

Influenza Weekly Epidemiology Report, NSW

14 to 20 May 2011

Produced by: Population Health Division, NSW Health.

This report describes the surveillance data collected for influenza and other respiratory pathogens, collected by NSW Health during the reporting period to identify changing trends in disease activity. This includes data collected from Emergency Department presentations data, sentinel laboratory testing data, and death registry data. Links are also provided at the end of the report to national and international influenza surveillance reports.

Information on the number of laboratory-confirmed influenza cases notified to NSW Health is available at the following website: <http://www.health.nsw.gov.au/data/diseases/influenza.asp>. Notified cases are likely to represent only a small proportion of the true number of influenza cases in the community as most cases are not confirmed by laboratory testing.

For weekly communicable disease surveillance updates refer to the NSW Health Communicable Disease Weekly Report at <http://www.health.nsw.gov.au/publichealth/infectious/index.asp>.

1. Summary

For the week ending 20 May 2011:

- The rate of influenza-like illness (ILI) presentations to selected emergency departments (EDs) remained low and was within the usual range for this time of year.
- Laboratory data indicated overall influenza activity was low, but there was some evidence of co-circulation of influenza A(H1N1)2009, influenza A(H3N2), and influenza B.
- Two cases with influenza A were admitted to intensive care units (ICU).
- Respiratory syncytial virus (RSV) was the most common respiratory virus identified by sentinel laboratories but bronchiolitis presentations to EDs were within the usual range.
- Death registration data for "Pneumonia or influenza" remained below the seasonal threshold.

2. Emergency Department (ED) presentations

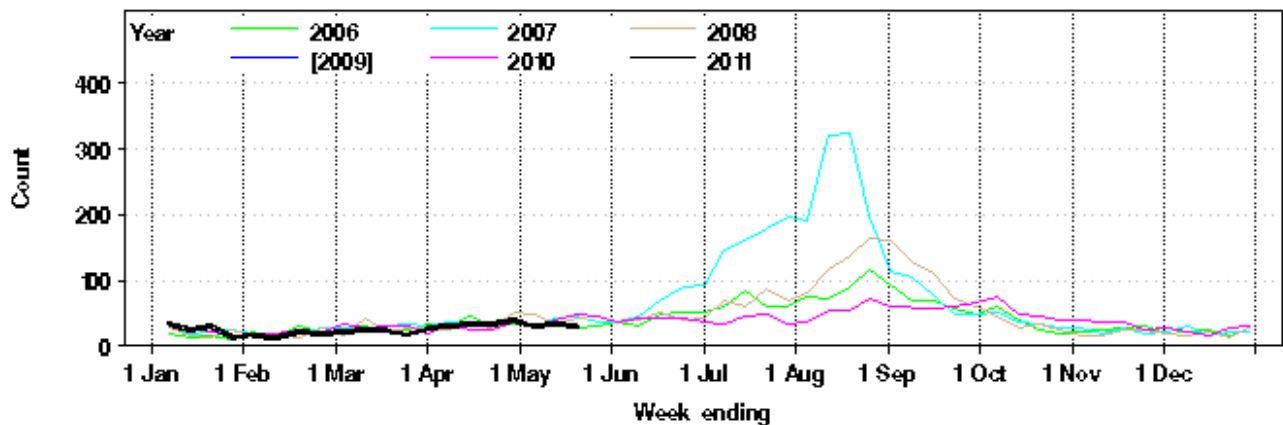
Data from 56 NSW emergency departments are included. Comparisons are made with data for the preceding six years. Recent counts are subject to change.

For the week ending 20 May 2011:

- The total count of ILI presentations to EDs was low, equal to a rate of 1.0 cases per 1000 presentations (Figure 1). This is similar to the previous week (rate 1.1 per 1000 presentations) and within the usual range seen in previous years. A higher proportion of presentations were reported in the age-group 15 to 54 years (77%).
- Bronchiolitis presentations were within the normal range for this time of year (Figure 2), equal to a rate of 5.2 per 1000 presentations. Bronchiolitis presentations to EDs tend to increase around this time each year, and usually reflect increasing circulation of RSV infection in the community.
- Pneumonia and ILI admissions to critical care units showed a decrease however remains slightly above the usual range seen at this time of year (Figure 3 & Table 1).

