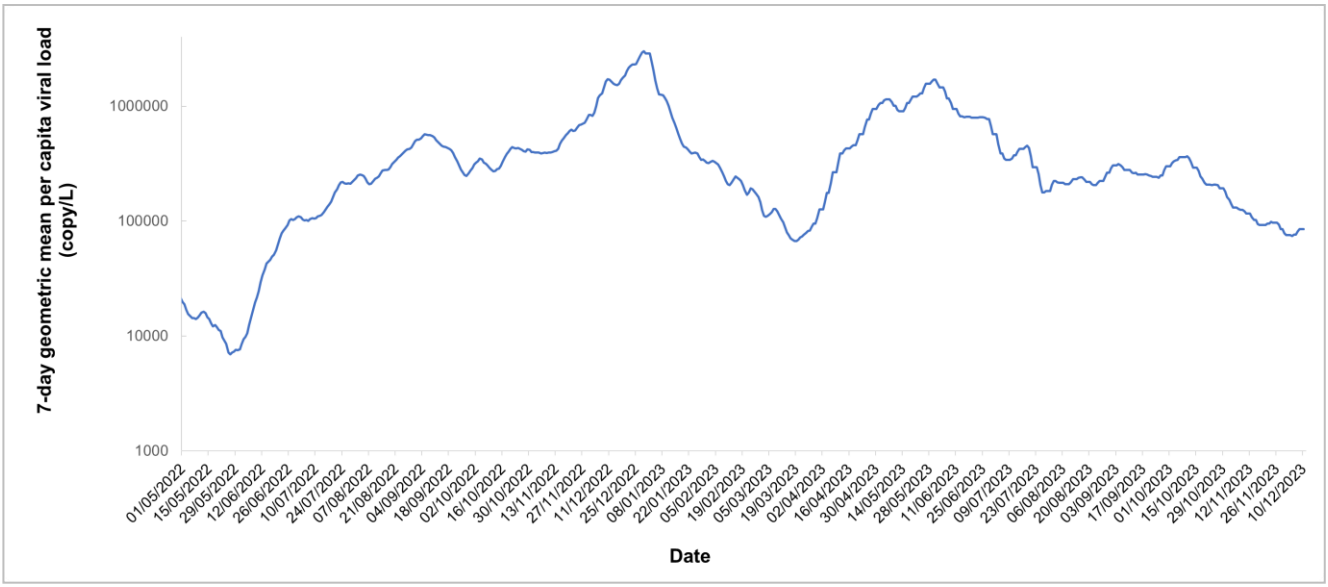

Figure 1.5 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance since May 1, 2022

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

In week 49, the average consultation rate for COVID-19 among sentinel general out-patient clinics (GOPC) and sentinel private medical practitioner clinics were 7.0 (Figure 1.6) and 2.8 (Figure 1.7) COVID-19 cases per 1,000 consultations, respectively.

