

# Influenza Monthly Epidemiology Report, NSW

November 2011

Produced by: Population Health Division, NSW Health.

Please note influenza reports will now only be produced on a monthly basis until May 2012, unless unusual influenza activity becomes apparent prior to this time.

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>.

## Novel Swine-Origin triple reassortant H3N2 viruses in the United States

On 22 November, the US CDC reported three human cases of swine-origin triple reassortant influenza A (H3N2) virus infection in children in Iowa associated with **limited human to human transmission**. No exposure to pigs has been identified in these patients or their close contacts.

- This virus contains the matrix (M) gene segment from the pandemic 2009 H1N1 virus.
- This virus type was first identified in a person in July 2011 and has since been identified in six other similar but isolated cases reported in three other US states. In all of these cases, recent exposure to pigs was identified in the patient or in a close contact of the patient.
- Most of the cases have experienced mild illness, although three cases with underlying illnesses were hospitalised.
- No neuraminidase inhibitor resistance has been reported but the current A (H3N2) component of seasonal influenza vaccines is unlikely to provide protection against this virus.
- There is currently no evidence of sustained human-human transmission but surveillance in the US has been enhanced.
- There have been no reports of this virus in Australia through human or animal surveillance.
- While the direct threat to Australia appears low, influenza reference laboratories in NSW and around the country are updating their testing capacity to detect this novel virus.
- All unusual influenza viruses should continue to be referred to influenza reference laboratories with relevant clinical and epidemiological data.

## 1. Summary

### In November 2011:

- the rate of influenza-like illness (ILI) presentations to selected emergency departments was low and is below the normal range expected for November
- 29 cases with laboratory-confirmed influenza A – predominantly H3N2 – and one case of influenza B were identified by sentinel laboratories
- Rhinovirus was the most common respiratory virus identified by sentinel laboratories.

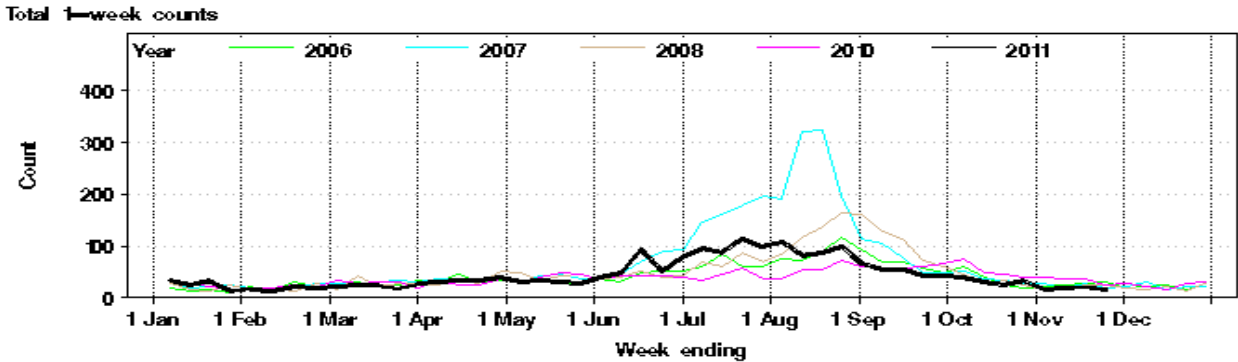
## 2. Emergency Department (ED) presentations

