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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 Feb 8, 2023)

Reporting period: Jan 30 – Feb 4, 2023

- The latest surveillance data showed that the activity of COVID-19 has been stable in the past one week in Hong Kong.
- 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).
- 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

From Jan 30 to Feb 8, 2023, the daily number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus ranged from 284 to 471. (Figure 1.1)

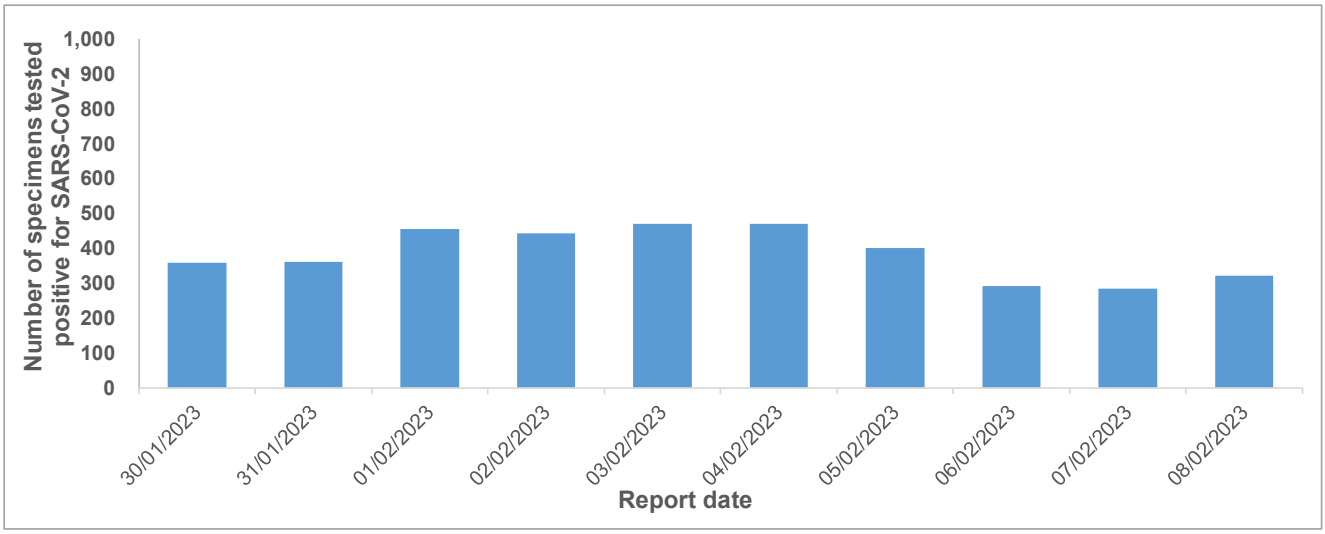

Figure 1.1 Daily number of positive nucleic acid test laboratory detections for SARS-CoV-2 virus

Positive detection rate of specimens tested positive for SARS-CoV-2 virus at community testing centres and community testing stations

In week 5 (Jan 29 – Feb 4, 2023), the positive rate of specimens (7-day moving average) collected from community testing centres (CTC) and community testing stations tested for SARS-CoV-2 virus was 0.62%, with daily number of tested specimens ranged from around 62,000 to around 78,000 during the week. (Figure 1.2)

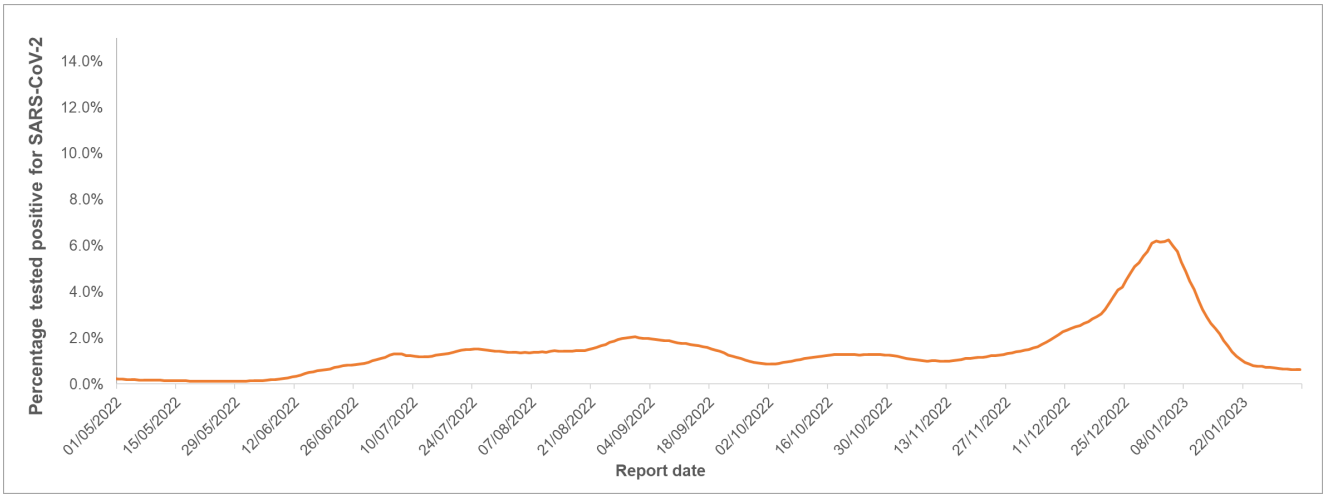

Figure 1.2 Percentage of specimens tested positive for SARS-CoV-2 virus at CTC and mobile specimen collection stations since May 1, 2022

