

What's happening with flu?

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Health

What we'll cover

- Influenza A,B,Cs
- Recent influenza epidemiology
- How to interpret flu reports
- Other prevention activities

Flu ABC's

Influenza A:

- 16 subtypes characterised by surface glycoproteins
- cause epidemics & pandemics

Influenza B:

- Cause epidemics
- More severe in the elderly

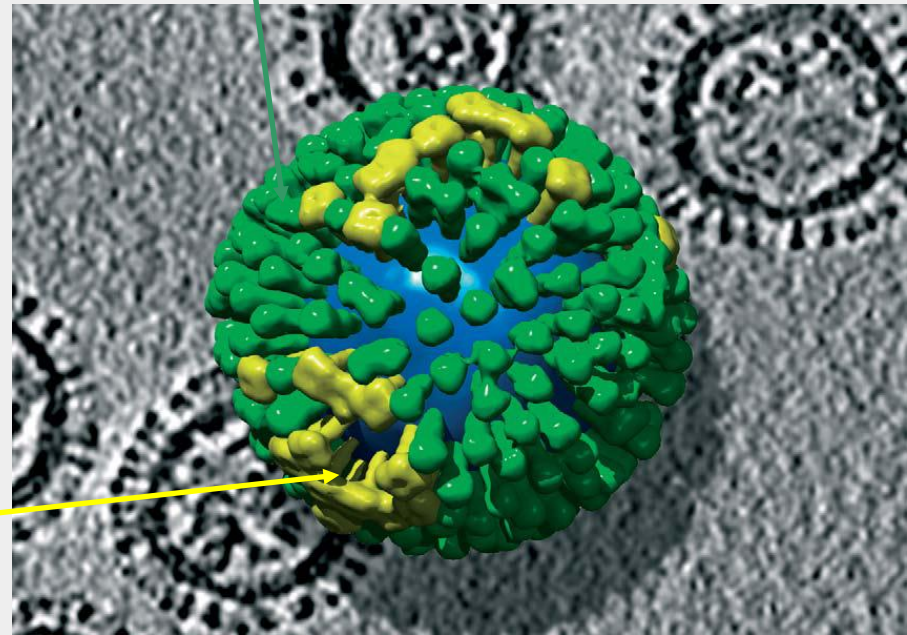
Influenza C:

- Sporadic cases, mild

illness

Neuraminidase

Haemagglutinin

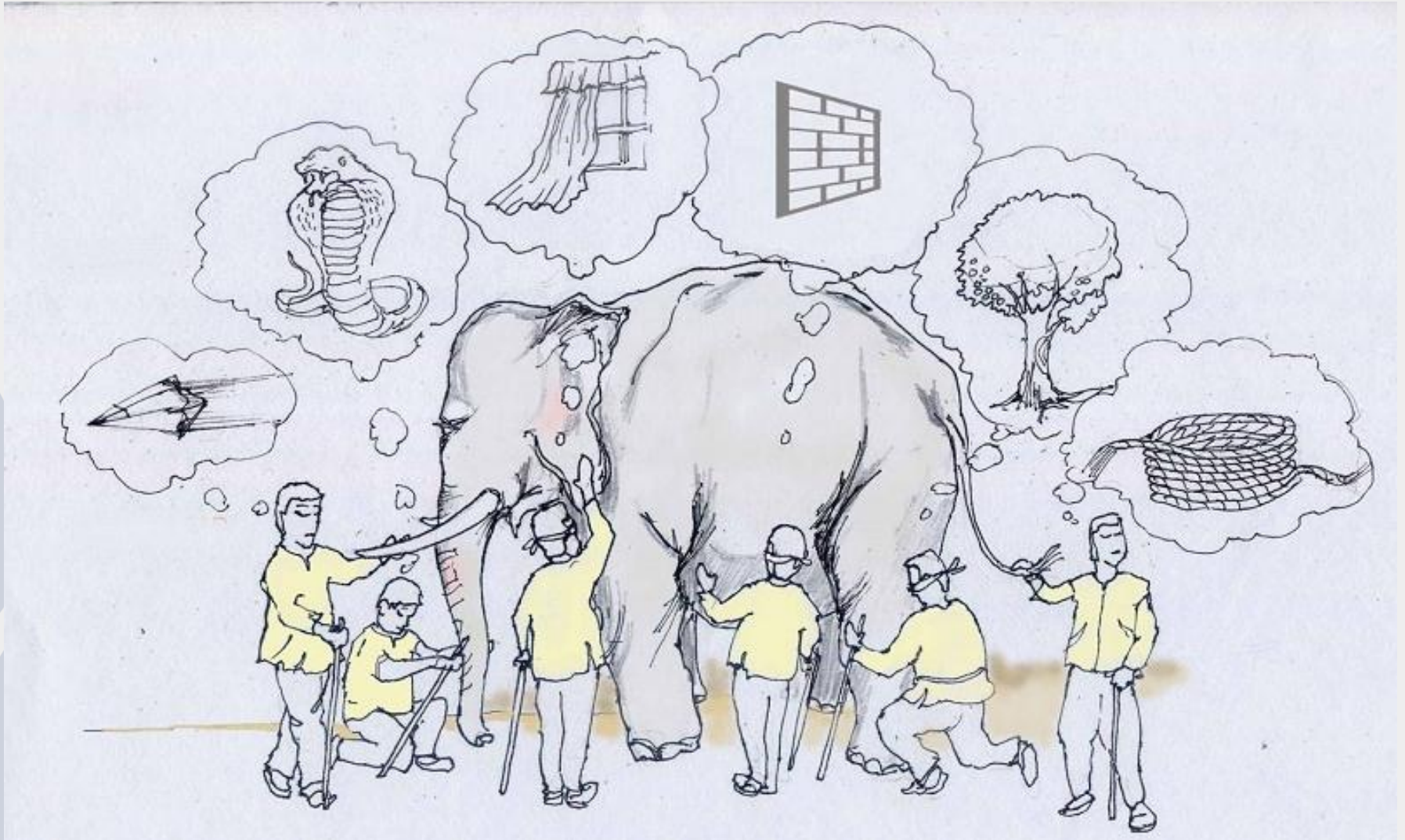


Flu ABCs

Flu season is different every year depending on:

- Predominant strain
- Level of immunity in community
- Match of strains with vaccine
- Uptake of vaccine
- Susceptibility of strain to antivirals
- Other factors such as travel, mixing, and co-circulating bugs

