



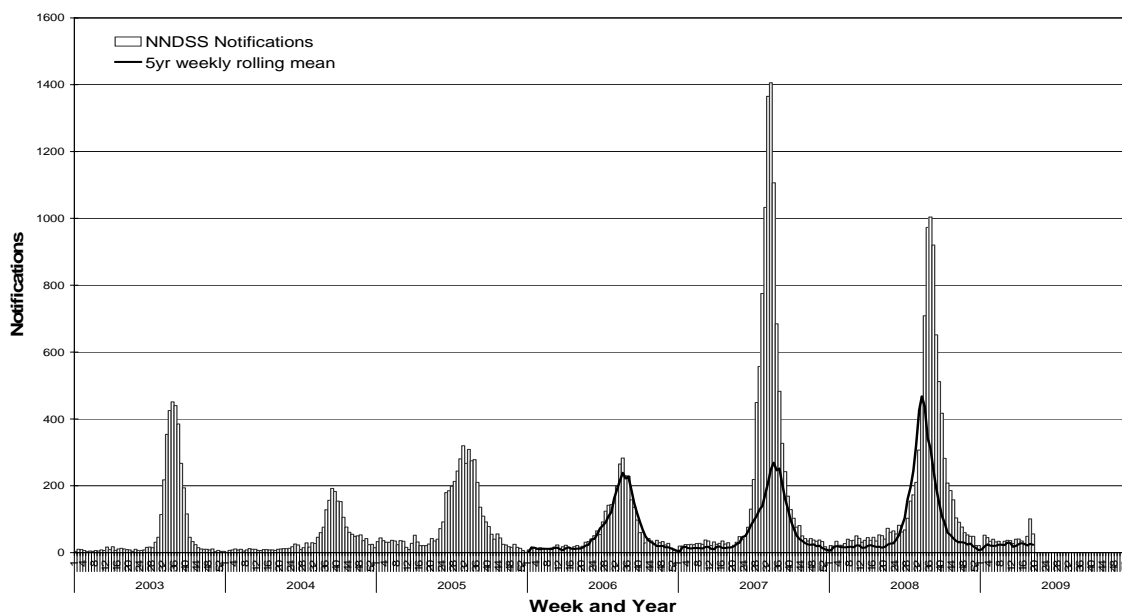
**REPORTING PERIOD: 25 April 2009 – 8 May 2009 (#1-09)**

*This report aims to increase awareness of seasonal influenza in Australia by providing an analysis of the various surveillance data sources throughout Australia. While every care has been taken in preparing this report, the Commonwealth does not accept liability for any injury or loss or damage arising from the use of, or reliance upon, the content of the report. Please note, this report is based on data available as at 8 May 2009. Delays in the reporting of data may cause data to change retrospectively. For further details about information contained in this report please contact the Influenza team through [flu@health.gov.au](mailto:flu@health.gov.au).*

**IN THIS REPORT:**

- A sharp increase in influenza notifications occurred in this reporting period, likely to be due to increased testing for influenza associated with H1N1 Influenza 09 (Human Swine Influenza).
- This year to date (1 January 2009 to 8 May 2009) there have been 750 cases of influenza notified in Australia. Forty-four percent of these cases have been in New South Wales. The highest rate of notifications as been in the Northern Territory, followed by the Australian Capital Territory and New South Wales.
- Influenza strains notified to NNDSS have been predominantly Type A (77.3% of typed notifications YTD).
- Although the WHO has not released a report on oseltamivir resistance since 18 March 2009, during the period 1 October 2008 to 31 January 2009, 95% of seasonal H1N1 viruses analysed from 30 countries were resistant to oseltamivir.
- Since the outbreak of H1N1 Influenza 09 (Human Swine Influenza) was first identified, there has been one confirmed case reported in Australia (as at 6am 12 May 2009).

**Figure 1: Number of notifications of laboratory-confirmed influenza, NNDSS, Australia 1 January 2003 to 8 May 2009, by week of diagnosis**



SOURCE: NNDSS

As influenza only became nationally notifiable in 2001, a 5 year rolling mean cannot be calculated for years prior to 2006.

