



Public Health Services produces the fluTAS Report to inform healthcare organisations and the public about the level of influenza (flu) in Tasmania. Multiple data sources are used to obtain measures of influenza activity in the community.

Summary

This report describes influenza activity in Tasmania **during May and June of 2016**. Available data over this period indicate:

- Influenza activity remained at the low 'baseline' level despite a small increase in testing.
- The 2016 winter flu season has not commenced.
- Surveillance of influenza-like illness by General Practice and *FluTracking* continued to indicate minimal activity during this period.
- Laboratory tests of nose and throat swabs indicated that other respiratory pathogens were the main cause of influenza-like illness during May and June.

Influenza Notifications

Tasmanian laboratories must notify the Director of Public Health of evidence of influenza 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.

Since the report of 9 May a further 57 notifications of influenza were received, with 49 relating to influenza detected in specimens collected during May and June. **The total number of influenza notifications since the start of 2016 is 122.** Notifications of influenza during May and June were similar to March and April (see Table 1). Weekly influenza counts at the end of June remained low and indicated that the winter influenza season had not commenced (see Figure 1). For comparison, more influenza had been reported by the end of June 2015 (154 notifications) with the 2015 influenza season in Tasmania having commenced during June 2015.

During May and June Influenza A virus was the most common cause of influenza in Tasmania (see Table 2). To date, additional laboratory typing has been performed on 20 samples of influenza A virus. Fifteen samples were the A(H1N1)pdm09 strain while the remaining five were A(H3N2). The 2016 annual influenza vaccine covers both of these strains. See *Annual Influenza Vaccine* (page 6).

¹ Polymerase Chain Reaction

Influenza has been notified in residents from all regions of Tasmania and one overseas visitor (see Table 1).

There have been no outbreaks of influenza in a residential institution reported since the start of 2016.

Table 1: Monthly Influenza Notifications by Region, January to June 2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
North	1	3	3	5	5	10	-	-	-	-	-	-	27
North-West	4	4	9	9	6	7	-	-	-	-	-	-	39
South	4	8	12	10	11	10	-	-	-	-	-	-	55
'Visitors'*	0	1	0	0	0	0	-	-	-	-	-	-	1
TOTAL	9	16	24	24	22	27	-	-	-	-	-	-	122

* Overseas residents diagnosed with influenza whilst in Tasmania.

Figure 1: Weekly influenza notifications by subtype, weeks 1 to 26 (ending Sunday 3 July 2016).

