



Synopsis

Influenza activity was above the national baseline. The most frequently identified influenza virus type was influenza B.

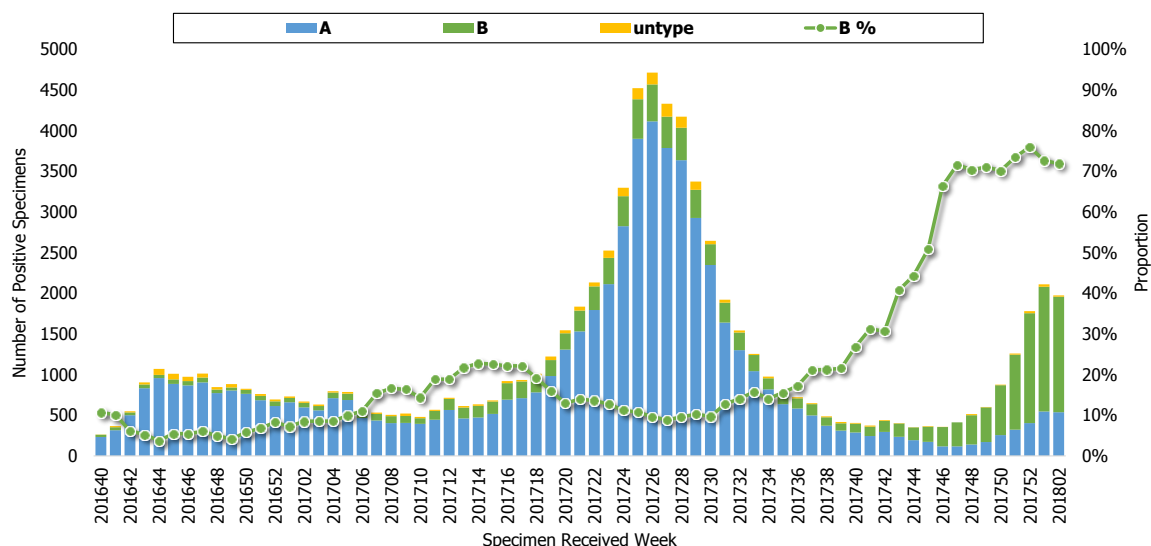
- The proportion of ILI visit in outpatient department was similar to the previous week.
- During week 2, the number of influenza positive specimens was slightly lower than the previous week. The predominant isolated influenza virus was influenza B/Yamagata.
- The newly reported influenza cases with severe complications were increasing during week 2. There were 41 newly confirmed severe complicated influenza cases and six newly fatal cases. A total of 160 severe complicated influenza cases were confirmed since October 1, 2017, and 17 of them were fatal. Influenza B was the predominant virus strain among severe complicated cases.

Viral Surveillance

Types and Trend

According to LARS¹, the number of influenza positive specimens during week 2 was slightly lower than the previous week, and the major virus type of positive specimens was influenza B. The proportion of specimens positive for influenza B virus was 72% during week 2.

