

FLU EXPRESS



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 influenza activities.

Local Situation of Influenza Activity (as of Dec 30, 2020)

Reporting period: Dec 20 – 26, 2020 (Week 52)

- 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 coming winter influenza season. To protect the healthcare system from being overwhelmed, getting influenza vaccination during 2020-2021 is therefore important. For the 2020/21 seasonal influenza vaccination programmes, including Vaccination Subsidy Scheme (VSS) and Government Vaccination Programme (GVP), have been launched on 8 and 22 October respectively. 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>)

Influenza-like-illness surveillance among sentinel general outpatient clinics and sentinel private medical practitioner clinics, 2016-20

In week 52, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPC) was 0.4 ILI cases per 1,000 consultations, which was lower than 0.6 recorded in the previous week (Figure 1, left). The average consultation rate for ILI among sentinel private medical practitioner (PMP) clinics was 20.3 ILI cases per 1,000 consultations, which was lower than 22.0 recorded in the previous week (Figure 1, right).

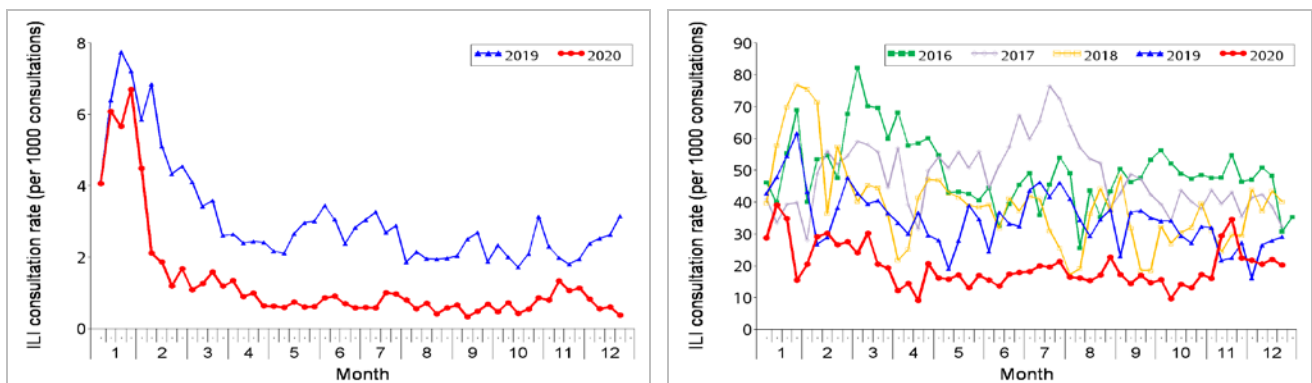


Figure 1 ILI consultation rates at sentinel GOPC (2019-20) (left) and PMP clinics (2016-20) (right)

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, 2016-20

Among the 5623 respiratory specimens received in week 52, 7 (0.12%) were tested positive for seasonal influenza A or B viruses. These positive detections include 2 (29%) influenza A(H1), 2 (29%) influenza A(H3) and 3 (43%) influenza B viruses. The positive percentage (0.12%) was below the baseline threshold of 9.21% but was lower than 0.29% recorded in the previous week (Figure 2).