Laboratory surveillance on genetic characterisation for COVID-19 cases

The Public Health Laboratory Services Branch (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 Jan 30 and Feb 8, 2023, the most common variants identified were descendant lineages of BA.2, followed by descendant lineages of BA.5. Other variants comprised 14.5% of all characterised specimens during the period, with proportion of BF.7, BN.1.3, BQ.1, CH.1.1 and XBB.1.5 accounting for 3.9%, 1.3%, 2.6%, 5.3% and 1.3% respectively. (Figure 1.3)

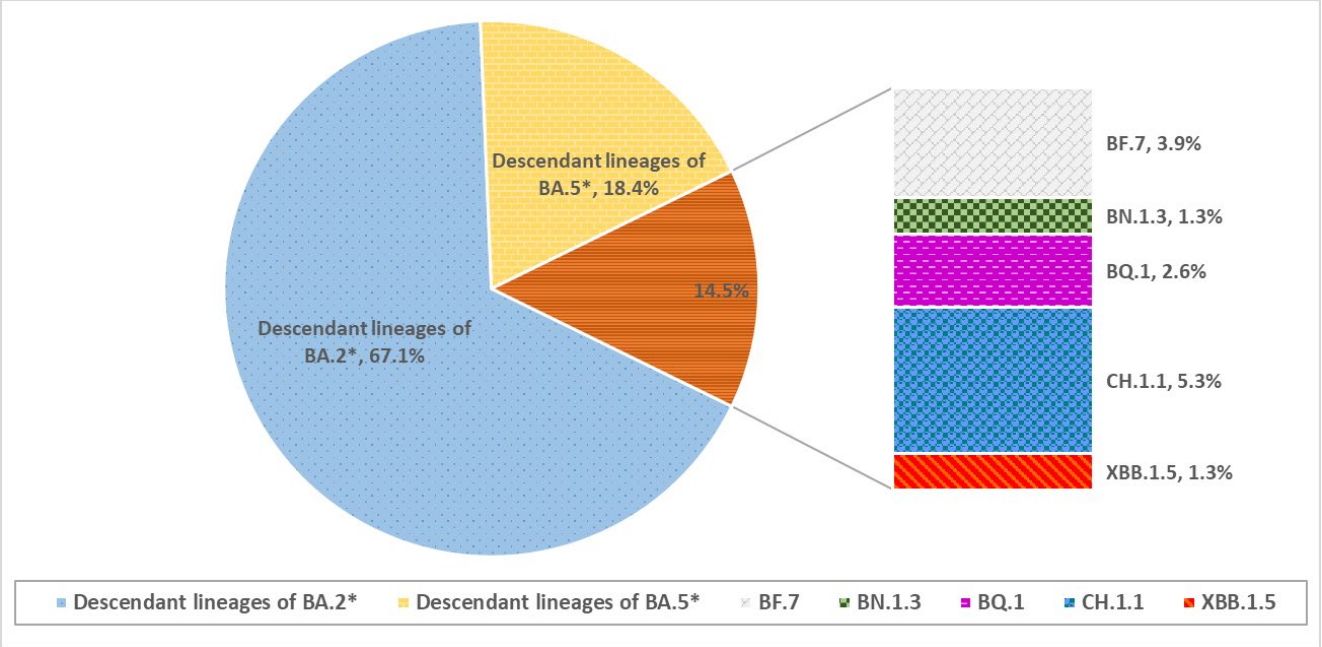

Figure 1.3 Proportion of variants among specimens tested positive for SARS-CoV-2 virus by PHLSB

** Excluding BF.7, BN.1.3, BQ.1, CH.1.1, XBB, and their descendant lineages. BN.1.3 and CH.1.1 are descendant lineages of BA.2.75.*

Surveillance of severe and fatal COVID-19 cases

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

From Jan 30 to Feb 8, 2023, 188 severe COVID-19 cases including deaths with cause of death preliminarily assessed to be related to COVID-19 were recorded. (Figure 1.4)

