



REPORTING PERIOD: 16 May 2009 – 29 May 2009 (#4-09)

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 5 June 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.

IN THIS REPORT:

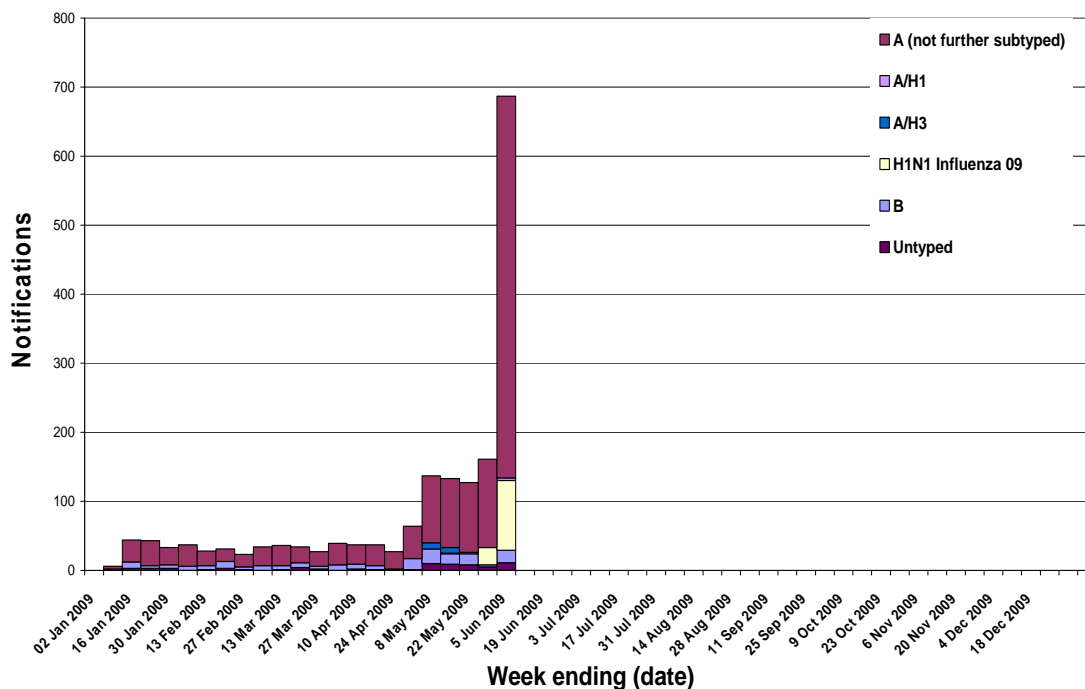
- Influenza notifications in Australia continue to rise, a reflection of the increased testing for H1N1 Influenza 09.
 - Notifications of H1N1 Influenza 09 continue to rise, with a large proportion of cases notified in Victoria - particularly in the Northern and South Western suburbs of Melbourne.
 - The bulk of H1N1 influenza 09 cases in Australia and Victoria to date have been in school aged children, with a median age of 15 years in Australia.
 - Six cases of H1N1 influenza 09 have been reported in Aboriginal and/or Torres Strait Islander people.

- Syndromic and laboratory surveillance indicates that the influenza season has not yet commenced in the Australian community.
 - Seasonal influenza notifications rates continue to be highest in children less than one year of age.

LABORATORY CONFIRMED INFLUENZA

Influenza A is the predominant circulating type in Australia. YTD, 1,382 cases (84%) of influenza notifications to NNDSS have been influenza type A, 174 cases (11%) have been influenza type B and 81 cases (5%) were untyped (Figure 1).

Figure 1: Typing characteristics of notifications of laboratory-confirmed influenza, Australia, 1 January 2009 to 29 May 2009, week of diagnosis, NNDSS



SOURCE: NNDSS

H1N1 INFLUENZA 09 IN AUSTRALIA

Since the outbreak of H1N1 Influenza 09 was first identified, there have been 872 confirmed cases identified in Australia (as of 3 June, 2009). This rapid increase reflects the rise in the number of confirmed cases with infection acquired in Australia. As Table 1 demonstrates, the bulk of these cases (86% of confirmed cases) were from Victoria.

