

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 Mar 28, 2018)

Reporting period: Mar 18 – 24, 2018 (Week 12)

- The latest surveillance data showed that the overall influenza activity in Hong Kong has continued to decrease, approaching the baseline level. Currently the predominating virus is influenza B, followed by influenza A(H1).
- 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.
- Apart from adopting personal, hand and environmental hygiene practices against respiratory illnesses, those members of the public who have not received influenza vaccine are urged to get vaccinated as soon as possible for personal protection.
- The Vaccination Subsidy Scheme (VSS) and the Government Vaccination Programme (GVP) for the 2017/18 season have been launched on Oct 18 and Oct 25, 2017 respectively. The VSS 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. Eligible groups for free vaccination are the same as those of 2016/17 under the GVP. 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 12, the average consultation rate for influenza-like illness (ILI) among sentinel general outpatient clinics (GOPCs) was 4.4 ILI cases per 1,000 consultations, which was lower than 4.6 recorded in the previous week (Figure 1, left). The average consultation rate for ILI among sentinel private doctors was 44.5 ILI cases per 1,000 consultations, which was lower than 45.3 recorded in the previous week (Figure 1, right).

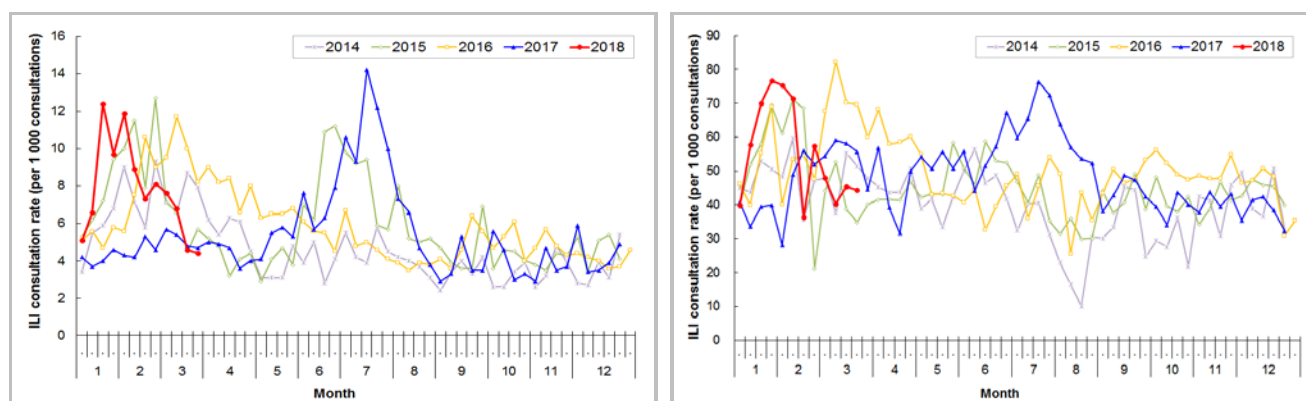


Figure 1 ILI consultation rate at sentinel GOPCs (left) and private doctors (right), 2014-18

Laboratory surveillance, 2014-18

Among the respiratory specimens received in week 12, the positive percentage of seasonal influenza viruses was 9.36%, which was below the baseline threshold of 10.7% and 13.26% recorded in the previous week (Figure 2). The 508 influenza viruses detected last week included 184 (3.39%) influenza A(H1), 32 (0.59%) influenza A(H3), 268 (4.94%) influenza B and 24 (0.44%) influenza C.

