



## Synopsis

**Influenza activity increased. The most frequently identified influenza virus type was influenza B.**

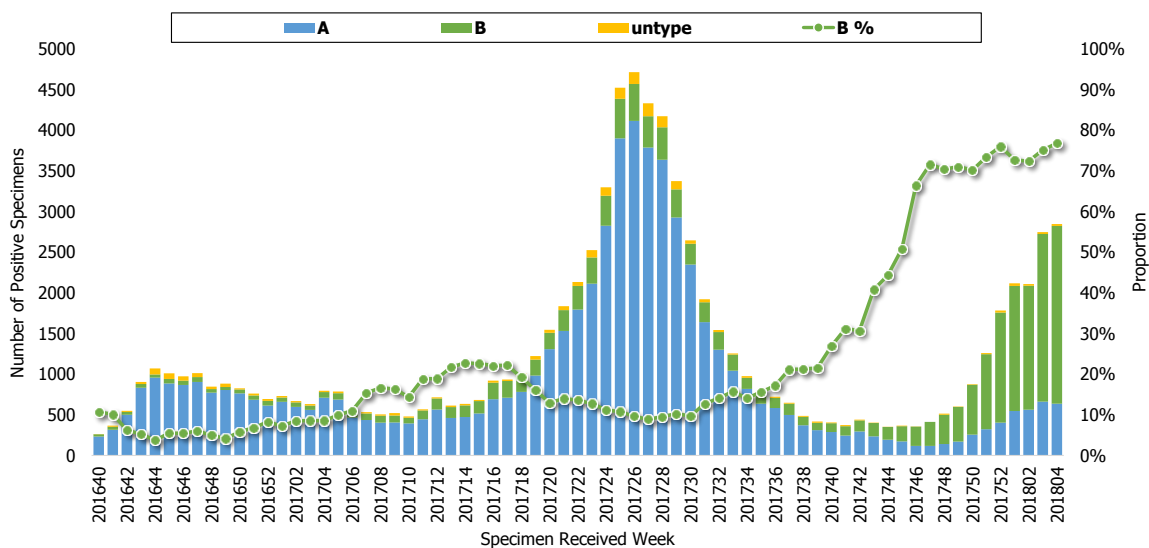
- The proportions of ILI visit in outpatient department and ER slightly increased than the previous week.
- The number of influenza positive specimens was slightly higher than the previous week. The predominant isolated influenza virus was influenza B/Yamagata.
- Both numbers of newly reported and confirmed influenza cases with severe complications were similar to the previous week. There were 49 newly confirmed severe complicated influenza cases and 9 newly fatal cases. A total of 261 severe complicated influenza cases were confirmed since October 1, 2017, and 40 of them were fatal. Influenza B was the predominant virus strain among severe cases and fatal cases.

## Viral Surveillance

### Types and Trend

According to LARS<sup>1</sup>, the number of influenza positive specimens during week 4 was slightly higher than the previous week, and the majority of positive specimens was influenza B viruses. The proportion of positive specimens for influenza B virus was 77% during week 4.

**Trend of influenza positive specimens according to LARS**

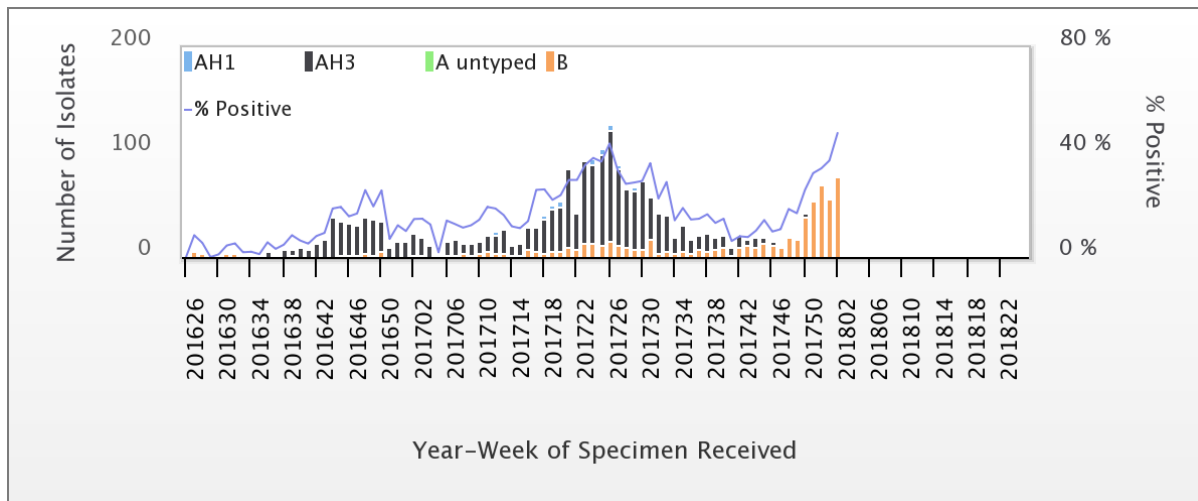


<sup>1</sup> In order to present the trend of influenza virus in real-time, the Automated Laboratory Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 51 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the Taiwan CDC Contracted Virology Laboratories<sup>2</sup>, the proportion of influenza positive specimens was 47.3%. Among these, 97.4% were influenza B virus during week 2, 2018. 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 January 13, 2018



### 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 80% 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, 3% were B/Victoria lineage, and 100% of those isolates matched the B component of the 2017-18 influenza vaccine B/Brisbane/60/2008; 97% were B/Yamagata lineage, and 100% 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.