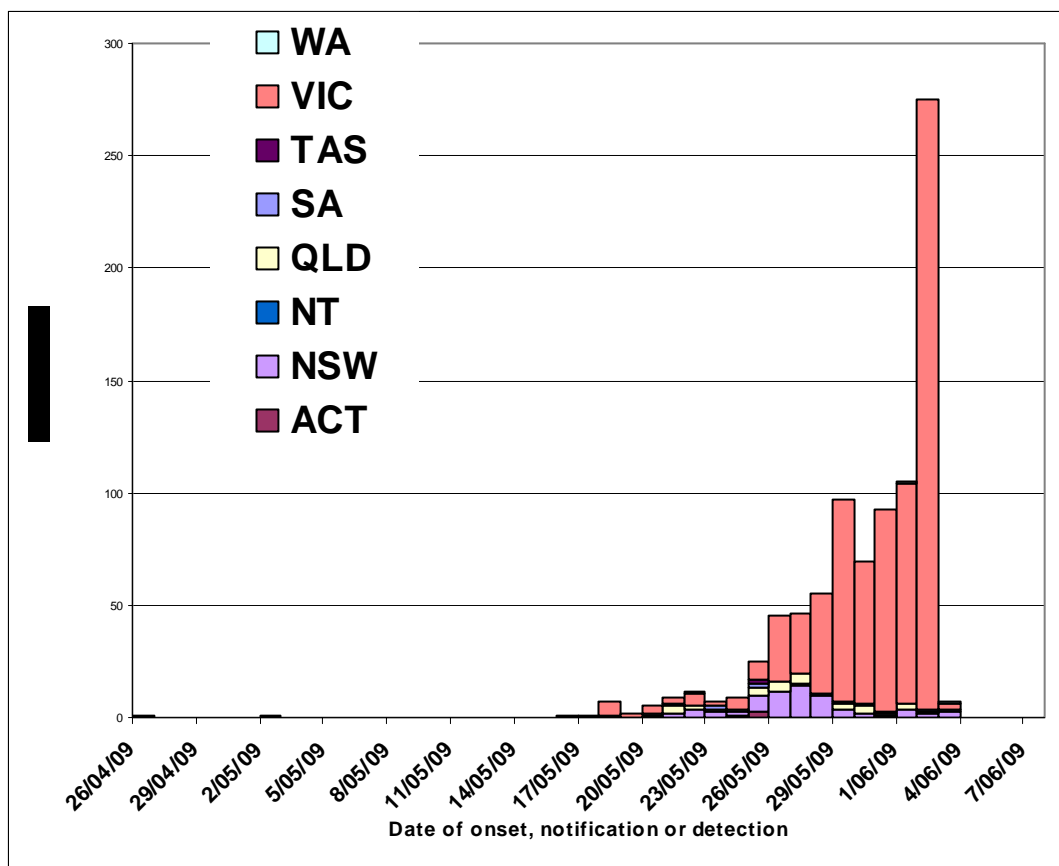
Please note that the following Figures and Tables are based on data extracted from NetEPI, a web-based outbreak case reporting symptom used by all jurisdictions, and based on onset date where available. Where an onset date is not available in NetEPI notification date has been used. Victorian cases use a calculated onset date which is the earliest available date calculated from specimen date, onset date, notification date or detection date. This assumption was made for all calculations and data on which the following figures are based.

