



Synopsis

Influenza activity was low and below the national baseline.

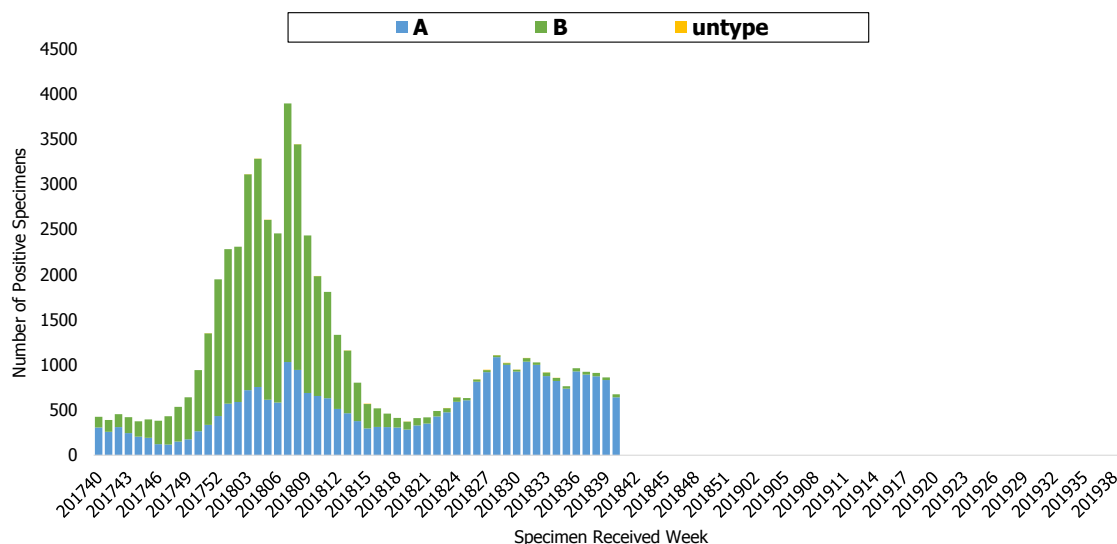
- The number of influenza positive specimens decreased during recent weeks. The predominant isolated influenza virus was A/H3N2.
- Both proportions and number of visits for ILI in OPD and ER were low in the past few weeks.
- There have been 4 severe complicated influenza cases since October 1, 2018, and none of them were fatal. Influenza A/H3N2 was the majority virus type among newly severe cases during the past 4 weeks.

Laboratory Surveillance

Types and Trend

According to LARS¹, the number of influenza positive specimens decreased during recent weeks. The proportion of positive specimens for influenza A virus was about 95%.

