

# Influenza Surveillance Weekly Report

Week 33: 12 to 18 August 2019

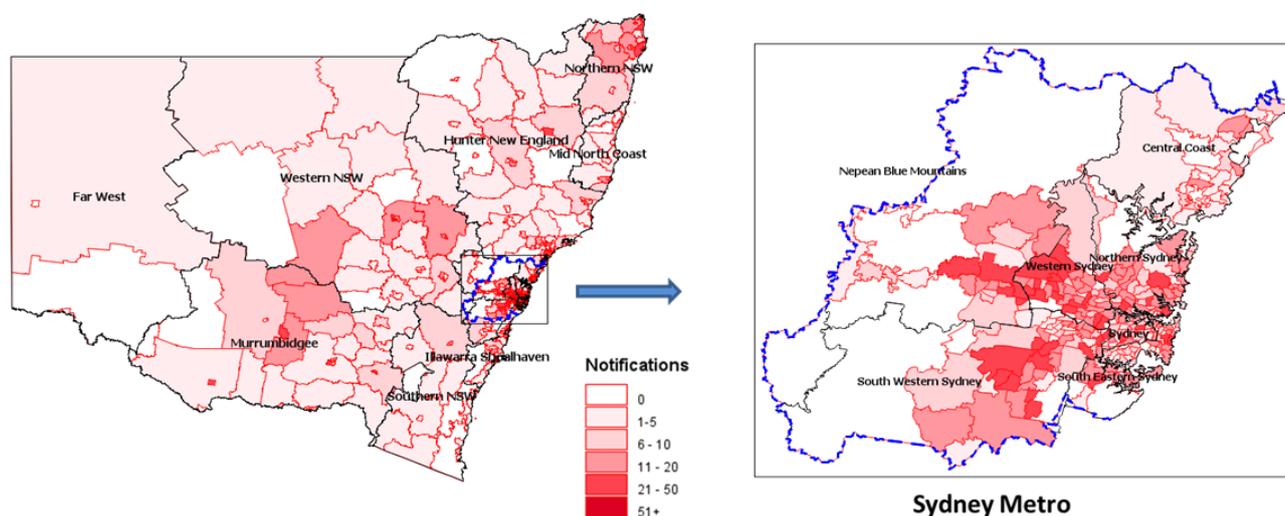
## Key Points

- ▶ Influenza activity remains high across NSW but has decreased or remained stable across local health districts (LHDs). Outbreaks in residential aged care facilities continue to be reported.
- ▶ Respiratory presentations to NSW emergency departments decreased and are within the usual range for this period.
- ▶ Influenza A strains predominated but influenza B strain activity is increasing.

## 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 <sup>1</sup>	Presentations	Trend <sup>1</sup>	% of LHD ED presentations <sup>2</sup>
Central Coast	192	▶	474	▶	17%
Far West	2	▶	61	▶	14%
Hunter New England	581	▼	1160	▶	16%
Illawarra Shoalhaven	240	▼	491	▶	16%
Mid North Coast	108	▶	367	▶	17%
Murrumbidgee	246	▶	383	▶	18%
Nepean Blue Mountains	395	▼	308	▶	14%
Northern NSW	293	▼	377	▶	16%
Northern Sydney	616	▼	629	▶	14%
South Eastern Sydney	512	▼	891	▶	14%
South Western Sydney	696	▼	1035	▶	17%
Southern NSW	67	▶	271	▶	16%
Sydney	289	▼	466	▶	14%
Western NSW	201	▶	441	▶	17%
Western Sydney	848	▼	916	▶	17%
New South Wales	5286	▼	8270	▶	16%

## Confirmed influenza by NSW local health district and local area (SA2)<sup>3</sup>



## Summary for this reporting week:

- ▶ [Hospital surveillance](#) – ILI presentations to EDs increased but are within the usual range for this time of year.
- ▶ [Laboratory surveillance](#) – both respiratory testing and the influenza laboratory test positive rate declined (24.3%). Influenza A strains continue to predominate over B strains.
- ▶ [Community surveillance](#) – influenza activity decreased or remained stable across LHDs. Fifteen outbreaks were reported from residential aged care facilities.
- ▶ [Death surveillance](#) – twenty-one 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](#) – declining activity, with overall clinical severity rated as low.

## Hospital Surveillance

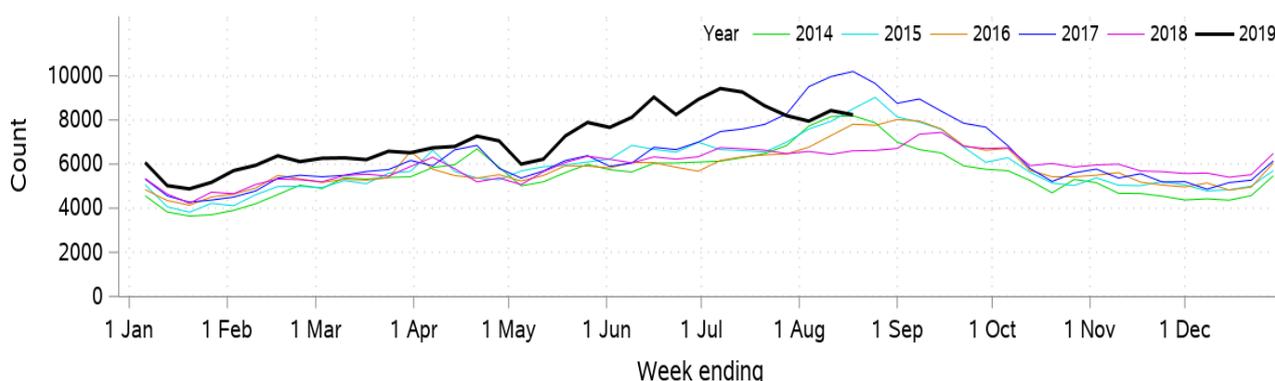
### NSW emergency department (ED) presentations for respiratory illness

