

# Influenza Surveillance Weekly Report

Week 20: May 13 to May 19, 2019

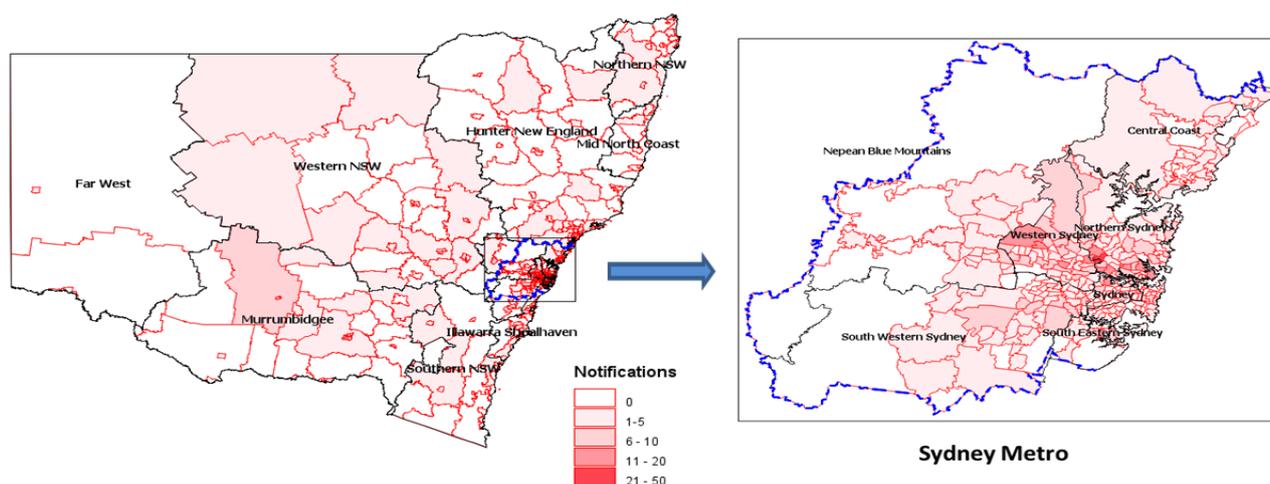
## Key Points

- ▶ Influenza activity was high across all NSW local health districts with the exception of Far West, consistent with the early stages of the annual influenza season.
- ▶ Respiratory presentations to NSW emergency departments increased or remained high in most NSW local health districts, and were within the usual range for influenza seasons overall.
- ▶ Influenza A strains predominated but influenza B activity is also increasing.

## Activity compared to the previous week – NSW local health districts

Local Health District	Confirmed Influenza		NSW Emergency Departments (60) All Respiratory/Fever/Unspecified infections		
	Cases	Trend <sup>1</sup>	Presentations	Trend <sup>1</sup>	% of LHD ED presentations <sup>2</sup>
Central Coast	39	▶	421	▲	15%
Far West	1	▶	25	▶	6%
Hunter New England	76	▶	874	▲	13%
Illawarra Shoalhaven	65	▲	407	▲	13%
Mid North Coast	12	▶	258	▶	12%
Murrumbidgee	48	▶	296	▲	15%
Nepean Blue Mountains	65	▶	283	▲	13%
Northern NSW	32	▶	256	▲	12%
Northern Sydney	255	▲	514	▲	13%
South Eastern Sydney	157	▲	864	▲	14%
South Western Sydney	138	▲	919	▲	16%
Southern NSW	20	▶	232	▶	14%
Sydney	120	▲	438	▶	14%
Western NSW	34	▶	370	▲	14%
Western Sydney	258	▲	974	▲	18%
New South Wales	1320	▲	7198	▶	14%

## 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 are on a steeply increasing trend
- ▶ [Laboratory surveillance](#) – the influenza laboratory test positive rate was higher (13.4%)  
Influenza A strains predominated but B strains are increasing
- ▶ [Community surveillance](#) – influenza activity increased across the majority of LHDs and was above the usual range across all LHDs
- ▶ [Death surveillance](#) – 37 influenza-related deaths have been reported to date in 2019
- ▶ [National surveillance](#) – high influenza activity for this time of year

## Hospital Surveillance

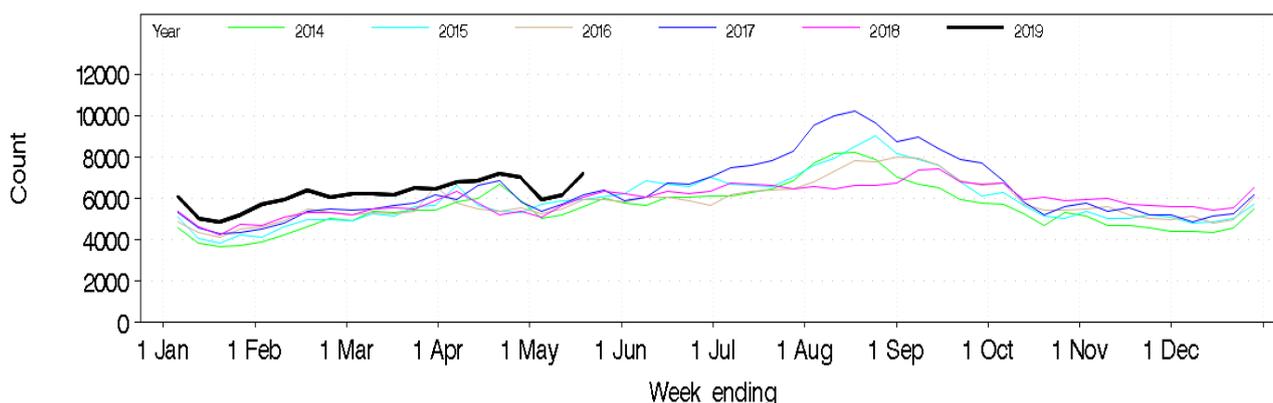
### NSW emergency department (ED) presentations for respiratory illness

