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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 Jan 10, 2024)

Reporting period: Dec 31, 2023 – Jan 6, 2024 (Week 1)

- The latest surveillance data showed that the overall local activity of COVID-19 has increased remarkably.
- 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 1, the weekly number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus was 538 as compared to 354 in the preceding week. (Figure 1.1)

In the first 4 days of week 2 (Jan 7 – Jan 10), the daily number of newly recorded positive nucleic acid test laboratory detections for SARS-CoV-2 virus ranged from 81 to 98.

Since Jan 30, 2023, the cumulative number of positive nucleic acid test laboratory detections was 49,808 (as of Jan 10, 2024).

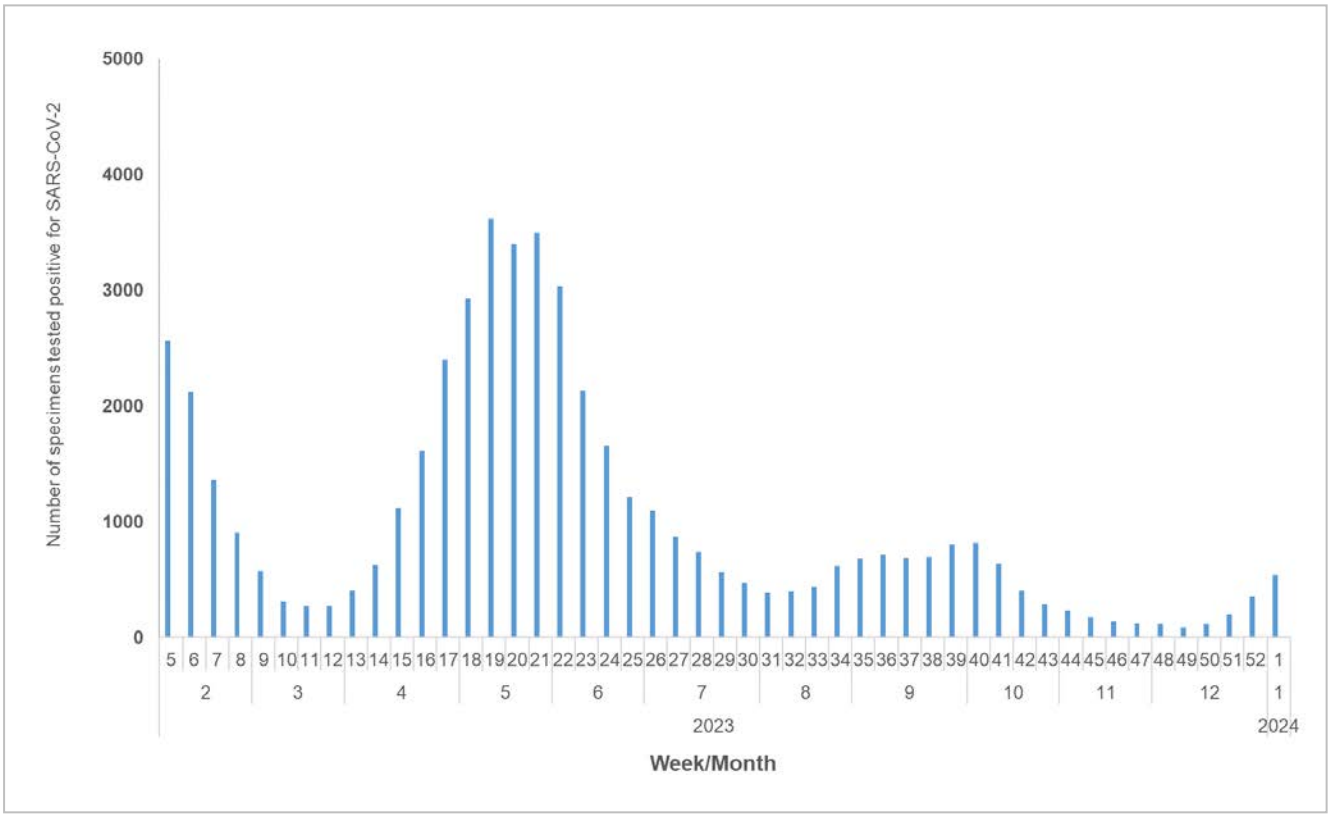

Figure 1.1 Weekly number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus

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

Among the 7,102 respiratory specimens received by the Public Health Laboratory Services Branch (PHLSB) in week 1, 483 (6.80%) were tested positive for SARS-CoV-2 virus as compared to 324 (4.88%) in the preceding week. (Figure 1.2)

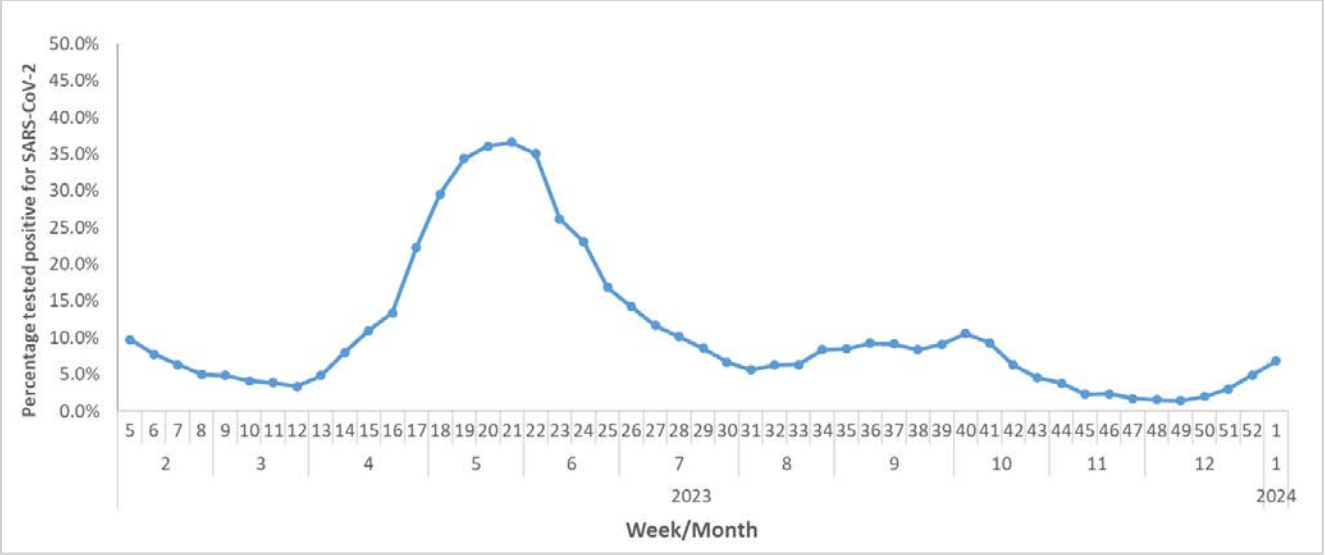

Figure 1.2 Percentage of specimens tested positive for SARS-CoV-2 virus at PHLSB

COVID-19 outbreak surveillance

In week 1, 6 COVID-19 outbreaks occurring in schools/institutions were recorded (affecting 25 persons), as compared to 5 outbreaks recorded in the previous week (affecting 34 persons). (Figure 1.3)

In the first 4 days of week 2 (Jan 7 – Jan 10), 7 COVID-19 outbreaks occurring in schools/institutions were recorded (affecting 32 persons).