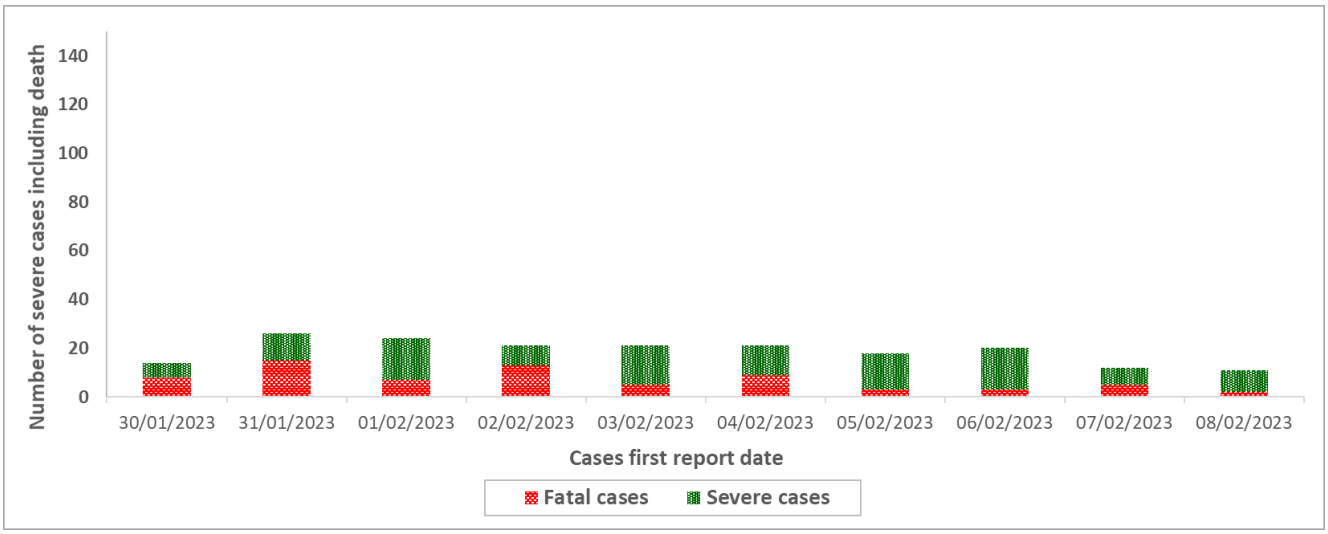

Figure 1.4 Daily number of severe COVID-19 cases including deaths

Sewage surveillance of SARS-CoV-2 virus

In week 5 (Jan 29 – Feb 4, 2023), the 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance was around 328,000 copy/L as compared to around 340,000 copy/L in the preceding week. (Figure 1.5)

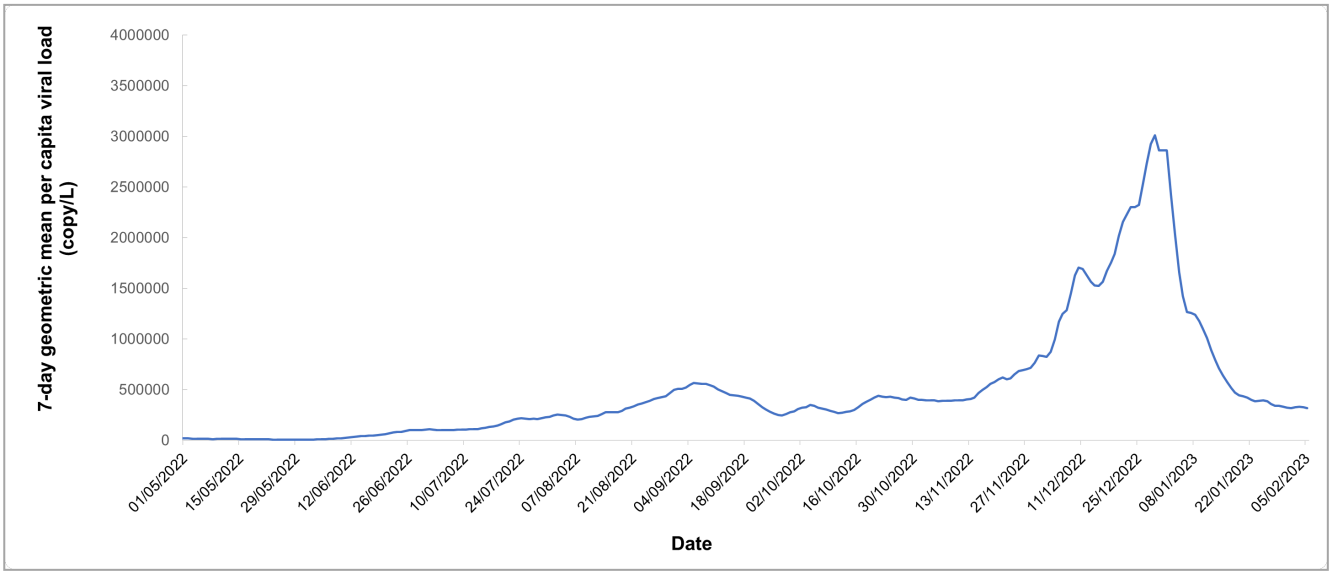

Figure 1.5 7-day geometric mean per capita viral load of SARS-CoV-2 virus from sewage surveillance since May 1, 2022

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

From Jan 30 to Feb 4, 2023, the average consultation rate for COVID-19 among sentinel general outpatient clinics (GOPC) was 178.1 COVID-19 cases per 1,000 consultations.

COVID-19 surveillance among sentinel private medical practitioner clinics commenced on Feb 8, and preliminary data will be provided when available.

Global situation of COVID-19 activity

- According to the World Heath Organization (WHO), as of Jan 29, 2023, over 753 million confirmed cases and over 6.8 million deaths have been reported globally. Nearly 20 million new cases and over 114,000 deaths were reported in the last 28 days (Jan 2 – 29, 2023) globally, a decrease of 78% and an increase of 65%, respectively, compared to the previous 28 days (Dec 5, 2022 – Jan 1, 2023).
- The highest numbers of new 28-day cases were reported from China, Japan, the United States of America (USA), the Republic of Korea and Brazil. The highest numbers of new 28-day deaths were reported from China, USA, Japan, the United Kingdom, and Brazil.
- 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.
- BA.5 and its descendent lineages remained dominant globally. The top three variants globally in Jan 2023 were BQ.1.1, BQ.1 and XBB.1.5. The top three most prevalent variants in the Western Pacific region were BA.5.2, BF.7 and BQ.1.1.
- WHO continued to consider COVID-19 constituting a public health emergency of international concern subsequent to the 14th meeting of the International Health Regulations (2005) Emergency Committee regarding the COVID-19 pandemic on Jan 27, 2023.

