Synopsis

During week 19, the ILI activity remain the same. However, both numbers of reported and confirmed cases of severe complicated influenza were higher than the previous week.

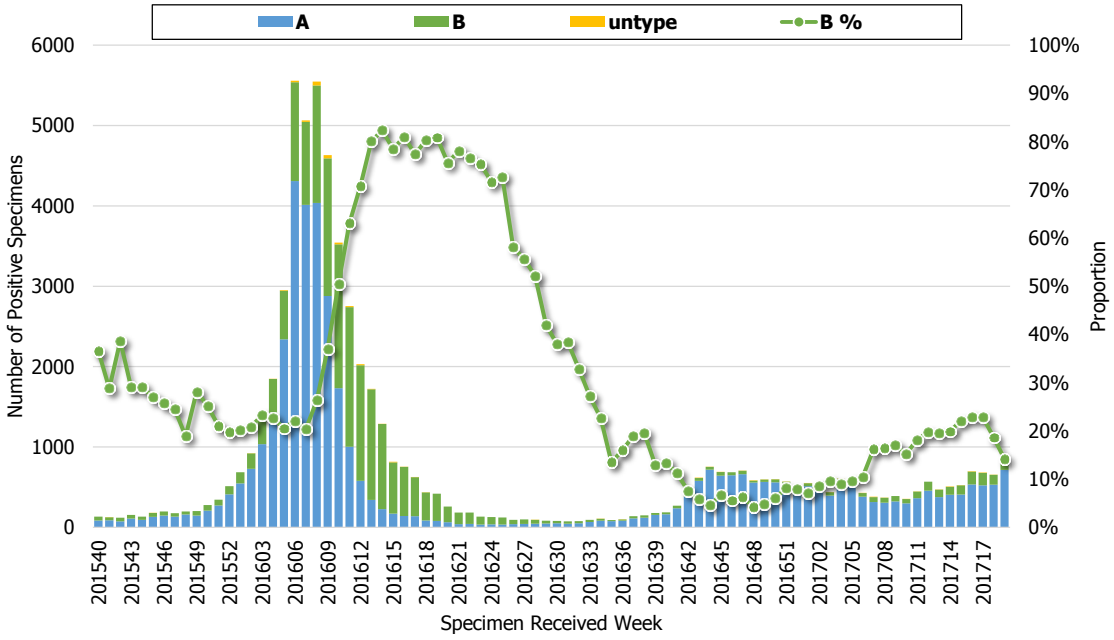
- During week 19, the proportion and number of ER visits for ILI were lower than the previous week. The proportion of outpatient department visits for ILI remained the same.
- The majority of the circulating influenza virus type was H3N2, 81% of H3N2 matched to the 2016-17 influenza vaccine strain in the past 4 weeks. No antiviral-resistance viruses were found in the circulating influenza viruses.
- During week 19, the number of severe complicated influenza cases was higher than the previous week, and there were 25 new confirmed severe complicated influenza cases. There have been 470 severe complicated influenza cases reported since July 1, 2016, and 61 of them reported death. Influenza A (H3N2) remained the dominant virus among severe cases (81%).
- It is likely that the ILI activity will remain the same, and the number of severe complicated influenza cases may increase slightly next week.

Viral Surveillance

Types and Trend

According to LARS[1], the number of the influenza positive specimens during week 19 was higher than the previous week, and the dominant influenza type among positive specimens was influenza A. The proportion of specimens positive for influenza B virus was 14% during week 19.