Table 1: Number and rate of laboratory-confirmed H1N1 Influenza 09 notifications by jurisdiction, NetEpi, to 3 June 2009

State	Cases	Percentage of Total Notifications	Rate per 100,000
ACT	4	0.5%	1.2
NSW	69	7.9%	1.0
NT	3	0.3%	1.4
QLD	26	3.0%	0.6
SA	8	0.9%	0.5
TAS	8	0.9%	1.6
VIC	751	86.1%	14.4
WA	3	0.3%	0.1
AUS	872	100%	4.1

SOURCE: NetEPI

Figure 2: Number of laboratory-confirmed H1N1 Influenza 09 notifications, NetEPI, 26 April 2009 to 3 June 2009, by jurisdiction and date of onset, notification or detection



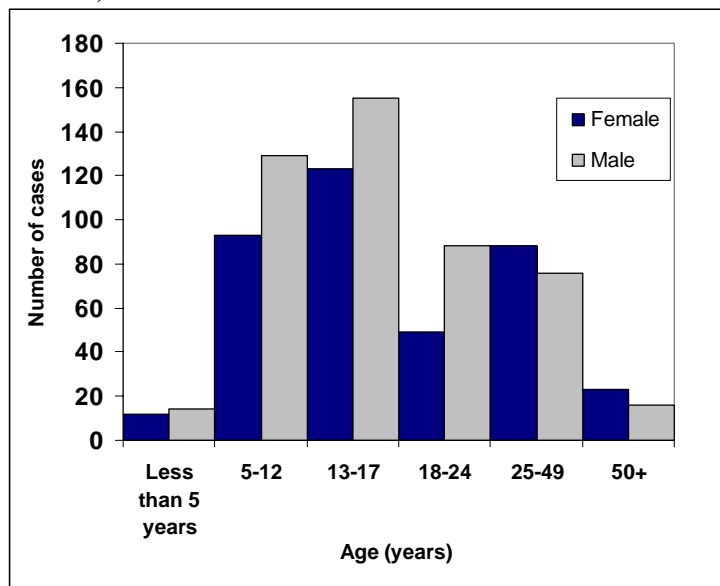
SOURCE: NetEPI

The median age of Australian cases of H1N1 Influenza 09 is 15 years. As can be seen in Figure 3, the bulk of the cases to date have been in the 5-12 year age group. This is slightly lower than reports from other countries, which all suggest a median age of between 16-25 years.¹

There are more males than females among confirmed cases. Forty four percent (n=391) of cases are female and 56% (n=481) of cases are male. Figure 3 shows the higher proportion of males in all age groups <25 years of age.

Indigenous status was complete for 122 of 872 cases, of which 6 were reported as Aboriginal and/or Torres Strait Islander people.

Figure 3: Notification rates of laboratory-confirmed H1N1 Influenza 09, Australia, to 3 June 2009, by age group and sex, NetEPI



