



## Synopsis

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

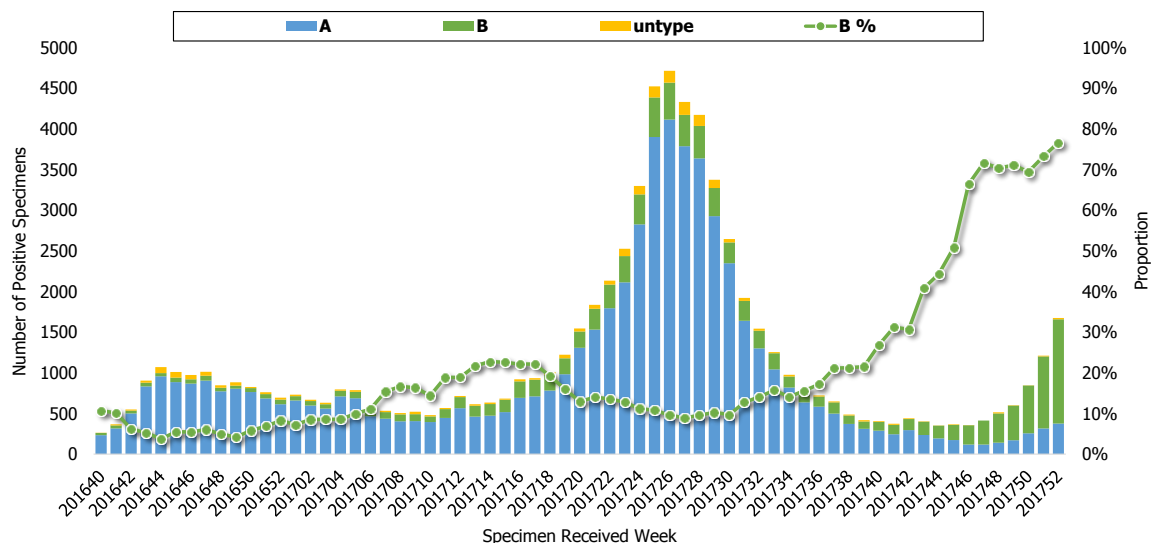
- The proportions of ILI visit in outpatient department and ER were increasing. The proportion of ER visits for ILI was above the national baseline.
- Recently, the number of influenza positive specimens was increasing. The predominant isolated influenza virus was influenza B.
- The newly numbers of reported and confirmed cases of severe complicated influenza cases were increasing in the past few weeks. There were 22 newly confirmed severe complicated influenza cases and two newly fatal severe influenza cases during week 52. A total of 98 severe complicated influenza cases were confirmed since October 1, 2017, and 10 of them were fatal. Influenza B was the predominant virus strain among severe complicated cases.

## Viral Surveillance

### Types and Trend

According to LARS<sup>1</sup>, the number of influenza positive specimens was increasing recently, and the major virus type of positive specimens was influenza B. The proportion of specimens positive for influenza B virus was 77% during week 52.

