

Influenza Monthly Epidemiology Report, NSW

April 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 influenza activity becomes apparent prior to this time.

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.

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

Summary

In April 2011:

- the rate of influenza-like illness (ILI) presentations to selected emergency departments was low
- 26 cases with laboratory-confirmed influenza A and 11 cases of influenza B were reported
- Respiratory syncytial virus (RSV) was the most common respiratory virus identified by sentinel laboratories.

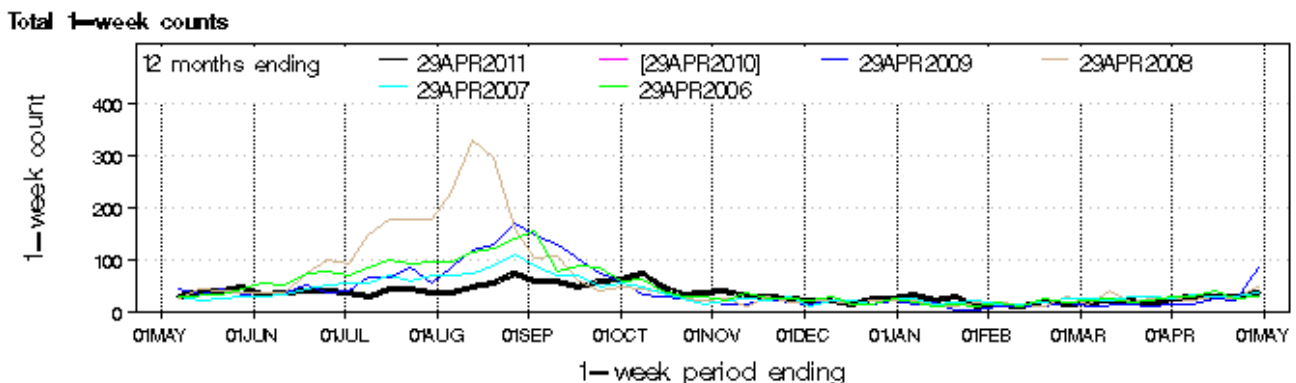
Emergency Department (ED) presentations

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 April 2011 there were 146 presentations with influenza-like illness (rate 1.0 per 1,000 presentations) (Figure 1). This is slightly more than the previous month (March - 124 presentations, rate 0.7 per 1,000 presentations), higher than the count of 85 (rate 0.6 per 1,000 presentations) for the month of April in 2010, but similar to April totals for 2006-2009.

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



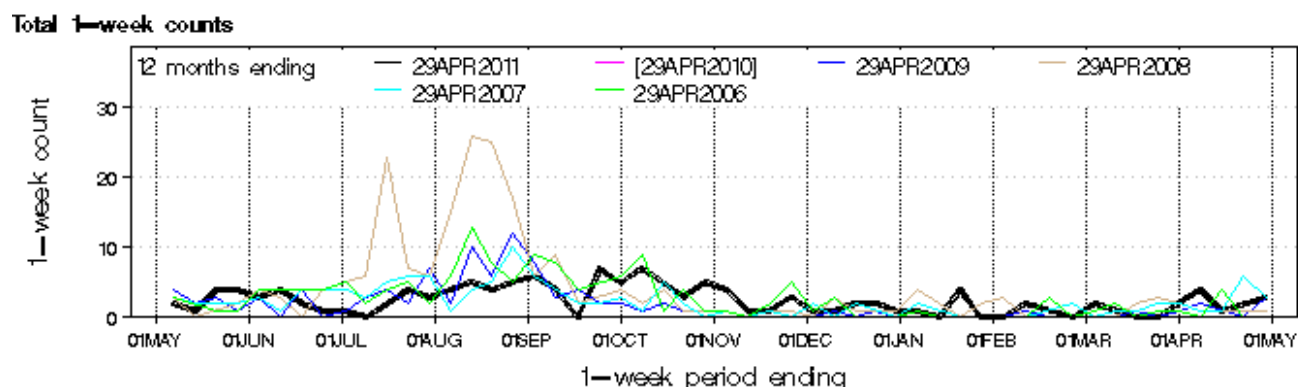
Note: * Excludes the 12 months of data from 29 April 2009 to enable easier comparison of 2011 data with data from previous non-

pandemic years. Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection (HOIST).

