

Summary

Public Health Services produces the fluTAS report each month during the Tasmanian flu season to inform healthcare organisations and the public about the level of flu activity.

This report describes flu activity in Tasmania in the first four months of 2015 (up to and including 3 May 2015). Available data over this period indicate:

- a low level of flu activity
- a similar level of activity to the same period in 2014
- although some cases of flu were reported, there is no indication the 2015 flu season has started
- most flu notifications are due to Influenza A infections.

Multiple data sources are used to obtain measures of flu activity in the community.

Flu Notifications

Tasmanian laboratories must notify the Director of Public Health of evidence of flu infection in specimens collected from patients. These specimens are usually nose or throat swabs, less often a blood sample. The best test for flu involves PCR¹ to detect influenza virus RNA present in a nose or throat swab.

A total of **70 notifications of laboratory-diagnosed flu** in Tasmanian residents were notified to DHHS during the first 18 weeks of 2015, compared with 69 notifications for the same period in 2014.

Overall, the five-year average over this time period was 32 notifications (2010-14).

Most Australian jurisdictions have experienced higher rates of inter-seasonal influenza notification in recent years, which may be at least partly due to greater awareness and testing outside of the usual “flu season”.

There have been 58 (83 per cent) notifications of Influenza A virus and 12 (17 per cent) notifications of Influenza B virus since the start of 2015 (see Table 1).

The number of Influenza A notifications is similar to 2014 (63 notifications) and double the 2010-14 average (28 notifications). The number of Influenza B notifications is also high compared with recent years (2010-14 average was four notifications).

¹ Polymerase Chain Reaction.

Figure 1: Laboratory-diagnosed influenza by subtype and week of specimen collection, 2014

