

Summary

The **fluTAS report** is a monthly update on the influenza season produced by the Communicable Diseases Prevention Unit to inform healthcare organisations and the public about the current level of influenza activity within Tasmania. Multiple data sources are used to obtain measures of influenza activity in the community.

This report describes **influenza** activity within Tasmanian during September 2014 up to and including **Sunday 28 September 2014**. Available data indicate:

- The 2014 influenza season has peaked.
- Notifications of laboratory-diagnosed influenza declined during late September.
- The majority of influenza notifications continue to be Influenza A infections.
- The most frequently reported Influenza A subtype within Tasmania is A(H1N1)pdm09.

Influenza Notifications

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

In the four weeks since the last report a further 169 notifications of laboratory-diagnosed influenza have been notified, taking the 2014 total to 608 notifications. The number of weekly notifications has steadily declined during September, following the peak week in mid- August (see Figure 1). The current level of notification within Tasmania is consistent with the final weeks of a typical influenza season.

Residents from the more populous southern region of Tasmania account for the largest proportion of influenza both among recent and all notifications in 2014 (see Table 1).

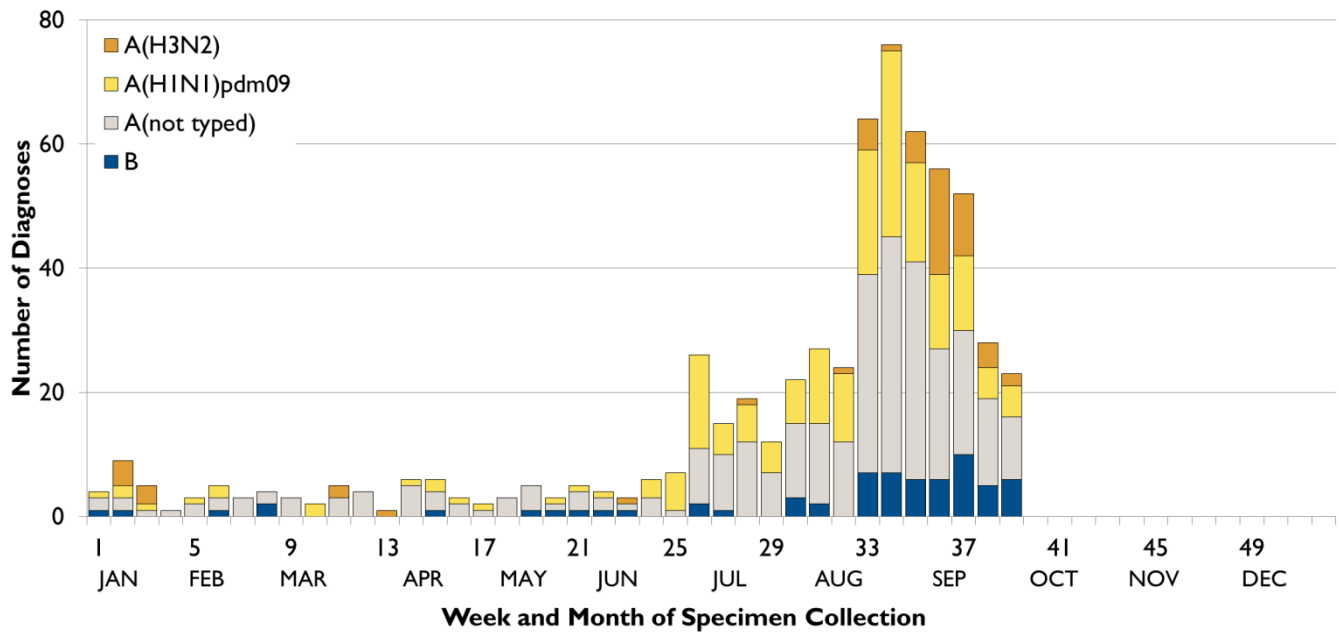
Table 1: Laboratory-diagnosed Influenza by Region of Tasmania, 28 September 2014

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | TOTAL |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| North | 2 | 5 | 6 | 6 | 5 | 7 | 16 | 58 | 36 | - | - | - | 141 |
| North-West | 3 | 3 | 3 | 1 | 3 | 6 | 19 | 31 | 20 | - | - | - | 89 |
| South | 16 | 7 | 6 | 10 | 10 | 33 | 45 | 148 | 103 | - | - | - | 378 |

Notifications have involved children and adults of all ages, with a peak in incidence among children aged less than 5 years, and a broad peak involving adults, highest in the 30-34 year age group.

¹ Polymerase Chain Reaction.