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

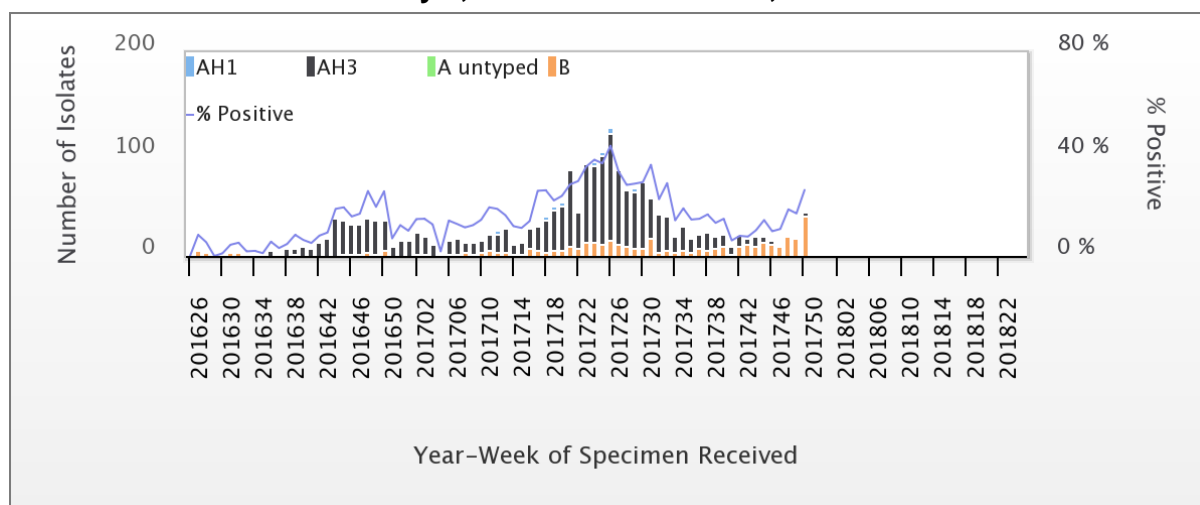


<sup>1</sup> In order to present the trend of influenza virus in real-time, the Automated Laboratory Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 51 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the Taiwan CDC Contracted Virology Laboratories<sup>2</sup>, the proportion of influenza positive specimens was 25.9%. Among these, 90.7% were influenza B during week 50, 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 16, 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 83% of those isolates matched the B component of the 2017-18 influenza vaccine B/Phuket/3073/2013 (trivalent).

### 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.

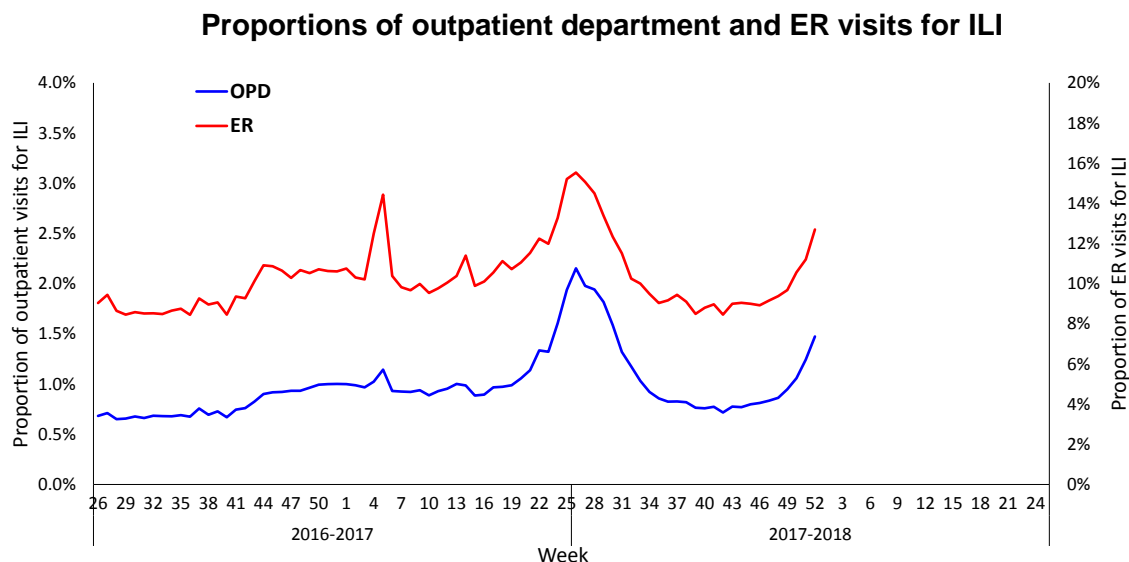
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	12	0
Influenza A (H3N2)	42	0
Influenza B	65	0

<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 52, the proportions of the outpatient department visits for ILI was 1.47%, and ER visits for ILI was 12.7%, which was above of the national baseline of 11.4%. Both proportions were increasing in the past few weeks.