Trend of influenza positive specimens according to LARS

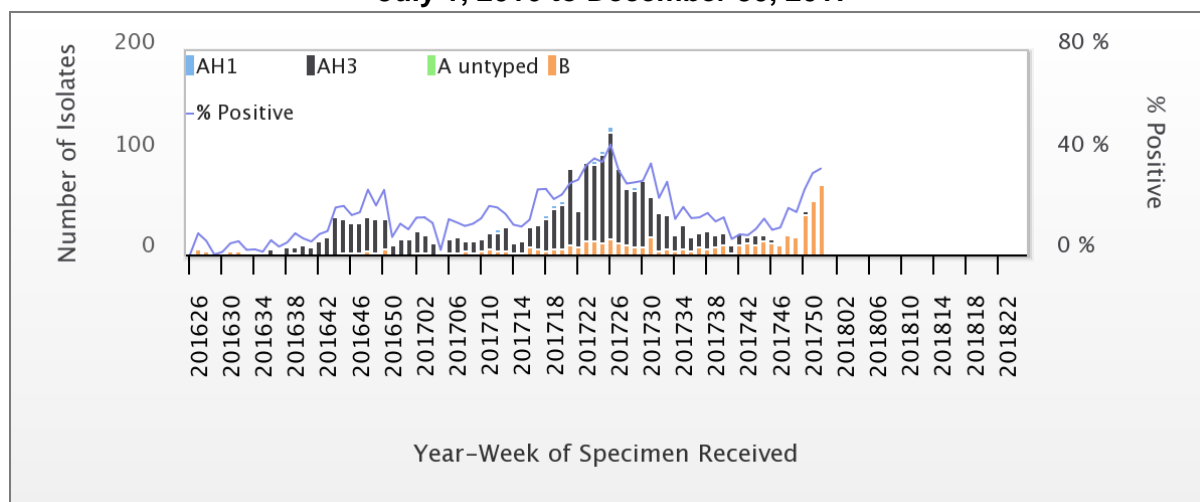


¹ In order to present the trend of influenza virus in real-time, the Automated Laboratory Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 51 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the Taiwan CDC Contracted Virology Laboratories², the proportion of influenza positive specimens was 33.8%. Among these, 97.2% were influenza B during week 52, 2017. Weekly virus data are available at: <http://nidss.cdc.gov.tw/>.

Influenza isolates and positive rate according to Contracted Virology Laboratories July 1, 2016 to December 30, 2017



Antigenicity

In the past 4 weeks, among the influenza isolates were antigenically characterized, all (100%) of the influenza A (H1N1) virus isolates matched the A (H1N1) component of the 2017-18 influenza vaccine (A/Michigan/45/2015), and 100% of the H3N2 virus isolates matched the A (H3N2) component of the 2017-18 influenza vaccine (A/Hong Kong/4801/2014). Among influenza B isolates, 100% were B/Yamagata lineage, and 96% of those isolates matched the B component of the 2017-18 influenza vaccine B/Phuket/3073/2013 (tetraivalent).

Antiviral Resistance

The table below summarized antiviral resistance to neuraminidase inhibitor (Oseltamivir) from October 1, 2017 to present. All of the influenza isolates were susceptible to Oseltamivir.

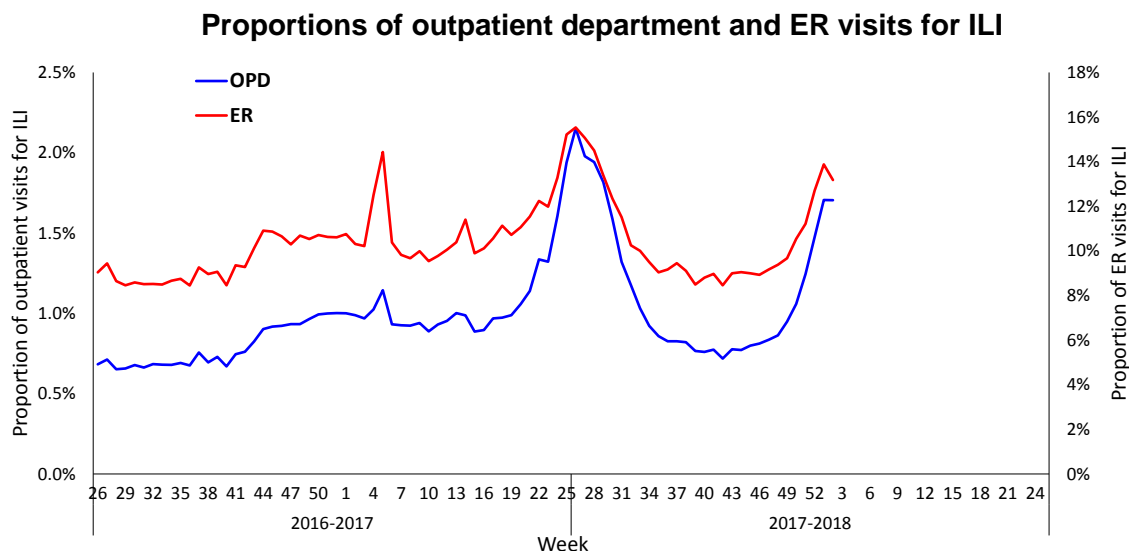
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	12	0
Influenza A (H3N2)	46	0
Influenza B	82	0

² The Contracted Virology Laboratories, including 8 laboratories of medical centers, have been established by Taiwan CDC since March, 1999 to monitor the subtype, antigenicity and drug resistance of influenza viruses in the community.