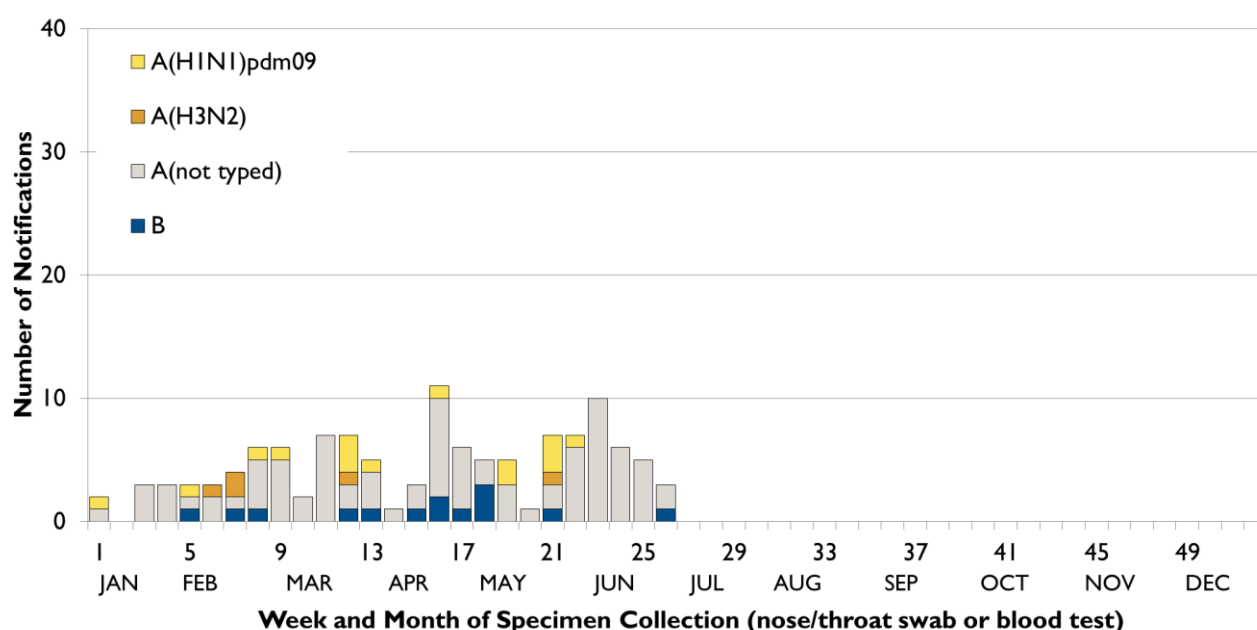


Table 2: Yearly influenza notifications by virus type, Tasmanian residents only.

	2009	2010	2011	2012	2013	2014	2015	2016 ⁽²⁾
Influenza A	1 294	95	189	1 008	207	589	787	106
Influenza B	1	12	174	85	90	81	643	15
Total Influenza	1 295	107	363	1 093	297	670	1 430	121
Predominant subtype of Influenza A	H1N1	H1N1	H1N1	H3N2	H1N1	H1N1 & H3N2	H3N2	-

² Influenza notifications between January and June 2016.

Laboratory Testing

Laboratory Testing Effort

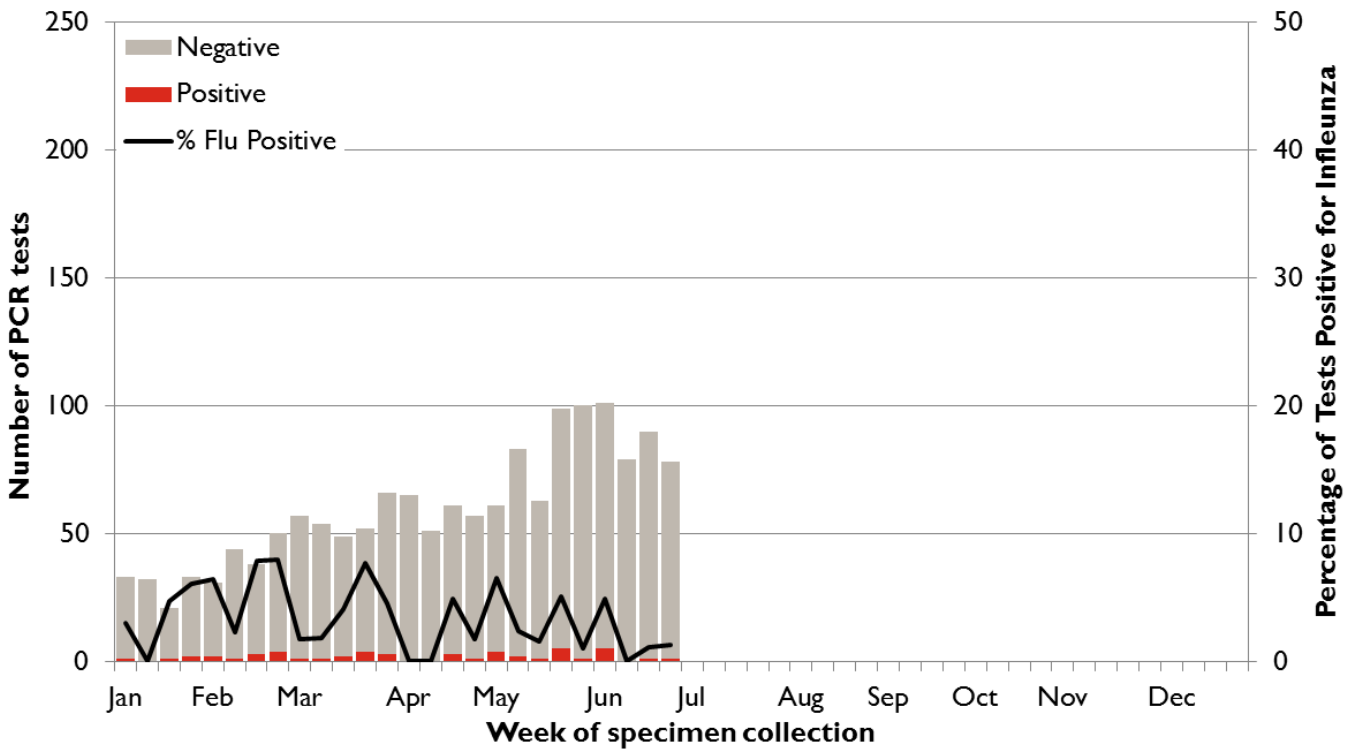
A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and influenza-like illnesses. Some people with these symptoms will visit their doctor. The decision whether to test someone for influenza rests with their treating doctor, and depends on their symptoms. The best test for influenza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