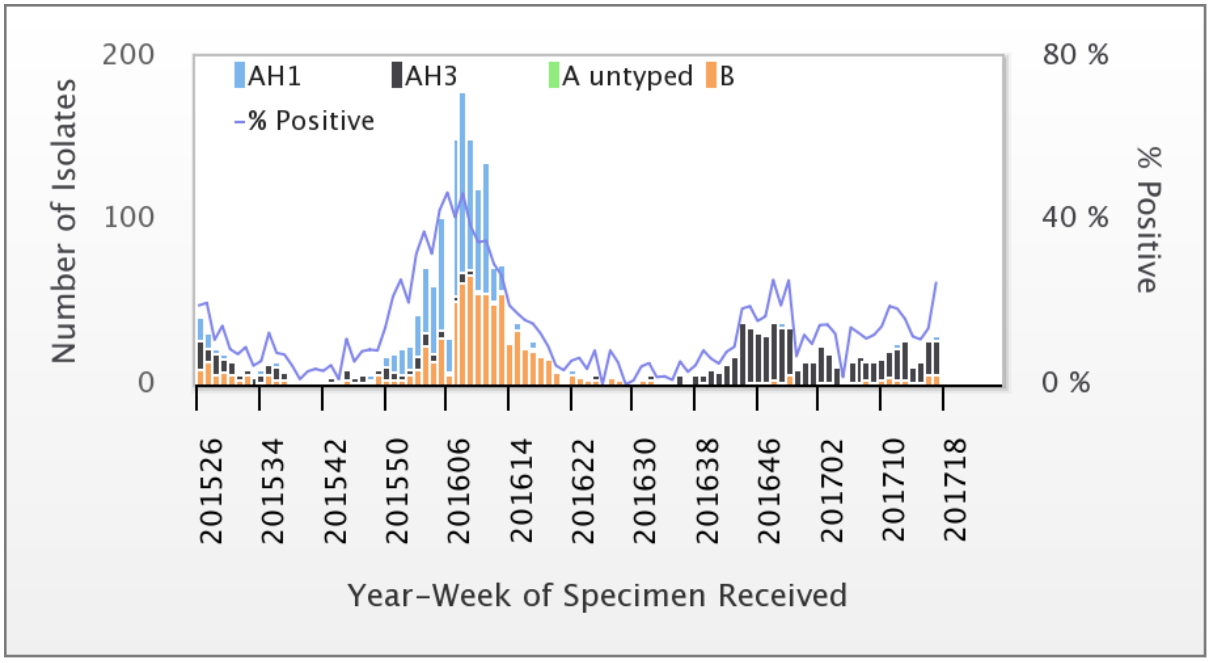
Trend of Influenza Positive Specimens according to LARS



[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 29 participating hospitals, including 17 medical centers. All positive specimens data uploads to LARS automatically.

According to the Taiwan CDC Contracted Diagnostic Virology Laboratories[2], the proportion of specimens testing positive for influenza virus was 24.8%. Among these, 73.3% were H3N2 during week 17, 2017. Weekly virus data are available on the website: http://nidss.cdc.gov.tw/ .

Influenza Positive Tests according to Contracted Diagnostic Virology Laboratories
July 1, 2015 to present



Antigenicity

In the past 4 weeks, among those influenza positive specimens that were antigenically characterized, all (100%) of the influenza A (H1N1) virus isolates match the A (H1N1) component of the 2016-17 influenza vaccine (A/California/7/2009), and 81% of the H3N2 virus isolates match the A (H3N2) component of the 2016-17 influenza vaccine (A/Hong Kong/4801/2014). In addition, all (100%) influenza B/Victoria lineage virus isolates match the B component of the 2016-17 influenza vaccine (B/Brisbane/60/2008).

Antiviral Resistance

The table below summarized the results of antiviral resistance to neuraminidase inhibitor (Oseltamivir) from October 1, 2016 to present. All of recent circulating influenza viruses were susceptible to Oseltamivir.

