



Synopsis

Influenza activity remained low and below the national baseline.

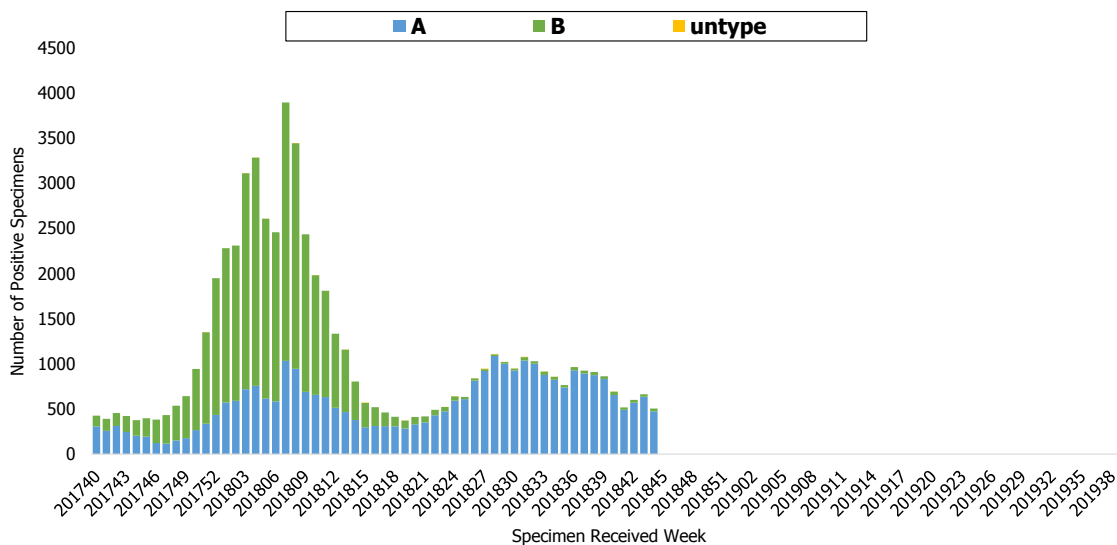
- A/H1N1 and A/H3N2 co-circulated in community, with the number of A/H1N1 was slightly higher than A/H3N2 during the last two weeks.
- Both proportions and number of outpatient and ER visits for ILI were low in the past few weeks.
- There have been 48 severe complicated influenza cases and 2 of them were fatal since October 1, 2018. A/H3N2 was the major virus type from these cases (about 60%).

Laboratory Surveillance

Types and Trend

According to LARS¹, the number of influenza positive specimens during week 44 was lower than the previous week. The proportion of positive specimens for influenza A virus was about 94%.

