Influenza Surveillance Weekly Report

Week 28: 8 to 14 July 2019

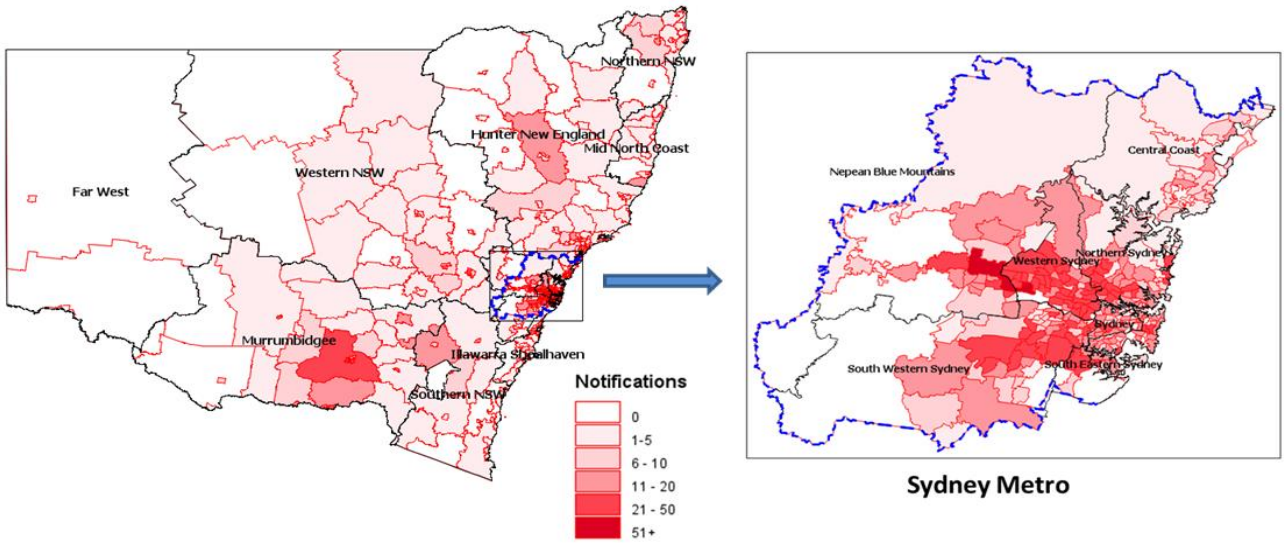
Key Points

- Influenza activity remains high across NSW but has remained steady or decreased in the majority of local health districts (LHDs). Multiple residential aged care facilities reported outbreaks.
- Respiratory presentations to NSW emergency departments were steady overall, and remained above the usual range for this period.
- 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	190	▼	489	►	18%
Far West	20	▲	62	►	14%
Hunter New England	510	▲	1177	►	18%
Illawarra Shoalhaven	242	►	535	►	18%
Mid North Coast	84	►	370	►	17%
Murrumbidgee	385	►	497	►	23%
Nepean Blue Mountains	511	▼	337	►	17%
Northern NSW	137	►	347	►	16%
Northern Sydney	812	▼	703	►	17%
South Eastern Sydney	772	▲	983	►	17%
South Western Sydney	841	▲	1262	►	21%
Southern NSW	97	►	296	►	17%
Sydney	378	▼	541	►	17%
Western NSW	129	►	481	►	20%
Western Sydney	1310	▼	1145	►	21%
New South Wales	6418	►	9225	►	19%

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



Summary for this reporting week:

- Hospital surveillance – ILI presentations to EDs increased and remain high
- Laboratory surveillance – the influenza laboratory test positive rate was lower (30.3%). Influenza A strains predominated with B strain activity steady
- Community surveillance – influenza activity decreased across some LHDs. Twenty-six outbreaks were reported from residential aged care facilities
- Death surveillance – six 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 14 July 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 increased to 18.5% of all presentations, slightly higher than the previous week (18.1%).
- Respiratory 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 increased this week to 64.4, up from 61.9 in the previous week.
- ILI presentations resulting in admission increased further and remained above the usual range for this time of year (Figure 2, Table 1).
- ED presentations and admissions for *pneumonia* decreased and both were within the usual range for this time of year (Table 1).
- *Pneumonia and ILI* presentations requiring admission to critical care also decreased and were within the usual range for this time of year (Figure 3, Table 1).
- ED presentations for *bronchiolitis* increased further but 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 – 14 July 2019 (black line), compared with the 5 previous years (coloured lines).