Figure 1: Comparison of weekly influenza-like illness presentations to NSW emergency departments, 2006-2011.

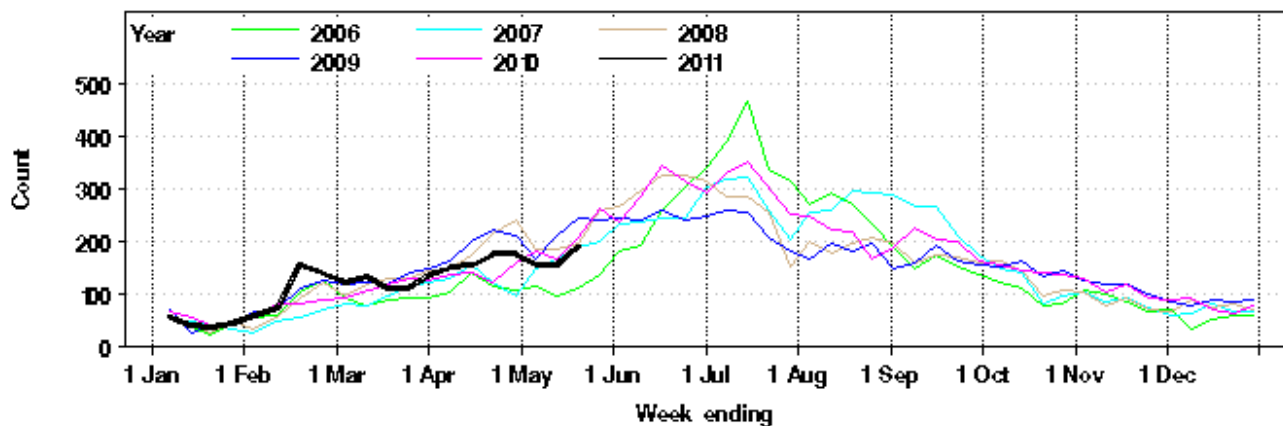
Total 1-week counts



Note: Excludes data from 2009 to enable easier comparison of 2011 data with data from previous non-pandemic years. Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the Centre for Epidemiology and Research, NSW Health Department.

Figure 2: Comparison of weekly bronchiolitis presentations to NSW emergency departments, 2006-2011.

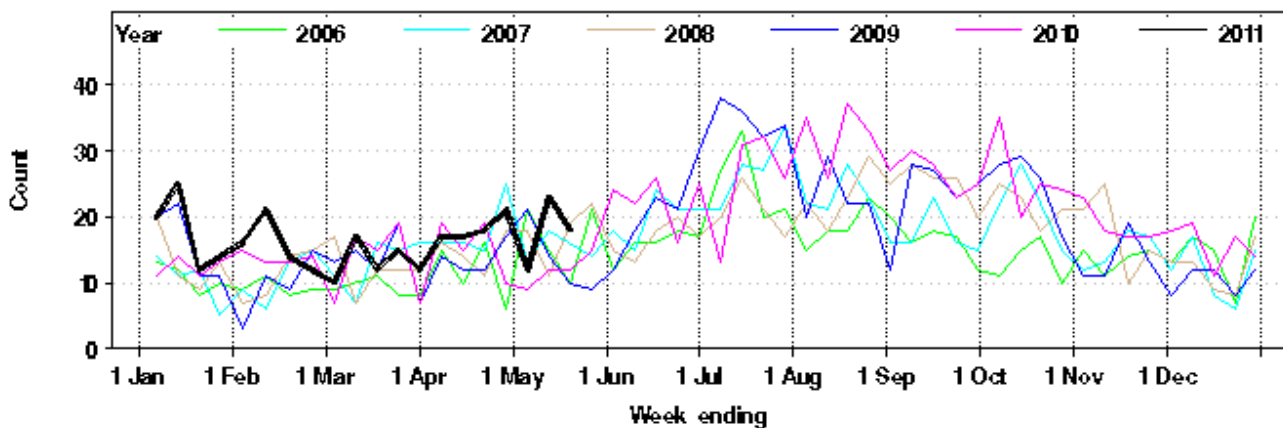
Total 1-week counts



Note: As for Figure 1, although includes 2009

Figure 3: Comparison of weekly admissions to hospital critical care units for influenza-like-illness and pneumonia, 2006-2011.

