Synopsis

Influenza activity continued to decrease but still above the national baseline. The predominant type was influenza B.

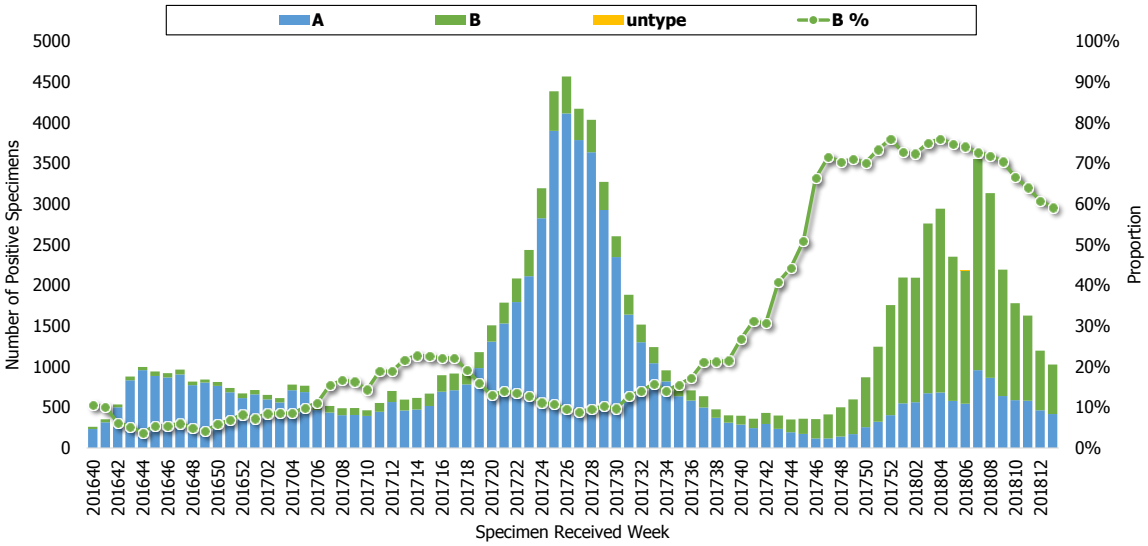
- Both proportions of ILI visit in OPD and ER were decreasing in the past few weeks.
- The number of influenza positive specimens was decreasing. The predominant isolated influenza virus was influenza B/Yamagata.
- There were 20 newly confirmed severe complicated influenza cases and 7 newly fatal cases. A total of 690 severe complicated influenza cases have been confirmed since October 1, 2017, and 111 of them were fatal. Influenza B was the predominant virus type among severe cases and fatal cases.

Laboratory Surveillance

Types and Trend

According to LARS[1], the number of influenza positive specimens during week 13 was lower than the previous week, and the majority virus type of positive specimens was influenza B. The proportion of positive specimens for influenza B virus was 59% during week 13.

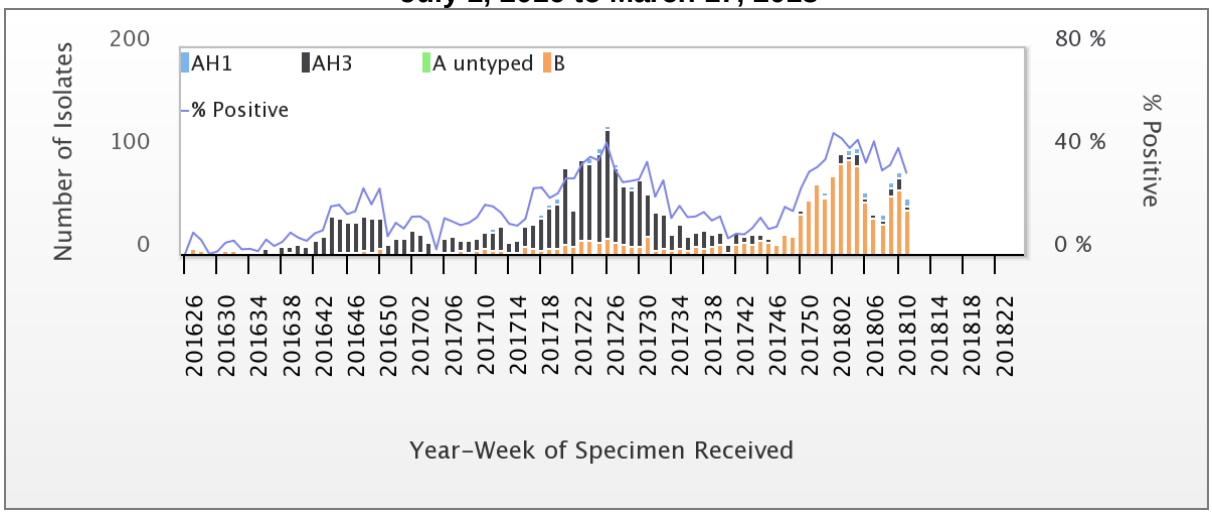
Trend of influenza positive specimens according to LARS



[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 Laboratories[2], the proportion of influenza positive specimens was 31.6%. Among these, 81.5% were influenza B virus during week 11, 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 March 17, 2018



Antigenicity

In the past 4 weeks, among those influenza isolates that 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 98% of those isolates matched the B component of the 2017-18 influenza vaccine B/Phuket/3073/2013 (tetravalent).