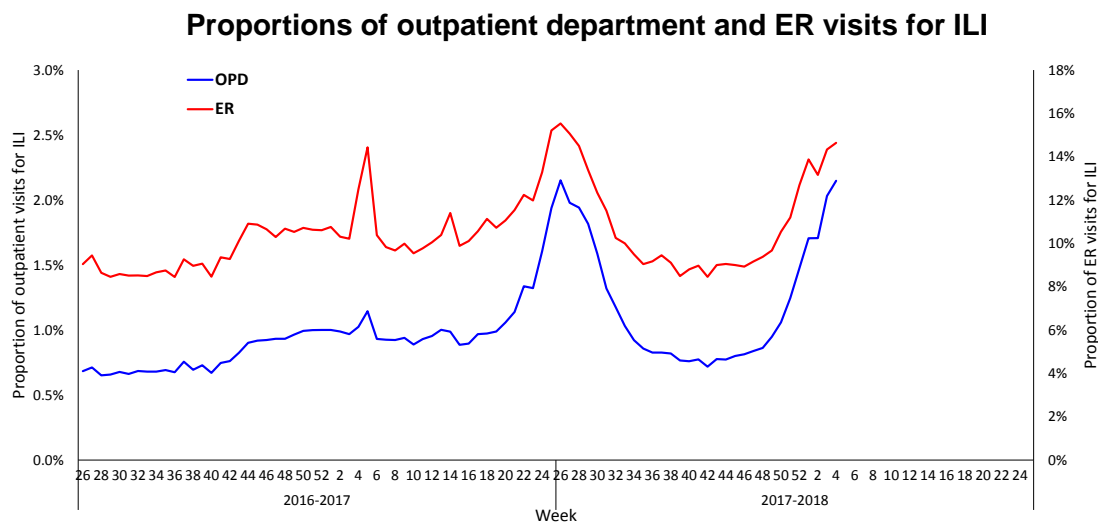
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
<b>Influenza A (H1N1)</b>	13	0
<b>Influenza A (H3N2)</b>	48	0
<b>Influenza B</b>	102	0

<sup>2</sup> 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 4, the proportion of the outpatient department visits for ILI was 2.15%, and the proportion of ER visits for ILI was 14.64%. Both proportions were slightly higher than the previous week.



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

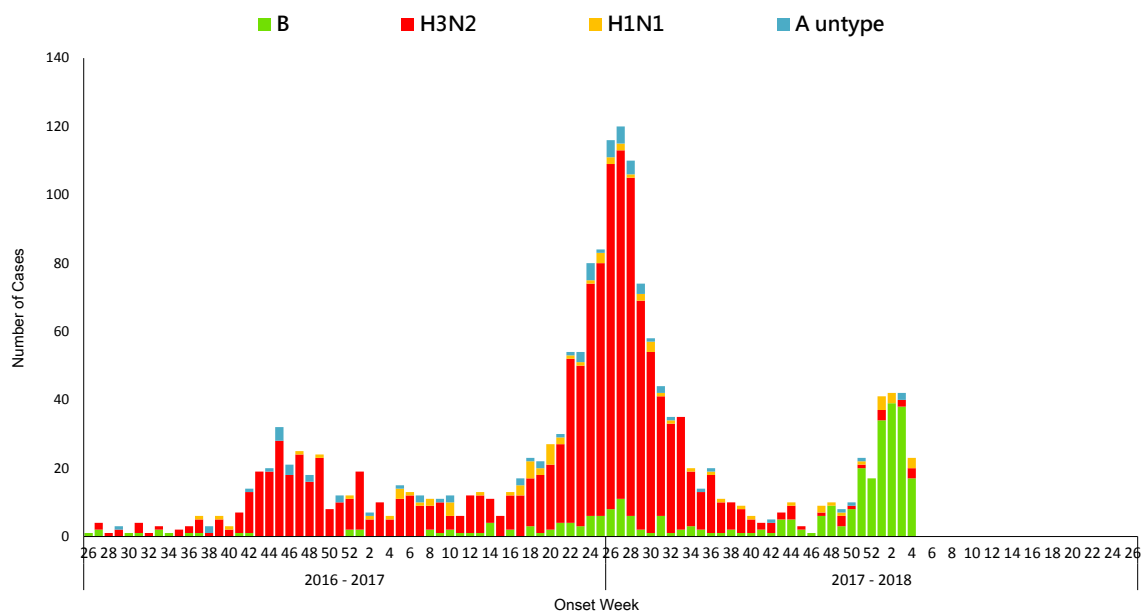
## Severe Complicated Influenza Report

Both numbers of newly reported and confirmed influenza cases with severe complications were similar to the previous week. During week 4, there were 49 newly confirmed cases [38 were influenza B, 5 were H1N1, 4 were H3N2 and 2 were influenza A(unknown subtype)] and 9 newly fatal cases (8 were influenza B, 1 was H1N1).