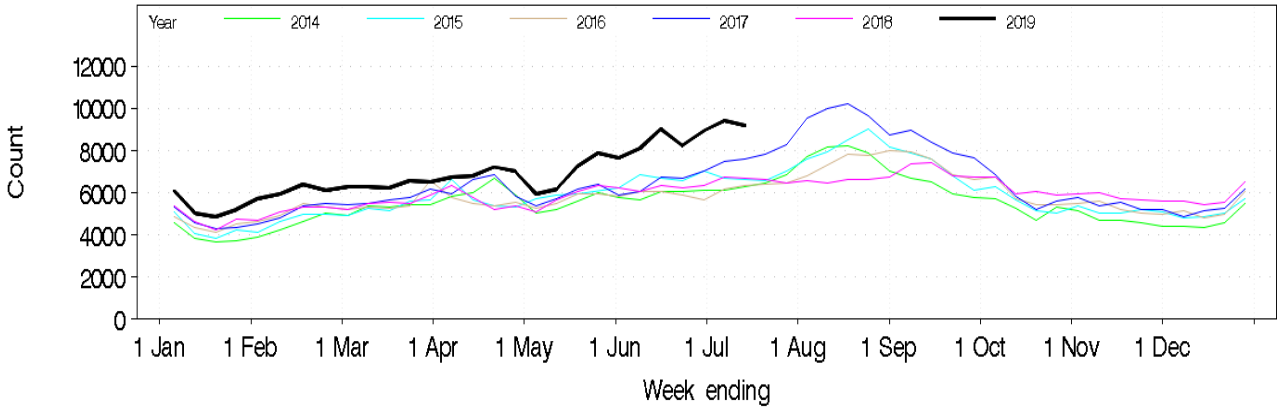


Figure 2: Total weekly counts of ED visits for *influenza-like-illness* that were admitted, all ages, 1 January – 14 July 2019 (black line), compared with the 5 previous years (coloured lines).

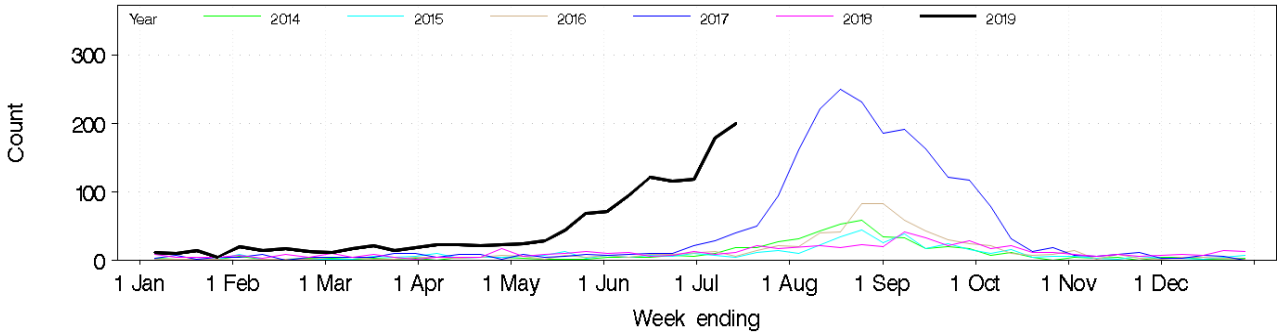


Figure 3: Total weekly counts of ED presentations for influenza-like illness and pneumonia, *that were admitted to a critical care ward*, all ages, 1 January – 14 July 2019 (black line), compared with the 5 previous years (coloured lines).

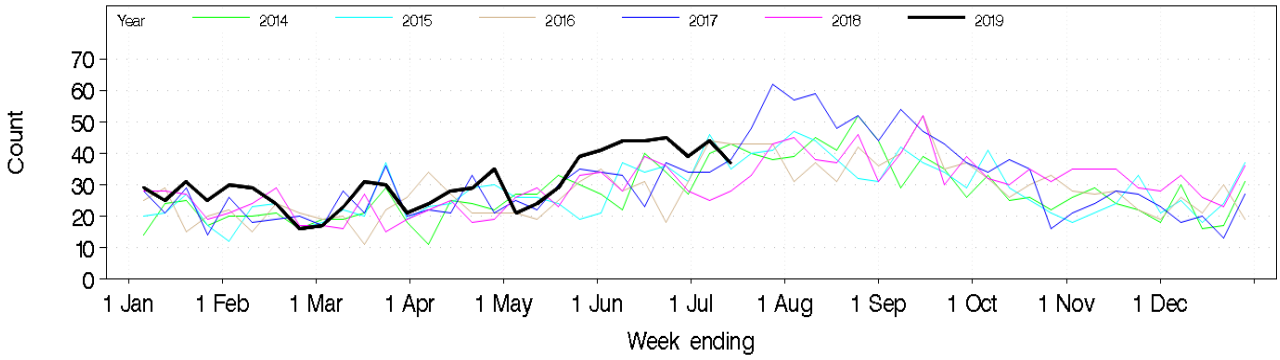


Table 1: Weekly emergency department respiratory illness summary, week ending 14 July 2019.[6]

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)	Increased (827)	**Above (66-169)**	**5-16 years (139) 0-4 years (140) 65+ years (146) 35-64 years (209) 17-34 years (193)**	**Ambulance arrival (160)**	The NSW daily index of increase for ILI presentations was 64.4.
	ILI admissions	Increased (200)	**Above (4–40)**	**0-4 years (21) 65+ years (91) 35-64 years (53) 5-16 years (7) 17-34 years (28)**	**Ambulance arrival (92)**	
	Pneumonia	Decreased (673)	Within (525-688)			
	Pneumonia admissions	Decreased (454)	Within (388–506)			
	Pneumonia and ILI critical care admissions	Decreased (37)	Within (28–43)			
	Asthma	Decreased (375)	Below (437–486)			
	Bronchiolitis	Increased (377)	Within (292–406)			Bronchiolitis is a disease of infants.
	All respiratory illness, fever and unspecified infections	Decreased (9,198)	**Above (6,294–7,592)**	**5-16 years (1234) 0-4 years (3317) 17-34 years (1291) 35-64 years (1472) 65+ years (1884)**	**Admission (2,914) Ambulance arrival (1,917)**	
Ambulance	Breathing problems	Decreased (2,479)	**Above (1,936–2,295)**	**65+ years (1,432) 0-4 years (220)**		

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.