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

## Presentations for influenza-like illness

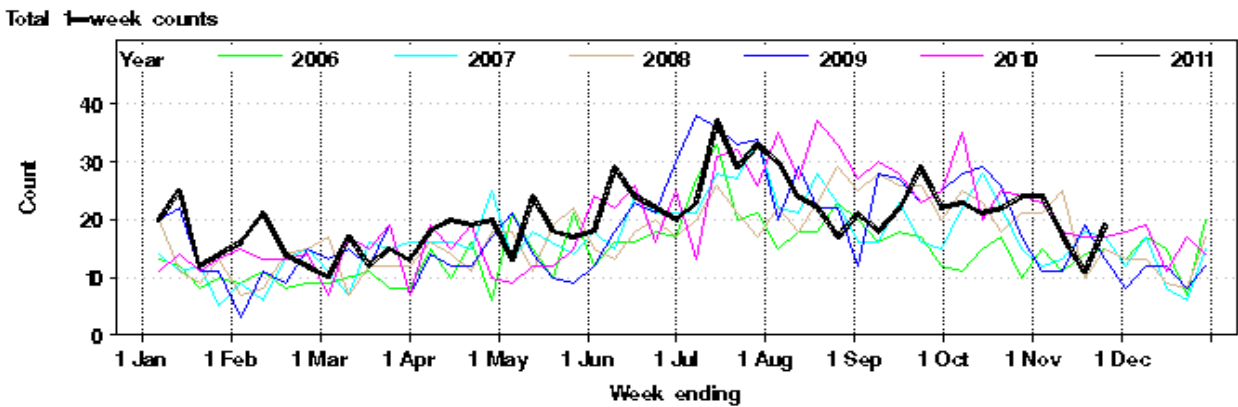
- In November 2011 there were 70 presentations with influenza-like illness (rate 0.5 per 1,000 presentations) (Figure 1). This is lower than the previous month (October -146 presentations, rate 0.8 per 1,000 presentations), lower than the count of 147 (rate 1.3 per 1,000 presentations) for the month of November in 2010 and lower to the November historical average.
- Total admissions from ED to critical care units for influenza-like illness and pneumonia decreased and are within the usual range for this time of year (Figure 2).
- Total ED presentations for bronchiolitis were within the usual range (Figure 3).

**Figure 1:** Comparison of weekly influenza-like illness presentations to NSW EDs, 2006-2011.\*



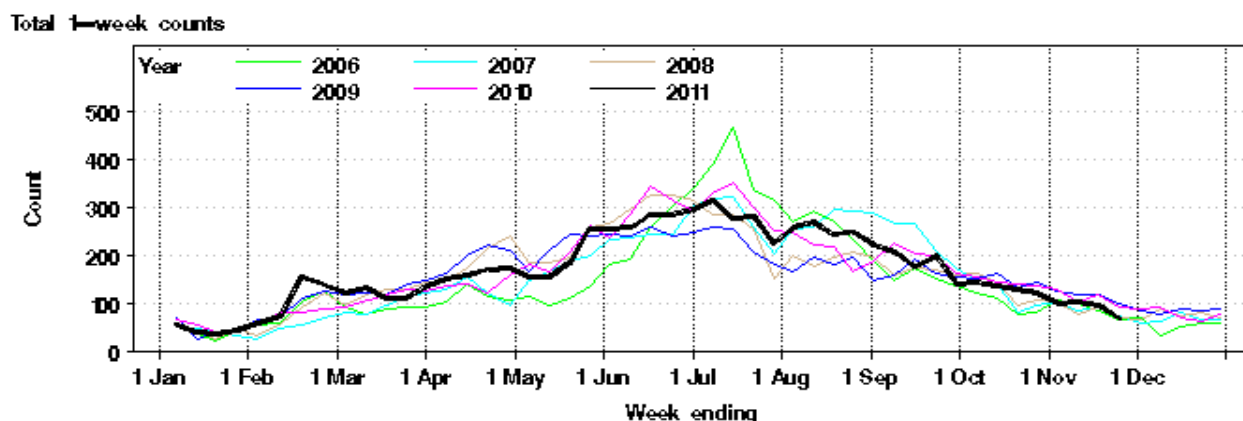
**Note:** Excludes data from 2009 to enable easier comparison of 2011 data with data from previous non-pandemic years. Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the Centre for Epidemiology and Research,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

**Figure 2:** Comparison of weekly admissions to hospital critical care units for ILI and pneumonia, 2006-2011.



**Note:** As for Figure 1, although includes 2009

**Figure 3:** Comparison of weekly bronchiolitis presentations to NSW EDs, 2006-2011.



Note: As for Figure 1, although includes 2009

### 3. Laboratory testing summary for influenza

In November 2011:

- 2,359 tests for respiratory viruses were performed at sentinel NSW laboratories (Table 1).
- 30 specimens tested positive for influenza A – 13 of these have tested positive for A(H3N2), only one 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).
- One case of influenza B was reported (Table 1, Figure 4).
- The number of positive influenza tests in November was lower than the previous month and lower than that for the same month in 2010.
- An influenza outbreak was reported from a hostel in Sydney South West this month, affecting 6 residents but no staff members. Three cases tested positive for influenza A.

