



Synopsis

Influenza activity slightly decreased and was below the national baseline.

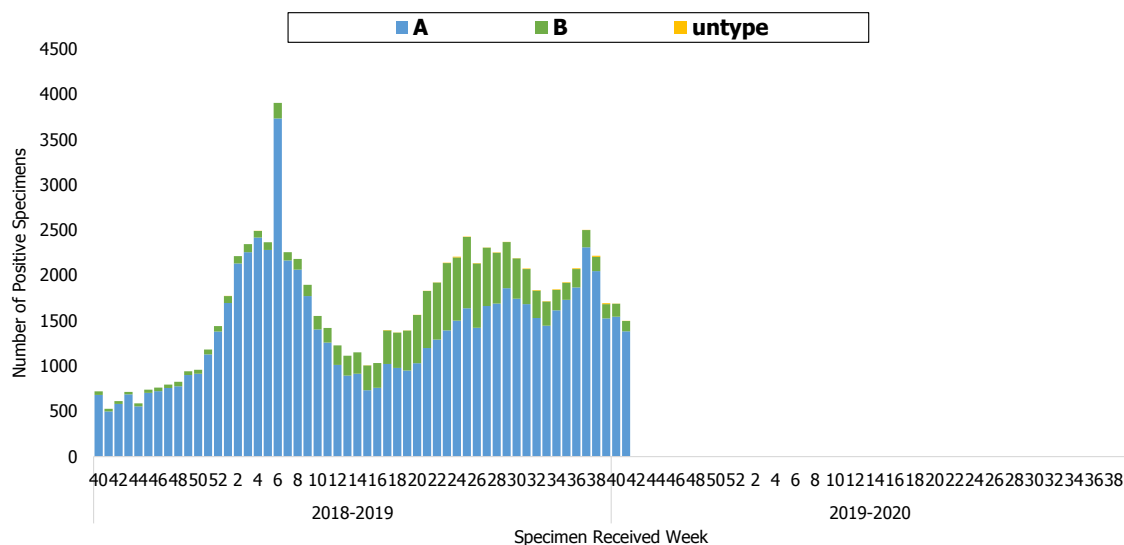
- In the past 4 weeks, A/H1N1 (82.3%) was the major virus type in community.
- The number of medical visits for ILI slightly decreased, and the proportion of ER visits for ILI was below the national baseline.
- During 2018-2019 flu season, there have been 1,990 severe complicated influenza cases, including 291 deaths. A/H1N1 (68%) was the major virus type from these cases. There have been 27 severe complicated influenza cases since October 1, 2019.

Laboratory Surveillance

Types and Trend

According to LARS¹, the number of influenza positive specimens slightly decreased, and the proportion of positive specimens for influenza A virus was 92%.

Trend of influenza positive specimens according to LARS

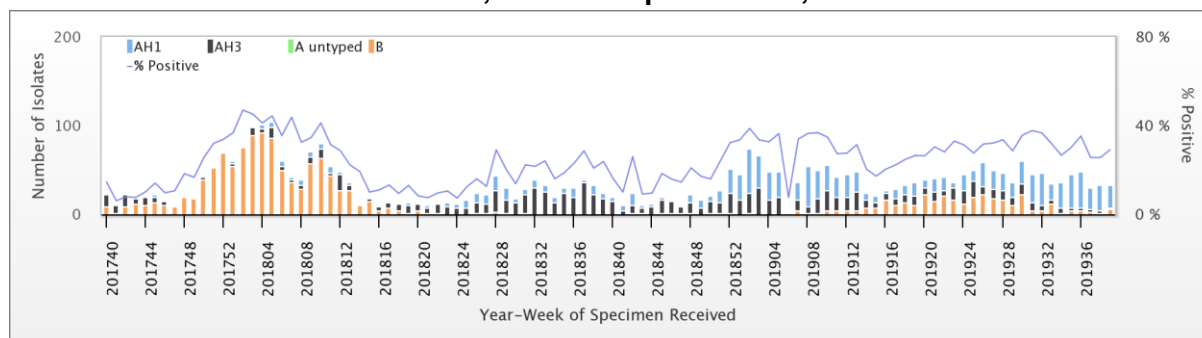


¹ In order to present the trend of influenza virus in real-time, the Laboratory Automated Reporting System (LARS) has been established by Taiwan CDC since 2014. The data presented here collected from 66 participating hospitals. All positive specimens data uploads to LARS automatically.



