Influenza Surveillance Weekly Report

Week 25: 17 to 23 June 2019

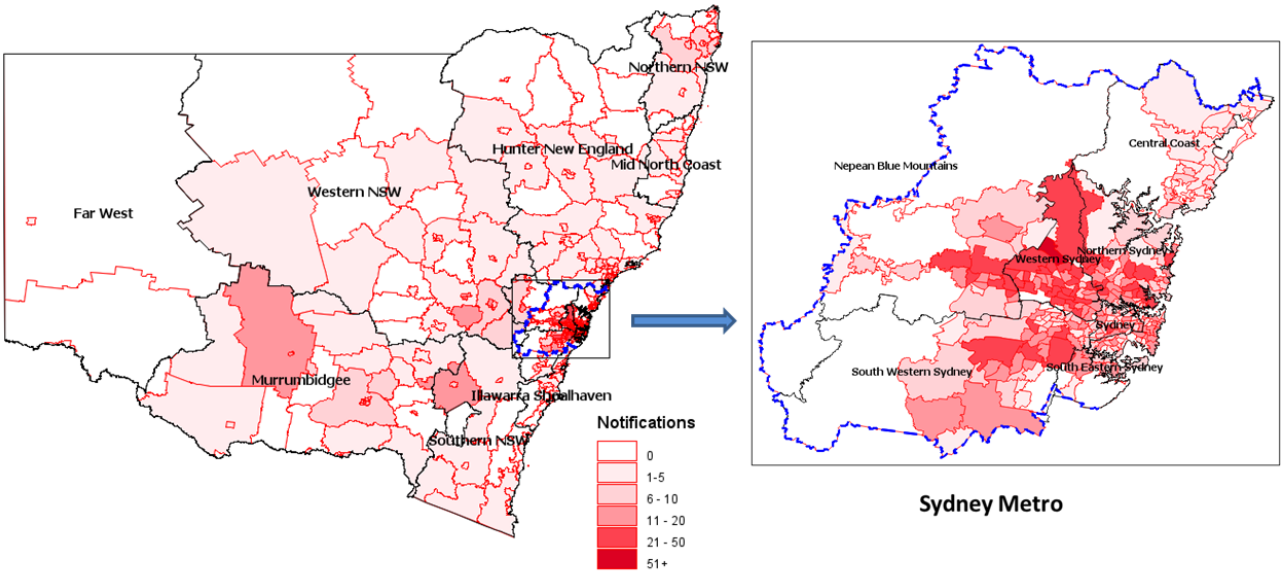
Key Points

- Influenza activity remains high across NSW but activity appears to have stabilised in some local health districts (LHDs). It is too early to tell if influenza activity has peaked.
- Respiratory presentations to NSW emergency departments decreased in some districts but remained high overall, and were within the usual range for influenza seasons overall.
- Influenza A strains predominated with influenza B strain activity remaining steady.

Activity compared to the previous week – NSW local health districts

Local Health District	Confirmed Influenza Notifications		NSW Emergency Departments (67) *All Respiratory/Fever/Unspecified infections*		
	Cases	Trend [1]	Presentations	Trend [1]	% of LHD ED presentations[2]
Central Coast	133	►	456	►	17%
Far West	9	►	49	►	12%
Hunter New England	275	▲	952	►	15%
Illawarra Shoalhaven	106	►	413	►	14%
Mid North Coast	36	►	332	▼	15%
Murrumbidgee	159	►	370	▼	18%
Nepean Blue Mountains	387	▲	336	►	17%
Northern NSW	105	►	302	►	14%
Northern Sydney	801	▲	654	▼	16%
South Eastern Sydney	553	▲	902	▼	15%
South Western Sydney	575	►	1121	►	19%
Southern NSW	77	►	291	►	17%
Sydney	337	►	523	►	16%
Western NSW	132	►	445	▼	18%
Western Sydney	932	►	10	▼	20%
New South Wales	4617	▲	8203	►	16%

Confirmed influenza by NSW local health district and local area (SA2)[3]



Summary for this reporting week:

- Hospital surveillance – ILI presentations to EDs decreased but remain high
- Laboratory surveillance – the influenza laboratory test positive rate was slightly lower (26.6%). Influenza A strains predominated with B strains remaining steady
- Community surveillance – influenza activity was steady across many LHDs but remains above the usual range for this time of year
- Death surveillance – seven influenza deaths were reported. People who die with influenza may have other underlying illnesses, and surveillance captures only a proportion of people who die from influenza
- National surveillance – high influenza activity for this time of year.

Hospital Surveillance

NSW emergency department (ED) presentations for respiratory illness

Source: PHREDSS[4]

For the week ending 23 June 2019:

- Presentations for *All respiratory illness, fever and unspecified infections* decreased this week but remain above the usual range for this time of year (Figure 1, Table 1). The proportion of these presentations to all unplanned ED presentations decreased and was 16.5 per 100 presentations, slightly lower than the previous week and within the seasonal range (Figure 2).
- Presentations were significantly elevated across all ages and in the majority of NSW local health districts (LHD) (Table 1).
- The daily index of increase for *influenza-like illness* (ILI)[5] presentations across NSW decreased this week to 53.2, down from 65.8 in the previous week. The seasonal threshold of 15 was exceeded on 21 April (Week 16), marking the start of the PHREDSS ILI season.
- ILI presentations resulting in admission decreased but remained above the usual range for this time of year (Figure 3, Table 1).
- ED presentations for pneumonia decreased while admissions for pneumonia increased; both remain above the usual range for this time of year (Table 1).
- *Pneumonia* and ILI presentations requiring admission to critical care also decreased but were above the usual range for this time of year (Figure 4, Table 1).
- ED presentations for *bronchiolitis* decreased and were within the usual range for this time of year (Table 1).

Figure 1: Total weekly counts of ED visits for *All respiratory illness, fever and unspecified infections*, all ages, 1 January – 23 June 2019 (black line), compared with the 5 previous years (coloured lines).

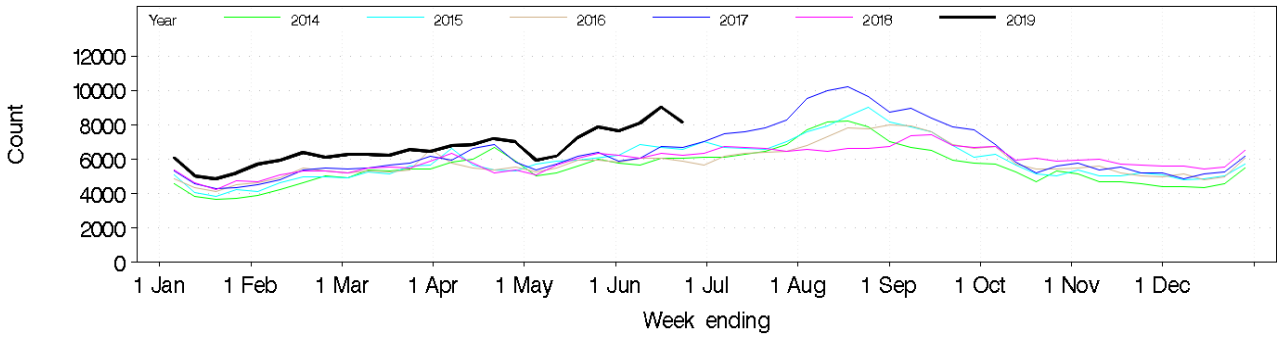


Figure 2: Total weekly counts of ED visits for *All respiratory illness, fever and unspecified infections*, all ages, as a rate per 100 ED visits, 1 January – 23 June 2019 (black line), compared with the range of season rate curves for the 5 previous years (white zone) aligned to the PHREDSS season start in 2019 (week 16).