Source: PHREDSS<sup>4</sup>

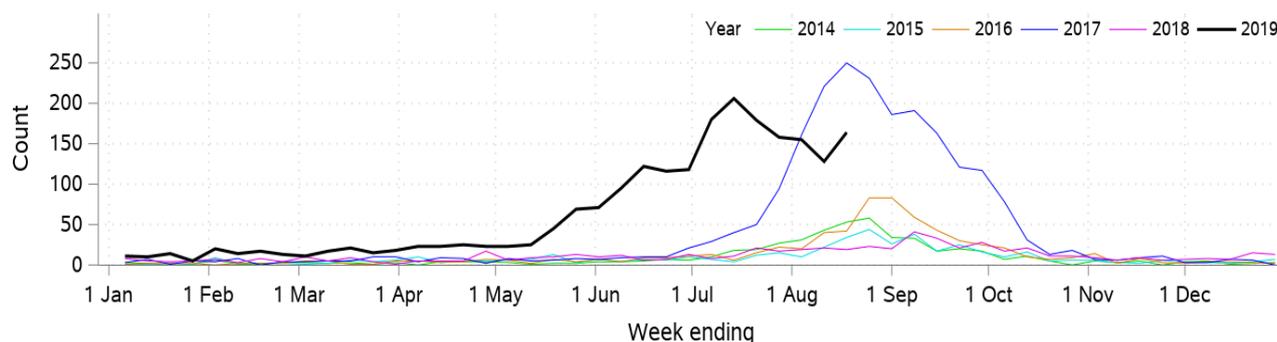
For the week ending 18 August 2019:

- Presentations for *All respiratory illness, fever and unspecified infections* decreased this week and are within the usual range for this time of year (Figure 1, Table 1). The proportion of these presentations to all unplanned ED presentations was 16.0%, slightly lower than the previous week (16.4%).
- The daily index of increase for *influenza-like illness* (ILI)<sup>5</sup> presentations across NSW increased slightly this week to 28.7, up from 28.1 in the previous week.
- ILI presentations resulting in admission increased but were within the usual range for this time of year (Figure 2, Table 1).
- ED presentations for pneumonia decreased while admissions for *pneumonia* increased; both were within the usual range for this time of year (Table 1).
- *Pneumonia and ILI* presentations requiring admission to critical care increased but were within the usual range for this time of year (Figure 3, Table 1).
- ED presentations for *bronchiolitis* decreased and were within the usual range for this time of year (Table 1).

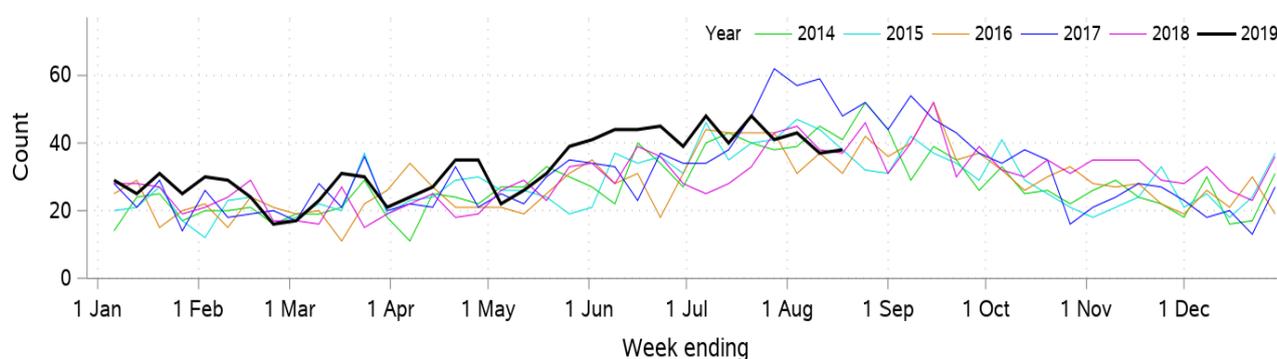
**Figure 1:** Total weekly counts of ED visits for *All respiratory illness, fever and unspecified infections*, all ages, 1 January – 18 August 2019 (black line), compared with the 5 previous years (coloured lines).



**Figure 2:** Total weekly counts of ED visits for *influenza-like-illness* that were admitted, all ages, 1 January – 18 August 2019 (black line), compared with the 5 previous years (coloured lines).



**Figure 3:** Total weekly counts of ED presentations for influenza-like illness or pneumonia, *that were admitted to a critical care ward*, all ages, 1 January – 18 August 2019 (black line), compared with the 5 previous years (coloured lines).



**Table 1:** Weekly emergency department respiratory illness summary, week ending 18 August 2019.<sup>6</sup>

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)	Increased (560)	Within (73–899)	65+ years (129) 17-34 years (154) 5-16 years (94)	Ambulance arrival (138)	The NSW daily index of increase for ILI presentations was (28.7).
	ILI admissions	Increased (164)	Within (19–250)	65+ years (95)	Ambulance arrival (90)	
	Pneumonia	Decreased (623)	Within (547–731)			
	Pneumonia admissions	Increased (435)	Within (413–512)			
	Pneumonia and ILI critical care admissions	Increased (38)	Within (31–48)			
	Asthma	Increased (455)	Within (431–571)			
	Bronchiolitis	Decreased (293)	Within (202–315)			Bronchiolitis is a disease of infants.
	All respiratory illness, fever and unspecified infections	Decreased (8,235)	Within (6,604–10,201)			
Ambulance	Breathing problems	Decreased (2,487)	Within (2,182–2,759)			