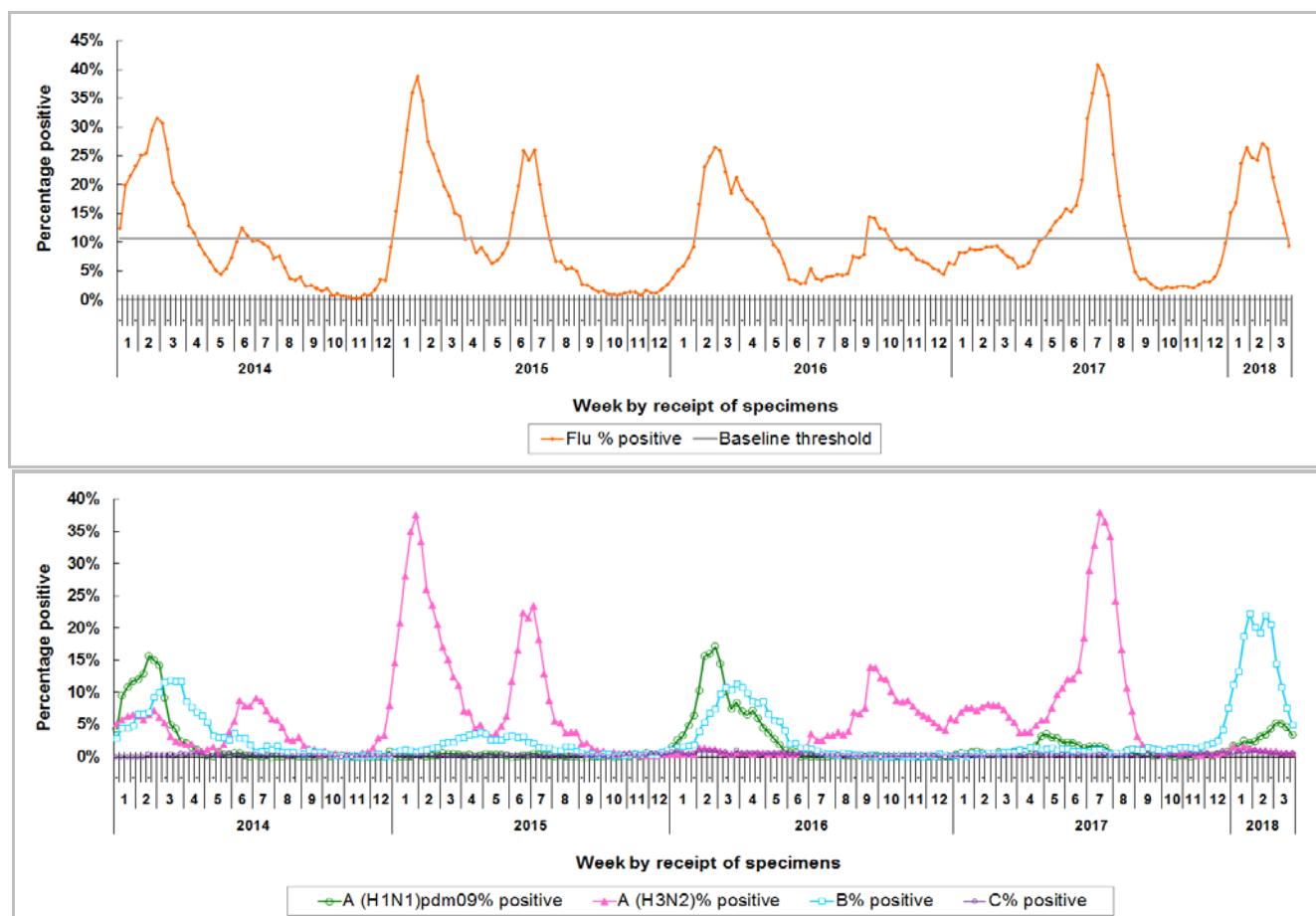


Figure 2 Percentage of respiratory specimens tested positive for influenza viruses, 2014-18 (upper: overall positive percentage, lower: positive percentage by subtypes)

[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 12, 11 ILI outbreaks occurring in schools/institutions were recorded (affecting 42 persons), which was lower than 30 outbreaks recorded in the previous week (affecting 160 persons) (Figure 3). In the first 4 days of week 13 (Mar 25-28, 2018), four ILI outbreaks in schools/institutions were recorded (affecting 13 persons). Since the start of the 2017/18 winter influenza season in week 2, 600 outbreaks were recorded (as of Mar 28).