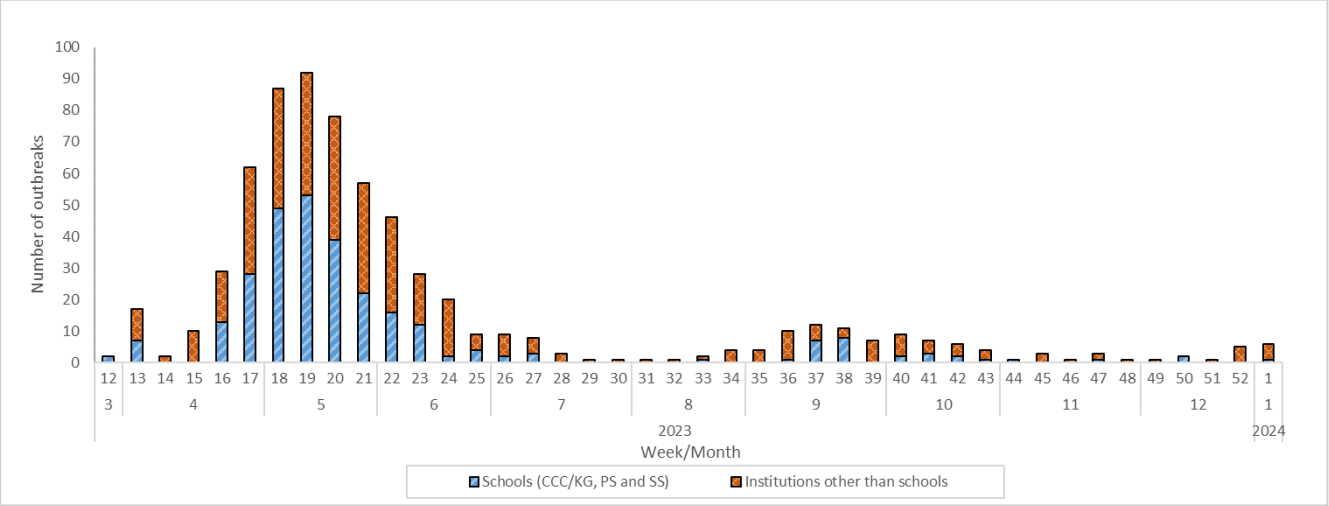

Figure 1.3 COVID-19 outbreaks in schools/institutions

Type of institutions	Week 52	Week 1	First 4 days of week 2 (Jan 7 – Jan 10)
Child care centre/ kindergarten (CCC/KG)	0	0	0
Primary school (PS)	0	0	0
Secondary school (SS)	0	1	1
Residential care home for the elderly	4	4	6
Residential care home for persons with disabilities	1	1	0
Others	0	0	0
Total number of outbreaks	5	6	7
Total number of persons affected	34	25	32

Surveillance of severe and fatal COVID-19 cases

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

In week 1, the weekly number of severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 was 30 as compared to 11 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 1,014 (as of Jan 6, 2024).

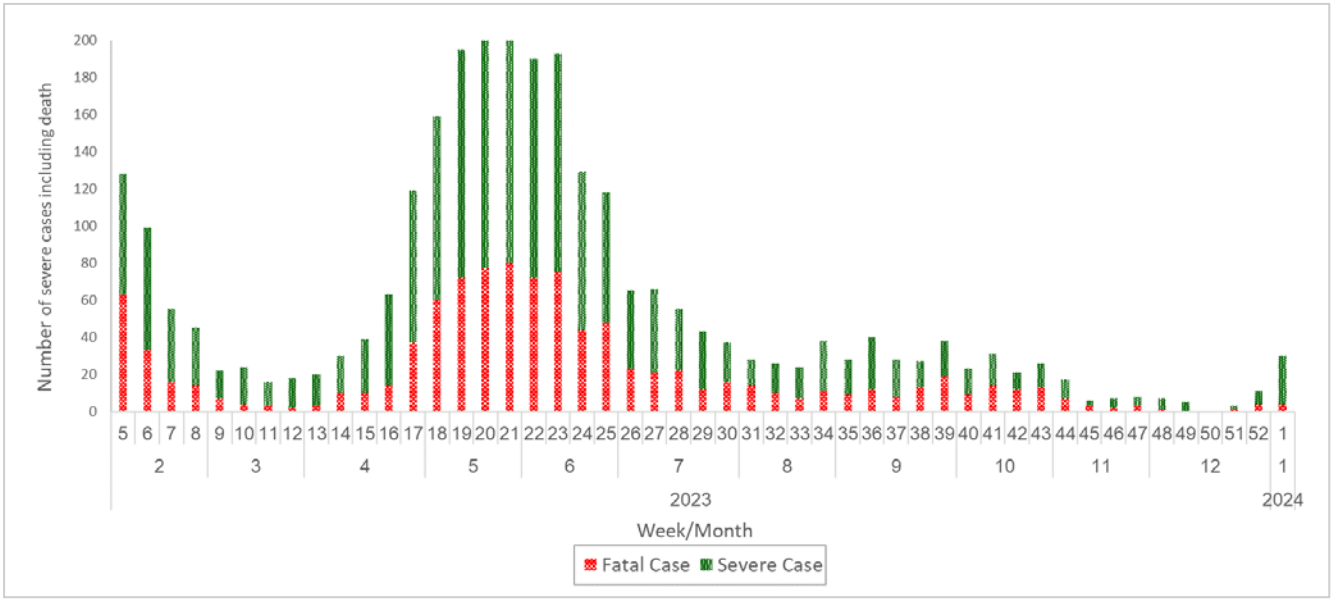

Figure 1.4 Weekly number of severe COVID-19 cases including deaths

Sewage surveillance of SARS-CoV-2 virus

In week 1, the 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance was around 268,000 copy/L as compared to around 205,000 copy/L in the preceding week. (Figure 1.5)