Trend of influenza positive specimens according to LARS

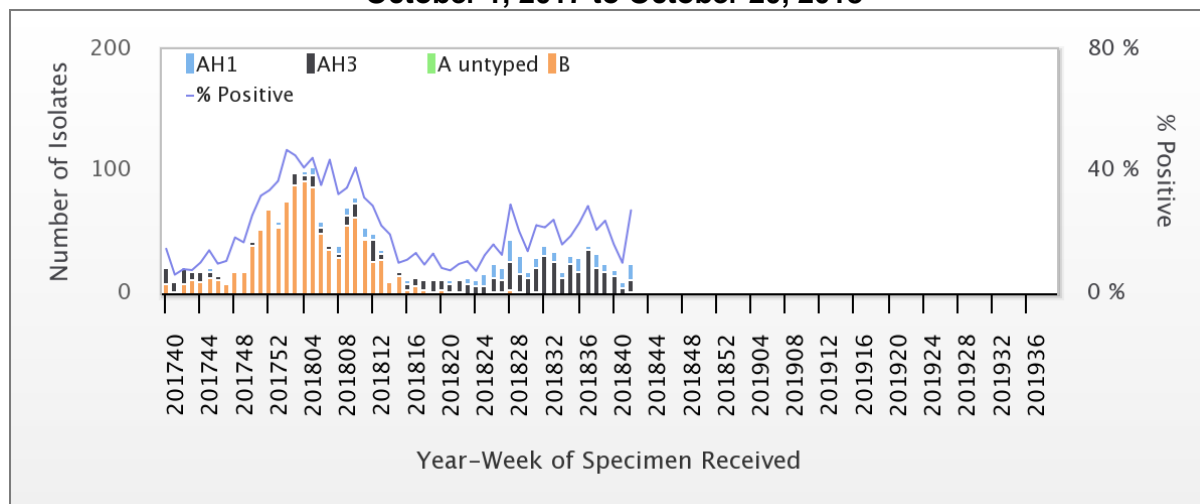


¹ In order to present the trend of influenza virus in real-time, the Laboratory Automated Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 57 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the laboratory surveillance², the proportion of influenza positive specimens was 27.2%. Among these, 56% were influenza A/H1N1 virus and 40% were A/H3N2 during week 42, 2018. Weekly virus data are available at: <http://nidss.cdc.gov.tw/>.

Influenza isolates and positive rate according to Contracted Virology Laboratories October 1, 2017 to October 20, 2018



Antigenicity

In the past four 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 2018-19 influenza vaccine (A/Michigan/45/2015), and 100% of the H3N2 virus isolates matched the A (H3N2) component of the 2018-19 influenza vaccine (A/Singapore/INFIMH-16-0019/2016). There were no influenza B positive isolates have been identified.

Antiviral Resistance

The table below summarized antiviral resistance to neuraminidase inhibitor (Oseltamivir) from October 1, 2018. All of the influenza isolates were susceptible to Oseltamivir.

	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	41	0
Influenza A (H3N2)	70	0
Influenza B	0	0

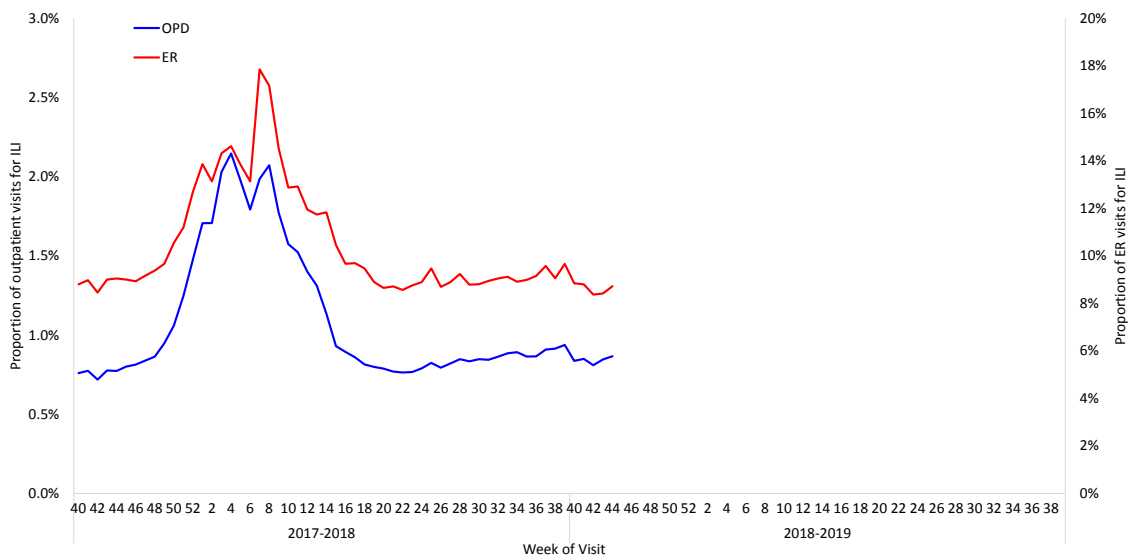
² In terms of the surveillance systems in Taiwan, please see: Jian, S. W., Chen, C. M., Lee, C. Y., & Liu, D. P. (2017). Real-Time Surveillance of Infectious Diseases: Taiwan's Experience. *Health security*, 15(2), 144-153.