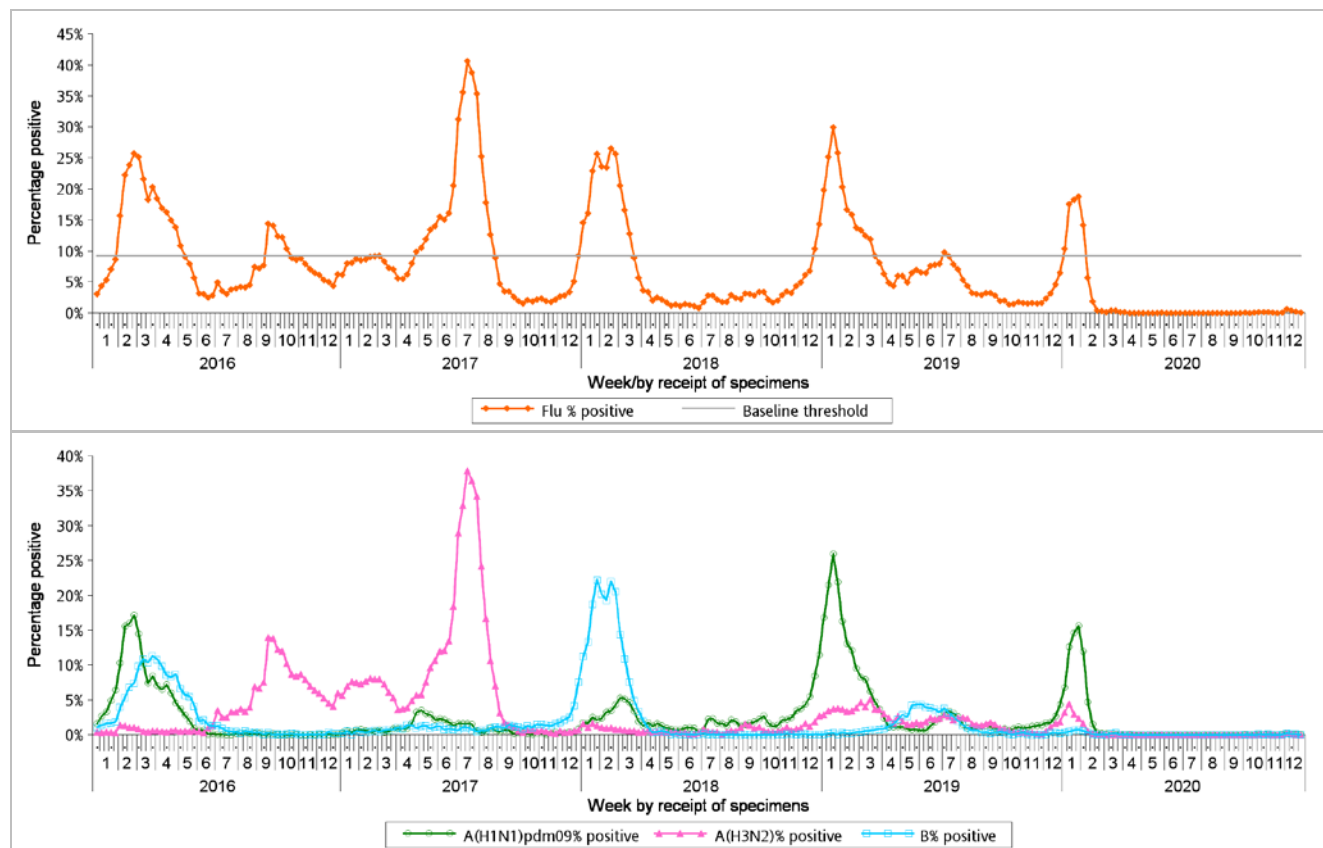


Figure 2 Percentage of respiratory specimens tested positive for influenza viruses, 2016-20 (upper: overall positive percentage, lower: positive percentage by subtypes)

[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.]

Surveillance of oseltamivir resistant influenza A and B viruses

- In March 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>

Antigenic characterisation of influenza viruses

Influenza viruses are antigenically characterised by haemagglutination inhibition test (HAI) using the antisera supplied by the World Health Organization.

Influenza A (H1): In March 2020, among the 5 influenza A(H1) virus antigenically characterised by HAI, 5 (100%) were antigenically similar to the strain “A/Brisbane/02/2018(H1N1)pdm09” representing the A(H1) component of the 2019/20 Northern Hemisphere influenza vaccines, as compared with 94.0% (78/83) in February 2020.

Influenza A (H3): In March 2020, among the 8 influenza A(H3) viruses antigenically characterised by HAI, 3 (37.5%) was antigenically similar to the strain “A/Kansas/14/2017(H3N2)” representing the A(H3) component of the 2019/20 Northern Hemisphere influenza vaccines, as compared with 15.4% (2/13) in February 2020.

Influenza B/Victoria: In March 2020, among the 15 influenza B/Victoria lineage viruses antigenically characterised by HAI, 15 (100%) were antigenically similar to the strain “B/Colorado/06/2017” representing the B/Victoria component of the 2019/20 Northern Hemisphere influenza vaccines, as compared with 100% (6/6) in February 2020.

Influenza B/Yamagata: From January to March 2020, no influenza B/Yamagata lineage viruses were antigenically characterised by HAI due to the very small number of positive detections.