## 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.

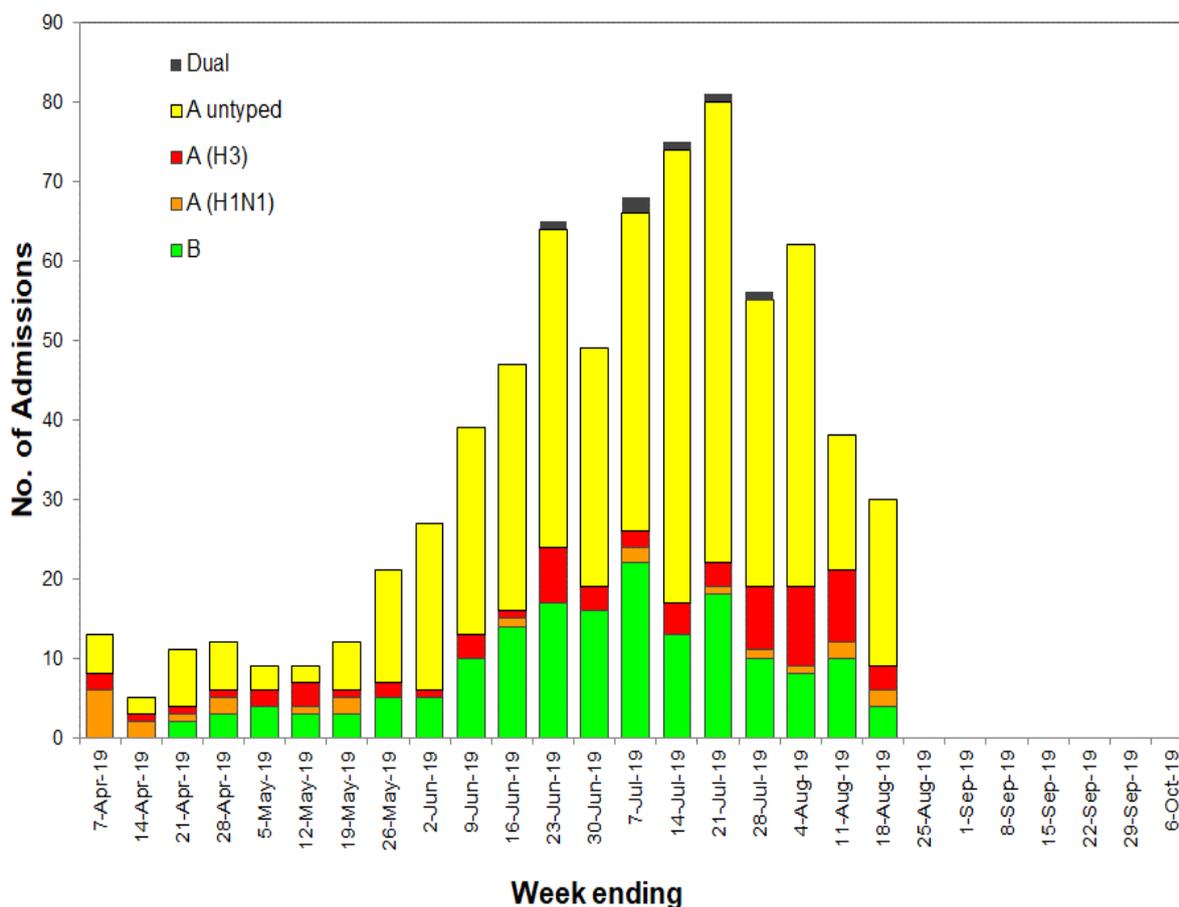
In NSW, three hospitals participate in providing weekly FluCAN data: Westmead Hospital, John Hunter Hospital and the Children’s Hospital at Westmead.

During week 33 there were 30 influenza admissions to NSW sentinel hospitals (Figure 4), fewer than the previous week (38 admissions, revised).

Since 1 April 2019, there have been 729 hospital admissions reported for influenza; 556 due to influenza A (including 24 A(H1N1) and 67 A(H3)), 167 due to influenza B and six due to dual infections (Figure 4).

Of these admissions for influenza, 364 were paediatric cases (<16 years of age) and 365 were in adults. Forty-four adults and 10 children have been admitted to a critical care ward.

**Figure 4:** FluCAN – Confirmed influenza hospital admissions in NSW, 1 April – 18 August, 2019\*.



Note: \* Admissions data are subject to change as new information is received.

## Laboratory Surveillance

For the week ending 18 August 2019 the number and proportion of respiratory specimens reported by NSW sentinel laboratories<sup>7</sup> which tested positive for influenza A or influenza B was decreased (Table 2, Figure 5). Influenza detections were similar to equivalent weeks of the influenza season in previous years.

The total number of respiratory tests requested each week has fallen over the past month but testing levels remain higher than previous years. For the year up to week 33, there have been 433,947 respiratory virus tests, 131% more than for the same period in 2018 (187,792 tests).

Overall, 24.3% of tests for respiratory viruses were positive for influenza (Figure 5), slightly lower than the previous week (25.0%). Influenza A strains remained more common than B strains. Detection of influenza A strains appears to be declining while influenza B strain detections are increasing (Table 2, Figures 5-6).

Further characterisation was available for only 5.8% of influenza 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 but indicate that B/Victoria continues to be 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).