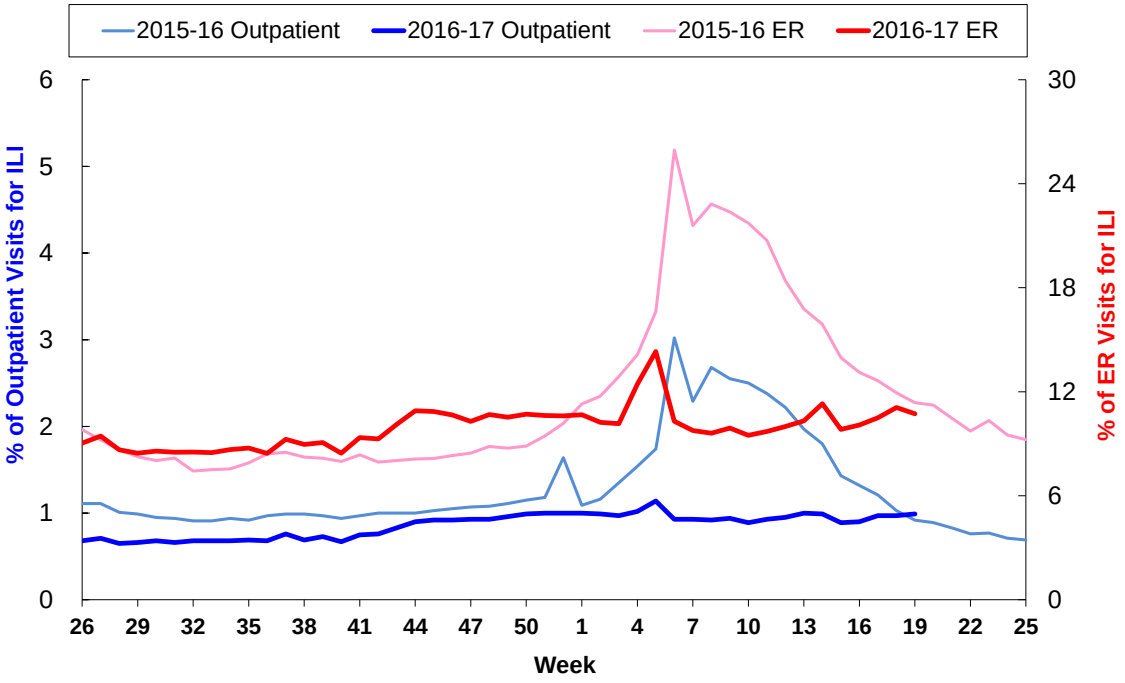
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	8	0
Influenza A (H3N2)	171	0
Influenza B	31	0

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

Influenza-like Illness (ILI) Surveillance

During week 19, the proportions of ER visits for ILI (10.73%) was lower than the previous week. The outpatient department visits for ILI (0.99%) was similar to the previous week.

Proportions of outpatient department and ER visits for ILI
July 1, 2015 to present



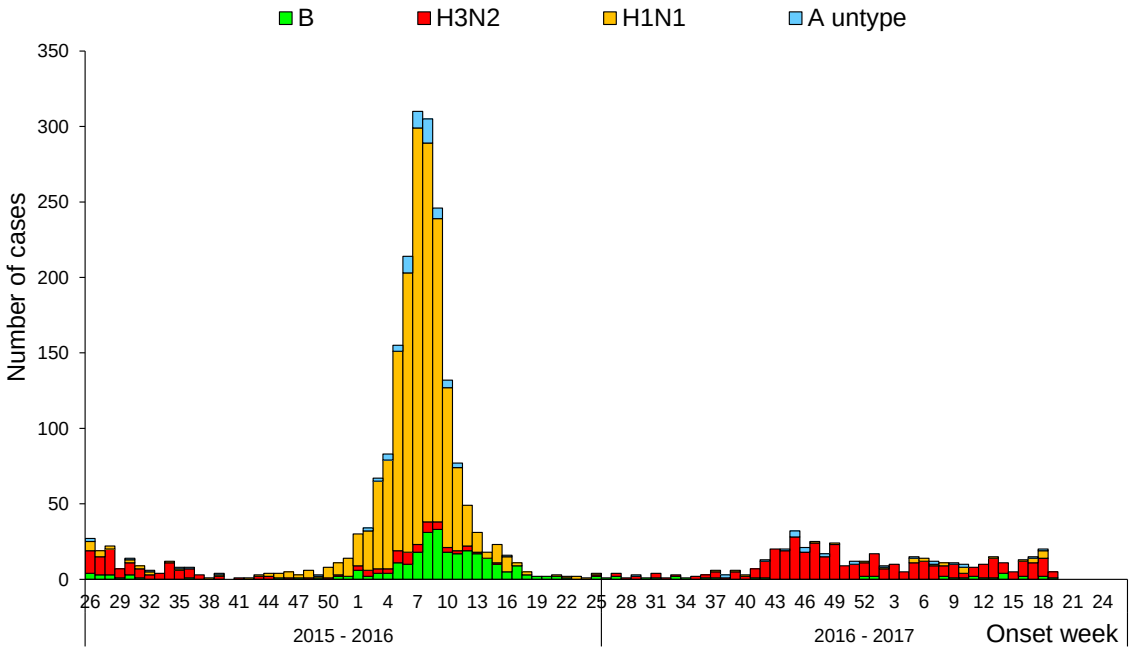
* Since 2016, the analysis of the ILI data from National Health Insurance Database is based on the ICD-10 diagnosis codes.