Laboratory testing suggests influenza has continued to decline further throughout November and is circulating at low levels. Rhinoviruses were the most common respiratory viruses identified by laboratories.

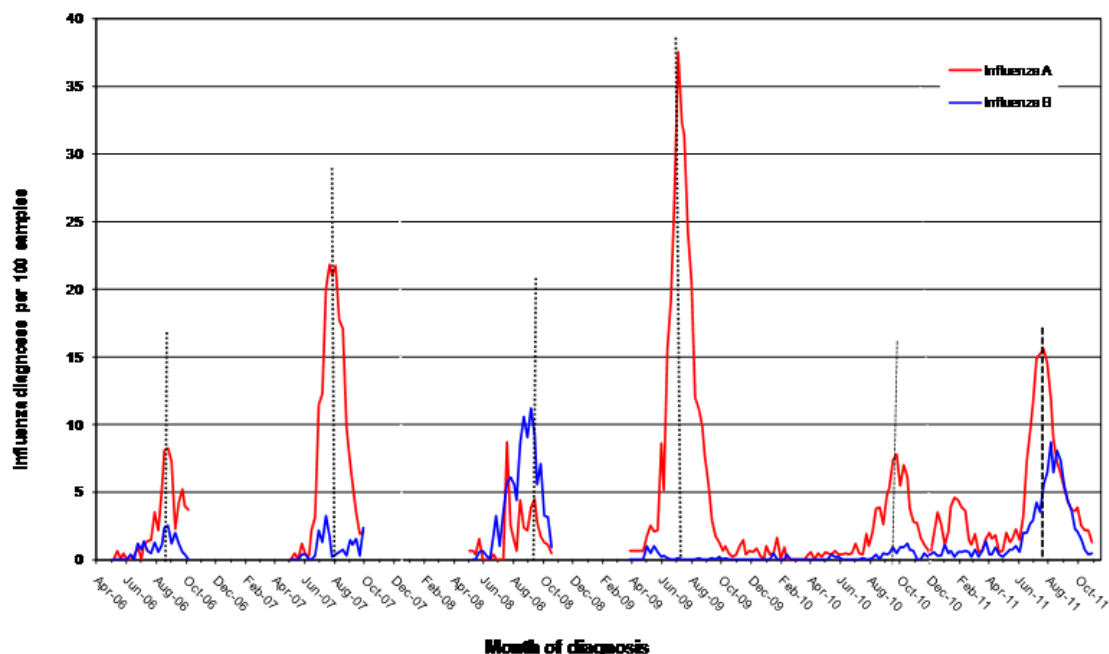
**Table 1:** Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories, 1 January to 25 November 2011.

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
27/05/2011	2595	49 (1.9%)	30 (61%)	24 (0.9%)	47	46	348	202	16
*01/07/2011	4373	363 (8.3%)	314 (85%)	104 (2.4%)	64	64	562	251	49
29/07/2011	6114	927 (15%)	758 (83%)	304 (5.0%)	128	135	520	252	103
*02/09/2011	7821	642 (8.2%)	432 (67%)	557 (7.1%)	150	239	466	411	195
*30/09/2011	4630	181 (3.9%)	38 (21%)	150 (3.2%)	123	242	233	346	160
28/10/2011	3073	64 (2.1%)	18 (28%)	26 (0.9%)	115	184	122	273	136
25/11/2011	2359	30 (1.3%)	1 (3%)	1 (0.04%)	86	112	51	227	51
<b>Week ending</b>									
04/11/2011	644	14 (2.2%)	1 (7%)	0	25	33	14	49	12
11/11/2011	586	4 (0.7%)	0	1 (0.2%)	20	25	12	63	11
18/11/2011	569	8 (1.4%)	0	0	24	25	11	53	19
25/11/2011	560	4 (0.7%)	0	0	17	29	14	62	9