Monitoring and Predicting Influenza Activity



Pre-pandemic

Pandemic

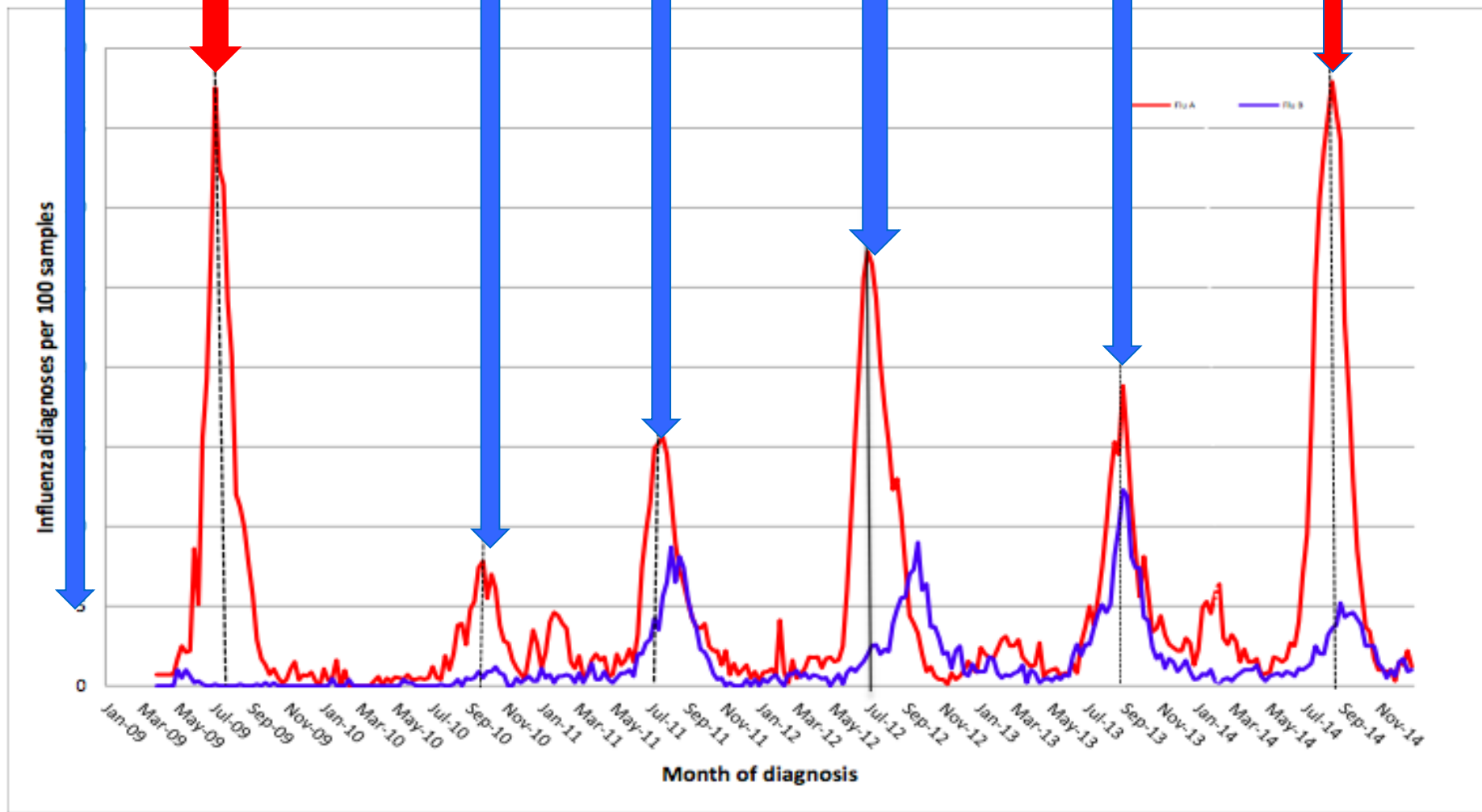
2010&2011

2012

2013

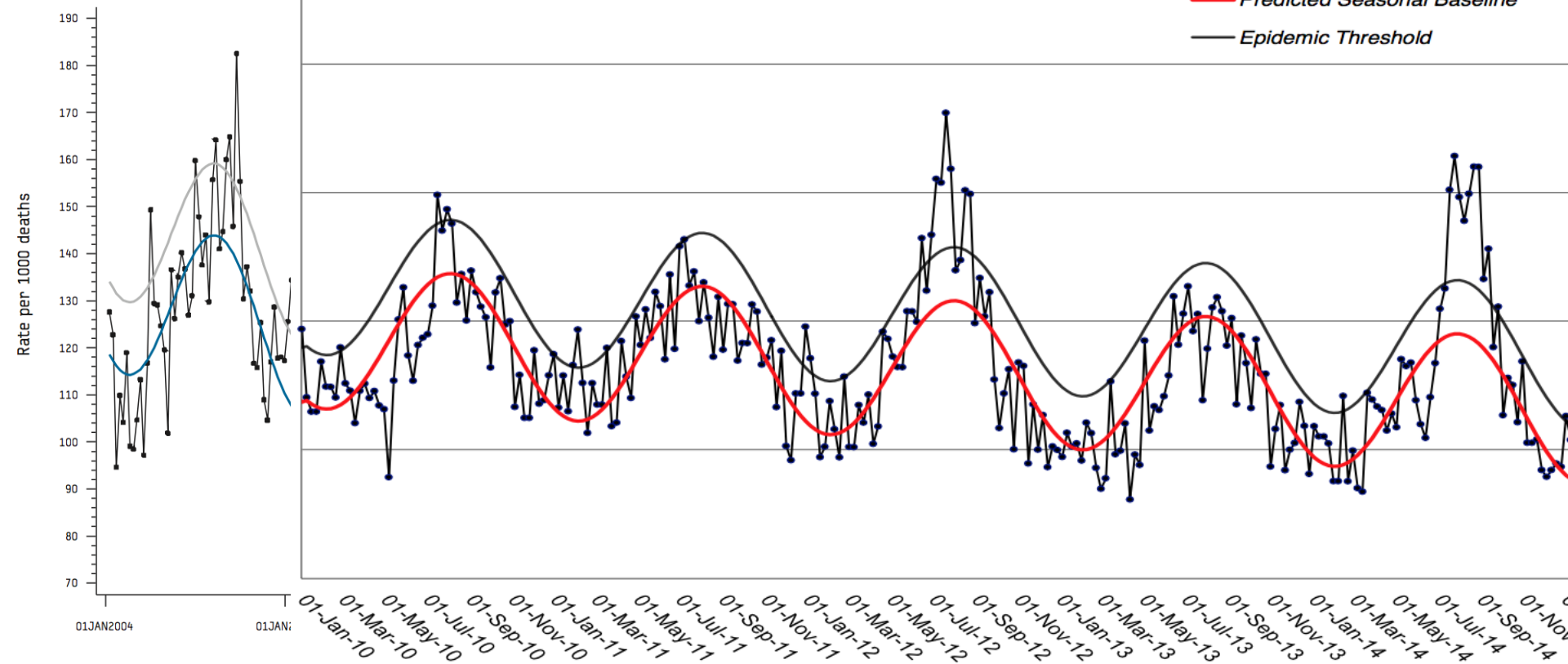
2014

Figure 4: Percent of laboratory tests positive for influenza A and influenza B, 1 January 2009 – 28 December 2014, New South Wales.



Pneumonia & Influenza Mortality

Weekly rate of deaths attributed to pneumonia and influenza, New South Wales, Australia



Source: NSW Registry of Births, Deaths and Marriages. Date: includes deaths registered as at 23:59:59 on the date.

Current Situation

- Influenza A (H3N2) was predominant in NSW in 2014
- Severe season, with over 100 reported outbreaks in residential facilities and 9 outbreaks in hospitals
- Influenza A (H3N2) was predominant in Northern Hemisphere 2014/15 winter
- Severe season
- Interseasonal influenza in NSW highest on record with notable outbreaks on cruise ships and aged care facilities

Current Situation

- Influenza A (H3N2) is predominant strain; influenza A (H1N1 pdm09), influenza B/Phuket and B/Brisbane also circulating
- Trivalent vaccine contains antigens matched to the circulating H3N2, H1N1 and B-Yamagata (Phuket) strains
- Quadrivalent vaccine also contains antigen matched to B-Victoria (Brisbane) strain
- 1.3 million doses of trivalent vaccine for NIP and 102,000 doses for HCW distributed so far

Weekly Flu Reports:

www.health.nsw.gov.au/Infectious/Influenza/Pages/reports.aspx



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Reports

Influenza surveillance reports 2015:

Please see [NSW data](#) for all notified cases of influenza in NSW - Please note that the vast majority of people do not get tested for influenza and that there may also be some delays in reporting confirmed influenza cases. Therefore data presented here maybe underestimating influenza activity in NSW.

