

# Influenza Monthly Epidemiology Report, NSW

November 2012

Produced by: Population Health Division, NSW Ministry of Health.

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 November 2012:

- Influenza-like illness activity in selected emergency departments was low. The rate was below the usual range for this time of year and well below the peak of activity seen in mid-July.
- ED admissions to critical care units for ILI and pneumonia were slightly above the usual range for this time of year.
- Laboratory testing data showed that influenza A activity is sporadic. A small cluster of cases of influenza B has been identified in far north NSW, however overall influenza B activity continues to decline having reached its peak in mid-September.
- The rate of deaths due to pneumonia or influenza remained below the seasonal threshold

## 2. Emergency Department (ED) presentations

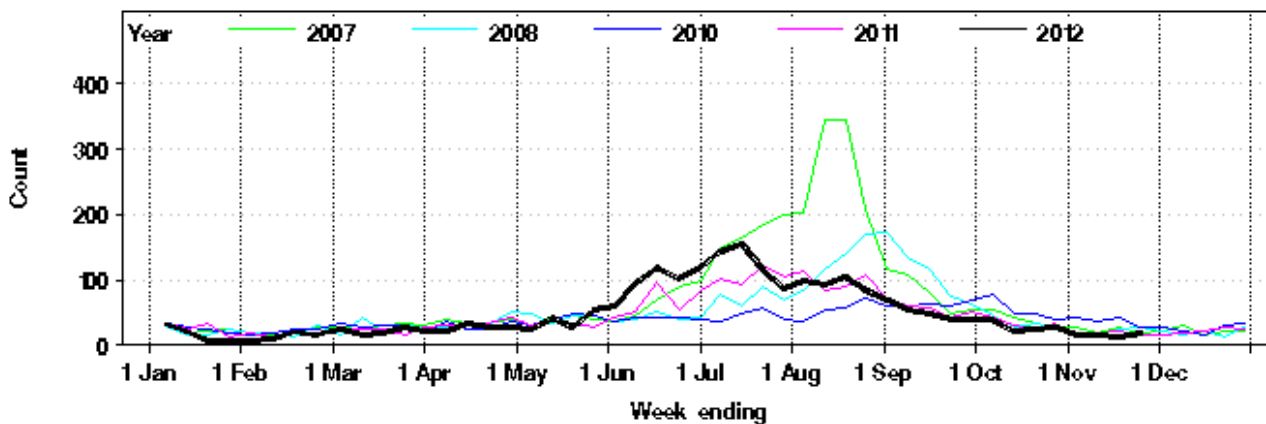
Data from 59 NSW emergency departments are included. Comparisons are made with data for the preceding six years. Recent counts are subject to change.

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

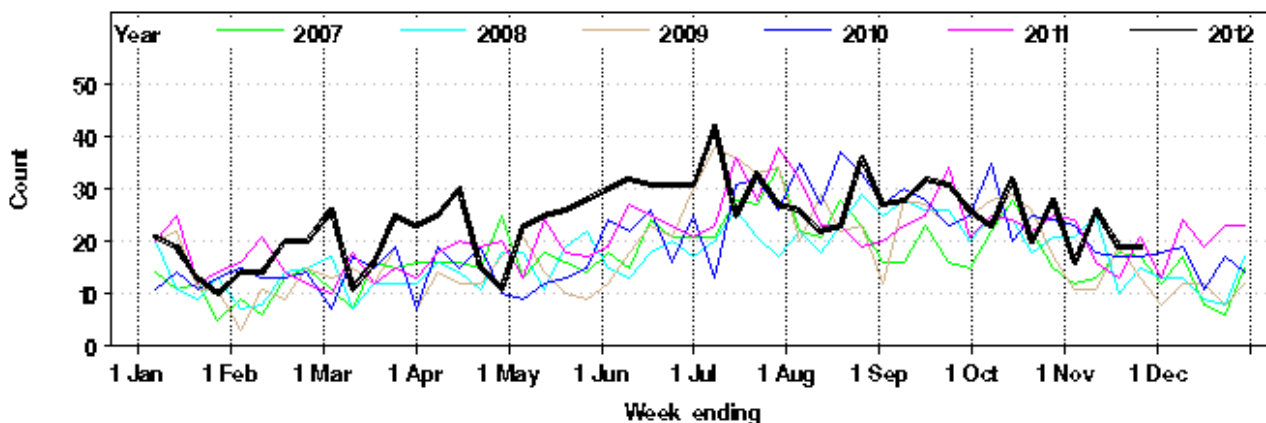
- In November 2012 there were 68 presentations with influenza-like illness (rate 0.4 per 1,000 presentations) (Figure 1). This is lower than the previous month (October – 141 presentations, rate 0.7 per 1,000 presentations), and similar to the count of 69 (rate 0.5 per 1,000 presentations) for the month of November in 2011 but within the historical average for November.
- Total admissions from ED to critical care units for influenza-like illness and pneumonia were slightly higher than the usual range for this time of year, however since mid November total admissions have been decreasing (Figure 2).