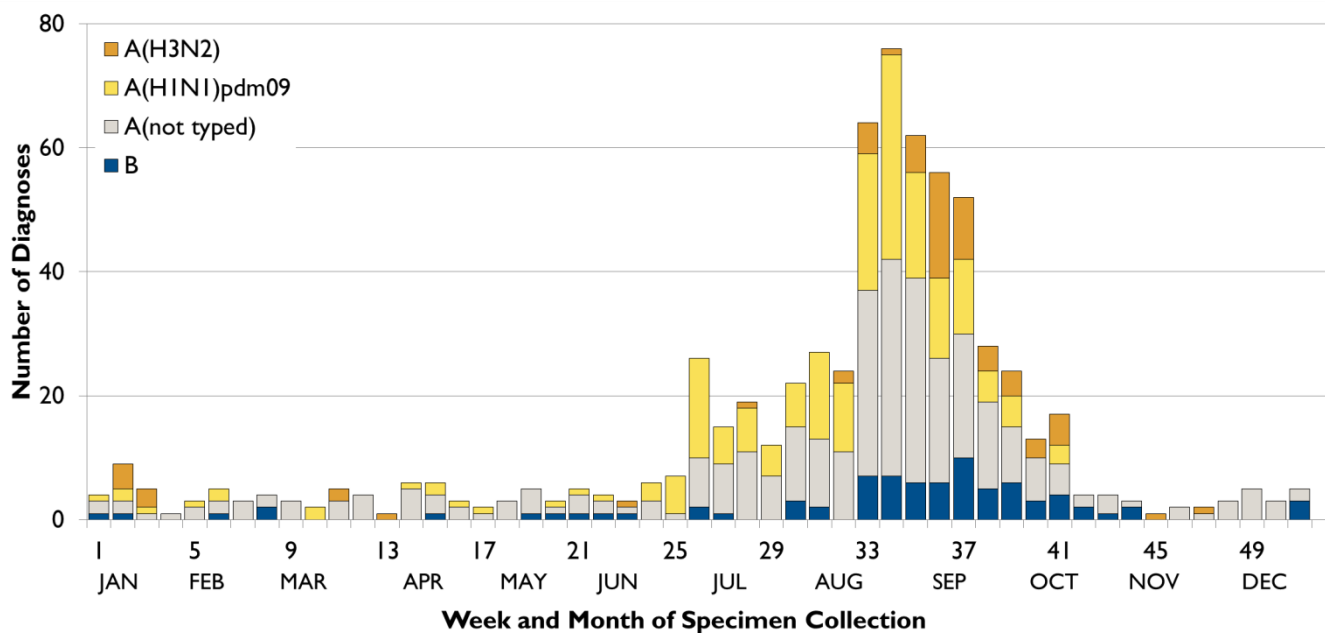
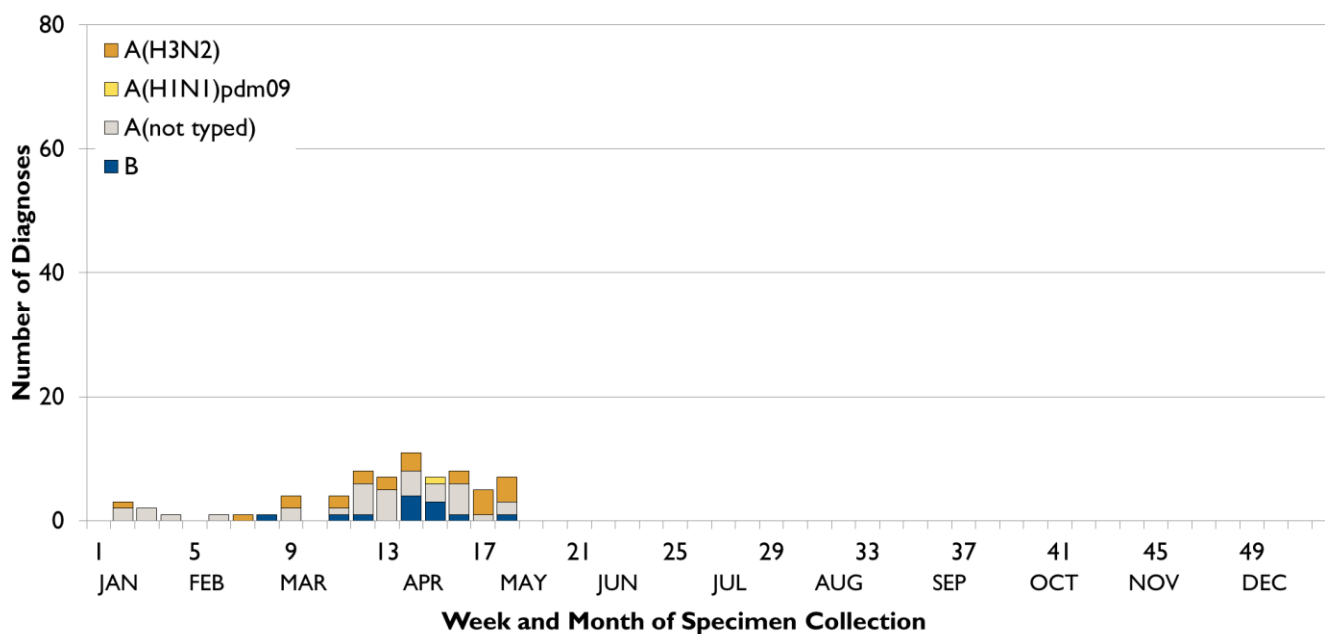


Figure 2: Laboratory-diagnosed influenza by subtype and week of specimen collection up to 3 May 2015 (week 18)



Some flu laboratory isolates undergo further testing to identify subtypes. To date 23 Influenza A notifications have been identified as being an A(H3N2) subtype² while another single notification was identified as the A(H1N1) subtype³.

² Where the Influenza Neuraminidase (“N”) typing is not reported this is assumed to be N2 i.e. A(H3N2).

³ This subtype was first associated with the 2009 swine influenza pandemic. It continues to circulate globally as a typical seasonal influenza subtype.

Table 1: Laboratory-diagnosed Influenza, Tasmania, 3 May 2015

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 ⁴ |
|------------------------------------|------------|------------|--------------|------------|------------|--------------|------------|-------------|-------------------|
| Influenza A | 389 | 208 | 1,294 | 95 | 189 | 1,008 | 206 | 590 | 58 |
| Influenza B | 26 | 176 | 1 | 12 | 174 | 85 | 90 | 81 | 12 |
| Total Influenza | 415 | 384 | 1,295 | 107 | 363 | 1,093 | 296 | 671 | 70 |
| Predominant subtype of Influenza A | unknown | unknown | H1N1 | H1N1 | H1N1 | H3N2 | H1N1 | H1N1 & H3N2 | H3N2 |

Residents from the more populous southern region of Tasmania made up the largest proportion (70 per cent) of the 70 flu notifications since the start of 2015 (see Table 2). This may reflect a higher incidence of flu in the south. Alternatively, increased testing for flu by clinicians in the south may account for this difference.