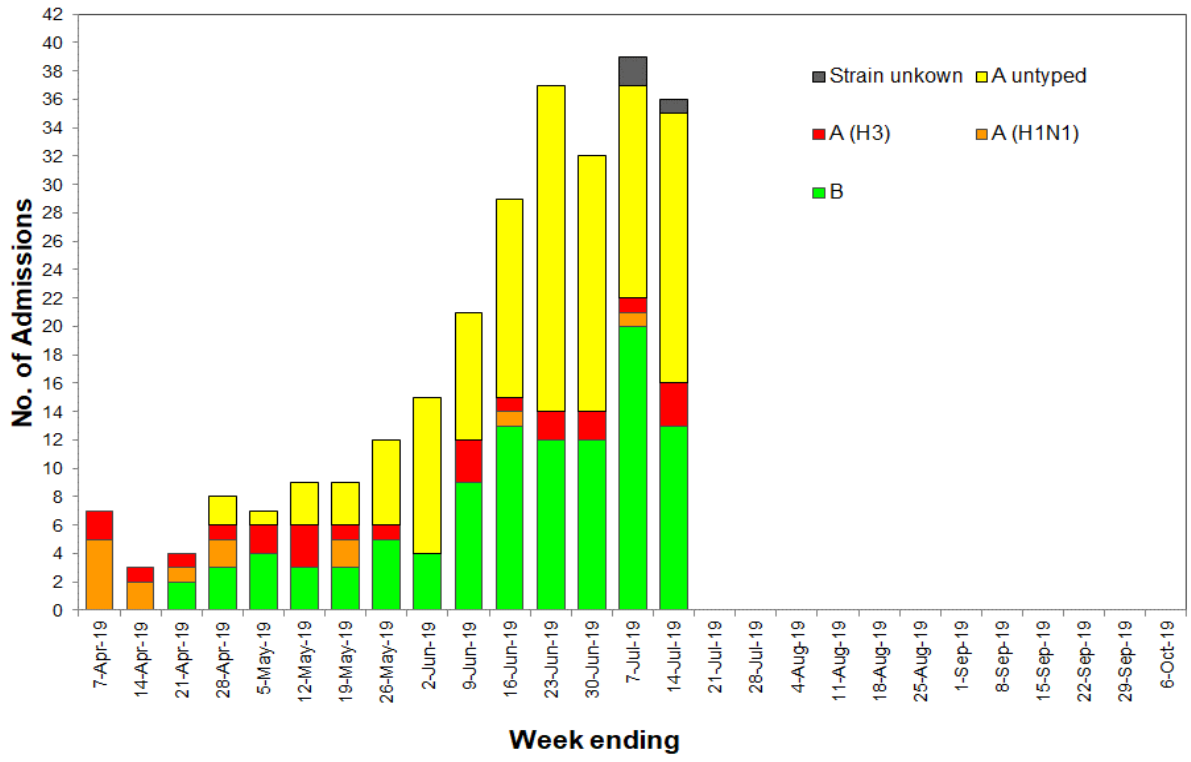
In NSW, three hospitals participate in providing weekly FluCAN data: Westmead Hospital, John Hunter Hospital and the Children's Hospital at Westmead. Westmead Hospital data is not available so far for 2019.

During week 28 there were 36 influenza admissions to NSW sentinel hospitals (Figure 4).

Since 1 April 2019, there have been 268 hospital admissions reported for influenza; 162 due to influenza A (including 14 A(H1N1) and 24 A(H3)), 103 due to influenza B and three were due to co-infection (Figure 4).

Of these admissions for influenza, 246 were paediatric cases (<16 years of age) and 22 were in adults. Four children and one adult have been admitted to a critical care ward.

Figure 4: FluCAN – Confirmed influenza hospital admissions in NSW, 1 April – 14 July, 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 14 July 2019 the number and proportion of respiratory specimens reported by NSW sentinel laboratories [7] which tested positive for influenza A or influenza B decreased but remained higher than expected for this time of year (Table 2, Figure 5). 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. For the year up to week 28, there have been 314,021 respiratory virus tests, 118% more than for the same period in 2018 (144,019 tests).

Overall, 30.3% of tests for respiratory viruses were positive for influenza (Figure 5), lower than the previous week (32.2%). Influenza A strains remained more common than B strains. Detection of

influenza A strains appears to be declining whilst influenza B strains remained steady (Table 2, Figures 5-6).

Further characterisation was available for only 3.1% 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 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 14 July 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%)	527	(3.3%)	81	(0.5%)	15305	(96.2%)	6653	(8.1%)	1300	1023	4207	12526	214	662
Week ending																	
7/07/2019	26582	6212	(23.4%)	158	(2.5%)	31	(0.5%)	6023	(97.0%)	2343	(8.8%)	404	326	1334	3236	93	159
14/07/2019	27430	6029	(22.0%)	139	(2.3%)	46	(0.8%)	5844	(96.9%)	2287	(8.3%)	513	363	1424	3197	117	179

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 14 July 2019.