**Figure 1:** Total weekly counts of Emergency Department visits for influenza-like illness, from January – November 2012 (black line), compared with each of the 5 previous years (coloured lines), for 59 NSW hospitals.\*



\* Note: Excludes 2009 data to enable comparison of 2012 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 – November 2012 (black line), compared with each of the 5 previous years (coloured lines), for 59 NSW hospitals.



### 3. Laboratory testing summary for influenza

In November 2012:

- 2828 tests for respiratory viruses were performed at sentinel NSW laboratories (Table 1).
- 14 specimens tested positive for influenza A – 10 tested positive for influenza A (H3N2) and four tested positive for A (pH1N1) (Table 1, Figure 3).
- 56 cases of influenza B were reported (Table 1, Figure 3).
- During November, influenza A activity was sporadic and the number of tests positive for influenza B continued to decrease throughout the month. Of the 56 influenza B cases 21 of these occurred in several small rural towns in the far north of the State.

Influenza virus activity continues to decline and is no longer the dominant respiratory virus identified by NSW sentinel laboratories.

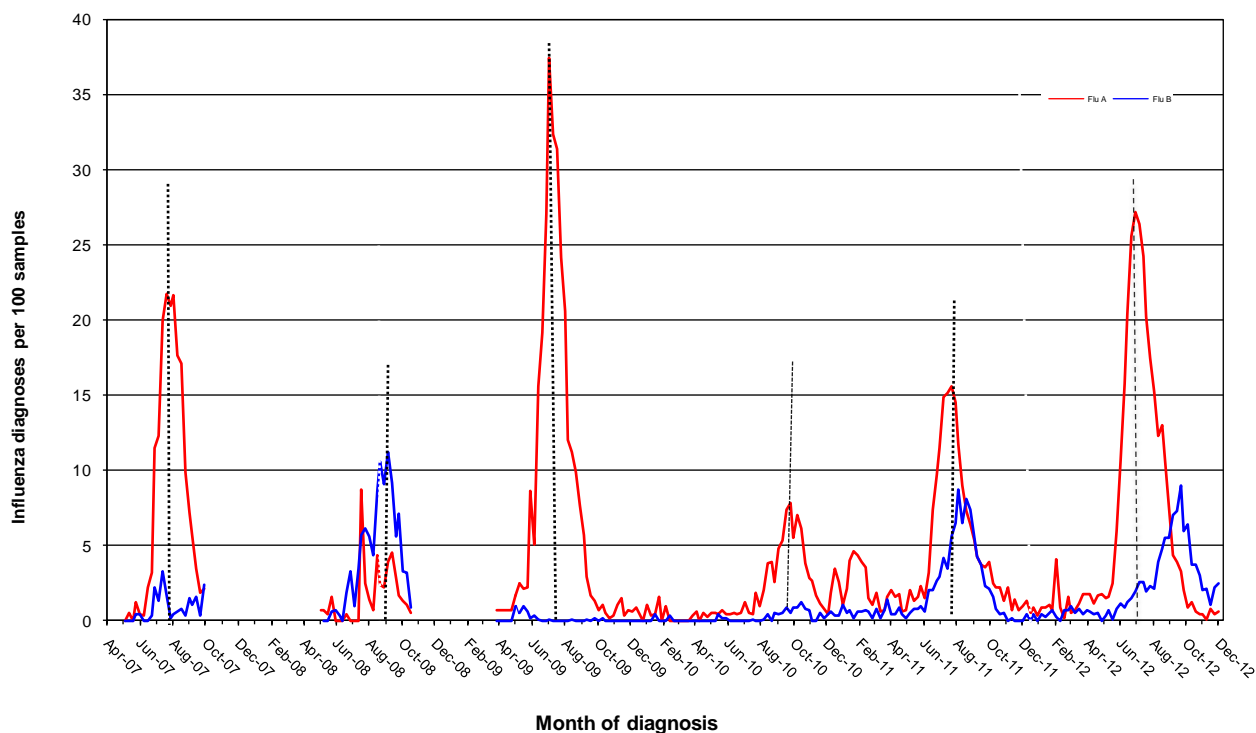
**Table 1:** Summary of testing for respiratory viruses and influenza at NSW laboratories 1 January to 30 November 2012.