Table 2: Laboratory-diagnosed Influenza by Region of Tasmania, 3 May 2015

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | TOTAL |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| North | 1 | 1 | 3 | 3 | 0 | - | - | - | - | - | - | - | 8 |
| North-West | 2 | 2 | 2 | 5 | 2 | - | - | - | - | - | - | - | 13 |
| South | 3 | 4 | 19 | 22 | 1 | - | - | - | - | - | - | - | 49 |

Taking into account the age-distribution of the Tasmanian population, the rate of flu notification has to date been greater in older Tasmanians. People aged 65 years or older account for 16 per cent of the Tasmanian population but 46 per cent of notifications (32 cases).

Laboratory Testing

Laboratory Testing Effort

A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and flu-like illnesses. Some people with these symptoms will visit their doctor.

The decision whether to test someone for flu rests with their treating doctor and depends on their symptoms.

The best test for flu is a PCR test, which detects flu virus RNA in a nose or throat swab. The number of these tests being performed by most Tasmanian laboratories is a useful indicator of the level of respiratory illness in the community.

Since the start of 2015 most flu has been diagnosed via PCR tests (83 per cent).

The number of tests conducted since the start of 2015 is 11 per cent greater than conducted during the same period of 2014.

The average weekly proportion of positive tests during this period is six per cent and identical to average of the same period in 2014.