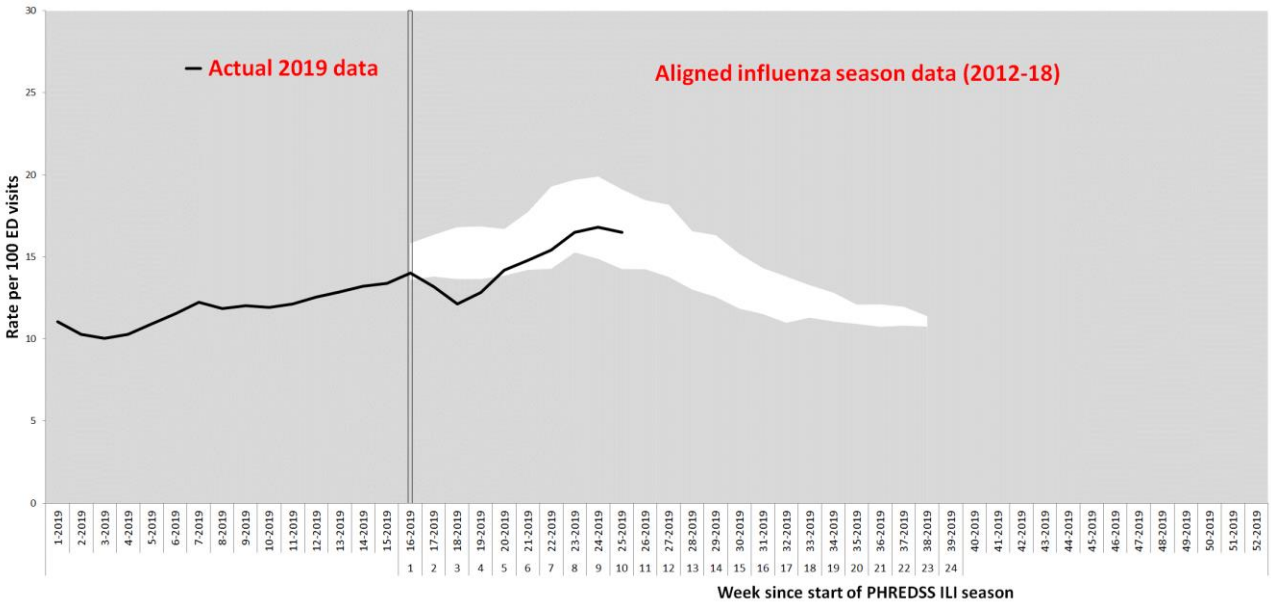


Figure 3: Total weekly counts of ED visits for *influenza-like-illness* that were admitted, all ages, 1 January – 23 June 2019 (black line), compared with the 5 previous years (coloured lines).

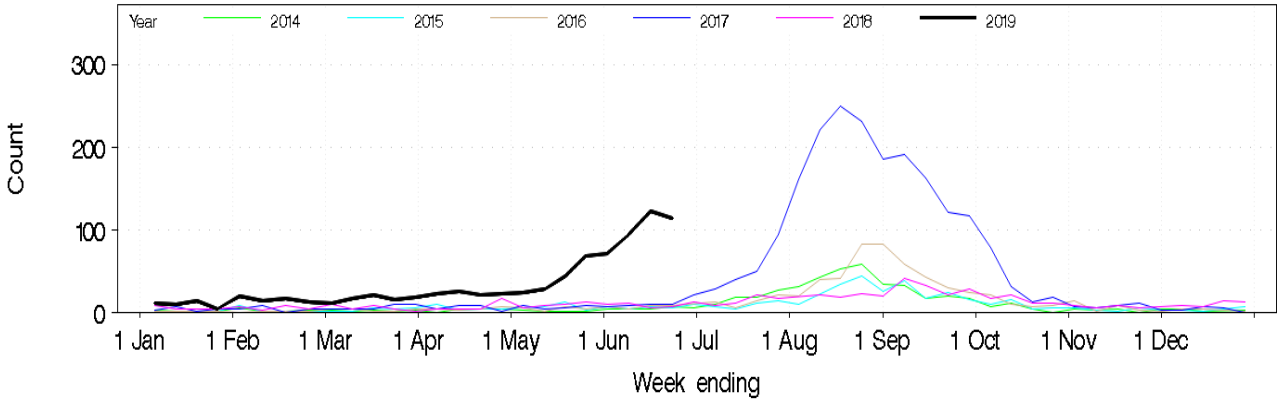


Figure 4: Total weekly counts of ED presentations for influenza-like illness and pneumonia, *that were admitted to a critical care ward*, all ages, 1 January – 23 June 2019 (black line), compared with the 5 previous years (coloured lines).

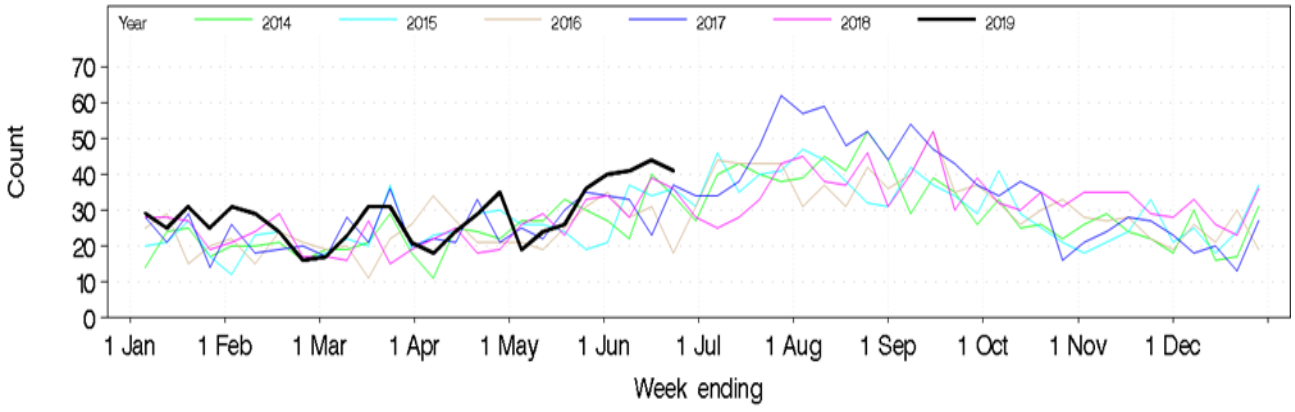


Table 1: Weekly emergency department respiratory illness summary, week ending 23 June 2019.[6]