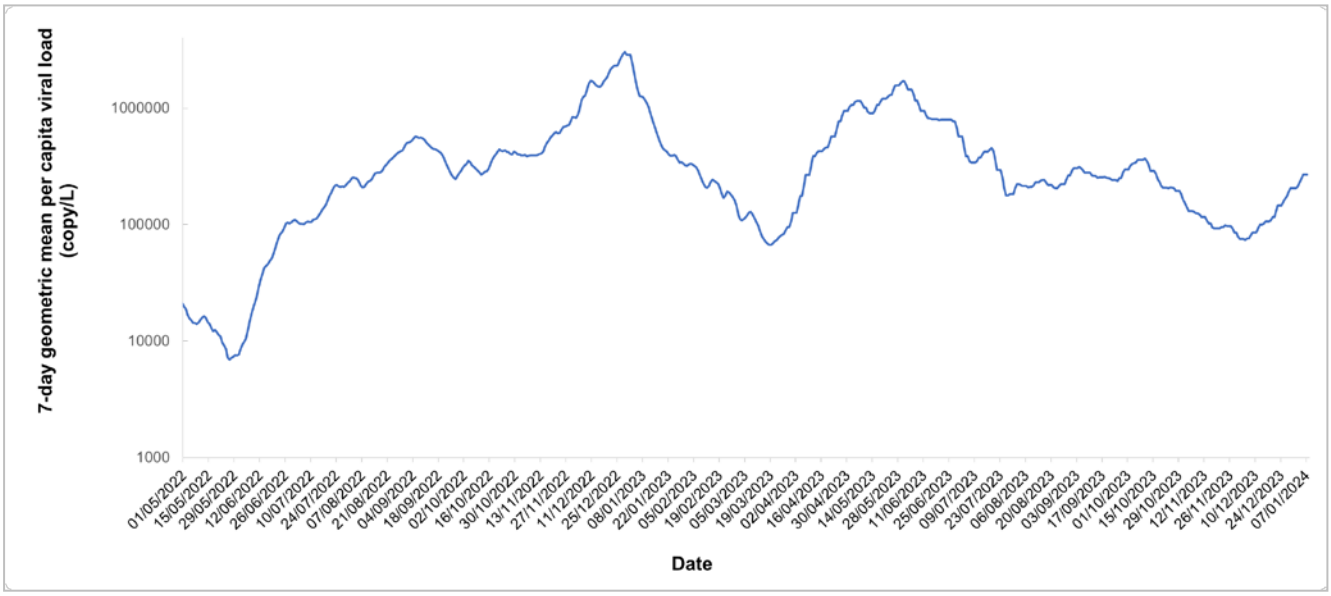

Figure 1.5 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance since May 1, 2022

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

In week 1, the average consultation rate for COVID-19 among sentinel general out-patient clinics (GOPC) and sentinel private medical practitioner clinics were 27.2 (Figure 1.6) and 18.7 (Figure 1.7) COVID-19 cases per 1,000 consultations, respectively.

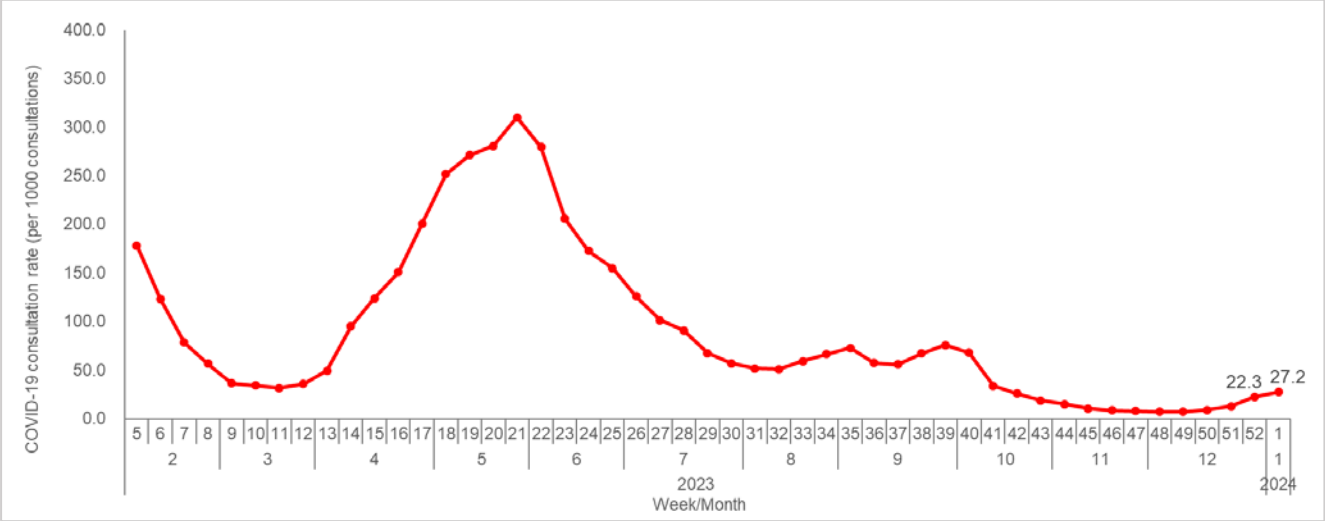

Figure 1.6 Average consultation rate of COVID-19 cases in GOPC

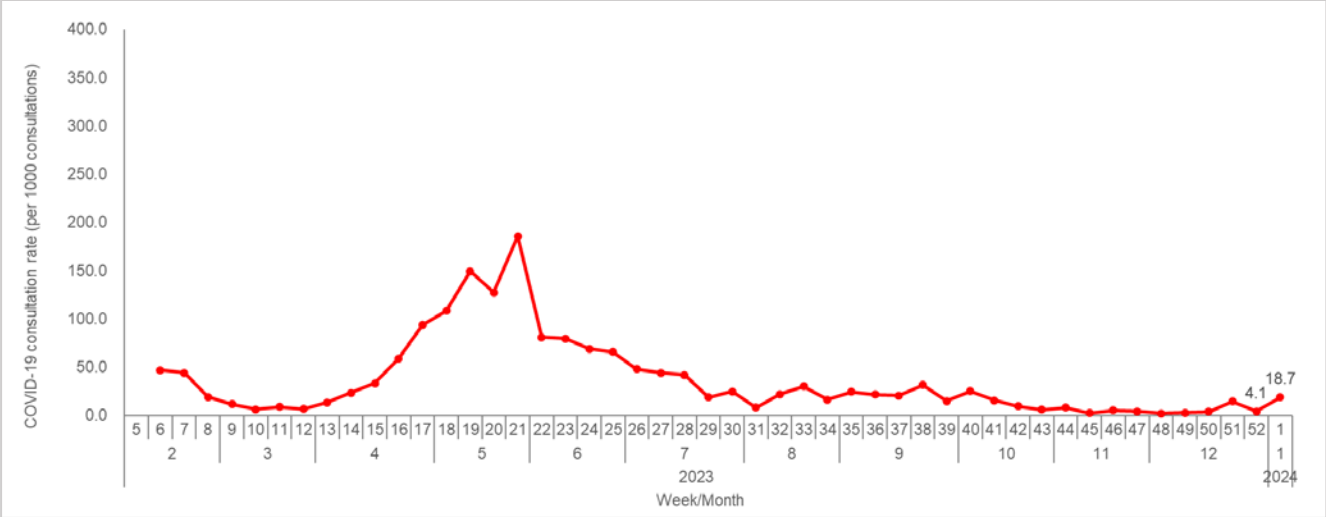

Figure 1.7 Average consultation rate of COVID-19 cases in private medical practitioner clinics