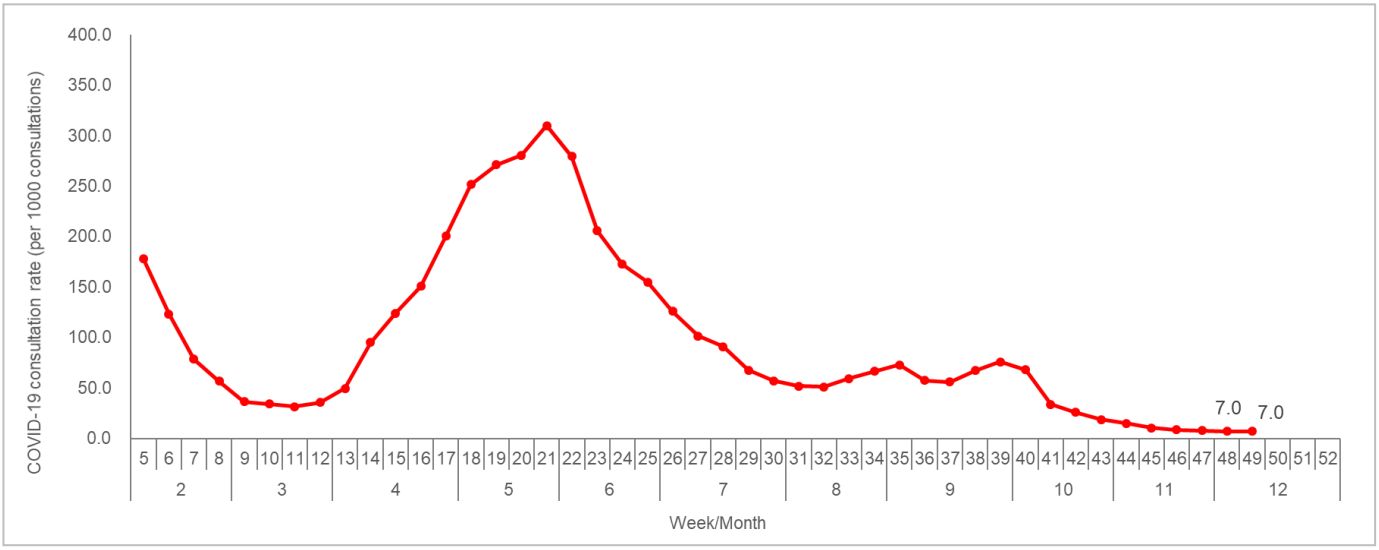

Figure 1.6 Average consultation rate of COVID-19 cases in GOPC

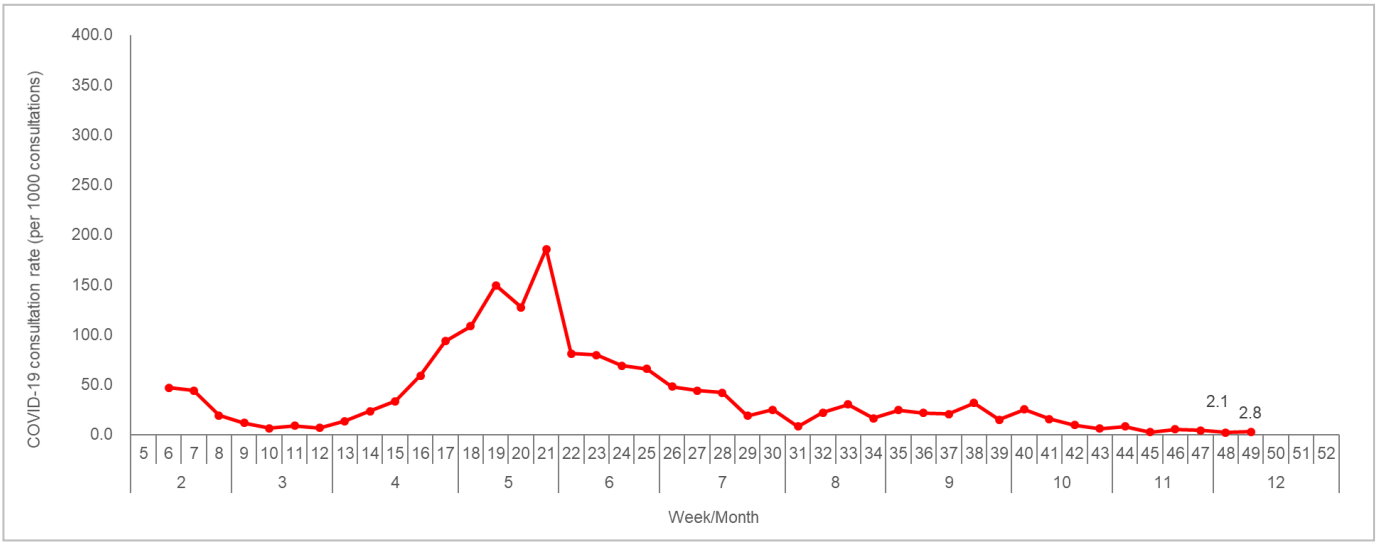

Figure 1.7 Average consultation rate of COVID-19 cases in private medical practitioner clinics

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 6, 2023) showed that XBB and its descendant lineages continue to be the most prevalent variant, comprising around 90% of all characterised specimens. These XBB sublineages included XBB.1.9.1, XBB.1.9.2^, XBB.1.5 and XBB.2.3. (Figure 1.8)