Severe Complicated Influenza Report

During week 19, the number of reported severe complicated influenza cases was higher than the previous week. There were 25 new confirmed severe complicated influenza cases (15 H3N2, 6 H1N1, 2 influenza A (unknown subtype) and 2 influenza B).

During this influenza season (July 1, 2016 to present), 470 severe complicated influenza cases have been confirmed (81% were H3N2), 85% of them did not receive influenza vaccine. The highest incidence and number of severe cases were among adults aged 65 years and above. There were 61 deaths due to severe complicated influenza (75% were H3N2). Among these deaths, 80% did not receive influenza vaccine.

Number of severe complicated influenza reports by week of onset
July 1, 2015 to present

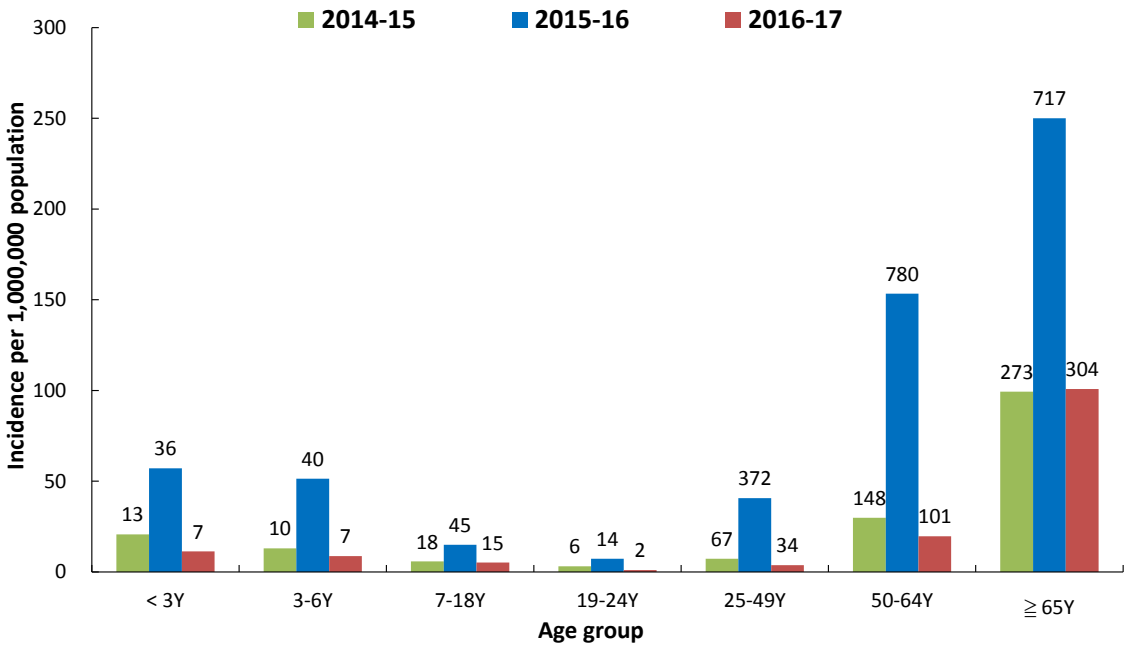


* A person who has ILI symptoms become severely ill (includes pulmonary complication, neurologic complication, myocarditis, invasive bacterial infection, or pericarditis) that requires intensive care or results in death within 14 days and with influenza virus infection confirmed by the laboratory is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

