

Influenza Monthly Epidemiology Report, NSW

March 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 March 2011:

- the rate of influenza-like illness (ILI) presentations to selected emergency departments was low
- 30 cases with laboratory-confirmed influenza A and 14 cases of influenza B were reported
- Rhinovirus was the most common respiratory virus identified by sentinel laboratories.

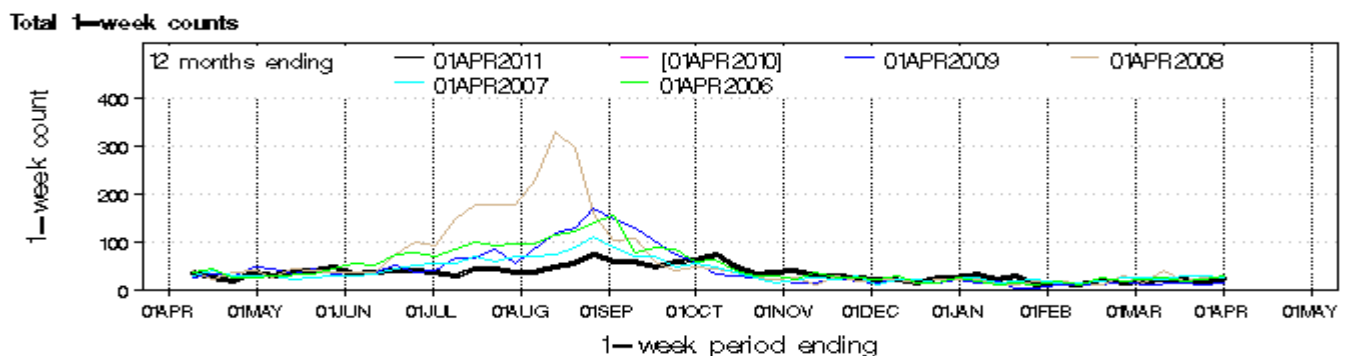
Emergency Department (ED) presentations

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 March 2011 there were 124 presentations with influenza-like illness (rate 0.7 per 1,000 presentations) (Figure 1). This is slightly more than the previous month (February - 76 presentations, rate 0.5 per 1,000 presentations), similar to the count of 139 (rate 0.8 per 1,000 presentations) for the month of March in 2010, and similar to March totals for 2006-2009.

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

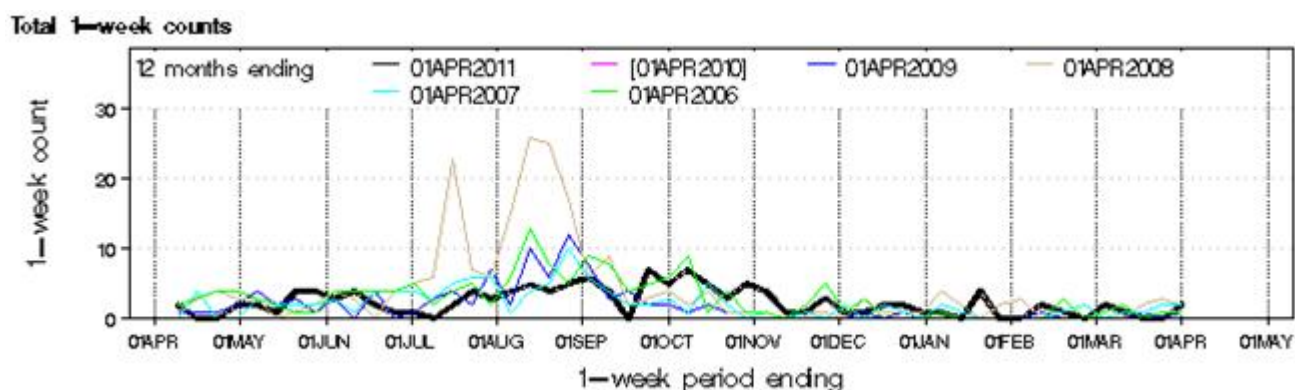


Note: * Excludes data from 2009 to enable easier comparison of 2011 data with data from previous non-pandemic years. Includes data from 56 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection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

