

Influenza Monthly Epidemiology Report, NSW

January 2013

This report describes the surveillance for influenza and other respiratory pathogens, undertaken by NSW Health to date. This includes data from a range of surveillance systems.

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

1. Summary

In January 2013:

- The rate of influenza-like illness (ILI) presentations to selected emergency departments was low and slightly above the normal range expected for January
- 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. The number of influenza cases is higher than expected for this time of year.
- Rhinovirus was the most common respiratory virus identified by sentinel laboratories.

2. Emergency Department (ED) presentations

Data from 59 NSW emergency departments are included. Comparisons are made with data for the preceding six years. Recent counts are subject to change.

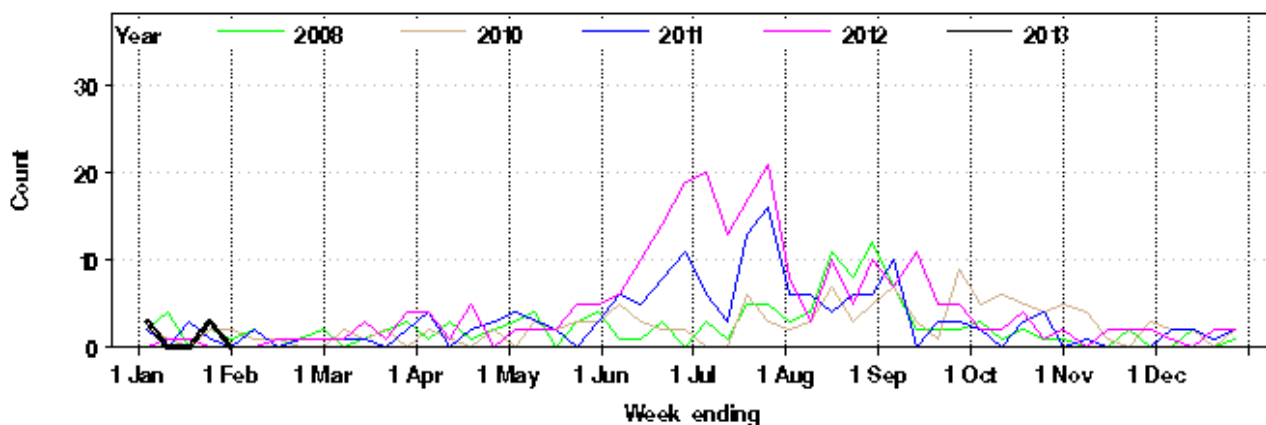
Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) managed by the Centre for Epidemiology and Evidence, NSW Ministry of Health.

Presentations for influenza-like illness

- In January 2013 there were 92 presentations with influenza-like illness (rate 0.5 per 1,000 presentations) (Figure 1). The majority of presentations (35) occurred in the first week of January.
This is higher than the previous month (December – 67 presentations, rate 0.4 per 1,000 presentations), and higher than the count of 76 (rate 0.4 per 1,000 presentations) for the month of January in 2012 and is slightly above the historical average for January.
- Total admissions from ED to critical care units for influenza-like illness and pneumonia were within the usual range for this time of year, except for the fourth week of January when they were above the usual range for this time of year (Figure 2).
- Total ED presentations for bronchiolitis were slightly above the usual range for this time of year (Figure 3).

Figure 1: Total weekly counts of Emergency Department visits for influenza-like illness, from January – February 2013 (black line), compared with each of the 5 previous years (coloured lines), for 59 NSW hospitals.*