Source: PHREDSS<sup>4</sup>

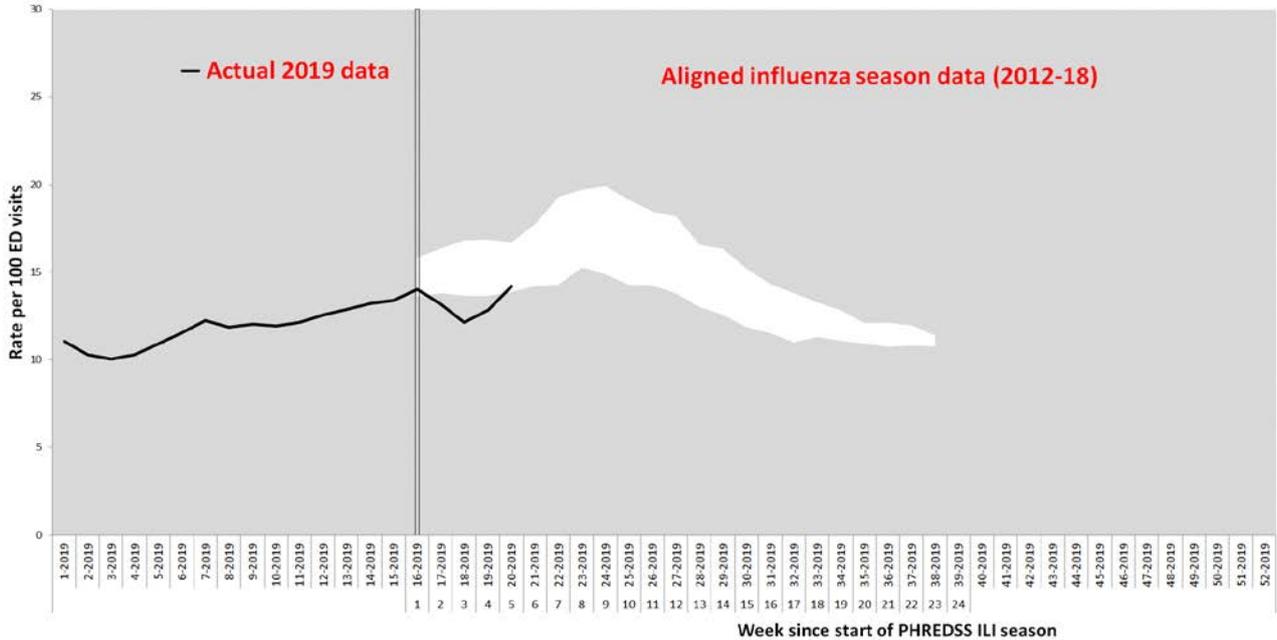
For the week ending May 19, 2019:

- Presentations for *All respiratory illness, fever and unspecified infections* increased further and remain above the usual range for this time of year (Figure 1, Table 1). The proportion of these presentations to all unplanned ED presentations was higher than the previous week at 14.2 per 100 presentations and within the seasonal range (Figure 2).
- Presentations were significantly elevated across all ages and in Western Sydney, South Western Sydney, South Eastern Sydney and Southern NSW local health districts (LHD).
- The daily index of increase for *influenza-like illness* (ILI)<sup>5</sup> presentations across NSW increased markedly to 32.2 (up from 17.4 last 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 increased and remained above the usual range for this time of year (Figure 3, Table 1).
- Both ED presentations and admissions for *pneumonia* increased and both remain above the usual range for this time of year (Table 1).
- *Pneumonia* and ILI presentations requiring admission to critical care decreased and were within the usual range for this time of year (Figure 4, Table 1).
- ED presentations for *Bronchiolitis* increased but were within the usual range for this time of year (Figure 5, Table 1).

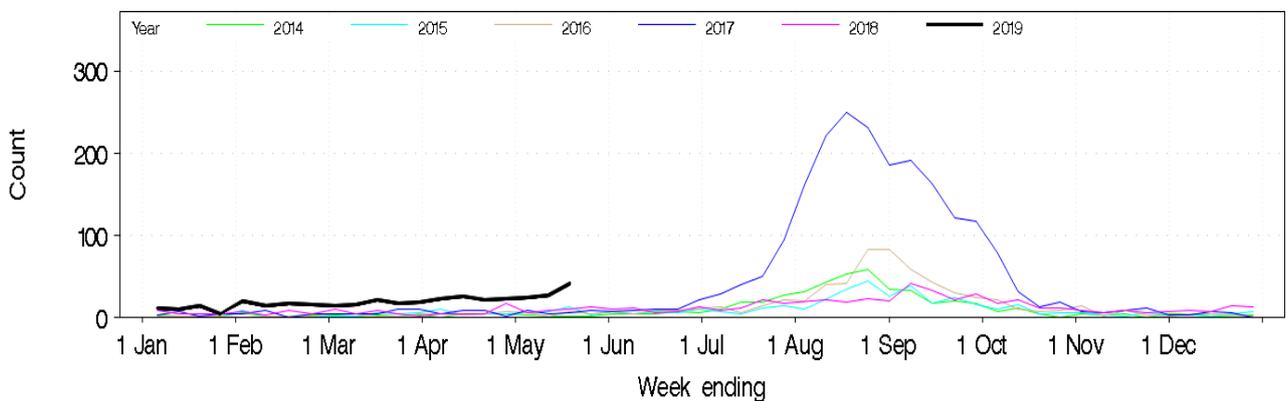
**Figure 1:** Total weekly counts of ED visits for *All respiratory illness, fever and unspecified infections*, all ages, from January 1 – May 19, 2019 (black line), compared with the 5 previous years (coloured lines).



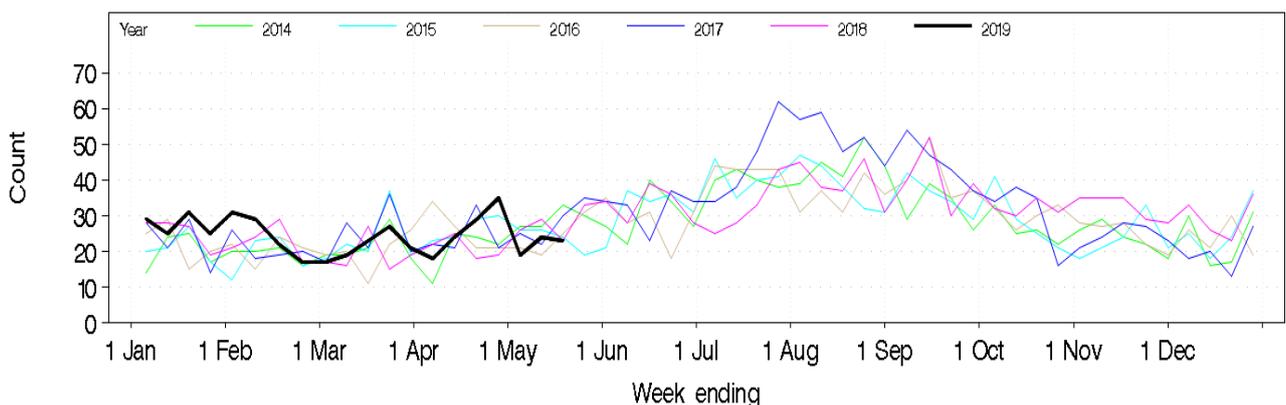
**Figure 2:** Total weekly counts of ED visits for *All respiratory illness, fever and unspecified infections*, all ages, as a rate per 100 ED visits, from January 1 – May 19, 2019 (black line), compared with the range of season rate curves for the 5 previous years (white zone) aligned to the PHREDSS season start in 2019 (week 16).