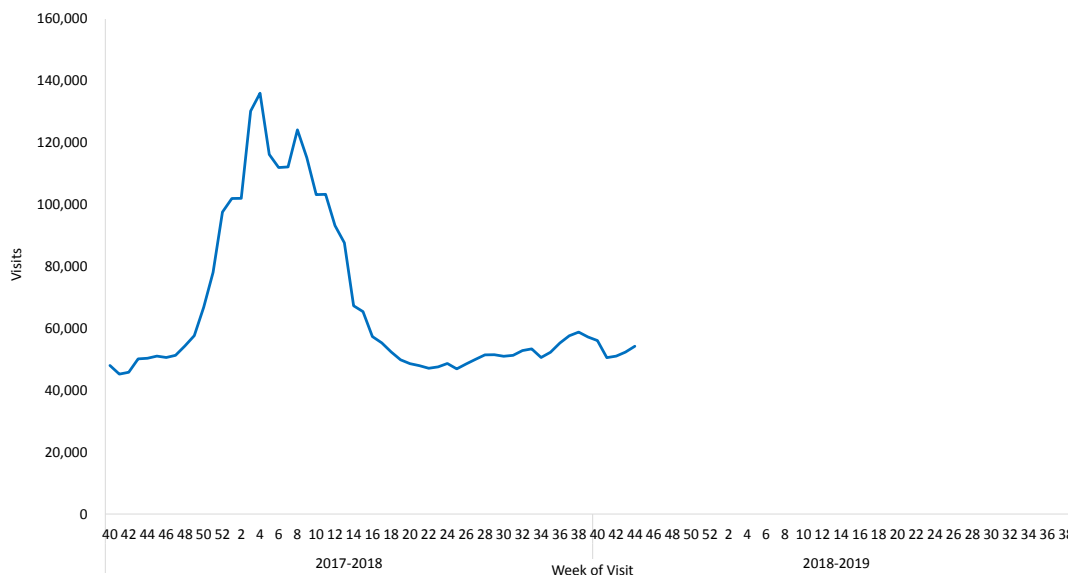
Influenza-like Illness (ILI) Surveillance

During week 44, the proportion of ILI visits was 0.87% and 8.73% in the outpatient and ER, respectively. The proportion of ER visits was below the national baseline of 11.5%. The number of visits for ILI in both outpatient and ER was 54,206, which was slightly higher than the previous week. In general, the ILI activity was low in the past few weeks.

Proportions of outpatient and ER visits for ILI



Total number of outpatient and ER visits for ILI



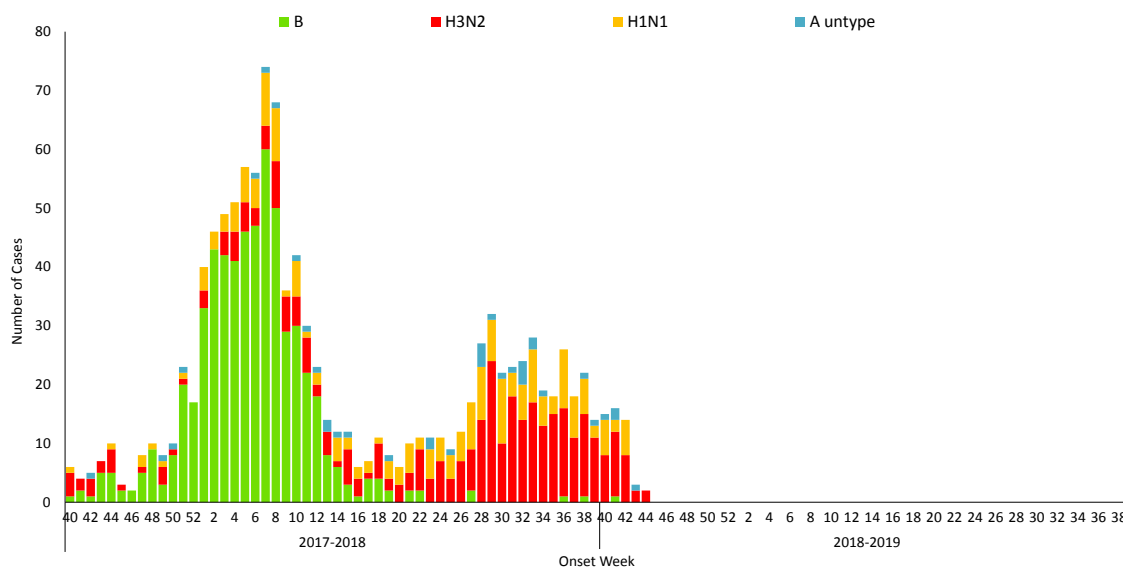
* Since 2016, the analysis of the ILI data from National Health Insurance Database is based on the ICD-10 diagnosis codes.