Influenza-like Illness (ILI) Surveillance

During week 2, the proportion of the outpatient department visits for ILI was 1.70%, which was similar to the previous week. The proportion of ER visits for ILI was 13.18%, which was slightly lower than the previous week, but was still above the national baseline of 11.4%.



* Since 2016, the analysis of the ILI data from National Health Insurance Database is based on the ICD-10 diagnosis codes.

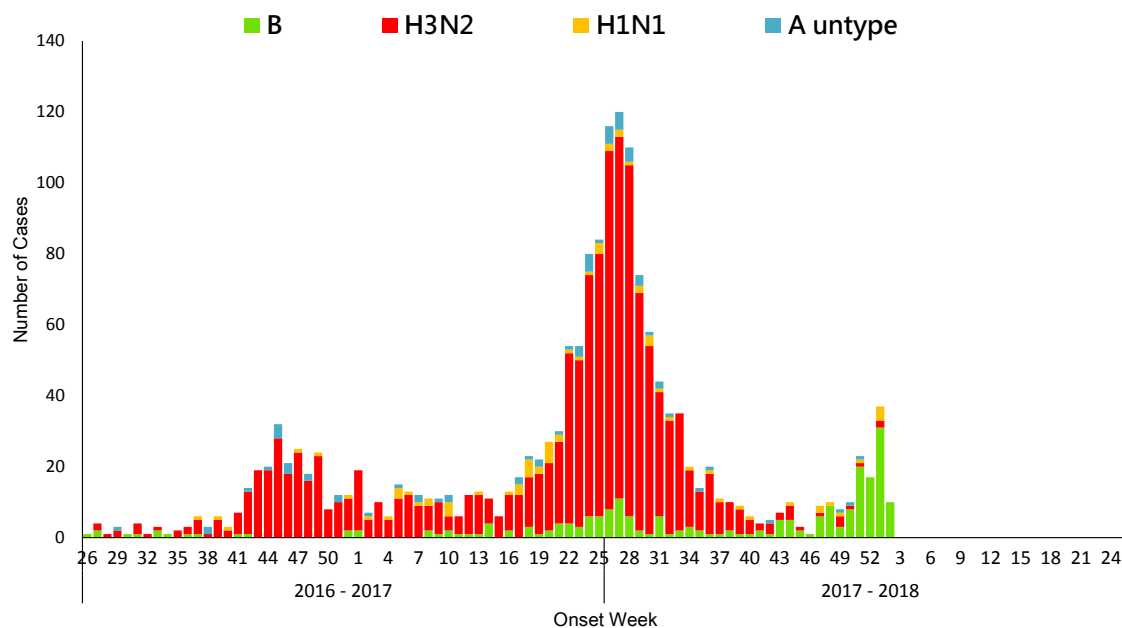
Severe Complicated Influenza Report

The newly reported and confirmed influenza cases with severe complications were higher than the previous week. During week 2, there were 41 newly confirmed cases (35 were influenza B, 4 were H1N1 and 2 were H3N2) and six newly fatal cases [5 were influenza B and 1 was influenza A (unknown subtype)].

The influenza activity returned to baseline in mid-August 2017 and the number of severe cases continuously declined until September. Since October 1, 2017, a total of 160 severe complicated influenza cases were confirmed [the majority of detected virus was influenza B (76%), followed by influenza A/H3N2 (15%)], and 17 of them were fatal. Among these cases, incidence and mortality were highest in the 65+ age group.



Number of severe complicated influenza confirmed cases by week of onset



* A person who has ILI symptoms become severely ill (includes pulmonary complication, neurologic complication, myocarditis, invasive bacterial infection, or pericarditis) that requires intensive care or results in death within 14 days and with influenza virus infection confirmed by the laboratory is defined as a confirmed severe complicated influenza case.