Admissions to hospital from emergency departments for influenza-like illness

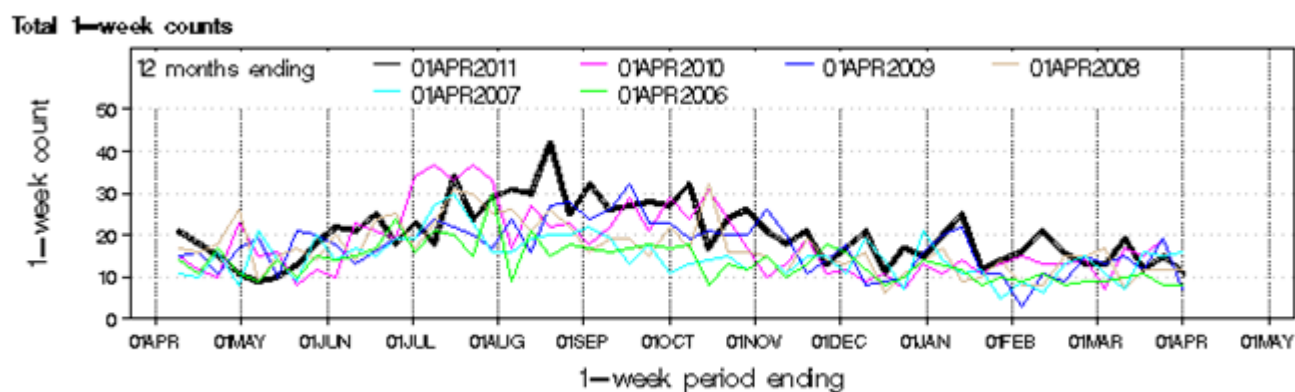
- There were six admissions to hospital following presentation to emergency departments with influenza-like illness in March 2011. This was similar to the previous month (4 admissions), but higher than the March 2011 total (2 admissions) (Figure 2).
- Pneumonia and influenza presentations admitted to critical care units declined further and was within 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 March 2011:

- 2,672 tests for respiratory viruses were performed at sentinel NSW laboratories (Table 1).
- 30 specimens tested positive for influenza A – 21 of these have tested positive for A(pH1N1) and the remainder had not yet been sub-typed (Table 1, Figures 4-5).
- 14 cases of influenza B were reported (Table 1, Figures 4-5).
- The number of positive influenza tests in March was lower than the previous month (February 2011) but higher than for the same month in 2010.

Laboratory testing suggests influenza has continued to circulate at low-moderate levels throughout March. The pandemic strain (pH1N1) continues to be the dominant strain circulating although it appears to be declining. Rhinovirus was the most common respiratory virus identified by laboratories, although respiratory syncytial virus isolations appear to be trending upwards, which is usual for this time of year.