| 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       | (%)    |        |                   |     |        |         |        |
| 27/01/2012         | 1617        | 14          | (0.9%)  | 6       | (42.9%)     | 4        | (28.6%)     | 7           | (0.4%) | 37     | 60                | 38  | 119    | 64      | 36     |
| 02/03/2012*        | 2520        | 31          | (1.2%)  | 12      | (38.7%)     | 1        | (3.2%)      | 15          | (0.6%) | 44     | 65                | 156 | 224    | 128     | 30     |
| 30/03/2012         | 2573        | 36          | (1.4%)  | 25      | (69.4%)     | 3        | (8.3%)      | 16          | (0.6%) | 59     | 79                | 269 | 263    | 114     | 40     |
| 27/04/2012         | 2857        | 46          | (1.6%)  | 31      | (67.4%)     | 5        | (10.9%)     | 11          | (0.4%) | 65     | 63                | 422 | 231    | 114     | 28     |
| 01/06/2012*        | 4394        | 209         | (4.8%)  | 166     | (79.4%)     | 2        | (1.0%)      | 30          | (0.7%) | 91     | 76                | 574 | 463    | 170     | 31     |
| 29/06/2012         | 5704        | 1316        | (23.1%) | 613     | (46.6%)     | 2        | (0.2%)      | 84          | (1.5%) | 96     | 68                | 558 | 535    | 16      | 53     |
| 27/07/2012         | 6818        | 1552        | (22.8%) | 982     | (63.3%)     | 5        | (0.3%)      | 159         | (2.3%) | 138    | 70                | 551 | 552    | 13      | 88     |
| 31/08/2012*        | 7781        | 915         | (11.8%) | 556     | (60.8%)     | 10       | (1.1%)      | 344         | (4.4%) | 165    | 145               | 515 | 577    | 34      | 189    |
| 28/09/2012         | 5096        | 178         | (3.5%)  | 94      | (52.8%)     | 6        | (3.4%)      | 373         | (7.3%) | 162    | 201               | 239 | 477    | 24      | 203    |
| 02/11/2012*        | 3920        | 29          | (0.7%)  | 12      | (41.4%)     | 4        | (13.8%)     | 150         | (3.8%) | 139    | 256               | 108 | 475    | 16      | 154    |
| 30/11/2012*        | 2828        | 14          | (0.5%)  | 10      | (71.4%)     | 4        | (28.6%)     | 56          | (2.0%) | 102    | 177               | 59  | 504    | 24      | 86     |
| <b>Week ending</b> |             |             |         |         |             |          |             |             |        |        |                   |     |        |         |        |
| 09/11/2012         | 714         | 1           | (0.1%)  | 1       | (100.0%)    | 0        | (0.0%)      | 15          | (2.1%) | 29     | 53                | 13  | 128    | 2       | 23     |
| 16/11/2012         | 715         | 6           | (0.8%)  | 4       | (66.7%)     | 2        | (33.3%)     | 8           | (1.1%) | 27     | 48                | 11  | 133    | 4       | 22     |
| 23/11/2012         | 730         | 3           | (0.4%)  | 3       | (100.0%)    | 0        | (0.0%)      | 16          | (2.2%) | 24     | 42                | 23  | 126    | 12      | 19     |
| 30/11/2012         | 669         | 4           | (0.6%)  | 2       | (1.0%)      | 2        | (50.0%)     | 17          | (2.5%) | 22     | 34                | 12  | 117    | 6       | 22     |

\*\* 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 Service (HAPS), St Vincent's (SydPath), Nepean, Douglas Hanley Moir (DHM), VDRLab.

**Figure 4:** Percent of laboratory tests positive for influenza A and influenza B, 1 January 2007 – 30 November 2012, 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 Vincent's (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).