Monthly reports 2015

- [Influenza epidemiology report April 2015](#)
- [Influenza epidemiology report March 2015](#)

Related Links

[Immunisation Advice](#)

[Environmental Health](#)

[Sexual Health](#)

[Emergency Preparedness](#)

[Influenza Reports](#)
[Influenza and pregnancy](#)

Situational Summary

NSW Health Influenza Surveillance Report

Week 19 Ending 10 May 2015

Influenza Surveillance Forecast:

- The 2015 influenza season has not yet started but influenza activity in NSW has been higher than expected in the last few months, suggesting an early start to the annual flu season is more likely.
- The elderly and the very young will again be particularly at risk if, as expected, the A/H3N2 strain predominates this year.
- The 2015 seasonal influenza vaccines for Australia have been updated to match the new variants of the A(H3N2) and B strains that emerged last year and which contributed to severe flu seasons both here and in the northern hemisphere.
- The 2015 seasonal vaccines are well-matched to the currently circulating influenza strains but influenza viruses are prone to change and vaccines can become less effective when they do.

Summary:

For the week ending 10 May 2015, influenza activity was LOW across NSW and has decreased from the unusually high activity seen earlier this year.

- [Emergency Department and Hospital surveillance \(FluCAN\)](#) – the index of increase for influenza-like illness (ILI) presentations was well below the seasonal threshold. ILI and pneumonia admissions to critical care wards decreased and were within the usual range for this time of year. No new influenza admissions to hospital were reported.
- [Laboratory surveillance](#) – the proportion of respiratory samples positive for influenza A or B was low (2.5%). There were no reports of laboratory-confirmed influenza outbreaks in institutions.
- [Community illness surveillance](#) – data collected from eGPS, ASPREN and FluTracking show low ILI activity as expected for this time of year.
- [National and international influenza surveillance](#) – Australia is currently in the inter-seasonal period

ED Surveillance

Figure 1: Total weekly counts of ED visits for influenza-like illness, from January – 10 May 2015 (black line), compared with each of the 5 previous years (coloured lines).

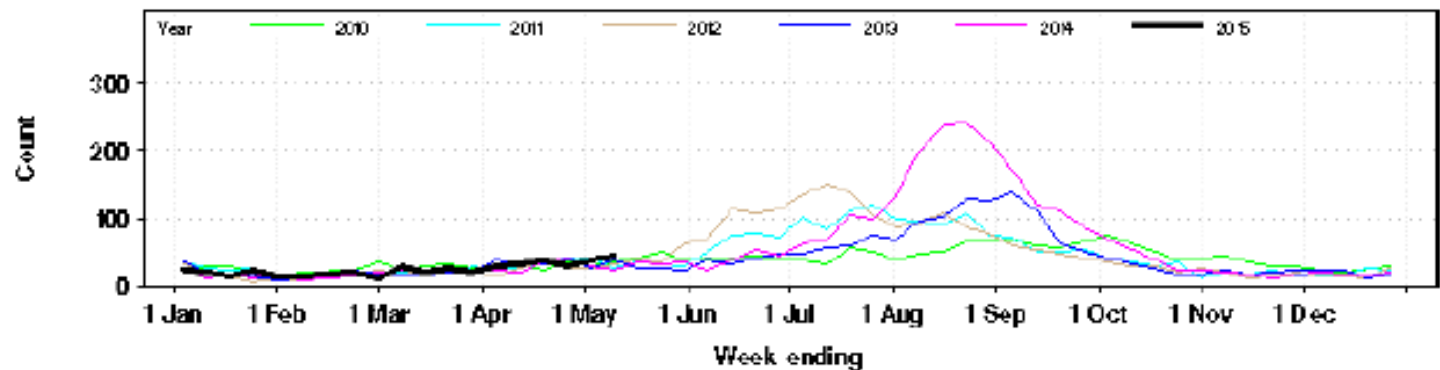
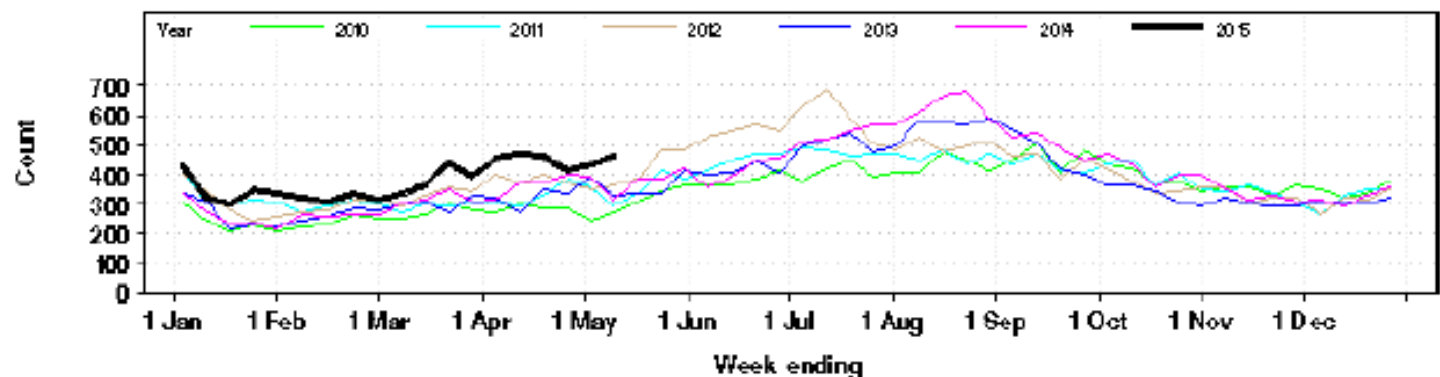


Figure 2: Total weekly counts of Emergency Department presentations for pneumonia, from January – 10 May 2015 (black line), compared with each of the 5 previous years (coloured lines).