According to the laboratory surveillance², the proportion of influenza positive specimens was 29.1% during week 39, 2019. In the previous 4 weeks, the proportions of A/H1N1, B and A/H3N2 were 82.3%, 10.3% and 7.5% respectively. 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 28, 2019



Antigenicity

During week 40 to week 41, among those influenza isolates that were antigenically characterized, 100% of the influenza A (H1N1) virus isolates matched the A (H1N1) component of the 2019-20 influenza vaccine (A/Brisbane/02/2018). One influenza A (H3N2) virus was isolated and did not match the A (H3N2) component of the 2019-20 influenza vaccine (A/Kansas/14/2017). Among influenza B isolates, 100% were B/Victoria lineage, and 50% of those isolates matched the B component of the 2019-20 influenza vaccine (B/Colorado/06/2017).

Antiviral Resistance

The table below summarized the antiviral resistance to neuraminidase inhibitor (Oseltamivir) of the isolates from October 1, 2019. All the influenza isolates were susceptible to Oseltamivir.

	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
Influenza A (H1N1)	15	0
Influenza A (H3N2)	0	0
Influenza B	4	0

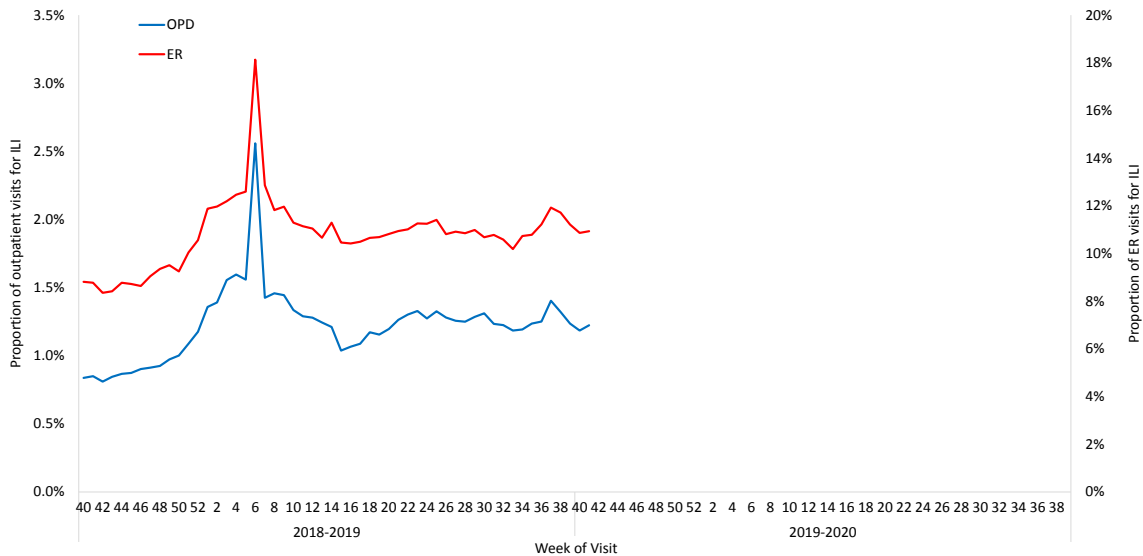
² In terms of the surveillance systems in Taiwan, please see: Jian, S. W., Chen, C. M., Lee, C. Y., & Liu, D. P. (2017). Real-Time Surveillance of Infectious Diseases: Taiwan's Experience. Health security, 15(2), 144-153.