Results of antigenic characterisation of influenza viruses, March 2020 (as at March 31, 2020)

Virus type	Number tested	Antigenically similar* to vaccine viruses	Antigenically dissimilar/ Low reacting
Influenza A(H1)	5	5 (100%)	0
Influenza A(H3)	8	3 (37.5%)	5 [^] (62.5%)
Influenza B/Victoria lineage	15	15 (100%)	0
Influenza B/Yamagata lineage	0	0	0

*Reacting at titres that are within 4-fold difference of the titres of the vaccine viruses.

[^]2 with 8-fold differences and 3 with 16-fold differences of the vaccine virus titre.

Influenza-like illness outbreak surveillance, 2016-20

In week 52, no ILI outbreaks occurring in schools/ institutions were recorded, as compared to no outbreaks recorded in the previous week (Figure 3). In the first 4 days of week 1, 2021 (Dec 27 - 30, 2020), no ILI outbreaks in schools/institutions were recorded.

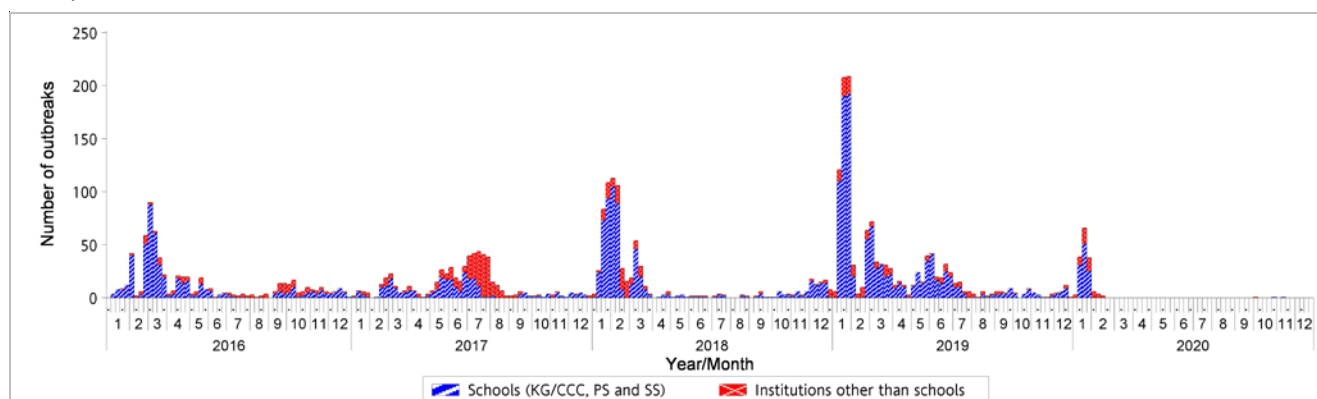


Figure 3 ILI outbreaks in schools/institutions, 2016-20

Type of institutions	Week 51	Week 52	First 4 days of Week 1, 2021 (Dec 27 – 30, 2020)
Child care centre/ kindergarten (CCC/KG)	0	0	0
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	0	0
Others	0	0	0
<i>Total number of outbreaks</i>	0	0	0
<i>Total number of persons affected</i>	0	0	0

Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2016-20

In week 52, the overall admission rates in public hospitals with principal diagnosis of influenza was 0 (per 10,000 population), which was below the baseline threshold of 0.25 and was the same as 0 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, 0, 0, 0, 0 and 0 cases (per 10,000 people in the age group) respectively, as compared to 0, 0, 0, 0, 0 and 0 cases in the previous week (Figure 4).