Admissions to hospital from emergency departments for influenza-like illness

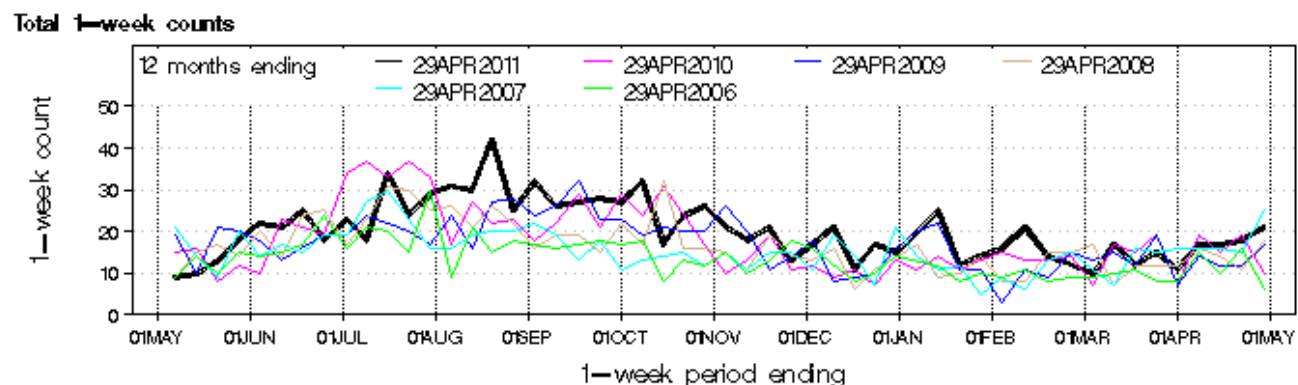
- There were 13 admissions to hospital following presentation to emergency departments with influenza-like illness in April 2011. This was higher than the previous month (6 admissions), and higher than the April 2010 total (5 admissions) (Figure 2).
- Pneumonia and influenza presentations admitted to critical care units increased and was slightly higher than the usual range for this time of year (Figure 3).

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



Note: * As for Figure 1.

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).

Laboratory testing summary for influenza

In April 2011:

- 2,292 tests for respiratory viruses were performed at sentinel NSW laboratories (Table 1).
- 26 specimens tested positive for influenza A – 14 of these have tested positive for A(pH1N1), two were influenza A H3 and the remainder had not yet been sub-typed (Table 1, Figures 4-5).
- 11 cases of influenza B were reported (Table 1, Figures 4-5).

- The number of positive influenza tests in April was similar to the previous month (March 2011) but higher than for the same month in 2010.
- An influenza outbreak was reported from an aged care facility in Northern Sydney this month, affecting 15 residents and nine staff. Two cases tested positive for influenza A (H3).

Laboratory testing suggests influenza has continued to circulate at low-moderate levels throughout April. The pandemic strain (pH1N1) although decreased further this month, continues to be the dominant strain circulating. RSV and rhinovirus were the most common respiratory viruses identified by laboratories.

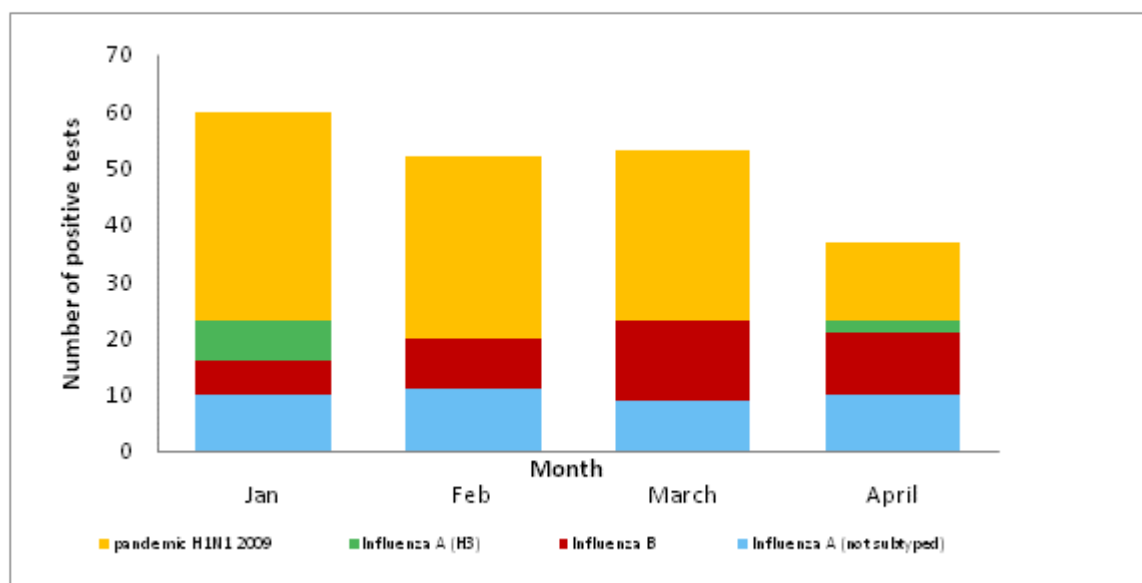
Table 1: Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories, 1 January to 29 April 2011.