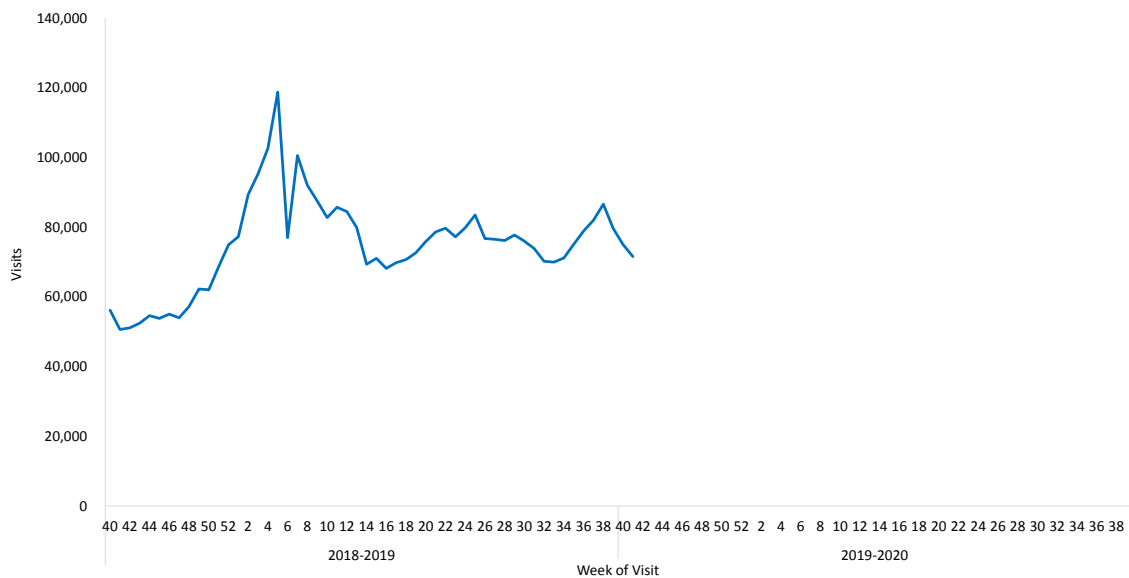
Influenza-like Illness (ILI) Surveillance

During week 41, the proportions of ILI visits were 1.22% and 10.94% for the outpatient and ER visits, respectively. The proportion of ER visits was below the national baseline of 11.5%. The total number of visits for ILI in outpatient and ER was 71,596, which was slightly lower than last week.

Proportions of outpatient and ER visits for ILI



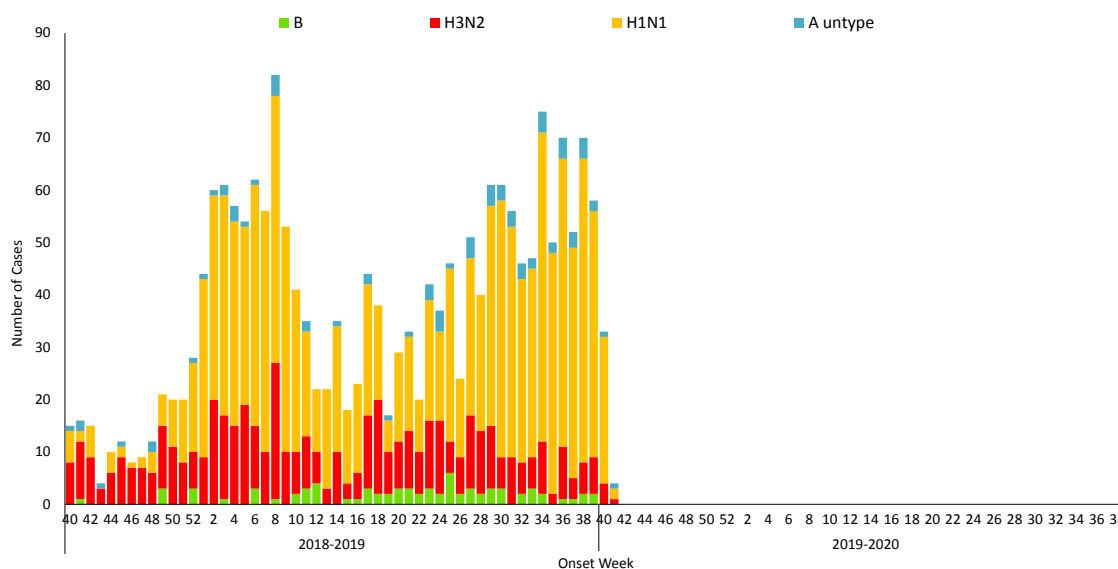
Total number of outpatient and ER visits for ILI



Severe Complicated Influenza Case

Since October 1, 2018 to September 30, 2019, a total of 1,990 severe complicated influenza cases have been confirmed³ (1,344 H1N1), including 291 fatal cases (194 H1N1). Most of these cases were adults aged 65 and older. There have been 27 severe complicated influenza cases (21 H1N1) since October 1, 2019.