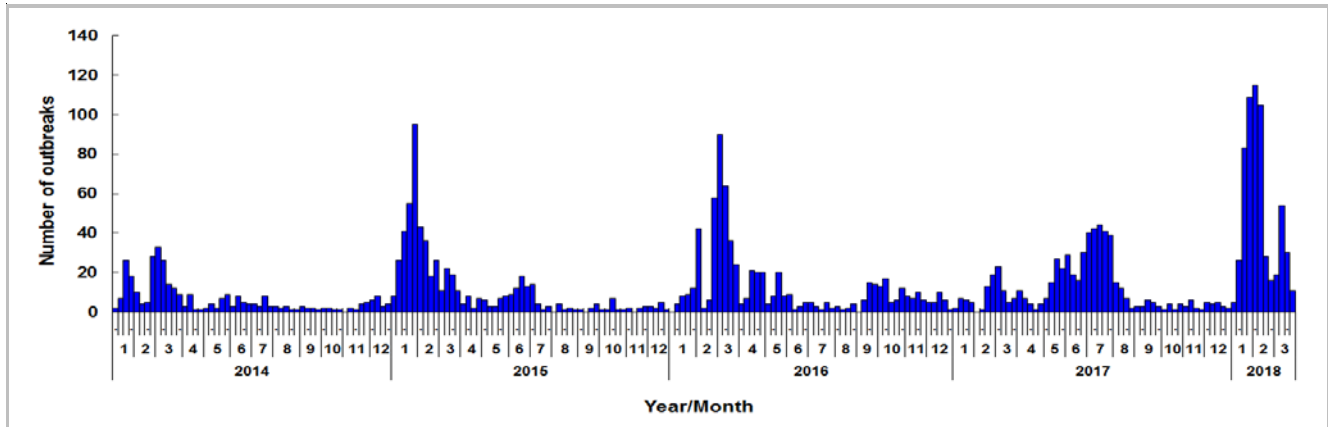


Figure 3 ILI outbreaks in schools/institutions, 2014-18

Type of institutions	Week 11	Week 12	Cumulative number of outbreaks since week 2 (as of Mar 28)
Kindergarten/ child care centre	16	4	228
Primary school	3	4	208
Secondary school	1	0	48
Residential care home for the elderly	5	2	72
Residential care home for the disabled	0	1	15
Others	5	0	29
<i>Total number of outbreaks</i>	30	11	600
<i>Total number of persons affected</i>	160	42	4218

In comparison, 381, 345 and 325 outbreaks were recorded in the same duration of surveillance (11 complete weeks) in the 2014/15 winter, 2015/16 winter and 2017 summer seasons respectively, as compared with 596 outbreaks in the current season (Figure 4).

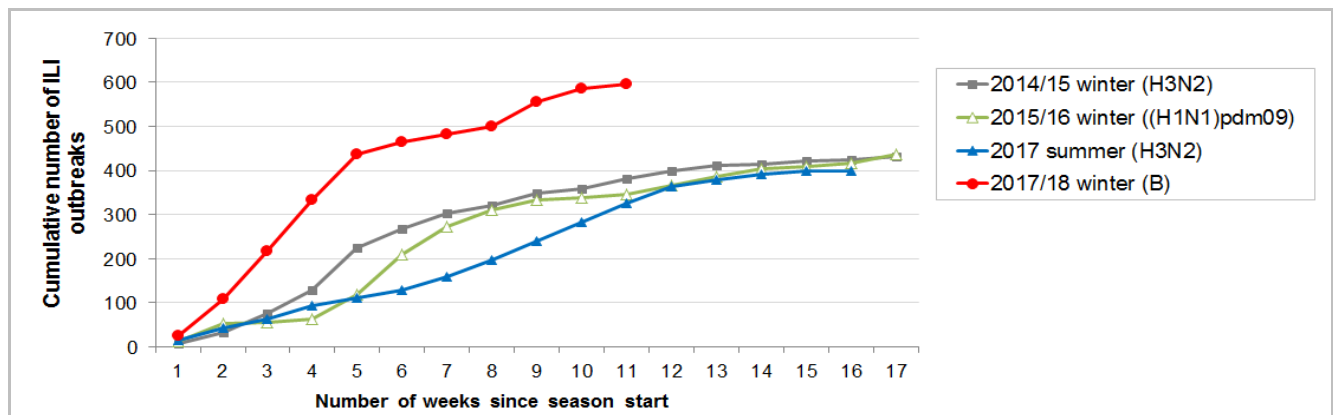


Figure 4 Cumulative numbers of ILI outbreaks reported during major influenza seasons, 2015-18

Note: The predominating virus was shown in bracket.

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

In week 12, the overall admission rate in public hospitals with principal diagnosis of influenza was 0.31 (per 10,000 population), which was above the seasonal threshold of 0.20 but lower than 0.47 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 2.38, 0.66, 0.12 and 0.66 cases (per 10,000 people in the age group) respectively, as compared to 3.57, 1.21, 0.17 and 1.00 cases in the previous week (Figure 5).