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 Jan 2, 2024) 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 31% of all specimens. WHO's newly designated VOI JN.1 constituted about 26% of all specimens, while non-JN.1 sublineages of BA.2.86 accounted for about 5%. (Figure 1.8)

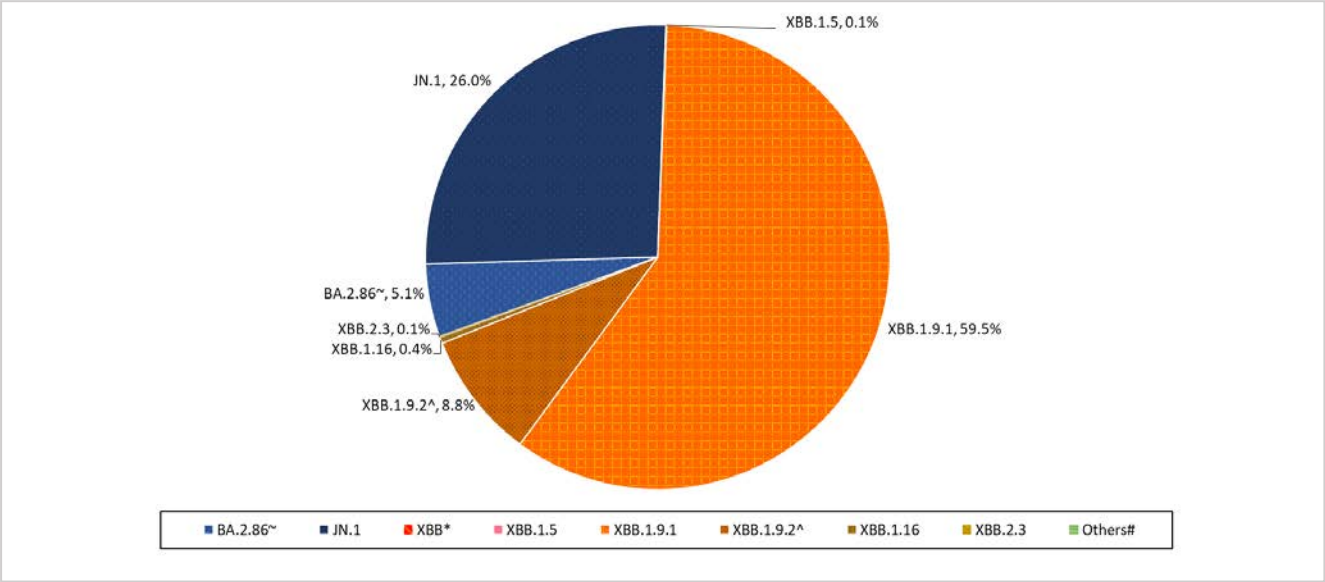

Figure 1.8 Estimated proportion of variants among sewage samples

~ 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 VOIs/ Variants Under Monitoring (VUMs) by World Health Organisation (WHO)

CHP also conducted genetic characterisation of 6 specimens obtained from reported severe and fatal cases of COVID-19 between Dec 21, 2023 and Jan 2, 2024. The results showed that XBB and its descendant lineages comprised around 50% of all characterised specimens. The proportion has dropped when compared with the previous weeks.

At the same time, the prevalence of JN.1 increased, comprising about 50% of all specimens (3 severe cases). (Figure 1.9)

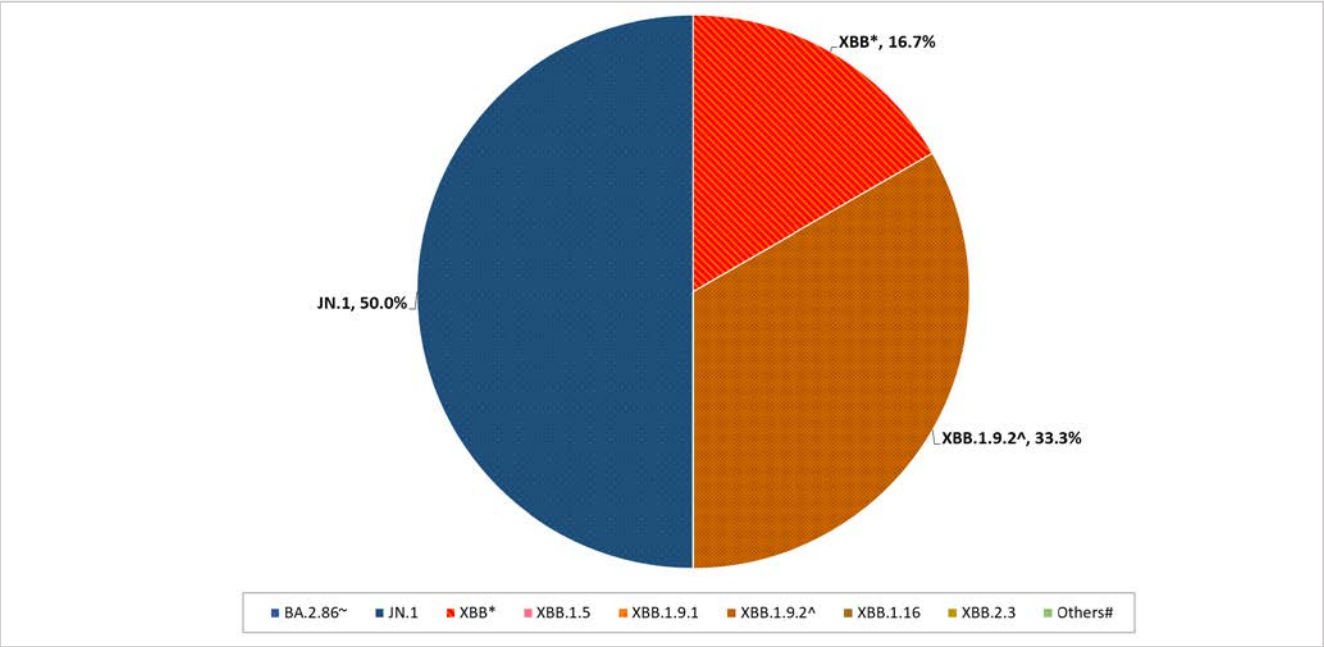

Figure 1.9 Proportion of variants among specimens obtained from reported severe and death cases for COVID-19

~ 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. The results showed that BA.2.86 and its descendant lineages are the most prevalent variant, comprising around 75% of all characterised specimens. The proportion has increased when compared with the previous weeks. JN.1 constituted about 60% of all specimens, while non-JN.1 sublineages of BA.2.86 accounted for about 15%. The prevalence of XBB and its descendant lineages decreased, comprising about 25% of all characterised specimens.