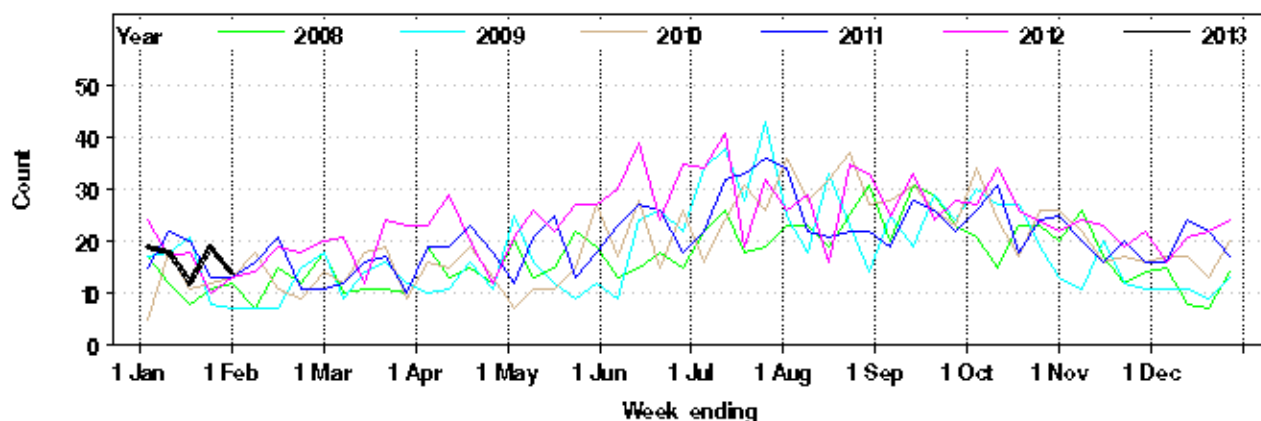
Total 1-week counts



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

Figure 2: Total weekly counts of Emergency Department visits for pneumonia and influenza-like illness, which were subsequently admitted to a critical care ward, from January – February 2013 (black line), compared with each of the 5 previous years (coloured lines), for 59 NSW hospitals.

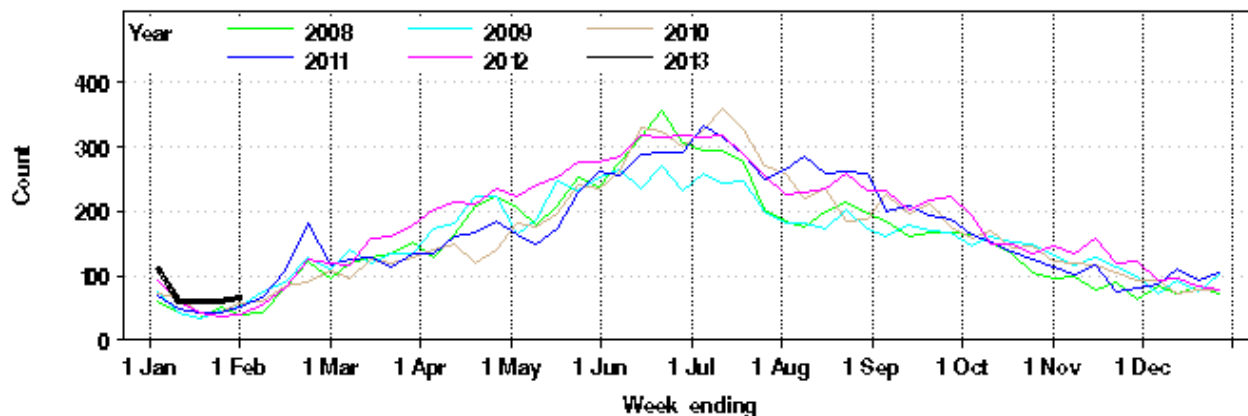
Total 1-week counts



Note: As for Figure 1, although includes 2009

Figure 3: Total weekly counts of Emergency Department visits for pneumonia and influenza-like illness, which were subsequently admitted to a critical care ward, from January – February 2013 (black line), compared with each of the 5 previous years (coloured lines), for 59 NSW hospitals.

Total 1-week counts



Note: As for Figure 1, although includes 2009

3. Laboratory testing summary for influenza

In January 2013:

- 2,141 tests for respiratory viruses were performed at sentinel NSW laboratories (Table 1).
- 44 specimens tested positive for influenza A – 13 of these have tested positive for A(H3N2), 14 tested positive for influenza A(pH1N1). The remainder tested negative to influenza A(pH1N1) and are assumed to be A(H3N2) (Table 1, Figure 4).
- 26 cases of influenza B were reported (Table 1, Figure 4).
- the number of positive influenza tests in January was higher than the previous month and higher than that for the same month in 2012.