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 Feb 8, 2023)

Reporting period: Jan 29 – Feb 4, 2023 (Week 5)

- The latest surveillance data showed that the overall seasonal influenza activity in Hong Kong remained low.
- 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.
- As Hong Kong continues to face the challenge of COVID-19 pandemic, influenza viruses and the virus that causes COVID-19 may both spread in the winter influenza season. To protect the healthcare system from being overwhelmed, getting influenza vaccination during 2022-23 is therefore important. For the coming 2022-23 season, Seasonal Influenza Vaccination School Outreach and the Residential Care Home Vaccination Programme were launched on September 29, whereas the Vaccination Subsidy Scheme (VSS) and the Government Vaccination Programme (GVP) began on October 6. For details, 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 influenza and prevention measures, please visit the Centre for Health Protection's pages below for more information:
  - The influenza page (http://www.chp.gov.hk/en/view_content/14843.html)
  - Webpage on Personal Hygiene (https://www.chp.gov.hk/en/healthtopics/content/460/19899.html)
  - Video on "Prevent diseases · Maintain good hygiene" (https://youtu.be/X0OxrsgAP2w)
- The current influenza surveillance data should be interpreted with caution as the ongoing COVID-19 pandemic has influenced the monitoring systems.

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

In week 5, the average consultation rate for influenza-like illness (ILI) among sentinel general out-patient clinics (GOPC) was 0.8 ILI cases per 1,000 consultations, which was lower than 1.2 recorded in the previous week (Figure 2.1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 26.7 ILI cases per 1,000 consultations, which was higher than 16.9 recorded in the previous week (Figure 2.1, right).

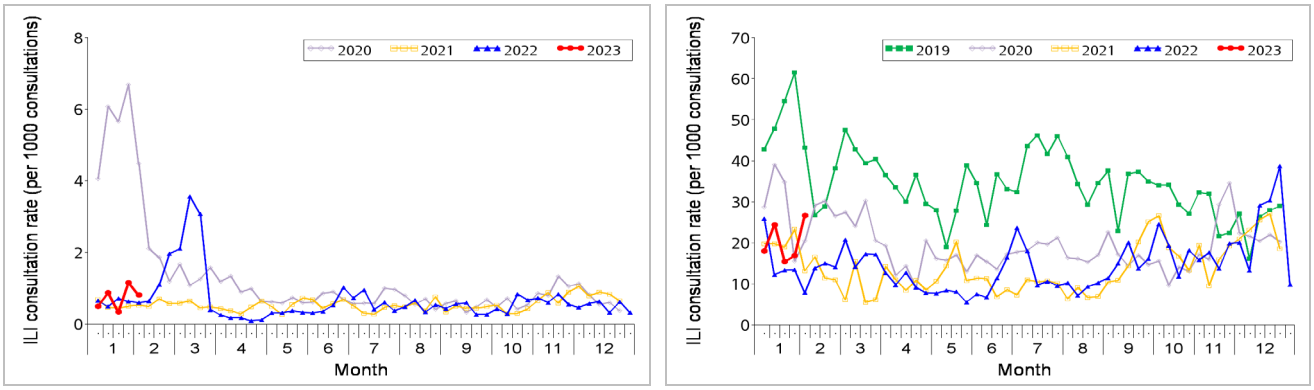

Figure 2.1 ILI consultation rates at sentinel GOPC (2020-23) (left) and PMP clinics (2019-23) (right)
Note: The CHP has started to use electronic data on diagnosis coding of patients of the Hospital Authority's GOPC for sentinel surveillance since January 2020, replacing manual data collection in the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

Laboratory surveillance, 2019-23

Among the 5,523 respiratory specimens* received in week 5, 69 (1.25%) were tested positive for seasonal influenza A or B viruses. These positive detections include 12 (17%) influenza A(H1), 55 (80%) influenza A(H3) and 2 (3%) influenza B viruses. The positive percentage (1.25%) was below the baseline threshold of 9.21% but was higher than 1.09% recorded in the previous week (Figure 2.2).

