

FLU EXPRESS



Flu Express is a weekly report produced by the Respiratory Disease Office of the Centre for Health Protection. It monitors and summarizes the latest local and global influenza activities.

Local Situation of Influenza Activity (as of Jan 2, 2019)

Reporting period: December 23 - 29, 2018 (Week 52)

- The latest surveillance data showed that the local influenza activity has continued to increase in the past week and exceeded the baseline thresholds, indicating that Hong Kong has entered the 2018/19 winter influenza season. It is anticipated that the local seasonal influenza activity will continue to rise in the coming weeks and remain at an elevated level for some time.
- 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.
- In the 2018/19 season, the Vaccination Subsidy Scheme (VSS) has been expanded to cover those aged 50 to 64 to receive subsidised seasonal influenza vaccination. It also continues to provide subsidised vaccination to children aged 6 months to under 12 years, elderly aged 65 years or above, pregnant women, persons with intellectual disabilities and recipients of Disability Allowance. Under the Government Vaccination Programme (GVP), eligible groups for free vaccination are the same as that of 2017/18. VSS and GVP have been launched on Oct 10 and Oct 24, 2018 respectively. For more details, please refer to the webpage (http://www.chp.gov.hk/en/view_content/17980.html).

Influenza-like-illness surveillance among sentinel general outpatient clinics and sentinel private doctors, 2014-18

In week 52, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPCs) was 6.0 ILI cases per 1,000 consultations, which was higher than 4.6 recorded in the previous week (Figure 1, left). The average consultation rate for ILI among sentinel private doctors was 40.1 ILI cases per 1,000 consultations, which was lower than 43.5 recorded in the previous week (Figure 1, right).

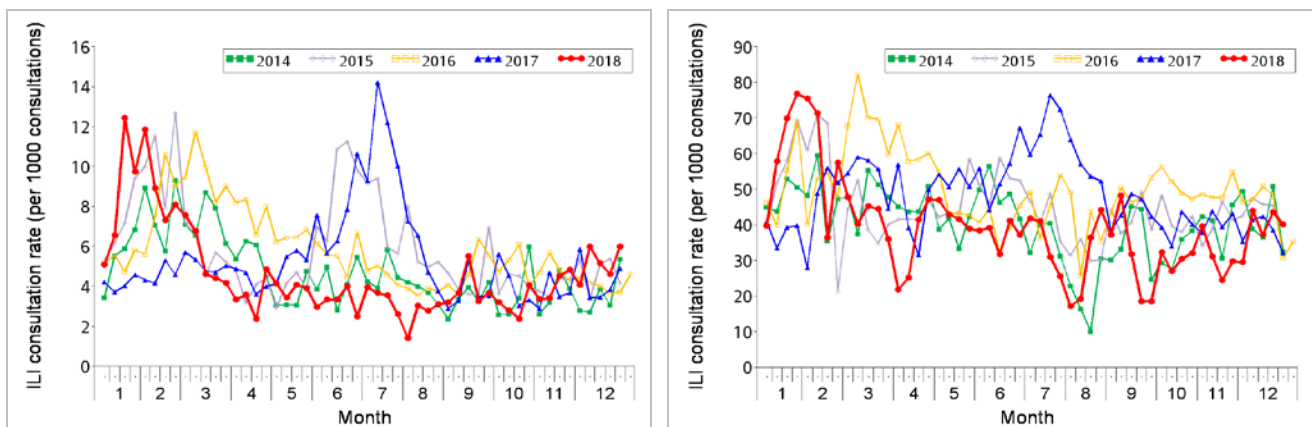


Figure 1 ILI consultation rate at sentinel GOPCs (left) and private doctors (right), 2014-18

Laboratory surveillance, 2014-18

Among the respiratory specimens received in week 52, the positive percentage of seasonal influenza viruses was 14.04%, which was above the baseline threshold of 10.7% and was higher than 10.61% recorded in the previous week (Figure 2). The 778 influenza viruses detected last week included 619 (11.17%) influenza A(H1), 148 (2.67%) influenza A(H3), 2 (0.04%) influenza B and 9 (0.16%) influenza C.