Total 1-week counts



Note: As for Figure 1, although includes 2009

Table 1: Weekly Emergency Department and Ambulance Respiratory Activity Summary

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, 56 NSW hospitals	Influenza like illness (ILI)	Steady	Usual				
	Pneumonia	Increased	Usual				
	Pneumonia and ILI admissions	Increased	Usual		Broken Hill		Count is low (4 visits). Will be monitored to see if it increases.
	Pneumonia and ILI critical care admissions	Decreased	Usual		Liverpool		Low count and decreasing.
	Bronchiolitis	Increased	Usual				
	Respiratory, fever and unspecified infections	Increased	Usual		Mt Druitt Hospital Goulburn Base Hospital		Increase confined to non-admitted, low urgency patients. No action.
	Total presentations	Increased	Same as the same week last year				
Ambulance calls, Sydney region	Breathing problems	Unavailable	Unavailable				

Notes on Table 1.

- (1) Statistically significant increases are shown in **bold**.
- (2) This report summarises activity from 56 Emergency Departments (EDs) across NSW and the Sydney Ambulance Operations Region. It provides information on general respiratory activity. Recent activity counts are subject to change.
- (3) 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. It is prepared by the Centre for Epidemiology and Research.

3. Laboratory testing for influenza

For week ending 20 May 2011:

- A total of 747 tests for respiratory viruses were performed at sentinel NSW laboratories and the results are presented in Table 2.
- Twelve specimens tested positive for influenza A – nine of these tested positive for A(H1N1)2009. The remainder were negative for A(H1N1)2009 and are presumed to be A(H3N2).
- Specimens from four cases tested positive for influenza B.
- RSV was the most common respiratory virus identified by laboratories, which is usual for this time of year.
- An outbreak of RSV was reported in an aged care facility in Sydney’s west. A total of 17 residents and 8 staff were affected.
- The overall rate of laboratory tests positive for influenza remained low (2.1%) and was within the usual range for this time of year (Figure 4).

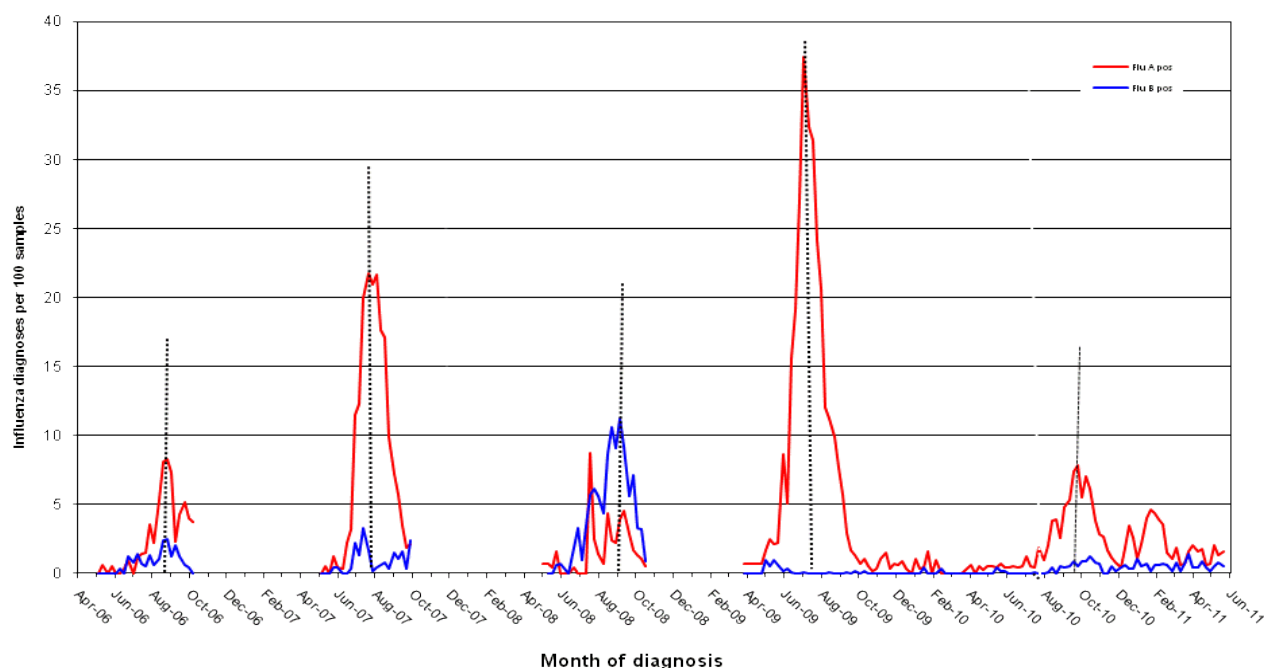
Table 2: Summary of testing for respiratory viruses and influenza at sentinel NSW laboratories, 1 January to 20 May 2011.

