Influenza Monthly Epidemiology Report, NSW

January 2011

Produced by: Population Health Division, NSW Health.

Please note influenza reports will now only be produced on a monthly basis until May 2011, unless unusual activity becomes apparent over the summer months

This report describes the surveillance for influenza, including influenza A (pH1N1), undertaken by NSW Health to date. This includes data from a range of surveillance systems.

Summary

In January 2011:

- the rate of influenza-like illness (ILI) presentations to selected emergency departments was low
- 37 cases with laboratory confirmed influenza A (pH1N1) and seven influenza A (H3) cases were reported in NSW, including a small influenza A (H3) outbreak at a correctional facility in rural NSW
- 14 cases of influenza A (not yet subtyped) were reported
- seven cases of influenza B were reported
- no cases with confirmed influenza A (pH1N1) influenza were admitted to intensive care units (ICU)
- no deaths in association with confirmed influenza A (pH1N1) were reported in NSW.

Rhinovirus was the most common respiratory virus identified by sentinel laboratories testing in January.

For weekly updates please see the communicable disease weekly report at http://www.health.nsw.gov.au/publichealth/infectious/index.asp

From 1 January to 31 December 2010:

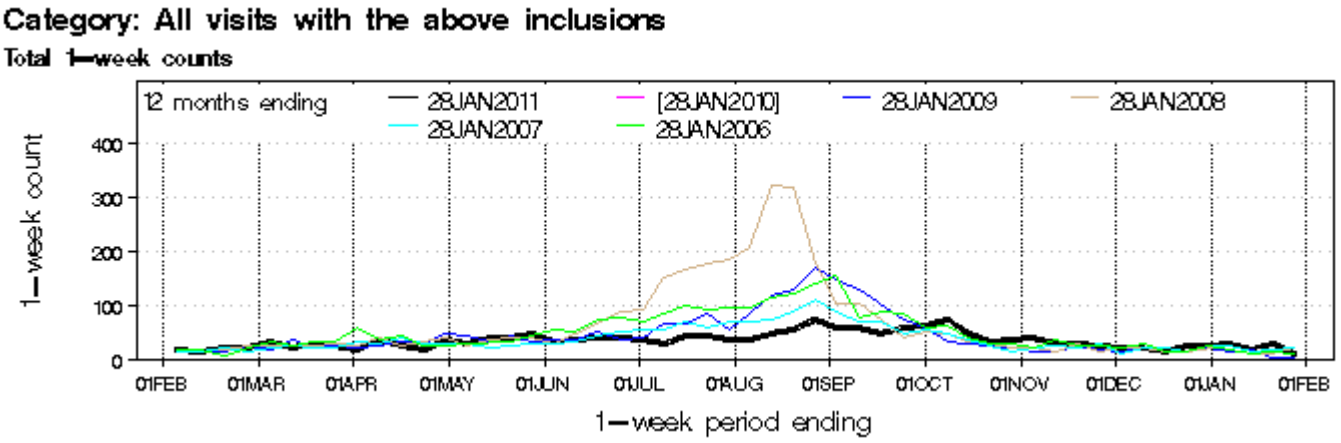
- the rate of ILI presentations to selected emergency departments remained low
- 540 cases of laboratory confirmed influenza A (pH1N1) were reported in NSW
- 15 cases of influenza A (H3) were reported in NSW
- 170 cases of influenza A (not subtyped) were reported in NSW
- 93 cases of influenza B were reported in NSW
- 66 cases with confirmed influenza have been admitted to intensive care units (ICU)
- eight deaths were reported in association with confirmed influenza A (pH1N1) in NSW.