ED & Ambulance Summary

Table 1: Weekly ED and Ambulance Respiratory Activity Summary for the week ending 10 May 2015. Includes data from 59 NSW EDs and the Sydney Ambulance Division. *

Data source	Diagnosis or problem category	Trend since last week	Comparison with usual range for time of year	Statistically significant age groups (if any)	Statistically significant local increase (if any)	Action other than this report (if any)	Comment
ED presentations, 59 NSW hospitals	Influenza like illness (ILI)	Increased	Above				
	Pneumonia	Increased	Above	0-4 and 17-64 years			
	Pneumonia and LI admissions	Decreased	Above				
	Pneumonia and LI critical care admissions	Decreased	Usual				
	Bronchiolitis	Steady	Above		Western NSW and Sydney LHDs, and Maitland Hospital		Bronchiolitis is a disease of infants.
	Respiratory illness, fever or unspecified infections	Increased	Above	0-4 and 35+ years	South Western Sydney, Western Sydney, Sydney, northern Sydney, and South Eastern Sydney LHDs		
	Asthma	Increased	Usual				
Ambulance Triple Zero (000) calls, NSW	breathing problems	Increased	Above	65+ years			

Notes: Statistically significant increases are shown in bold. LHD = Local Health District

Disease Severity

Figure 3: Total weekly counts of Emergency Department presentations for pneumonia or influenza-like illness and admitted to a critical care ward, from January – 10 May 2015 (black line), compared with each of the 5 previous years (coloured lines).

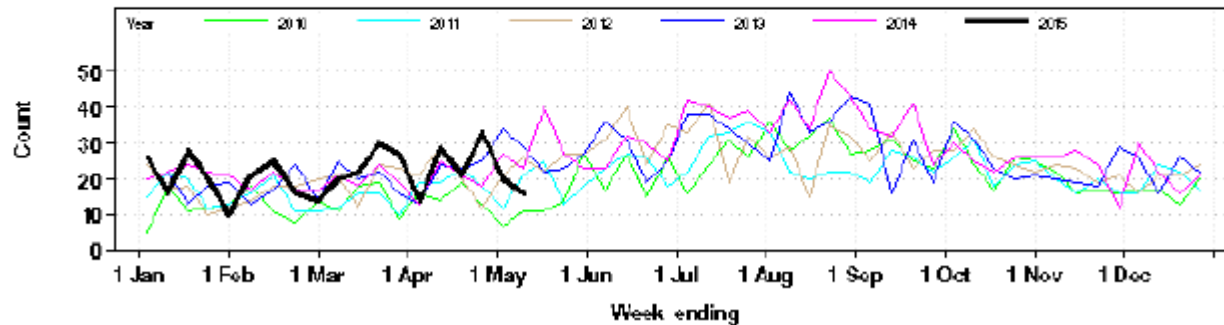
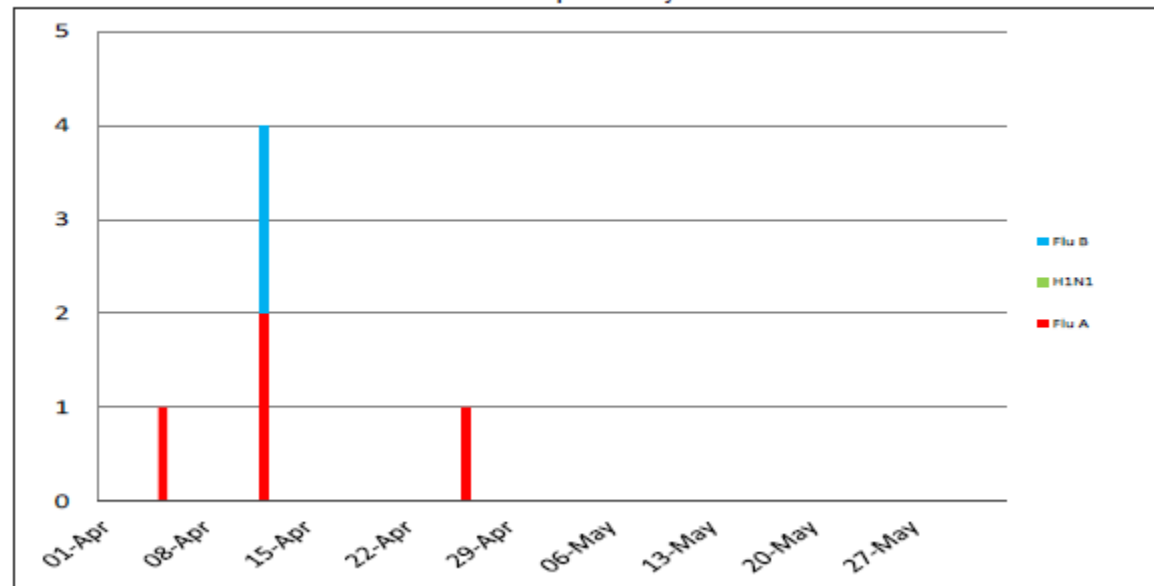


Figure 5: FluCAN – Number of confirmed influenza hospital admissions in NSW by date of specimen, April – May 2015.