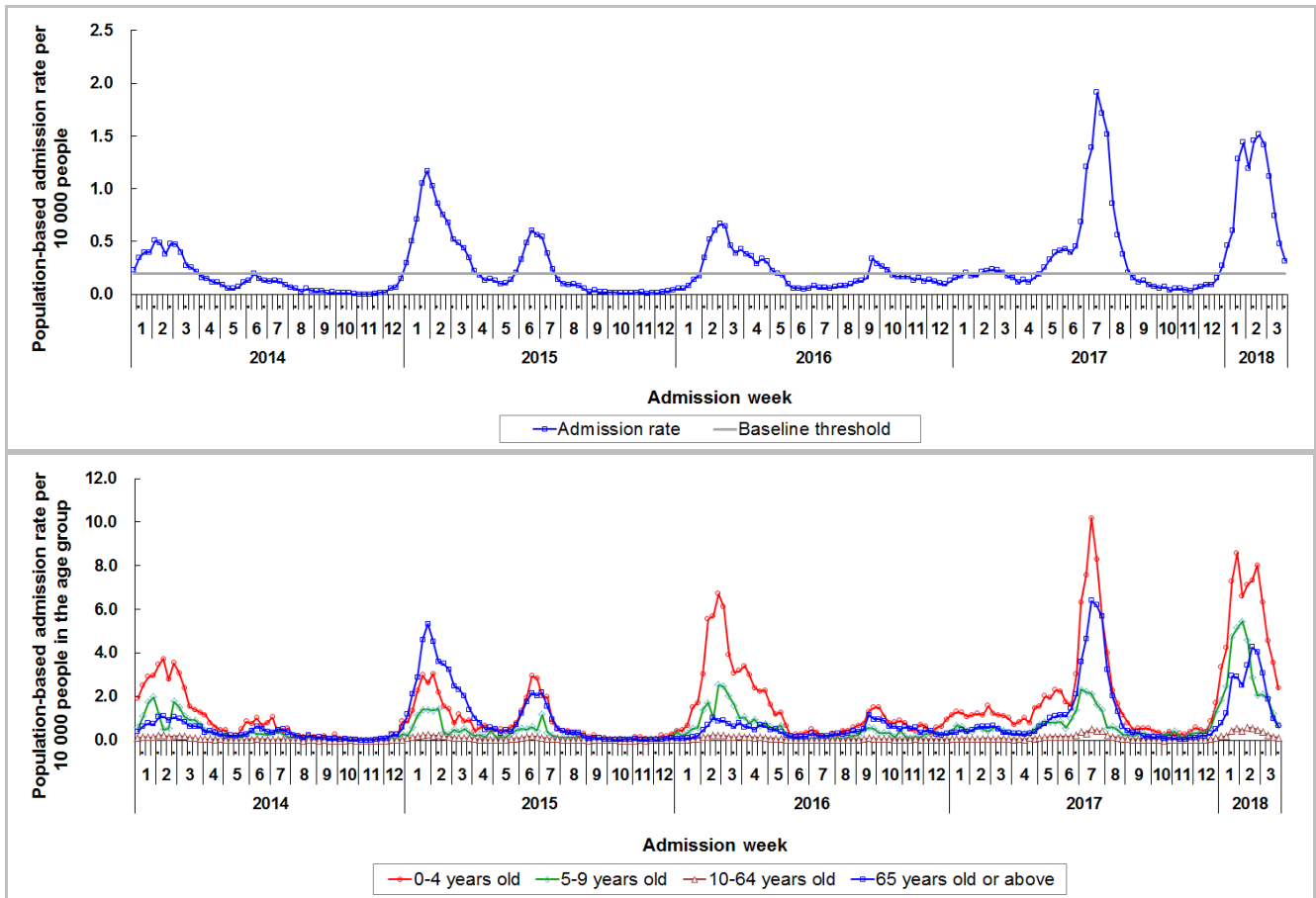


Figure 5 Influenza-associated hospital admission rates, 2014-18 (upper: overall rate, lower: rates by age groups)

[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 12, the rate of the ILI syndrome group in the accident and emergency departments (AEDs) was 167.3 (per 1,000 coded cases), which was lower than the rate of 172.8 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.