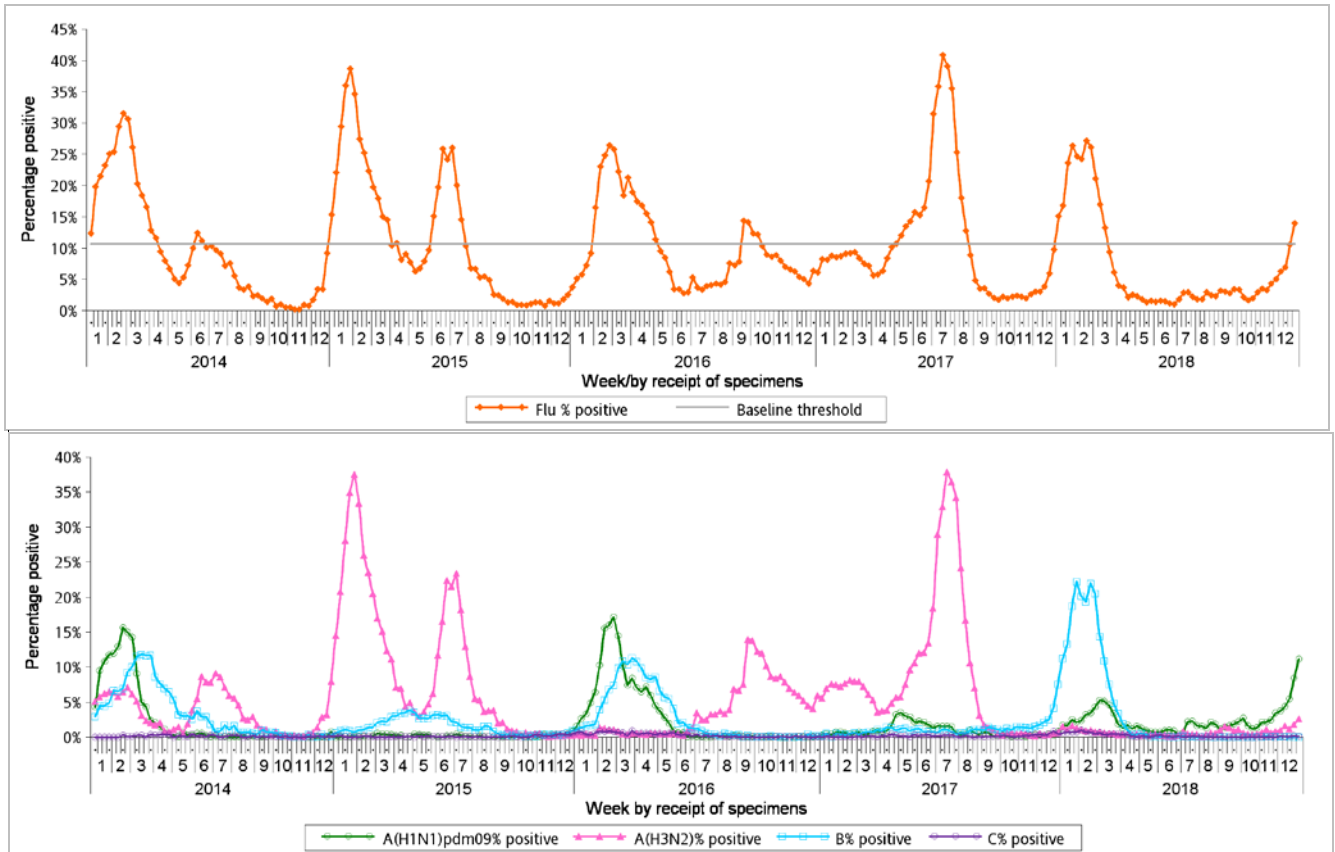


Figure 2 Percentage of respiratory specimens tested positive for influenza viruses, 2014-18 (upper: overall positive percentage, lower: positive percentage by subtypes)

[Note: The baseline threshold is 1.96 standard deviation above the average weekly positive percentage during non-season periods from 2014-2017.]

Influenza-like illness outbreak surveillance, 2014-18

In week 52, 8 ILI outbreaks occurring in schools/institutions were recorded (affecting 46 persons), as compared to 17 outbreaks recorded in the previous week (affecting 100 persons) (Figure 3). In the first 4 days of week 1 (Dec 30, 2018 to Jan 2, 2019), three ILI outbreaks in schools/ institutions were recorded (affecting nine persons).