SOURCE: NetEPI

¹ Weekly epidemiological record, 29th May 2009, WHO

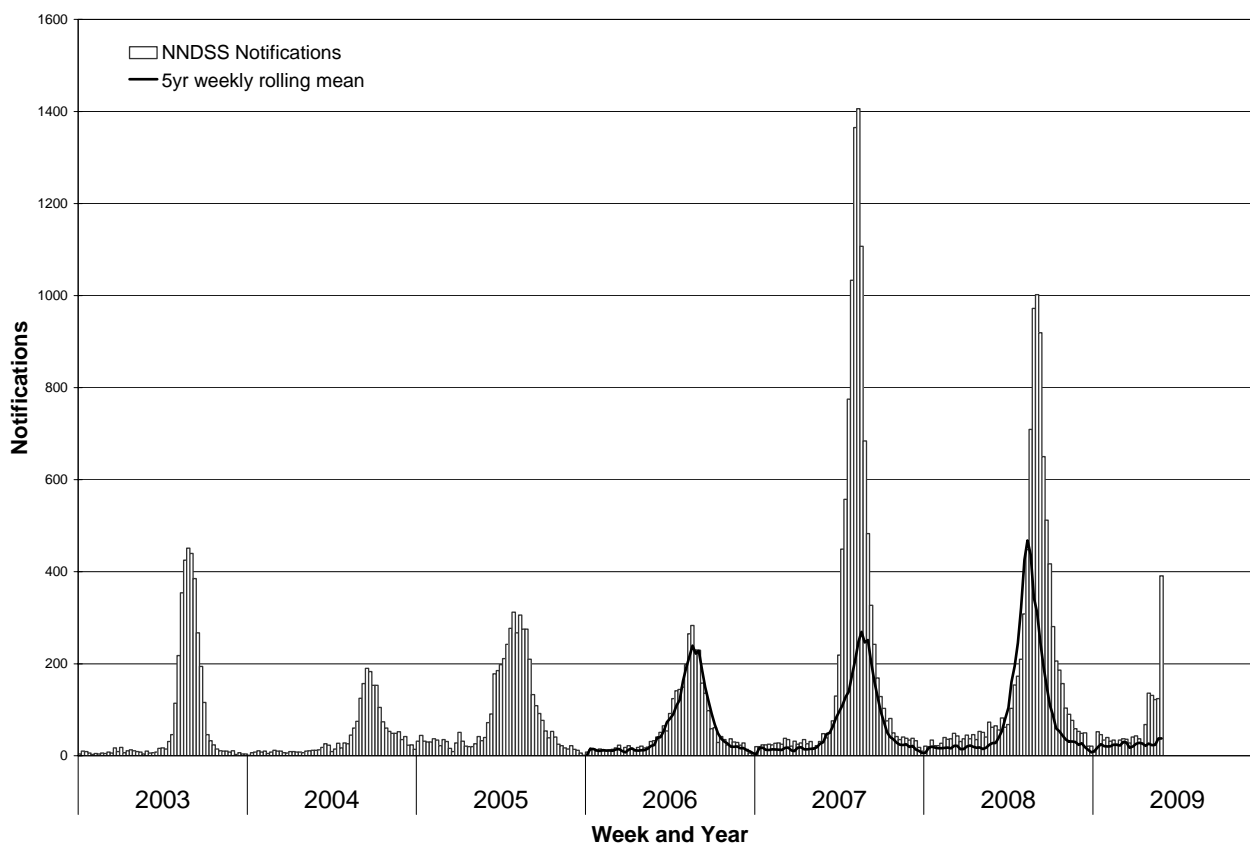
SEASONAL INFLUENZA IN AUSTRALIA

Note: This section EXCLUDES any notifications of H1N1 Influenza 09.

There have been 1,526 cases of laboratory confirmed influenza diagnosed year-to-date (YTD) in 2009 (Figure 4). There were 851 laboratory confirmed influenza cases in the same period last year.

Influenza notifications are above the 5 year rolling mean for this period (Figure 4). The sharp increase in influenza notifications and notification rates in this reporting period (Figures 4 and 5) is likely to be due to increased testing for influenza associated with H1N1 Influenza 09.

Figure 4: Number of laboratory-confirmed influenza notifications, NNDSS, 1 January 2009 to 29 May 2009, by jurisdiction and week of diagnosis



SOURCE: NNDSS

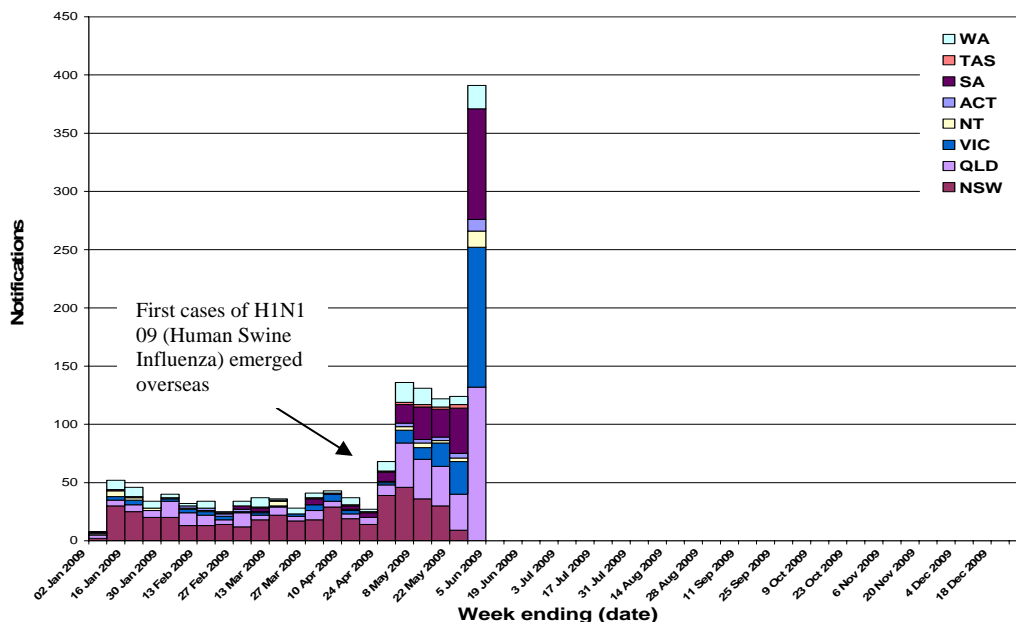
Notifications in 2009 have been predominantly from New South Wales, with 446 (29.2%) notifications, Queensland, 386 (25.3%) notifications and South Australia, 233 (15.3%) notifications of influenza (Table 2; Figure 4)