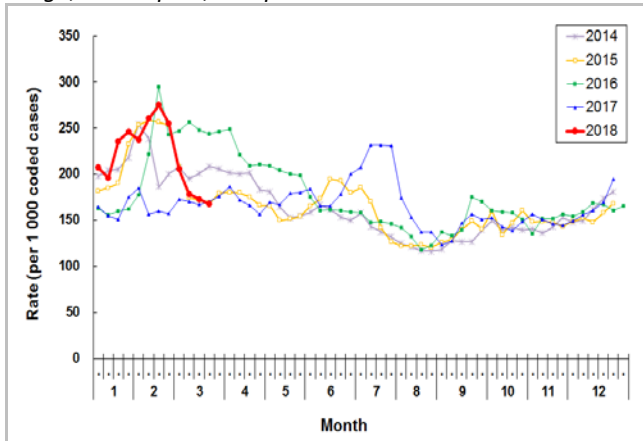


Figure 5 Rate of ILI syndrome group in AEDs, 2014-18

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

In week 12, 0.74% of children in the sentinel child care centres / kindergartens (CCCs/KGs) had fever (38°C or above) as compared to 0.71% recorded in the previous week (Figure 6).

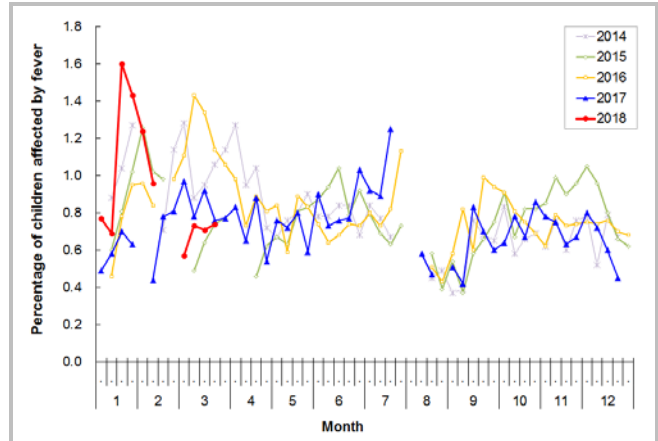


Figure 6 Percentage of children with fever at sentinel CCCs/KGs, 2014-18

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

In week 12, 0.08% 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 7).

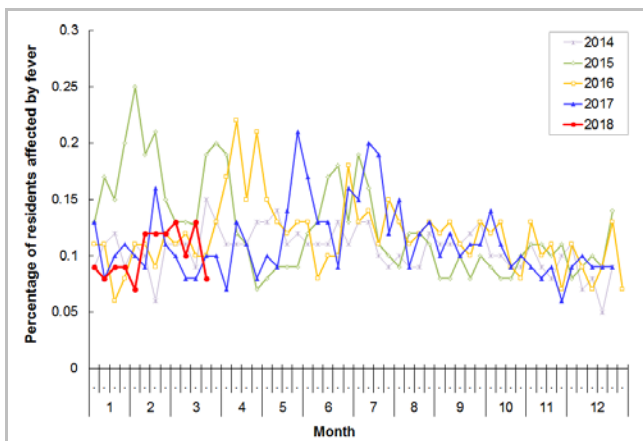


Figure 7 Percentage of residents with fever at sentinel RCHes, 2014-18

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

In week 12, the average consultation rate for ILI among Chinese medicine practitioners (CMPs) was 2.19 ILI cases per 1,000 consultations as compared to 2.09 recorded in the previous week (Figure 8).

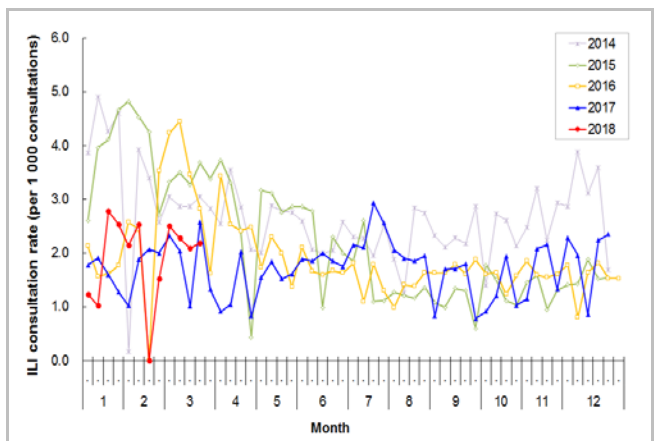


Figure 8 ILI consultation rate at sentinel CMPs, 2014-18

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)

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 12, 19 adult cases of ICU admission/death with laboratory confirmation of influenza were recorded, in which 13 of them were fatal. Six of the 19 severe adult cases were known to have received the 2017/18 influenza vaccine. In the first 4 days of week 13 (Mar 25 to 28), 14 cases were recorded, in which ten of them were fatal.