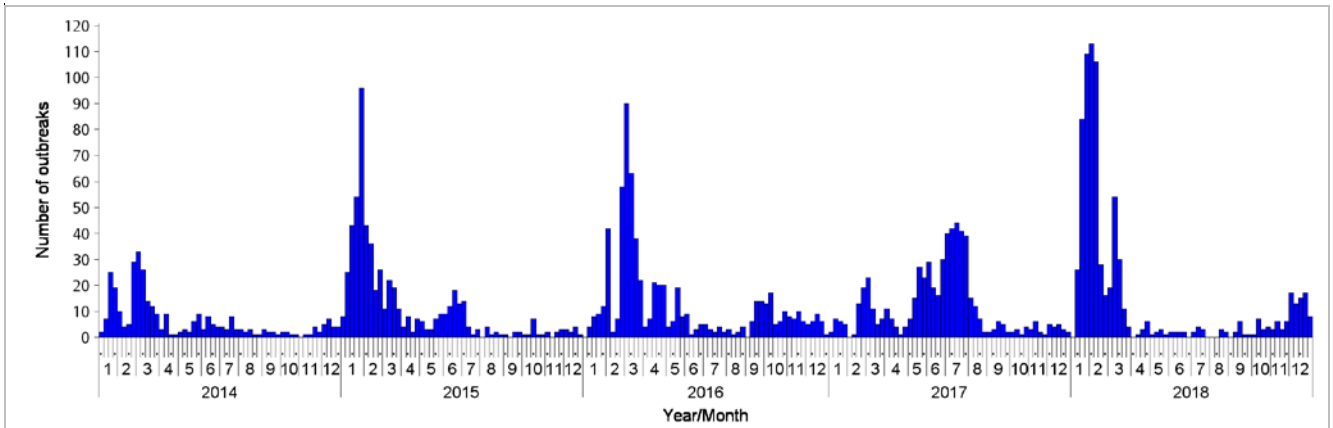


Figure 3 ILI outbreaks in schools/institutions, 2014-18

Type of institutions	Week 51	Week 52	First 4 days of week 1 (Dec 30, 2018 to Jan 2, 2019)
Kindergarten/ child care centre	9	1	0
Primary school	3	0	0
Secondary school	2	0	0
Residential care home for the elderly	1	5	3
Residential care home for persons with disabilities	2	1	0
Others	0	1	0
<i>Total number of outbreaks</i>	17	8	3
<i>Total number of persons affected</i>	100	46	9

Influenza-associated hospital admission rates in public hospitals based on discharge coding, 2014-18

In week 52, the overall admission rates in public hospitals with principal diagnosis of influenza was 0.43 (per 10,000 population), which was above the baseline threshold of 0.20 and was higher than 0.39 recorded in the previous week. The influenza-associated admission rates for persons aged 0-4 years, 5-9 years, 10-64 years and 65 years or above were 4.11, 1.30, 0.17 and 0.60 cases (per 10,000 people in the age group) respectively, as compared to 3.64, 0.88, 0.14 and 0.67 cases in the previous week (Figure 4).