## LABORATORY CONFIRMED INFLUENZA

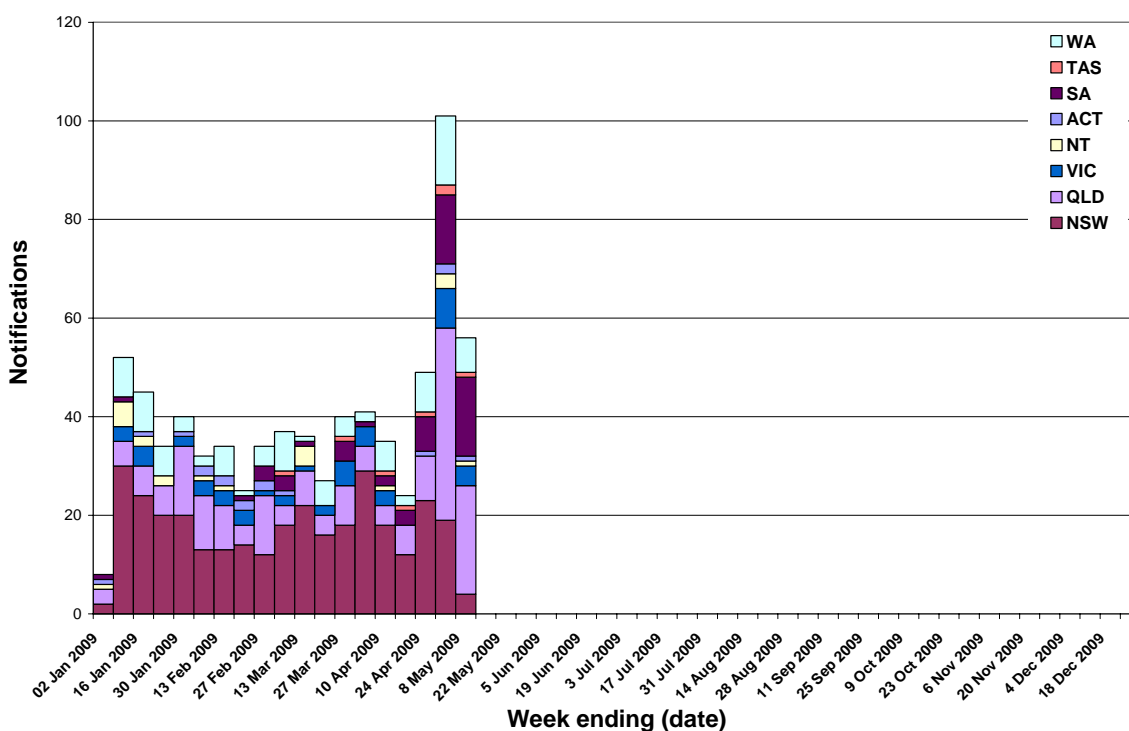
There have been 750 cases of laboratory confirmed influenza diagnosed year-to-date (YTD) in 2009 (Figure 1). There were 678 laboratory confirmed influenza cases in the same period last year.

Notifications in 2009 have been predominantly from New South Wales, with 327 (43.6%) notifications year-to-date and Queensland, 178 (23.7%) cases of influenza notified (Table 1; Figure 2). The sharp increase in influenza notifications and notification rates in this reporting period (Figures 2) is likely to be due to increased testing for influenza associated with H1N1 Influenza 09 (Human Swine Influenza).

**Table 1: Number and rate of laboratory-confirmed notifications by jurisdiction, NNDSS, 1 January 2009 to 8 May 2009, NNDSS**

State	Cases	Percentage of Total Notifications	Rate per 100,000	Average Rate YTD 2004-2008
ACT	16	2.1%	4.7	2.8
NSW	327	43.6%	4.7	2.4
NT	21	2.8%	9.8	6.0
QLD	178	23.7%	4.3	3.5
SA	57	7.6%	3.6	0.6
TAS	8	1.1%	1.6	1.2
VIC	48	6.4%	0.9	0.7
WA	95	12.7%	4.5	2.1
<b>AUS</b>	<b>750</b>	<b>100%</b>	<b>3.6</b>	<b>2.0</b>