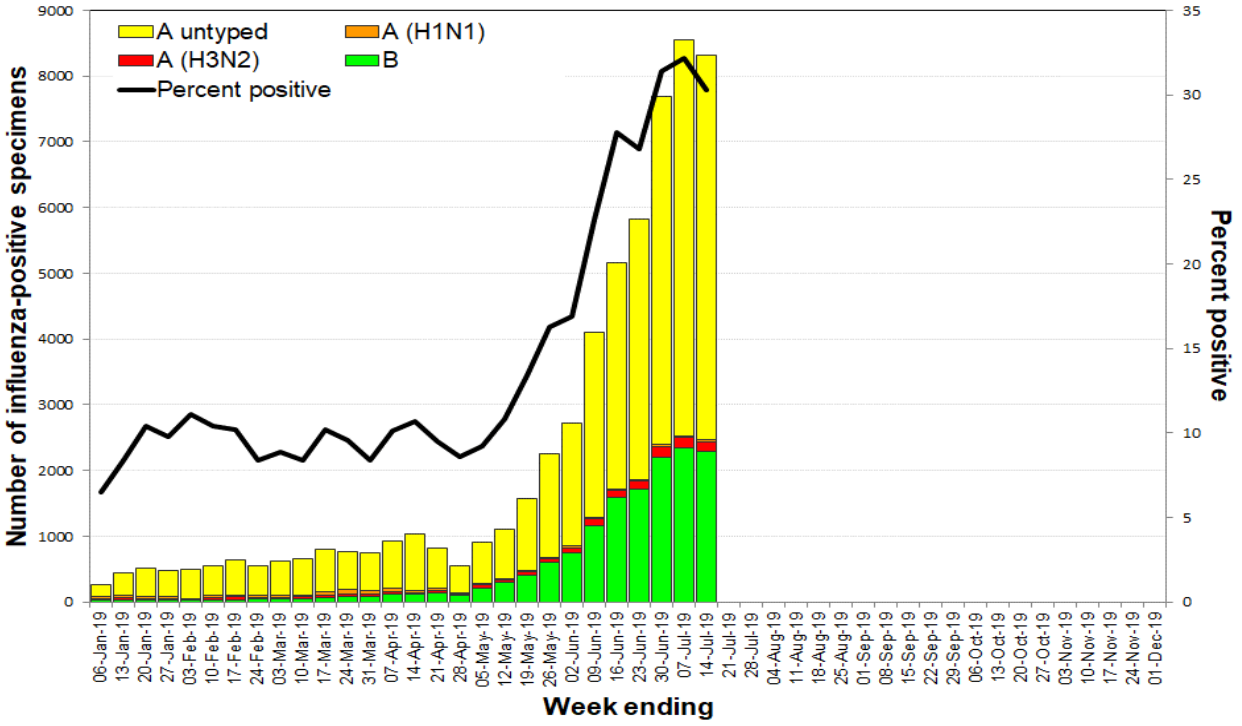
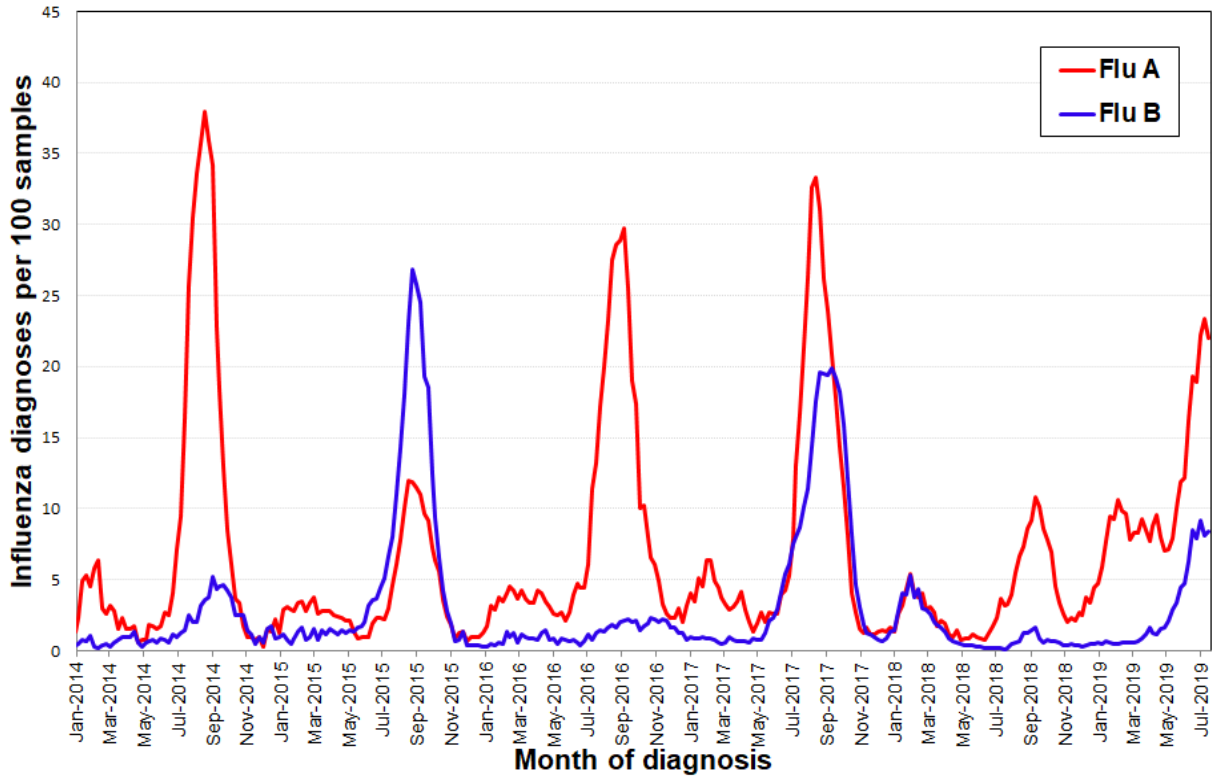