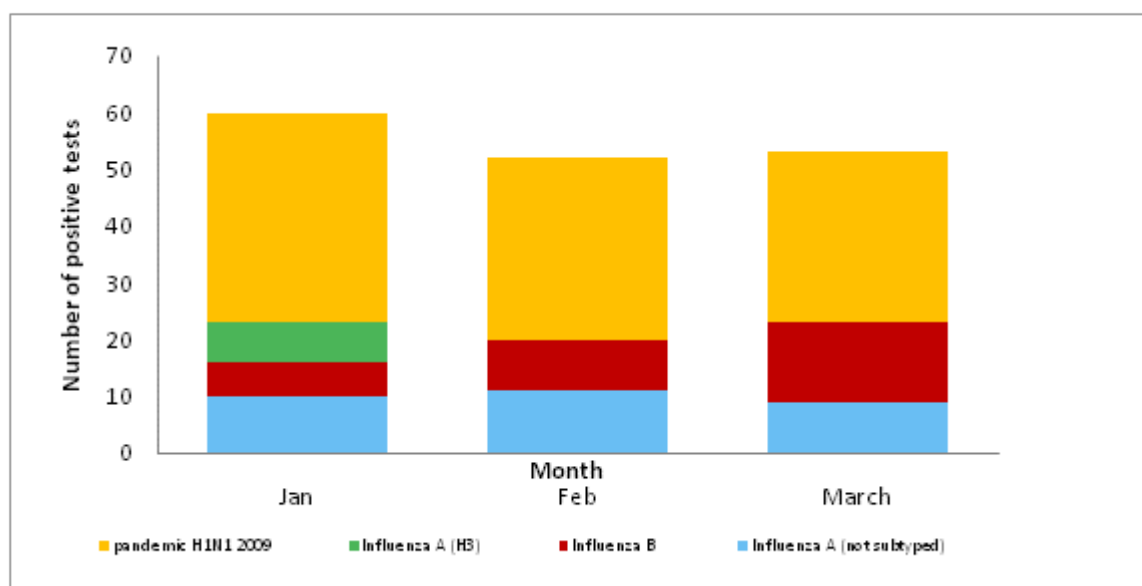
Table 1: Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories, 1 January to 1 April 2011.

| 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 | 2672 | 30 (1.1%) | 21 (70%) | 14 (0.5%) | 14 | 40 | 184 | 235 | 13 |
| Week ending | | | | | | | | | |
| 04/03/2011 | 494 | 4 (0.8%) | 2 (50%) | 2 (0.6%) | 2 | 8 | 14 | 49 | 1 |
| 11/03/2011 | 545 | 3 (0.6%) | 3 (100%) | 1 (0.2%) | 2 | 9 | 31 | 69 | 6 |
| 18/03/2011 | 563 | 4 (0.7%) | 3 (75%) | 4 (0.7%) | 3 | 10 | 44 | 46 | 3 |
| 25/03/2011 | 513 | 8 (1.6%) | 6 (75%) | 6 (1.2%) | 1 | 6 | 32 | 27 | 1 |
| 01/04/2011 | 557 | 11 (2.0%) | 7 (64%) | 1 (0.2%) | 6 | 7 | 63 | 44 | 2 |

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

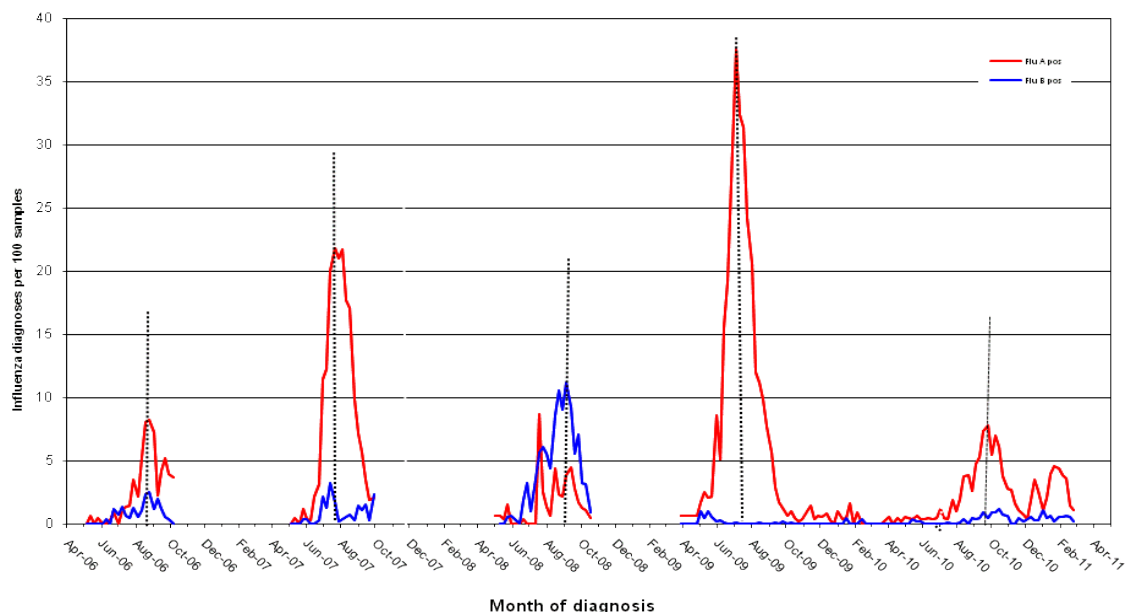
Note: Data is provided by laboratories on a weekly basis. Excludes point of care tests. Influenza laboratory diagnoses using virology are reported by South Eastern Area Laboratory Services (SEALS), Institute of Clinical Pathology and Medical Research (ICPMR), The Children's Hospital at Westmead (CHW), 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.**