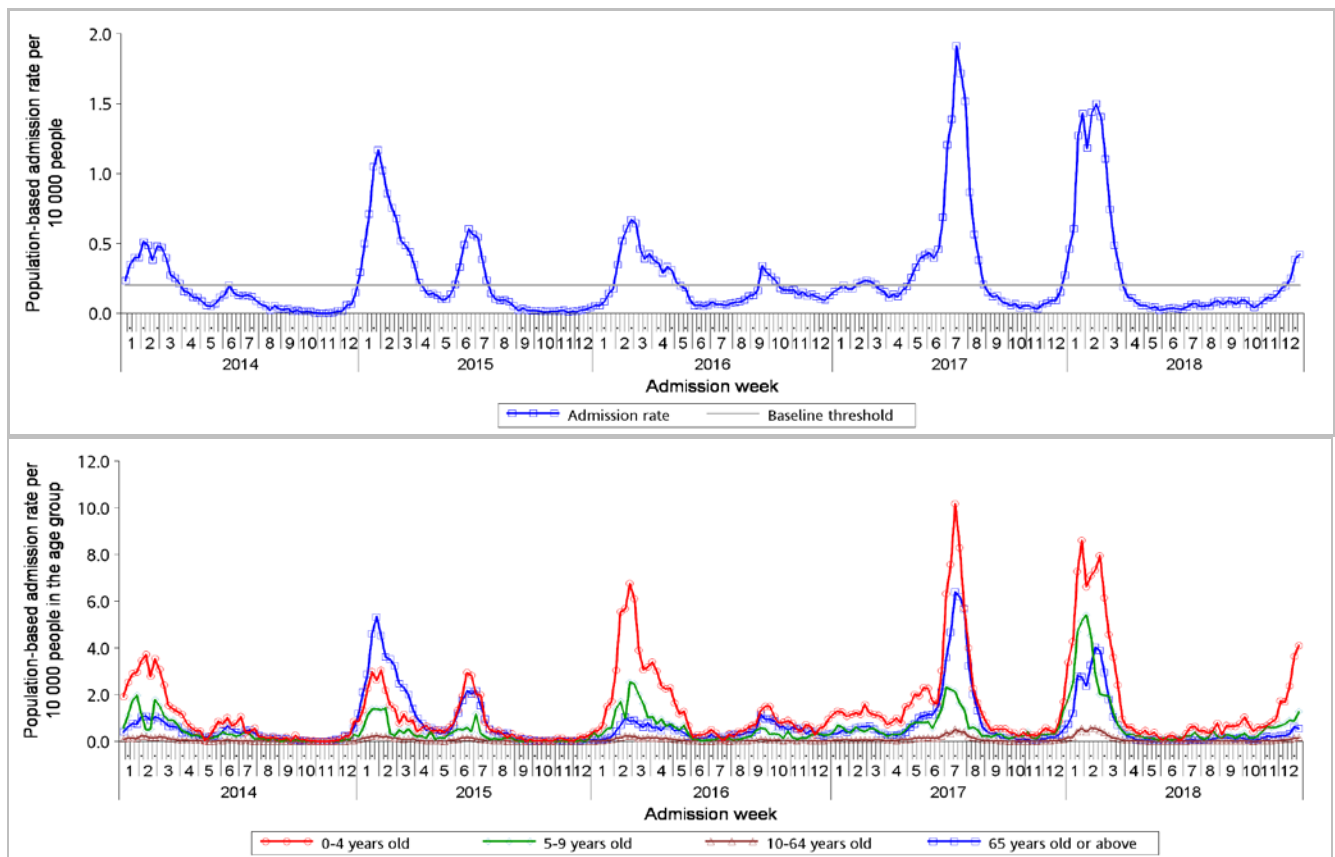


Figure 4 Influenza-associated hospital admission rates, 2014-18 (upper: overall rate, lower: rates by age groups)
 [Note: The baseline threshold is 1.96 standard deviation above the average weekly admission rate during non-season periods from 2014-2017.]

Rate of ILI syndrome group in accident and emergency departments, 2014-18[#]

In week 52, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 205.5 (per 1,000 coded cases), which was higher than the rate of 181.8 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.

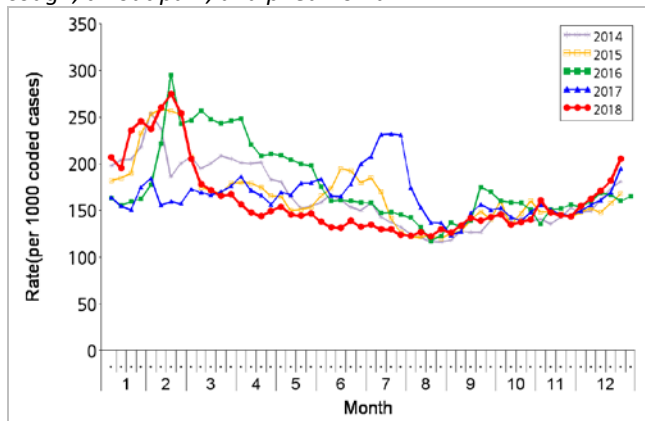


Figure 5 Rate of ILI syndrome group in AEDs, 2014-18

Fever surveillance at sentinel child care centres/ kindergartens, 2014-18

The surveillance for week 52 was suspended due to Christmas holiday. In week 51, 0.98% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 0.93% recorded in the previous week (Figure 6).

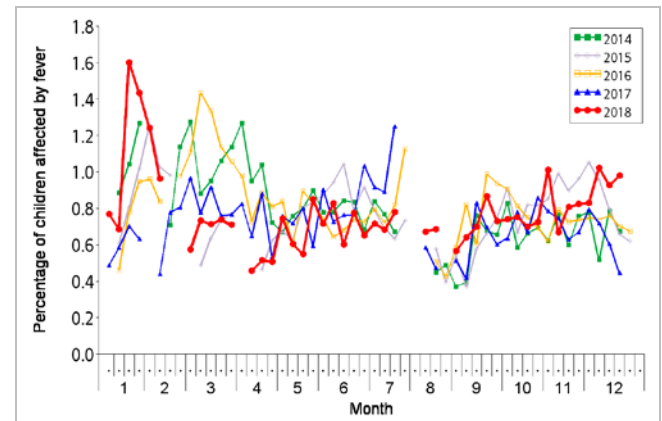


Figure 6 Percentage of children with fever at sentinel CCCs/KGs, 2014-18

Fever surveillance at sentinel residential care homes for the elderly, 2014-18

In week 52, 0.16% of residents in the sentinel residential care homes for the elderly (RCHes) had fever (38°C or above), compared to 0.12% recorded in the previous week (Figure 7).