Since the start of 2016 around half (48%) of influenza was been diagnosed by PCR (nose and throat swabs). The remaining cases were diagnosed by a blood test (serology).

During May and June there was an average of 84 weekly PCR tests performed. This was an increase on testing between January and April (average 47 per week) however similar to testing during May and June 2015 (average 83 per week).

Although weekly tests increased during May and June, the proportion of tests positive for influenza remained at the low ‘baseline’ level (of one per cent) for Tasmania (see Figure 2). Last year (2015) the proportion of tests positive for influenza at the end of June was 13 per cent.

Figure 2: Influenza tests via PCR by week during 2016 (week ending 2 July)



Other Respiratory Pathogens

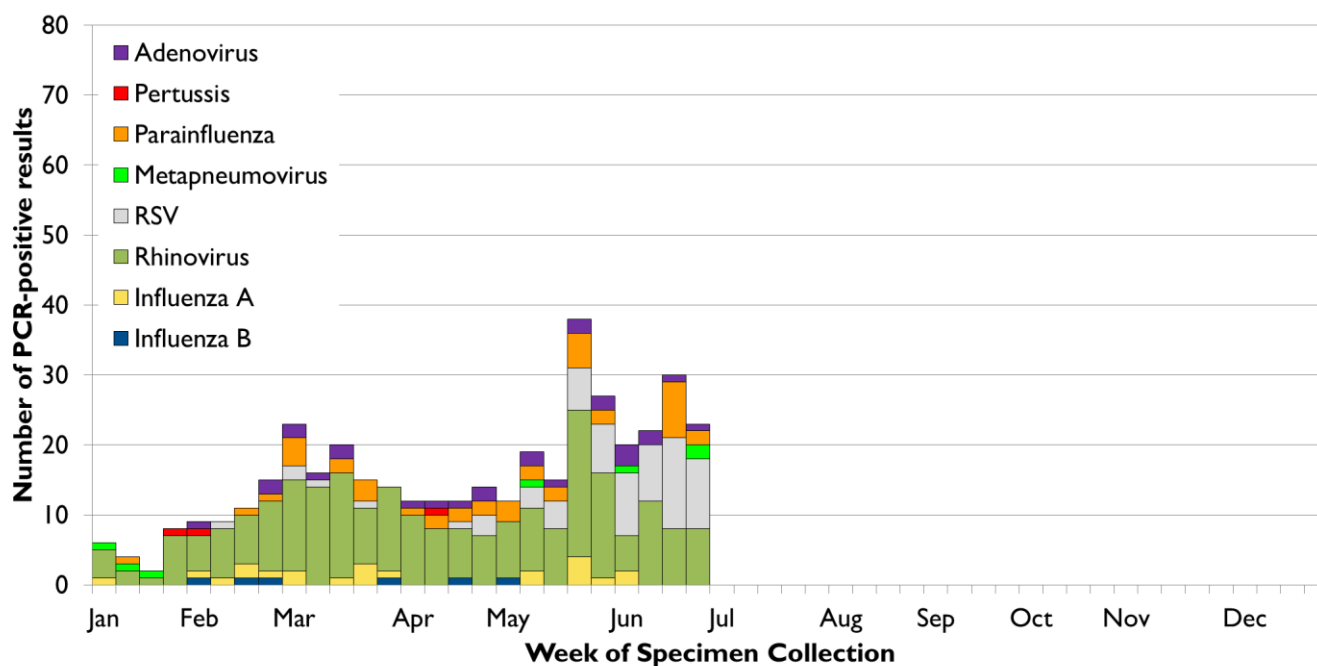
The Royal Hobart Hospital performs PCR tests on nose and throat swabs that detect influenza and multiple non-influenza respiratory pathogens that cause illness. These specimens have been collected statewide mostly from emergency department and hospitalised patients. The monitoring of non-influenza respiratory pathogen activity can help the interpretation of testing activity and syndromic surveillance trends.