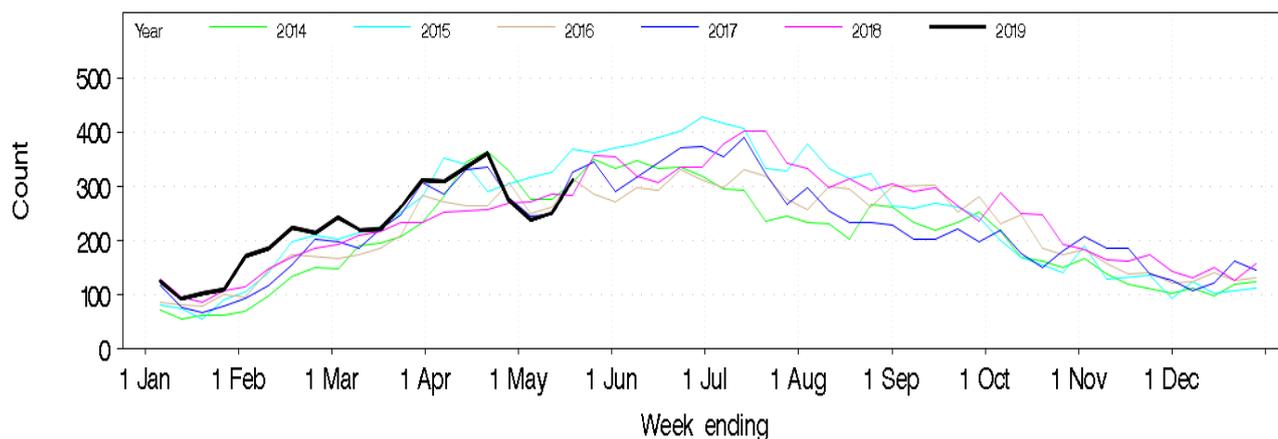
**Figure 3:** Total weekly counts of ED visits for *influenza-like-illness* that were admitted, all ages, from January 1 – May 19, 2019 (black line), compared with the 5 previous years (coloured lines).



**Figure 4:** Total weekly of ED presentations for influenza-like illness and pneumonia, *that were admitted to a critical care ward*, all ages, from January 1 – May 19, 2019 (black line), compared with the 5 previous years (coloured lines).



**Figure 5:** Total weekly counts of ED visits for *bronchiolitis*, all ages, from January 1 – May 19, 2019 (black line), compared with the 5 previous years (coloured lines).



**Table 1:** Weekly emergency department respiratory illness summary, week ending May 19, 2019.

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 (184)	Above (37-48)	<b>0-4 (22)</b> <b>17-34 (66)</b> <b>65+ (27)</b> <b>35-64 (55)</b> <b>5-16 (14)</b>	<b>Ambulance arrival (43)</b>	The NSW daily index of increase for ILI presentations was 32.2.
	ILI admissions	Increased (42)	Above (2-13)	<b>65+ (19)</b>	<b>Ambulance arrival (20)</b>	
	Pneumonia	Increased (575)	Above (393-546)	<b>5-16 (58)</b>		
	Pneumonia admissions	Increased (332)	Above (292-376)			
	Pneumonia and ILI critical care admissions	Decreased (23)	Within (23-33)			
	Asthma	Increased (577)	Below (614-779)			
	Bronchiolitis	Increased (312)	Within (284-369)			Bronchiolitis is a disease of infants.
	All respiratory illness, fever and unspecified infections	Increased (7,177)	Above (5,617-6,161)	<b>5-16 (1,007)</b> <b>17-34 (926)</b> <b>65+ (1,495)</b> <b>35-64 (1,141)</b> <b>0-4 (2,606)</b>	<b>Admission (2,559)</b> <b>Ambulance arrival (1,528)</b>	
Ambulance	Breathing problems	Increased (2,260)	Above (1,582-1,965)	<b>65+ years (1,248)</b>		

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.

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

## FluCAN (The Influenza Complications Alert Network)

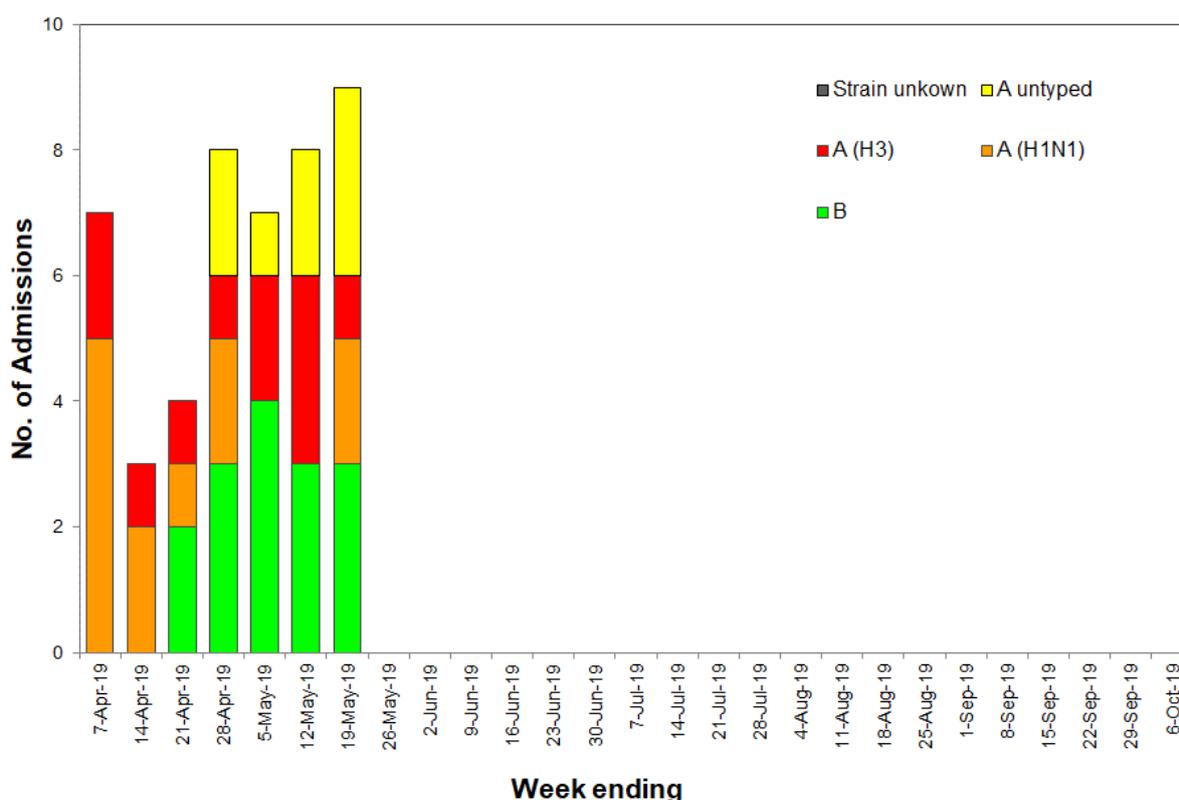
In 2009, the FluCAN surveillance system was created to be a rapid alert system for severe respiratory illness requiring hospitalisation. Data is provided on patients admitted with influenza confirmed by polymerase chain reaction (PCR) testing.