Week	Influenza type				
	A(H1)	A(H3)	B	C	A (pending subtype)
Week 12	0	2	17	0	0
First 4 days of week 13 (Mar 25 to 28)	2	0	11	1	0

- Since the start of the 2017/18 winter influenza season in week 2, 563 adult cases of ICU admission/death with laboratory confirmation of influenza were recorded, in which 375 of them were fatal (as of Mar 28). Among them, 462 patients had infection with influenza B, 59 patients with influenza A(H1N1)pdm09, 31 patients with influenza A(H3N2), five patients with influenza C and six patients with influenza A pending subtype.
- In comparison, 538, 333 and 318 adult cases were recorded in the same duration of surveillance (11 complete weeks) in the 2014/15 winter, 2015/16 winter and 2017 summer seasons respectively, as compared with 549 cases in the current season (Figure 10, left). The corresponding figures for deaths were 416, 160 and 223 in the above seasons, as compared with 365 deaths in the current season (Figure 10, right).

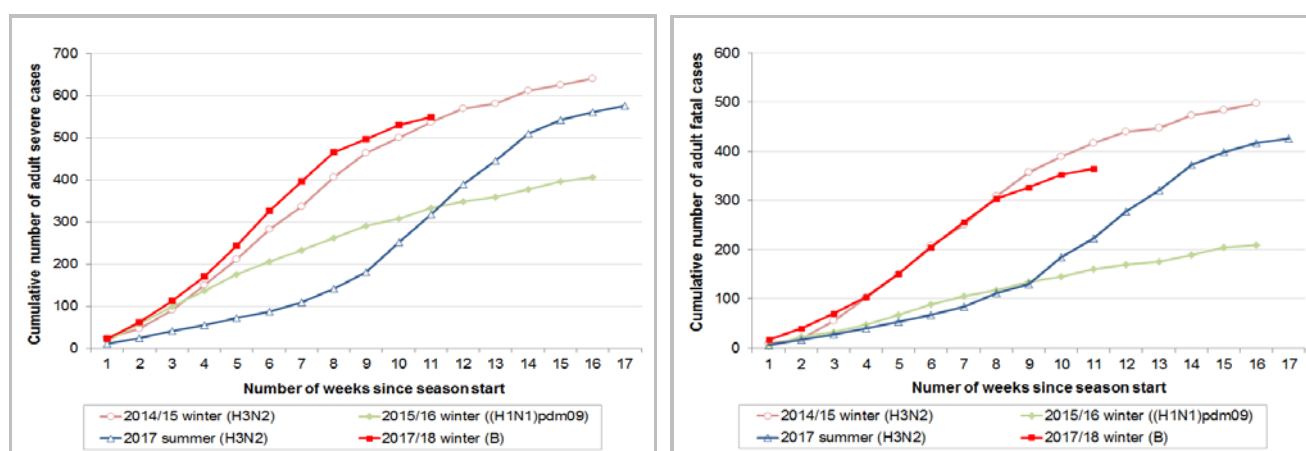


Figure 10 Cumulative numbers of adult severe influenza cases reported during major influenza seasons, 2015–18 (left: ICU admission/death cases; right: deaths)

Note: The predominating virus was shown in bracket.

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

- In week 12 and the first 4 days of week 13 (Mar 25 to 28), there were no cases of severe paediatric influenza-associated complication/death.
- In 2018, 20 paediatric cases of influenza-associated complication/death were recorded, in which two of them were fatal (as of March 28). 15 patients had infection with influenza B and five with influenza A(H1). 19 (95%) did not receive the influenza vaccine for the 2017/18 season.
- In comparison, 17, 21 and 17 paediatric cases of influenza-associated complication/death were recorded in the same duration of surveillance (11 complete weeks) in the 2014/15 winter, 2015/16 winter and 2017 summer seasons respectively, as compared with 20 cases in the current season (Figure 11, left). The corresponding figures for deaths were 1, 3 and 3 in the above seasons, as compared with 2 deaths in current season (Figure 11, right).