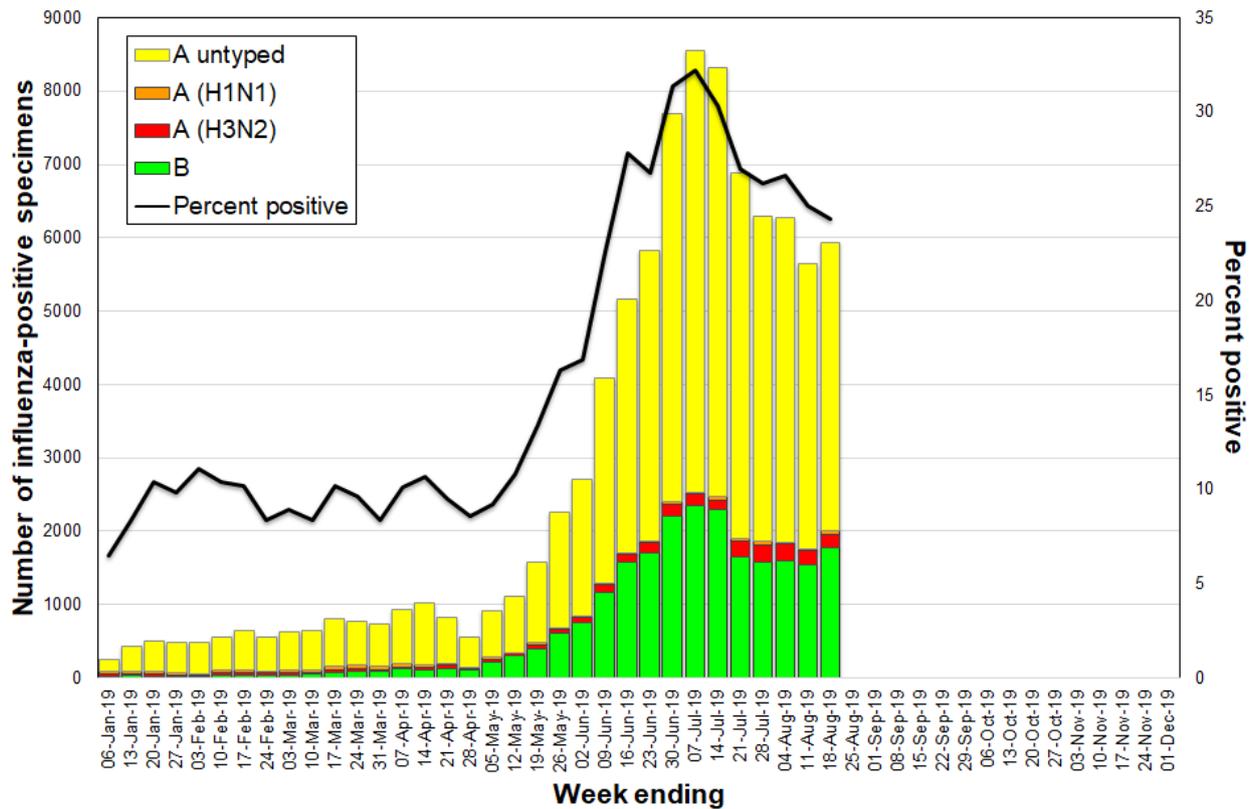
**Table 2:** Summary of testing for influenza and other respiratory viruses at NSW laboratories, 1 January to 18 August 2019.

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
30/06/2019*	82219	15913	(19.4%)	530	(3.3%)	81	(0.5%)	15302	(96.2%)	6653	(8.1%)	1300	1023	4207	12526	214	662
04/08/2019*	127104	26862	(21.1%)	964	(3.6%)	198	(0.7%)	25700	(95.7%)	9460	(7.4%)	2080	1812	1818	13880	664	716
<b>Week ending</b>																	
11/08/2019	22566	4103	(18.2%)	184	(4.5%)	32	(0.8%)	3887	(94.7%)	1548	(6.9%)	475	423	892	2688	276	150
18/08/2019	24457	4139	(16.9%)	187	(4.5%)	39	(0.9%)	3933	(95.0%)	1775	(7.3%)	667	432	742	3434	436	116

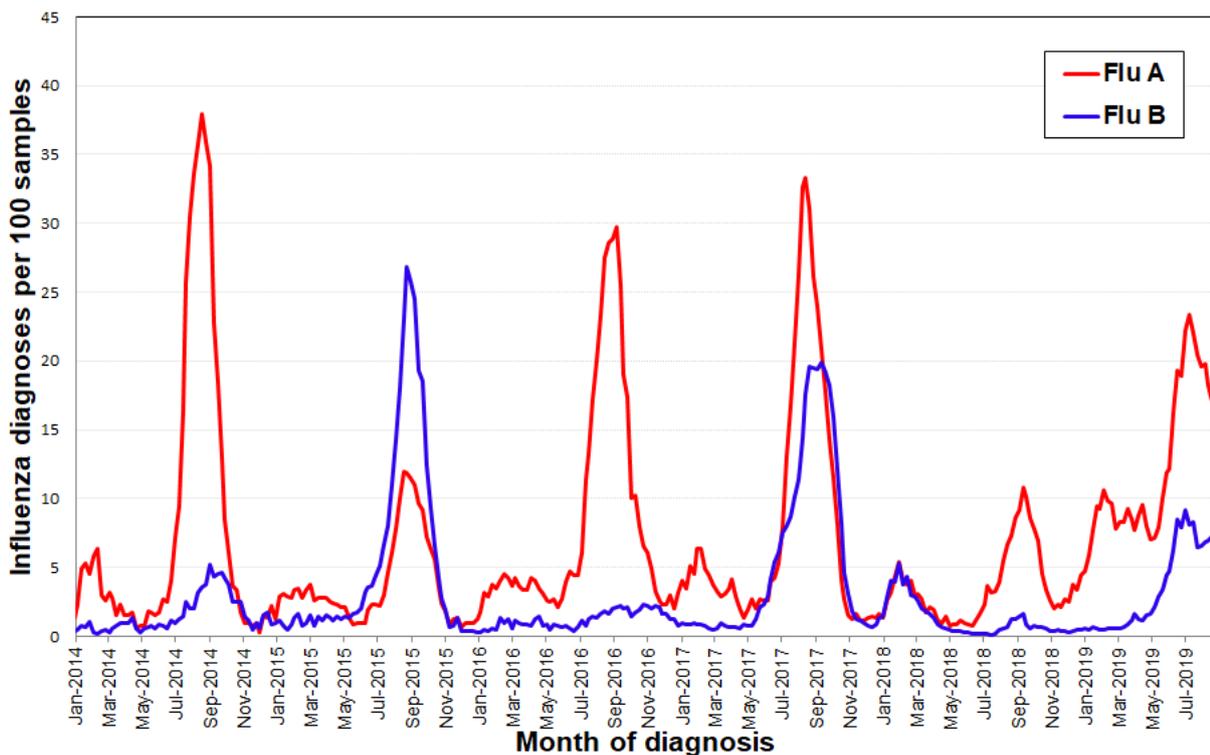
Notes: \* Five-week reporting period

\*\* Human metapneumovirus

**Figure 5:** Weekly influenza positive test results by type and sub-type reported by NSW sentinel laboratories, 1 January to 18 August 2019.



