

# Influenza Monthly Epidemiology Report, NSW

Including H1N1 influenza 09

February 2010

Produced by: Population Health Division, NSW Health.

## Summary

From 1 January to 28 February 2010:

- presentations to selected emergency departments were low, and slightly higher than the same period last year
- seven cases with laboratory confirmed pandemic (H1N1) 2009 influenza were reported in NSW.
- one patient with laboratory confirmed pandemic (H1N1) 2009 influenza were reported to have been admitted to NSW hospitals.
- no deaths were reported in association with confirmed pandemic (H1N1) 2009 influenza in NSW.

For a summary of 2009 data, go to

[http://www.health.nsw.gov.au/publichealth/Infectious/reports/influenza\\_05022010.asp](http://www.health.nsw.gov.au/publichealth/Infectious/reports/influenza_05022010.asp)

For weekly updates please see the communicable disease weekly report at

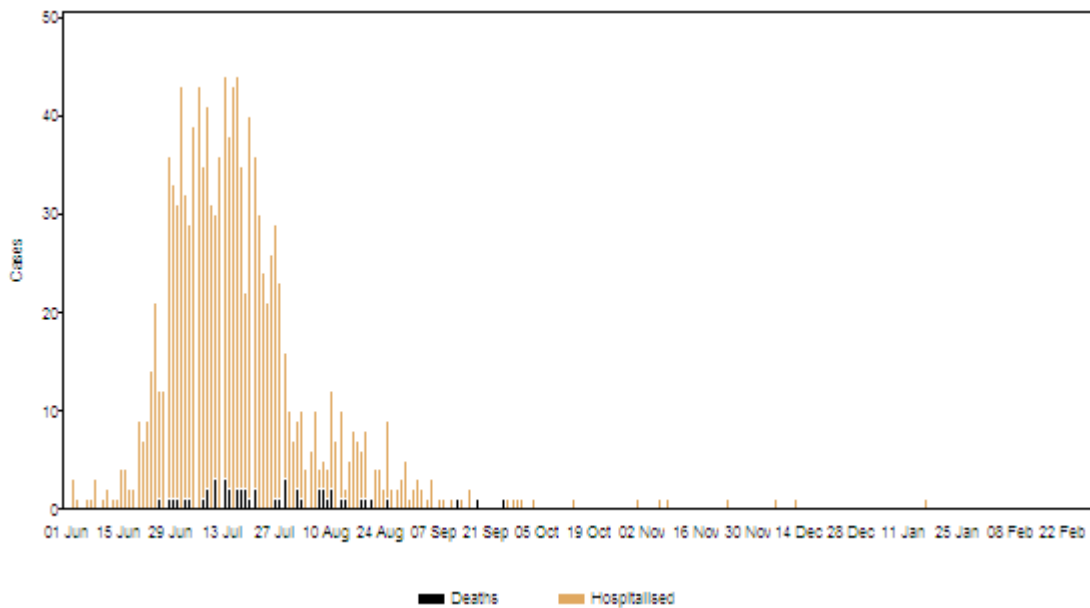
<http://www.health.nsw.gov.au/publichealth/infectious/index.asp>

In February 2010, notifications, hospitalisations and deaths of cases of H1N1 influenza 09 continued to decline. In February 2010:

- presentations to selected emergency departments were low, and were similar to the same month last year
- two cases with laboratory confirmed H1N1 pandemic (H1N1) 2009 influenza were reported in NSW.
- no patients with laboratory confirmed pandemic (H1N1) 2009 influenza were reported to have been admitted to NSW hospitals.
- no deaths to date in association with confirmed pandemic (H1N1) 2009 influenza in NSW

Rhinovirus was the most common respiratory virus diagnosed by sentinel laboratories in February.

**Figure 1:** Hospitalisations and deaths associated with laboratory confirmed pandemic (H1N1) 2009 influenza, 1 May 2009 to 28 February 2010 by date of hospitalisation or death.