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

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



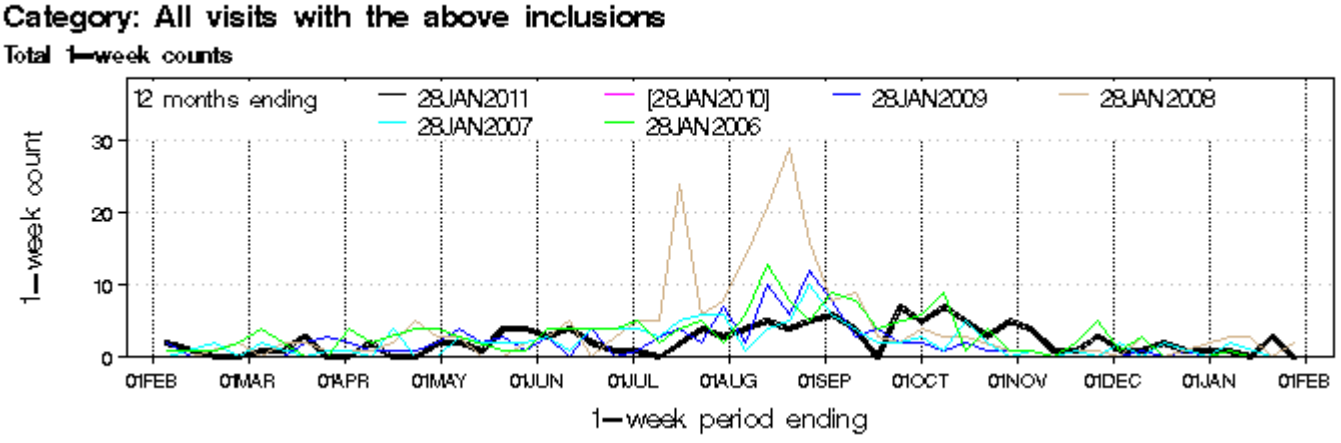
Note: Excludes data from 2009 to enable easier comparison of 2010 data with data from previous non-pandemic years. Some people presenting to NSW emergency departments have been referred to an influenza clinic without being recorded in the regular ED information system. (Under-reporting of influenza-related ED presentations will occur in this situation.) Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection (HOIST).

- In January 2011 there were 107 presentations with influenza-like illness (rate 0.7 per 1,000 presentations). This is similar to the previous month (December - 126 presentations, rate 0.7 per 1,000 presentations), similar to the count of 95 (rate 0.7 per 1,000 presentations) for the month of January in 2011, and similar to January totals for 2006-2009.

- In 2010, presentations to emergency departments for influenza-like illness were highest in mid October 2010 at around 76 presentations per week. The October 2010 peak was the lowest annual peak in the last eight years of reporting.

Admissions to hospital from emergency departments for influenza-like illness

Figure 2: Weekly counts of admissions to hospital for influenza-like illness from NSW emergency departments, 2006-2011*.

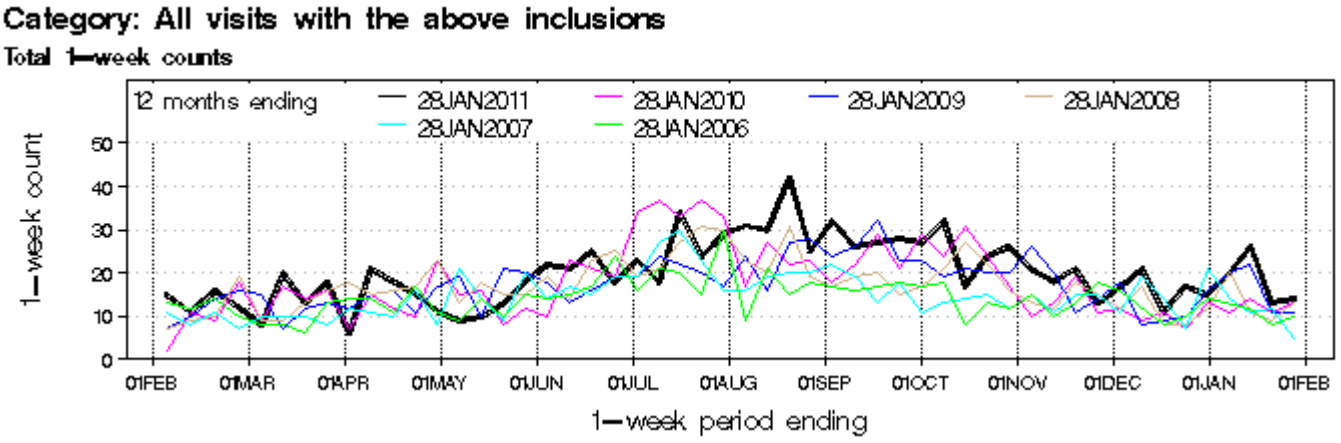


Note: As for figure 1.

- There were five admissions to hospital following presentation to emergency departments with influenza-like illness in January 2011. This was lower than the previous month (9 admissions), but the same as January 2010 total.