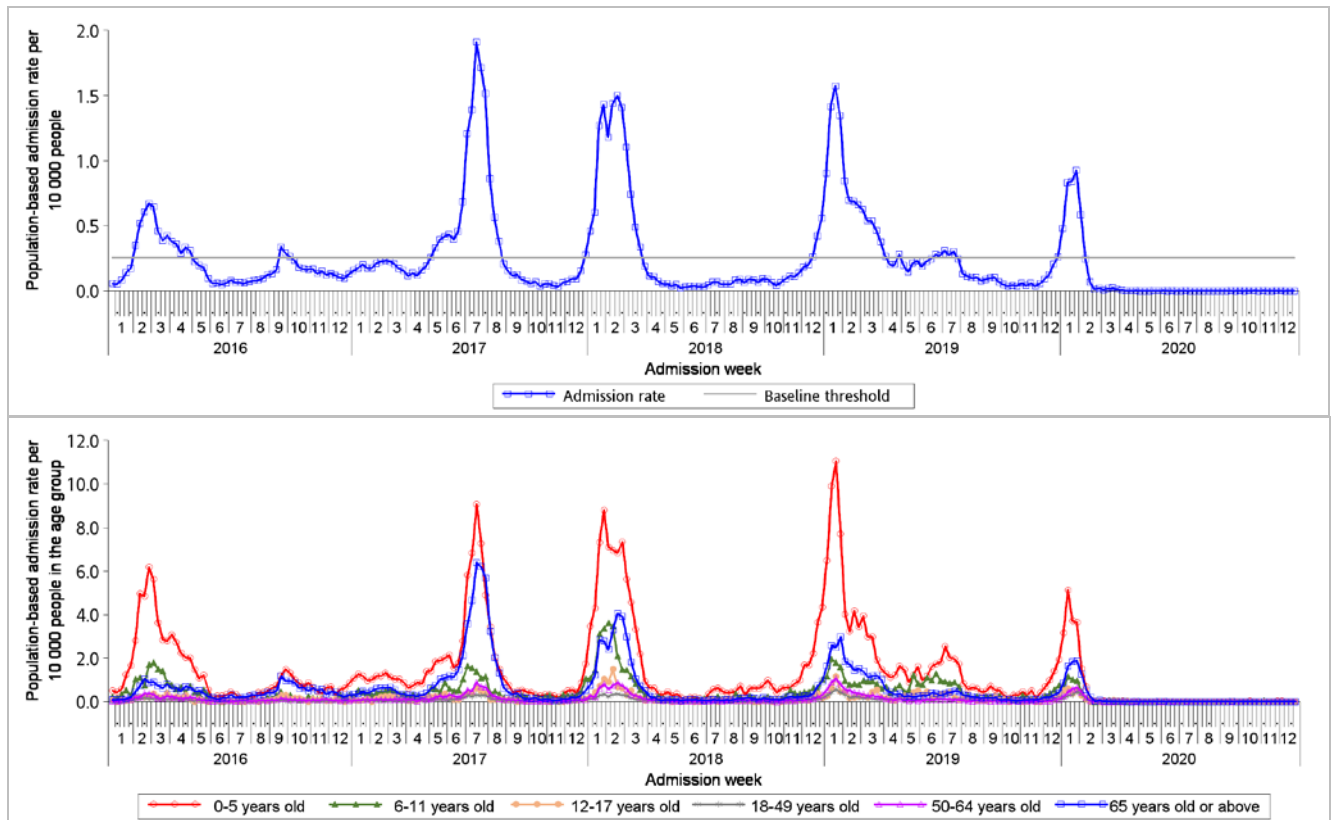


Figure 4 Influenza-associated hospital admission rates, 2016-20 (upper: overall rate, lower: rates by age groups)

[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, 2016-20[#]

In week 52, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 127.3 (per 1,000 coded cases), which was lower than the rate of 128.9 in the previous week (Figure 5).

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

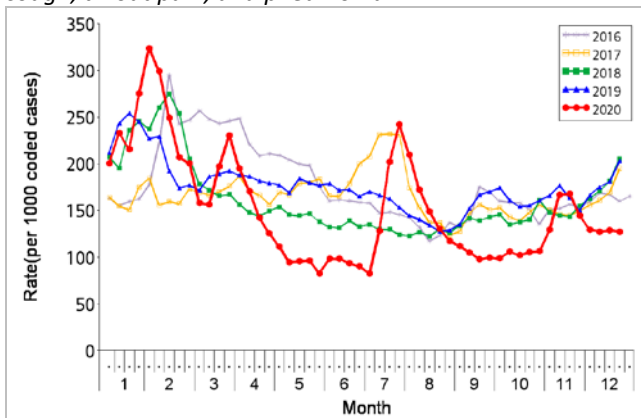


Figure 5 Rate of ILI syndrome group in AEDs, 2016-20

Fever surveillance at sentinel child care centres/ kindergartens, 2016-20

The surveillance in week 47-52 was suspended due to temporary school suspension. In week 46, 0.48% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 0.30% recorded in the previous week (Figure 6).