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

During week 20 there were 9 influenza admissions to NSW sentinel hospitals (Figure 6).

Since April 1, 2019, there have been 46 hospital admissions reported for influenza; 31 due to influenza A (including 12 A (H1N1) and 11 A (H3)) and 15 due to influenza B (Figure 6). Of these admissions, 42 were paediatric cases (<16 years of age) and four were in adults. No cases have been admitted to a critical care ward.

**Figure 6:** FluCAN – Confirmed influenza hospital admissions in NSW, April 1 – May 19, 2019\*.



**Note:** \* Admissions data are subject to change as new information is received. Westmead Hospital data is currently not available.

## Laboratory Surveillance

For the week ending May 19, 2019 the number and proportion of respiratory specimens reported by NSW sentinel laboratories<sup>6</sup> which tested positive for influenza A or influenza B increased further and remained higher than expected for this time of year (Table 2, Figure 7).

Overall, 13.4% of tests for respiratory viruses were positive for influenza (Figure 7), higher than the previous week (10.8%) and already above the seasonal threshold (5%). Influenza A strains remained more common than B strains, with influenza A (H3N2) strains now more common than A (H1N1) strains (Table 2, Figures 7-8).

The influenza positive rate fell in the last two weeks of April after the unusually high influenza activity seen over summer. However, the recent rise in activity appears consistent with an early start to the 2019 influenza season.

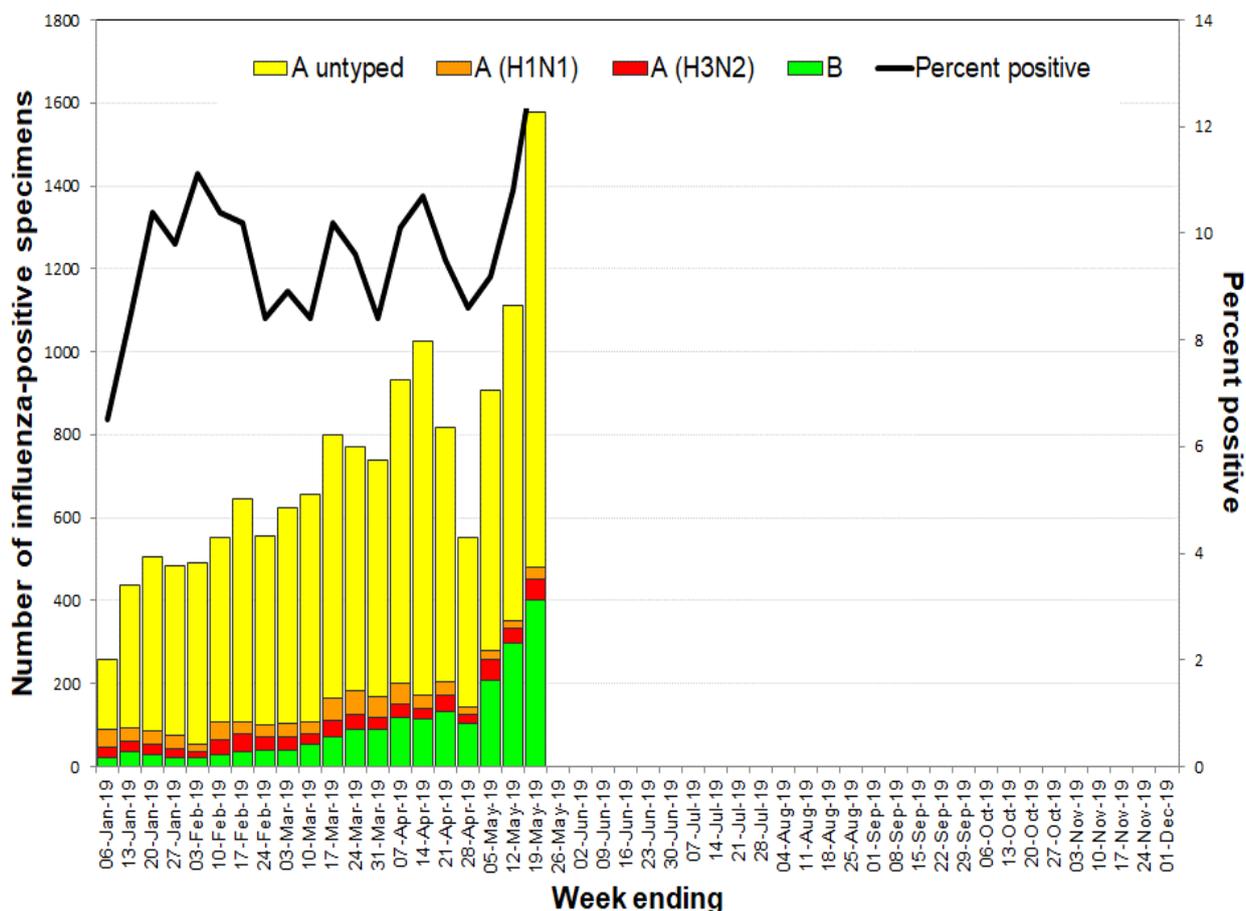
Rhinovirus was again the most common respiratory virus identified, followed by influenza then respiratory syncytial virus (RSV), which is a common cause of bronchiolitis in infants (Table 2).

**Table 2:** Summary of testing for influenza and other respiratory viruses at NSW laboratories, January 1 to May 19, 2019.