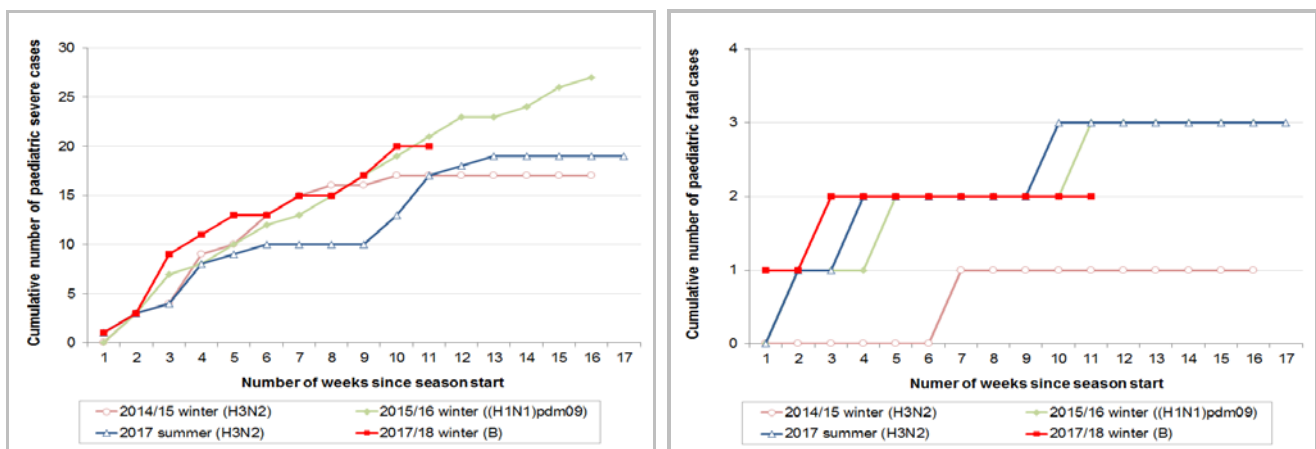


Figure 11 Cumulative numbers of cases of paediatric influenza-associated complication/death reported during major influenza seasons, 2015–18 (left: complication/death cases; right: deaths)

Note: The predominating virus was shown in bracket.

Severe influenza cases of all ages

- Since the start of the current winter influenza season in week 2, 583 severe influenza cases among all ages have been reported, including 377 deaths (as of Mar 28).

Age group	Cumulative number of cases (death)
0-5	13 (2)
6-11	5 (0)
12-17	2 (0)
18-49	41 (8)
50-64	115 (42)
>=65	407 (325)

- Among the adult fatal cases, about 83% had chronic diseases. Both of the two paediatric fatal cases did not have chronic diseases.
- Among patients with laboratory confirmation of influenza admitted to public hospitals in this season (from January 7 to Mar 28), 2.4% of admitted cases died during the same episode of admission. So far, it was within the historical range between 1.9% (2015/16 winter season) and 3.3% (2015 summer season).