Number of severe complicated influenza confirmed cases by week of onset



Number and incidence of severe complicated influenza confirmed cases and deaths by age groups
October 1, 2018 to September 30, 2019

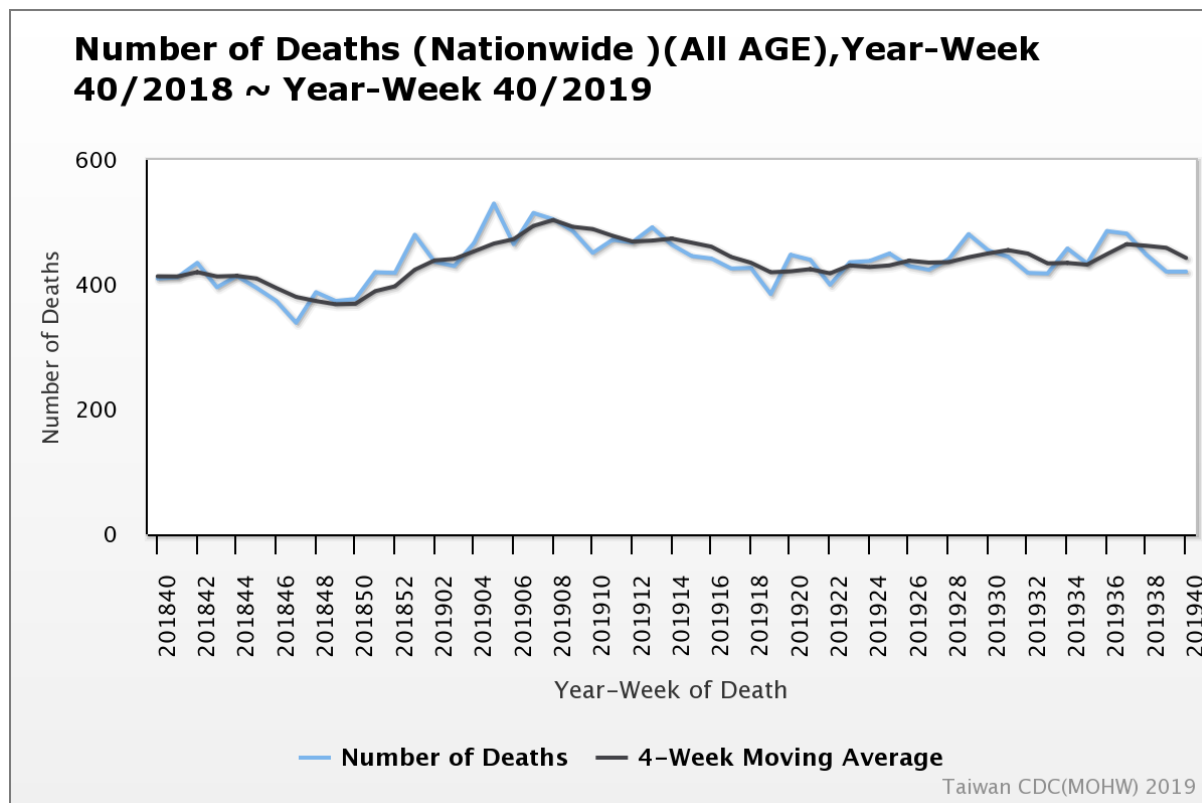
Age Group	Cases	Deaths	Cumulative incidence per 100,000 population	Cumulative mortality per 100,000 population
< 3 y	36	5	6.0	0.8
3-6 y	44	7	5.1	0.8
7-18 y	43	4	1.6	0.1
19-24 y	19	1	1.0	0.1
25-49 y	277	38	3.1	0.4
50-64 y	550	85	10.5	1.6
65 +	1,021	151	30.6	4.5
Total	1,990	291	8.4	1.2

³ 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.



Pneumonia and Influenza (P&I) Mortality Surveillance

Based on the Internet System for Death Reporting (ISDR)⁴ data, the number of deaths attributed to pneumonia and influenza (P&I) was similar to last 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/>.



⁴ 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.