Figure 1: Laboratory-diagnosed influenza by subtype and week of specimen collection up to 28 September 2014 (week 39)



Of the 608 influenza notifications received since the start of 2014, 542 (89%) were due to Influenza A virus infections. The remaining 66 (11%) notifications were infections with Influenza B virus (see Table 2). Some influenza laboratory isolates undergo further testing to identify subtypes. The most frequently identified Influenza A subtype of 2014 is the A(H1N1)pdm09 subtype². Notifications of A(H1N1) declined during September, while late-season notifications of Influenza B remained steady (but typically fewer than 10 per week). A brief spike in cases of A(H3N2) occurred in early September, but was not followed by sustained transmission and notification of this subtype.

Table 2: Laboratory-diagnosed Influenza, Tasmania, 28 September 2014

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 ³ |
|------------------------------------|------------|------------|--------------|------------|------------|--------------|------------|-------------------|
| Influenza A | 389 | 208 | 1,294 | 95 | 189 | 1,008 | 206 | 542 |
| Influenza B | 26 | 176 | 1 | 12 | 174 | 85 | 90 | 66 |
| Total Influenza | 415 | 384 | 1,295 | 107 | 363 | 1,093 | 296 | 608 |
| Predominant subtype of Influenza A | unknown | unknown | H1N1 | H1N1 | H1N1 | H3N2 | H1N1 | H1N1 |

Note: H1N1 from 2009 onwards refers to the specific subtype A(H1N1)pdm09

Laboratory Testing

Laboratory Testing Effort

A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and influenza-like illnesses. Some people with these symptoms will visit their doctor. The decision whether to test someone for influenza rests with their treating doctor, and depends on their symptoms. The best test for influenza is a PCR test, which detects influenza virus RNA in a nose or throat swab. The number of these tests being performed in public and private Tasmanian laboratories is a useful indicator of the level of respiratory illness in the community.

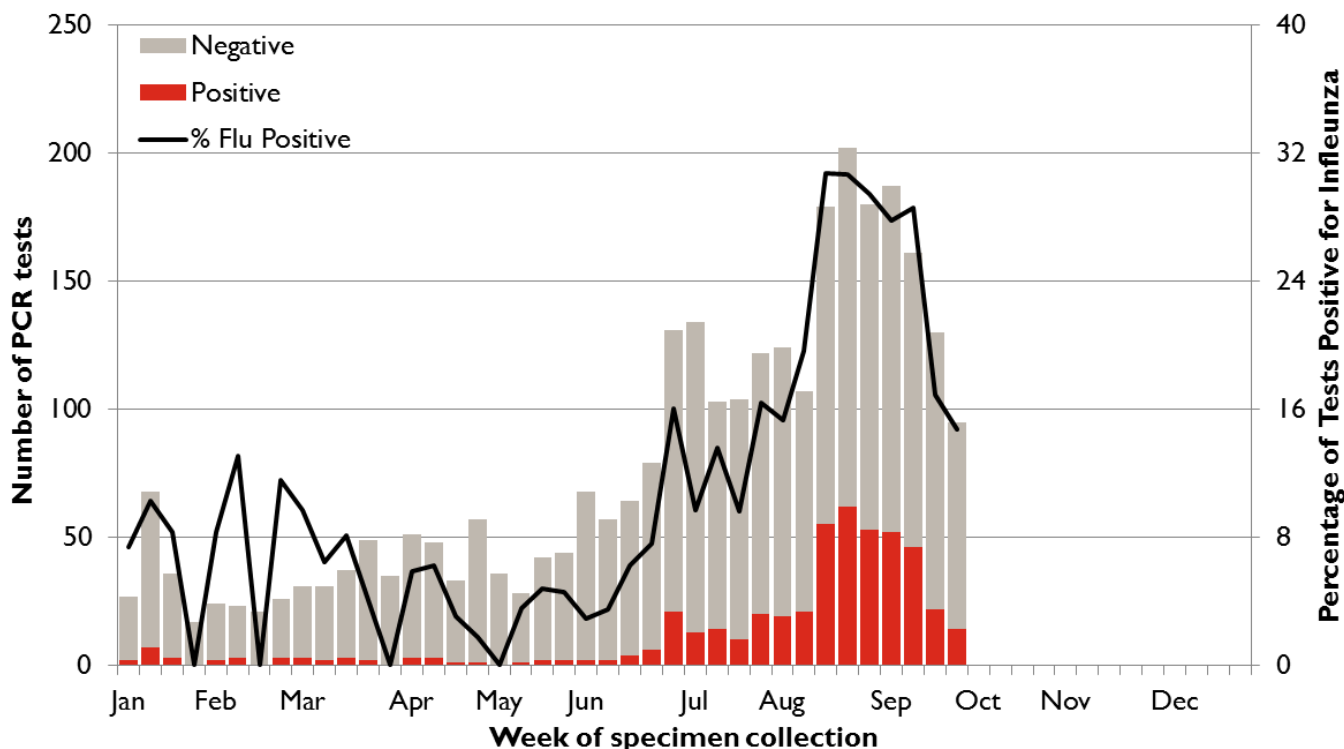
Since the start of 2014 the majority of influenza has been diagnosed via PCR tests (87%).