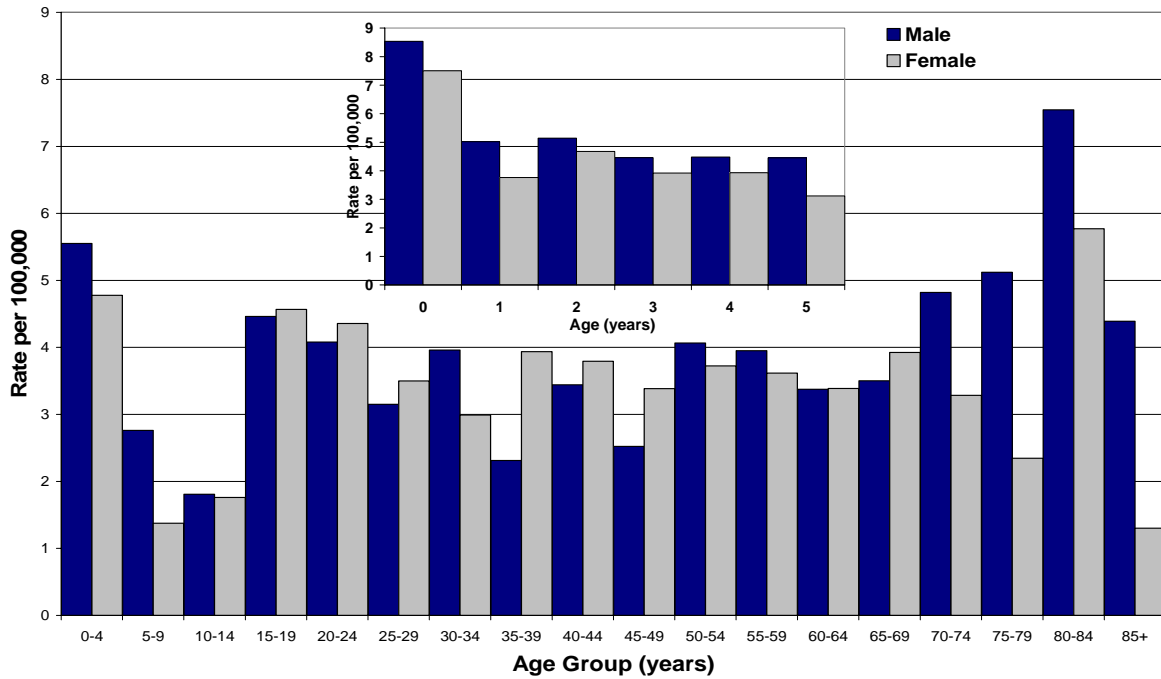
**Figure 2: Number of laboratory-confirmed influenza notifications, NNDSS, 1 January 2009 to 8 May 2009, by jurisdiction and week of diagnosis**



SOURCE: NNDSS

National age-specific notification rates YTD show the highest rate of notifications occurred in adults 80-84 years, with males over 80 years of age having the highest rates (Figure 3). Rates in children 0-4 years are relatively low (Figure 3 insert).

**Figure 3: Notification rates of laboratory-confirmed influenza, NNDSS, Australia, 1 January 2009 to 8 May 2009, by age group and sex, NNDSS**