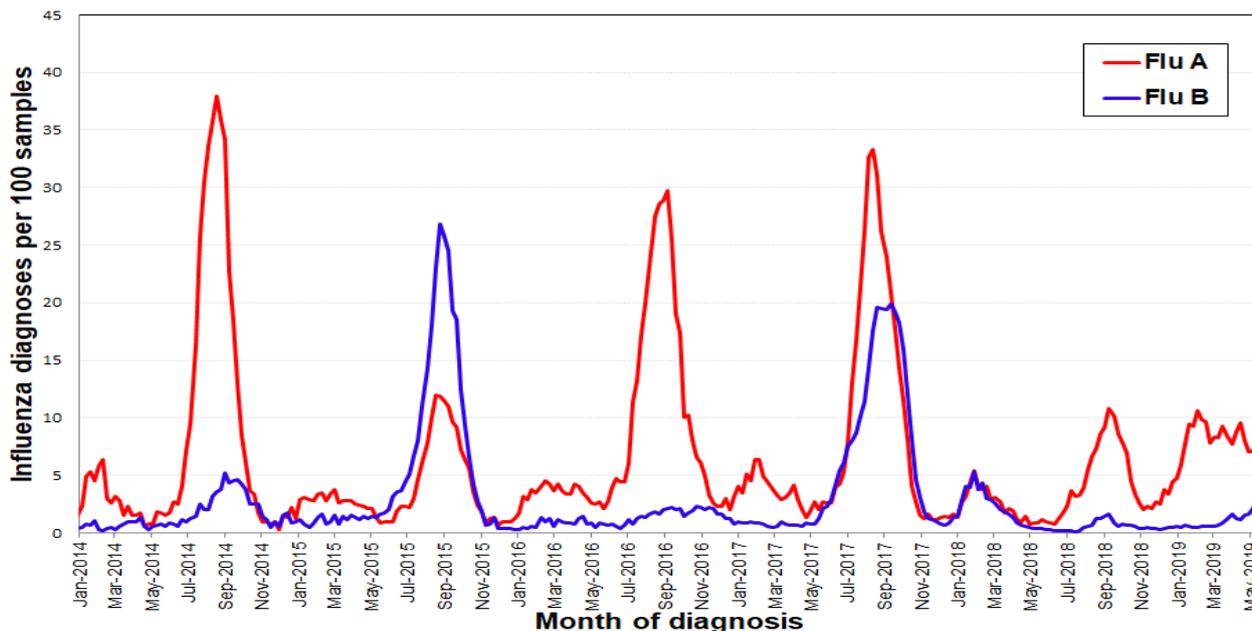
Month ending	Total Tests	TEST RESULTS															
		Influenza A								Influenza B		Adeno	Parainf 1, 2 & 3	RSV	Rhino	HMPV **	Entero
		Total		H3N2		H1N1 pdm09		A (Not typed)		Total							
		Total	(%)	Total	(%A)	Total	(%A)	Total	(%A)	Total	(%)	Total	Total	Total	Total	Total	Total
3/02/2019*	23496	2055	(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%)	132	(5.0%)	198	(7.4%)	2334	(87.6%)	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
Week ending																	
5/05/2019	9906	700	(7.1%)	49	(7.0%)	24	(3.4%)	627	(89.6%)	208	(2.1%)	274	261	899	1531	51	225
12/05/2019	10336	815	(7.9%)	36	(4.4%)	17	(2.1%)	762	(93.5%)	297	(2.9%)	279	271	828	1703	54	232
19/05/2019	11786	1176	(10.0%)	52	(4.4%)	26	(2.2%)	1098	(93.4%)	401	(3.4%)	295	242	891	2179	40	243

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

**Figure 7:** Weekly influenza positive test results by type and sub-type reported by NSW sentinel laboratories, January 1 to May 19, 2019



**Figure 8:** Percentage of laboratory tests positive for influenza A and influenza B by week, January 1 2013 to May 19, 2019, New South Wales.



## Community Surveillance

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

In the week ending May 19 there were 1320 notifications of influenza confirmed by polymerase chain reaction (PCR) testing, higher than the 979 (revised) notifications reported in the previous week. Rates were higher than usual for this time of year.

Influenza notification rates increased across the State with the exception of Northern NSW. Rates were higher than usual in all jurisdictions for this time of year. Rates were highest in Northern Sydney and Western Sydney (Table 3).

**Table 3:** Weekly notifications of laboratory-confirmed influenza by Local Health District.

Local Health District	Week ending 19 May 2019		Week ending 12 May 2019	
	Number of notifications	Rate per 100 000 population	Number of notifications	Rate per 100 000 population
Central Coast	39	11.19	24	6.89
Far West	1	3.33	0	0
Hunter New England	76	8.06	70	7.43
Illawarra Shoalhaven	65	15.62	35	8.41
Mid North Coast	12	5.37	5	2.24
Murrumbidgee	48	16.17	23	7.75
Nepean Blue Mountains	65	16.88	54	14.02
Northern NSW	32	10.43	37	12.06
Northern Sydney	255	26.97	179	18.93
South Eastern Sydney	157	16.56	132	13.93
South Western Sydney	138	13.53	84	8.24
Southern NSW	20	9.34	7	3.27
Sydney	120	17.48	97	14.13
Western NSW	34	11.99	25	8.81
Western Sydney	258	25.12	207	20.15

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 five influenza outbreaks in institutions reported this week. Four were in residential care facilities and the other outbreak was in a military facility. All were due to influenza A. In the year to date there have been 49 laboratory confirmed influenza outbreaks in institutions reported to NSW public health units, including 38 in residential care facilities (Table 4, Figure 9). Forty-seven of the outbreaks have been due to influenza A, one was due to influenza B and one involved both A and B strains.

In the 38 influenza outbreaks affecting residential care facilities, at least 295 residents were reported to have had ILI symptoms and 36 required hospitalisation. Overall, there have been 10 deaths<sup>1</sup> in residents reported which were linked to these outbreaks, all of whom were noted to have other significant co-morbidities.