## Introduction

A novel influenza A virus (H1N1 influenza 2009 -previously called human swine influenza) was identified in April 2009 in the United States and Mexico. Since then, widespread community transmission of the virus has been confirmed in other continents including Australia.

Illness in most people has been generally mild, and broadly similar to seasonal influenza. Features that are unusual include the younger age of cases, the relative sparing of the over 60 year old age group, and the out-of-season timing of the epidemic in the northern hemisphere.

The community was initially generally susceptible to a novel influenza virus. This means that despite the generally mild profile of the illness, the impact of the virus has been substantial, particularly as community transmission became established in Australia during the winter.

This report provides a summary of the surveillance for influenza, including confirmed pandemic (H1N1) 2009 influenza, undertaken by NSW Health. This includes data from a range of surveillance systems.

## Emergency Department (ED) presentations

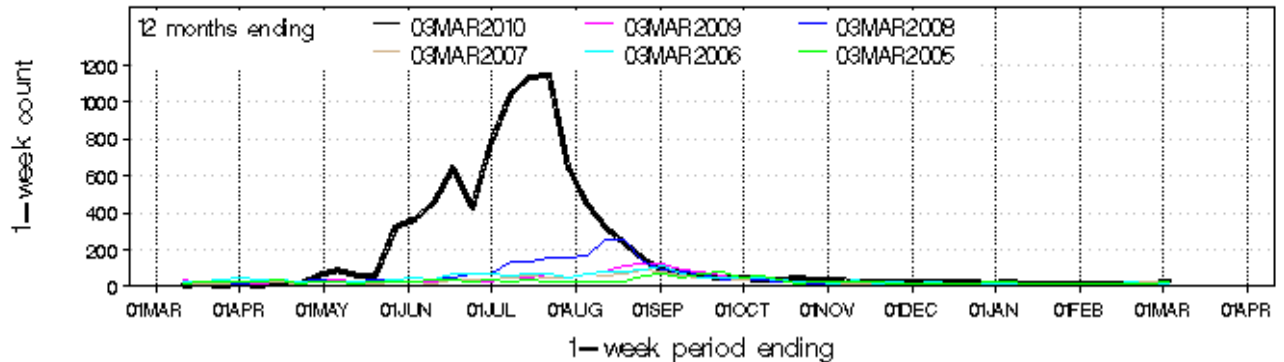
Data from 52 NSW emergency departments are included. Comparisons are made with data for the preceding six years. Recent counts are subject to change.

## Presentations for influenza-like illness

**Figure 2:** Comparison of weekly influenza-like illness presentations to NSW emergency departments, 2003-2009\*

**Category:** All visits with the above inclusions

Total 1-week counts



\* Some people presenting to NSW emergency departments have been referred to an influenza clinic without being recorded in the regular ED information system. (Under-reporting of influenza-related ED presentations will occur in this situation.) Includes data from 49 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection (HOIST).

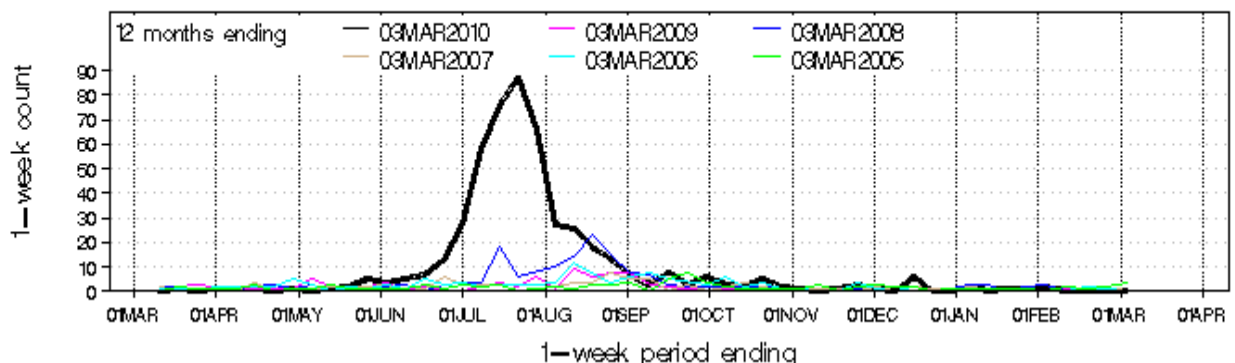
- In February 2010, there were 88 presentations with influenza-like illness. This is less than the previous month (January 95 presentations), but is greater than the count of 57 for the month of February in 2009
- Presentations to emergency departments for influenza-like illness were highest in mid July 2009 at around 1300 presentations per week. The July peak was approximately three times the previous highest peak of 2007.

