

NSW Health Influenza Surveillance Report

Week 19 Ending 12 May 2013

Influenza Surveillance Forecast:

NSW experienced moderate influenza activity last winter, with the greatest impact in older age-groups largely due to the re-emergence of the influenza A(H3N2) strain. This strain co-circulated with A(H1N1)pdm09 and B strains. The impact of seasonal influenza in NSW this year is expected to be less than in 2012 given that:

- the influenza strains likely to predominate in NSW this year also circulated last season (so many people will have acquired immunity)
- the 2013 influenza vaccine is better matched to these strains than the 2102 vaccine, and
- the uptake of influenza vaccine in NSW this year has been higher than in recent years.

It is important to note, however, that as the influenza A(H3N2) strain is expected to circulate again this year, people in older age-groups will again be at higher risk of infection compared to the years when A(H1N1)pdm09 was the main influenza A strain circulating.

Summary:

For the week ending 12 May 2013, influenza activity was low in NSW with no indication that the influenza season has started.

- [Emergency Department surveillance](#) – the rate of influenza-like illness (ILI) presentations was low and within the usual range for this time of year. Bronchiolitis activity declined this week.
- [Laboratory surveillance](#) – testing data indicated overall influenza activity was low. Rhinovirus was the most common respiratory virus identified by sentinel laboratories.
- [Community illness surveillance](#) – data collected from ASPREN and FluTracking.net indicated low ILI activity in NSW.
- [National and International influenza surveillance](#) – there is a decreasing trend in reports from China of human cases of infection with the novel avian influenza A(H7N9) strain.

About this report:

Health Protection NSW collects and analyses surveillance data on influenza and related respiratory pathogens, and produces regular surveillance reports for the community and health professionals. Surveillance reports are produced weekly reports commencing in May and continuing until the end of the influenza season. Monthly reports are produced throughout the rest of the year.

The influenza surveillance reports include data from a range of surveillance systems and sources concerned with Emergency Department illness surveillance, laboratory (virological) surveillance, and community illness surveillance. Pneumonia and influenza mortality data are also monitored and reported upon periodically.

For further information on influenza see the [NSW Health Influenza website](#).

1. Emergency Department (ED) Surveillance

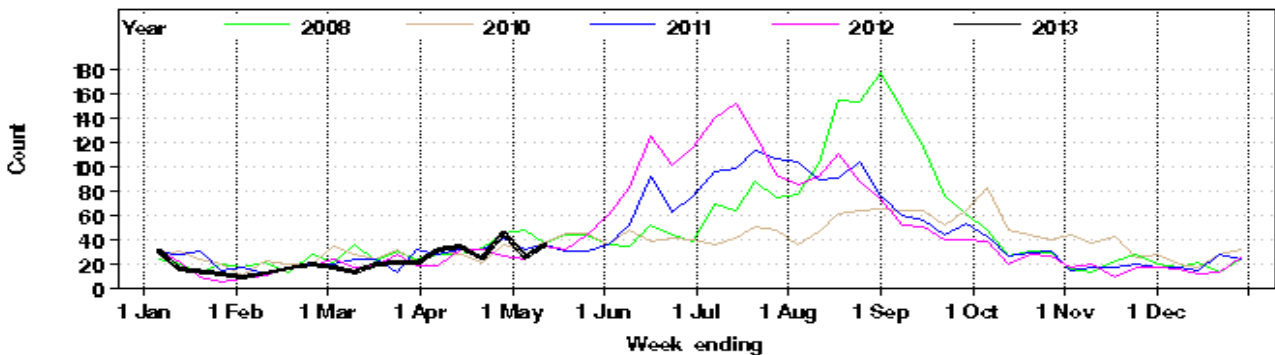
Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) managed by the Centre for Epidemiology and Evidence, NSW Ministry of Health. Data from 59 NSW emergency departments (ED) are included. Comparisons are made with data for the preceding five years. Recent counts are subject to change.

Presentations for influenza-like illness (ILI) and other respiratory illness

The ED surveillance system uses a statistic called the ‘index of increase’ to indicate when presentations are increasing at a statistically significant rate. It accumulates the difference between the previous day’s count of presentations and the average for that weekday over the previous 12 months. An index of increase value of 15 is considered an important signal for the start of the influenza season in NSW as it suggests influenza is circulating widely in the community.