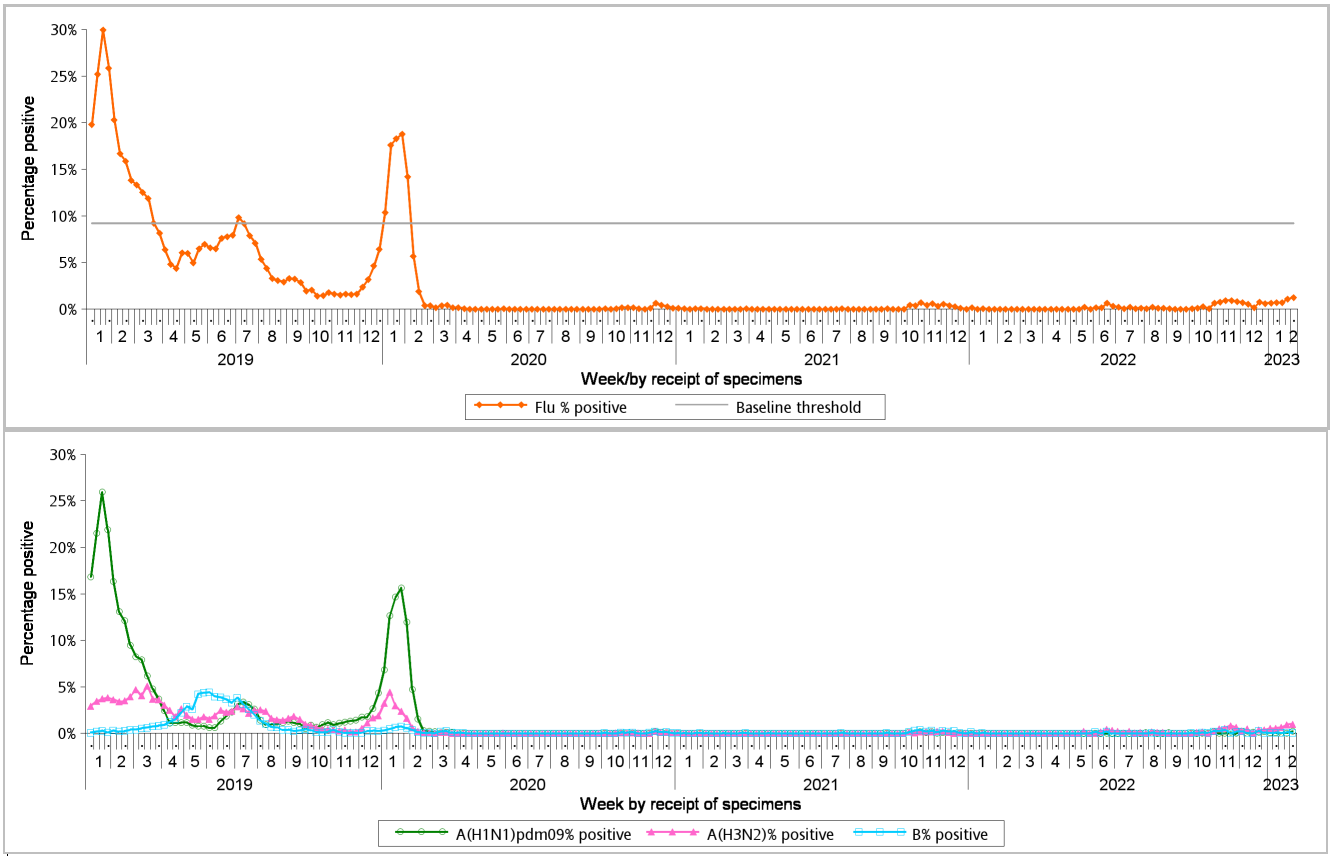

Figure 2.2 Percentage of respiratory specimens tested positive for influenza viruses, 2019-23 (upper: overall positive percentage, lower: positive percentage by subtypes)

[Note: The baseline threshold is 1.96 standard deviation above the average weekly positive percentage during non-season periods from 2014 week 49 - 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 Mar 2020, 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/10/641/695/6903.html

* Including 1,812 specimens received by Public Health Laboratory Services Branch, Centre for Health Protection and 3,711 specimens received by Hospital Authority

Influenza-like illness outbreak surveillance, 2019-23

In week 5, 2 ILI outbreaks occurring in institutions were recorded (affecting 11 persons), as compared to no outbreaks recorded in the previous week (Figure 2.3). In the first 4 days of week 6 (Feb 5 – 8), 1 ILI outbreak in a school was recorded (affecting 5 persons).

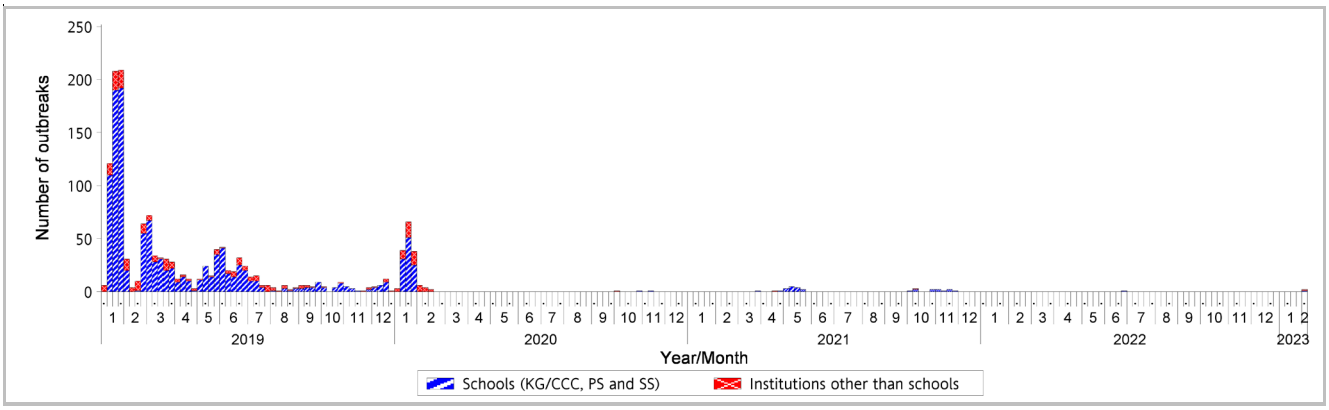

Figure 2.3 ILI outbreaks in schools/institutions, 2019-23

Type of institutions	Week 4	Week 5	First 4 days of Week 6 (Feb 5 – 8)
Child care centre/ kindergarten (CCC/KG)	0	0	1
Primary school (PS)	0	0	0
Secondary school (SS)	0	0	0
Residential care home for the elderly	0	0	0
Residential care home for persons with disabilities	0	1	0
Others	0	1	0
Total number of outbreaks	0	2	1
Total number of persons affected	0	11	5