## Admissions to hospital from emergency departments for influenza-like illness

**Figure 3:** Weekly counts of admissions to hospital for influenza-like illness from NSW emergency departments, 2003-2009\*.

**Category:** All visits with the above inclusions

Total 1-week counts



\* Some people presenting to NSW emergency departments have been referred to an influenza clinic without being recorded in the regular ED information system. (Under-reporting of influenza-related ED presentations will occur in this situation.) Includes data from 49 emergency departments. Source: NSW Health Public Health Real-time Emergency Department Surveillance System (PHREDSS) and the NSW Emergency Department Data Collection (HOIST).

- There were four admissions to hospital following presentation to emergency departments with influenza-like illness in February 2010. This is lower than the previous month (January six admissions), but greater than February 2009 when one person was admitted with ILI.
- Admissions from emergency departments to hospital for influenza-like illness were highest in mid July 2009 and peaked at around 110 admissions.

## **Laboratory confirmed cases of pandemic (H1N1) 2009 influenza**

### **Hospitalisations**

In January 2010 there has been one hospital admission for confirmed pandemic (H1N1) 2009 influenza. There have been no admissions in February.

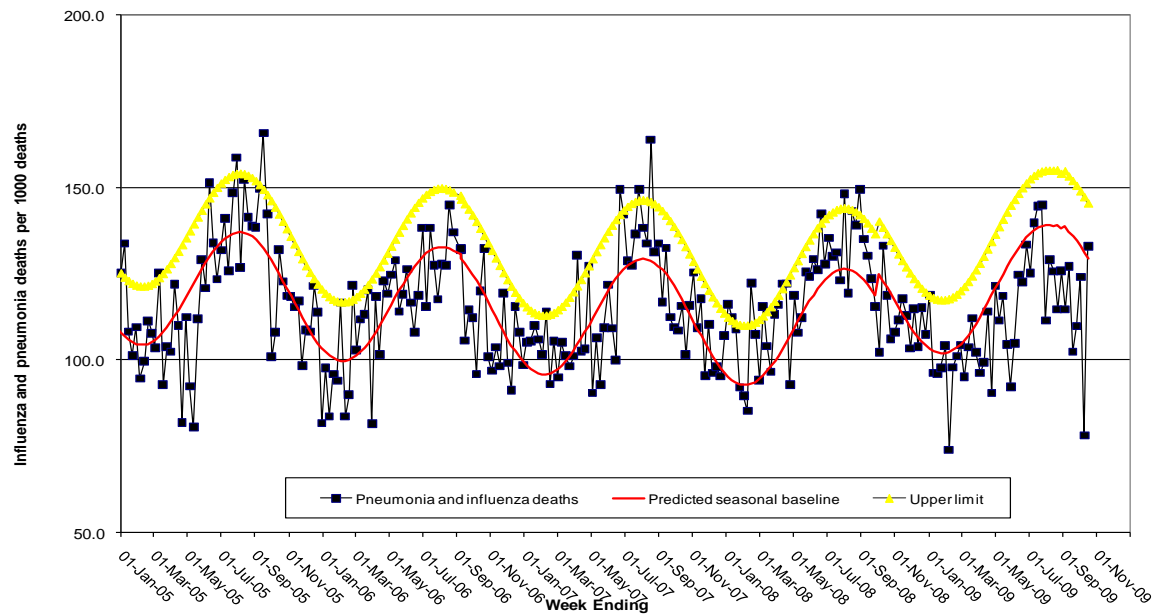
### **Deaths associated with pandemic (H1N1) 2009 influenza**

From 1 January to 28 February 2010.