**Figure 6:** Percentage of laboratory tests positive for influenza A and influenza B by week, 1 January 2014 to 18 August 2019, New South Wales.



## Community Surveillance

In the week ending 18 August there were 5,286 notifications of influenza, lower than the previous week (6,536, revised). There have been 84,557 influenza notifications so far this year.\*

### Influenza notifications by Local Health District (LHD)

Influenza notifications and notification rates were decreased or stable across all districts. Notification rates remain highest in the Nepean Blue Mountains and Northern NSW LHDs (Table 3).

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

Local Health District	Week ending 18 Aug 2019		Week ending 11 Aug 2019	
	Number of notifications	Rate per 100 000 population	Number of notifications	Rate per 100 000 population
Central Coast	192	55.1	219	62.85
Far West	2	6.65	2	6.65
Hunter New	581	61.65	724	76.83
Illawarra	240	57.68	282	67.77
Mid North Coast	108	48.35	133	59.55
Murrumbidgee	246	82.86	248	83.53
Nepean Blue	395	102.55	441	114.49
Northern NSW	293	95.47	360	117.3
Northern Sydney	616	65.15	756	79.96
South Eastern	512	54.02	631	66.57
South Western	696	68.24	791	77.55
Southern NSW	67	31.29	94	43.9
Sydney	289	42.09	472	68.74
Western NSW	201	70.87	192	67.7
Western Sydney	848	82.55	1191	115.94

Notes: \* All data are preliminary and subject to change. Significant delays in the registration of notifications may occur during the winter months. For further information see the [influenza notifications data page](#).

### Influenza outbreaks in institutions

There were 18 influenza outbreaks in institutions reported this week. Fifteen in residential care facilities and three were in hospital settings. All but one were due to influenza A.

In the year to date there have been 314 laboratory confirmed influenza outbreaks in institutions reported to NSW public health units, including 269 in residential care facilities (Table 4, Figure 7). There have been 294 outbreaks due to influenza A, 15 due to influenza B and five involved both A and B strains.

In the 269 influenza outbreaks affecting residential care facilities, at least 2567 residents were reported to have had ILI symptoms and 320 required hospitalisation. Overall, there have been 86 deaths<sup>1</sup> in residents reported which were linked to these outbreaks, all of whom were noted to have other significant co-morbidities.

<sup>1</sup> Deaths associated with institutional outbreaks are also included in the [Deaths surveillance](#) section if laboratory-confirmed.

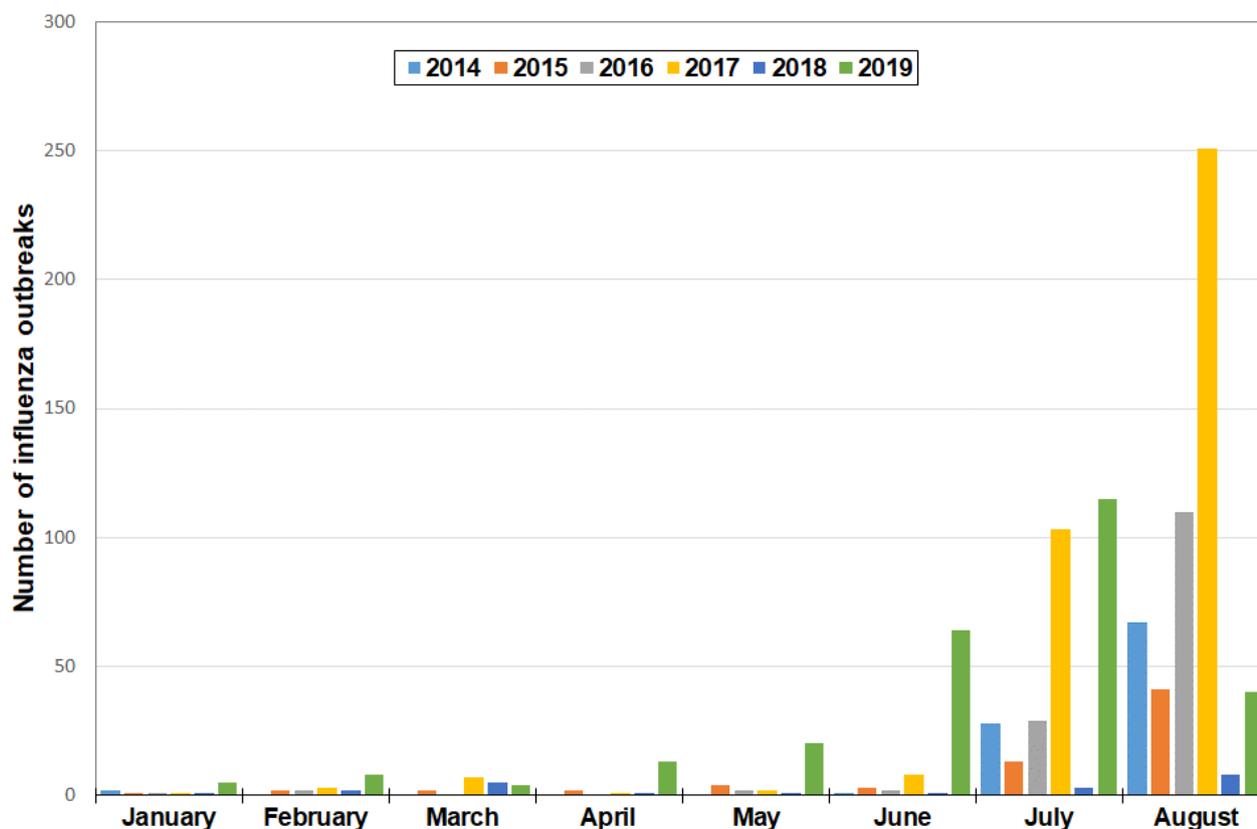
NSW public health units advise institutions on how to manage their influenza outbreaks. NSW Health also provides influenza antiviral treatment to help control outbreaks when requested and appropriate. This week NSW Health provided 363 courses of oseltamivir to eight residential care facilities experiencing outbreaks, and have provided 6420 courses so far this year.