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

In week 5, the overall admission rates in public hospitals with principal diagnosis of influenza was 0.03 (per 10,000 population), which was below the baseline threshold of 0.25 but was higher than 0.02 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 0.30, 0.06, 0.06, 0.01, 0.03 and 0.02 cases (per 10,000 people in the age group) respectively, as compared to 0.23, 0.03, 0, 0.01, 0.01 and 0.04 cases in the previous week (Figure 2.4).

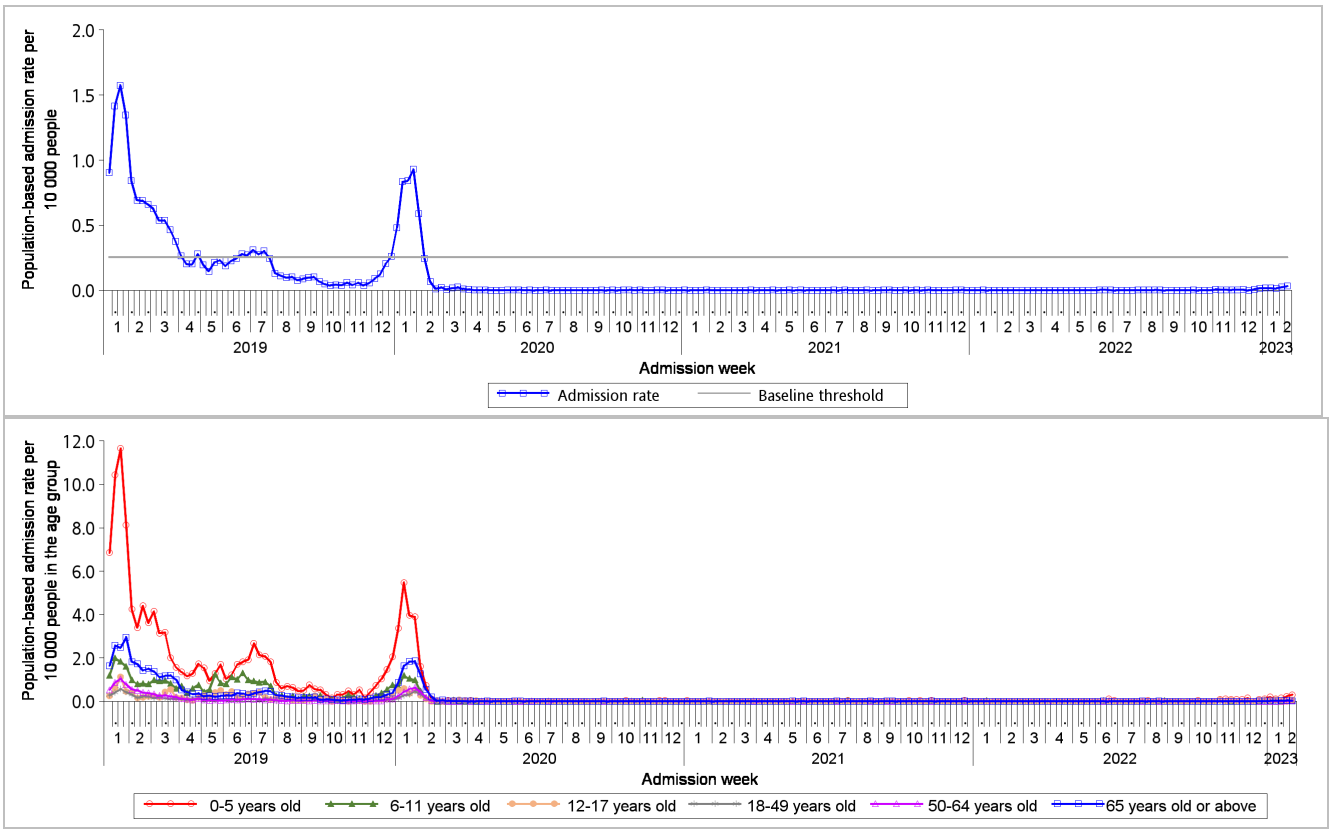

Figure 2.4 Influenza-associated hospital admission rates, 2019-23 (upper: overall rate, lower: rates by age groups)

[Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014 week 49 – 2019 week 48.]

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

In week 5, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 98.1 (per 1,000 coded cases), which was lower than the rate of 104.7 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.