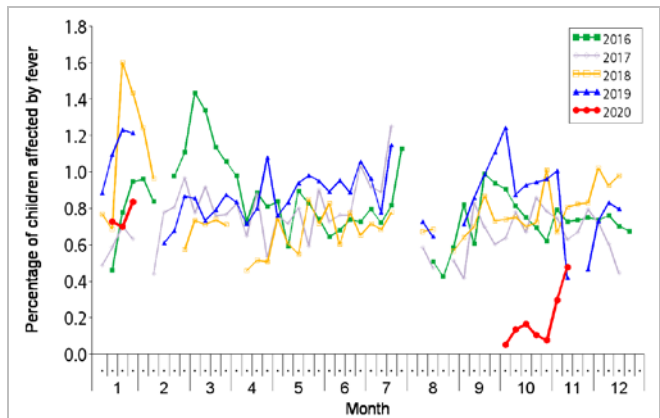


Figure 6 Percentage of children with fever at sentinel CCCs/KGs, 2016-20

Fever surveillance at sentinel residential care homes for the elderly, 2016-20

In week 52, 0.10% of residents in the sentinel residential care homes for the elderly (RCHes) had fever (38°C or above), compared to 0.09% recorded in the previous week (Figure 7).

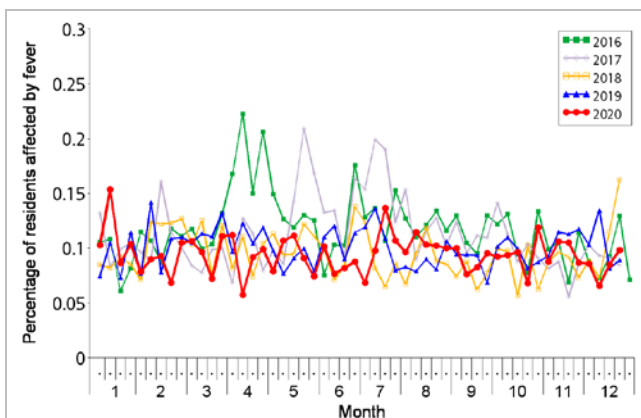


Figure 7 Percentage of residents with fever at sentinel RCHes, 2016-20

Influenza-like illness surveillance among sentinel Chinese medicine practitioners, 2016-20

In week 52, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 0.80 ILI cases per 1,000 consultations as compared to 0.42 recorded in the previous week (Figure 8).

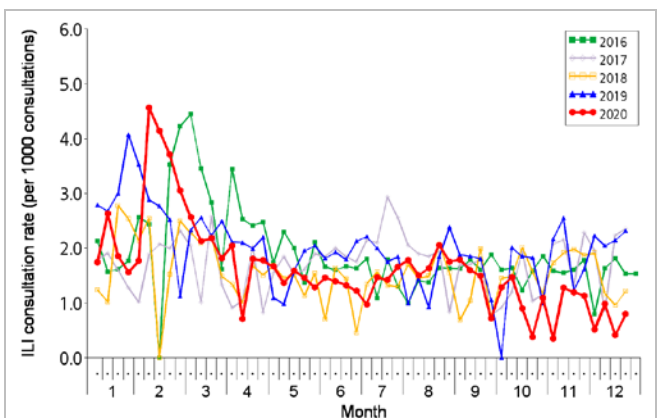


Figure 8 ILI consultation rate at sentinel CMPs, 2016-20

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 51, no adult cases of ICU admission/death with laboratory confirmation of influenza were recorded, as compared to 0 cases recorded in the previous week. Data on week 52 will be updated next week.

Week	Influenza type				
	A(H1)	A(H3)	B	C	A (without subtype)
Week 50	0	0	0	0	0
Week 51	0	0	0	0	0

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

- In week 52 and the first 4 days of week 1, 2021 (Dec 27 – 30, 2020), there were no cases of severe paediatric influenza-associated complication/death.
- In 2020, six paediatric cases of influenza-associated complication/death were recorded, in which none of them were fatal (as of Dec 30). About 83% had not ever received the influenza vaccine for the 2019/20 season.