Trend of influenza positive specimens according to LARS

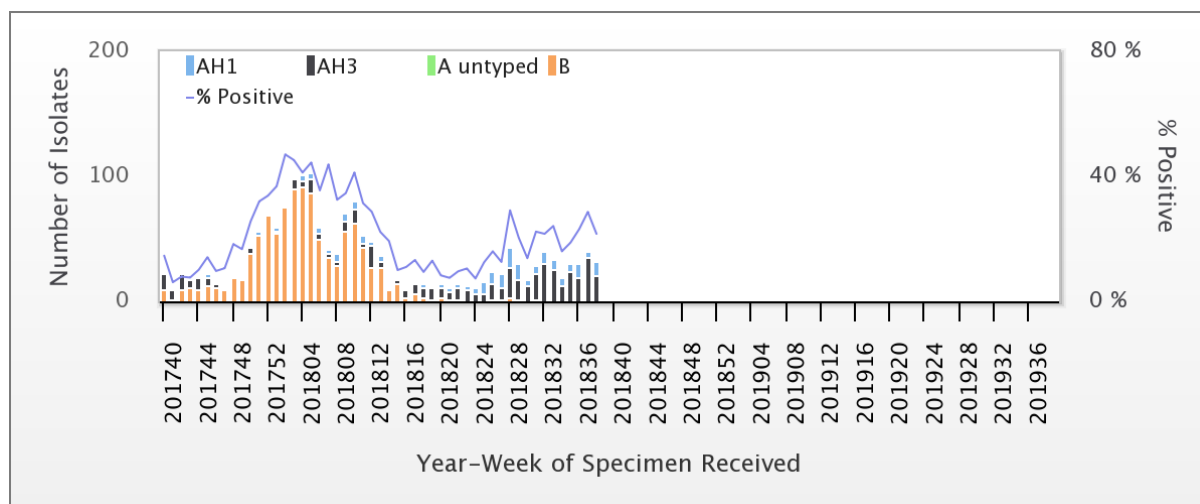


¹ In order to present the trend of influenza virus in real-time, the Laboratory Automated Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 57 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the laboratory surveillance², the proportion of influenza positive specimens was 21.6%. Among these, 65.6% were influenza A/H3N2 virus during week 38, 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 September 22, 2018



Antigenicity

In the past one week, 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 was no influenza B positive isolate identified yet.

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) | 9 | 0 |
| Influenza A (H3N2) | 0 | 0 |
| Influenza B | 0 | 0 |

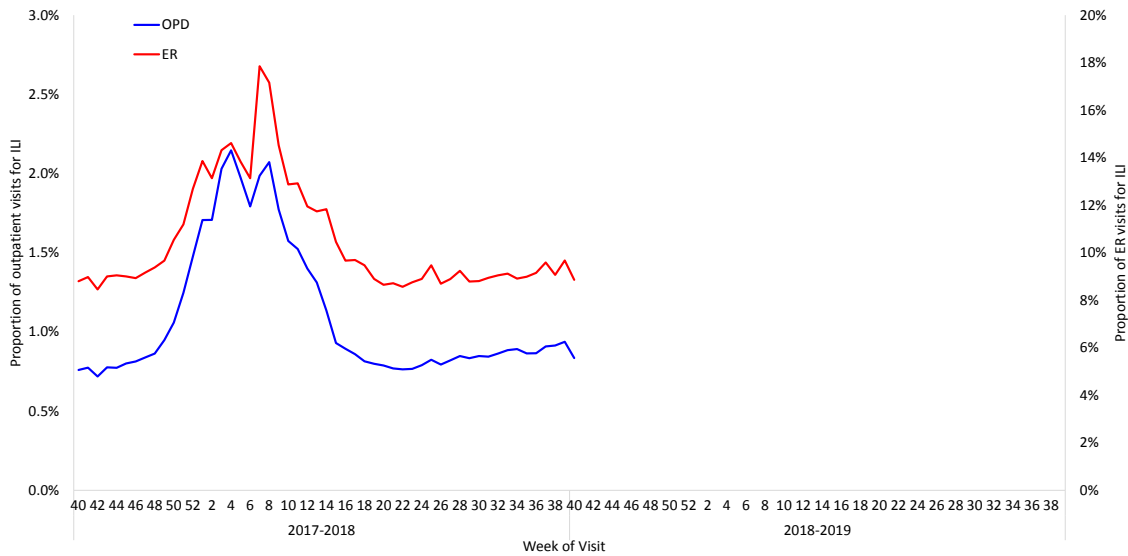
² In terms of the surveillance systems in Taiwan, please see: Jian, S. W., Chen, C. M., Lee, C. Y., & Liu, D. P. (2017). Real-Time Surveillance of Infectious Diseases: Taiwan's Experience. *Health security*, 15(2), 144-153.