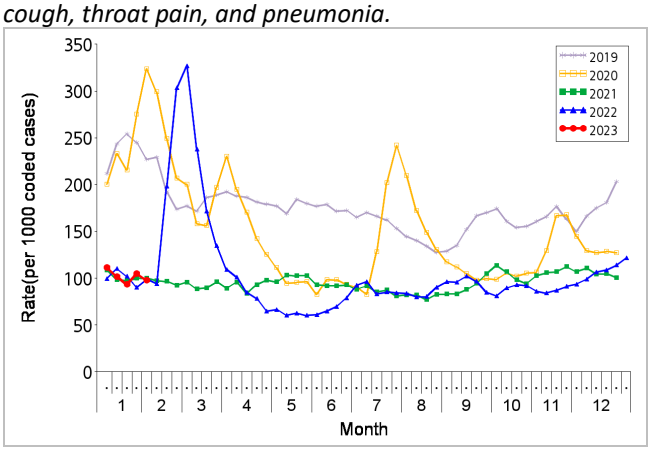

Figure 2.5 Rate of ILI syndrome group in AEDs, 2019-23

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

In week 5, 0.49% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above). The surveillance for week 4 was suspended due to Lunar New Year holiday. (Figure 2.6).

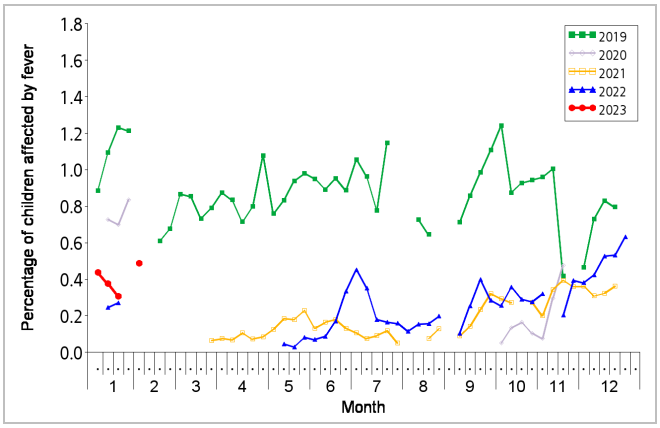

Figure 2.6 Percentage of children with fever at sentinel CCCs/KGs, 2019-23

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

In week 5, 0.09% of residents in the sentinel residential care homes for the elderly (RCHEs) had fever (38°C or above), compared to 0.07% recorded in the previous week (Figure 2.7).

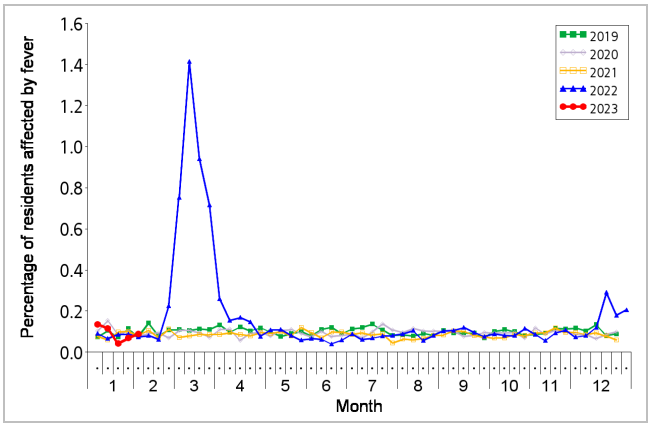

Figure 2.7 Percentage of residents with fever at sentinel RCHEs, 2019-23

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

In week 5, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 0.79 ILI cases per 1,000 consultations as compared to 0.63 recorded in the previous week (Figure 2.8).

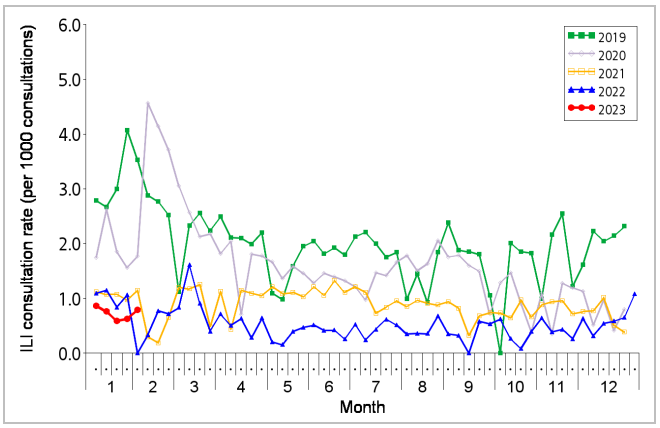

Figure 2.8 ILI consultation rate at sentinel CMPs, 2019-23

Surveillance of severe influenza cases

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

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

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

- In week 5, 2 adult cases of ICU admission with laboratory confirmation of influenza were recorded.

Week	Influenza type				
	A(H1)	A(H3)	B	C	A (pending subtype)
Week 4	0	0	0	0	0
Week 5	0	2	0	0	0

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

- In week 5 and the first 4 days of week 6 (Feb 5 – 8), there were no cases of severe paediatric influenza-associated complication/death.
- In 2023, 1 paediatric case of severe influenza-associated complication/death was recorded, which was a fatal case (as of Feb 8, 2023).