Antiviral Resistance

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

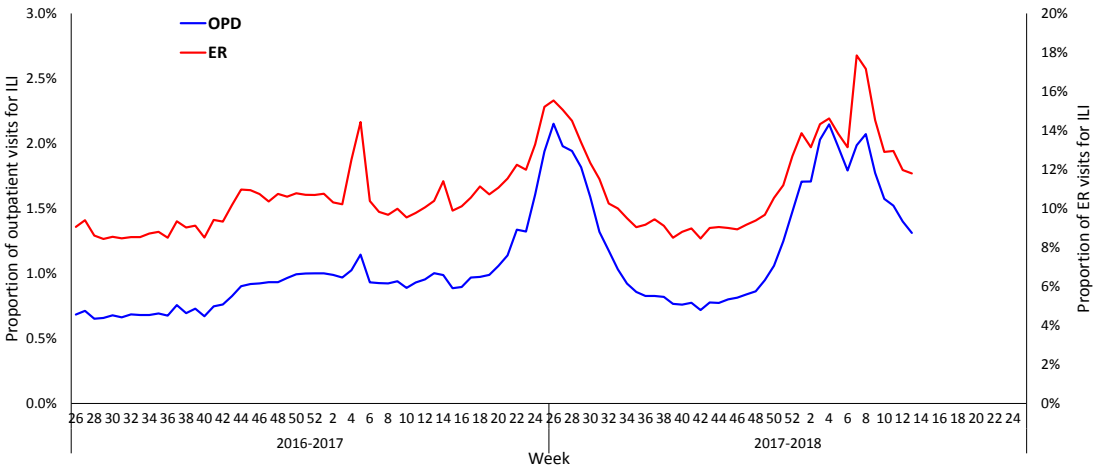
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	29	0
Influenza A (H3N2)	73	0
Influenza B	228	0

[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 13, the proportion of ILI visits was 1.31% in the outpatient department and 11.79% in the ER. Both proportions continued to decrease recently.

Proportions of outpatient department and ER visits for ILI



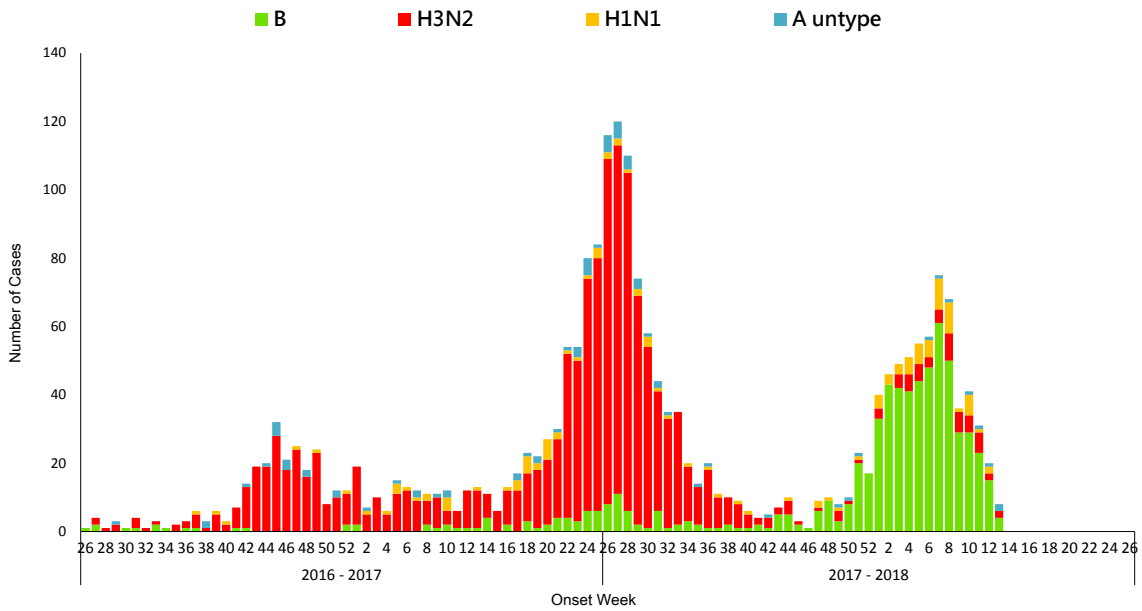
* Since 2016, the analysis of the ILI data from National Health Insurance Database is based on the ICD-10 diagnosis codes.