Four week period ending	Virology specimens tested	Influenza A (total pos) (%)	H1N1** (total pos) (%)	Influenza B (total pos) (%)	Adenovirus	Parainfluenza 1, 2 & 3	RSV	Rhinovirus	HMPV***
27/01/2011	1572	57 (3.7%)	36 (64%)	6 (0.4%)	22	50	36	97	20
25/02/2011	1842	43 (2.3%)	32 (74%)	9 (0.5%)	20	21	69	180	8
*01/04/2011	2697	36 (1.3%)	26 (72%)	18 (0.7%)	14	40	184	235	13
29/04/2011	2292	27 (1.1%)	14 (52%)	12 (0.5%)	22	36	288	174	29
Week ending									
06/05/2011	441	9 (2.0%)	6 (66%)	5 (1.3%)	10	8	66	31	2
13/05/2011	626	8 (1.3%)	3 (38%)	5 (0.8%)	6	12	80	55	3
20/05/2011	747	12 (1.6%)	9 (75%)	4 (0.5%)	11	15	106	67	3

* Equals a five week period ** Subset of influenza A cases *** HMPV = Human metapneumovirus

Note: Data is provided by laboratories on a weekly basis. Excludes point of care tests. Influenza laboratory diagnoses using virology are reported by South Eastern Area Laboratory Services (SEALS), Institute of Clinical Pathology and Medical Research (ICPMR), The Children's Hospital at Westmead (CHW), South West Area Pathology Services (SWAPS), Pacific Laboratory Medicine Services (PaLMS), Royal Prince Alfred Hospital (RPAH), Hunter Area Pathology Services (HAPS), St Vincents (SydPath), Douglas Hanley Moir (DHM) and VDRLab .

Figure 4: Percent of laboratory tests positive for influenza A and influenza B, 1 January 2006 – 20 May 2011, New South Wales.



Note: Data is provided by laboratories on a weekly basis. Excludes point of care tests. Influenza laboratory diagnoses using virology are reported by South Eastern Area Laboratory Services (SEALS), Institute of Clinical Pathology and Medical Research (ICPMR), The Children's Hospital at Westmead (CHW), South West Area Pathology Services (SWAPS), Pacific Laboratory Medicine Services (PaLMS), Royal Prince Alfred Hospital (RPAH), Hunter Area Pathology Services (HAPS), St Vincents (SydPath) from 4 Dec 2010, Nepean- up to 1 October, Douglas Hanley Moir (DHM) from 21 August , VDRLab from 5 March 2010 , Lavery and Nepean from 1 April 2010 AND St Vincent's November 2010. **Note: No data received from Nepean since the month of December and Lavery discontinued testing for influenza from 18 February.**