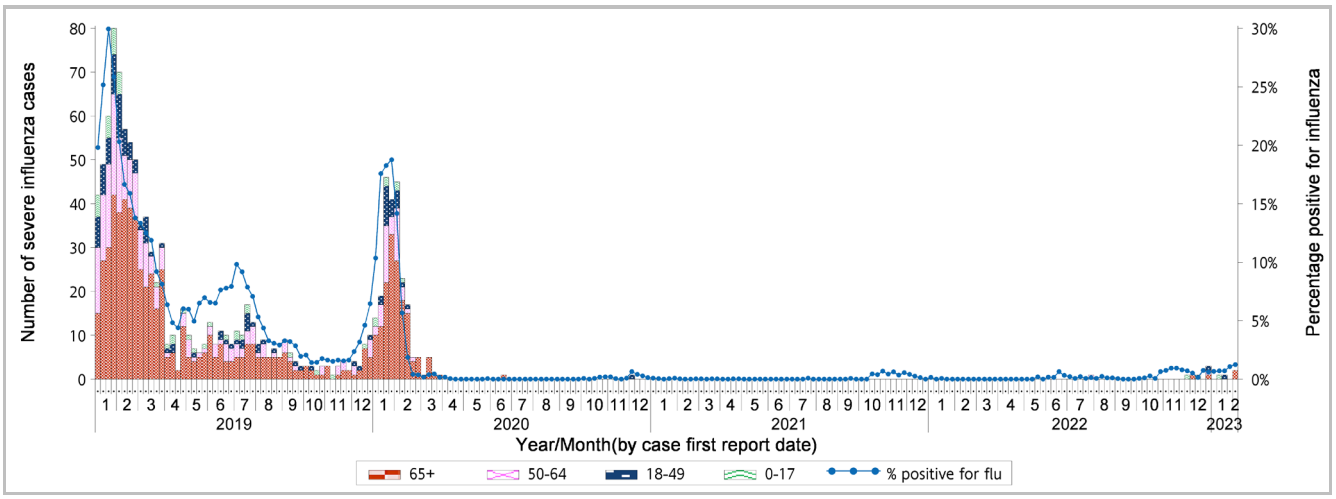

Figure 2.9 Weekly number of severe influenza cases by age groups, 2019-23 (the percentage positive for influenzas viruses in Figure 2 is also shown in this graph)

Global situation of influenza activity

Globally, influenza activity decreased but remained somewhat elevated due to activity in the northern hemisphere. Influenza A viruses predominated with a slightly larger proportion of influenza A(H1N1)pdm09 viruses detected among the subtyped influenza A viruses. In the temperate zone of the southern hemisphere, influenza activity decreased to low levels.

- In the United States (week ending Jan 28, 2023), influenza activity continued to decline across the country. The percentage of specimens tested positive for influenza continued to decrease to 2.1% from the peak of 25.7% in early December last year. The percentage of out-patient visits for ILI was stable (2.6%), but still remained above the national baseline of 2.5%. The overall cumulative influenza-related hospitalisation rate was 58.6 per 100,000 population, which was 1.1 times higher than the highest cumulative in-season hospitalisation rate in week 4 during previous seasons going back to 2010-2011, which ranged from 0.5 to 51.4. Majority of influenza viruses detected this season were influenza A(H3N2) viruses.
- In Canada (week ending Jan 28, 2023), influenza activity was low and continued to decline. The weekly percentage of tests positive for influenza continued to decline to 1.0%, which was at interseasonal levels. Influenza A(H3N2) was the dominant subtype, representing 93% of sub-typed influenza A detections this season (Aug 28, 2022 – Jan 28, 2023).
- In the United Kingdom (week ending Jan 29, 2023), influenza activity decreased. Influenza positivity decreased to 2.7%, as compared to 3.0% in the preceding week, with 220 samples tested positive for influenza (including 42 influenza A(H3), 4 influenza A(H1N1)pdm09, 108 influenza A(not subtyped) and 66 influenza B). Both weekly hospital admission and ICU admission rates for influenza returned to low or baseline intensity levels.
- In Europe (week ending Jan 29, 2023), the percentage of sentinel specimens tested positive for influenza remained stable at 21% as compared to 23% in the previous week, which was above the epidemic threshold of 10%. Influenza A(H1)pdm09 viruses became predominating in both sentinel and non-sentinel surveillance systems since week 2.
- In Mainland China (week ending Jan 29, 2023), influenza surveillance data showed that the percentages of specimens tested positive for influenza in the northern and southern provinces were at relatively low levels. Influenza A(H3N2) viruses were predominating.
- In Taiwan (week ending Jan 28, 2023), influenza activity in the community continued to increase. Majority of the influenza detections in the past 4 weeks were influenza A(H3N2) viruses.
- In Japan (week ending Jan 29, 2023), the average number of reported ILI cases per sentinel site continued to increase to 10.36 from 9.59 in the preceding week, which was above the baseline level of 1.00. Influenza A(H3) viruses were predominating.
- In Korea (week ending Jan 28, 2023), influenza activity decreased but remained elevated. The weekly ILI rate decreased to 25.6 from 28.3 per 1,000 out-patient visits in the preceding week. In week 4, 12 out of 104 respiratory specimens (11.5%) were tested positive for influenza (including 12 influenza A(H3N2)).
- In Singapore (week ending Jan 28, 2023), the daily number of consultations for acute respiratory infection remained stable. The overall positivity rate for influenza among ILI samples in the community was 14.4% in the past 4 weeks. Influenza A(H3N2) viruses were predominating.

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 and Singapore Ministry of Health.