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***
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	2672	30 (1.1%)	21 (70%)	14 (0.5%)	14	40	184	235	13
29/04/2011	2292	26 (1.1%)	14 (54%)	11 (0.5%)	22	36	288	174	29
Week ending									
08/04/2011	566	9 (1.6%)	3 (33%)	3 (0.5%)	7	7	70	47	2
15/04/2011	665	10 (1.5%)	7 (70%)	5 (0.6%)	2	10	68	52	7
22/04/2011	503	3 (0.6%)	1 (33%)	2 (0.4%)	8	7	71	44	14
29/04/2011	558	4 (0.7%)	3 (75%)	1 (0.2%)	5	12	79	31	6

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

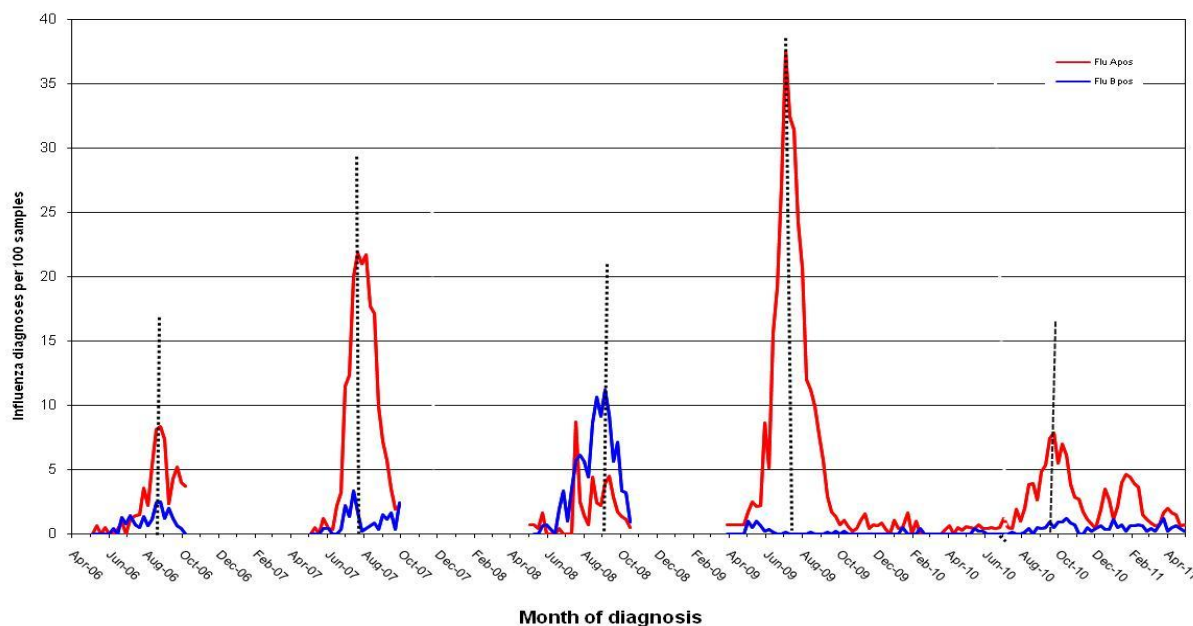
Note: Data is provided by laboratories on a weekly basis. Excludes point of care tests. Influenza laboratory diagnoses using virology are reported by South Eastern Area Laboratory Services (SEALS), Institute of Clinical Pathology and Medical Research (ICPMR), The Children's Hospital at Westmead (CHW), South West Area Pathology Services (SWAPS), Pacific Laboratory Medicine Services (PaLMS), Royal Prince Alfred Hospital (RPAH), Hunter Area Pathology Services (HAPS), 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 received from Nepean since the month of December and Laverty discontinued testing for influenza from 18 February 2010.**