\* 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

**Figure 4:** Percent of laboratory tests positive for influenza A and influenza B, 1 January 2006 – 28 October 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), Nepean (no data between Oct 2010 to June 2011), Douglas Hanley Moir (DHM), 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

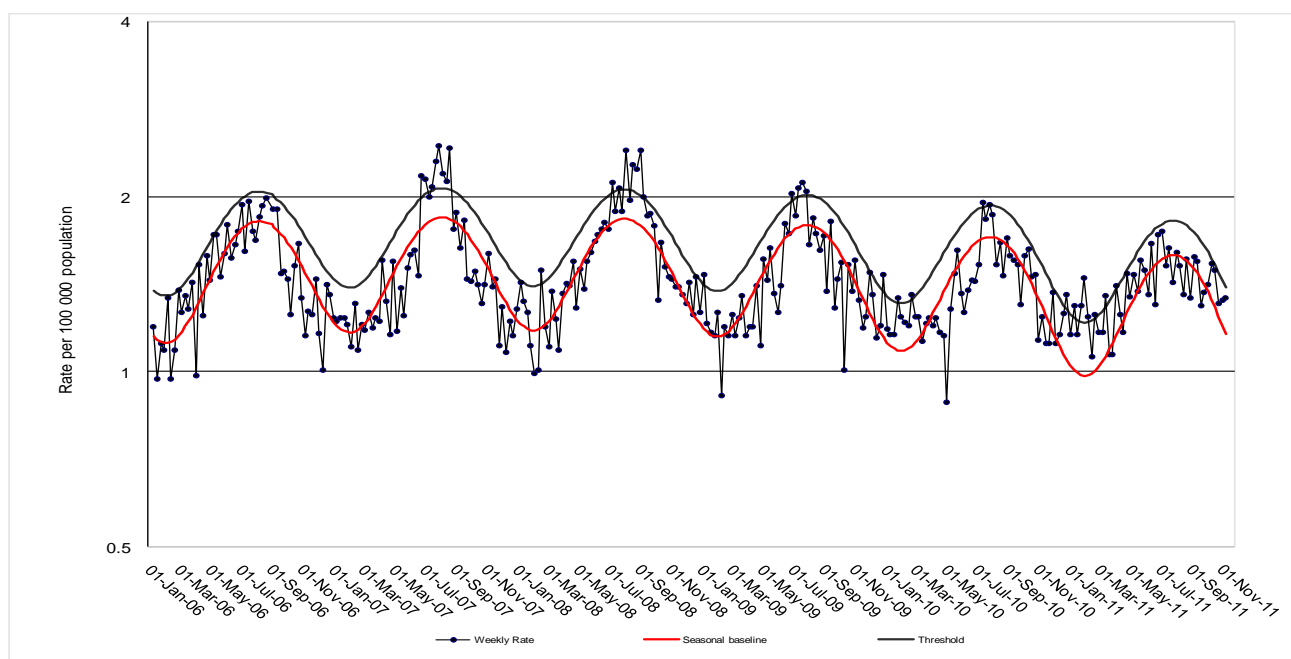
Deaths registration data is routinely reviewed for deaths attributed to pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

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 11 November:

- There were 1.3 pneumonia or influenza deaths per 100,000 NSW population, below the seasonal threshold of 1.4 per 100,000 population (Figure 5).\*

**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.
- (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 information on the Novel Swine-Origin triple reassortant H3N2 viruses in the United States see:

*Limited Human-to-Human Transmission of Novel Influenza A (H3N2) Virus — Iowa, November 2011*  
MMWR November 23, 2011 / 60(Dispatch);1-3

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm60d1123a1.htm?s\\_cid=mm60d1123a1\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm60d1123a1.htm?s_cid=mm60d1123a1_w)

Influenza like illness in the United States. WHO Global Alert and Response report 24 November 2011 [http://www.who.int/csr/don/2011\\_11\\_24/en/index.html](http://www.who.int/csr/don/2011_11_24/en/index.html)