Global situation of COVID-19 activity

- Globally, as of Dec 31, 2023, there have been 773,819,856 confirmed cases of COVID-19, including 7,010,568 deaths, reported to WHO.

- According to WHO COVID-19 epidemiological update last published on Dec 22, 2023,
  - Over 850,000 new cases and over 3,000 deaths were reported in the last 28 days (Nov 20 to Dec 17, 2023) globally.
  - The highest numbers of new 28-day cases were reported from Russia, Singapore, Italy, Poland and Australia. The highest numbers of new 28-day deaths were reported from Italy, Sweden, Russia, Australia and Poland.
  - 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 five VOIs, which are BA.2.86, EG.5, JN.1, 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.
  - On 18 December 2023, JN.1, a sub-lineage of the BA.2.86 Omicron variant, was designated a separate VOI, apart from its parent lineage BA.2.86, due to its rapid increase in prevalence in recent weeks. 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. Protection by XBB.1.5 monovalent vaccines are likely to be effective against JN.1.
  - Between Nov 27 and Dec 3, 2023, EG.5 is the most prevalent variant globally, accounting for 36.3% compared to 53.7% between Oct 30 and Nov 5, 2023. During the same period, the prevalence of JN.1 and BA.2.86 increased from 3.3% and 4.4% to 27.1% and 5.9% respectively. On the other hand, the prevalence of XBB.1.16 and XBB.1.5 decreased from 9.6% and 8.2% to 4.2% and 7.3% respectively. All VUMs showed decreasing trends over the reporting period.

Sources:

1. WHO COVID-19 dashboard, accessed on Jan 11, 2024
2. World Health Organization COVID-19 epidemiological update

Local Situation of Influenza Activity (as of Jan 10, 2024)

Reporting period: Dec 31, 2023 – Jan 6, 2024 (Week 1)

- The latest surveillance data showed that the overall influenza activity continued to increase and exceeded the seasonal epidemic threshold, indicating that Hong Kong entered the 2023/24 winter influenza season.
- 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, 2020-24

In week 1, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 10.1 ILI cases per 1,000 consultations, which was higher than 7.4 recorded in the previous week (Figure 2.1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 48.3 ILI cases per 1,000 consultations, which was higher than 35.3 recorded in the previous week (Figure 2.1, right).

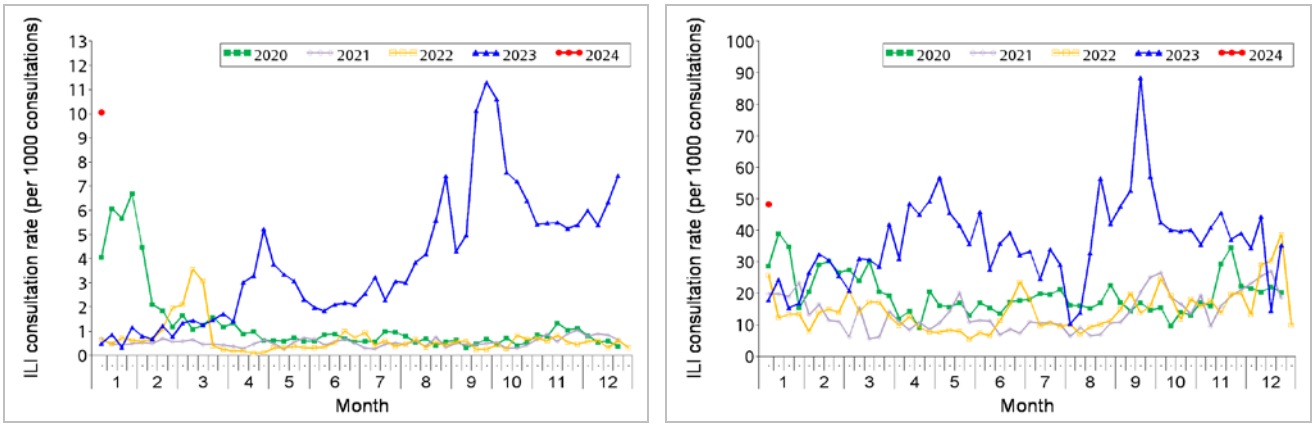

Figure 2.1 ILI consultation rates at sentinel GOPC (left) and PMP clinics (right), 2020-24
Note: The CHP has started to use electronic data on diagnosis coding of patients of the Hospital Authority's GOPC for sentinel surveillance since January 2020, replacing manual data collection in the past.

Laboratory surveillance, 2020-24

Among the 8,671 respiratory specimens received in week 1*, 1,021 (11.77%) were tested positive for seasonal influenza A or B viruses. Among the subtyped influenza detections, there were 66 (7%) influenza A(H1), 775 (77%) influenza A(H3) and 166 (16%) influenza B viruses. The positive percentage (11.77%) was above the baseline threshold of 9.21% but was higher than 8.49% recorded in the previous week (Figure 2.2).