There was more weekly testing³ during May and June (47 tests per week) than in January to April (27 tests) (see Figure 3). This activity was however similar to testing activity during the May and June period of 2015 (50 tests per week).

During May and June 2016 Rhinovirus remained the most commonly detected pathogen (46 per cent). Detections of Respiratory Syncytial Virus (RSV) increased during this time to become the second most commonly detected pathogen (29 per cent). Between January and April 2016 RSV accounted for only four per cent of detections.

Detections of Influenza A virus and Influenza B virus remained low throughout May and June; four per cent and less than one per cent respectively.

Figure 3: Respiratory pathogen detections, 2016 (week ending 2 July).



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 in the community. 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/or 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 on the World Wide Web at www.flutracking.net and on Facebook: www.facebook.com/Flutracking.

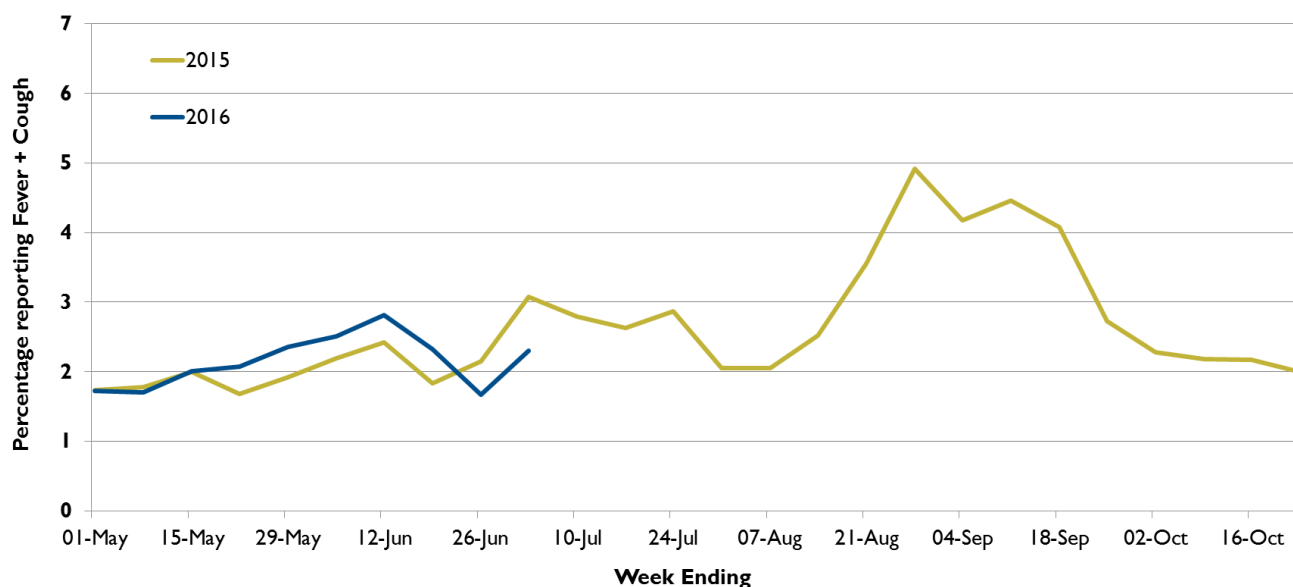
FluTracking recommenced at the start of May 2016. Each week an average of more than 2 600 Tasmanians have participated in FluTracking.