⁴ Current number of diagnoses up to and including 3 May 2015

Figure 3: Influenza tests via PCR by week during 2014

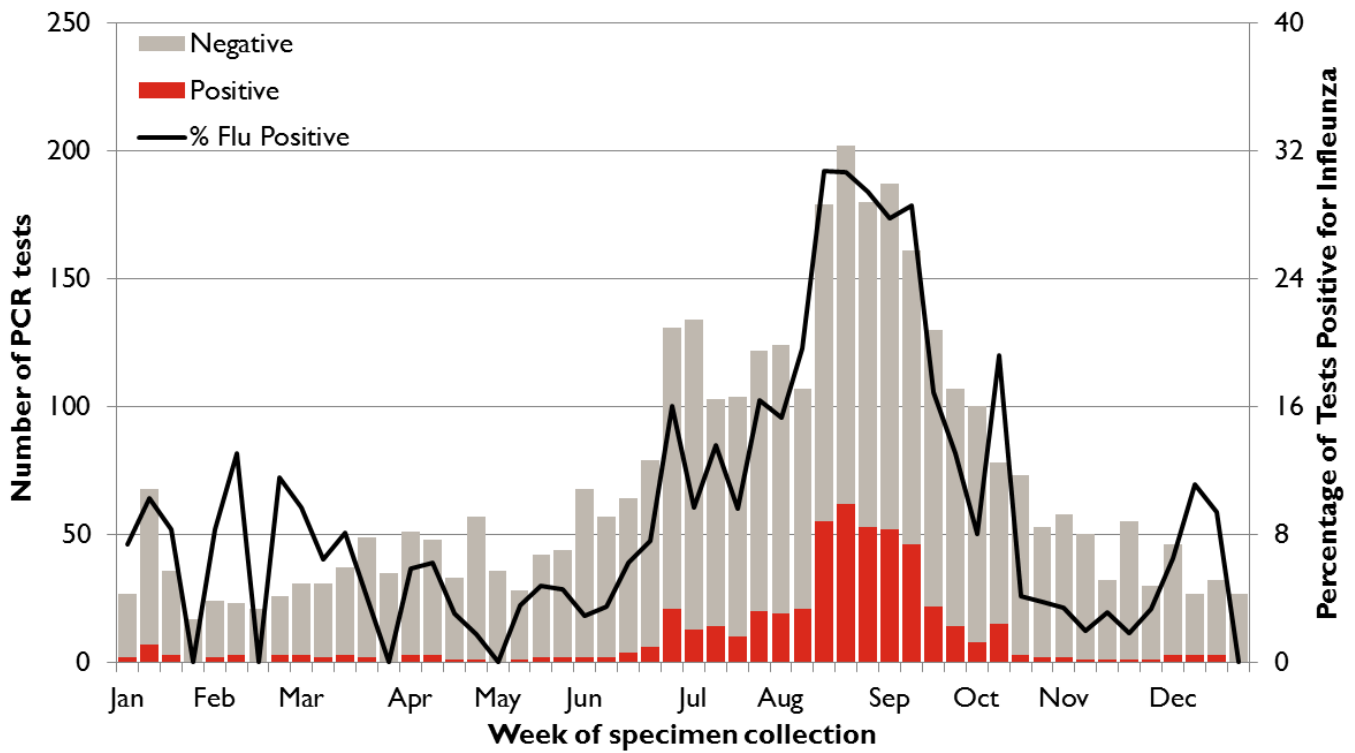
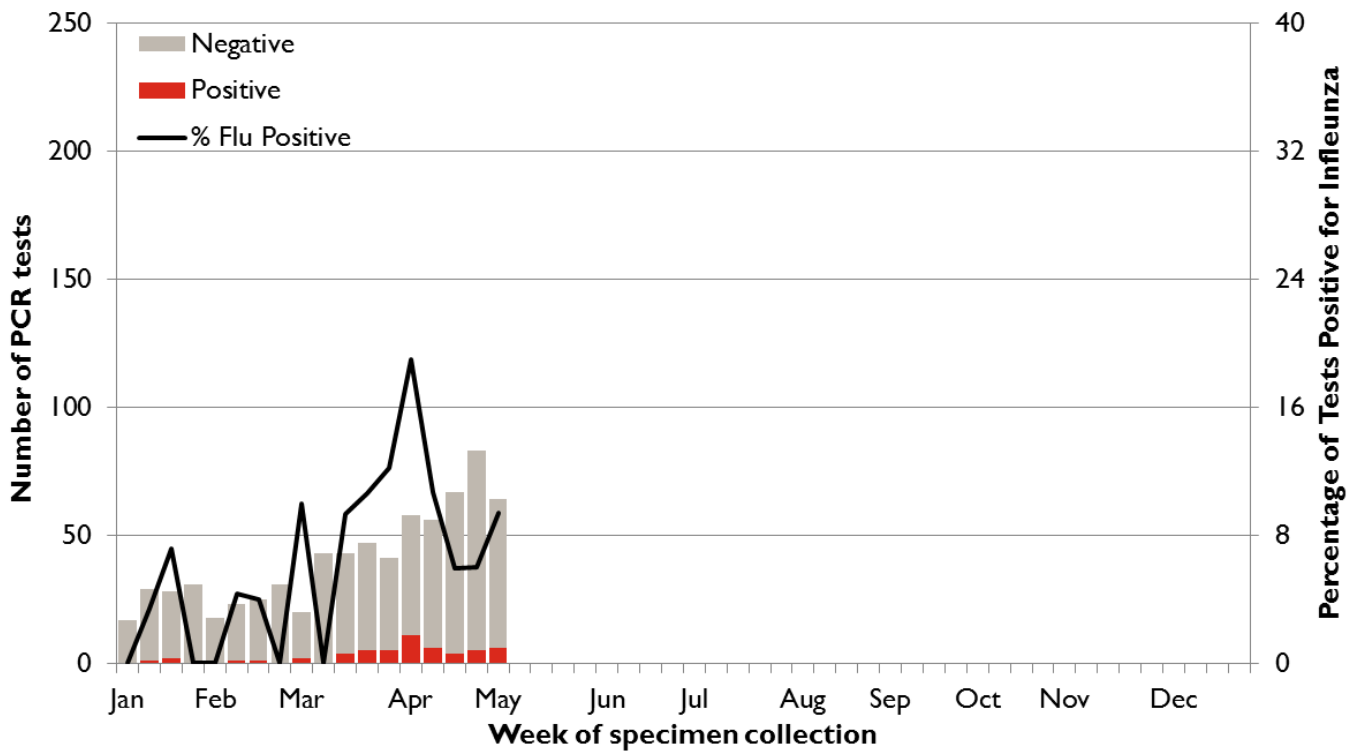


Figure 4: Influenza tests via PCR by week during 2015 (at 3 May)



Other Respiratory Pathogens

The Royal Hobart Hospital performs PCR tests on nose and throat swabs that detect flu and multiple non-flu respiratory pathogens which cause illness. These specimens have mostly been collected statewide from Emergency Department and hospitalised patients.