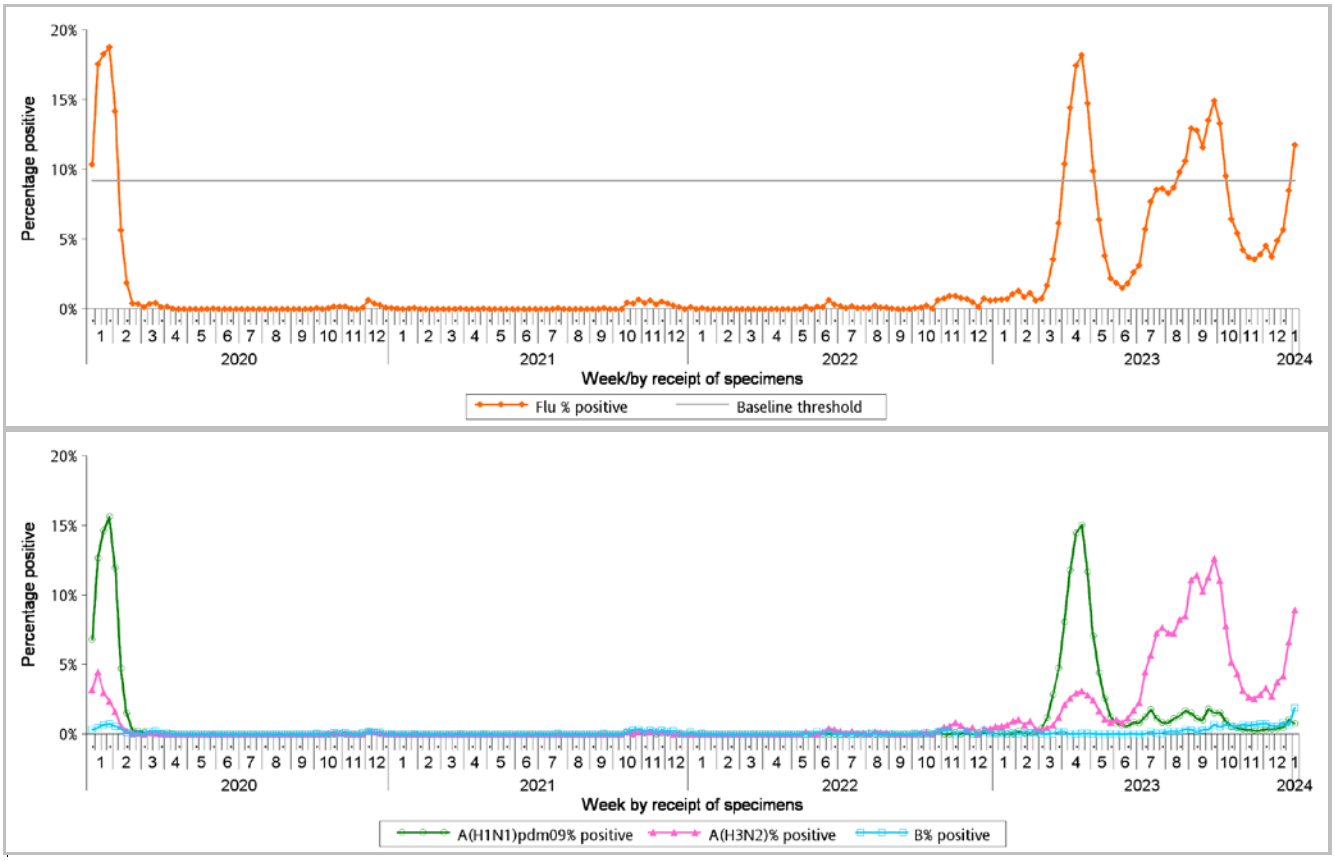

Figure 2.2 Percentage of respiratory specimens tested positive for influenza viruses, 2020-24 (upper: overall positive percentage, lower: positive percentage by subtypes)

[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 November 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: https://www.chp.gov.hk/en/statistics/data/10/641/695/7035.html

* Including 7,102 specimens received by Public Health Laboratory Services Branch, Centre for Health Protection and 1,569 specimens received by the Hospital Authority

Influenza-like illness outbreak surveillance, 2020-24

In week 1, 11 ILI outbreaks occurring in schools/institutions were recorded (affecting 47 persons), as compared to 1 outbreak recorded in the previous week (affecting 11 persons) (Figure 2.3). In the first 4 days of week 2 (Jan 7 to 10), 21 ILI outbreaks occurring in schools/institutions were recorded (affecting 91 persons).

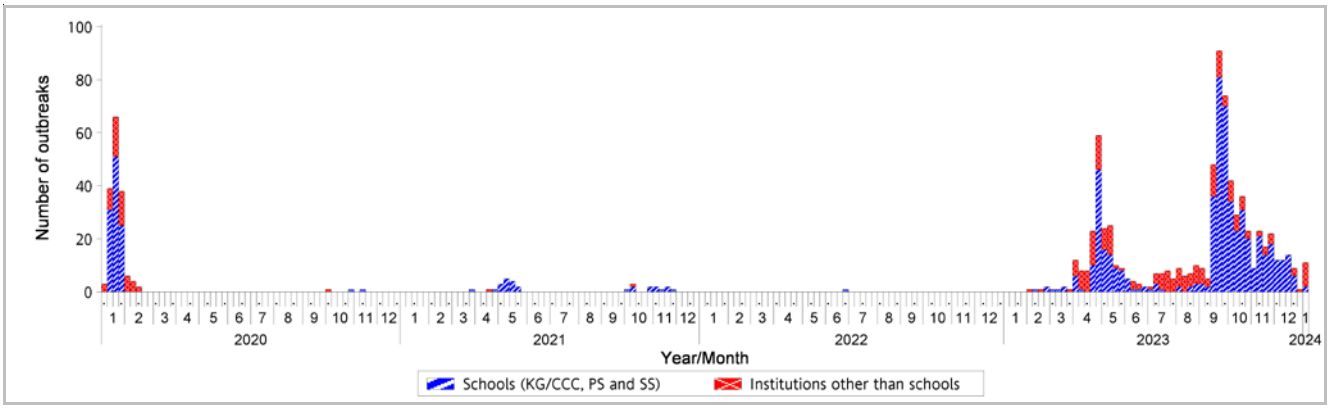

Figure 2.3 ILI outbreaks in schools/institutions, 2020-24

Type of institutions	Week 52	Week 1	First 4 days of week 2 (Jan 7 – 10)
Child care centre/ kindergarten (CCC/KG)	0	0	2
Primary school (PS)	0	2	13
Secondary school (SS)	0	0	0
Residential care home for the elderly	0	3	4
Residential care home for persons with disabilities	1	3	0
Others	0	3	2
Total number of outbreaks	1	11	21
Total number of persons affected	11	47	91

Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2020-24

In week 1, the overall admission rate in public hospitals with principal diagnosis of influenza was 0.68 (per 10,000 population), which was above the baseline threshold of 0.25 and was higher than 0.58 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 3.82, 1.21, 0.72, 0.27, 0.21 and 1.36 cases (per 10,000 people in the age group) respectively, as compared to 1.71, 0.93, 0.43, 0.30, 0.30 and 1.20 cases in the previous week (Figure 2.4).