Severe Complicated Influenza Case

In week 44, there were six new influenza cases with severe complications, and 5 of them were infected by H3N2. There were 2 newly fatal cases infected by H1N1. Since October 1, 2018, a total of 48 severe complicated influenza cases have been confirmed, and 2 of them were fatal. The majority of virus isolates were H3N2 (about 60%). Most of these cases were 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.

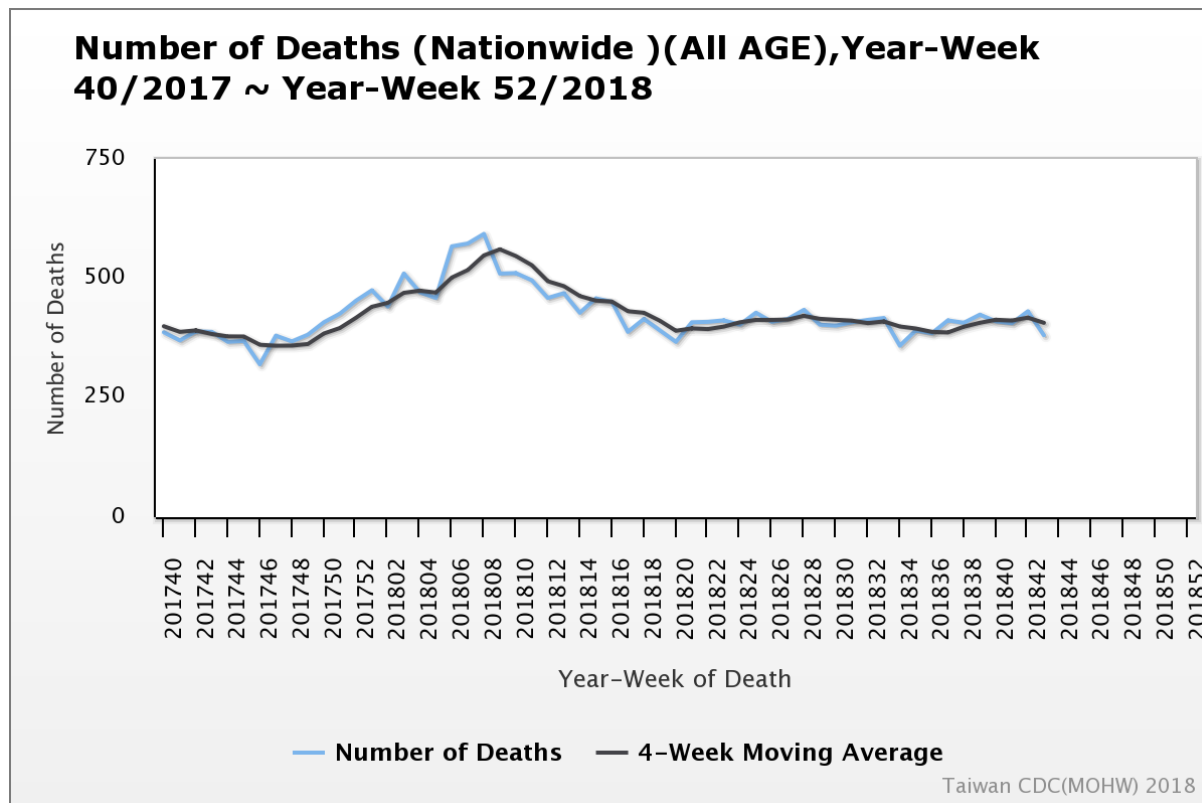
**Number and incidence of severe complicated influenza confirmed cases and deaths by age groups
October 1 to November 5, 2018**

Age Group	Cases	Deaths	Cumulative incidence per ten thousand population	Cumulative mortality per ten thousand population
< 3 y	1	0	0.2	0
3-6 y	1	0	0.1	0
7-18 y	3	1	0.1	0.04
19-24 y	1	0	0.1	0
25-49 y	4	0	0.04	0
50-64 y	11	0	0.2	0
65 +	27	1	0.8	0.03
Total	48	2	0.2	0.01



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 43 was lower than the previous week. 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.