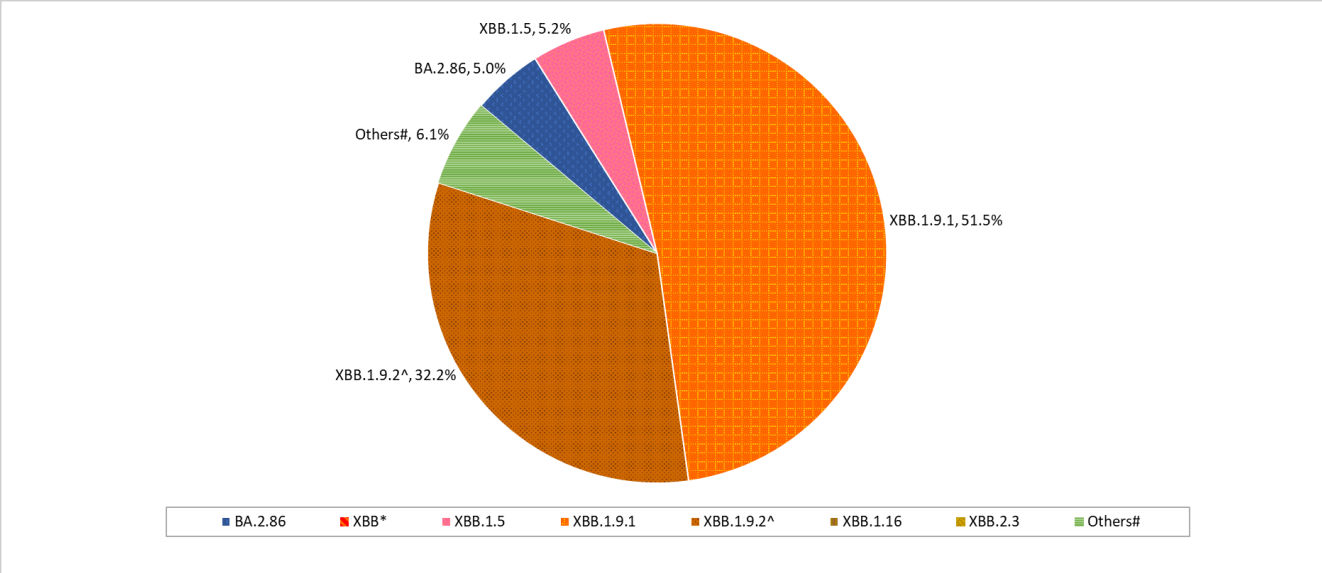

Figure 1.8 Estimated proportion of variants among sewage samples

** 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 68 specimens obtained from reported severe and fatal cases of COVID-19 between Oct 25 and Nov 27, 2023. The result showed that XBB and its descendant lineages continue to be the most prevalent variant, comprising 100% of all characterised specimens. These XBB sublineages included XBB* and XBB.1.9.2^. (Figure 1.9)

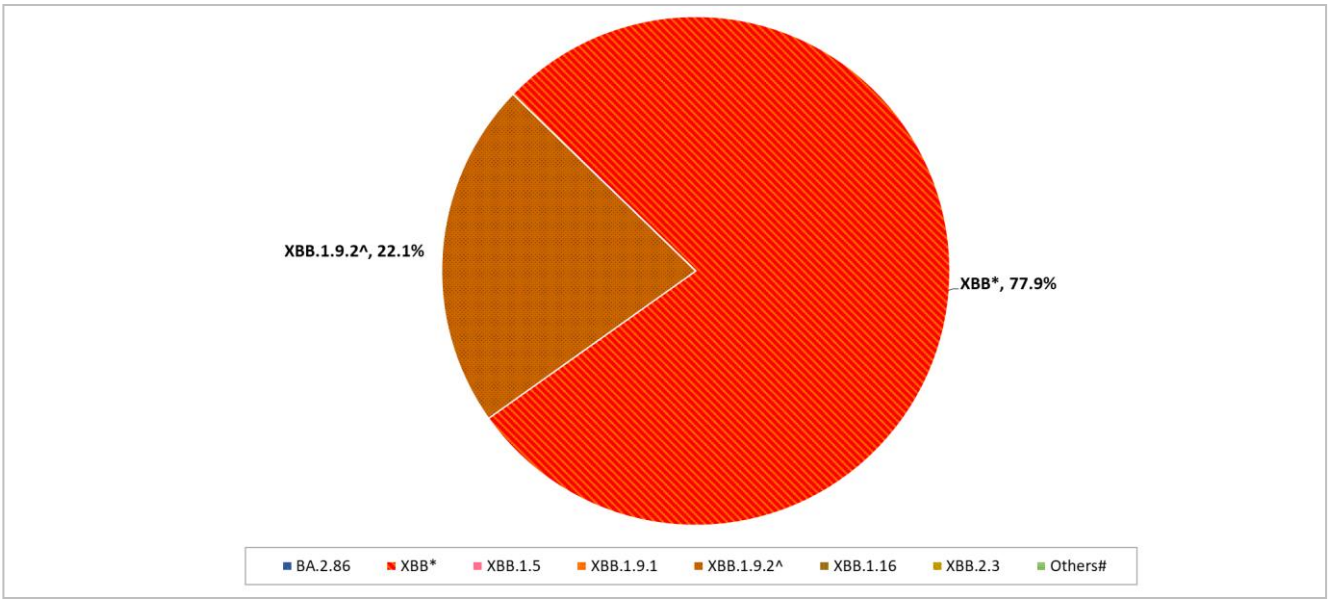

Figure 1.9 Proportion of variants among specimens obtained from reported severe and death cases for COVID-19

** 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

Global situation of COVID-19 activity

- Globally, as of Dec 6, 2023, there have been 772,138,818 confirmed cases of COVID-19, including 6,985,964 deaths, reported to WHO.

- According to WHO COVID-19 weekly epidemiological update last published on Nov 24, 2023,
  - Over 500 000 new cases and over 2400 deaths were reported in the last 28 days (Oct 23 to Nov 19, 2023) globally.
  - The highest numbers of new 28-day cases were reported from Russia, Italy, Singapore, Australia and Poland. The highest numbers of new 28-day deaths were reported from Italy, Sweden, Russia, Iran and Czechia.
  - 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.
  - Currently, WHO is monitoring four VOIs, which are BA.2.86, EG.5, XBB.1.5 and XBB.1.16, and five VUMs, which are DV.7, XBB, XBB.1.9.1, XBB.1.9.2 and XBB.2.3.
  - BA.2.86 has been designated as a VOI on Nov 20, 2023. However, it does not suggest a change in the clinical presentation or an increase in severity of this variant compared to other Omicron sublineages. The initial risk evaluation of BA.2.86 published by WHO on 21 Nov, 2023 is low. Moreover, the updated risk evaluation of EG.5 remains low. Although it accounts for more than half of the variants in global circulation, at present, there is no evidence of an increase in disease severity directly associated with EG.5 compared with other Omicron sublineages.
  - Between Oct 30 and Nov 5, 2023, EG.5 is the most prevalent variant globally, accounting for 51.6% compared to 47.0% between Oct 2 and Oct 8, 2023. During the same period, the prevalence of BA.2.86 also increased from 1.8% to 8.9%. On the other hand, the prevalence of XBB.1.16 and XBB.1.5 decreased from 15.9% and 8.5% to 8.2% and 8.3% respectively. Among the VUMs, the prevalence of DV.7 and XBB showed stable trends while other VUMs have shown decreasing trends.