- There have been no deaths reported associated with pandemic (H1N1) 2009 influenza

### **Deaths with influenza or pneumonia reported on the death certificate**

- While pneumonia has many causes, a well-known marker 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 (Figure 6)
- 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.
- Deaths referred to a coroner are not yet 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.
- Death registration data show that as of 12 February 2010, there were 101 pneumonia or influenza deaths per 1000 deaths in NSW, which is below the seasonal threshold of 135 per 1000.



**Figure 6:** Rate of deaths classified as influenza and pneumonia as per NSW Registered Death Certificates, 2004-2010

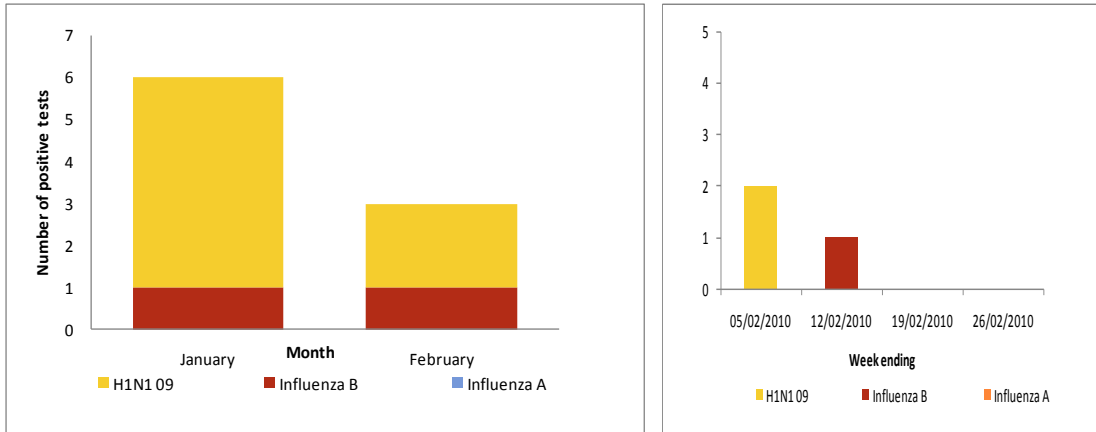
Source: NSW Registry of Births, Deaths and Marriages.

## Laboratory testing summary for influenza (including pandemic (H1N1) 2009 influenza

From 30 January to 28 February 2010

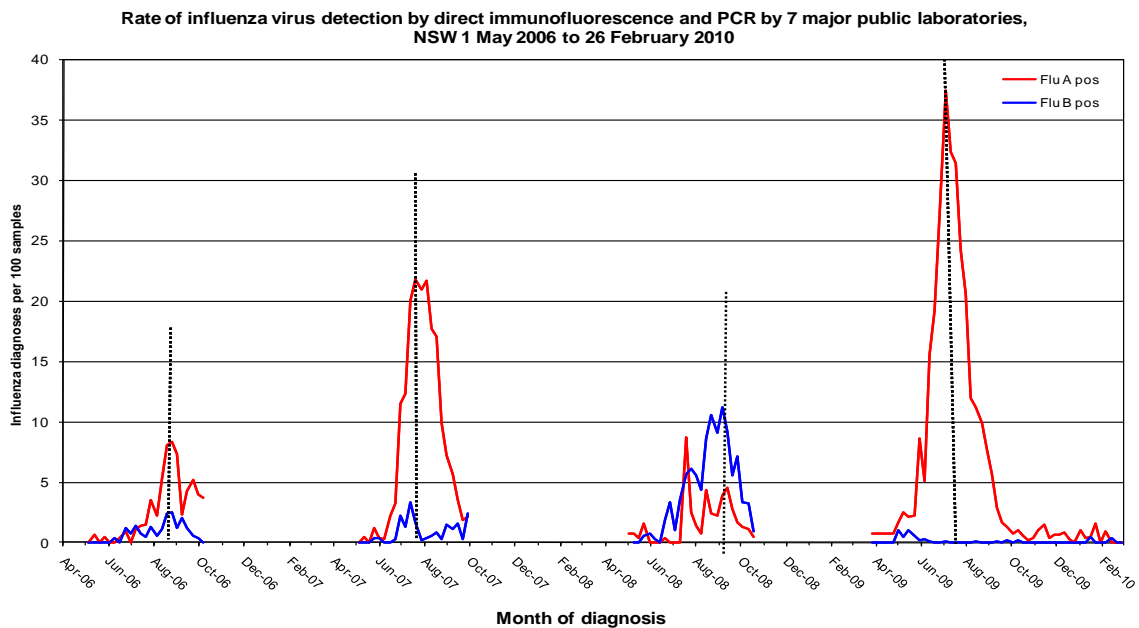
- 1071 tests for respiratory viruses were performed at NSW public hospital laboratories
- Two (0.2%) of these tests were positive for influenza A, of which all were positive for pandemic (H1N1) 2009 influenza
- One test was positive for influenza B