Table 2: Number and rate of laboratory-confirmed notifications by jurisdiction, 1 January 2009 to 29 May 2009, NNDSS

State	Cases	Percentage of Total Notifications	Rate per 100,000	Average Rate YTD 2004-2008
ACT	36	2.4%	10.6	16.6
NSW	446	29.2%	6.5	14.1
NT	43	2.8%	20.0	33.2
QLD	386	25.3%	9.2	21.0
SA	233	15.3%	14.7	3.9
TAS	14	0.9%	2.8	7.2
VIC	229	15.0%	4.4	4.6
WA	139	9.1%	6.6	12.4
AUS	1526	100%	7.3	2.5

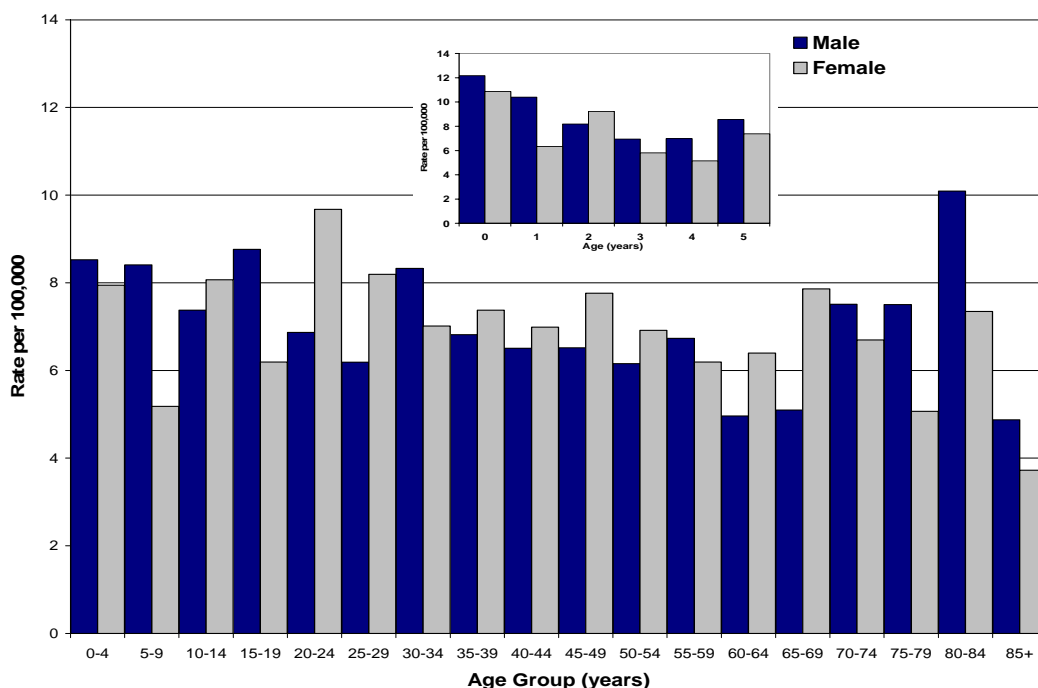
The YTD rate of influenza in Australia is 7 cases per 100,000 population. The rate of notifications has risen sharply in South Australia, Queensland, the Australian Capital Territory and Victoria. The rate of notifications is highest in the Northern Territory (20 cases per 100,000 population), followed by South Australia (15 cases per 100,000 population) and the Australian Capital Territory (11 cases per 100,000 population) (Table 2).