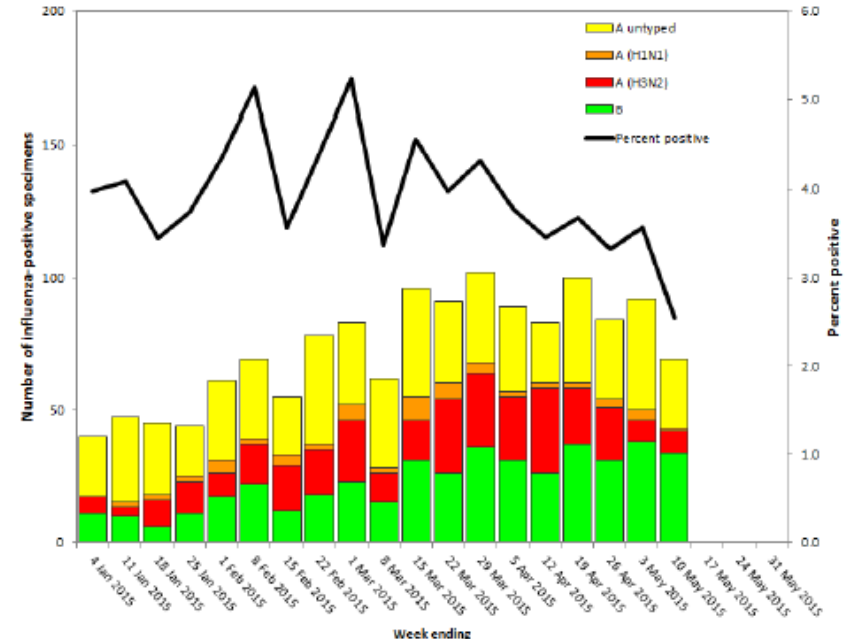
Laboratory Surveillance

Table 2: Summary of testing for influenza and other respiratory viruses at NSW laboratories, 1 January to 10 May, 2015.

Month ending	Total Tests	TEST RESULTS											
		Influenza A				Influenza B		Adeno	Parainf 1, 2 & 3	RSV	Rhino	Entero	HMPV
		Total	H3N2 **	H1N1 pdm09	A (Not typed)	Total							
		Total (%)	Total (%A) **	Total (%A)	Total (%A)	Total (%)							
01/02/2015*	5920	182 (3.1%)	40 (22.0%)	11 (6.0%)	131 (72.0%)	55 (0.9%)	150	181	181	607	59	49	
01/03/2015	6287	212 (3.4%)	72 (34.0%)	14 (6.6%)	126 (59.4%)	75 (1.2%)	126	83	271	842	24	29	
29/03/2015	8577	242 (2.8%)	82 (33.9%)	21 (8.7%)	140 (57.9%)	108 (1.3%)	181	117	767	1084	52	34	
03/05/2015*	12584	285 (2.3%)	105 (36.8%)	13 (4.6%)	167 (58.6%)	163 (1.3%)	257	187	1351	1443	59	78	
Week ending													
10/05/2015	2715	35 (1.3%)	8 (22.9%)	1 (2.9%)	26 (74.3%)	34 (1.3%)	57	41					