- In 2010, admissions from emergency departments to hospital for influenza-like illness were highest during September and October, and peaked at around seven admissions per week.

Figure 3: Weekly counts of admissions to hospital critical care units for influenza-like-illness and pneumonia from NSW emergency departments, 2006-2011*.



Note: Data is preliminary and is subject to change in later weeks. Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection (HOIST).

- Pneumonia and influenza presentations admitted to critical care wards decreased but remained slightly above the usual range for this time of year.

Laboratory testing summary for influenza

In January 2011:

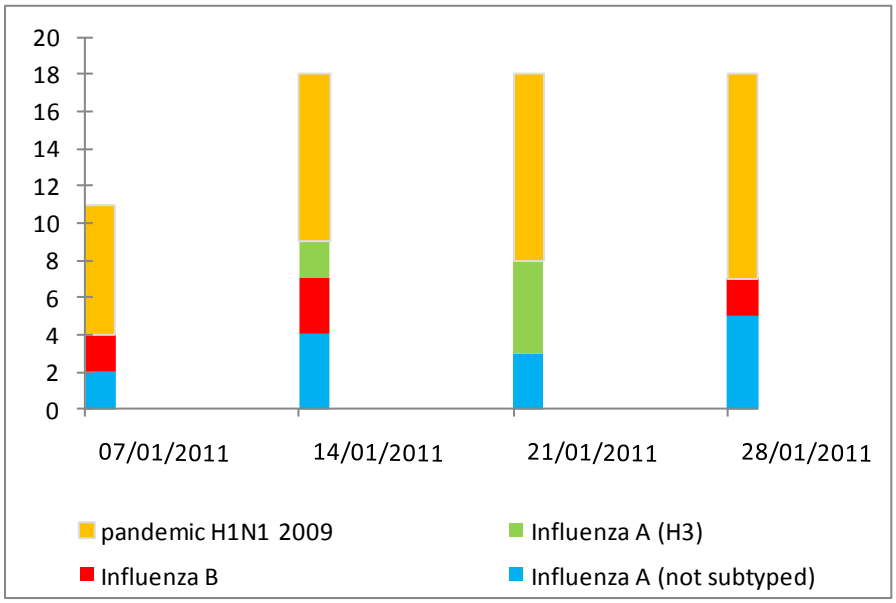
- 1573 tests for respiratory viruses were performed at sentinel NSW laboratories
- 58 specimens tested positive for influenza A – 37 of these have tested positive for A (pH1N1) seven for A (H3) and 14 had not yet been subtyped
- 7 cases of influenza B were reported
- The number of positive influenza tests in January was higher than for the same month in 2010. A few cases occurred in overseas travellers and there was a small outbreak of influenza A (H3) reported from a NSW regional prison

Influenza has continued to circulate at low levels throughout January. The pandemic strain (pH1N1) continues to be the dominant strain circulating although it appears to be declining. Other respiratory viruses have circulated at low levels, including rhinovirus, parainfluenza, respiratory synctinal virus, adenovirus, and human metapneumovirus.

From 1 January to 31 December 2010:

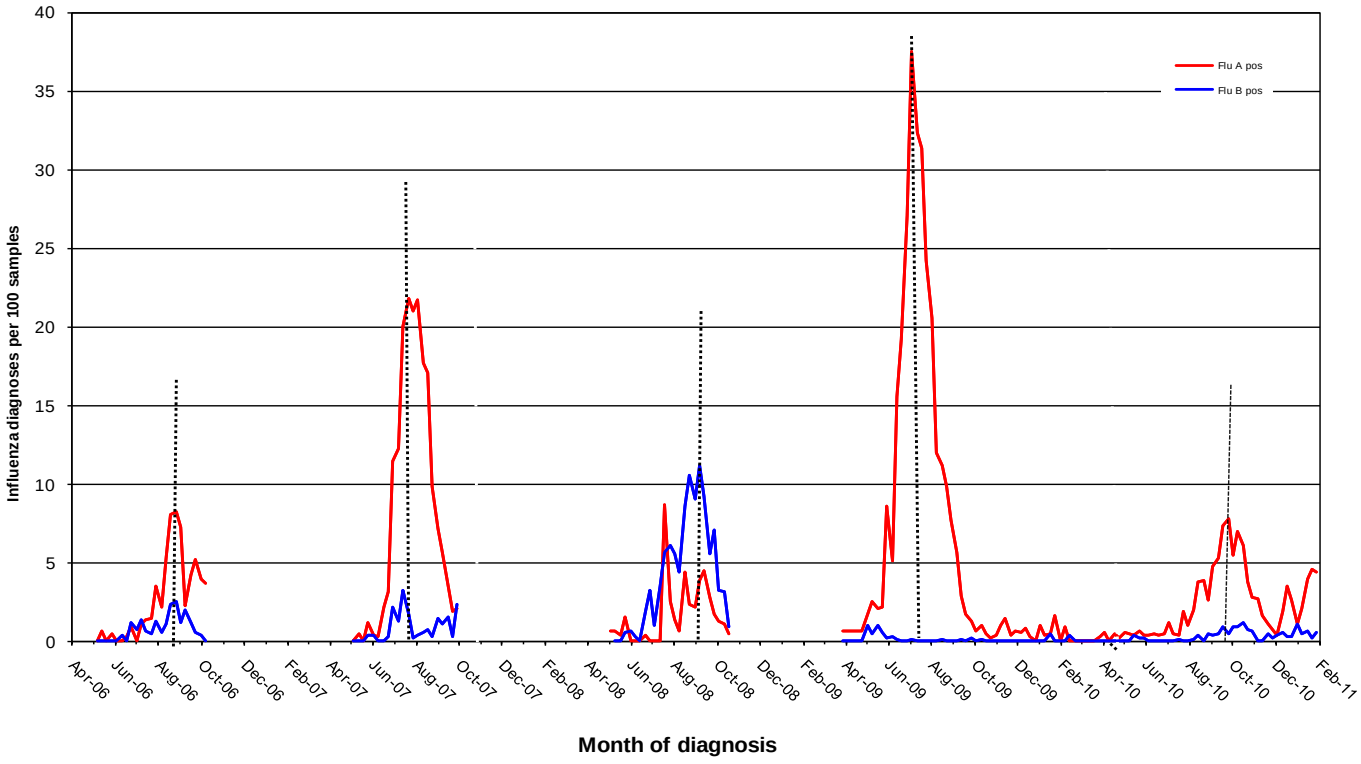
- 28,976 tests for respiratory viruses were performed at sentinel NSW public hospital and private laboratories
- 725 tests were positive for influenza A, and 93 positive for influenza B.
    - 540 of the confirmed influenza A samples positive for A (pH1N1), 15 samples were A (H3), and 170 were not subtyped.

Figure 4: Number of positive laboratory tests for influenza by month ending 28 January 2011



Note: 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), Douglas Hanley Moir (DHM), VDRLab, Laverty and St Vincent's.

Figure 5: Percent of laboratory tests positive for influenza A and influenza B, 1 January 2006 – 28 January 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), Nepean- up to 1 October, Douglas Hanley Moir (DHM) from 21 August , VDRLab from 5 March 2010 , Laverty and Nepean from 1 April 2010 AND St Vincent's November 2010. **Note: No data was received from Nepean for the month of December or from Laverty for the last two weeks of December.**

Table 1: Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories,1 to 28 January 2011.

Four week period ending	Virology specimens tested	Influenza A (total pos) (%)	H1N1** influenza 09 (total pos) (%)	Influenza B (total pos) (%)	Adenovirus	Parainfluenza 1, 2 & 3	RSV	Rhinovirus	HMPV***
28/01/2011	1573	58 (3.7%)	34 (59%)	7 (0.4%)	22	50	36	97	20
Week ending									
07/01/2011	416	9 (2.1%)	7 (78%)	2 (0.5%)	3	8	11	41	5
14/01/2011	427	17 (4.0%)	11 (65%)	3 (0.8%)	7	19	6	18	7
21/01/2011	409	18 (4.4%)	10 (56%)	0	9	16	5	23	2
28/01/2011	321	14 (4.4%)	9 (64%)	2	3	7	14	15	6

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

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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 circulating widely.

In January 2011:

- public health units reported there were no deaths with influenza
- death registration data show that as of 14 January 2011, there were 114 pneumonia or influenza deaths per 1000 deaths in NSW, which is above the seasonal threshold of 106 per 1,000 deaths.