Figure 6: Percentage of laboratory tests positive for influenza A and influenza B by week, 1 January 2014 to 14 July 2019, New South Wales.



Community Surveillance

In the week ending 14 July there were 6418 notifications of influenza, lower than the previous week (6762, revised). There have been 47,822 influenza notifications so far this year.*

Influenza notifications by Local Health District (LHD)

Influenza notifications and notification rates varied across the State with some areas showing signs of declining activity. Notable increases in notifications were seen in Far West, Hunter, South Eastern and South Western Sydney LHDs. Notification rates remain highest in Nepean Blue Mountains, Murrumbidgee and Western Sydney LHDs (Table 3).

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

Local Health District	Week ending 14 Jul 2019		Week ending 07 Jul 2019	
	Number of notifications	Rate per 100 000 population	Number of notifications	Rate per 100 000 population
Central Coast	190	54.52	250	71.74
Far West	20	66.53	6	19.96
Hunter New England	510	54.12	427	45.31
Illawarra Shoalhaven	242	58.16	218	52.39
Mid North Coast	84	37.61	74	33.13
Murrumbidgee	385	129.68	413	139.11
Nepean Blue Mountains	511	132.67	590	153.18
Northern NSW	137	44.64	175	57.02
Northern Sydney	812	85.88	1005	106.29
South Eastern Sydney	772	81.45	664	70.05
South Western Sydney	841	82.45	776	76.08
Southern NSW	97	45.3	104	48.57
Sydney	378	55.05	536	78.06
Western NSW	129	45.48	162	57.12
Western Sydney	1310	127.53	1362	132.59

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 26 influenza outbreaks in institutions reported this week. Twenty-four were in residential care facilities and one each in a hospital and a group home setting. All were due to influenza A except for one influenza B outbreak.

In the year to date there have been 185 laboratory confirmed influenza outbreaks in institutions reported to NSW public health units, including 154 in residential care facilities (Table 4, Figure 7). There have been 171 outbreaks due to influenza A, 11 due to influenza B and three involved both A and B strains.

In the 154 influenza outbreaks affecting residential care facilities, at least 1401 residents were reported to have had ILI symptoms and 183 required hospitalisation. Overall, there have been 38 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 321 courses of oseltamivir to seven residential care facilities, and have provided 3565 courses so far this year.

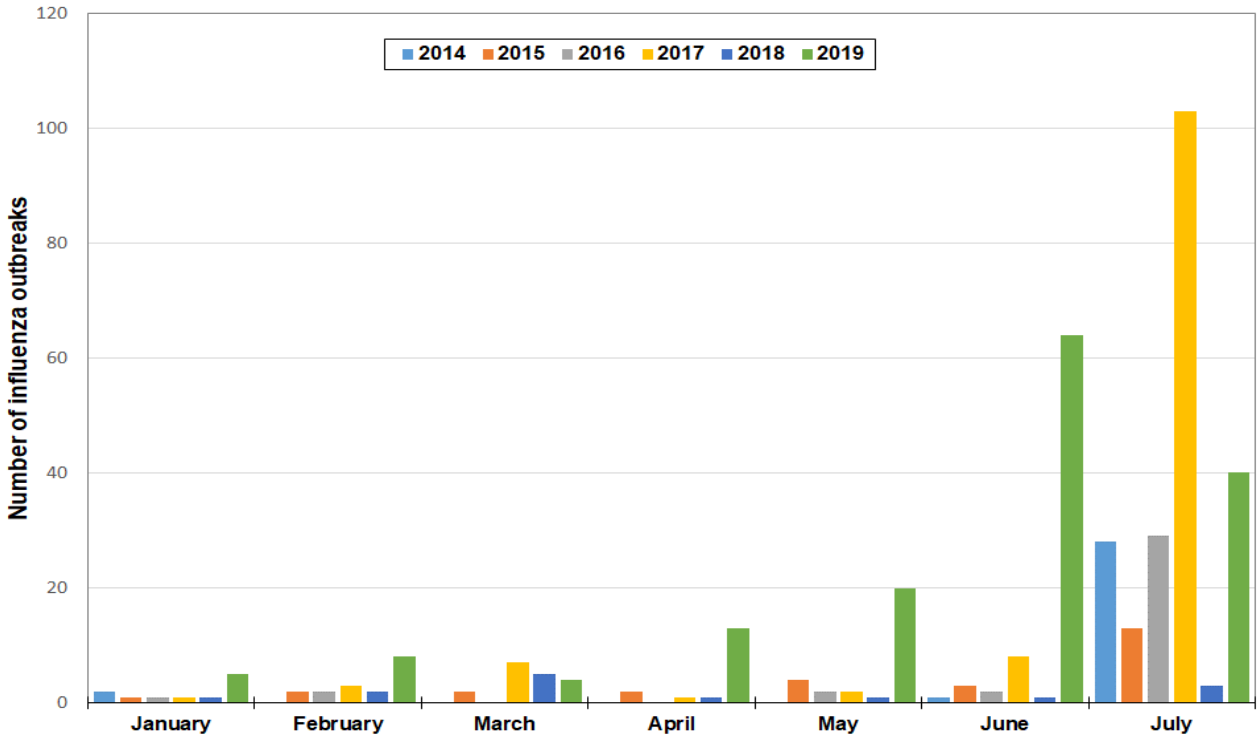
Table 4: Reported influenza outbreaks in NSW residential care facilities, January 2014 to 14 July 2019.