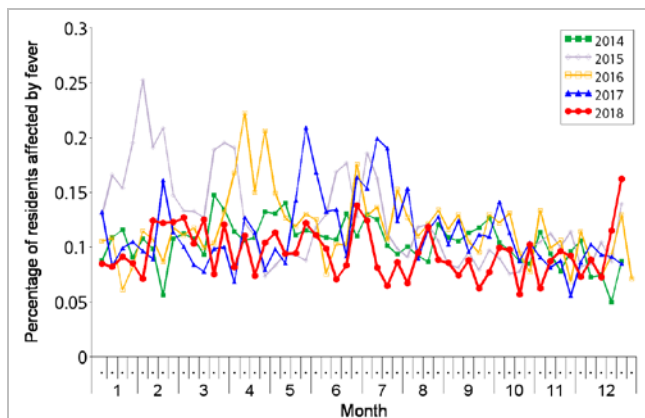


Figure 7 Percentage of residents with fever at sentinel RCHes, 2014-18

Influenza-like illness surveillance among sentinel Chinese medicine practitioners, 2014-18

In week 52, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 1.22 ILI cases per 1,000 consultations as compared to 0.96 recorded in the previous week (Figure 8).

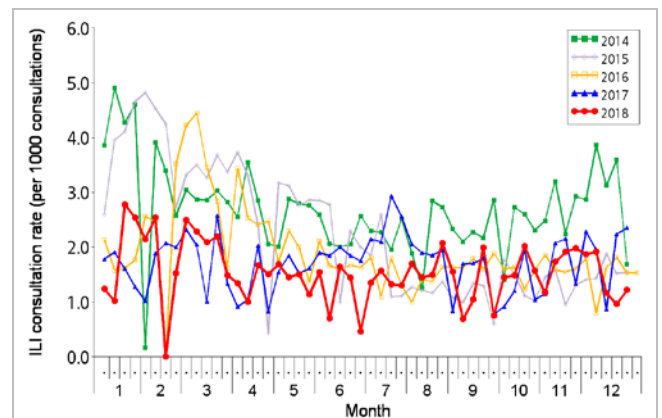


Figure 8 ILI consultation rate at sentinel CMPs, 2014-18

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)

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 52, 13 adult cases of ICU admission/deaths with laboratory confirmation of influenza were recorded (including three deaths) as compared to 16 cases (including six deaths) recorded in the previous week. Three of the 13 severe adult cases were known to have received the 2018/19 influenza vaccine.

Week	Influenza type				
	A(H1)	A(H3)	B	C	A (pending subtype)
Week 51	12	4	0	0	0
Week 52	9	3	0	0	1

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

- In week 52 and the first 4 days of week 1 (Dec 30, 2018 to Jan 2, 2019), there were three cases of severe paediatric influenza-associated complication.

Reporting week	Age	Sex	Complication	Fatal case?	Influenza subtype	History of receiving influenza vaccine for this season
52	18 days	Male	Severe pneumonia and respiratory failure	No	Influenza A (H1)	No
52	11 years	Female	Encephalopathy	No	Influenza A (H1)	No
1	8 years	Male	Encephalopathy	No	Influenza A (H1)	Yes

- In 2018, 31 paediatric cases of influenza-associated complication/death were recorded, in which three of them were fatal. 25 (81%) did not receive the seasonal influenza vaccine. In 2019, one non-fatal paediatric case of influenza-associated complication was recorded. He received the seasonal influenza vaccine (as of Jan 2, 2019).