Interpreting death data

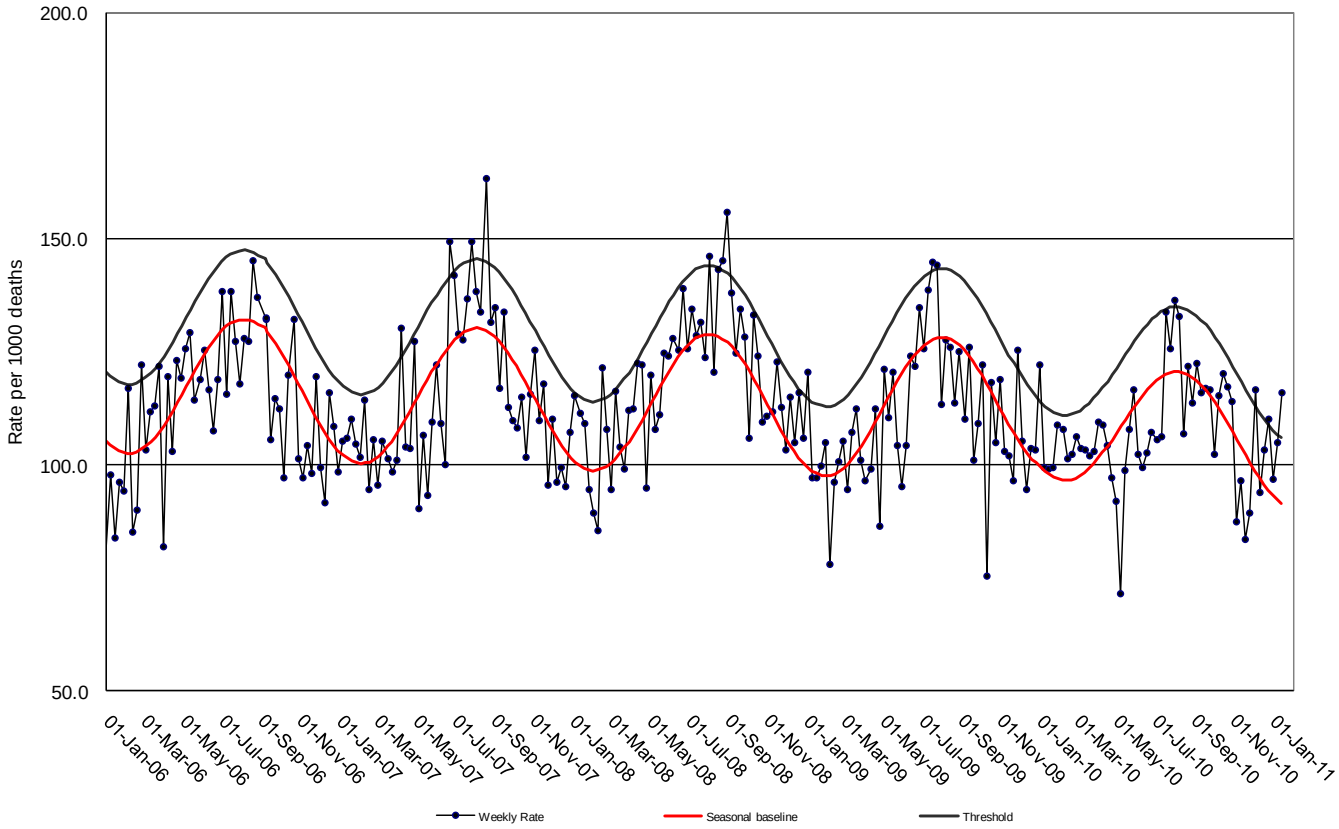
Note: Deaths referred to a coroner during the reporting period may not be available for analysis. Deaths in younger people may be more likely to require a coronial inquest. Therefore influenza-related deaths in younger people may be under-represented in these data. Influenza deaths confirmed by serology need to be viewed with caution as positive tests may also indicate past vaccination or previous infection .

From 1 January to 26 November 2010.

Death registration data have been cross matched with laboratory notified cases of influenza:

- death registration data cross matched with laboratory notified cases of influenza show 29 people with laboratory confirmed influenza have died up to 26 November. All cases underlying illness, 27/29 (93%) were aged 55 years and over. For twenty-one cases laboratory confirmation was by serology. However eight cases have been diagnosed by polymerase chain reaction (PCR) testing.

Figure 6: Rate of deaths classified as influenza and pneumonia as per NSW Registered Death Certificates, 2006-2011



Source: NSW Registry of Births, Deaths and Marriages.