4. Deaths with pneumonia or influenza reported on the death certificate

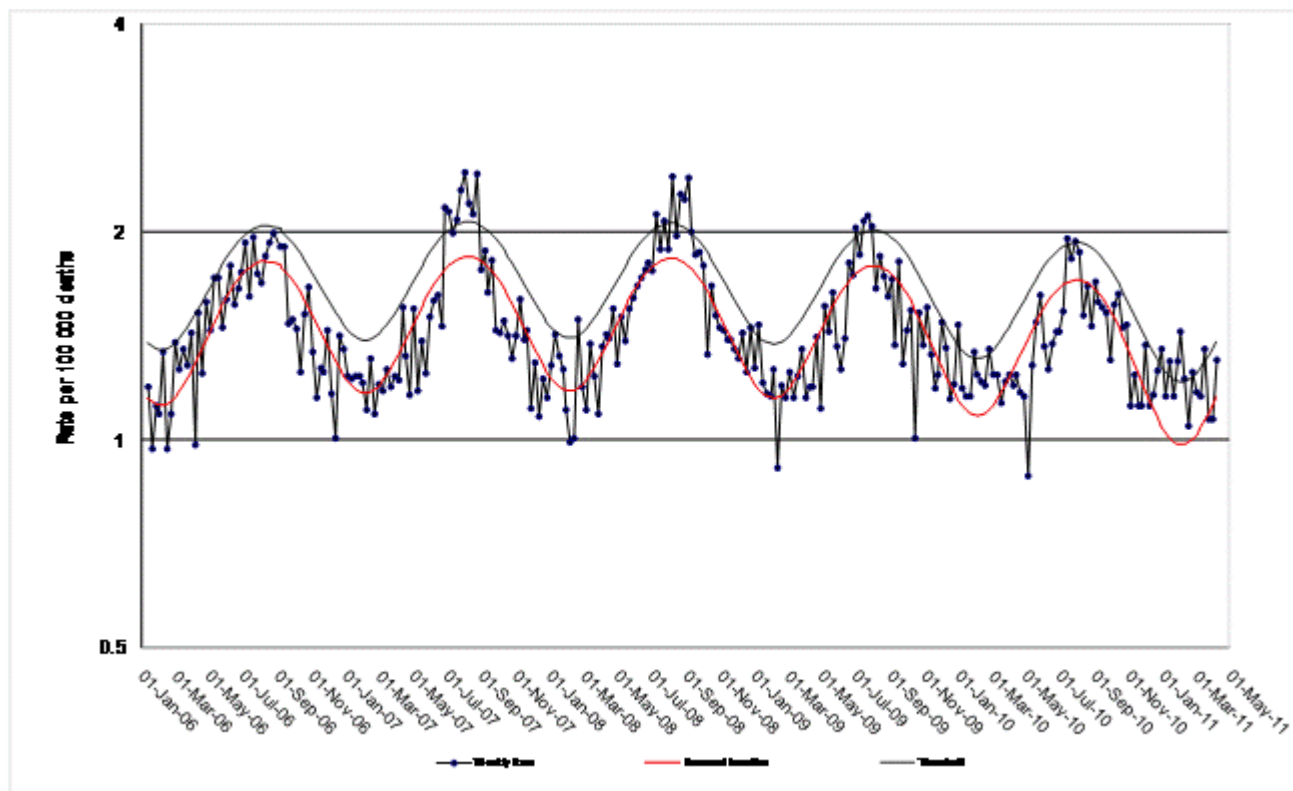
Deaths registration data is routinely reviewed for deaths attributed to pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

The predicted seasonal baseline estimates the predicted rate of influenza or pneumonia 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.

For week ending 29 April:

- The most recent death registration data available showed that as of 29 April 2011 there were 1.0 pneumonia or influenza deaths per 100,000 NSW population, below the seasonal threshold of 1.5 per 100,000 population (Figure 5).*
- NSW public health units also reported no deaths among notified influenza cases.

Figure 5: Rate of deaths classified as influenza and pneumonia (by NSW Registered Death Certificates) per 100,000 NSW population, 2006-2011.*



Source: NSW Registry of Births, Deaths and Marriages.

* Notes on interpreting death data:

- (1) The number of deaths mentioning "Pneumonia or influenza" is reported as a rate per 100,000 NSW population. Using the NSW population provides a more stable and reliable denominator than deaths from all causes. This is because pneumonia and influenza are known to contribute to increases in deaths from non-respiratory illnesses, such as deaths due to ischaemic heart disease. As the number of these deaths will increase with rises in influenza activity, the actual effect of influenza on mortality rates will be obscured if all-cause mortality is used as the denominator. This limitation is avoided by using the NSW population, which is relatively constant throughout the year, as the denominator.
- (2) Deaths referred to a coroner during the reporting period may not be available for analysis. Deaths in younger people may be more likely to require a coronial inquest. Therefore influenza-related deaths in younger people may be under-represented in these data.

5. National and International Influenza Surveillance Links

For the latest information on national influenza activity please see the Australian Influenza Surveillance Reports at the following website:

<http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-ozflu-2011.htm>

For the latest information on international influenza activity please see the World Health Organization Influenza Updates at the following website:

<http://www.who.int/csr/disease/influenza/en/index.html>