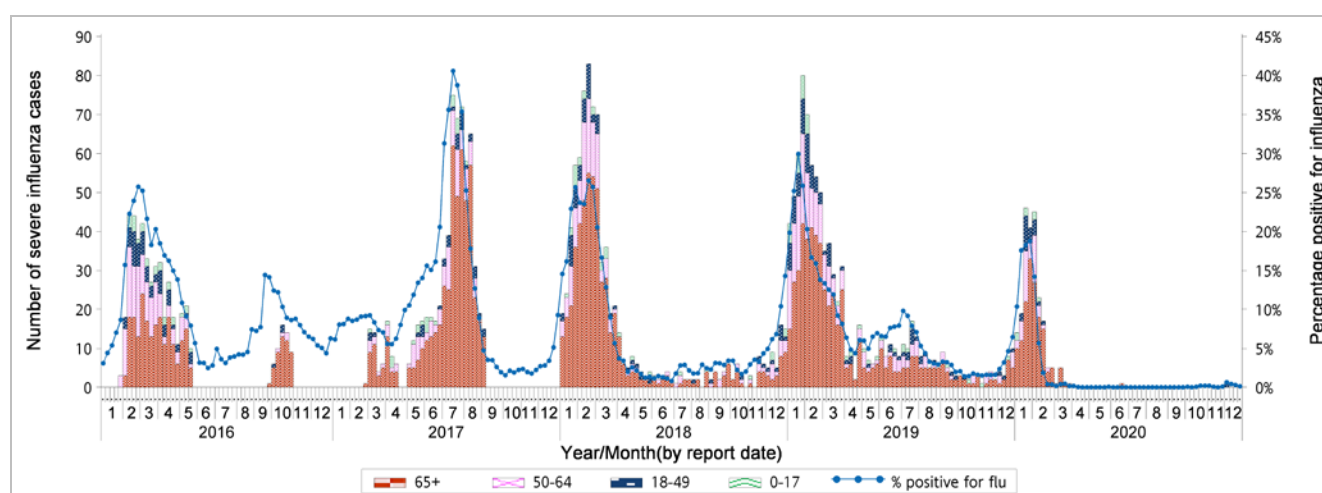


Figure 9 Weekly number of severe influenza cases by age groups, 2016-20 (the percentage positive for influenza viruses in Figure 2 is also shown in this graph)

Note: The surveillance system for severe influenza cases among adult patients aged 18 years or above was only activated intermittently during influenza seasons before 2018.

Global Situation of Influenza Activity

In the temperate zone of the northern hemisphere, influenza activity remained below inter-seasonal levels while in the temperate zones of the southern hemisphere, influenza activity was reported at inter-seasonal level. Worldwide, influenza A and B viruses were detected in similar proportions.

- In the United States (week ending Dec 19, 2020), the influenza activity remained lower than usual for this time of year. The proportion of outpatient visits for ILI remained low at 1.5%, which was below the national baseline of 2.6%. The percentages of respiratory specimens testing positive for influenza was 0.1%.
- In Canada (week ending Dec 12, 2020), the influenza activity remained exceptionally low for this time of year. The percentage of tests positive for influenza in week 50 was 0.02%, compared to 16.8% during the past six seasons.
- In the United Kingdom (week ending Dec 20, 2020), indicators for influenza showed low levels of activity. The ILI consultation rates remained low. There were no influenza positive samples detected in week 51.
- In Europe (week ending Dec 20, 2020), influenza activity remained at inter-seasonal levels. None of the 786 sentinel specimens tested positive for influenza viruses.
- In Mainland China (week ending Dec 20, 2020), the influenza activities in both northern and southern provinces continued to remain low. Only few detections of influenza viruses were mainly reported in southern provinces.
- In Taiwan (week ending Dec 19, 2020), the activity of ILI remained low, and the number of medical visits for ILI at emergency and outpatient clinics in the past four weeks slightly decreased. No detections of influenza were reported in week 46-49.
- In Korea (week ending Nov 28, 2020), influenza activity was at a low level. The weekly ILI rate was 2.6‰, which was lower than 3.2‰ recorded in the previous week. Among the 127 respiratory specimens collected in week 48, no samples were tested positive for influenza viruses.

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](#), [Public Health England](#), [Joint European Centre for Disease Prevention and Control-World Health Organization/Flu News Europe](#), [Chinese National Influenza Center](#), [Taiwan Centres for Disease Control](#) and [Korean Centers for Disease Control and Prevention](#).