Sources:

1. WHO COVID-19 dashboard, accessed on Dec 14, 2023
2. World Health Organization COVID-19 weekly epidemiological update

Local Situation of Influenza Activity (as of Dec 13, 2023)

Reporting period: Dec 3 – 9, 2023 (Week 49)

- The latest surveillance data showed that the overall local seasonal influenza activity was comparable to the previous week.
- 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 49, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 6.0 ILI cases per 1,000 consultations, which was higher than 5.4 recorded in the previous week (Figure 2.1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 34.4 ILI cases per 1,000 consultations, which was lower than 39.1 recorded in the previous week (Figure 2.1, right).

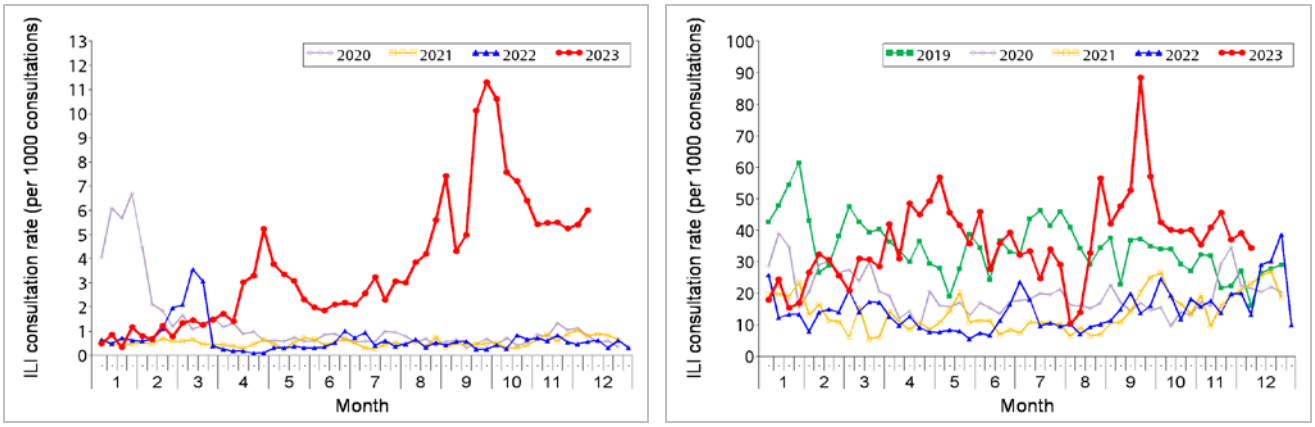

Figure 2.1 ILI consultation rates at sentinel GOPC (2020-23) (left) and PMP clinics (2019-23) (right)
Note: The CHP has started to use electronic data on diagnosis coding of patients of the Hospital Authority's GOPC for sentinel surveillance since January 2020, replacing manual data collection in the past.

Laboratory surveillance, 2019-23

Among the 7,157 respiratory specimens received in week 49*, 269 (3.76%) were tested positive for seasonal influenza A or B viruses. Among the subtyped influenza detections, there were 26 (10%) influenza A(H1), 195 (74%) influenza A(H3) and 42 (16%) influenza B viruses. The positive percentage (3.76%) was below the baseline threshold of 9.21% but was lower than 4.52% recorded in the previous week (Figure 2.2).

