Synopsis

Influenza is in an epidemic period and shows an increasing trend recently, with A/H1N1 and A/H3N2 co-circulating in the community.

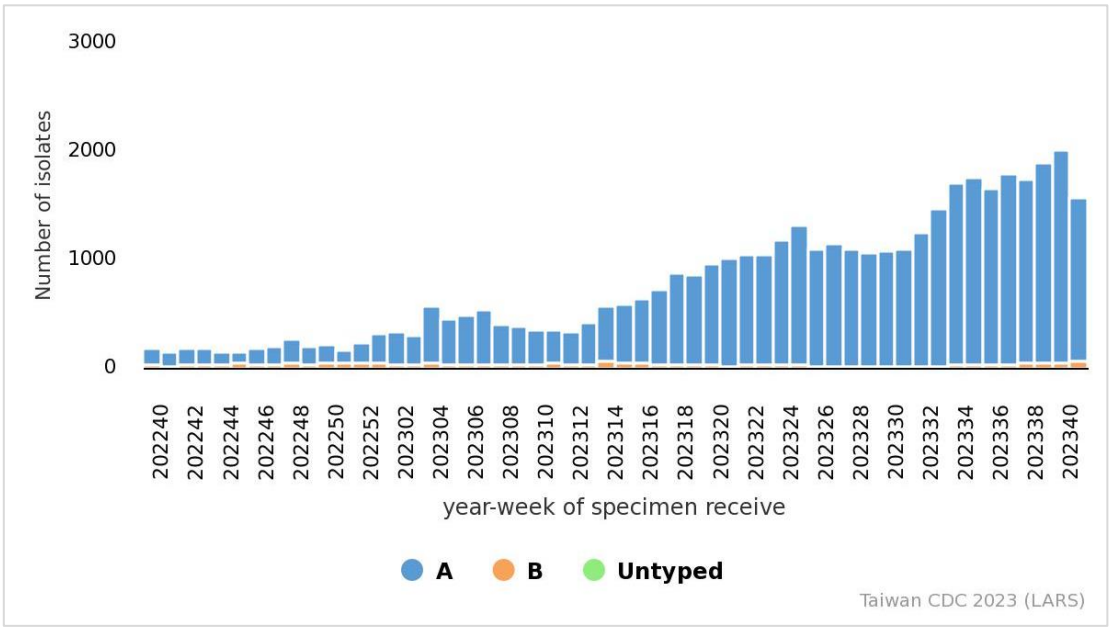
- Influenza A virus is circulating in the community. During the last four weeks, H1N1 and H3N2 were co-circulating.
- In week 41, there was a consecutive holiday, and as a result of the closure of some outpatient services, both the number of specimens collected and the number of medical visits for influenza-like illness (ILI) were affected. However, both figures have remained high recently.
- During 2023-2024 influenza season (since October 1, 2023), there have been 54 influenza cases with severe complications, of which 5 cases were fatal. During 2022-2023 influenza season (from October 1, 2022 to September 30, 2023), there were 802 influenza cases with severe complications, of which 185 cases were fatal.

Laboratory Surveillance[1]

Laboratory Automated Reporting System (LARS)

In week 41, the number of influenza-positive specimens was lower than the previous week, probably due to holidays. However, there has been an increasing trend recently. Over the last four weeks, the proportion of influenza A positive specimens was 97%.