Data source	Diagnosis or problem category	Trend since last week	Comparison with usual range	Significantly elevated age groups	Significant elevated severity indicators	Comment
ED presentations 60 NSW hospitals	Influenza-like illness (ILI)	Decreased (485)	**Above (47–61)**	**5-16 years (98) 0-4 years (60) 17-34 years (144) 65+ years (67) 35-64 years (116)**	**Ambulance arrival (72)**	The NSW daily index of increase for ILI presentations was 65.8.
	ILI admissions	Decreased (114)	**Above (6–10)**	**5-16 years (13) 65+ years (36) 17-34 years (27) 0-4 years (15) 35-64 years (23)**	**Critical Care Ward (5) Ambulance arrival (39)**	
	Pneumonia	Decreased (654)	**Above (446–612)**			
	Pneumonia admissions	Increased (472)	Above (348–437)			
	Pneumonia and ILI critical care admissions	Decreased (41)	Above (18–37)			
	Asthma	Decreased (453)	Below (463–614)			
	Bronchiolitis	Decreased (336)	Within (330–402)			Bronchiolitis is a disease of infants.
	All respiratory illness, fever and unspecified infections	Decreased (8,177)	**Above (5,858–6,658)**	**5-16 years (1,200) 17-34 years (1,096) 35-64 years (1,390) 65+ years (1,700) 0-4 years (2,791)**	**Admission (2,647) Ambulance arrival (1,710)**	
Ambulance	Breathing problems	Decreased (2,386)	**Above (1,547–2,046)**			

FluCAN (The Influenza Complications Alert Network)

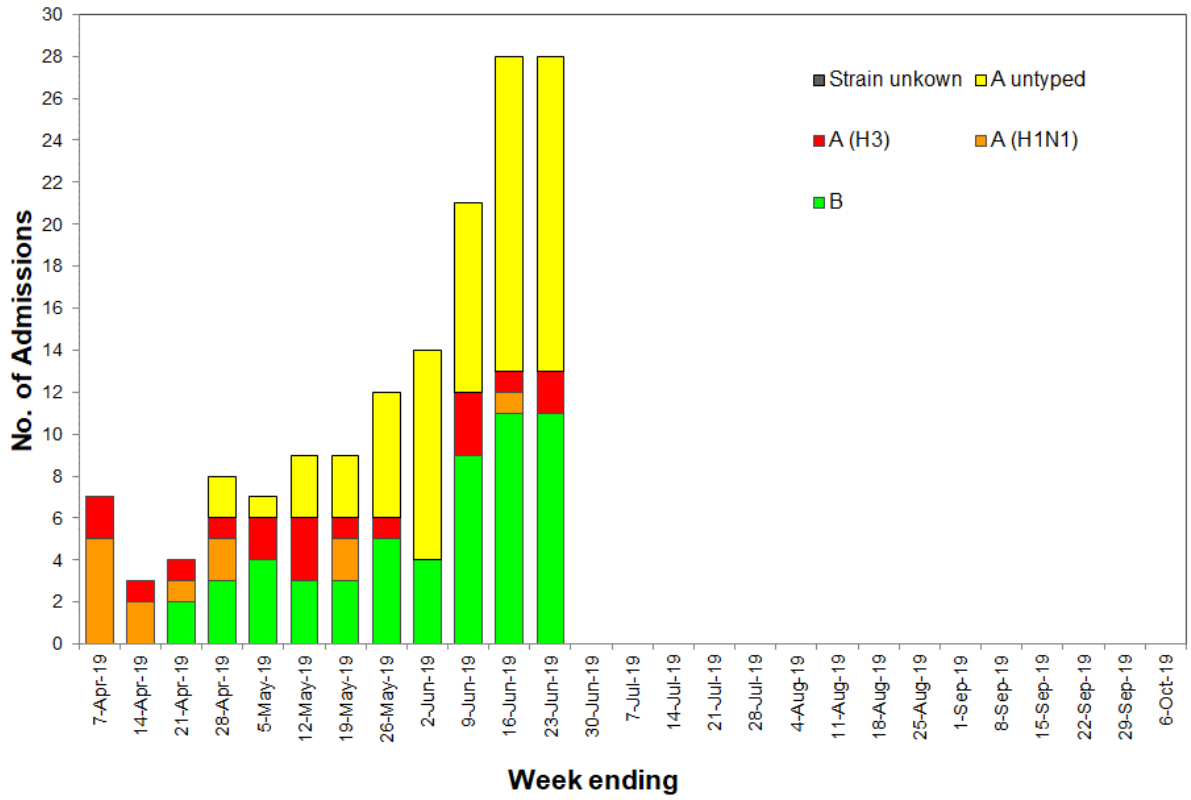
In 2009, the FluCAN surveillance system was created to be a rapid alert system for severe respiratory illness requiring hospitalisation. Data is provided on patients admitted with influenza confirmed by polymerase chain reaction (PCR) testing.

In NSW, three hospitals participate in providing weekly FluCAN data: Westmead Hospital, John Hunter Hospital and the Children's Hospital at Westmead. Westmead Hospital data is not available so far for 2019.

During week 25 there were 28 influenza admissions to NSW sentinel hospitals (Figure 6).

Since 1 April 2019, there have been 150 hospital admissions reported for influenza; 95 due to influenza A (including 13 A(H1N1) and 18 A(H3)) and 55 due to influenza B (Figure 6). Of these admissions, 143 were paediatric cases (<16 years of age) and seven were in adults. Two children have been admitted to a critical care ward.

Figure 6: FluCAN – Confirmed influenza hospital admissions in NSW, 1 April – 23 June, 2019*.



Note: * Admissions data are subject to change as new information is received. Westmead Hospital data is not available so far for 2019.

Laboratory Surveillance

For the week ending 23 June 2019 the number and proportion of respiratory specimens reported by NSW sentinel laboratories [7] which tested positive for influenza A or influenza B decreased slightly but remained higher than expected for this time of year (Table 2, Figure 7). It is too early to tell if the season has reached the peak. However, influenza detections were similar to equivalent weeks of the influenza season in previous years.

This comes on the background of increased numbers of respiratory virus tests conducted by these laboratories compared to the same time last year. In this reporting week (week 25), there were 21,117 respiratory tests, 69% more than for the same week in 2018 (6,758 tests). For the year up to week 25, there have been 235,630 respiratory virus tests, 56% more than for the same period in 2018 (104,277 tests).

Overall, 26.6% of tests for respiratory viruses were positive for influenza (Figure 7), lower than the previous week (27.8%). Influenza A strains remained more common than B strains with detections of both types remaining steady (Table 2, Figures 7-8).

Further characterisation was available for only 3.4% of A strains, but this suggests that the influenza A(H3N2) strain was the predominant influenza A strain this week.

Information on the lineage of influenza B strains is even less commonly available. However, both B/Yamagata and B/Victoria strains have been identified this year and there are indications that B/Victoria is becoming the predominant B strain in the community.

Influenza was the most common respiratory virus identified, followed by rhinovirus and respiratory syncytial virus (RSV) (Table 2).

Table 2: Summary of testing for influenza and other respiratory viruses at NSW laboratories, 1 January to 23 June 2019.