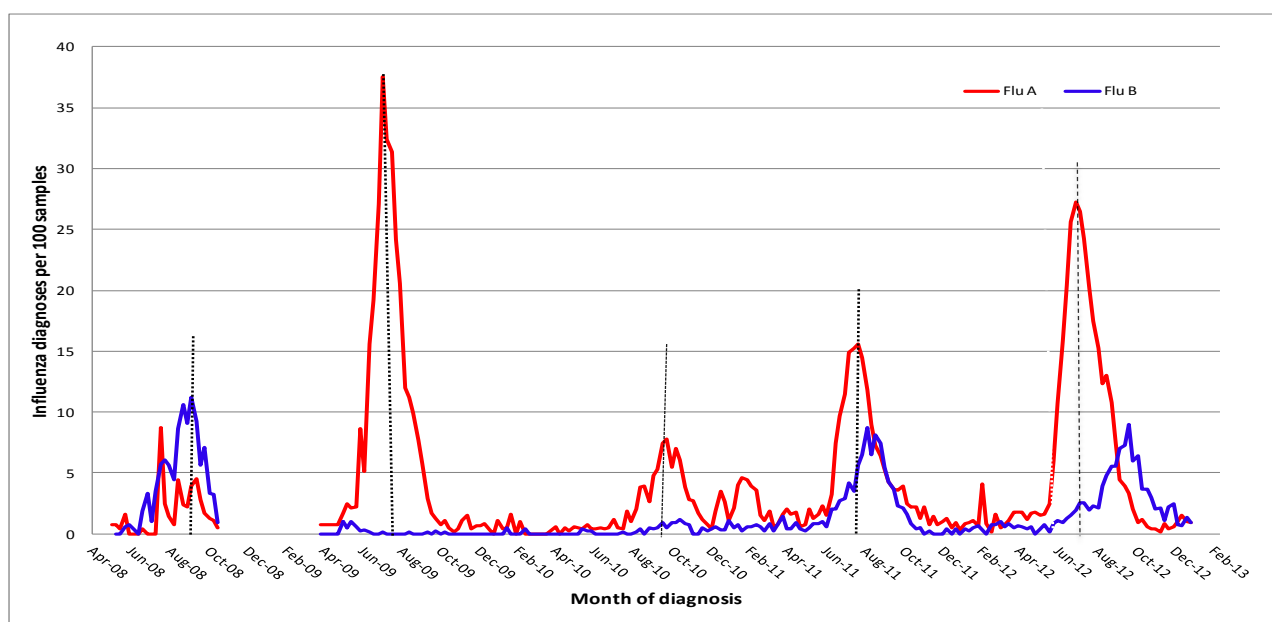
Laboratory testing indicates that although influenza has occurred at low levels, the number of confirmed influenza cases (both A and B) is higher than for the same period since 2010 (when data collection over the summer months began). In addition, the number of cases with confirmed influenza A(pH1N1) has risen sharply. Ten of the influenza isolates were from people known to have acquired their infections overseas. Rhinoviruses were the most common respiratory viruses identified by laboratories.

Table 1: Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories, 1 January to 1 February 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
Week ending															
04/01/2013	453	11	(2.4%)	3	(27.3%)	1	(9.1%)	4	(0.9%)	14	18	24	77	7	17
11/01/2013	447	9	(2.0%)	3	(33.3%)	4	(44.4%)	4	(0.9%)	12	23	16	62	8	12
18/01/2013	433	8	(1.8%)	2	(25.0%)	4	(50.0%)	8	(1.8%)	14	23	9	74	2	13
25/01/2013	419	7	(1.7%)	3	(42.9%)	1	(14.3%)	7	(1.7%)	12	11	18	65	8	10
01/02/2013	389	9	(2.3%)	2	(22.2%)	4	(44.4%)	3	(0.8%)	16	12	14	50	12	7

** Subset of influenza A cases *** HMPV = Human metapneumovirus

Figure 4: Percent of laboratory tests positive for influenza A and influenza B, 1 January 2008 – 1 February 2013, New South Wales.



Source: 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, Institute of Clinical Pathology and Medical Research, The Children’s Hospital at Westmead, South West Area Pathology Services, Pacific Laboratory Medicine Services, Royal Prince Alfred Hospital, Hunter Area Pathology Services, St Vincent’s - SydPath, Nepean (no data between Oct 2010 to June 2011), Douglas Hanley Moir, VDRLab from 5 March 2010, Laverty (data from 1 April 2010 to February 2011) and St Vincent’s (data since November 2010).