The weekly number of tests and proportion of tests positive for influenza both decreased during late September 2014 (see Figure 2). This followed a typical seasonal peak in influenza activity during August-September.

² This subtype was first associated with the 2009 swine influenza pandemic. It continues to circulate globally as a typical seasonal influenza subtype.

³ Current number of diagnoses up to and including 28 September 2014

Figure 2: Influenza tests via PCR by week during 2014 (at 28 September).

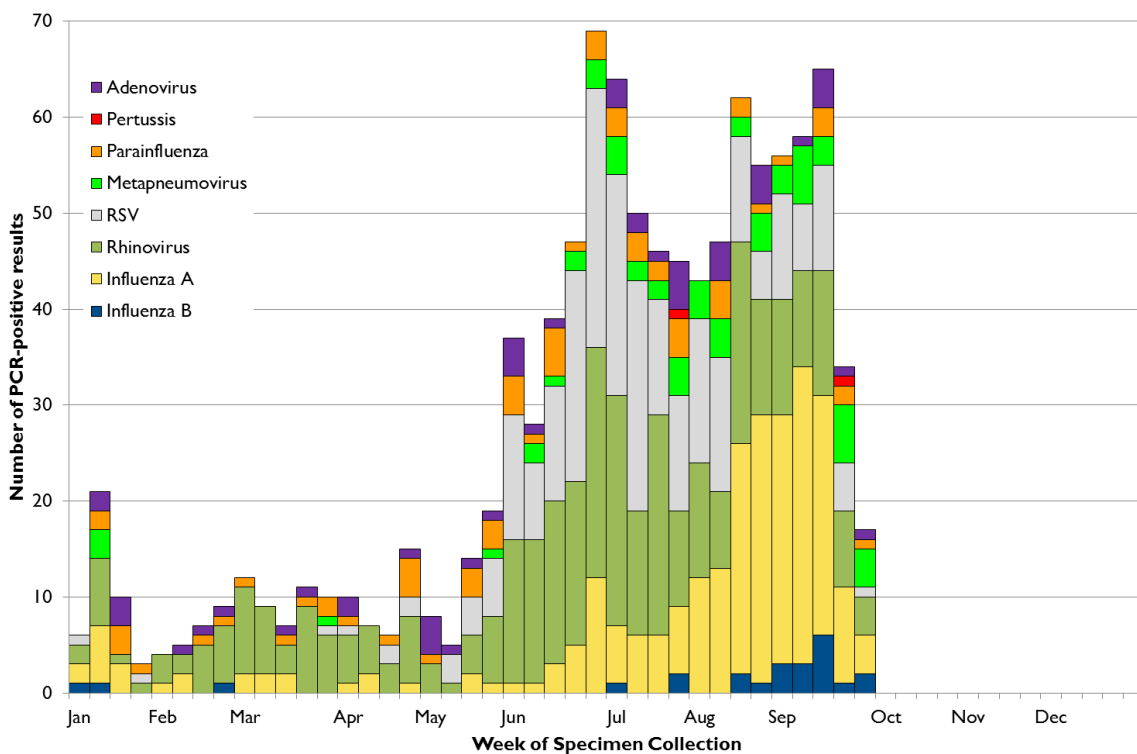


Other Respiratory Pathogens

The Royal Hobart Hospital (RHH) performs PCR tests on nose and throat swabs that detect influenza and multiple non-influenza respiratory pathogens which cause illness. These specimens have mostly been collected state-wide from Emergency Department and hospitalised patients. The monitoring of non-influenza respiratory pathogen activity can assist the interpretation of testing activity and Syndromic Surveillance trends.

The weekly numbers of positive tests of most pathogens decreased during September 2014. Metapneumovirus continues to cause occasional respiratory illnesses even as influenza A and RSV decline (see Figure 3).

Figure 3: Respiratory pathogen detections, 2014 (at 28 September)



Influenza-Like Illnesses (Syndromic Surveillance)