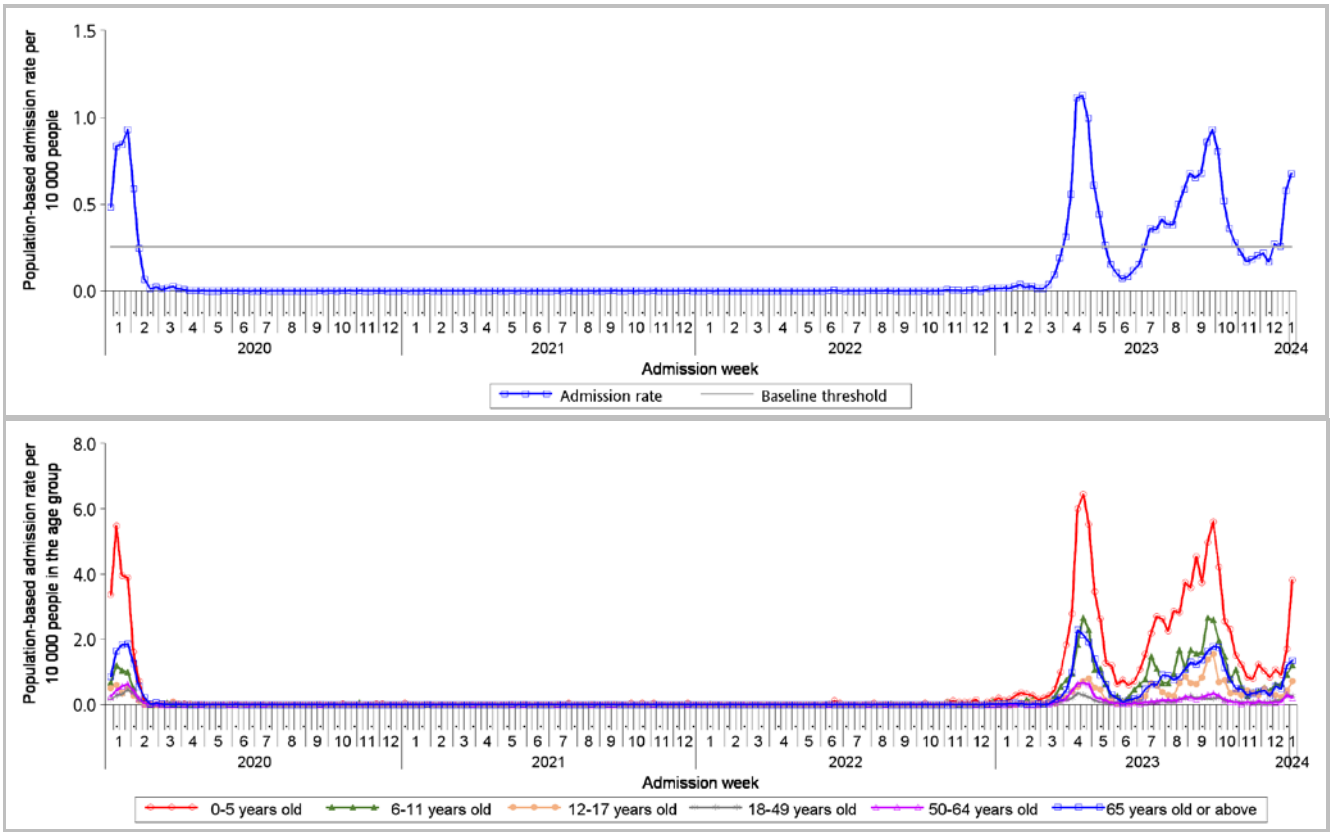

Figure 2.4 Influenza-associated hospital admission rates, 2020-24 (upper: overall rate, lower: rates by age groups)
[Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014 week 49 to 2019 week 48.]

Rate of ILI syndrome group in accident and emergency departments, 2020-24#

In week 1, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 217.9 (per 1,000 coded cases), which was higher than the rate of 201.0 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.

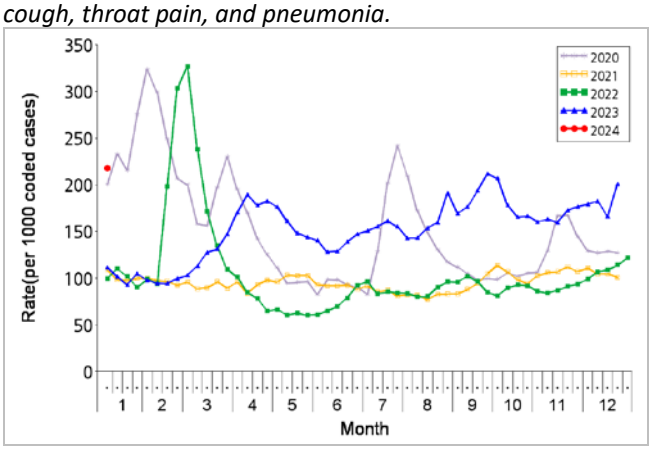

Figure 2.5 Rate of ILI syndrome group in AEDs, 2020-24

Fever surveillance at sentinel child care centres/ kindergartens, 2020-24

In week 1, 1.21% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above). The surveillance in week 52 was suspended due to Christmas and New Year holidays (Figure 2.6).

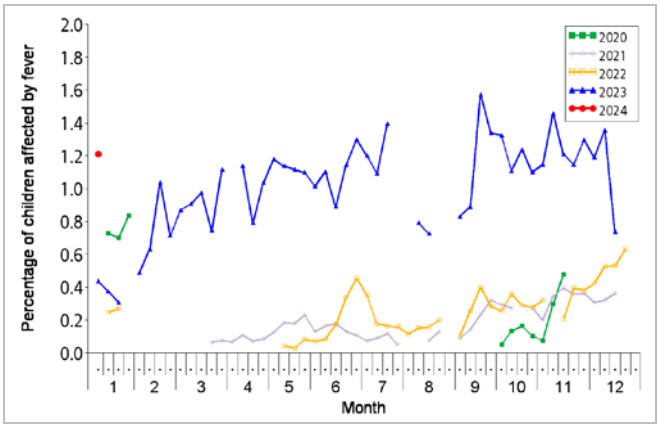

Figure 2.6 Percentage of children with fever at sentinel CCCs/KGs, 2020-24

Fever surveillance at sentinel residential care homes for the elderly, 2020-24

In week 1, 0.13% of residents in the sentinel residential care homes for the elderly (RCHEs) had fever (38°C or above), compared to 0.13% recorded in the previous week (Figure 2.7).

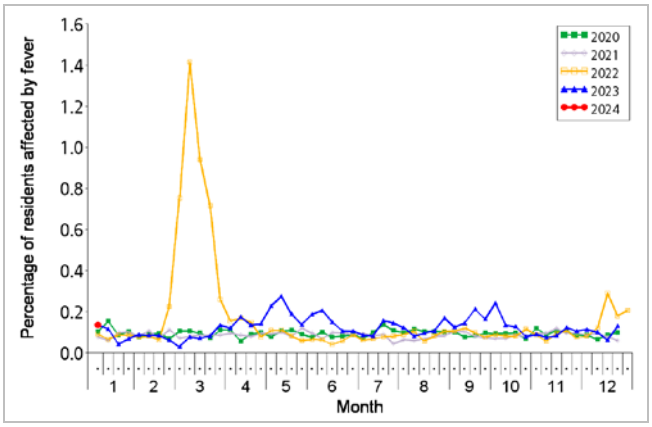

Figure 2.7 Percentage of residents with fever at sentinel RCHEs, 2020-24

Influenza-like illness surveillance among sentinel Chinese medicine practitioners, 2020-24

In week 1, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 1.69 ILI cases per 1,000 consultations as compared to 1.16 recorded in the previous week (Figure 2.8).