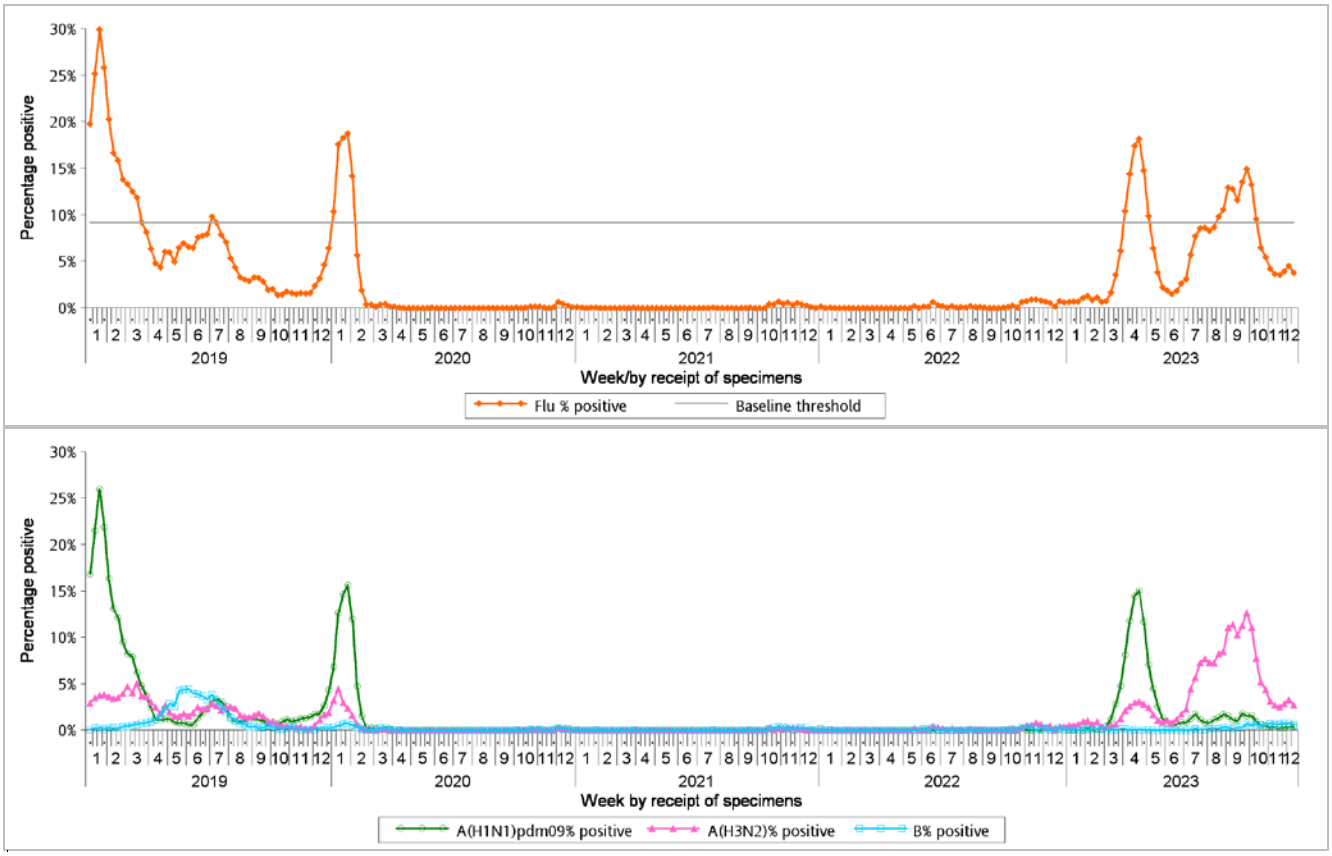

Figure 2.2 Percentage of respiratory specimens tested positive for influenza viruses, 2019-23 (upper: overall positive percentage, lower: positive percentage by subtypes)

[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 5,828 specimens received by Public Health Laboratory Services Branch, Centre for Health Protection and 1,329 specimens received by the Hospital Authority

Influenza-like illness outbreak surveillance, 2019-23

In week 49, 11 ILI outbreaks occurring in schools/institutions were recorded (affecting 47 persons), as compared to 13 outbreaks recorded in the previous week (affecting 83 persons) (Figure 2.3). In the first 4 days of week 50 (Dec 10 to 13), 12 ILI outbreaks occurring in schools/institutions were recorded (affecting 63 persons).