- On 12 May 2013, the index of increase for influenza-like illness presentation was 10.3, below the threshold of 15 and suggested that the influenza season had not commenced in NSW.
- The rate of ILI presentations increased to 1.1 cases per 1000 presentations and was at the lower end of the usual range for this time of year (Figure 1 and Table 1).
- ILI and pneumonia admissions to critical care wards decreased significantly this week and have returned to the usual range for this time of year (Figure 2 and Table 1).
- The number of children presenting with bronchiolitis decreased and was within the usual range for this time of year (Figure 3 and Table 1).

Figure 1: Total weekly counts of ED visits for influenza-like illness, from January – 12 May 2013 (black line), compared with each of the 5 previous years (coloured lines).*



* **Note:** Excludes 2009 data to enable comparison of 2013 data with data from previous non-pandemic years.

Figure 2: Total weekly counts of ED visits for pneumonia and ILI admitted to a critical care ward, from January – 12 May 2013 (black line), compared with each of the 5 previous years (coloured lines).

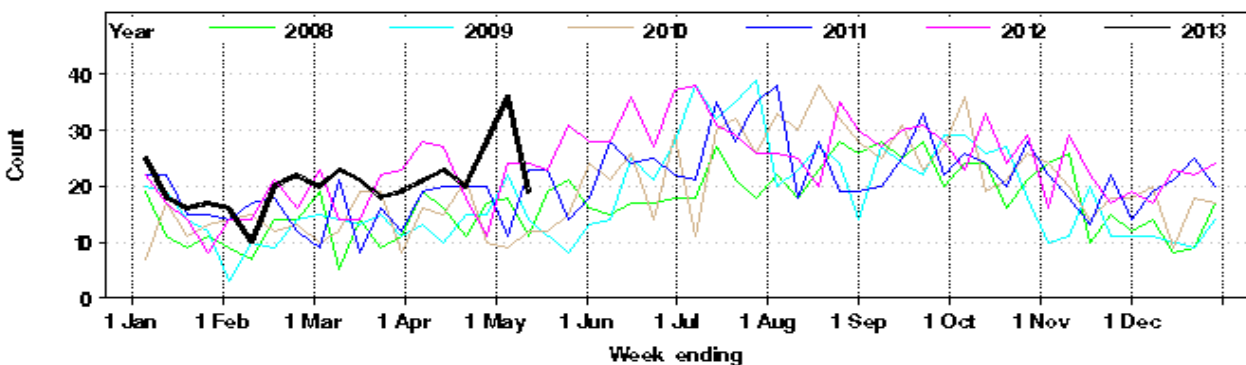


Figure 3: Total weekly counts of ED visits for bronchiolitis, from January – 12 May 2013 (black line), compared with each of the 5 previous years (coloured lines).

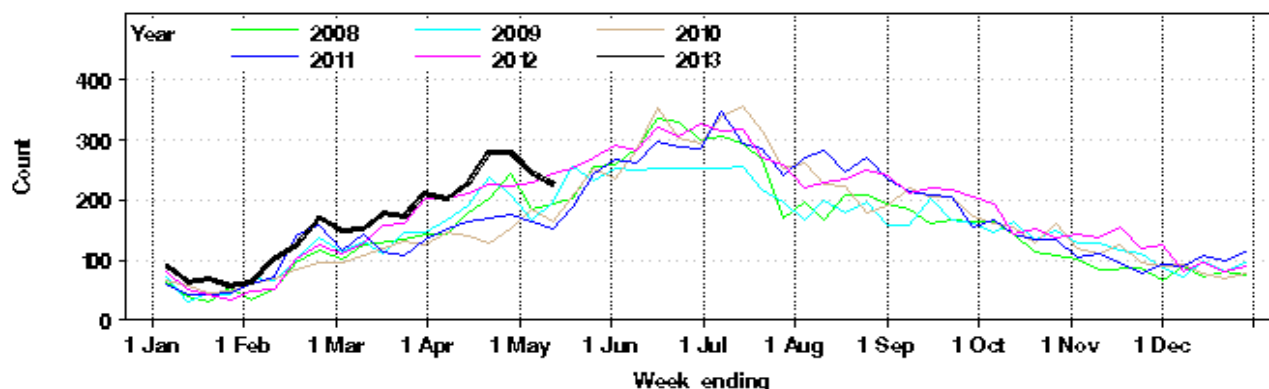


Table 1: Weekly ED and Ambulance Respiratory Activity Summary. Includes data from 59 NSW EDs and the Sydney Ambulance Division. *