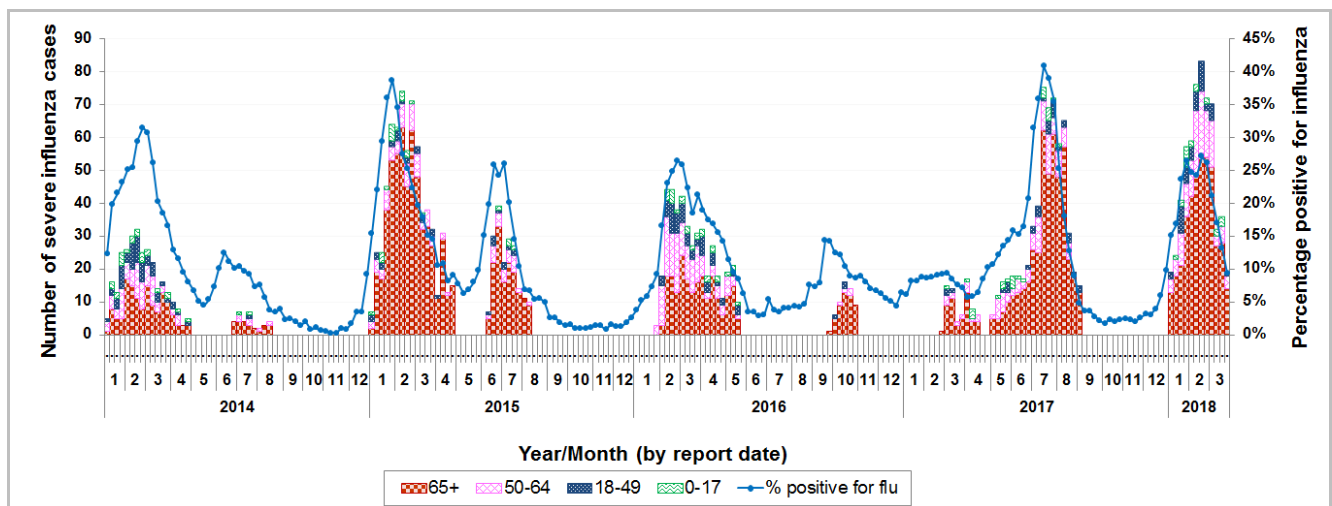


Figure 12 Weekly number of severe influenza cases by age groups, 2014-18 (the percentage positive for influenza viruses in Figure 2 is also shown in this graph)

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 12 and the first 4 days of week 13 (Mar 25 to 28), 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 remained high but appeared to have peaked in some countries in the temperate zone of the northern hemisphere. In the temperate zone of the southern hemisphere activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

- In the United States (week ending Mar 17, 2018), influenza activity decreased. The proportion of outpatient visits for ILI was 2.7%, which was above the national baseline of 2.2%. Overall, influenza A(H3) viruses have predominated this season. However, in recent weeks the proportion of influenza A viruses has declined, and during week the week ending Mar 17, 2018, influenza B viruses were more frequently reported than influenza A viruses.
- In Canada (week ending Mar 17, 2018), the influenza season peaked in mid-February, but influenza activity remains elevated in many parts of the country. All indicators of influenza activity have either decreased or remained similar to the previous week. The overall percentage of tests positive for influenza in the week ending Mar 17, 2018 was 24%. Detections of influenza B continued to be greater than those of influenza A.
- In the United Kingdom (week ending Mar 18, 2018), influenza continued to circulate but decreases were noted across most indicators.. Influenza A and B were co-circulating. The positivity of influenza detection was 22.2% in the week ending Mar 18, 2018, above the baseline threshold of 8.6%.
- In Europe (week ending Mar 18, 2018), influenza continued to circulate widely in the Region with some eastern European countries that had only recently reported increased activity, experiencing a late start to the season with increased circulation of influenza type A viruses. Both influenza A and B viruses were co-circulating in Europe with the majority being type B viruses. 44% of sentinel specimens were tested positive for influenza virus.
- In Mainland China (week ending Mar 18, 2018), influenza activity continued to decrease. Influenza activity in northern provinces was at a low level, while southern provinces had entered the later phase of the influenza season. Influenza A(H1N1) and influenza B Yamagata viruses were predominating. In southern provinces, the proportion of ILI cases in emergency and outpatient departments reported by sentinel hospitals was 3.6%, lower than that reported in the previous week (3.7%) and that in the corresponding period in 2016 (3.9%), but higher than that in the corresponding period in 2015 and 2017 (2.5%, 3.0%). In northern provinces, that proportion was 2.6%, same as that in the previous week, higher than that in the corresponding period in 2015 (2.5%), but lower than that in the corresponding period in 2016-2017 (3.6%, 2.8%). The proportion of influenza detections in the week ending Mar 18, 2018 was 15.6% (67.6% influenza A and 32.4% influenza B).
- In Macau (week ending Mar 17, 2018), the proportions of ILI cases in emergency departments among adults and children decreased. The proportion of influenza detections was 23.2%, lower than that in the previous week (32.2%).
- In Taiwan (week ending Mar 24, 2018), influenza activity was gradually decreasing, but was still at the seasonal level. In the week ending Mar 24, the proportion of ILI cases in emergency department was 11.96% which was above the threshold of 11.4%. The predominating virus was influenza B.
- In Japan (week ending Mar 18, 2018), the influenza season has started in late November 2017. The average number of reported ILI cases per sentinel site has decreased to 8.65 in the week ending Mar 18, 2018 from 12.05 in the previous week. It was higher than the baseline level of 1.00. The predominating virus in the past five weeks was influenza B, followed by influenza A(H3N2) and 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](#), [Health Bureau of Macao Special Administrative Region](#), [Taiwan Centers for Disease Control](#) and [Japan Ministry of Health, Labour and Welfare](#).