Month ending	Total Tests	TEST RESULTS															
		Influenza A								Influenza B		Adeno	Parainf 1, 2 & 3	RSV	Rhino	HMPV **	Entero
		Total		H3N2		H1N1 pdm09		A (Not typed)		Total							
		Total	(%)	Total	(%A)	Total	(%A)	Total	(%A)	Total	(%)	Total	Total	Total	Total	Total	Total
3/02/2019*	23496	2055	(8.7%)	111	(5.4%)	161	(7.8%)	1777	(86.5%)	129	(0.5%)	730	902	920	3171	270	485
3/03/2019*	25351	2232	(8.8%)	144	(6.5%)	134	(6.0%)	1954	(87.5%)	145	(0.6%)	710	926	1448	5053	162	693
31/03/2019	31863	2664	(8.4%)	134	(5.0%)	202	(7.6%)	2328	(87.4%)	302	(0.9%)	967	1408	2583	5866	172	843
28/04/2019	34720	2957	(8.5%)	144	(4.9%)	158	(5.3%)	2652	(89.7%)	491	(1.4%)	1003	1422	3799	7148	208	1109
02/06/2019*	61942	6303	(10.2%)	265	(4.2%)	119	(1.9%)	5919	(93.9%)	2270	(3.7%)	1528	1337	4695	11729	312	1206
Week ending																	
9/06/2019	18146	2938	(16.2%)	108	(3.7%)	23	(0.8%)	2807	(95.5%)	1158	(6.4%)	359	279	983	3325	57	177
16/06/2019	18577	3582	(19.3%)	113	(3.2%)	16	(0.4%)	3453	(96.4%)	1583	(8.5%)	260	207	965	2815	40	158
23/06/2019	21117	3982	(18.9%)	136	(3.4%)	14	(0.4%)	3832	(96.2%)	1661	(7.9%)	313	257	1073	3148	50	163

Notes: * Five-week reporting period. ** Human metapneumovirus

Figure 7: Weekly influenza positive test results by type and sub-type reported by NSW sentinel laboratories, 1 January to 23 June 2019.

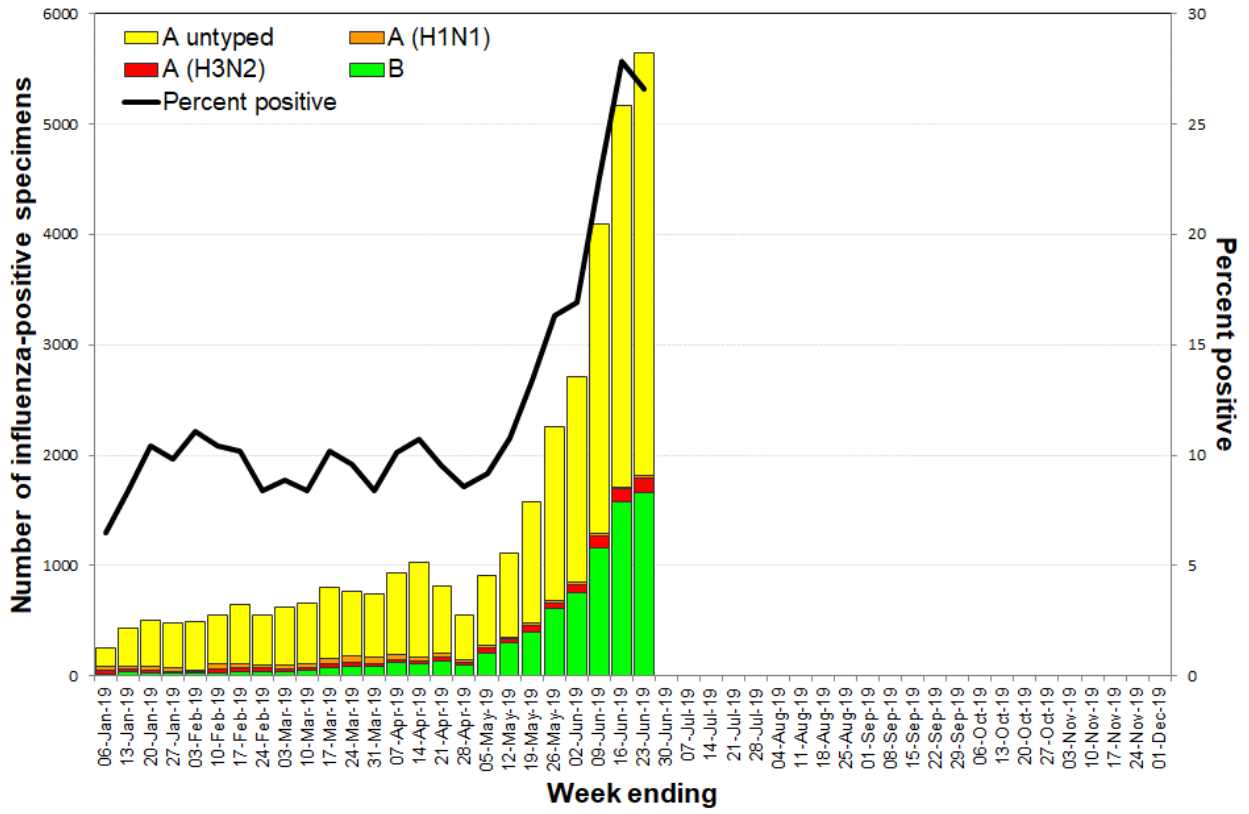
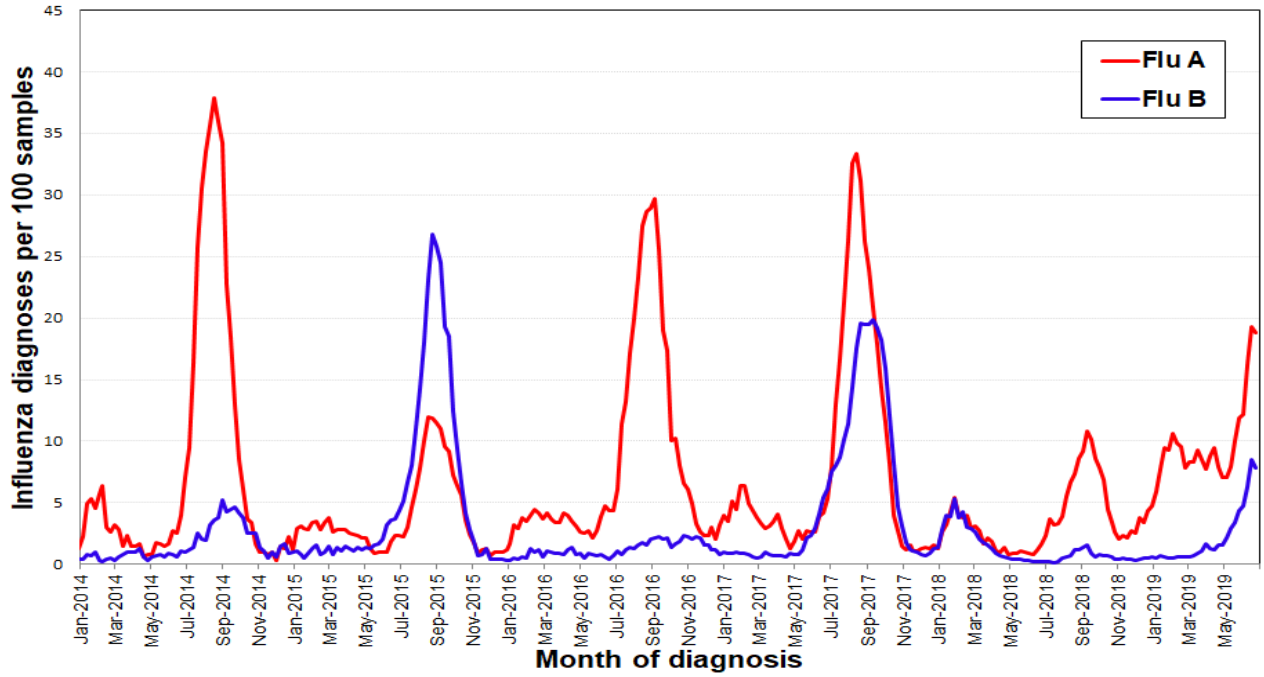


Figure 8: Percentage of laboratory tests positive for influenza A and influenza B by week, 1 January 2014 to 23 June 2019, New South Wales.