Data source	Diagnosis or problem category	Trend since last week	Overall comparison with usual range for time of year	Statistically significant age groups (if any)	Statistically significant local increase (if any)	Action other than this report (if any)	Comment
ED presentations, 59 NSW hospitals*	Influenza like illness (ILI)	Increased	Usual				
	Pneumonia	Decreased	Usual				
	Pneumonia and ILI admissions	Decreased	Usual				
	Pneumonia and ILI critical care admissions	Decreased	Usual				
	Bronchiolitis	Decreased	Usual				
	Respiratory, fever and unspecified infections	Increased	Usual				
	Asthma	Increased	Usual				
	Total presentations	Increased	Usual				1.1% lower than 2012.
Ambulance calls, Sydney region	Breathing problems	Increased	Usual				

* **Notes on Table 1:** Statistically significant increases are shown in bold. Recent activity counts are subject to change. This is a routine general report for information on respiratory activity and is additional to public health situation reports that advise of unusual increases in activity in particular provisional ED diagnosis groupings or Ambulance problem categories.

2. Laboratory Surveillance

For the week ending 12 May 2013, the number and proportion of respiratory specimens reported by NSW sentinel laboratories which tested positive for influenza were low (Table 2 and Figure 4). Rhinovirus was the most common respiratory virus identified by NSW sentinel laboratories.

A total of 784 tests for respiratory viruses were reported with only 16 specimens (2.0%) testing positive for influenza viruses. Influenza A(H3N2) predominated but influenza A(pH1N1) and influenza B were also detected.

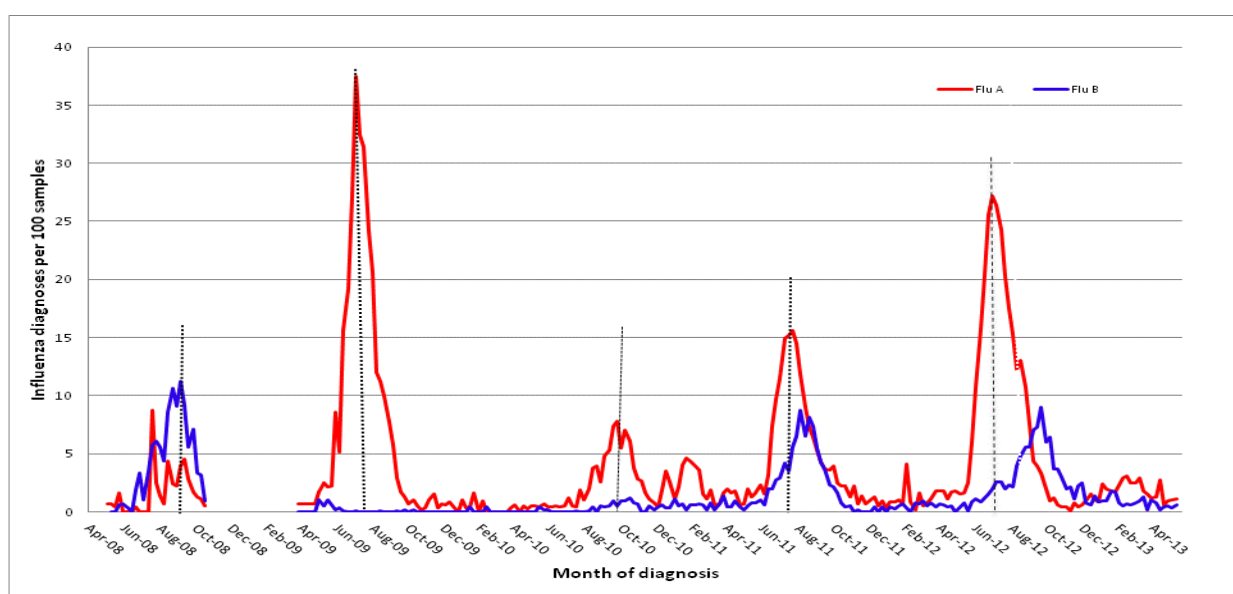
An outbreak of influenza B was reported this week from an aged care facility. The three residents (33%) that tested positive had all received this year's influenza vaccine.