Year	2014	2015	2016	2017	2018	2019*
Number of outbreaks	121	103	252	543	42	154

Note: * Year to date.

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

Figure 7: Reported influenza outbreaks in NSW residential care facilities by month, 2016 to 14 July 2019.



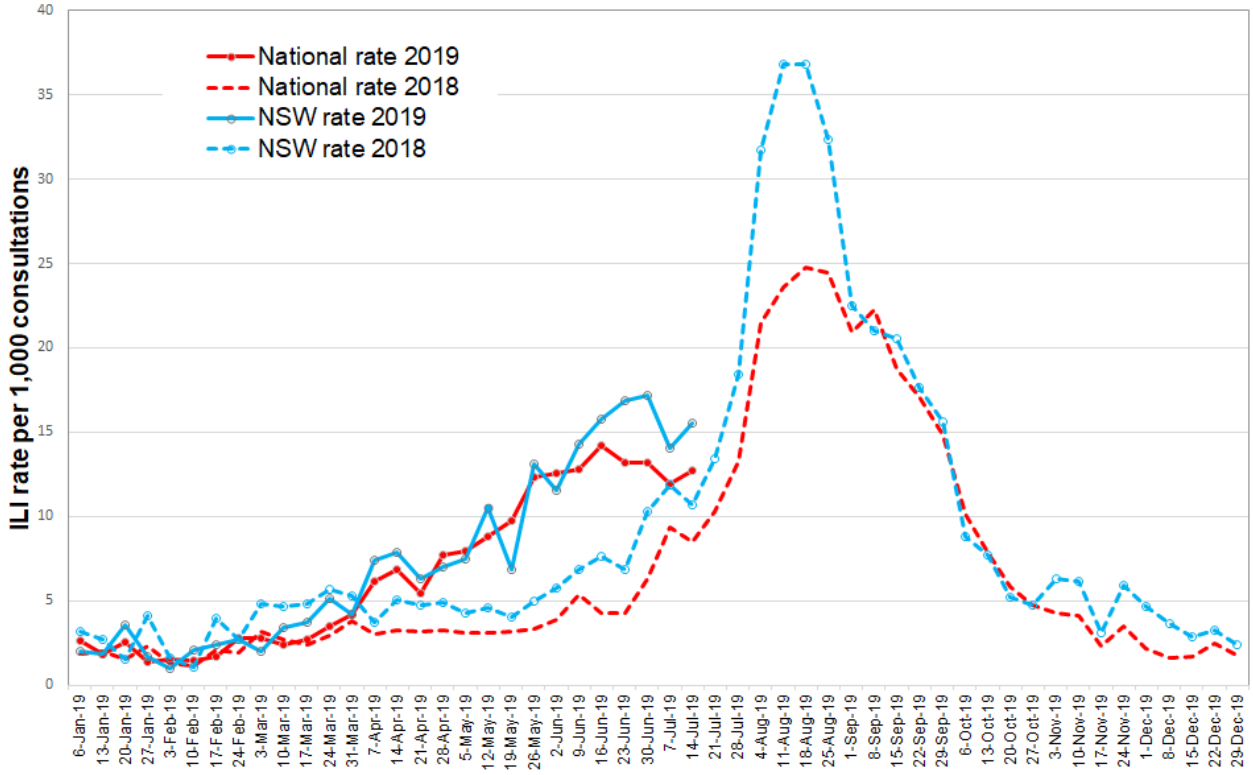
The Australian Sentinel Practices Research Network (ASPREN)

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 28 there were ASPREN reports received from 75 NSW GPs. The reported consultation rate for ILI per 1000 consultations was increased at 15.6 (Figure 8), higher than the previous week (14.0, revised) and 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 8: ASPREN – NSW and National GP ILI rates per 1000 consultations – 2019 to the week ending 14 July, compared to 2018 weekly rates.