Figure 5: Number of laboratory-confirmed influenza notifications, NNDSS, 1 January 2009 to 29 May 2009, by jurisdiction and week of diagnosis



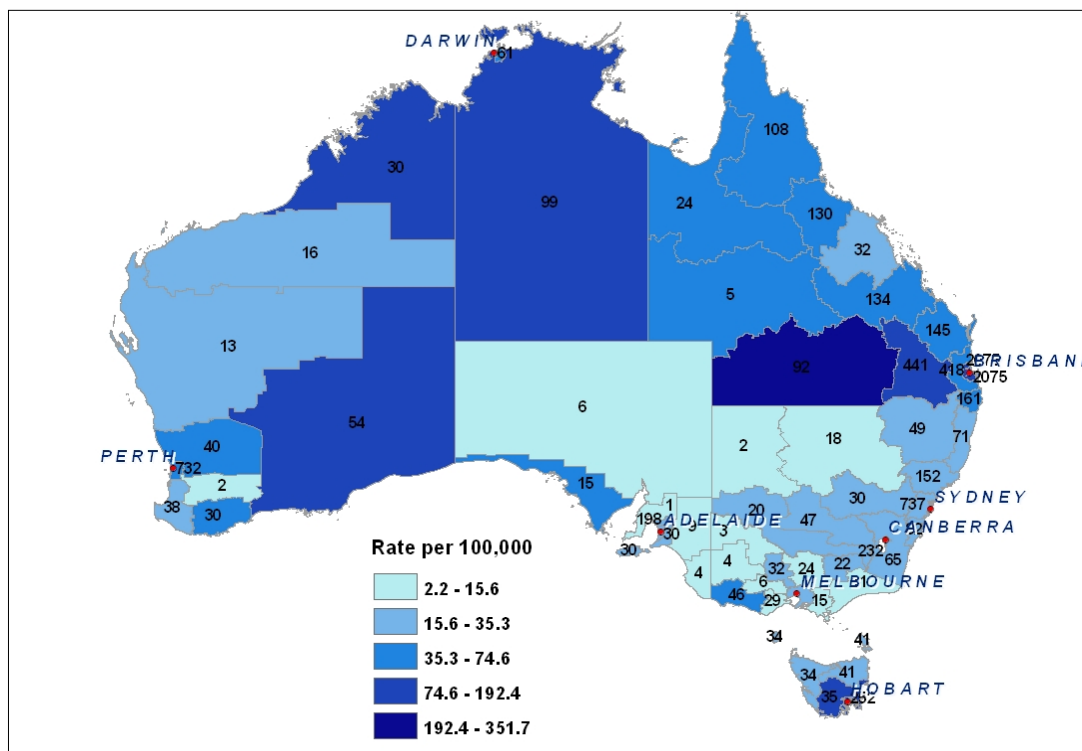
National age-specific notification rates YTD show the highest rate of notifications occurred in children aged less than one year. Rates are not significantly different across other age groups (Figure 6).

Figure 6: Notification rates of laboratory-confirmed influenza, NNDSS, Australia, 1 January 2009 to 29 May 2009, by age group and sex, NNDSS



Mapping of influenza notifications by statistical division of residence indicates that there are areas within states, with higher rates compared to the rest of the state or Australia (Figure 7). The numbers on the map indicate the number of cases occurring within each region.

Figure 7: Map of notification rates of laboratory-confirmed influenza, NNDSS, Australia, 1 January 2008 to 29 May 2009, by Statistical Division of residence



SOURCE: NNDSS

LABORATORY SURVEILLANCE

Sentinel laboratory surveillance indicates that levels of influenza in the community are still relatively low.