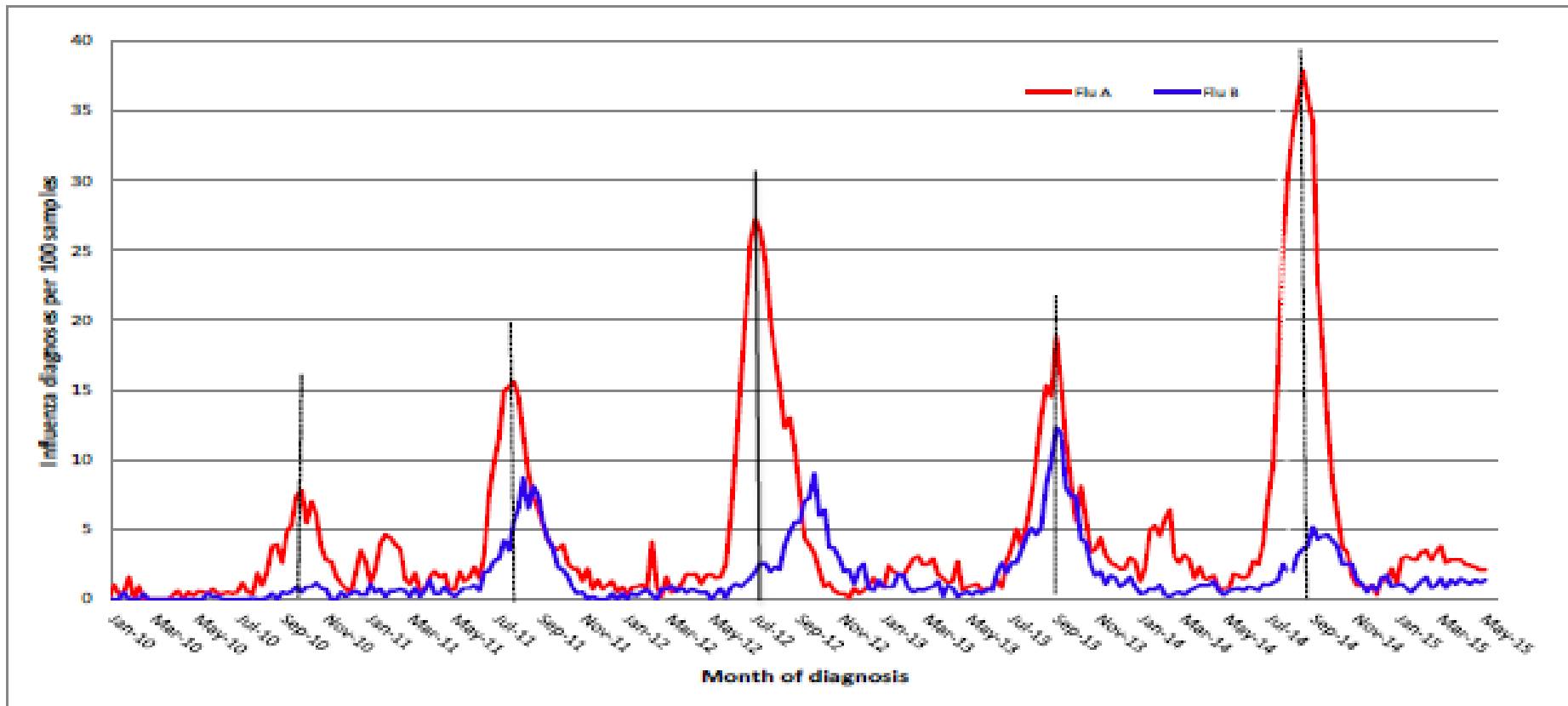
Figure 6: Influenza positive test results by type and sub-type reported by NSW sentinel laboratories, 1 January 2010 to 10 May 2015.

Note: * Five week reporting period. ** Subset of influenza A positive tests. Not all influenza A tests negative for A(H1N1)pdm09 are assumed to be A(H3N2). *** HMPV = Human metapneumovirus



Laboratory Surveillance

Figure 7: Percent of laboratory tests positive for influenza A and influenza B, 1 January 2010 – 10 May 2015, New South Wales. (see Notes below)



Influenza Notifications

Table 3: Influenza laboratory notifications to the NSW Notifiable Conditions Information Management System (NCIMS) by NSW Local Health District, 1 January to 10 May, 2015.

Local Health District	Week ending 10 May 2015		Previous 4 weeks	
	Number of notifications	Rate per 100 000 population	Average weekly notifications	Rate per 100 000 population
Central Coast	1	0.3	2	0.45
Far West	0	0	0	0
Hunter New England	4	0.44	4	0.41
Illawarra Shoalhaven	2	0.5	4	1
Mid North Coast	2	0.93	2	0.79
Murrumbidgee	0	0	0	0.52
Nepean Blue Mountains	2	0.54	4	1.09
Northern NSW	1	0.34	2	0.59
Northern Sydney	19	2.12	21	2.31
South Eastern Sydney	8	0.9	22	2.46
Southern NSW	0	0	0	0
South Western Sydney	3	0.32	4	0.42
Sydney	4	0.64	3	0.48
Western NSW	1	0.36	2	0.54
Western Sydney	6	0.65	8	0.89

Outbreaks in Institutions

Table 4. Reported influenza outbreaks in NSW institutions, 2010 to May 2015.

Year	2010	2011	2012	2013	2014	2015**
No. of outbreaks	2	4	39	12	120	7

Community Surveillance

Figure 8. Average rate of influenza-like presentations to sentinel general practices, by week of consultation 2011-15