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 261 severe complicated influenza cases were confirmed, and 40 of them were fatal [the majority of detected virus was influenza B (about 80%), followed by influenza A/H3N2 (about 11%)]. Among these cases, incidence and mortality were the 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 29, 2018

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	4	0	0.6	0.0
3-6 y	5	0	0.6	0.0
7-18 y	8	0	0.3	0.0
19-24 y	1	0	0.1	0.0
25-49 y	29	5	0.3	0.1
50-64 y	55	11	1.1	0.2
65 +	159	24	5.0	0.8
Total	261	40	1.1	0.2

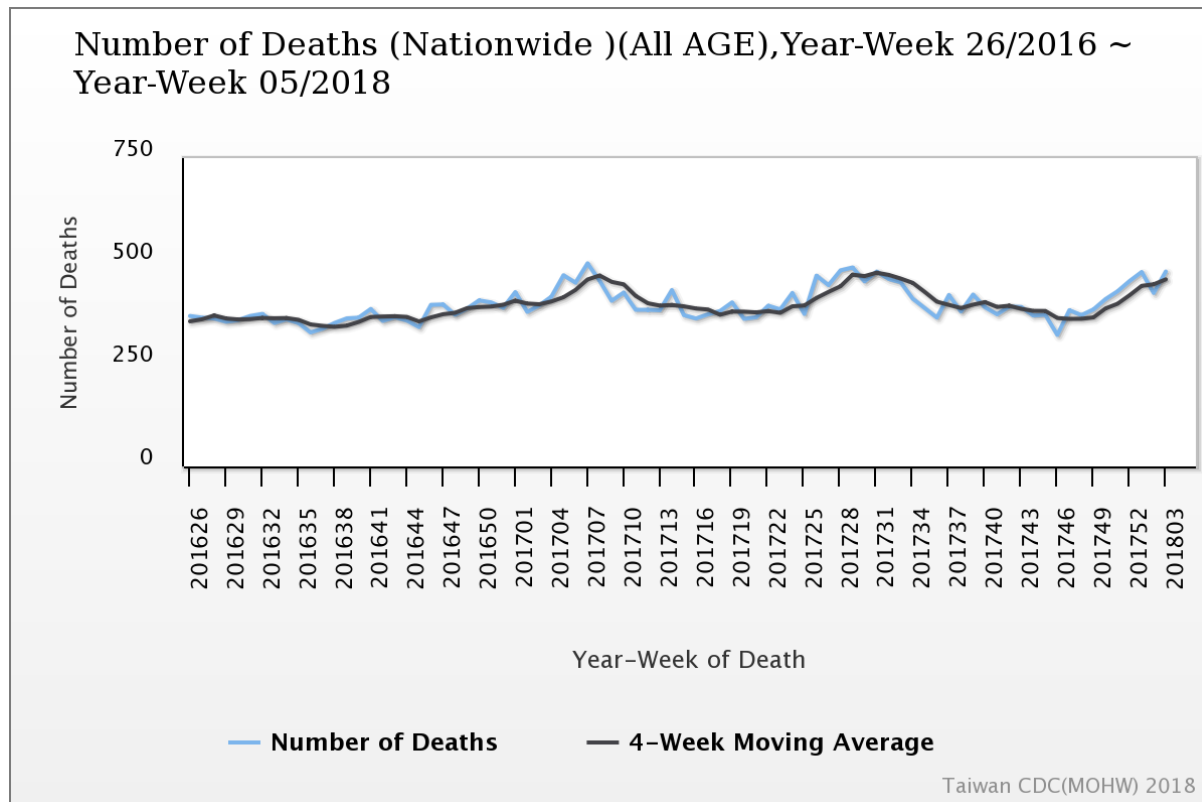
July 1, 2017 to January 29, 2018 (by flu season)

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	14	0	2.2	0.0
3-6 y	14	1	1.7	0.1
7-18 y	11	0	0.4	0.0
19-24 y	7	0	0.4	0.0
25-49 y	74	14	0.8	0.2
50-64 y	144	28	2.8	0.5
65 +	572	96	18.0	3.0
Total	836	139	3.5	0.6



## 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) during week 3, 2018, was higher than the previous week. 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.