Community Surveillance

Influenza notifications by Local Health District (LHD)

In the week ending 23 June there were 4617 notifications of influenza confirmed by polymerase chain reaction (PCR) testing, higher than the 4101 (revised) notifications reported in the previous week. Influenza notification rates were relatively stable across most of the state, with the exception of Northern Sydney, South Eastern Sydney, Hunter New England and Nepean Blue Mountains LHDs where notifications were notably increased (Table 3).

Table 3: Weekly notifications of laboratory-confirmed influenza by local health district.

Local Health District	Week ending 23 Jun 2019		Week ending 16 Jun 2019	
	Number of notifications	Rate per 100 000 population	Number of notifications	Rate per 100 000 population
Central Coast	133	38.17	145	41.61
Far West	9	29.94	7	23.29
Hunter New England	275	29.18	159	16.87
Illawarra Shoalhaven	106	25.48	95	22.83
Mid North Coast	36	16.12	24	10.75
Murrumbidgee	159	53.56	142	47.83
Nepean Blue Mountains	387	100.47	317	82.3
Northern NSW	105	34.21	166	54.09
Northern Sydney	801	84.72	648	68.54
South Eastern Sydney	553	58.34	428	45.16
South Western Sydney	575	56.37	555	54.41
Southern NSW	77	35.96	68	31.76
Sydney	337	49.08	292	42.52
Western NSW	132	46.54	162	57.12
Western Sydney	932	90.73	893	86.93

Notes: * All data are preliminary and may change as more notifications are received. For further information see the influenza notifications data page.

Influenza outbreaks in institutions

There were 14 influenza outbreaks in institutions reported this week. Twelve were in residential care facilities, one was in a hospital setting and one was in a group home. All but one were due to influenza A.

In the year to date there have been 106 laboratory confirmed influenza outbreaks in institutions reported to NSW public health units, including 87 in residential care facilities (Table 4, Figure 9). Ninety-seven of the outbreaks have been due to influenza A, seven were due to influenza B and two involved both A and B strains.

In the 87 influenza outbreaks affecting residential care facilities, at least 727 residents were reported to have had ILI symptoms and 89 required hospitalisation. Overall, there have been 18 deaths[1] in residents reported which were linked to these outbreaks, all of whom were noted to have other significant co-morbidities.

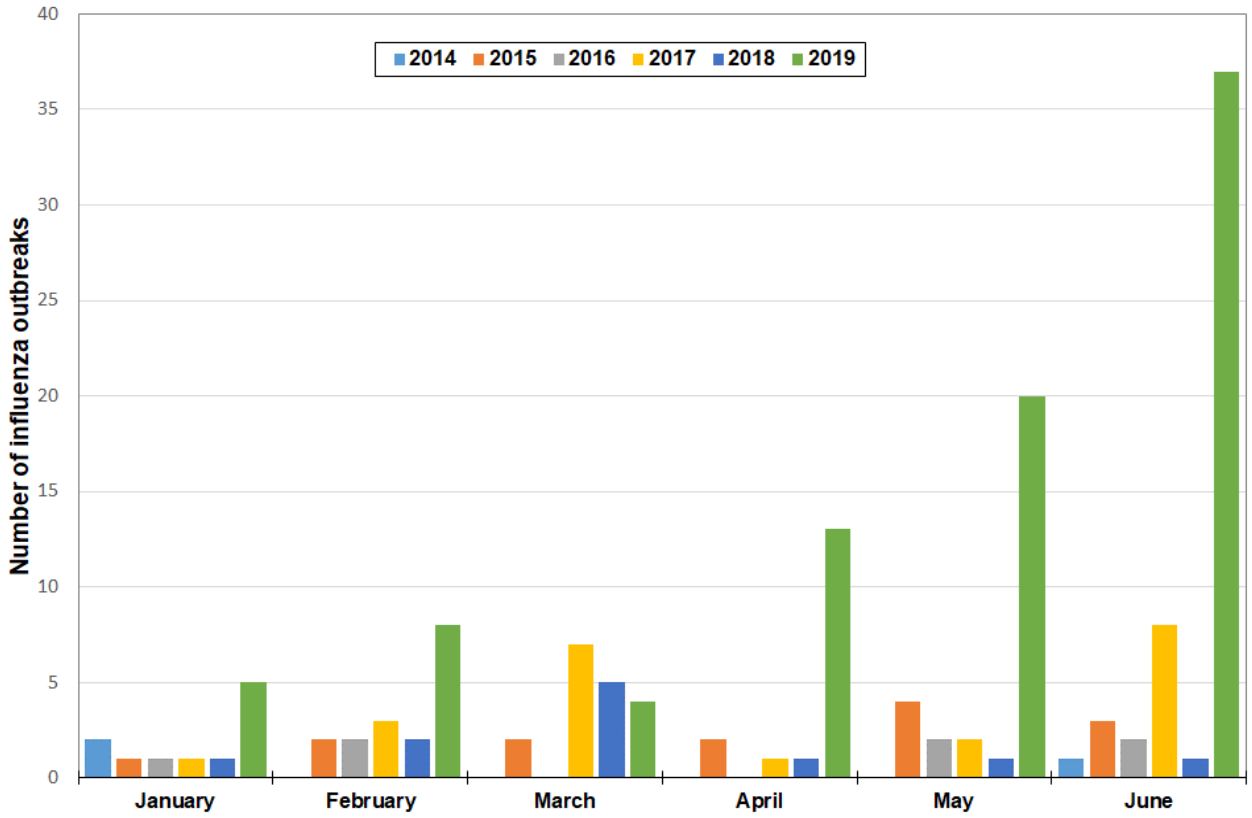
NSW public health units advise institutions on how to manage their influenza outbreaks. NSW Health also provides influenza antiviral treatment to help control outbreaks when requested and appropriate. This week NSW Health provided oseltamivir to two hospitals (18 courses) and one residential care facility (140 courses), and have provided 1842 courses so far this year.

Table 4: Reported influenza outbreaks in NSW residential care facilities, January 2014 to 23 June 2019.

Year	2014	2015	2016	2017	2018	2019*
Number of outbreaks	121	103	252	543	42	87

Note: * Year to date.

Figure 9: Reported influenza outbreaks in NSW residential care facilities by month, 2014 to 23 June 2019.



[1] Deaths associated with institutional outbreaks are also included in the Deaths surveillance section if laboratory-confirmed.