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

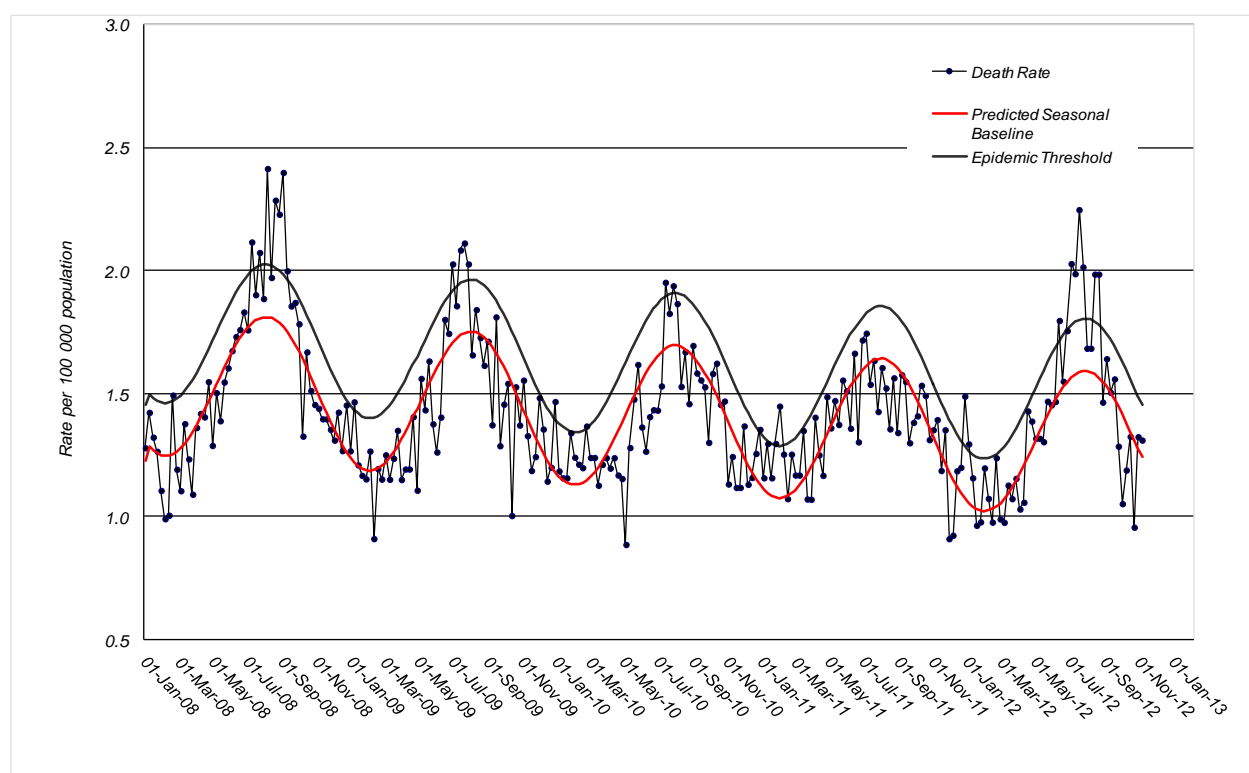
Deaths registration data is routinely reviewed for deaths attributed to pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

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 the week ending 25 January:

- There were 0.44 pneumonia or influenza deaths per 100,000 NSW population, which is below the epidemic threshold of 1.19 per 100,000 population (Figure 4).*

Figure 5: Rate of deaths classified as influenza and pneumonia (by NSW Registered Death Certificates) per 100,000 NSW population, 2008-2013



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.
- (3) The interval between death and death data availability is usually at least 7 days, and so these data are one week behind reports from emergency departments and laboratories. In addition, previous weekly rates may also change due to longer delays in reporting some deaths.

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>

For the information on current strains covered in this year's influenza vaccine see WHO Collaborating Centre for Reference and Research on Influenza at the following website:

http://www.influenzacentre.org/centre_vaccines.htm

6. National and International Influenza Surveillance and Links

Novel Coronavirus Infections

As of 13 February 2013, a total of 12 confirmed cases of human infection with NCoV have been notified to WHO, with no change in the number of fatalities i.e., five deaths since April 2012.

The latest confirmed case does not have recent travel history outside the UK. This is the third case confirmed in the country this month and is in the same family cluster as the two recently confirmed cases. The confirmation with NCoV in this case with no recent travel history indicates that infection was acquired in the UK. Although this new case offers further indications of person-to-person transmission, no sustained person-to-person transmission has been identified.

To date, evidence of person-to-person transmission has been limited. Although this case is suggestive of person-to-person transmission, on the basis of current evidence, the risk of sustained person-to-person transmission appears to be very low.

See the [WHO Coronavirus site](#) for further information, including recommendations for surveillance, laboratory testing and infection control.

See NSW Information for [Clinicians and Laboratories](#)