**Table 4:** Reported influenza outbreaks in NSW residential care facilities, January 2014 to 18 August 2019.

Year	2014	2015	2016	2017	2018	2019*
<b>Number of outbreaks</b>	121	103	252	543	42	269

Note: \* Year to date.

**Figure 7:** Reported influenza outbreaks in NSW residential care facilities by month, 2016 to 18 August 2019.



### The Australian Sentinel Practices Research Network (ASPREN)

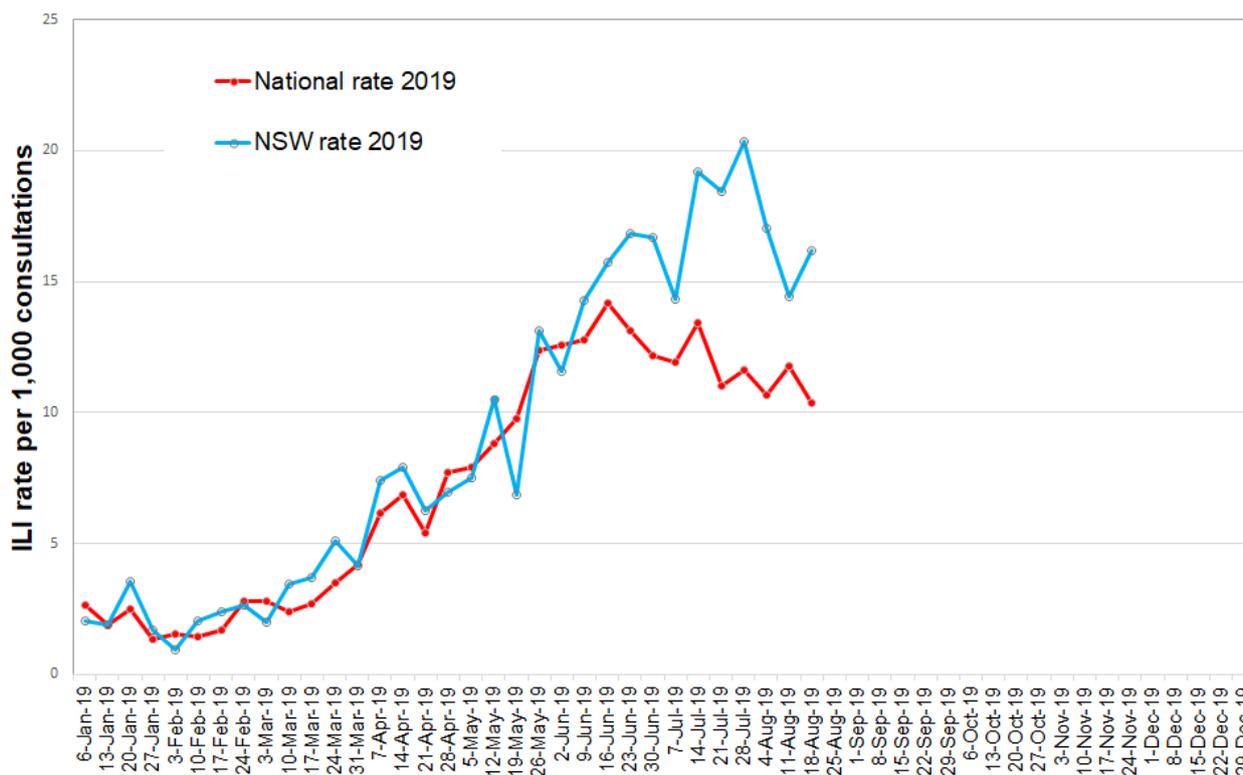
ASPREN is a network of sentinel general practitioners (GPs) run through the Royal Australian College of General Practitioners and the University of Adelaide which has collected de-identified information on influenza-like illness (ILI) and other conditions seen in general practice since 1991.

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 33 there were ASPREN reports received from 79 NSW GPs. The reported consultation rate for ILI per 1000 consultations was increased at 16.2 (Figure 8), higher than the previous week (14.4, revised), and higher than the national level.

For further information see the [ASPREN website](#).