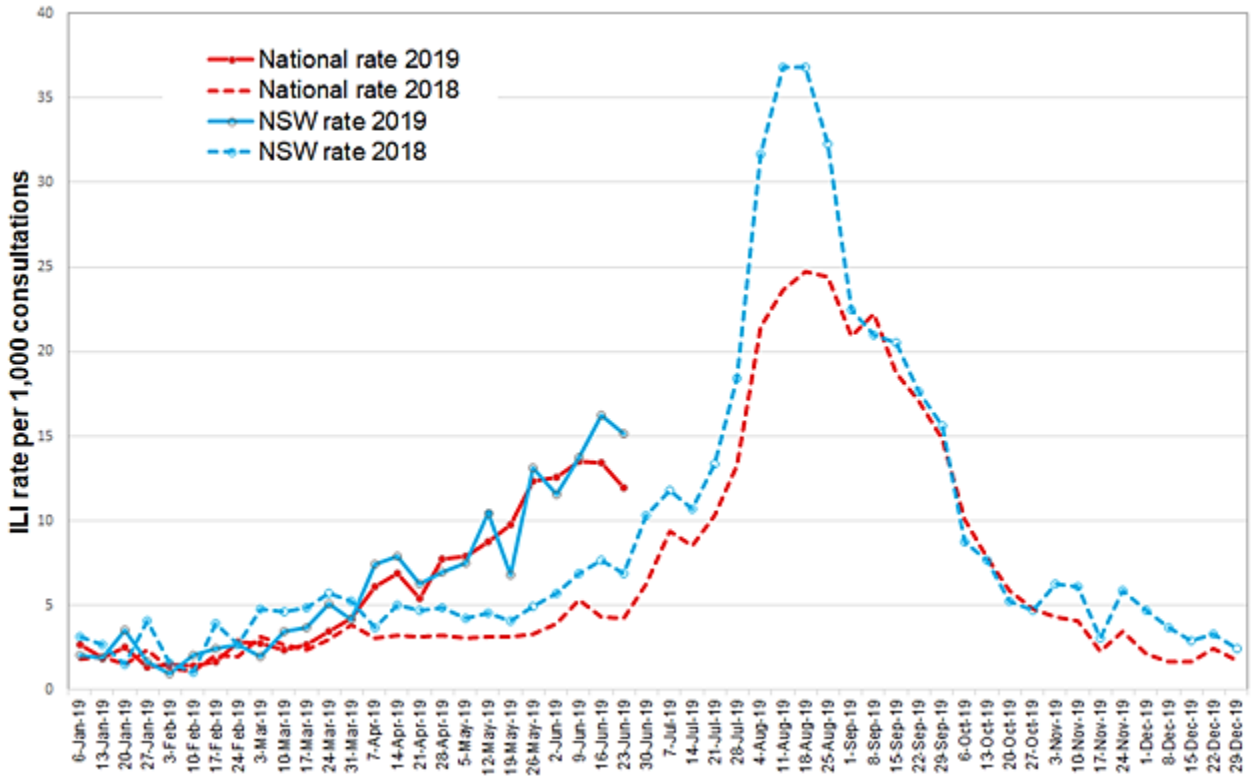
The Australian Sentinel Practices Research Network (ASPREN)

ASPREN is a network of sentinel general practitioners (GPs) run through the Royal Australian College of General Practitioners and the University of Adelaide which has collected de-identified information on influenza-like illness (ILI) and other conditions seen in general practice since 1991.

Participating GPs in the program report on the proportion of patients presenting with an ILI. The number of GPs participating on a weekly basis may vary.

In week 25 there were ASPREN reports received from 73 NSW GPs. The reported consultation rate for ILI per 1000 consultations was decreased at 15.2 (Figure 10), lower than the previous week (16.3, revised) but higher than usual for this time of year. It was also higher than the National level but similar to equivalent weeks of the influenza season in previous years. For further information see the ASPREN website.

Figure 10: ASPREN – NSW and National GP ILI rates per 1000 consultations – 2019 to the week ending 23 June, compared to 2018 weekly rates.



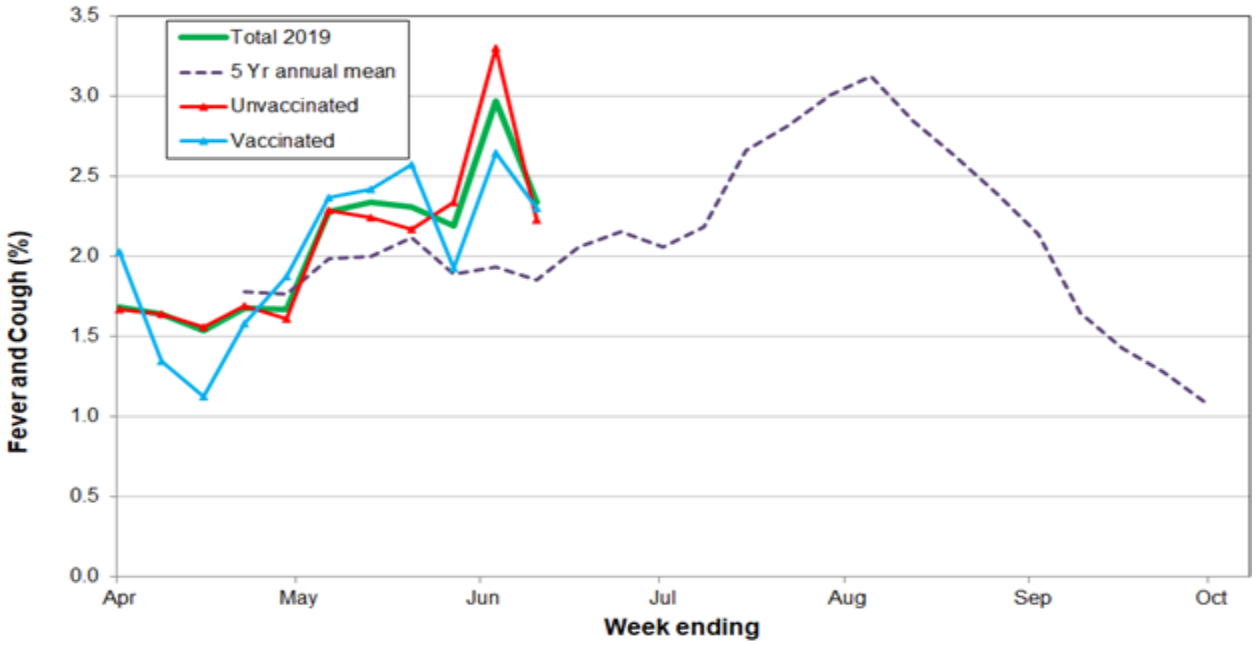
FluTracking.net

FluTracking.net is an online health surveillance system to detect epidemics of influenza. It is a project of the University of Newcastle, the Hunter New England Local Health District and the Hunter Medical Research Institute. Participants complete a simple online weekly survey which is used to generate data on the rate of ILI symptoms in communities.

In week 25 FluTracking received reports for 13,512 people in NSW with the following results:

- 2.3% of respondents reported fever and cough, notably lower than the previous week (3.0%, revised) but higher than the five year annual mean (2.0%) (Figure 11).
- Among respondents who reported being vaccinated for influenza in 2019, 2.3% reported fever and cough similar to the 2.2% rate reported among unvaccinated respondents (Figure 11).
- 1.5% of respondents reported fever, cough and absence from normal duties, lower than the previous week (2.0%, revised).

Figure 11: FluTracking – Percent of NSW participants reporting fever and cough by vaccination status and week, 2019 to the week ending 23 June, 2019 compared to the 5 year mean (Age Standardised).



Notes: Participants are not considered vaccinated until at least two weeks has elapsed since their recorded time of vaccination.

For further information on the project and how to participate, please see the FluTracking website.