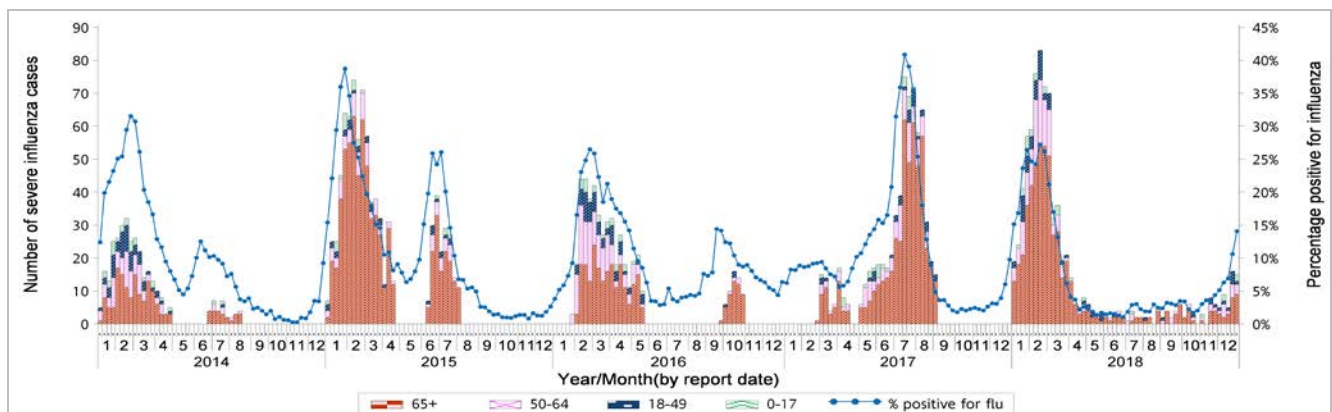


Figure 9 Weekly number of severe influenza cases by age groups, 2014-18 (the percentage positive for influenza viruses in Figure 2 is also shown in this graph)

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.

Surveillance of oseltamivir resistant influenza A(H1N1)pdm09 virus infection

- In week 52 and the first 4 days of week 1 (Dec 30, 2018 to Jan 2, 2019), there were no new reports of oseltamivir (Tamiflu) resistant influenza A(H1N1)pdm09 virus infection. There are totally 48 reports of oseltamivir resistant influenza A(H1N1)pdm09 virus detected in Hong Kong since 2009.

Global Situation of Influenza Activity

Influenza activity continued to increase in temperate zone of the northern hemisphere although overall influenza activity remained low. Increased influenza detections were reported in some countries of Southern and South-East Asia. In the temperate zones of the southern hemisphere, influenza activity returned to inter-seasonal levels. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

- In the United States (week ending Dec 22, 2018), influenza activity is increasing. The proportion of outpatient visits for ILI increased to 3.3%, which was above the national baseline of 2.2%. The percent of respiratory specimens testing positive for influenza increased to 15.55% from 11.39% recorded in the previous week. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continued to co-circulate.
- In Canada (week ending Dec 15, 2018), influenza activity continued to increase. The influenza season has started earlier than in recent years. The percentage of tests positive for influenza continued to increase to 22.8%. Influenza A was the most common influenza virus, and the majority of these viruses were A(H1N1)pdm09.
- In the United Kingdom (week ending Dec 23, 2018), influenza activity continued to increase, with evidence now that influenza is starting to circulate in the community with indicators approaching baseline threshold levels. The positivity of influenza detection was 11.8%, which was above the baseline threshold of 9.2%.
- In Europe (week ending Dec 23, 2018), influenza activity was observed as continuing to increase in the European Region despite the low level of country reporting for the week of December 17. 21.8% of sentinel specimens were tested positive for influenza virus. The majority of influenza virus detections were type A.
- In Mainland China (week ending Dec 23, 2018), most provinces have entered the influenza season, and influenza activity continued to increase. Influenza viruses detected were mainly influenza A(H1N1), followed by influenza A(H3N2), and there were few influenza B(Victoria) and B(Yamagata) detections.
- In Taiwan area (week ending Dec 29, 2018), influenza activity was increasing although the influenza season has not started yet. Influenza A(H3N2) (53%) and A(H1N1) (38%) viruses co-circulated in the community in recent four weeks.
- In Macau (week ending Dec 22, 2018), the proportions of ILI cases in emergency departments among both adults and children increased as compared to the previous week. The proportion of influenza detections increased to 26.9%, higher than that in the previous week. Influenza viruses detected were influenza A(H1) (52.4%) and influenza A(H3) (47.6%).
- In Japan (week ending Dec 23, 2018), influenza activity continued to increase and the influenza season started in early December. The average number of reported ILI cases per sentinel site increased to 8.05 in the week ending December 23, 2018, which was above the baseline level of 1.00. The predominating virus in the past four weeks was 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](#), [Public Health England](#), [Joint European Centre for Disease Prevention and Control-World Health Organization/Flu News Europe](#), [Chinese National Influenza Center](#), [Taiwan Centers for Disease Control](#), [Health Bureau of Macao Special Administrative Region](#) and [Japan Ministry of Health, Labour and Welfare](#).