Number and incidence of confirmed severe complicated influenza cases and deaths by age groups
July 1, 2016 to present

Age Group	Cases	Deaths	Cumulative incidence per million population	Cumulative mortality per million population
< 3 y	7	0	11.3	0.0
3-6 y	7	1	8.7	1.2
7-18 y	15	1	5.2	0.3
19-24 y	2	0	1.0	0.0
25-49 y	34	4	3.7	0.4
50-64 y	101	11	19.6	2.1
65 +	304	44	100.8	14.6
Total	470	61	20.0	2.6

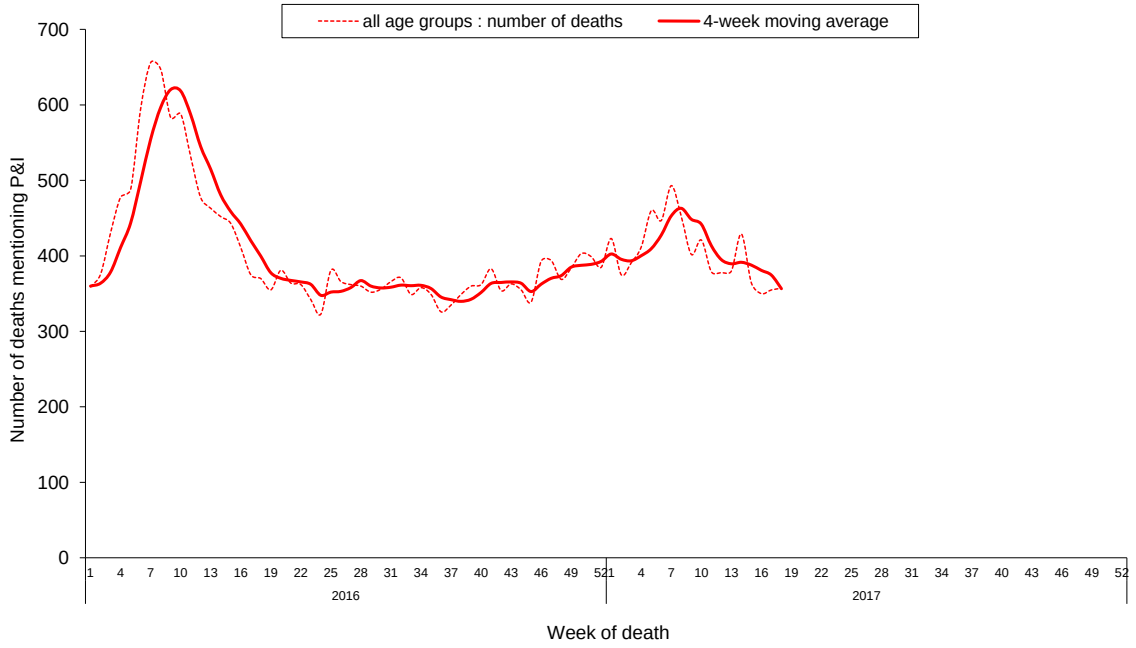
Number of confirmed severe complicated influenza reports by age groups
July 1, 2016 to present



*The number shows above each bar represents the number of confirmed sever complicated influenza cases.

Pneumonia and Influenza (P&I) Mortality Surveillance

Based on the Internet System for Death Reporting (ISDR) surveillance data, the trend of the number of deaths attributed to pneumonia and influenza (P&I) was decreasing during the last 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.