**Figure 8:** ASPREN – NSW and National GP ILI rates per 1000 consultations – 2019 to the week ending 18 August.



## FluTracking.net

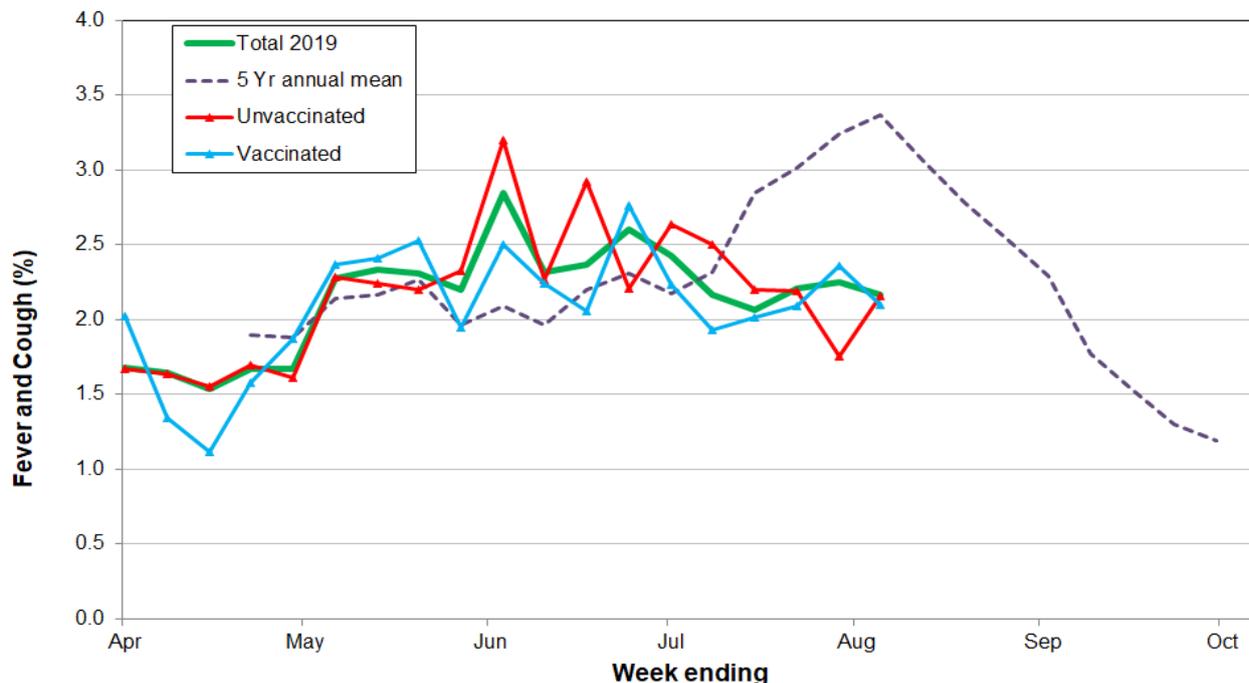
FluTracking.net is an online health surveillance system to detect epidemics of influenza. It is a project of the University of Newcastle, the Hunter New England Local Health District and the Hunter Medical Research Institute.

FluTracking participants complete a simple online weekly survey which is used to generate data on the rate of ILI symptoms in communities.

In week 33 FluTracking received reports for 13,102 people in NSW with the following results:

- 2.16% of respondents reported fever and cough, lower than the previous week (2.25, revised) and lower than the five year annual mean (3.36%) (Figure 9).
- Among respondents who reported being vaccinated for influenza in 2019, 2.10% reported fever and cough compared to 2.15% among unvaccinated respondents (Figure 9).
- 1.38% of respondents reported fever, cough and absence from normal duties, lower than the previous week (1.61%, revised).

**Figure 9:** FluTracking – Percent of NSW participants reporting fever and cough by vaccination status and week, April to the week ending 18 August 2019, compared to the age standardised 5 year mean.



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

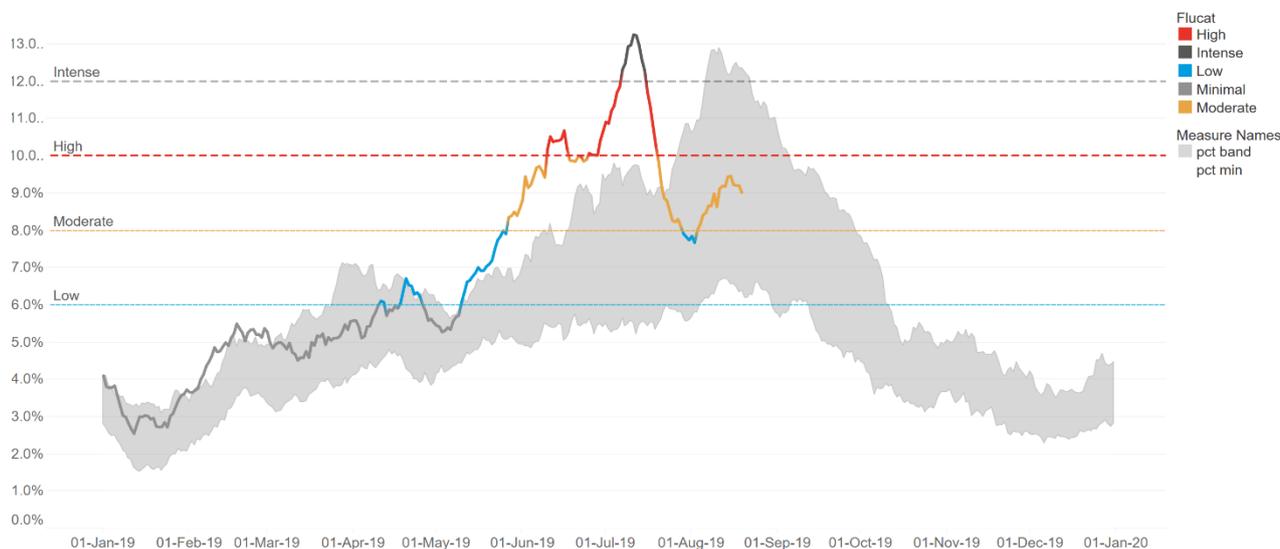
For further information on the project and how to participate, please see the [FluTracking](#) website.

### Healthdirect Australia

Healthdirect Australia is a national, government-owned, not-for profit organisation that collects data based on calls to its Healthdirect helpline (1800 022 222). This data includes the number of callers who report symptoms consistent with influenza-like illness (ILI).

In the week ending 18 August the number of ILI-related calls to Healthdirect Australia for NSW decreased and remained within the usual range of activity for this time of year, and was in the moderate range of activity for the season (Figure 10).

**Figure 10:** Healthdirect Australia – weekly ILI-related calls as a proportion of all calls for NSW, 2019 to the week ending 18 August compared to the weekly range between 2013 and 2018.