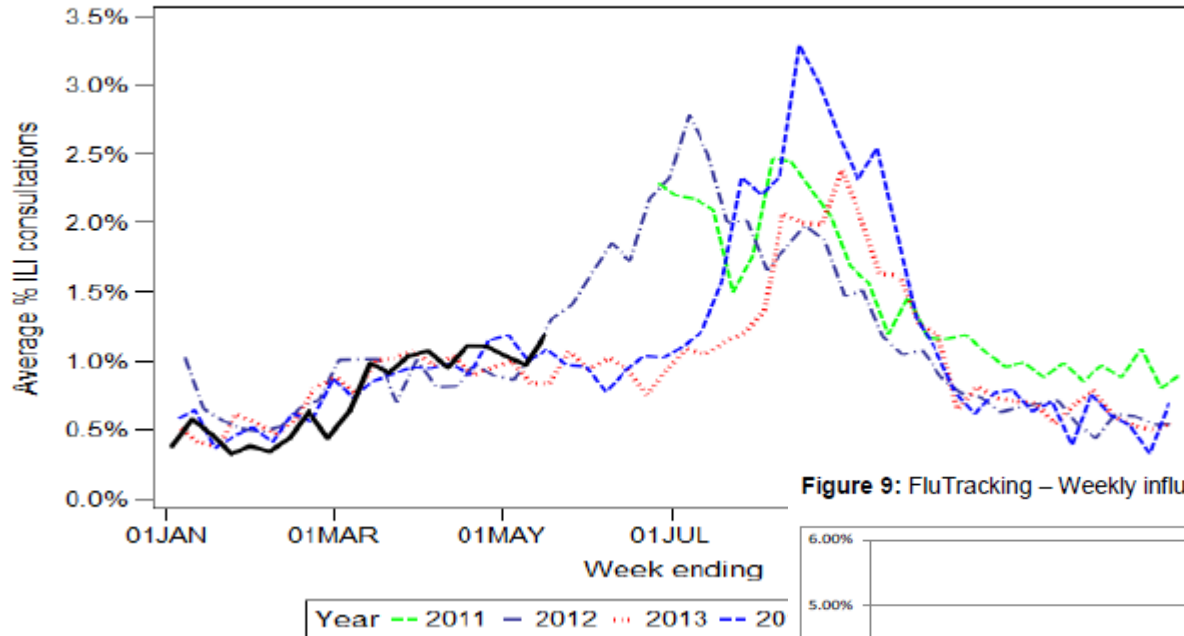
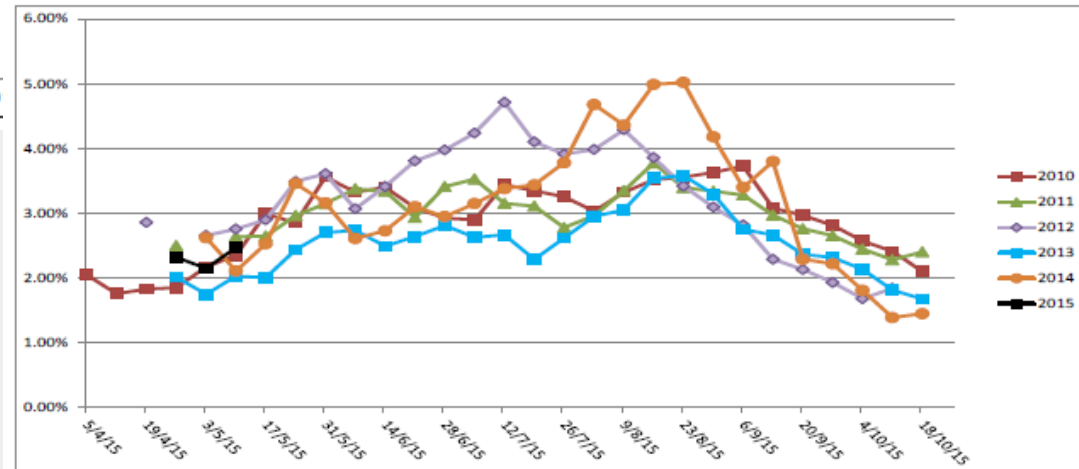


Figure 9: FluTracking – Weekly influenza like illness reporting rate, NSW, 2010 – 2015.



For further information please see the [FluTracking](#) website.

Prevention - Residential Care Sector

- Briefings of regulators, corporates and local facilities
- Promotion of vaccination & distribution of vaccine
- Implementation of national control guidelines
- Tamiflu cache for distribution
- Posters & brochures updated & distributed

Influenza vaccination for residential care staff



Protect yourself and your residents from influenza

Prevention - Hospitals

- Optimise staff vaccination rates
- Use rapid diagnostics and isolate/cohort patients with ILI
- Two-way communication with aged care facilities
- Notify outbreaks to the public health unit

STOP

FLU

Help us Protect our Residents, Visitors and Staff

- If you have a **COUGH** or other flu symptoms (like a fever, sore throat, or runny nose) you may put other people at risk.
- If your visit is **urgent**, please notify a staff member as soon as you arrive and put on a face mask.
- If your visit is **not urgent**, please consider visiting on another day when you are feeling better.

 **NSW** Health
GOVERNMENT

Prevention – Pregnant Women



Did you know?

- 1 Influenza during pregnancy can be serious, increasing risks of:
 - premature labour, and
 - low birth weight

Did you know?

- 2 Vaccinating against flu while pregnant will also help protect your baby beyond the womb.

Did you know?

- 3 Influenza vaccination during pregnancy is **SAFE** and **FREE**, so make an appointment to speak with your GP today!



Prevention – Young Adults

Catch It

A sneeze can travel up to 160km an hour



Bin It

A flu virus can survive on a tissue for up to 12 hours



Kill It

A flu virus stays on unwashed hands for 30 minutes



WHAT'S YOUR IN**FLU**ENCE?

Find out more

Insert NSW Health
logo

Summary

- Timing and severity of flu season is multifactorial
- Surveillance draws on multiple information sources to monitor situation
- Local information is available via public health units
- Maximise productivity and reduce hospital outbreaks by vaccinating staff in ED, acute medical & high dependency wards