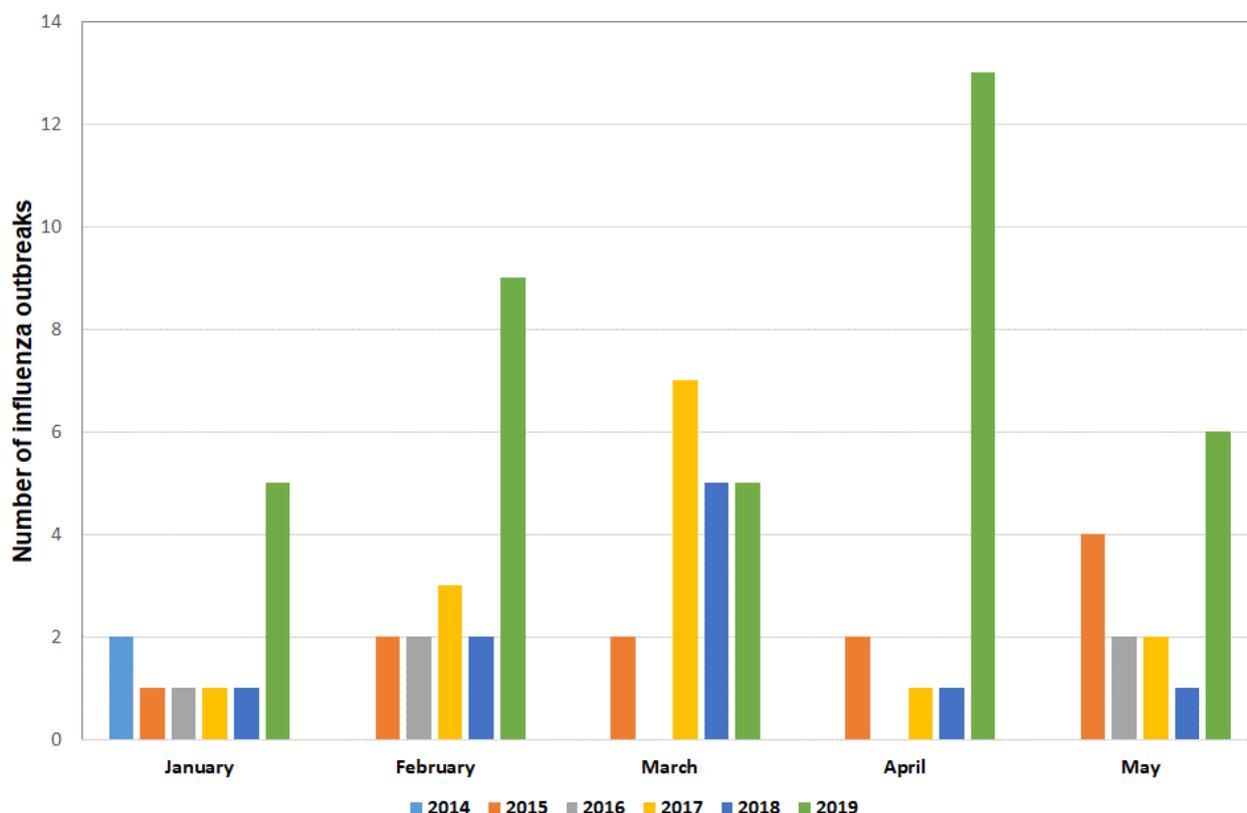
NSW public health units advise institutions on how to manage their influenza outbreaks. NSW Health also provides influenza antiviral treatment to help control outbreaks when requested and appropriate. This week NSW Health provided 78 courses of oseltamivir to two institutions with influenza outbreaks, and have provided 763 courses so far this year.

**Table 4:** Reported influenza outbreaks in NSW institutions, January 2014 to May 19, 2019.

Year	2014	2015	2016	2017	2018	2019*
Number of outbreaks	121	103	252	543	42	38

Note: \* Year to date.

**Figure 9:** Reported influenza outbreaks in NSW residential care facilities by month, 2014 to May 19, 2019.



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

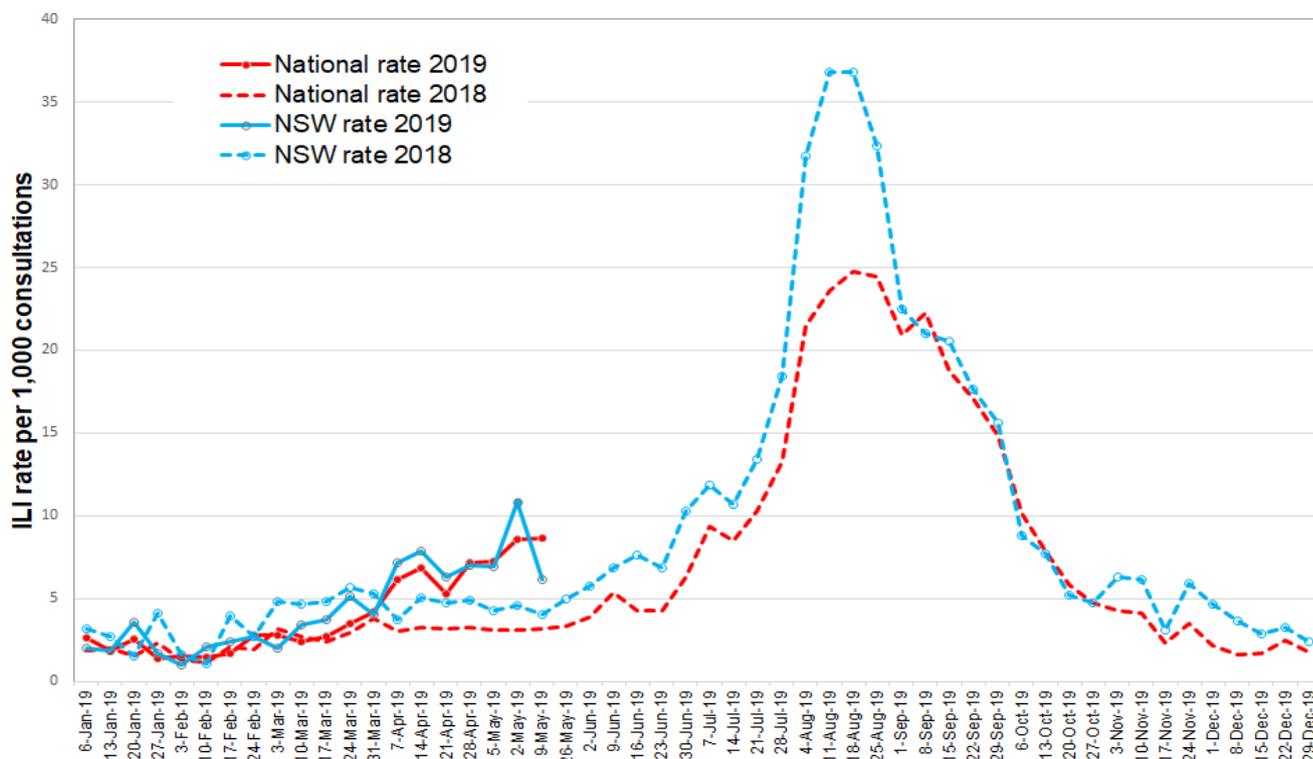
## The Australian Sentinel Practices Research Network (ASPREN)

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 20 there were ASPREN reports received from 70 NSW GPs. The reported consultation rate for ILI per 1000 consultations was decreased at 6.15 (Figure 10), lower than for the previous week (10.81) but higher than usual for this time of year. For further information see the [ASPREN website](#).

**Figure 10:** ASPREN – NSW and National GP ILI rates per 1000 consultations – 2019 to the week ending May 19, compared to 2018 weekly rates.