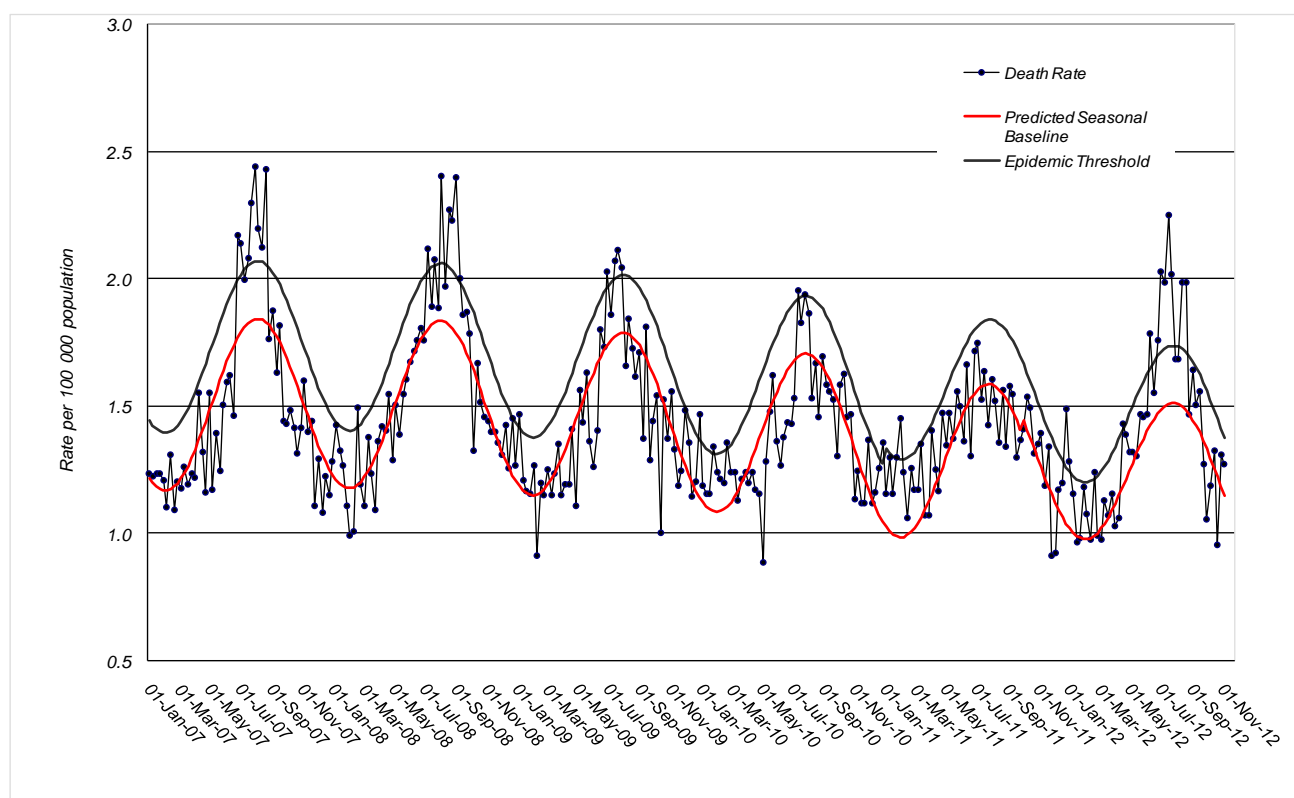
## 4. Deaths with pneumonia or influenza reported on the death certificate

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 9 November:

- There were 1.27 pneumonia or influenza deaths per 100,000 NSW population, which is below the epidemic threshold of 1.38 per 100,000 population (Figure 4).\*
- Between 1 July and 9 November 2012, out of 19,748 deaths there were 31 death certificates mentioning influenza, and 2,183 mentioning pneumonia. The majority of these influenza and pneumonia deaths were in persons aged greater than 65 years.
- The updated data on pneumonia and influenza deaths indicates that the rate of deaths in this category was above the epidemic threshold for most of July. As expected, the increase in the death rate mirrored the increases seen in laboratory isolations of influenza and Emergency Department ILI activity, but with a delay of one to two weeks.



**Figure 5:** Rate of deaths classified as influenza and pneumonia (by NSW Registered Death Certificates) per 100,000 NSW population, 2007-2012

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. WHO recommendation for the 2013 Southern Hemisphere influenza vaccine

The World Health Organization (WHO) Consultation on the Composition of Influenza Vaccines for the Southern Hemisphere 2013 was held in Beijing on 17-19 September 2012.

Following the Consultation, WHO recommended that trivalent vaccines for use in the 2013 influenza season (southern hemisphere winter) contain the following:

- *an A/California/7/2009 (H1N1)-like virus;*
- *an A/Victoria/361/2011 (H3N2)-like virus*
- *a B/Wisconsin/1/2010-like virus.*

For further information see the WHO report [here](#).

## 6. National and International Influenza Surveillance and Links

### Novel Coronavirus Infections

On 30 The World Health Organization (WHO) reported that a total of nine laboratory-confirmed cases of infection with a novel coronavirus have now been identified – five cases (including 3 deaths) from Saudi Arabia, two cases from Qatar and two cases (both fatal) from Jordan.

The latest confirmed case from Saudi Arabia occurred in October 2012 and is part of a family cluster three confirmed cases and one probable case. The two cases from Jordan occurred in April 2012 and were investigated as part of a cluster of severe pneumonia cases.

This novel coronavirus is not closely related to SARS CoV. Current information suggests that the virus is not readily spread between people, although the observation of multiple cases within one family and possibly within a cluster of cases in Jordan is cause for concern.

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

### Links to Other Influenza Surveillance

Australian Influenza Surveillance Reports:

<http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-ozflu-2012.htm>

World Health Organization Influenza Updates:

<http://www.who.int/csr/disease/influenza/en/index.html>

WHO Collaborating Centre for Reference and Research on Influenza (Melbourne):

<http://www.influenzacentre.org/index.htm>