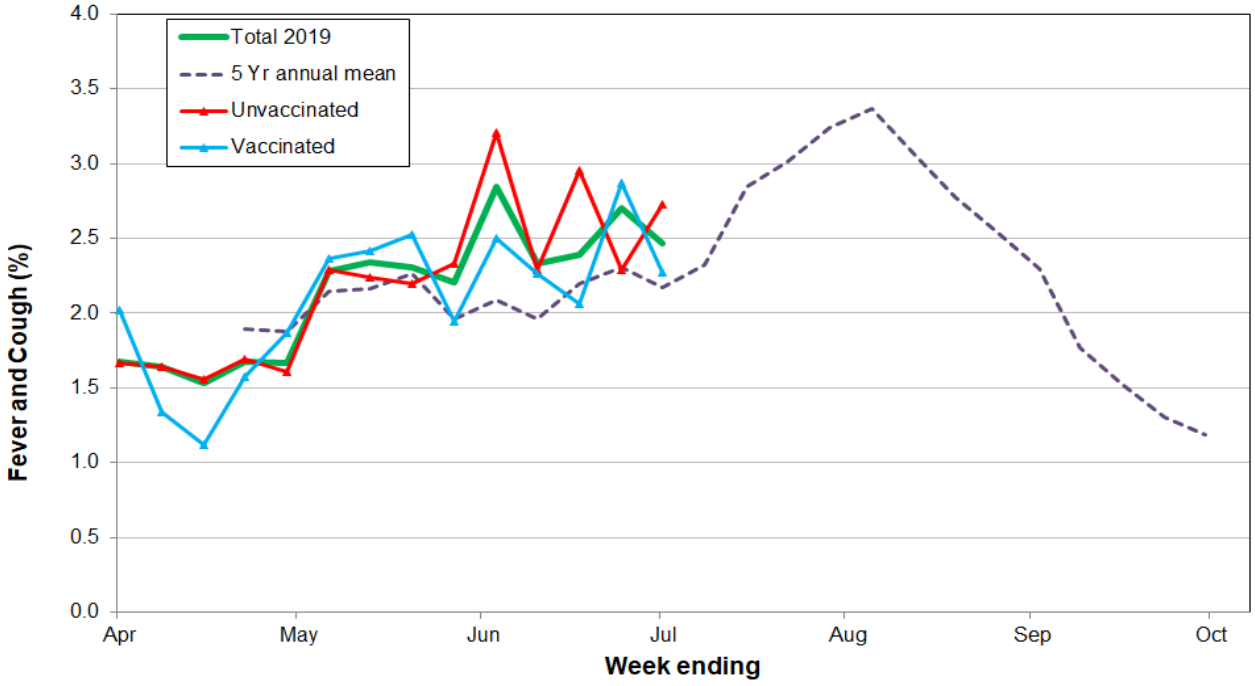
FluTracking.net

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 28 FluTracking received reports for 12,787 people in NSW with the following results:

- 2.5% of respondents reported fever and cough, slightly lower than the previous week (2.7, revised) but higher than the five year annual mean (2.2%) (Figure 9).
- Among respondents who reported being vaccinated for influenza in 2019, 2.3% reported fever and cough compared to 2.7% among unvaccinated respondents (Figure 9).
- 1.6% of respondents reported fever, cough and absence from normal duties, lower than the previous week (1.8%).

Figure 9: FluTracking – Percent of NSW participants reporting fever and cough by vaccination status and week, 2019 to the week ending 14 July, 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.

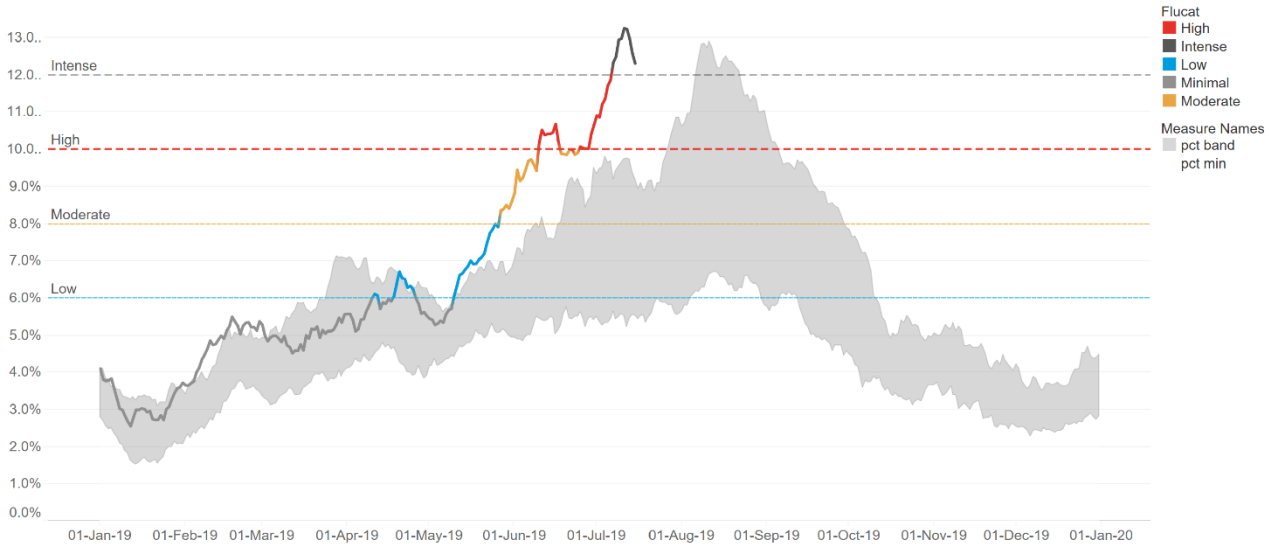
For further information on the project and how to participate, please see the FluTracking website.