## FluTracking.net

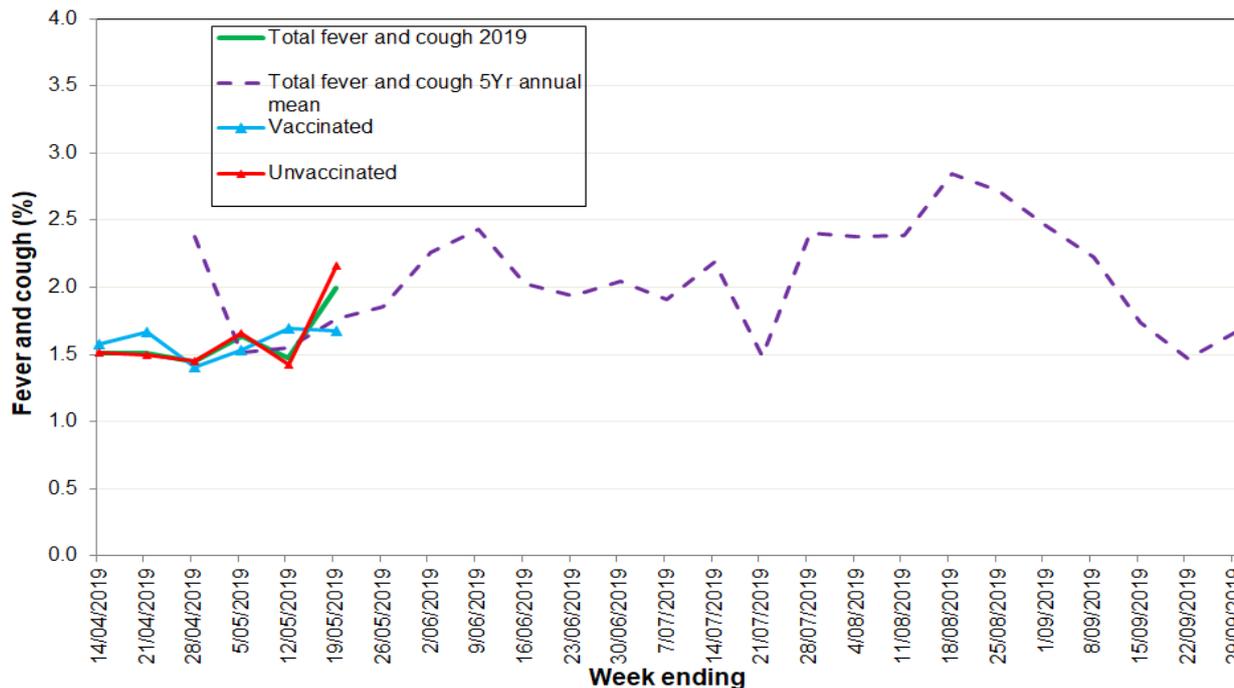
FluTracking.net is an online health surveillance system to detect epidemics of influenza. It is a project of the University of Newcastle, the Hunter New England Local Health District and the Hunter Medical Research Institute.

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

In week 20 FluTracking received reports for 13,318 people in NSW with the following results:

- 2.0% of respondents reported fever and cough, higher than the previous week (1.5%) and higher than the five year annual mean (1.2%) (Figure 11).
- Among respondents who reported being vaccinated for influenza in 2019, 1.7% reported fever and cough compared to the 2.2% rate reported among unvaccinated respondents (Figure 11).
- 1.2% of respondents reported fever, cough and absence from normal duties, higher than the previous week (0.9%).

**Figure 11:** FluTracking – Percent of NSW participants reporting fever and cough by vaccination status and week, 2019 to the week ending May 19, 2019 compared to the 5 year mean.



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

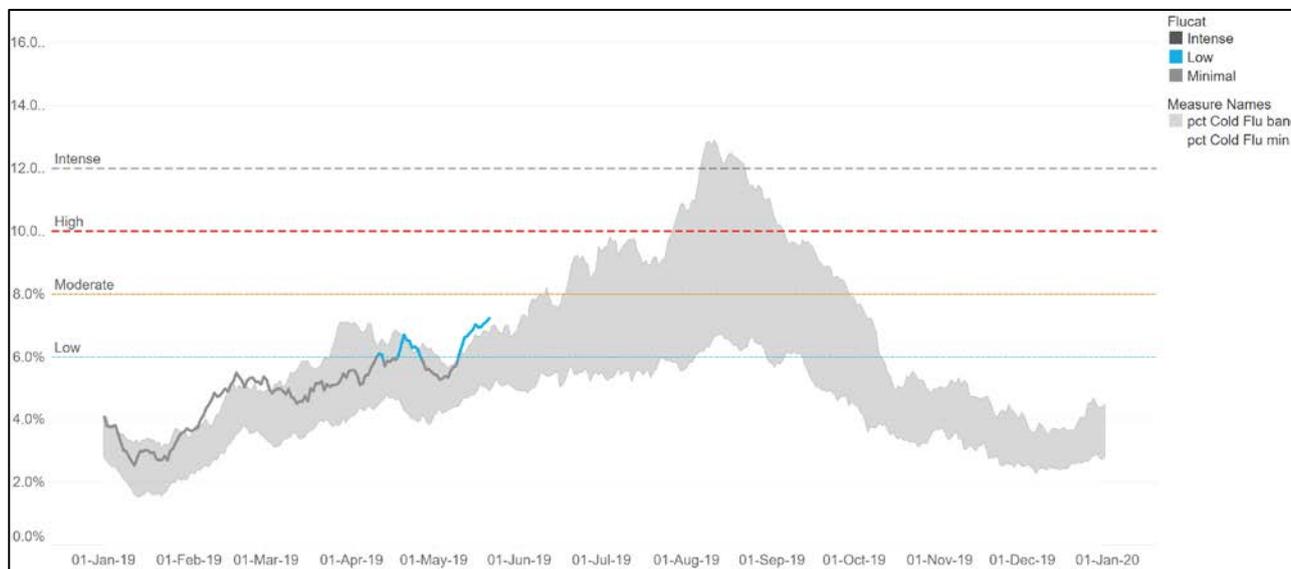
For further information on the project and how to participate, please see the [FluTracking](#) website.

### 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 May 19 the number of ILI-related calls to Healthdirect Australia for NSW increased and was above the usual range of activity for this time of year but was in the low-moderate range of activity for the season (Figure 12).

**Figure 12:** Healthdirect Australia – weekly ILI-related calls as a proportion of all calls for NSW, 2019 to the week ending 19 May compared to the weekly range between 2012 and 2017.



For further information see the [Healthdirect Australia](#) flu trends website.