Figure 4: Number of positive laboratory tests for influenza by month ending 29 April 2011



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 – 29 April 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. **No data for Nepean since December 2010. Laverty reports that they have discontinued testing for influenza from 18 February.**

Deaths with pneumonia or influenza reported on the death certificate

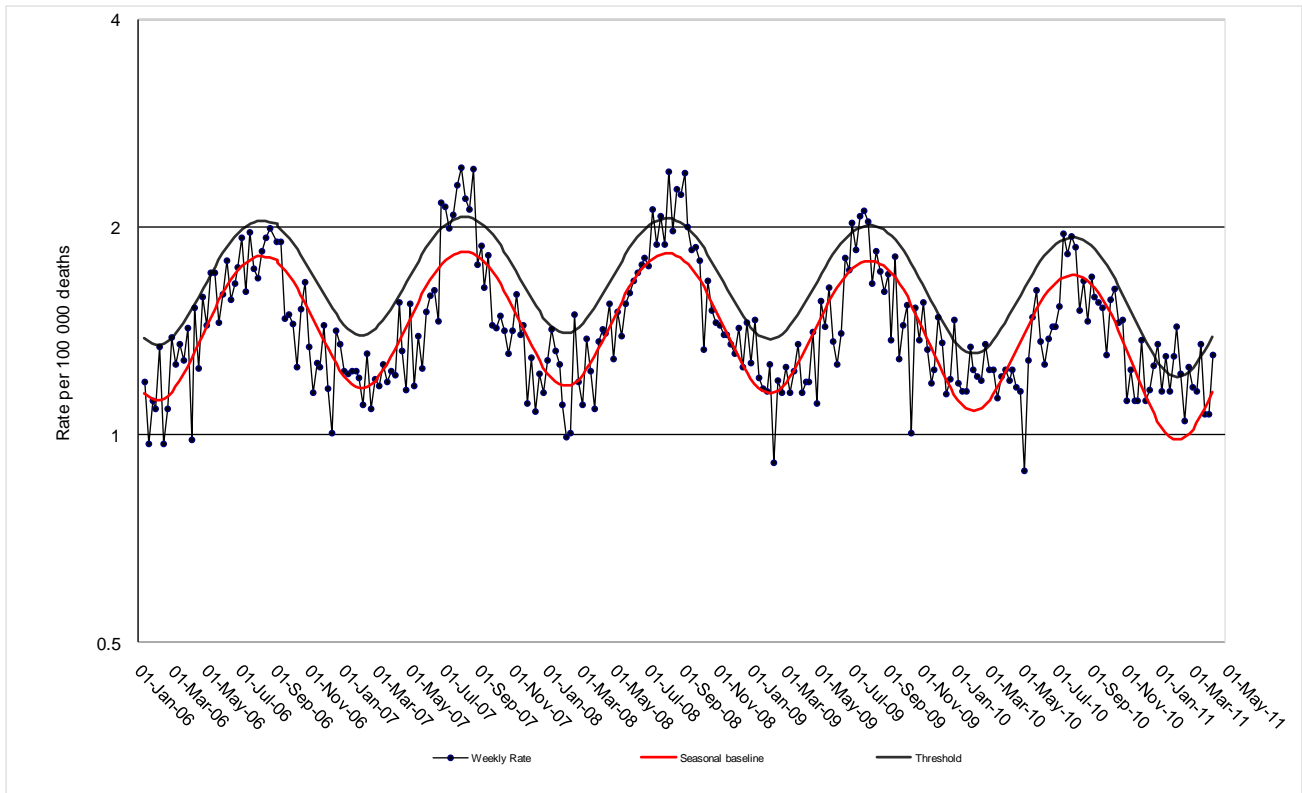
Deaths registration data is routinely reviewed for deaths attributed to pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

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 April 2011:

- public health units reported there was one death reported among notified influenza cases
- death registration data show that as of 8 April 2011 there were 1.3 pneumonia or influenza deaths per 100,000 NSW population, below the seasonal threshold of 1.4 per 100,000 deaths.*

Figure 6: 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

Note: * There has been a change in the way registered pneumonia and influenza death rates are reported. Previously, the number of pneumonia and influenza deaths had been reported per 1,000 deaths from all causes. These deaths will now be reported per 100,000 NSW population to provide a more stable denominator.

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.

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.