Numbers of influenza-positive specimens from LARS

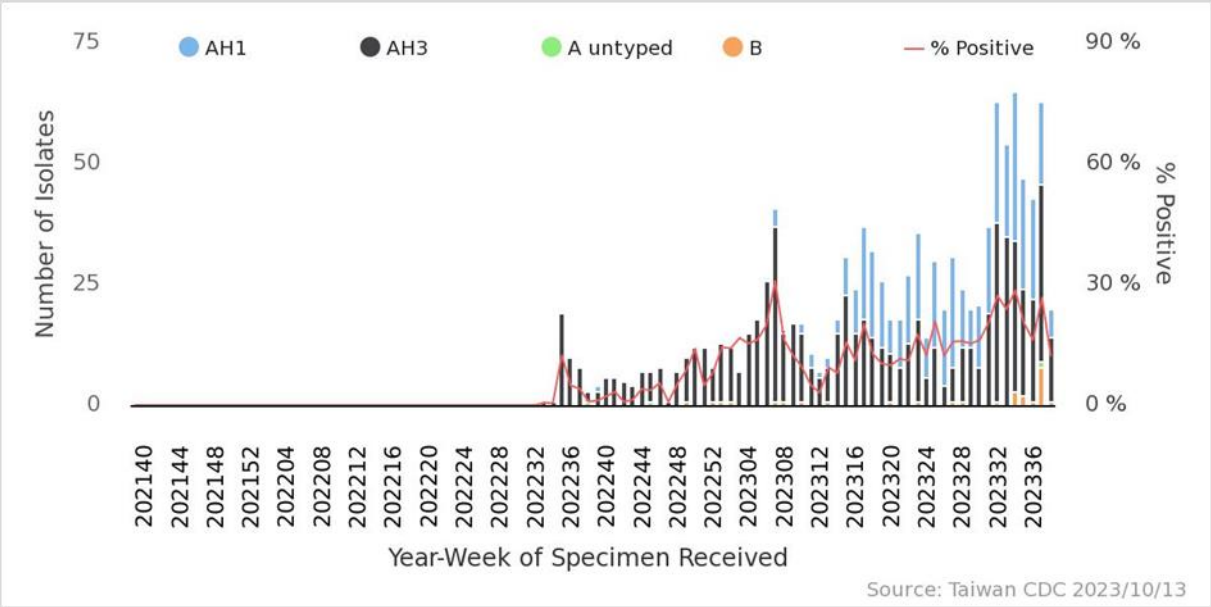


[1] In terms of the surveillance systems in Taiwan, please see: Jian, S. W., Chen, C. M., Lee, C. Y., & Liu, D. P. (2017). Real-Time Surveillance of Infectious Diseases: Taiwan's Experience. Health security, 15(2), 144-153.

Contracted Virology Laboratories Surveillance

The proportion of influenza-positive specimens of week 39 was 12.3%. During the last four weeks (week 36 to week 39), influenza A was the predominant virus type, with H3N2 and H1N1 accounting for 53.8% and 38.7%, respectively, and the proportion of influenza B (6.9%) showed a slight increase. Weekly virus data are available at https://nidss.cdc.gov.tw/.

Influenza isolates according to Contracted Virology Laboratories



Antigenicity

During the 2022-23 influenza season (from October 1, 2022 to September 30, 2023), among those influenza isolates that were antigenically characterized, 100% of the influenza A (H1N1) virus isolates matched the A (H1N1) component of the 2022-23 influenza vaccine (A/Victoria/2570/2019 (H1N1)pdm09), and 98% of influenza A (H3N2) virus isolates matched the A (H3N2) component of the 2022-23 influenza vaccine (A/Darwin/9/2021). Among influenza B isolates, 100% were B/Victoria lineage, and 100% of those isolates matched the B component of the 2022-23 influenza vaccine (B/Austria/1359417/2021).

Antiviral Resistance

The table below summarized the antiviral resistance to neuraminidase inhibitor (Oseltamivir) of the isolates during the 2022-23 influenza season.

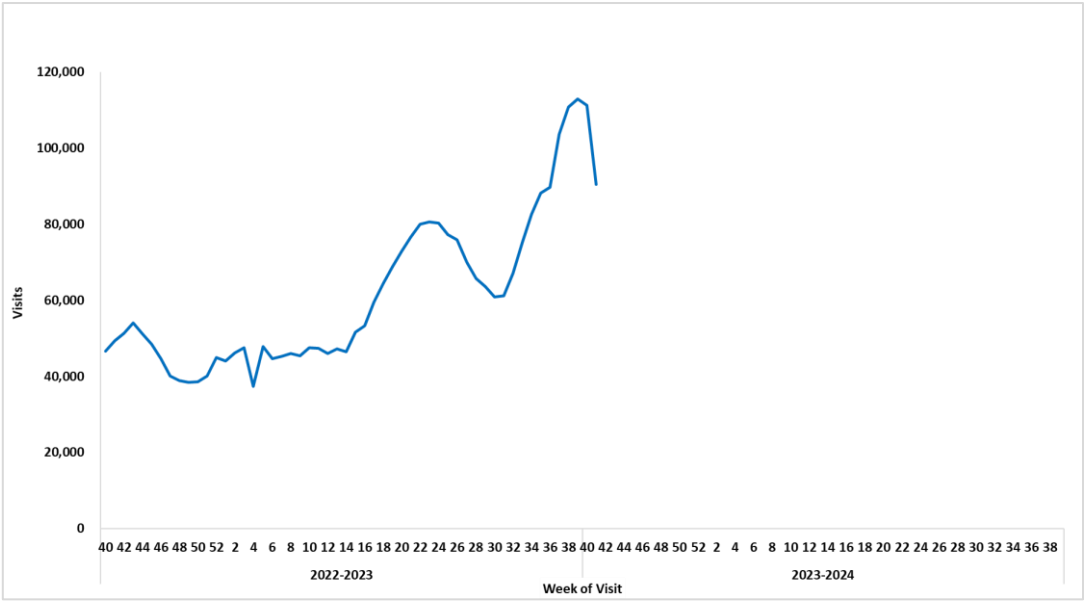
	Isolates tested (n)	Resistance Viruses, n (%)
		Oseltamivir
A (H1N1)	350	2 (0.6%)
A (H3N2)	655	0
B	20	0

Influenza-like Illness (ILI) Surveillance

During week 41, the proportions of ILI visits were 1.5% and 12.5% in outpatient and ER, respectively. The total number of visits for ILI in outpatient and ER was 90,386 in week 41, which was lower than the previous week, probably due to holidays. However, the epidemic shows an increasing trend recently.