## Deaths surveillance

### Pneumonia and influenza mortality

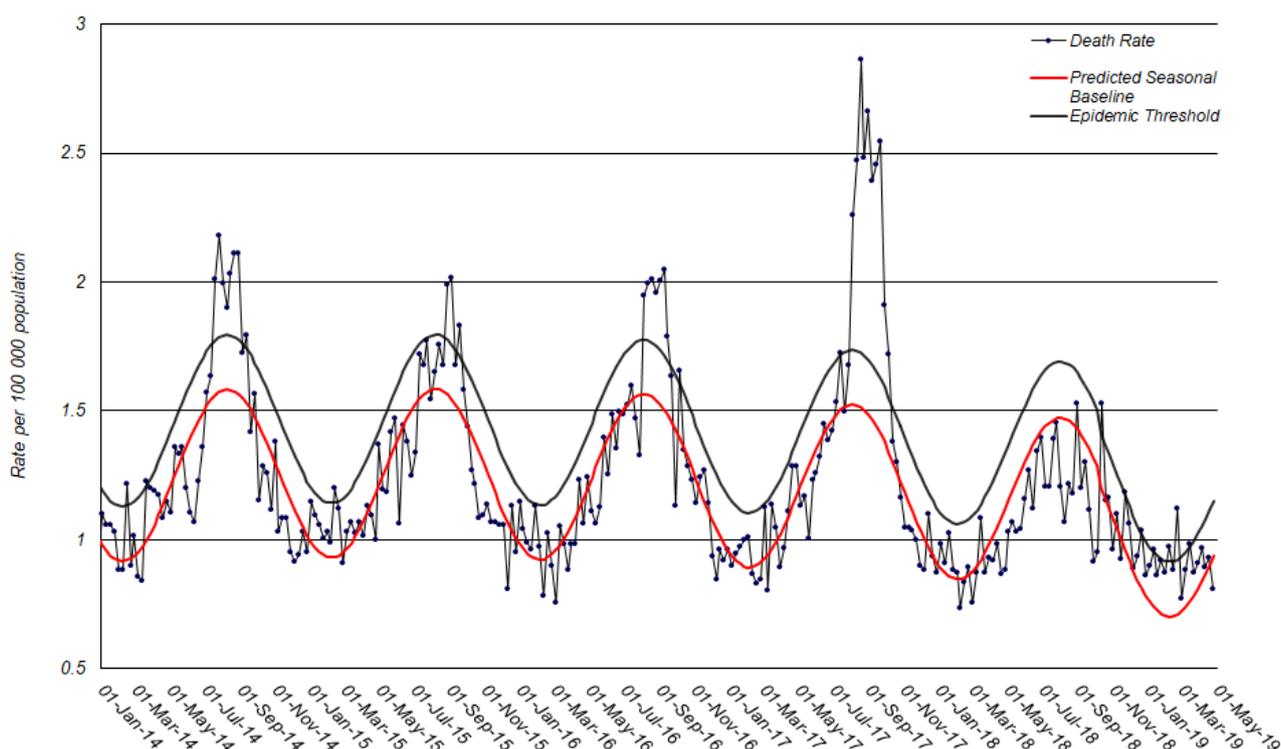
Due to delays in the death registration process, death data for recent weeks are highly variable. For this reason, death data from the three most recent weeks are not included in the report.

For the week ending April 26, 2019, the rate of deaths attributed to *pneumonia or influenza* was 0.81 per 100 000 NSW population, below the epidemic threshold of 1.15 per 100 000 population (Figure 13).

For the year up to April 26, 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 16,027 registry death certificates in 2019, 38 (0.24%) certificates mentioned influenza. These included one death in a child and one death in a person in the 25-34 years age-group, with the remaining deaths in people aged 55 years or older. An additional 1223 (7.63%) death certificates mentioned pneumonia.

**Figure 13:** Rate of deaths classified as *influenza or pneumonia* per 100 000 NSW population, 2014 – 26 April 2019



Source: NSW Registry of Births, Deaths and Marriages.

\* Notes on interpreting death data:

- Deaths registration data is routinely reviewed for deaths attributed to 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.
- 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.
- 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-related deaths with laboratory confirmation

For the year to May 19, 2019 there have been 37 laboratory-confirmed influenza deaths (Table 5).

This total includes influenza deaths from all sources, including public health units, aged care facility outbreaks, the NSW Coroner's Office, and the NSW Registry of Births, Deaths and Marriages, but only where there has been laboratory confirmation of influenza infection for that person.

Of the seven deaths in people aged less than 65 years, one was in the 45-49 year age-group, one was in the 55-59 year age-group and the rest were in people in the 60-64 year age-group. The death in a child included in the death registry data was not confirmed as influenza by laboratory testing.

In 2019, seven of the deaths occurred in May, 11 were in April, three were in March, 10 were in February and six were in January.

**Table 5:** Laboratory-confirmed influenza deaths by age-group and year, NSW, January 1, 2017 to May 19, 2019 (by date of illness onset).

Age-group	Year		
	2017	2018	2019*
0-4 years	2	2	0
5-19 years	4	0	0
20-64 years	44	6	7
65+ years	509	32	30
<b>Total</b>	<b>559</b>	<b>40</b>	<b>37</b>

Notes: \*Year to date.

### Government-funded vaccine distribution

NSW Health commenced distributing National Immunisation Program and NSW Government Program influenza vaccines on April 1, 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 May 19, 1.96 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.1*, with data up to May 5, 2019, noted:

- **Activity** – influenza and ILI activity was high for this time of year. Influenza notifications were decreased in the past fortnight but this is likely due to backlogs in data entry.
- **Severity** – There is no indication of the potential severity of the 2019 season at this time.
- **Impact** – There is no indication of the potential severity 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 (93%). Where subtyping data were available, influenza A(H3N2) was the dominant influenza A subtype in the past fortnight.

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

### Global Influenza Update

The latest [WHO global update on 13 May 2019](#) provides data up to 28 April. In the temperate zone of the northern hemisphere influenza activity decreased overall.

- In North America and Europe, influenza activity was low overall.
- In North Africa, influenza detections were low across reporting countries.
- In Western Asia, influenza activity decreased overall, with exception of Saudi Arabia where activity remained elevated.
- In East Asia, although decreasing influenza activity was reported in some countries, and in Southern Asia, influenza activity was low overall.
- In the Caribbean, Central American countries, and the tropical countries of South America, influenza and RSV activity were low in general.
- In West and Middle Africa, influenza activity was low across reporting countries. Influenza activity continued to be reported from Eastern Africa although in decreasing trend with predominantly influenza A(H1N1)pdm09 followed by A(H3N2) detections.

In the temperate zones of the southern hemisphere, influenza detections increased in southern Australia and South Africa. The influenza activity in South America 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 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

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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

While WHO makes recommendations for the influenza vaccine, it is up to national authorities to decide on the final composition for their individual countries.

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. This is because in Australia, the vast majority of recently circulating influenza B viruses have been of the B/Yamagata lineage and few B/Victoria lineage viruses have been detected.

The Therapeutic Goods Administration (TGA) has 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:

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<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 60 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> 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