The Victorian Infectious Disease Reference Laboratory (VIDRL) has reported that in the week ending 24 May 2009, picornavirus was the most commonly detected respiratory virus in Victoria (For full report see: www.vidrl.org.au).

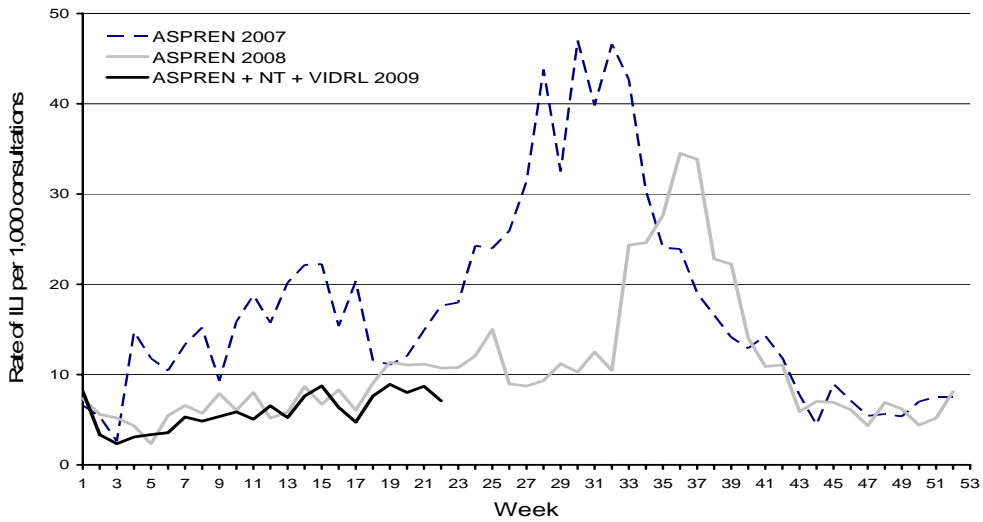
SYNDROMIC SURVEILLANCE

SENTINEL GENERAL PRACTICE

Data available from the Australian Sentinel Practices Research Network (ASPREN), the Northern Territory GP surveillance system, and VIDRL up until Week 22 2009* show that ILI consultation rates this reporting period are below levels seen during the same period in 2007 and 2008 (Figure 8). In the last week, the presentation rate to sentinel GPs in Australia was 7 cases per 1000 patients seen. Compared to previous years there is no apparent ongoing increase in the number of people visiting their GPs with ILI as a result of the large amount of media around H1N1 Influenza 09.

As data from NT and VIDRL surveillance systems have been being combined with ASPREN data, rates may not be readily comparable between 2007/2008 and 2009.

Figure 8: Rate of ILI reported from GP ILI surveillance systems from 2007 to 2009 by week