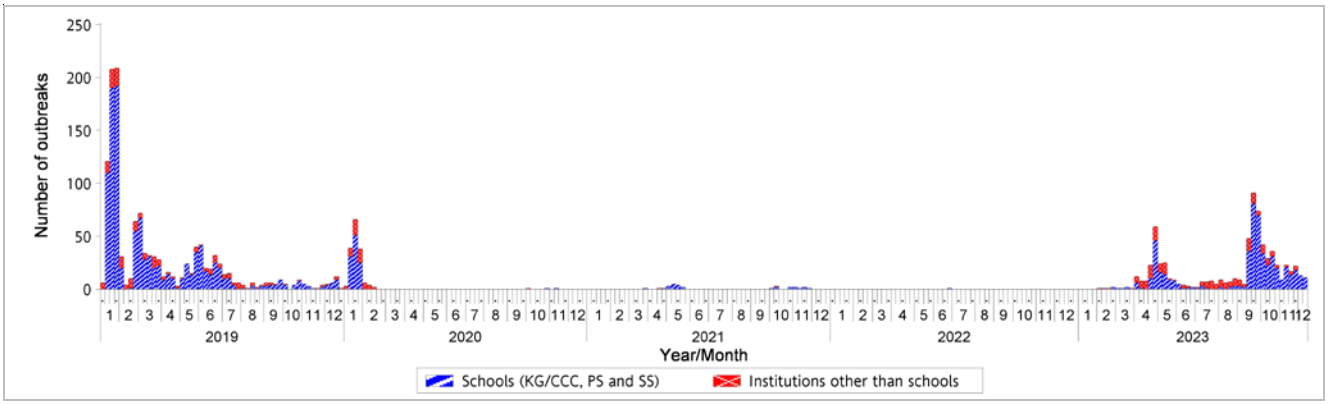

Figure 2.3 ILI outbreaks in schools/institutions, 2019-23

Type of institutions	Week 48	Week 49	First 4 days of week 50 (Dec 10 – 13)
Child care centre/ kindergarten (CCC/KG)	2	0	3
Primary school (PS)	11	8	7
Secondary school (SS)	0	3	2
Residential care home for the elderly	0	0	0
Residential care home for persons with disabilities	0	0	0
Others	0	0	0
Total number of outbreaks	13	11	12
Total number of persons affected	83	47	63

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

In week 49, the overall admission rate in public hospitals with principal diagnosis of influenza was 0.14 (per 10,000 population), which was below the baseline threshold of 0.25 and was lower than 0.20 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 0.80, 0.38, 0.26, 0.07, 0.03 and 0.20 cases (per 10,000 people in the age group) respectively, as compared to 0.95, 0.43, 0.46, 0.07, 0.05 and 0.41 cases in the previous week (Figure 2.4).

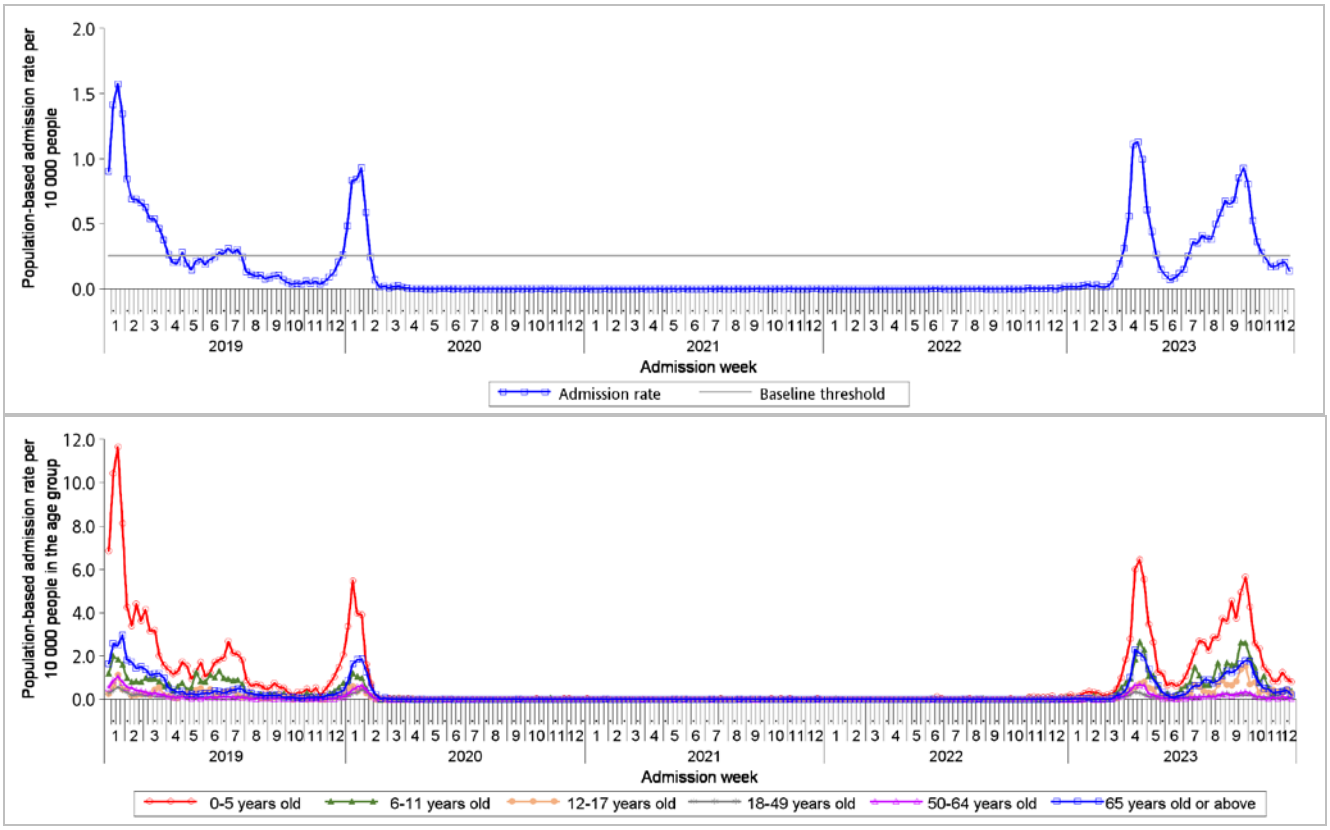

Figure 2.4 Influenza-associated hospital admission rates, 2019-23 (upper: overall rate, lower: rates by age groups)
[Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014 week 49 to 2019 week 48.]