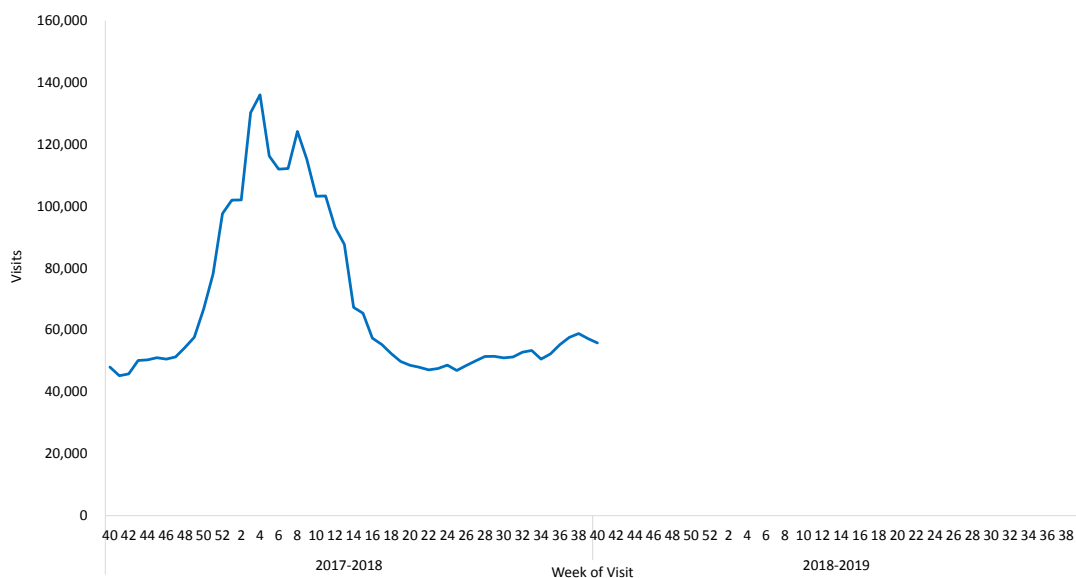
Influenza-like Illness (ILI) Surveillance

During week 40, the proportion of ILI visits was 0.84% in the outpatient department and 8.56% in the ER, which was below the national baseline (11.5%). The number of visits for ILI in both outpatient department and ER was 55,791. The ILI activity was low in recent weeks.

Proportions of outpatient department and ER visits for ILI



Total visits of outpatient department and ER for ILI



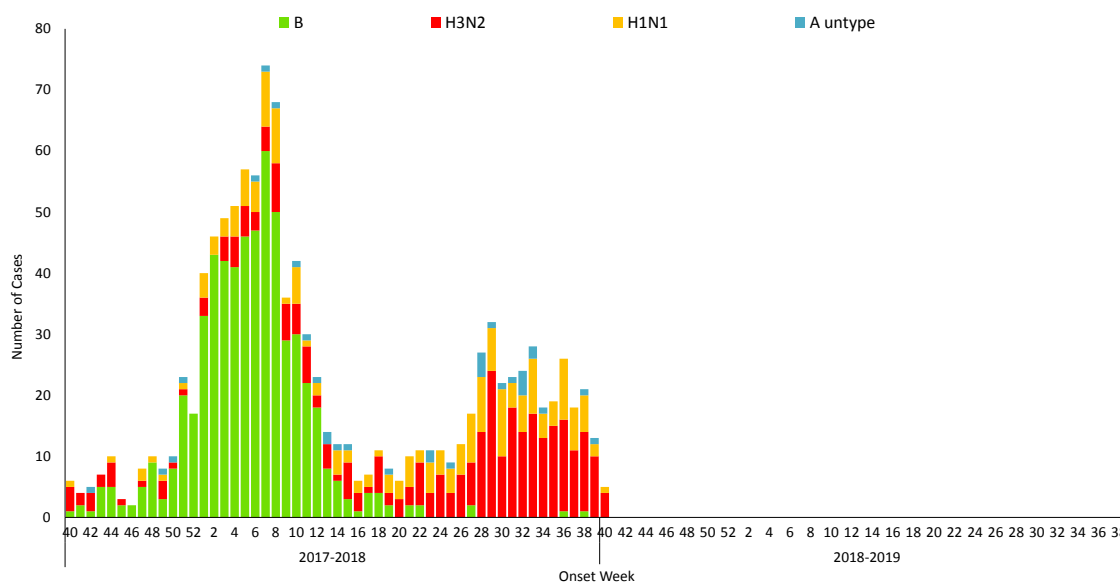
* Since 2016, the analysis of the ILI data from National Health Insurance Database is based on the ICD-10 diagnosis codes.



Severe Complicated Influenza Case

There were 14 newly confirmed influenza cases with severe complications (11 were H3N2, 3 were H1N1). In addition, one new fatal case of influenza A/H1N1, who fell ill in September 2018, was registered. Since October 1, 2018, a total of 4 severe complicated influenza cases have been confirmed, and none of them were fatal. The majority of detected virus type during the past 4 weeks was 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.