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 14 July the number of ILI-related calls to Healthdirect Australia for NSW decreased but remain above the usual range of activity for this time of year and was in the high 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 14 July compared to the weekly range between 2012 and 2017.



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

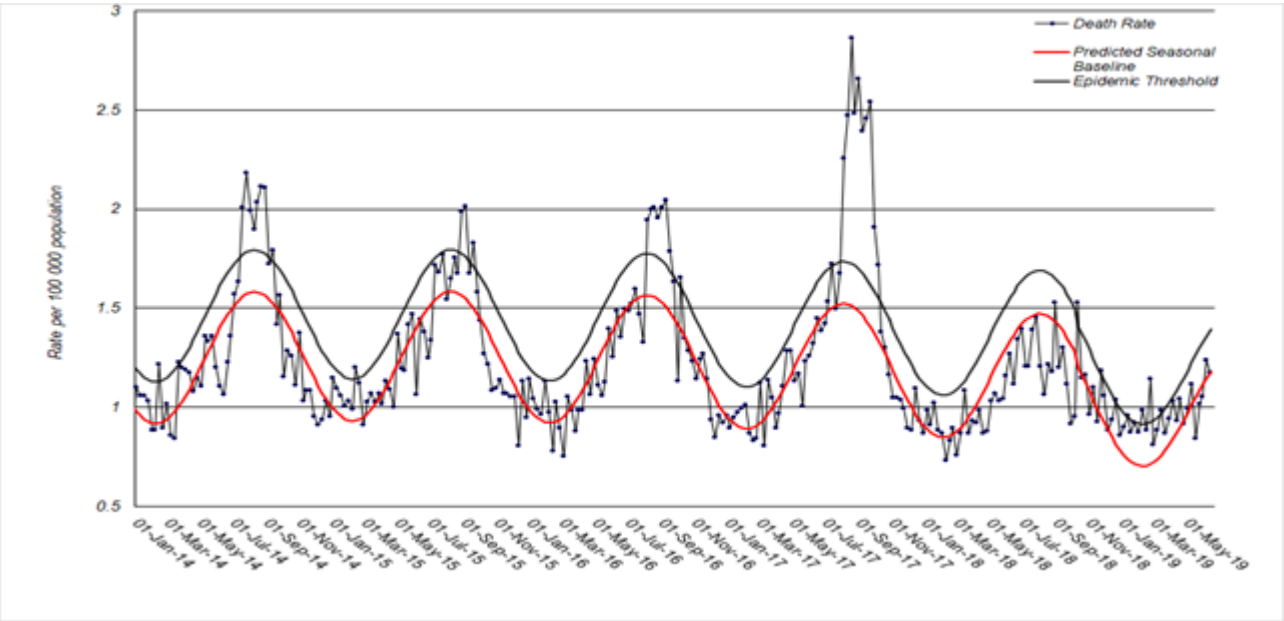
Due to delays in the death registration process, death data for recent weeks are underestimated. For this reason, pneumonia and influenza mortality data from the three most recent weeks are not included.

For the week ending 21 June 2019, the rate of deaths attributed to *pneumonia* or *influenza* was 1.23 per 100,000 NSW population, below the epidemic threshold of 1.42 per 100,000 population (Figure 11).

For the year up to 21 June 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 11).

Among the 24,791 death registrations in 2019, 83 (0.33%) mentioned influenza. An additional 1939 (7.82%) death registrations mentioned pneumonia.

Figure 11: Rate of death registrations classified as *influenza or pneumonia* per 100,000 NSW population, 2014 – 21 June, 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 14 July 2019, there have been 79 influenza deaths identified using Coroner's reports and death registrations with laboratory confirmation. (Table 5). This includes six people who died in this reporting week. All but one newly notified deaths were in people aged 60 years. Two additional deaths have been added this week having received confirmation from the Coroner that influenza was a contributing factor which lead to their death.

Data are subject to change as new information is received.

Table 5: Laboratory-confirmed influenza deaths by age-group and year, NSW, 2017 to 14 July 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	14
65+ years	509	32	65
Total	**559**	**40**	**79**

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 14 July, 2.45 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.5,* with data up to 30 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 8 July 2019 provides data up to 23 June 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 continued to increase or remained elevated in most areas. The 2019 influenza season has 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 temperate South America.
- In Southern Asia and South East Asia, influenza activity was low across reporting countries, except Myanmar where an increase in influenza A(H1N1) was reported.

- In the Caribbean, Central American countries, and the tropical countries of South America, influenza and RSV activity were low in general, with exception of Costa Rica and Panama where influenza A viruses activity was high
- In Northern, 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.