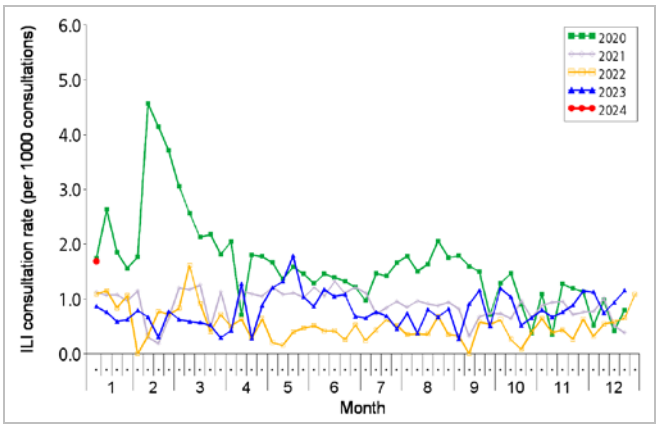

Figure 2.8 ILI consultation rate at sentinel CMPs, 2020-24

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 1, 33 adult cases of ICU admission/death with laboratory confirmation of influenza were recorded (including 15 deaths) as compared to 23 cases (including 10 deaths) recorded in the previous week.

Week	Influenza type			
	A(H1)	A(H3)	B	A (pending subtype)
Week 52, 2023	1	18	2	2
Week 1, 2024	5	17	5	6

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

- In week 1 and the first 4 days of week 2 (Jan 7 – 10), there were 2 cases of severe paediatric influenza-associated complication/death.

Reporting week	Age	Sex	Complication	Fatal case?	Influenza subtype	History of receiving influenza vaccine for this season
Week 1	13 months	Female	Encephalitis	No	Influenza A(H3)	No
Week 2	11 years	Male	Severe pneumonia	No	Influenza A(H3)	No

- In 2024, 2 paediatric cases of severe influenza-associated complication/death were recorded, in which none of them were fatal (as of Jan 10, 2024).

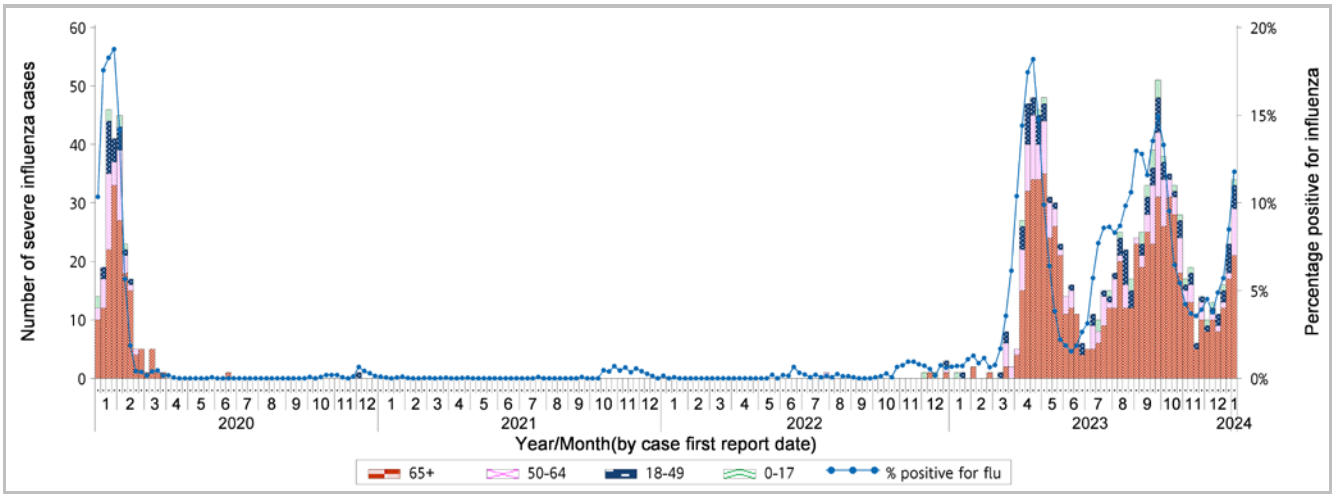

Figure 2.9 Weekly number of severe influenza cases by age groups, 2020-24 (the percentage positive for influenza viruses in Figure 2.2 is also shown in this graph)

Global Situation of Influenza Activity

Influenza detections increased due to increases in temperate Northern hemisphere, mainly in parts of Europe, Central Asia and North America (data up to Dec 24, 2023).

- In the United States (week ending Dec 30, 2023), influenza activity was elevated and continued to increase in most parts of the country. The percentage of specimens tested positive for influenza increased to 17.5%. The percentage of out-patient visits for ILI also increased to 6.9%, which was above the national baseline of 2.9%. Majority of the influenza detections were influenza A(H1) viruses.
- In Canada (week ending Dec 30, 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 18.9% in week 52. Majority of the influenza detections were influenza A(H1) viruses.
- In the United Kingdom (week ending Dec 31, 2023), influenza activity slightly increased. Influenza positivity slightly increased to 11.8% in week 52 as compared to 11.2% in the preceding week. The weekly ILI consultation rate in England decreased to 4.9 from 7.7 per 100,000 population in preceding week, and was within baseline activity levels.
- In Europe (week ending Dec 31, 2023), the overall influenza activity continued to increase. The influenza testing positivity in sentinel settings has been above 10% since week 50, indicating the start of the seasonal influenza epidemic in the Region. The percentage of sentinel specimens tested positive for influenza increased to 21% in both week 51 and week 52.
- In Mainland China (week ending Dec 31, 2023), influenza surveillance data showed influenza detections in southern provinces increased whereas that in northern provinces decreased. The percentage of specimens tested positive for influenza in the southern and northern provinces were 54.2% and 36.2% respectively. Influenza A(H3) viruses were predominating, followed by influenza B(Victoria) viruses.
- In Taiwan (week ending Dec 30, 2023), influenza-like illness was in an epidemic period. The number and percentage of out-patient visits for ILI continued to increase. The percentage of specimens tested positive for influenza in week 51 was 21.6%. Most of the influenza detections in the 4 weeks from week 47 to 50 were influenza A(H3N2) (64.3%), followed by influenza B (31.4%) viruses.
- In Japan (week ending Dec 31, 2023), the average number of reported ILI cases per sentinel site decreased to 21.65 from 23.13 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 30, 2023), the weekly ILI rate remained elevated. The rate in week 52 was 49.9 per 1,000 out-patient visits, which was above the season epidemic threshold of 6.5. In week 52, 39.5% of tests were positive for influenza (including 15.4% influenza A(H3N2), 14.8% influenza B and 9.3% influenza A(H1N1)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, 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 and Korean Disease Control and Prevention Agency.