Deaths surveillance

Coded cause of death data is not timely enough for seasonal influenza surveillance. To provide rapid indicators of influenza and pneumonia mortality, death registrations from the NSW Registry of Births, Deaths and Marriages are used. A keyword search is applied, across any text field of the Medical Certificate Cause of Death (MCCD), to identify death registrations that mention influenza or pneumonia. The MCCD text includes conditions directly leading to the death, antecedent causes and other significant conditions contributing to the death. Two indicators are then reported:

1. Pneumonia and influenza mortality to provide a more complete picture of the impact of influenza, and
2. Influenza deaths with laboratory confirmation for a more specific measure.

NSW Health monitors the number of people whose deaths certificates report influenza and pneumonia, however the proportion of deaths accurately identified as being due to influenza likely varies over time as influenza testing has become more readily available, and so trends need to be interpreted with caution.

Pneumonia and influenza mortality

Due to delays in the death registration process, death data for recent weeks are underestimated. For this reason, pneumonia and influenza mortality data from the three most recent weeks are not included.

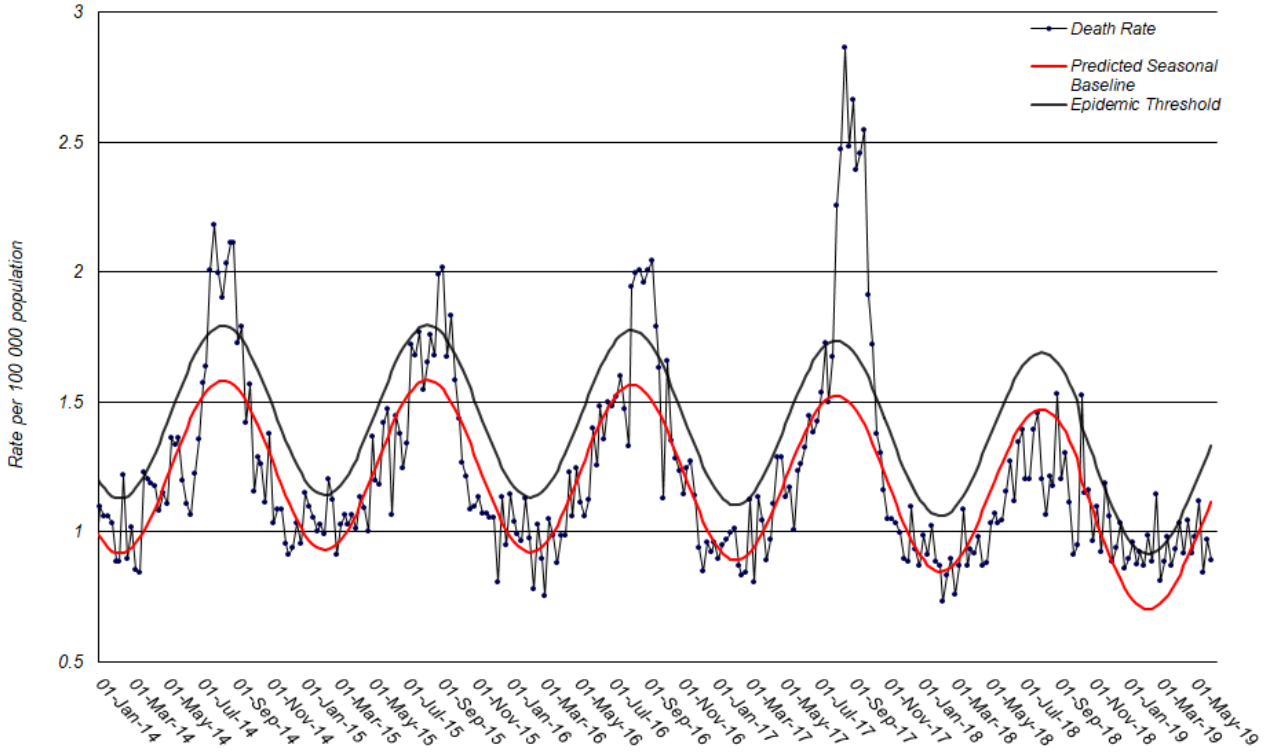
For the week ending 31 May 2019, the rate of deaths attributed to *pneumonia* or *influenza* was 0.89 per 100 000 NSW population, below the epidemic threshold of 1.33 per 100 000 population (Figure 13).

For the year up to 24 May 2019, *pneumonia* or *influenza* deaths have remained mostly below the epidemic threshold with the exception of a short period late in February and mid-March where the

death rate rose above the epidemic threshold. However, the death rate has remained above the predicted seasonal baseline throughout summer and autumn (Figure 13).

Among the 21,291 death registrations in 2019, 65 (0.30%) mentioned influenza. An additional 1625 (7.63%) death registrations mentioned pneumonia.

Figure 13: Rate of death registrations classified as *influenza or pneumonia* per 100 000 NSW population, 2014 – 31 May, 2019



Source: NSW Registry of Births, Deaths and Marriages.

* Notes on interpreting death data:

(a) Deaths registration data is routinely reviewed for deaths mentioning pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

(b) The predicted seasonal baseline estimates the predicted rate of pneumonia or influenza deaths in the absence of influenza epidemics. If deaths exceed the epidemic threshold, then it may be an indication that influenza is beginning to circulate widely and may be more severe.

(c) The number of deaths mentioning “Pneumonia or influenza” is reported as a rate per 100,000 NSW population (rather than a rate per total deaths reported).

(d) Deaths referred to a coroner during the reporting period may not be available for analysis, particularly deaths in younger people which are more likely to require a coronial inquest. Influenza-related deaths in younger people may be under-represented in these data as a result.

(e) The interval between death and death data availability is usually at least 14 days, and so these data are at least two weeks behind reports from emergency departments and laboratories and subject to change.

Influenza deaths with laboratory confirmation

For the year to 23 June 2019, there have been 57 influenza deaths identified using death registrations with laboratory confirmation. (Table 5). This includes seven people who died in this reporting week. These deaths were in people aged 60 years or older.

Data are subject to change as new information is received.

Table 5: Laboratory-confirmed influenza deaths by age-group and year, NSW, 2017 to 23 June 2019 (by date of death).

Age-group	Year		
	2017	**2018**	**2019***
0-4 years	2	2	0
5-19 years	4	0	0
20-64 years	44	6	10
65+ years	509	32	47
Total	**559**	**40**	**57**

Notes: *Year to date.

Government-funded vaccine distribution

NSW Health commenced distributing National Immunisation Program and NSW Government Program influenza vaccines on 1 April 2019. National Immunisation Program (NIP) vaccines include vaccines for people aged 65 years and over, pregnant women, Aboriginal people aged 6 months and over, and people 6 months and over with medical conditions pre-disposing them to severe influenza.

NSW Government Program vaccines are for health care workers in NSW Health facilities and all children from 6 months to under 5 years of age not covered under the NIP.

As of 23 June, 2.40 million doses had been distributed to general practitioners, Aboriginal medical services, hospitals, aged care facilities, and childhood vaccination clinics across NSW.

For more information about the 2019 Influenza Vaccination Program see: https://www.health.nsw.gov.au/immunisation/Pages/flu.aspx .