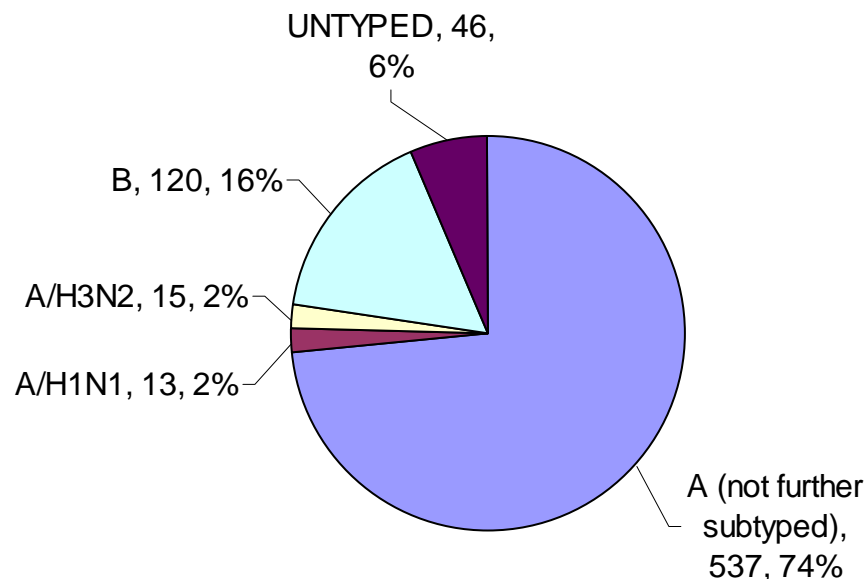


SOURCE: NNDSS

### ANTIGENIC CHARACTERISTICS

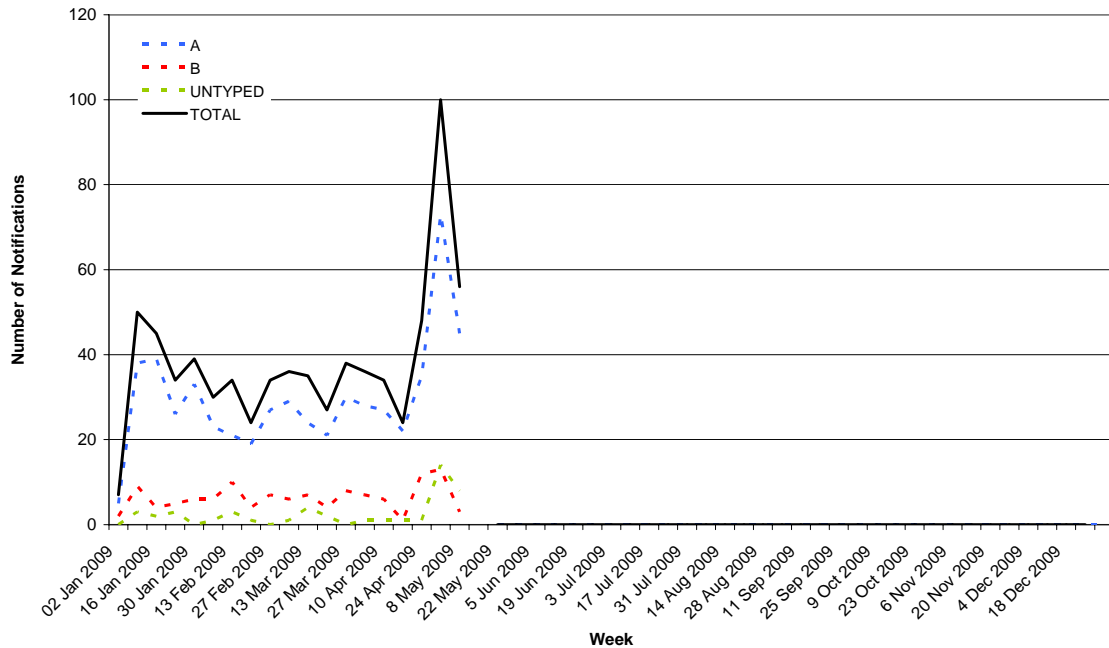
Typing characteristics have been relatively stable in 2009 (figure 5). YTD, 565 cases (77.3%) of influenza notifications to NNDSS have been Influenza Type A, 120 cases (16.4%) have been Influenza Type B and 46 cases (6.3%) were untyped (Figure 4). Of the Type A notifications that were subtyped, 15 were H3N2 and 13 were H1N1.

**Figure 4: Typing characteristics of notifications of laboratory-confirmed influenza, Australia, 1 January 2009 to 8 May 2009, NNDSS**



SOURCE: NNDSS

**Figure 5: Typing characteristics of notifications of laboratory-confirmed influenza, Australia, 1 January 2009 to 8 May 2009, by week of diagnosis, NNDSS**