**Figure 7:** Number of positive laboratory tests for influenza for 4 week periods ending 26 February 2010.



Note: 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 and St Vincent's Hospital (SYDPATH).

**Figure 8:** Percent of laboratory tests positive for influenza A and influenza B, 1 January 2006 – 2010, New South Wales



Note: 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 and St Vincent's Hospital (SYDPATH).

Data was not collect October to May for years 2006 to 2008

**Table 2:** Summary of testing for respiratory viruses and influenza at NSW public hospital laboratories, 1 January to 26 February 2010.

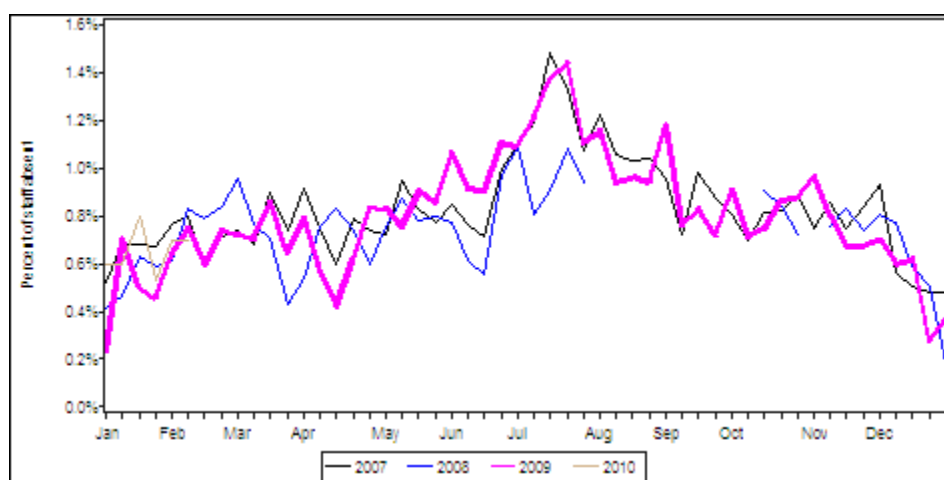
Four week period ending	Virology specimens tested	Influenza A (total pos) (%)	Influenza B (total pos) (%)	H1N1 influenza 09 (total pos) (%)	Adenovirus	Parainfluenza 1, 2 & 3	RSV	Rhinovirus	HMPV
29/01/2010	853	5 (0.6%)	1	5 (100%)	20	28	52	52	6
26/02/2010	1071	2 (0.2%)	1	2 (100%)	9	32	61	78	3
<b>Week ending</b>									
05/02/2010	208	2 (1.0%)	0	2 (100%)	2	9	16	11	1
12/02/2010	260	0	1	0	1	9	12	17	1
19/02/2010	312	0	0	0	1	7	15	29	0
26/02/2010	291	0	0	0	5	7	18	21	1

Note: 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) and Douglas Hanley Moir (DHM).