National and International Influenza Surveillance

National Influenza Surveillance

The fortnightly *Australian Surveillance Report No.4,* with data up to 16 June 2019, noted:

- **Activity** – Currently, influenza and influenza-like illness (ILI) activity are high for this time of year compared to previous years. At the national level, notifications of laboratory-confirmed influenza have increased in the past fortnight, however, some jurisdictions have experienced a notable decrease in activity.
- **Severity** – Clinical severity for the season to date, as measured through the proportion of patients admitted directly to ICU, and deaths attributed to influenza, is low.
- **Impact** – There is no indication of the potential impact on society of the 2019 season at this time.
- **Virology** – In the year to date and in the past fortnight, the majority of confirmed influenza cases reported nationally were influenza A (86%). However, the proportion of influenza B nationally has been increasing each week since early May.

For further information see the Australian Influenza Surveillance Reports.

Global Influenza Update

The latest WHO global update on 10 June 2019 provides data up to 26 May 2019. In the temperate zones of the southern hemisphere, influenza detections increased overall. In summary:

- In the temperate zones of the southern hemisphere, influenza detections increased overall. The 2019 influenza season appeared to have started earlier than previous years in Australia, Chile, South Africa and New Zealand.
- Influenza A(H3N2) viruses predominated in Oceania and South Africa.
- Influenza A(H1N1)pdm09 viruses predominated in South America.
- In Southern Asia and South East Asia, influenza activity was low overall, with exception of Bangladesh and Cambodia, respectively.
- In the Caribbean, Central American countries, and the tropical countries of South America, influenza and RSV activity were low in general.
- In Eastern, West and Middle Africa, influenza activity was low across reporting countries.
- In the temperate zone of the northern hemisphere influenza activity returned to inter-seasonal level in most countries.

Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Follow the link for the WHO influenza surveillance reports.

Influenza at the human-animal interface

WHO publishes regular updated risk assessments of human infections with avian and other non-seasonal influenza viruses at Influenza at the human-animal interface, with the most recent report published on 9 April 2019. These reports provide information on human cases of infection with non-seasonal influenza viruses, such as H5 and H7 clade viruses, and outbreaks among animals.

Since the previous update, new human infections with avian influenza A(H7N9) and A(H9N2) viruses were reported. The overall risk assessment for these viruses remains unchanged. Other sources of information on avian influenza and the risk of human infection include:

- US CDC Avian influenza
- European CDC (ECDC) Avian influenza
- Public Health Agency of Canada Avian influenza H7N9.

Composition of influenza vaccines in 2019

WHO influenza vaccine strain recommendations – Southern Hemisphere, 2019

The WHO recommendations for the composition of trivalent vaccines included changes in the influenza A(H3N2) component and the influenza B (Victoria lineage), as follows:

- an A/Michigan/45/2015 (H1N1)pdm09-like virus
- an A/Switzerland/8060/2017 (H3N2)-like virus
- a B/Colorado/06/2017-like virus (B/Victoria lineage)

It was recommended that quadrivalent vaccines also contain a second B component, a B/Phuket/3073/2013-like virus (B/Yamagata lineage).

Australian influenza vaccine strain recommendations – 2019 influenza season

The Australian Influenza Vaccine Committee (AIVC) recommendation for the Australian trivalent vaccine includes a B/Yamagata lineage virus (a B/Phuket/3073/2013-like virus), rather than a B/Victoria lineage virus, based on circulating influenza B viruses at the time of the

recommendation. The Therapeutic Goods Administration (TGA) accepted the AIVC recommendations for 2019.

Information on NSW seasonal influenza vaccination activities in 2019, including free vaccine for all children aged 6 months to less than 5 years can be found at: https://www.health.nsw.gov.au/immunisation/Pages/flu.aspx .

WHO influenza vaccine strain recommendations – Northern Hemisphere, 2019-20

The WHO Consultation on the Composition of Influenza Vaccines for Use in the 2019-20 Northern Hemisphere Influenza Season was held in Beijing on 18-20 February 2019.

From this meeting it was recommended that egg based quadrivalent vaccines for use in the 2019-2020 northern hemisphere influenza season contain the following:

- an A/Brisbane/02/2018 (H1N1)pdm09-like virus;
- an A/Kansas/14/2017 (H3N2)-like virus;
- a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage); and
- a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

It was also recommended that the influenza B virus component of trivalent vaccines for use in the 2019-2020 northern hemisphere influenza season should be a B/Colorado/06/2017-like virus of the B/Victoria/2/87-lineage.

In light of recent changes in the proportions of genetically and antigenically diverse A(H3N2) viruses, the recommendation for the A(H3N2) component was announced on 21 March. More details about the most recent influenza vaccine recommendations can be found at: http://www.who.int/influenza/vaccines/virus/en/ .

Report Notes:

[1] Notes for trend comparisons with the previous week:

		Trend in Cases	Trend in Presentations
►	Stable	<10% change or <20 cases change	<10% change or <40 presentations change
▼	Decrease	10% or greater decrease	10% or greater decrease
▲	Increase	10-20% increase	10-20% increase
▲	Higher increase	>20% increase	>20% increase

[2] *All Respiratory, fever and unspecified infections* presentations as a percentage of all unplanned emergency department presentations in participating hospitals in the local health district.

[3] NSW Local Health Districts and SA2: Influenza notification maps use NSW Local Health District Boundaries and Australian Bureau of Statistics (ABS) statistical area level 2 (SA2) of place of residence of cases are shown. Note that place of residence is used as a surrogate for place of acquisition for cases; the infection may have been acquired while the person was in another area.

[4] NSW Health Public Health Rapid, Emergency Disease and Syndromic Surveillance system, CEE, NSW Ministry of Health. Comparisons are made with data for the preceding 5 years. Includes unplanned presentations to 67 NSW emergency departments, which accounted for 83% of all NSW ED presentations in the 2016/2017 financial year. The coverage is lower in rural EDs. Data is continuously updated.

[5] The ED 'ILI' syndrome includes provisional diagnoses selected by a clinician of 'influenza-like illness' or 'influenza' (including 'pneumonia with influenza'), avian and other new influenza viruses.

[6] Notes: [i] The usual range is the range of weekly counts for the same week in the previous five years for ED presentations and for ambulance Triple (000) calls.

Key for trend since last week: Non-bold and green=decreased or steady; Non-bold and orange=increased
Key for comparison with usual range: Non-bold and green =usual range; Non-bold and orange=above usual range, but not significantly above five-year mean; Bold and yellow=within usual range, but significantly above five-year mean; Bold and red = above the usual range and significantly above five-year mean (ED).
Counts are statistically significant (shown in bold) if they are at least five standard deviations above the five-year mean. The 'daily index of increase' is statistically significant above a threshold of 15. LHD = Local Health District.

[ii] Severity indicators include: Admission or admission to a critical care ward (CCW); Triage category 1; Ambulance arrival and Death in ED.

[7] Preliminary laboratory data is provided by participating sentinel laboratories on a weekly basis and are subject to change. Point-of-care test results have been included since August 2012 but serological diagnoses are not included.
Participating sentinel laboratories: Pathology North (Hunter, Royal North Shore Hospital), Pathology West (Nepean, Westmead), South Eastern Area Laboratory Services, Sydney South West Pathology Service (Liverpool, Royal Prince Alfred Hospital), The Children's Hospital at Westmead, Australian Clinical Labs, Douglas Hanly Moir Pathology, Laverty Pathology, Medlab, SydPath, VDRLab (up to 2017), Austech, 4cyte.