For further information see the [Healthdirect Australia Flu trends](#) 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

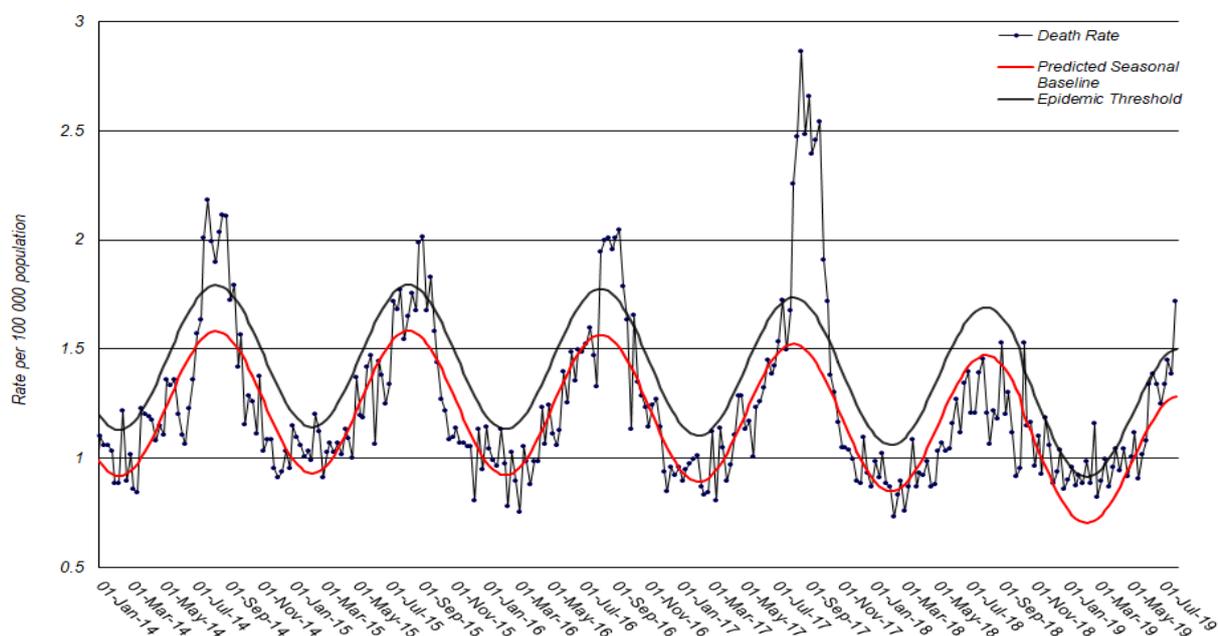
Due to delays in the death registration process, death data for recent weeks are underestimated. For this reason, pneumonia and influenza mortality data from the three most recent weeks are not included.

For the week ending 26 July 2019, the rate of deaths attributed to *pneumonia* or *influenza* was 1.72 per 100,000 NSW population, an increase from the previous week (1.36) and above the epidemic threshold of 1.50 per 100,000 population (Figure 11).

This is the first week that the death rate from *pneumonia* or *influenza* has been above the epidemic threshold since a short period from late February to mid-March (Figure 11). This is consistent with the peak of influenza activity for this season seen in early to mid-July.

Among the 30,637 death registrations in 2019, 157 (0.51%) mentioned influenza. An additional 2504 (8.17%) death registrations mentioned pneumonia.

**Figure 11:** Rate of death registrations classified as *influenza* or *pneumonia* per 100,000 NSW population, 2014 – 26 July, 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 18 August 2019, there have been 168 influenza deaths identified using Coroner's reports and death registrations with laboratory confirmation. (Table 5). This includes the deaths of 21 people reported this week.

Of the newly notified deaths three were in people under the age of 60 years. The remaining 18 deaths were all in people aged 65 years or over.

Deaths data are subject to change as new information is received.

**Table 5:** Laboratory-confirmed influenza deaths by age-group and year, NSW, 2017 to 18 August 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	17
65+ years	509	32	151
<b>Total</b>	<b>559</b>	<b>40</b>	<b>168</b>

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 18 August, 2.49 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

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### National Influenza Surveillance

The fortnightly *Australian Surveillance Report No.8*, with data up to 11 August 2019, noted:

- **Activity** – Currently, influenza and influenza-like illness (ILI) activity is lower than average for this time of year compared to previous years, and is consistent with past activity following a peak in notifications. At the national level, notifications of laboratory-confirmed influenza have decreased in the past fortnight; however, this may be due in some measure to data entry backlogs.
- **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.
- **Virology** – The majority of confirmed influenza cases reported nationally were influenza A in the year to date (81%) and past fortnight (77%). The proportion of cases attributed to influenza B has increased slightly in the past fortnight, following a steady decline during July.

For further information see the [Australian Influenza Surveillance Reports](#).

### Global Influenza Update

The latest [WHO global update on 19 August 2019](#) provides data up to 4 August 2019. In the temperate zones of the southern hemisphere, influenza detections increased overall. In summary:

- In the temperate zones of the southern hemisphere, influenza activity appeared to have peaked in most countries.
- In the Caribbean, Central American, and tropical South American countries, influenza activity was low overall.
- In tropical Africa, influenza activity was low across reporting countries, with the exception of a few countries in Eastern Africa.
- In Southern Asia, influenza activity was low across reporting countries.
- In South East Asia, influenza activity was decreasing or low across reporting countries except in Myanmar.
- In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels.

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 24 June 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, one new human infection with an influenza A(H1N1) variant virus was reported. There were no new reports of human cases of avian influenza A(H5) or A(H7) 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

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### 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:

<sup>1</sup> 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

<sup>2</sup> All Respiratory, fever and unspecified infections presentations as a percentage of all unplanned emergency department presentations in participating hospitals in the local health district.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> Notes: 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.

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

<sup>7</sup> 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, Lavery Pathology, Medlab, SydPath, VDRLab (up to 2017), Austech, 4cyte.