Number and incidence of severe complicated influenza confirmed cases and deaths by age groups

October 1, 2017 to January 15, 2018

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	1	0	0.2	0.0
3-6 y	4	0	0.5	0.0
7-18 y	6	0	0.2	0.0
19-24 y	0	0	0.0	0.0
25-49 y	20	3	0.2	0.0
50-64 y	40	5	0.8	0.1
65 +	89	9	2.8	0.3
Total	160	17	0.7	0.1

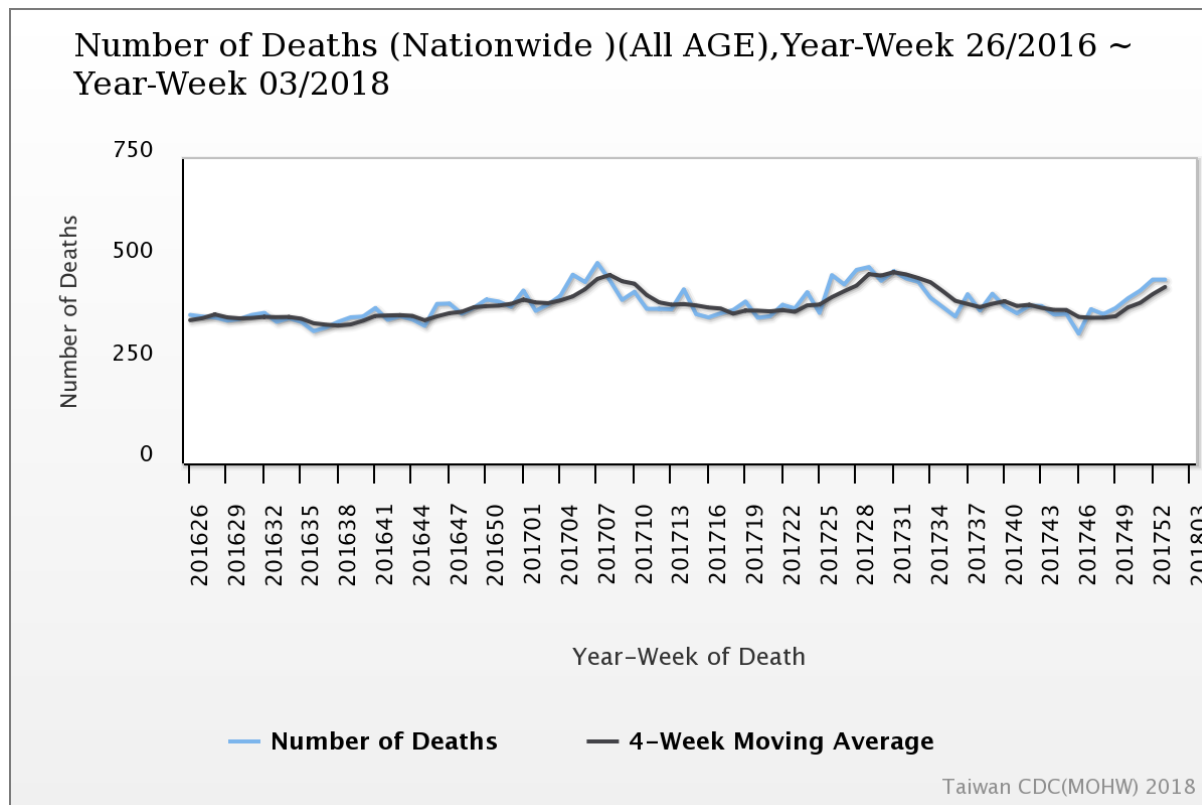
July 1, 2017 to January 15, 2018 (by flu season)

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	11	0	1.8	0.0
3-6 y	13	1	1.6	0.1
7-18 y	9	0	0.3	0.0
19-24 y	6	0	0.3	0.0
25-49 y	65	12	0.7	0.1
50-64 y	129	22	2.5	0.4
65 +	502	81	15.8	2.5
Total	735	116	3.1	0.5



Pneumonia and Influenza (P&I) Mortality Surveillance

Based on the Internet System for Death Reporting (ISDR) surveillance data, the number of deaths attributed to pneumonia and influenza (P&I) increased in the past few weeks. The proportion of deaths attributed to P&I for adults aged 65 years and above was the highest among the three age groups (0–49, 50–64, and 65+). Weekly P&I data are available at: <http://nidss.cdc.gov.tw/>.



* Medical institutions are required to report any mortality case to the Ministry of Health and Welfare (MOHW) within 7 days after a death certificate is issued through the Internet System for Death Reporting (ISDR). Either the immediate cause of death or the underlying cause of death was used to identify P&I death cases. Only those with keyword texts containing 'pneumonia', 'influenza' or 'common cold' were counted as a P&I death.