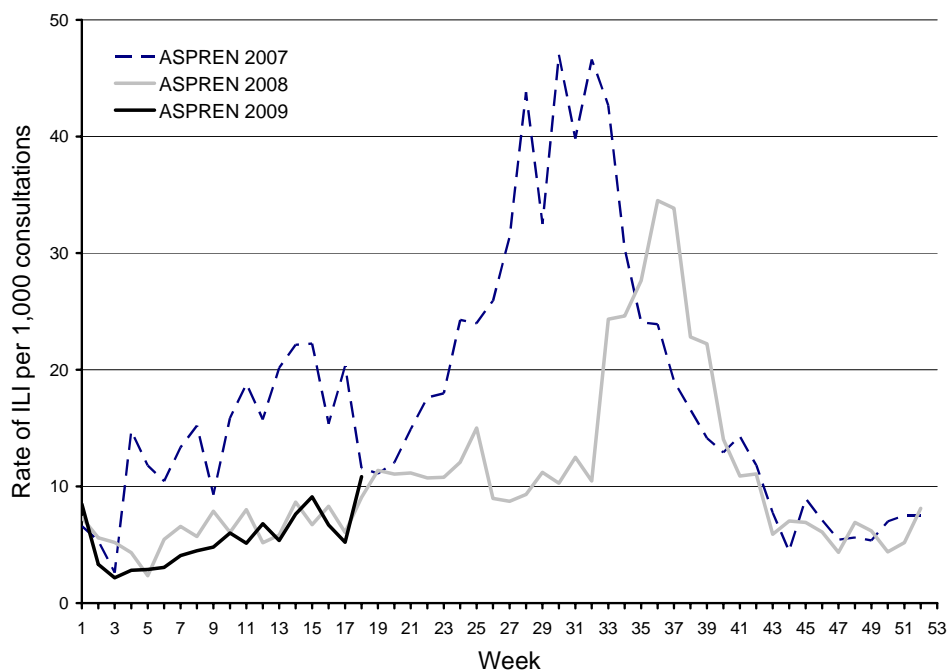


SOURCE: NNDSS

### SENTINEL GENERAL PRACTICE SURVEILLANCE

Data available from the Australian Sentinel Practices Research Network (ASPREN) up until 3 May 2009 show that ILI consultation rates have risen in the last week, but continue to remain at similar levels to those seen during the same period in 2007 and 2008 (Figure 6). There is no apparent increase in the number of people visiting their GPs with ILI as a result of the large amount of media around H1N1 Influenza 09 (Human Swine Influenza).

**Figure 6: Rate of ILI reported from ASPREN from 1 January 2007 to 3 May 2009 by week**



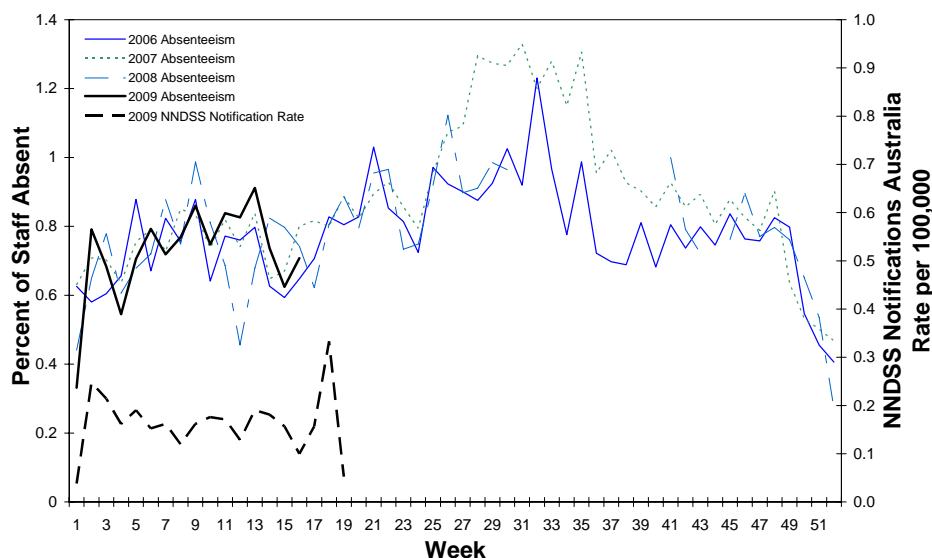
SOURCE: ASPREN

## ABSENTEEISM SURVEILLANCE

A national organisation provides data on the number of employees that have been on sick leave for a continuous period of more than three days. These data are not influenza or ILI specific and absenteeism may be a result of other illnesses.

Absenteeism rates in 2009 have been following a similar trend to recent years (Figure 7).