The monitoring of non-flu respiratory pathogen activity can help the interpretation of testing activity and Syndromic Surveillance trends.

The amount of respiratory pathogen testing during the first 18 weeks of 2015 is comparable to the same period of 2014.

The three most commonly detected pathogens have to date been Rhinovirus, Influenza A and Adenovirus. During the same period last year Parainfluenza was the third most commonly detected respiratory pathogen.

Figure 5: Respiratory pathogen detections, 2014

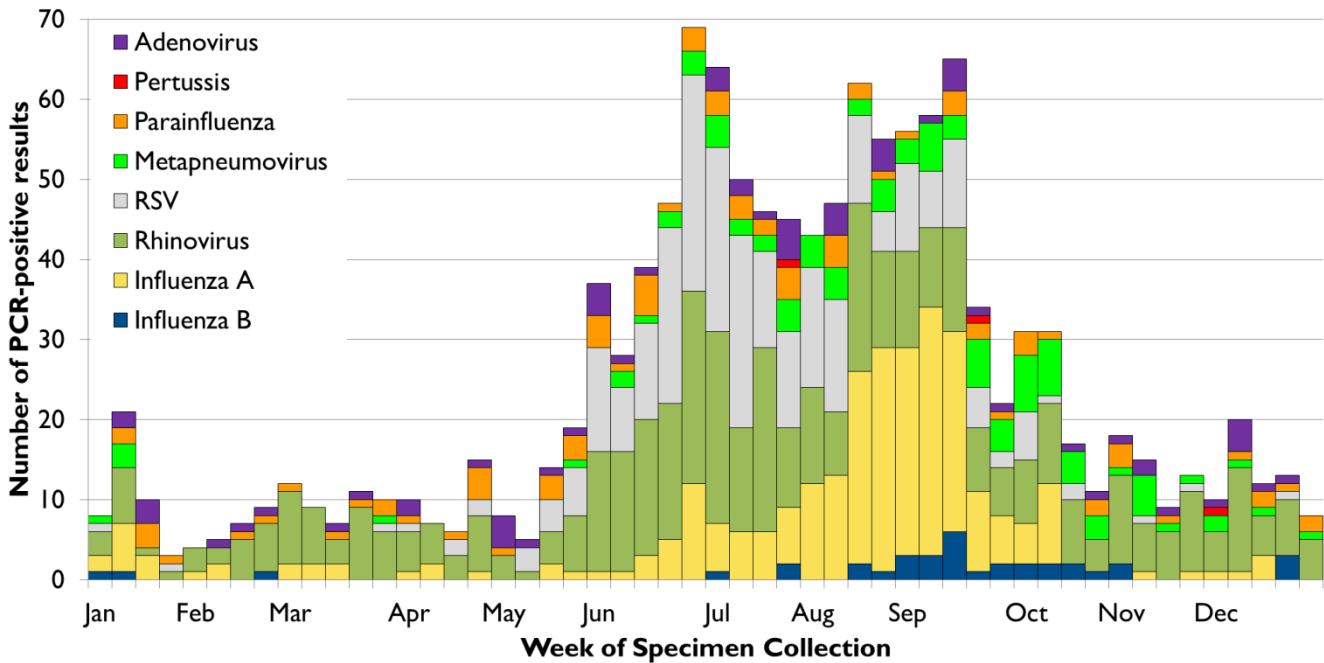
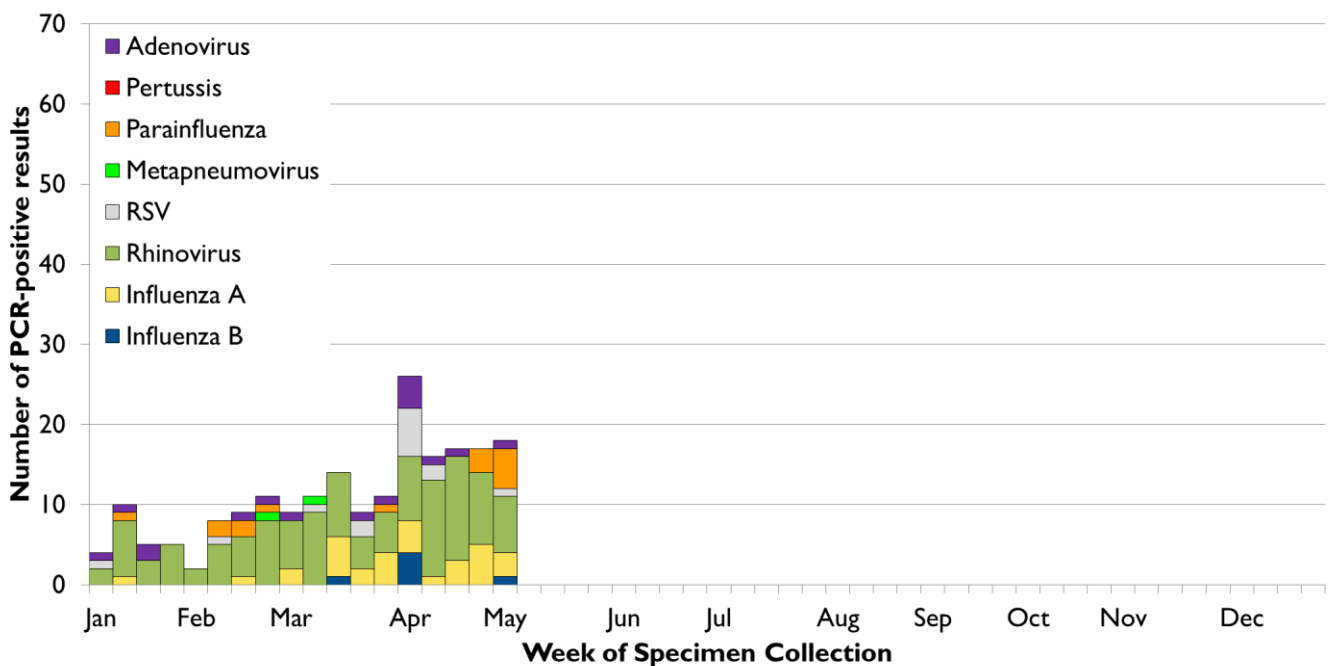