Figure 4: Number of positive laboratory tests for influenza by month ending 1 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 – 1 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

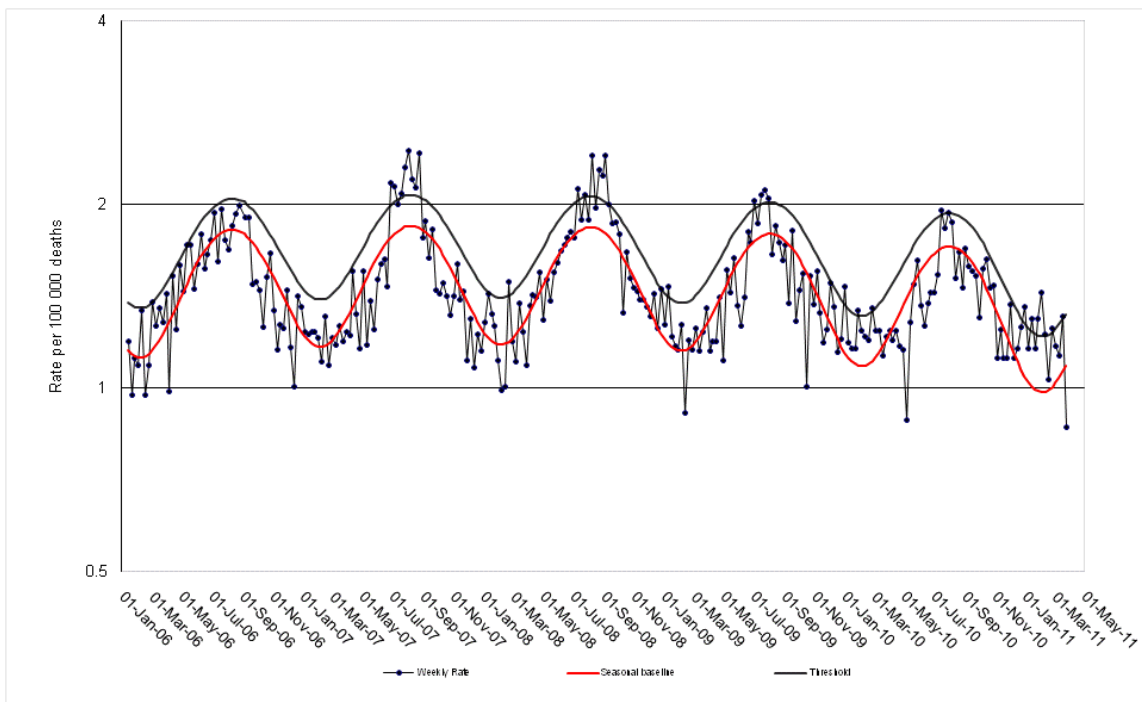
Deaths registration data is routinely reviewed for deaths attributed to pneumonia or influenza. While pneumonia has many causes, a well-known indicator of seasonal and pandemic influenza activity is an increase in the number of death certificates that mention pneumonia or influenza as a cause of death.

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 March 2011:

- public health units reported there were no deaths reported among notified influenza cases
- death registration data show that as of 25 March 2011 there were 0.9 pneumonia or influenza deaths per 100,000 NSW population, below the seasonal threshold of 1.3 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.