Percentages of outpatient and ER visits for ILI

Total number of outpatient and ER visits for ILI



Influenza Case with Severe Complications

In week 41, there were 40 newly confirmed influenza cases with severe complications (23 of H1N1 and 17 of H3N2), of which 8 cases were fatal (3 of H1N1 and 5 of H3N2). During 2023-2024 influenza season, a total of 54 influenza cases with severe complications (31 of H1N1 and 23 of H3N2) were confirmed, of which 5 cases were fatal (all of H3N2). Throughout the 2022-2023 influenza season, there were 802 influenza cases with severe complications (511 of H1N1, 272 of H3N2, 10 of untyped influenza A, and 9 of influenza B), of which 185 cases were fatal (137 of H1N1, 43 of H3N2, 3 of untyped influenza A, and 2 of influenza B).

Incidence of influenza cases with severe complications and mortality rate

2023-2024 influenza season (from October 1, 2023, to October 16, 2023)

Age Group	Cases	Deaths	Cumulative incidence per 100,000 population	Cumulative mortality per 100,000 population
< 3 y	2	1	0.42	0.21
3-6 y	0	0	0.00	0.00
7-18 y	2	0	0.08	0.00
19-24 y	0	0	0.00	0.00
25-49 y	7	1	0.08	0.01
50-64 y	12	2	0.23	0.04
65 +	31	1	0.78	0.03
Total	54	5	0.23	0.02

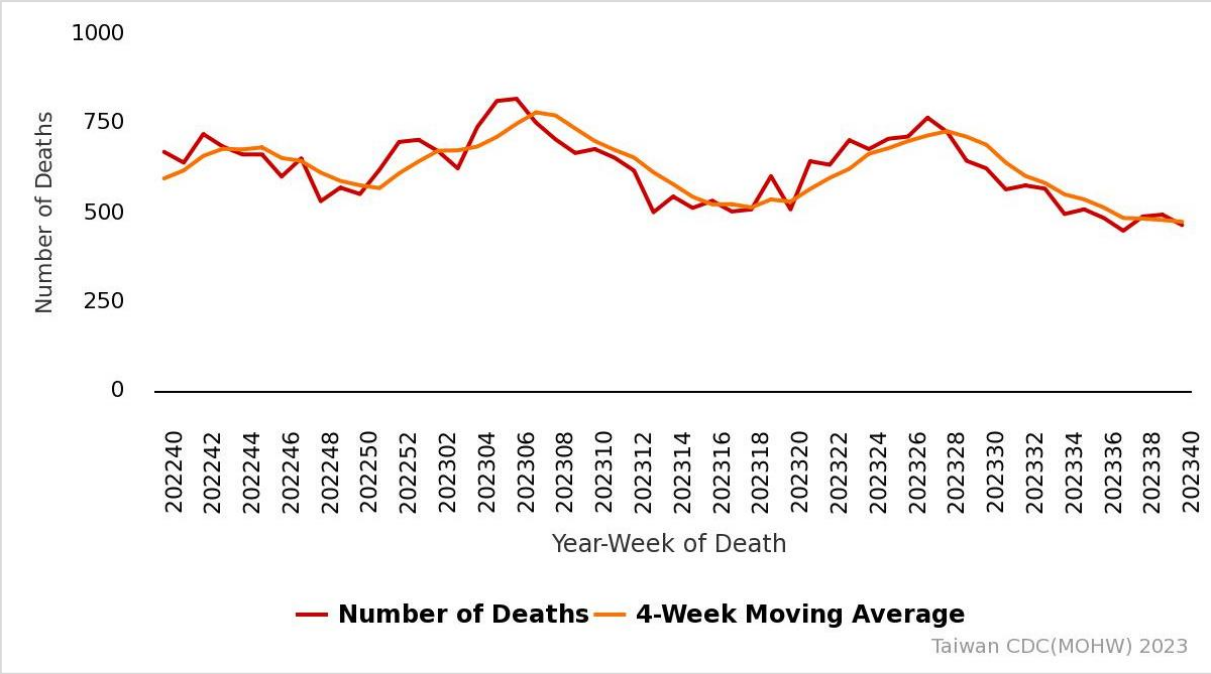
2022-2023 influenza season (from October 1, 2022, to September 30, 2023)

Age Group	Cases	Deaths	Cumulative incidence per 100,000 population	Cumulative mortality per 100,000 population
< 3 y	8	0	1.70	0.00
3-6 y	18	2	2.32	0.26
7-18 y	41	3	1.69	0.12
19-24 y	6	0	0.37	0.00
25-49 y	105	16	1.21	0.18
50-64 y	186	41	3.55	0.78
65 +	438	123	10.99	3.09
Total	802	185	3.46	0.80

Pneumonia and Influenza (P&I) Mortality Surveillance

Based on the Internet System for Death Reporting (ISDR)[2] data, the number of deaths attributed to pneumonia and influenza (P&I) was similar in recent 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 https://nidss.cdc.gov.tw/.

Weekly Number of Deaths due to Pneumonia and Influenza



[2] 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.