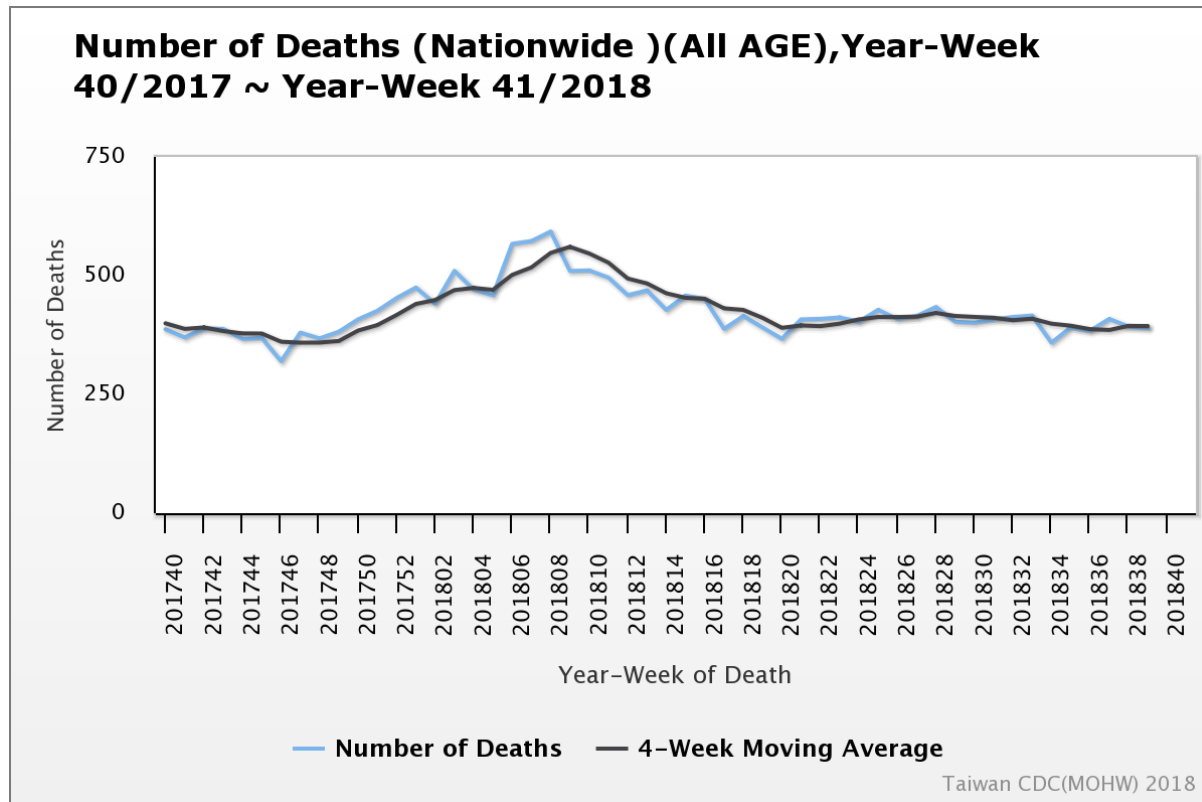
Number and incidence of severe complicated influenza confirmed cases and deaths by age groups October 1 to October 8, 2018

| Age Group | Cases | Deaths | Cumulative incidence per ten thousand population | Cumulative mortality per ten thousand population |
|-----------|-------|--------|--|--|
| < 3 y | 0 | 0 | 0 | 0 |
| 3-6 y | 0 | 0 | 0 | 0 |
| 7-18 y | 0 | 0 | 0 | 0 |
| 19-24 y | 0 | 0 | 0 | 0 |
| 25-49 y | 1 | 0 | 0.01 | 0 |
| 50-64 y | 0 | 0 | 0 | 0 |
| 65 + | 3 | 0 | 0.09 | 0 |
| Total | 4 | 0 | 0.02 | 0 |



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.