Figure 6: Respiratory pathogen detections, 2015 (at 3 May)



Influenza-Like Illnesses (Syndromic Surveillance)

Influenza-like illness (ILI) is much more common than laboratory-diagnosed influenza. For much of the year common colds and other respiratory illnesses make up most of the ILI occurring in the community.

However, during the annual flu season, the proportion of the population experiencing symptoms of ILI who have flu usually increases. It is, therefore, useful to monitor the proportion of people reporting ILI, regardless of the cause.

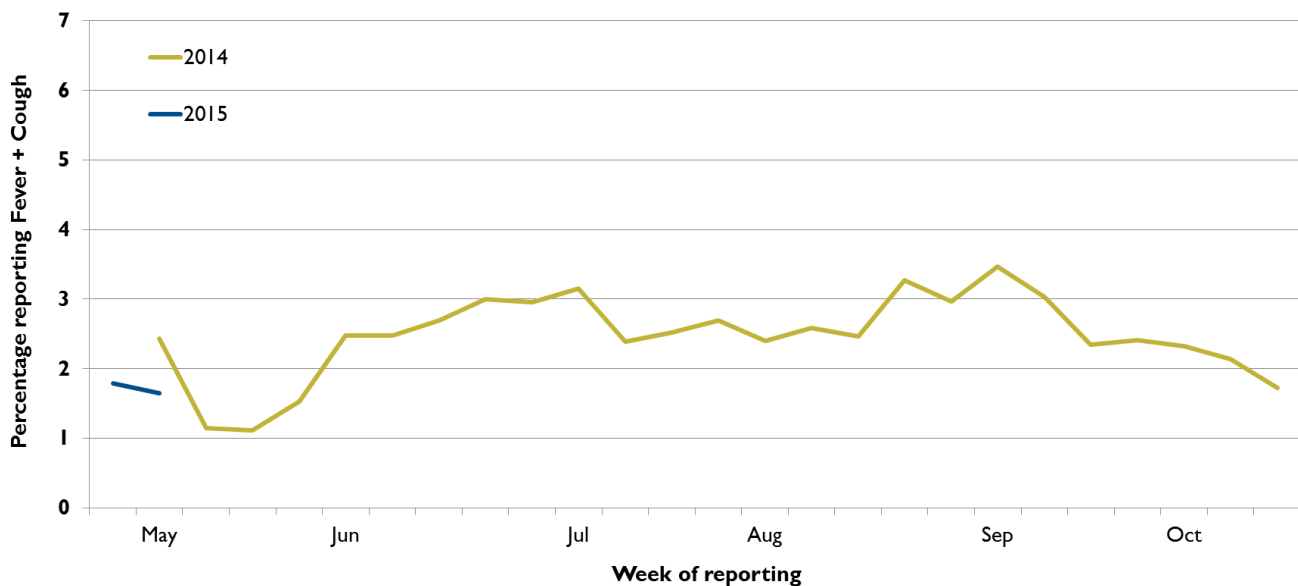
FluTracking

FluTracking is a weekly online survey that asks participants to report whether they have had fever and cough in the preceding week. It is a joint initiative of Newcastle University, Hunter New England Population Health and the Hunter Medical Research Institute. *FluTracking* information is available at www.flutracking.net.

The 2015 *FluTracking* survey has commenced; the first reporting period was the week ending Sunday April 26.

The early ILI data from Tasmanian participants does not indicate a greater than expected level of illness.

Figure 7: Percentage of Tasmanian *FluTracking* participants reporting fever and cough, 3 May 2015



General Practice surveillance

ASPREN is a network of registered sentinel GPs throughout the state who report fortnightly on the number and proportion of presentations of patients with fever, cough and fatigue. ASPREN is a joint initiative of the Royal Australian College of General Practitioners and University of Adelaide.

Further information is available at www.dmac.adelaide.edu.au/aspren.

The latest Tasmanian data from participating General Practices up to the fortnight ending 8 March 2015 indicated very few flu-like illness (ILI) presentations. Similarly few ILI presentations were reported during the same period in 2014.

Other Measures of Influenza Activity

FluCAN

The Influenza Complications Alert Network (FluCAN) reports on flu-related hospitalisations and complications in sentinel hospitals in each state including Tasmania. On 5 May FluCAN reported low flu activity during April 2015.

Interstate activity

The Australian Influenza Surveillance Report is compiled from a number of data sources, including laboratory-confirmed notifications to NNDSS, sentinel flu-like illness reporting from general practitioners and emergency departments, workplace absenteeism and laboratory testing.

The current national report is available at www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm.

The report for the week ending April 10 was of low levels of flu activity indicative of the current inter-seasonal period. Activity at the state and territory level is reported to be varied with Influenza A as the predominant virus in circulation and A(H3N2) the most common subtype.

Flu viruses circulating in Australia appear to be a good match with the 2015 seasonal trivalent (three) and quadrivalent (four) flu vaccines.

Annual flu Vaccine

The contents of the annual flu vaccine are reviewed late each year, to produce vaccines for the following year that provide protection from flu strains likely to be common in winter.

Advice on the formulation of annual flu vaccines is provided by the Australian Influenza Vaccine Committee: www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc.

The formulation of the 2015 vaccine is described at www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia.

Annual vaccination is recommended in the National Immunisation Program and is free* for Tasmanians at risk of severe flu, including:

- anyone aged 65 and over
- Indigenous children aged six months to five years
- Indigenous people aged 15 years or over
- pregnant women
- any person six months of age and over with a chronic condition predisposing to severe flu illness that needs regular medical follow-up or hospitalisation such as: cardiac disease, respiratory disease including severe asthmatics, kidney disease, diabetes, impaired immunity, neuromuscular disease.

* The cost of the vaccine is covered for these groups but the medical provider may charge a consultation fee to administer the vaccine.



Email cpdu.surveillance@dhhs.tas.gov.au to provide feedback on the fluTAS Report or call the Public Health Hotline on 1800 671 738.