**Figure 7: Absenteeism rates, 1 January 2006 to 22 April 2009, by week and NNDSS influenza notifications, Rate per 100,000 population, 1 January 2009 to 6 May 2009, by week**



SOURCE: Absenteeism data

## INTERNATIONAL SEASONAL ACTIVITY SUMMARY

### Global, Europe, United States and Canada

During weeks 15-16, the level of seasonal influenza activity globally continued to decrease and is below baseline levels in most countries. No countries reported regional or widespread seasonal influenza activity. Local seasonal influenza activity was reported by Canada, Estonia, the Russian Federation, United Kingdom and the United States of America. The strains reported from countries experiencing regional and local seasonal influenza activity varied between seasonal influenza A (H1 and H3) and influenza B.<sup>i</sup>

In Canada, since 2008-2009 seasonal reporting commenced on 24 August 2008, influenza A has been the predominant circulating type (61% of typed samples). The Canadian National Microbiology Laboratory has not provided an update on antigenic characterisation or antiviral resistance since 11 April 2009. At this time, 24% of the viruses subtyped were H1N1 and 17% H3N2. Oseltamivir resistance was detected in 100% (225) of influenza H1N1 isolates tested as at 11 April 2009.<sup>ii</sup>

In Europe, since 2008-2009 seasonal reporting commenced on 29 September 2008, influenza A has been the predominant circulating type (84%), with influenza B viruses accounting for 16%. Of the 51% of influenza A viruses subtyped, 89% were H3N2 and 11% were H1N1. Oseltamivir resistance has been detected in 98% of influenza H1N1 isolates tested as at 19 April 2009.<sup>iii</sup>

In The United States, since 2008-2009 seasonal reporting commenced on 30 September 2008, influenza A has been the predominant circulating type (66.8%), with influenza B viruses accounting for 33.2%, as at 11 April 2009. Of the 40% of influenza A viruses subtyped, 90% were H1N1. Oseltamivir resistance has been detected in 99% of the 748 influenza H1N1 isolates tested, as at 11 April 2009. Due to the current H1N1 influenza 09 (Human Swine Influenza) outbreaks, the United States Centers for Disease Control and Prevention have not been providing timely data on seasonal influenza activity.<sup>iv, v</sup>

*For further information please contact: [flu@health.gov.au](mailto:flu@health.gov.au)*

## **DATA CONSIDERATIONS**

### NNDSS (National Notifiable Diseases Surveillance System)

NNDSS comprises of notifications from jurisdictions of laboratory-confirmed influenza cases. Influenza is notifiable in all jurisdictions in Australia. Data included in this report was extracted and analysed on 8 May 2008.

### ASPREN

ASPREN, the Australian Sentinel Practices Research Network, has Sentinel GPs who report ILI presentation rates in NSW, SA, ACT, VIC, QLD, TAS and WA. As jurisdictions joined ASPREN at different times and the number of GPs reporting has changed over time, the representativeness of ASPREN data in 2009 may be different to that of previous years.

ASPREN data are sent to the Surveillance Branch on a weekly basis, and are currently available up until 3 May 2009.

### Absenteeism Surveillance

Absenteeism data are provided weekly to the Surveillance Branch by a national employer and are currently available up until 22 April 2009.

### International Summary – References:

<sup>i</sup> WHO, Seasonal influenza activity in the world weeks 15 & 16, 3 May 2009.

Available from: <http://www.who.int/csr/disease/influenza/update/en/index.html>. Accessed 8 May 2009.

<sup>ii</sup> Flu Watch Weekly reports 2008-2009 season, Weeks 15 & 16, 2009.

Available from: <http://www.phac-aspc.gc.ca/fluwatch/08-09/index-eng.php>. Accessed 8 May 2009.

<sup>iii</sup> EISS Weekly Electronic Bulletin Influenza Season 2008-2009 Week 17.

Available from: [http://www.eiss.org/cgi-files/bulletin\\_v2.cgi?season=2008](http://www.eiss.org/cgi-files/bulletin_v2.cgi?season=2008). Accessed 8 May 2009.

<sup>iv</sup> CDC FluView 2008-2009 influenza season, Week 14.

Available from: <http://www.cdc.gov/flu/weekly/fluactivity.htm>. Accessed 8 May 2009.

<sup>v</sup> CDC FluView 2008-2009 influenza season, Week 16

Available from: <http://www.cdc.gov/flu/weekly/>. Accessed 8 May 2009.