On average over two per cent of Tasmanian participants reported fever and cough each week during May and June. Over 60 per cent of these individuals reported absenteeism from their normal duties as a result of their illness. Similar levels of illness and absenteeism were reported during May and June 2015.

³ Excluding repeat tests.

The low amount of ILI reported each week during May and June is similar to previous years (see figure 4).

Figure 4: Tasmanian FluTracking participants reporting ‘fever and cough’– 2016 compared 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 most recent report of 2016 (No. 11) described influenza-like illness (ILI) consultations in Tasmania as ‘Baseline’. During May participating urban practices reported that two of 1 000 consultations related to ILI. Rural practices reported only one of 1 000 consultations were related to ILI.

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.

The latest report describes the level of national (influenza) hospital admissions in the two weeks ending 1 July 2016 as ‘low pre-season activity’. The single participating Tasmanian hospital reports three influenza hospitalisations since April 2016.

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.

Two Australian Influenza Surveillance Reports have been published by the Australian Government Department of Health and are available at www.health.gov.au/flureport. The report for the fortnight ending 24 June 2016 reported that influenza activity across Australia remained at low levels with some increases beginning in some regions. During this period other respiratory viruses such as RSV were reported to be the most common cause of influenza-like illness presentations to general practitioners participating in (sentinel) influenza surveillance.

Annual Influenza Vaccine

The 2016 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. Advice on the formulation of annual influenza vaccines is provided to the Therapeutic Goods Administration by the Australian Influenza Vaccine Committee (AIVC): www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc.

The AIVC met in October 2015 to recommend the influenza viruses to be used in influenza vaccines for 2016. The committee recommended the following:

- Trivalent (three-strain) vaccines should contain the following
 - **A (H1N1)**: an A/California/7/2009 (H1N1)pdm09-like virus
 - **A (H3N2)**: an A/Hong Kong/4801/2014 (H3N2)-like virus
 - **B**: a B/Brisbane/60/2008-like virus
- Quadrivalent (four-strain) vaccines should contain the trivalent strains listed above plus an additional B strain
 - B/Phuket/3073/2013-like virus.

Further information on 2016 influenza vaccines is available at www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia-2016.

Is vaccination recommended?

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

- People aged 65 and over
- Aboriginal and Torres Strait Islander people aged six months to less than five years
- Aboriginal and Torres Strait Islander people who are aged 15 years and over
- Pregnant women
- People aged six months and over with medical conditions such as severe asthma, lung or heart disease, low immunity or diabetes that can lead to complications from influenza.

For more information see www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/immunise-influenza.

* The cost of the quadrivalent 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 influenza season update produced by the DHHS Public Health Services to inform healthcare organisations and the public about influenza activity in Tasmania.

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

To provide feedback on the fluTAS Report email Communicable Disease Prevention Unit or call the Public Health Hotline – Tasmania on 1800 671 738.