Severe Complicated Influenza Report

There were 20 newly confirmed influenza cases with severe complications [13 were influenza B, 2 were H1N1, 3 were H3N2, 2 were influenza A (unknown subtype)] and 7 newly fatal cases (4 were influenza B, 3 were H1N1).

In the previous influenza outbreak, the activity returned to the baseline in mid-August 2017 and the number of severe cases continuously declined until September. Since October 1, 2017, a total of 690 severe complicated influenza cases have been confirmed, and 111 of them were fatal [the majority of detected virus was influenza B (about 80%), followed by influenza A/H3N2 (about 10%)]. Among these cases, incidence and mortality rates were the highest for adults aged 65 and older.

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 April 2, 2018

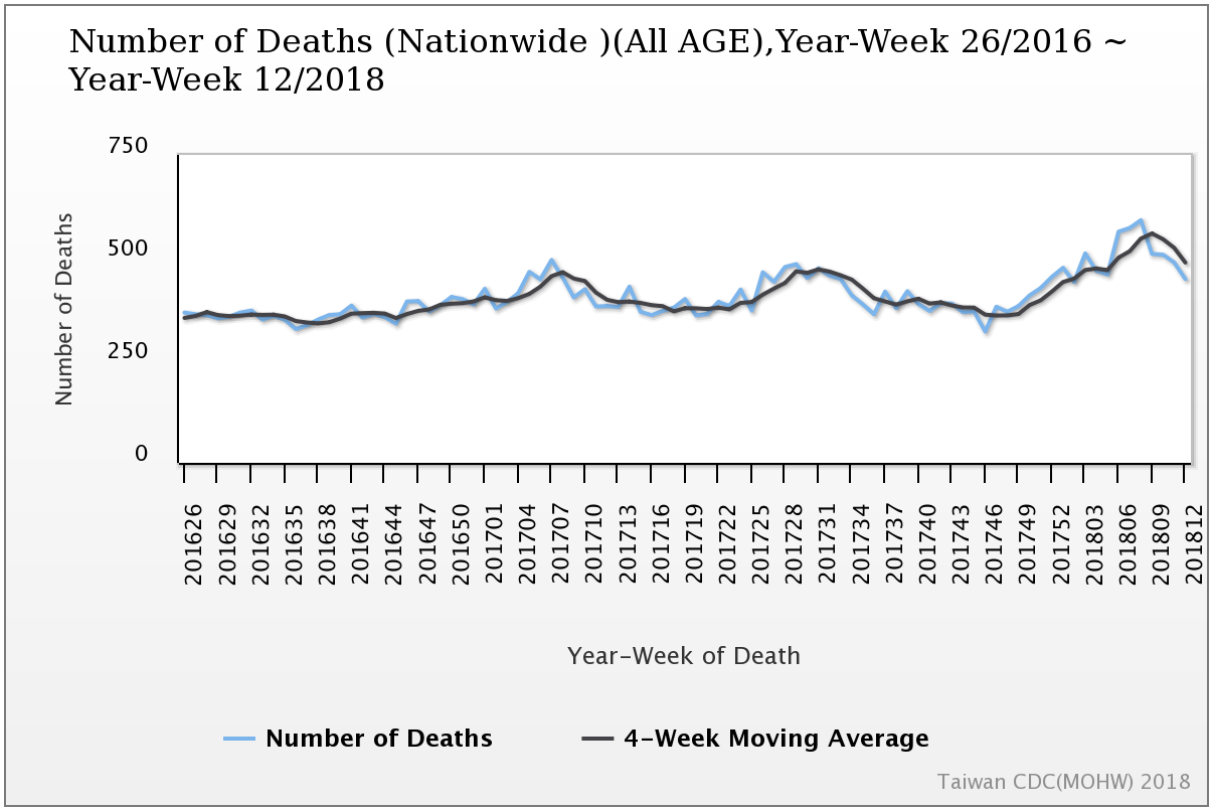
Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	13	1	2.1	0.2
3-6 y	8	0	1.0	0.0
7-18 y	18	0	0.6	0.0
19-24 y	4	1	0.2	0.1
25-49 y	72	9	0.8	0.1
50-64 y	158	27	3.0	0.5
65 +	417	73	13.1	2.3
Total	690	111	2.9	0.5

July 1, 2017 to April 2, 2018 (by flu season)

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	23	1	3.7	0.2
3-6 y	17	1	2.1	0.1
7-18 y	21	0	0.8	0.0
19-24 y	10	1	0.5	0.1
25-49 y	117	18	1.3	0.2
50-64 y	247	44	4.8	0.8
65 +	830	145	26.1	4.6
Total	1,265	210	5.4	0.9

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) decreased in the past few weeks. The proportion of deaths attributed to P&I for adults aged 65 and older 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.