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

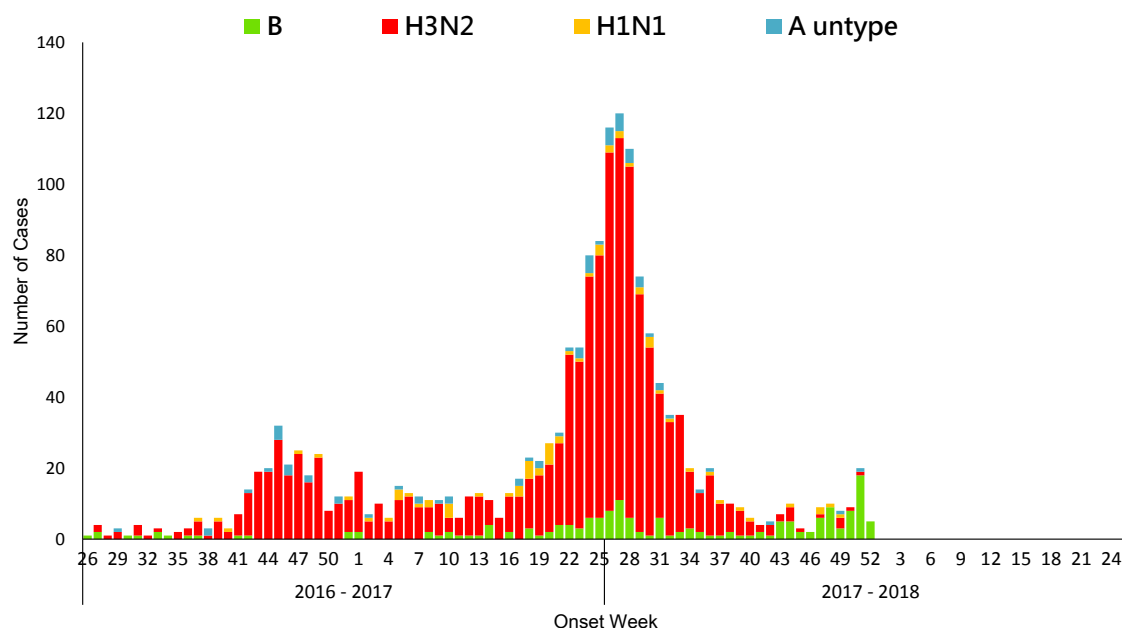
## Severe Complicated Influenza Report

The newly numbers of reported and confirmed cases of severe complicated influenza were higher than the previous week. During week 52, there were 22 newly confirmed severe complicated influenza cases [20 influenza B, 1 H3N2, 1 influenza A (unknown subtype)] and two newly fatal severe influenza B cases.

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 98 severe complicated influenza cases were confirmed (68% were influenza B and 22% were H3N2) and 10 of them were fatal (8 influenza B and 2 H3N2). Among these, the number of 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 1, 2018

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	0	0	0.0	0.0
3-6 y	4	0	0.5	0.0
7-18 y	4	0	0.1	0.0
19-24 y	0	0	0.0	0.0
25-49 y	14	2	0.2	0.0
50-64 y	21	3	0.4	0.1
65 +	55	5	1.7	0.2
Total	98	10	0.4	0.0

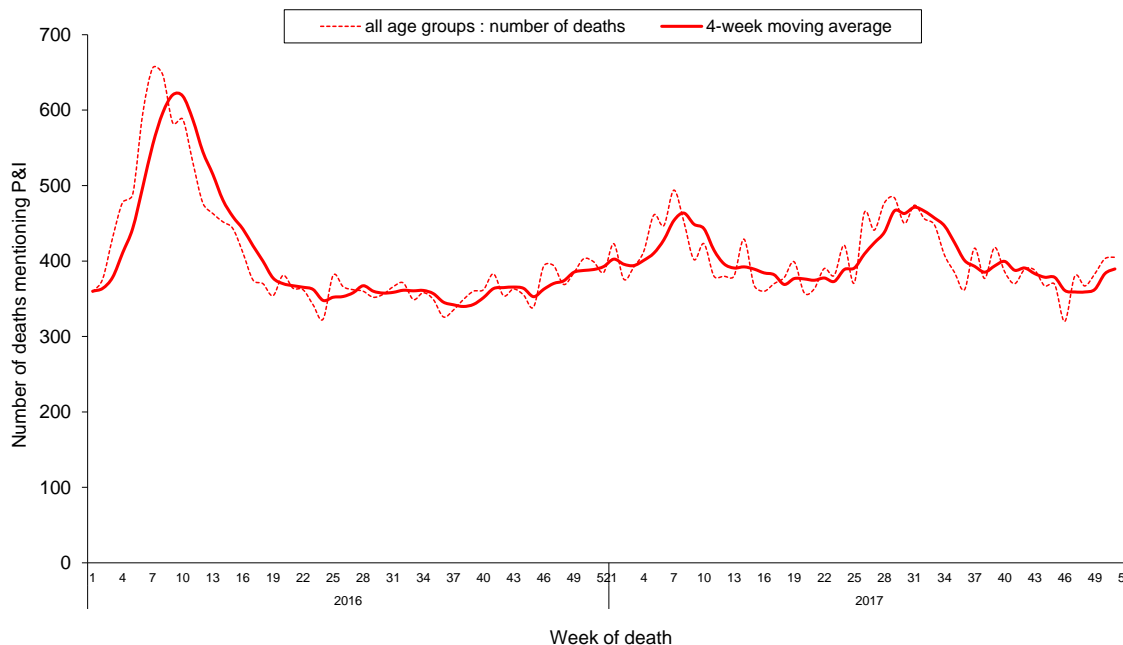
### July 1, 2017 to January 1, 2018 (by flu season)

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	10	0	1.6	0.0
3-6 y	13	1	1.6	0.1
7-18 y	7	0	0.3	0.0
19-24 y	6	0	0.3	0.0
25-49 y	59	11	0.7	0.1
50-64 y	110	20	2.1	0.4
65 +	468	77	14.7	2.4
Total	673	109	2.9	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+).



\* 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.