* ASPREN to 29 May 2009, NT to 24 May 2009, VIDRL to 24 May 2009

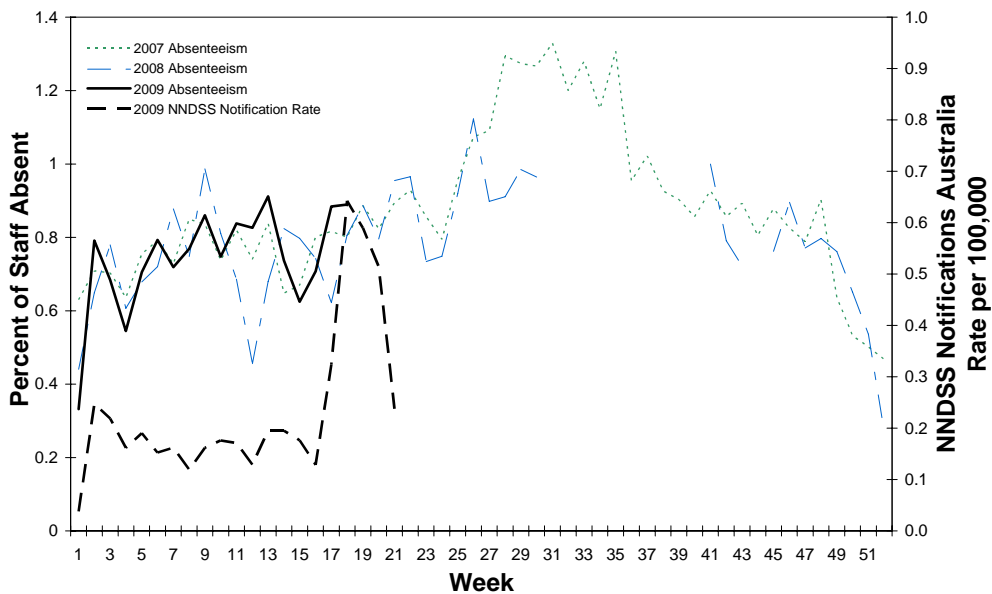
SOURCE: ASPREN, NT, VIDRL

ABSENTEEISM

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 continue to follow similar trends to recent years and may indicate that influenza is not yet widespread in the community (Figure 9).

Figure 9: Absenteeism rates, 1 January 2007 to 6 May 2009, by week and NNDSS influenza notifications, Rate per 100,000 population, 1 January 2009 to 22 May 2009, by week



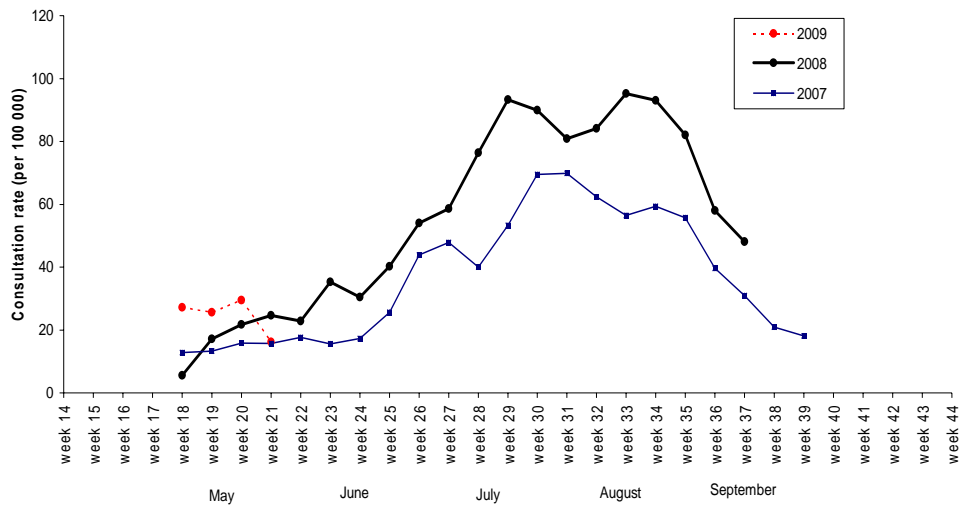
SOURCE: Absenteeism data

INTERNATIONAL

New Zealand Influenza Activity

The current rate of influenza in New Zealand is lower than at the same time last year (Figure 10).

Figure 10: Weekly consultation rates for ILI in New Zealand, 2007, 2008 and 2009



SOURCE: New Zealand Influenza Weekly Update

For further information please contact: flu@health.gov.au

DATA CONSIDERATIONS

NetEPI (Web based outbreak case reporting system)

All jurisdictions are reporting H1N1 influenza 09 cases using NetEPI. Data included in this report were extracted and analysed on 5 June 2008.

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 were extracted and analysed on 5 June 2008.

Laboratory Surveillance data

Laboratory testing data are extracted from the 2009 Victorian Influenza Vaccine Effectiveness Audit Report' (VIDRL). This report is provided weekly.

GP Surveillance

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 29 May 2009.

Northern Territory GP surveillance data are sent to the Surveillance Branch on a weekly basis, and are currently available up to 24 May 2009.

VIDRL influenza surveillance data are sent to the Surveillance Branch on a weekly basis, and are currently available up to 24 May 2009.

Absenteeism Surveillance

Absenteeism data are provided weekly to the Surveillance Branch by a national employer and are currently available up until 6 May 2009.