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

In week 49, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 179.6 (per 1,000 coded cases), which was higher than the rate of 176.6 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.

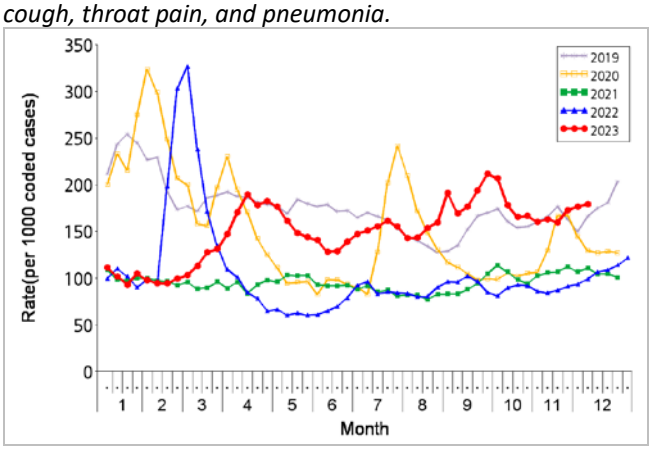

Figure 2.5 Rate of ILI syndrome group in AEDs, 2019-23

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

In week 49, 1.19% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 1.30% recorded in the previous week (Figure 2.6).

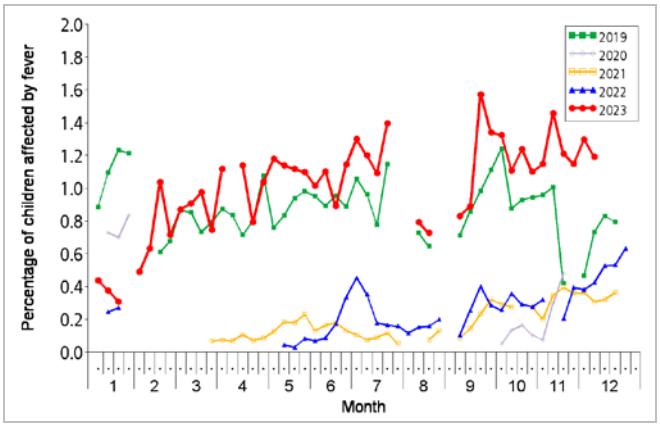

Figure 2.6 Percentage of children with fever at sentinel CCCs/KGs, 2019-23

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

In week 49, 0.11% 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).

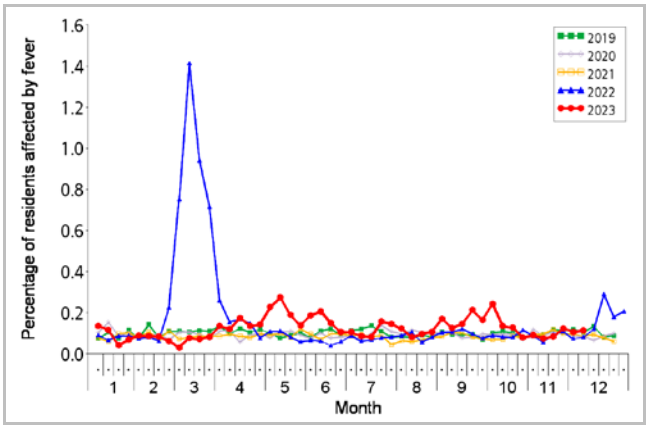

Figure 2.7 Percentage of residents with fever at sentinel RCHEs, 2019-23

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

In week 49, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 1.13 ILI cases per 1,000 consultations as compared to 1.15 recorded in the previous week (Figure 2.8).

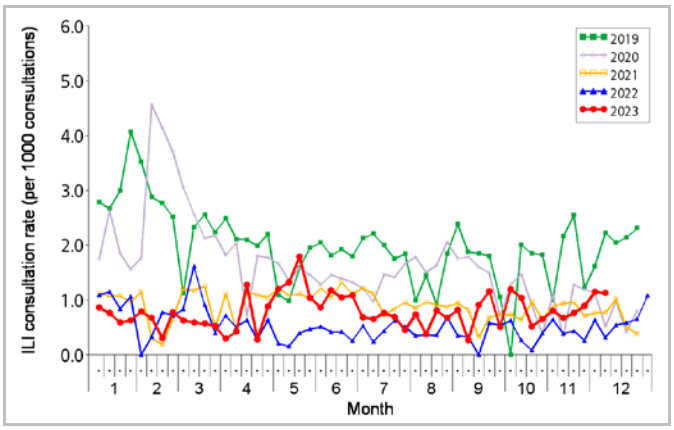

Figure 2.8 ILI consultation rate at sentinel CMPs, 2019-23

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 49, 12 adult cases of ICU admission/death with laboratory confirmation of influenza were recorded (including 7 deaths) as compared to 9 cases (including 4 deaths) recorded in the previous week.

Week	Influenza type			
	A(H1)	A(H3)	B	A (pending subtype)
Week 48	0	9	0	0
Week 49	1	6	1	4

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

- In week 49 and the first 4 days of week 50 (Dec 10 – 13), there was one case of severe paediatric influenza-associated complication/death.