Table 2: Summary of testing for influenza and other respiratory viruses at NSW laboratories, 1 January to 12 May 2013. *

Month ending	Total Tests	Influenza A		A(H3N2)		A(pH1N1)		Influenza B		Adeno.	Parainf. 1, 2 & 3	RSV	Rhino.	Entero.	HMPV***
		Total	(%)	Total	(%Flu A) **	Total	(%Flu A) **	Total	(%)						
01/02/2013*	2141	44	(2.1%)	13	(29.5%)	14	(31.8%)	26	(1.2%)	68	87	81	328	37	59
01/03/2013	2199	60	(2.7%)	17	(28.3%)	20	(33.3%)	15	(0.7%)	55	41	119	452	29	31
29/03/2013	2472	47	(1.9%)	9	(19.1%)	12	(25.5%)	21	(0.8%)	82	59	333	488	53	33
26/04/2013	3039	39	(1.3%)	13	(33.3%)	11	(28.2%)	10	(0.3%)	92	188	599	586	61	54
Week ending															
05/05/2013	790	8	(1.0%)	3	(37.5%)	4	(50.0%)	2	(0.3%)	23	15	176	133	12	13
12/05/2013	784	9	(1.1%)	3	(33.3%)	1	(11.1%)	5	(0.6%)	19	29	117	147	6	18

** Subset of influenza A positive tests. Not all influenza A samples are typed; *** HMPV = Human metapneumovirus

Figure 4: Percent of respiratory samples positive for influenza A or influenza B, 1 January 2008 – 12 May 2013, New South Wales. *



Note: Laboratory surveillance data is provided by laboratories on a weekly basis and includes point-of-care tests as of 10 August 2012. Serological diagnoses are not included.

Source: Participating sentinel laboratories include the following: South Eastern Area Laboratory Services, Institute of Clinical Pathology and Medical Research, The Children’s Hospital at Westmead, Sydney South West Pathology Service, Pacific Laboratory Medicine Service, Royal Prince Alfred Hospital, Hunter Area Pathology Service, Nepean Hospital Pathology [no data from Oct 2010 to June 2011], Douglas Hanley Moir Pathology, VDRLab [data from 5 March 2010], Laverty Pathology [data from 1 April 2010 to February 2011] and SydPath (St Vincent’s) Pathology [data since Nov 2010].

3. Community Illness Surveillance

The Australian Sentinel Practices Research Network (ASPREN)

ASPREN is a network of sentinel general practitioners (GPs) run through the RACGP and University of Adelaide that has collected de-identified information on influenza like illness and other conditions seen in general practice since 1991. GP’s participating in the program report on the proportion of patients presenting with an ILI. The number of GP’s participating on a weekly basis may vary.

- For the week ending 12 May, there were 22 ASPREN reports received from NSW GP's. The overall consultation rate for ILI was low at 4.3 per 1000 consultations, consistent with inter-seasonal reporting.

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

FluTracking.net

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

- For the week ending 12 May, FluTracking received reports for 4554 people in NSW. Fever and cough was reported by only 2% of respondents (Figure 5), with 1% of respondents reporting fever, cough and absence from normal duties.
- Low levels of influenza-like illness activity were also reported from all other states and territories.

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

4. National and International Influenza Surveillance

Avian influenza A(H7N9) in China

On 9 May, the World Health Organization (WHO) reported in its [weekly update](#) that there had been 131 cases of human infection caused by the avian influenza A(H7N9) virus, with 32 deaths. The report also showed an epicurve of cases with known onset dates which suggests the outbreak peaked in April and is now in decline. The decline may reflect an impact of China's control measures, including closure of live bird markets in affected areas, or it may simply be following the seasonal pattern that is seen with avian influenza A(H5N1) and human influenza strains.

WHO has also recently reported an [updated risk assessment for avian influenza A\(H7N9\)](#). In it they advise that although two family clusters have been reported, there is no evidence of sustained human-to-human transmission, and no indication that international spread has occurred.

An infected person who travels to another country could spread the infection. However, as the virus does not appear to cause sustained human-to-human transmission, extensive community spread is unlikely. If transmissibility were to increase, then the risk of spread would also increase.

NSW Health is following this situation closely and coordinating with national and state disease control partners to make a knowledgeable public health risk assessment and provide appropriate advice, particularly to clinicians.

NSW influenza reference laboratories have developed diagnostic tests for the influenza A(H7N9) strain. Any suspected cases identified in NSW should be reported to your local public health unit on **1300 066 055**.

Regular updates are posted at the [WHO Avian influenza A\(H7N9\) website](#).

Useful influenza surveillance links

- Follow the link for the [Australian Influenza Surveillance Reports](#) which provide the latest information on national influenza activity.
- Follow the link for the [World Health Organization Global Influenza Programme](#).
- Follow the link for Australia's [WHO Collaborating Centre for Reference and Research on Influenza](#), part of an international network of centres analysing influenza viruses currently circulating in the human population in different countries around the world. The centre also provides information on the [current vaccine recommendations](#) for influenza.