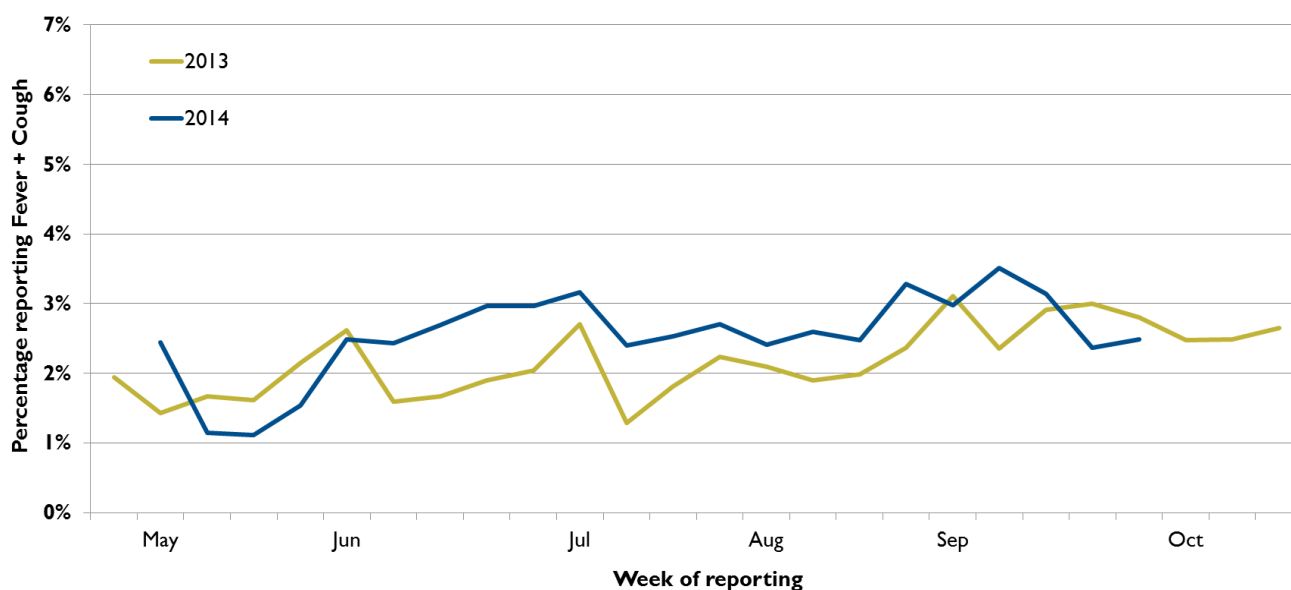
Influenza-like illness (ILI) is much more common than laboratory diagnosed influenza. For much of the year, common colds and other respiratory illnesses make up most of the ILI occurring in the community. However, during the annual influenza season, the proportion of the population experiencing symptoms of ILI who have influenza 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 proportion of Tasmanian participants reporting ILI each week peaked during September (see Figure 4).

Figure 4: Percentage of Tasmanian FluTracking participants reporting fever and cough, 28 September 2014



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 indicated an increase in influenza-like illness (ILI) presentations during the fortnight ending 10 August 2014, consistent with other indicators of increased influenza activity at the time.

Other Measures of Influenza Activity

FluCAN

The Influenza Complications Alert Network (FluCAN) reports on influenza related hospitalisations and complications in sentinel hospitals in each state including Tasmania. By late September 2014 the national overview of FluCAN reporting was of decreasing influenza activity. A peak in admissions at participating hospitals occurred during the last week of August 2014.

Interstate activity

The Australian Influenza Surveillance Report is compiled from a number of data sources, including laboratory-confirmed notifications to NNDSS, sentinel influenza-like illness reporting from general practitioners and emergency departments, workplace absenteeism, and laboratory testing. The current national report is available at <http://www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm>.

The report for the fortnight ending 12 September indicated influenza activity as having peaked across most of Australia. Influenza A was the predominant influenza virus type nationally and A(H1N1)pdm09 the most common subtype in most jurisdictions. In New South Wales and the Australia Capital Territory A(H3N2) is the most common subtype. Influenza strains currently circulating within Australia are similar to the strains included in the 2014 vaccine.

Annual Influenza Vaccine

The contents of the annual influenza vaccine are reviewed late each year, aiming to produce vaccines for the following year that provide protection from influenza strains likely to be common during winter. The recommended formulation of the 2014 vaccine is described at <http://www.tga.gov.au/about/committees-aivc.htm>. The World Health Organization recently released recommendations for the composition of influenza vaccines for the 2015 southern hemisphere influenza season http://www.who.int/influenza/vaccines/virus/recommendations/2015_south/en/.

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

- anyone aged 65 and over
- Indigenous people who are aged 15 years or over
- pregnant women
- any person six months of age and over with a chronic condition predisposing to severe influenza illness that requires 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; there may be a consultation fee for the medical provider to administer the vaccine.



The **fluTAS Report** is a monthly flu season update produced by the DHHS Public and Environmental Health Service to inform healthcare organisations and the public about the current level of flu activity in Tasmania.

Alongside routine surveillance of diseases in Tasmania, the report combines multiple data sources to obtain a measure of flu activity in the community, which can be used by our health system to prepare and respond.

To provide feedback on the fluTAS Report, email the [Communicable Disease Prevention Unit](#) or call the Public Health Hotline on 1800 671 738.