Reporting week	Age	Sex	Complication	Fatal case?	Influenza subtype	History of receiving influenza vaccine for this season
49	7 years	Male	Severe pneumonia	No	Influenza A(H3)	No

- In 2023, 27 paediatric cases of severe influenza-associated complication/death were recorded, in which 5 of them were fatal (as of Dec 13, 2023).

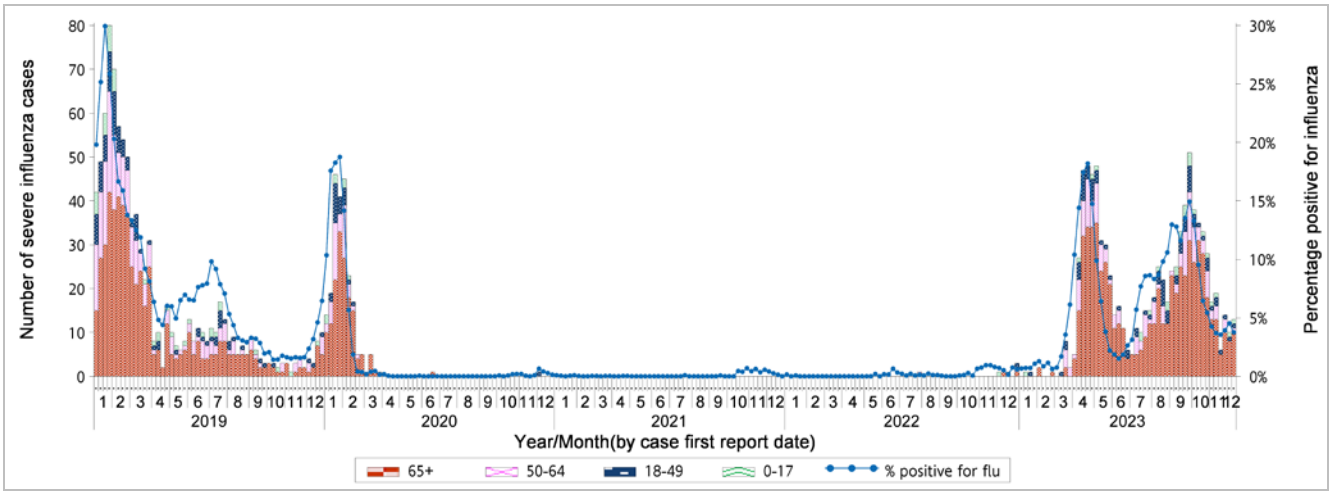

Figure 2.9 Weekly number of severe influenza cases by age groups, 2019-23 (the percentage positive for influenza viruses in Figure 2.2 is also shown in this graph)

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 2, 2023), influenza activity continued to increase in most parts of the country. The percentage of specimens tested positive for influenza continued to increase to 6.8%. The percentage of out-patient visits for ILI also increased to 4.0%, which was above the national baseline of 2.9%. Majority of the influenza detections were influenza A(H1), followed by influenza B/Victoria viruses.
- In Canada (week ending Dec 2, 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 9.9% in week 48. Majority of the influenza detections were influenza A(H1) viruses.
- In the United Kingdom (week ending Dec 3, 2023), influenza activity slightly increased. Influenza positivity increased to 2.3% in week 48 as compared to 1.7% in the preceding week. The weekly ILI consultation rate in England increased to 4.6 from 3.8 per 100,000 population in preceding week, but was within baseline activity levels.
- In Europe (week ending Dec 3, 2023), influenza activity remained low. The percentage of sentinel specimens tested positive for influenza remained below the 10% epidemic threshold at 4%.
- In Mainland China (week ending Dec 3, 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 50.6% and 41.2% respectively. Influenza A(H3) viruses were predominating, followed by influenza B/Victoria viruses.
- In Taiwan (week ending Dec 2, 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 47 was 12.8%. Most of the influenza detections in the 4 weeks from week 43 to 46 were influenza A(H3N2) (64.2%), followed by influenza A(H1N1) (20.8%) and influenza B (15.0%) viruses.
- In Japan (week ending Dec 3, 2023), the average number of reported ILI cases per sentinel site decreased to 26.72 from 28.30 in the preceding week, but was above the baseline level of 1.00. Influenza A(H3) viruses predominated, and followed by influenza A(H1).
- In Korea (week ending Dec 2, 2023), the weekly ILI rate continued to increase. The rate in week 48 was 48.6 per 1,000 out-patient visits, which was above the season epidemic threshold of 6.5. In week 48, 42.2% of tests were positive for influenza (including 29.6% influenza A(H1N1)pdm09, 16.2% influenza A(H3N2) and 6.0% influenza B).
- In Singapore (week ending Dec 9, 2023), the average daily number of consultations for acute respiratory infection continued to increase. The overall positivity rate for influenza among ILI samples in the community was 11.0% 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, 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 Disease Control and Prevention Agency and Singapore Ministry of Health.