## Community impact

- Workplace absenteeism is an indicator of the level of influenza activity in the community. One major Australian employer with more than 10,000 NSW employees, has provided data on the proportion of their employees absent from work due to illness for more than 3 consecutive days. Data are available to the week ending 17 February 2010.
- Absenteeism peaked in the week ending 22 July 2009, 1.4% of their NSW employees took sick leave of more than three consecutive days.
- In the week ending 17 February 2010, 0.7% of their NSW employees took sick leave of more than 3 consecutive days.

**Figure 9:** Weekly proportion of employees of a national employer taking more than 3 consecutive days sick leave, NSW, to 17 February with comparison to 2007-2009\*.



\* Data were not available for some weeks in 2008. Source: Absenteeism Data.

## Immunisation for pandemic (H1N1) 2009 influenza

**Table 3: Pandemic (H1N1) 2009 influenza immunisation in NSW population health survey respondents from November 2009 - February 2010**

Indicator	Group	Nov-09				Dec-09				Feb-10			
		N	%	LCI	UCI	N	%	LCI	UCI	N	%	LCI	UCI
Overall Swine flu vaccination		515	16.1	12.9	19.3	515	23.3	19.6	27.0	564	27.3	23.6	31.0
Swine flu vaccination by age group	<10 years	NA	NA	NA	NA	NA	NA	NA	NA	51	11.8	2.9	20.6
	10 to 19	50	10.0	1.7	18.3	50	10.0	1.7	18.3	42	11.9	2.1	21.7
	20 to 64	299	12.0	8.3	15.7	304	14.1	10.2	18.1	278	18.3	13.8	22.9
	65 years and older	166	25.3	18.7	31.9	161	44.7	37.0	52.4	193	47.7	40.6	54.7
Swine flu vaccination by sex	Males	205	17.6	12.3	22.8	211	20.4	14.9	25.8	204	27.0	20.9	33.1
	Females	310	15.2	11.2	19.2	304	25.3	20.4	30.2	360	27.5	22.9	32.1
Overall Swine flu vaccination by AHS	Sydney South West	40	10.0	0.7	19.3	43	20.9	8.8	33.1	61	29.5	18.1	41.0
	South Eastern Sydney & Illawarra	46	26.1	13.4	38.8	53	20.8	9.8	31.7	56	28.6	16.7	40.4
	Sydney West	54	5.6	0.0	11.7	73	26.0	16.0	36.1	63	28.6	17.4	39.7
	Northern Sydney & Central Coast	64	17.2	7.9	26.4	71	18.3	9.3	27.3	55	40.0	27.0	53.0
	Hunter & New England	88	25.0	15.9	34.1	74	24.3	14.5	34.1	80	25.0	15.5	34.5
	North Coast	78	16.7	8.4	24.9	70	31.4	20.5	42.3	90	25.6	16.5	34.6
	Greater Southern	68	13.2	5.2	21.3	70	24.3	14.2	34.3	82	19.5	10.9	28.1
	Greater Western	77	11.7	4.5	18.9	61	18.0	8.4	27.7	77	27.3	17.3	37.2
Swine flu vaccination by location	GP		85.5	77.9	93.1		90.8	85.6	96.0		87.7	82.4	92.9
	Other location		14.5	6.9	22.1		9.2	4.0	14.4		12.3	7.1	17.6

\* note that all data is unweighted (therefore figures are for those people who responded to the survey not the population as a whole).

Vaccination for pandemic (H1N1) 2009 influenza became available for adults 30 September and children less than 10 years on the 8 December 2010.

- Uptake of H1N1 vaccination has increased over time since data became available in November to 27.3% in February 2010.
- Vaccination rates vary across the AHS's from 19.5% in Greater Southern to 40% in North Sydney Central Coast for the month of February, and an increase can be seen in all AHS from November 2009 to February 2010 across all AHS.
- The majority of people are having their vaccination at their GP.