



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 July 2016**. Available data over this period indicate:

- The modest increase in influenza activity at the end of July is similar to pre-season activity observed in recent years.
- The 2016 winter flu season appeared to be beginning toward the end of July.
- Influenza A virus is the most common cause of laboratory confirmed Influenza. The most common circulating strains included A(H1N1)pdm09, followed by A(H3N2). The 2016 annual vaccine covers these strains.
- There was a small increase in laboratory tests of nose and throat swabs during July. Respiratory Syncytial Virus (RSV) was the most commonly detected respiratory pathogen followed by Rhinovirus and Influenza A virus.
- Surveillance of influenza-like illness by General Practice and *FluTracking* continued to indicate low activity during this period.

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.

There were a further 37 notifications of influenza during July, resulting in a **total of 159 influenza notifications since the start of 2016**. The July total of 37 notifications is the largest monthly total since the start of 2016 (see Table 1). Weekly notification counts increased during July, with 18 of the 37 influenza notifications in the final week (see Figure 1).

During July 2016, Influenza A virus was the most common cause of influenza in Tasmania: isolated in 34 out of 37 notifications. Since the start of 2016, additional laboratory typing has been performed on 25 samples of influenza A virus. Sixteen samples were the A(H1N1)pdm09 strain while the remaining nine 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 I).

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

Table I: Monthly Influenza Notifications by Region, January to July 2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
North	1	3	3	5	5	10	11	-	-	-	-	-	38
North-West	4	4	9	9	6	7	7	-	-	-	-	-	46
South	4	8	12	10	11	10	19	-	-	-	-	-	74
'Visitors'*	0	1	0	0	0	0	0	-	-	-	-	-	1
TOTAL	9	16	24	24	22	27	37	-	-	-	-	-	159

* Overseas residents diagnosed with influenza whilst in Tasmania.

Figure I: Weekly influenza notifications by subtype, weeks 1 to 30 (ending Sunday 31 July 2016).

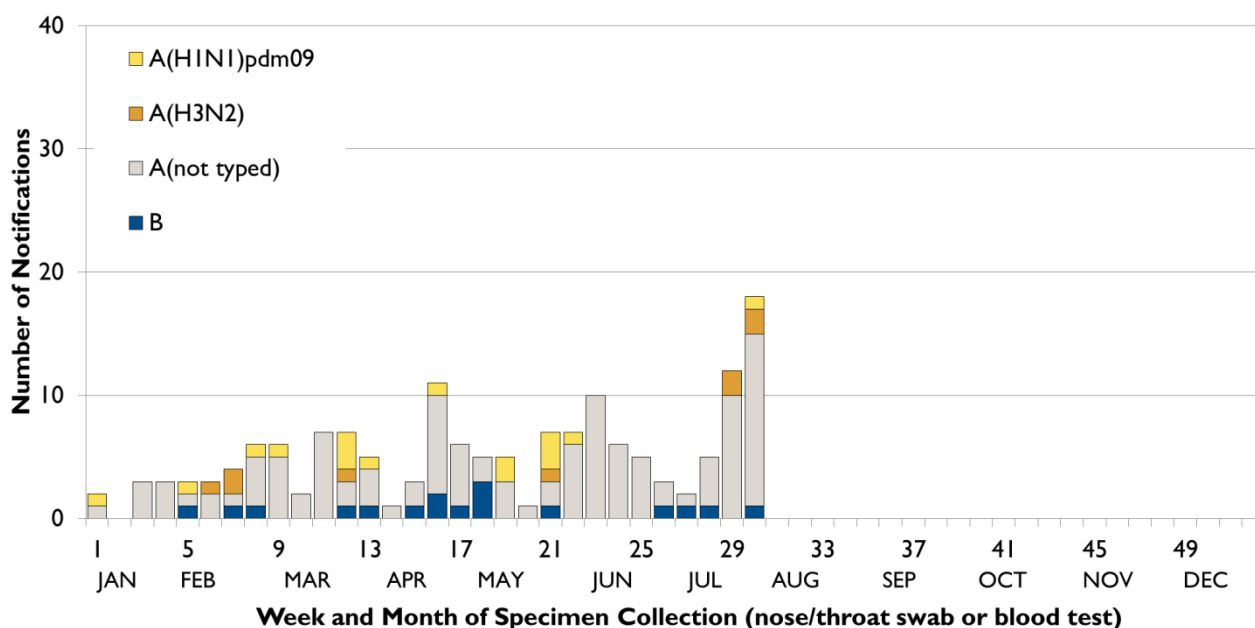


Table 2: Yearly influenza notifications by virus type, Tasmanian residents only.

	2009	2010	2011	2012	2013	2014	2015	2016 ⁽²⁾
Influenza A	1 294	95	189	1 008	207	589	787	140
Influenza B	1	12	174	85	90	81	643	18
Total Influenza	1 295	107	363	1 093	297	670	1 430	158
Predominant subtype of Influenza A	H1N1	H1N1	H1N1	H3N2	H1N1	H1N1 & H3N2	H3N2	-

Laboratory Testing

Laboratory Testing Effort

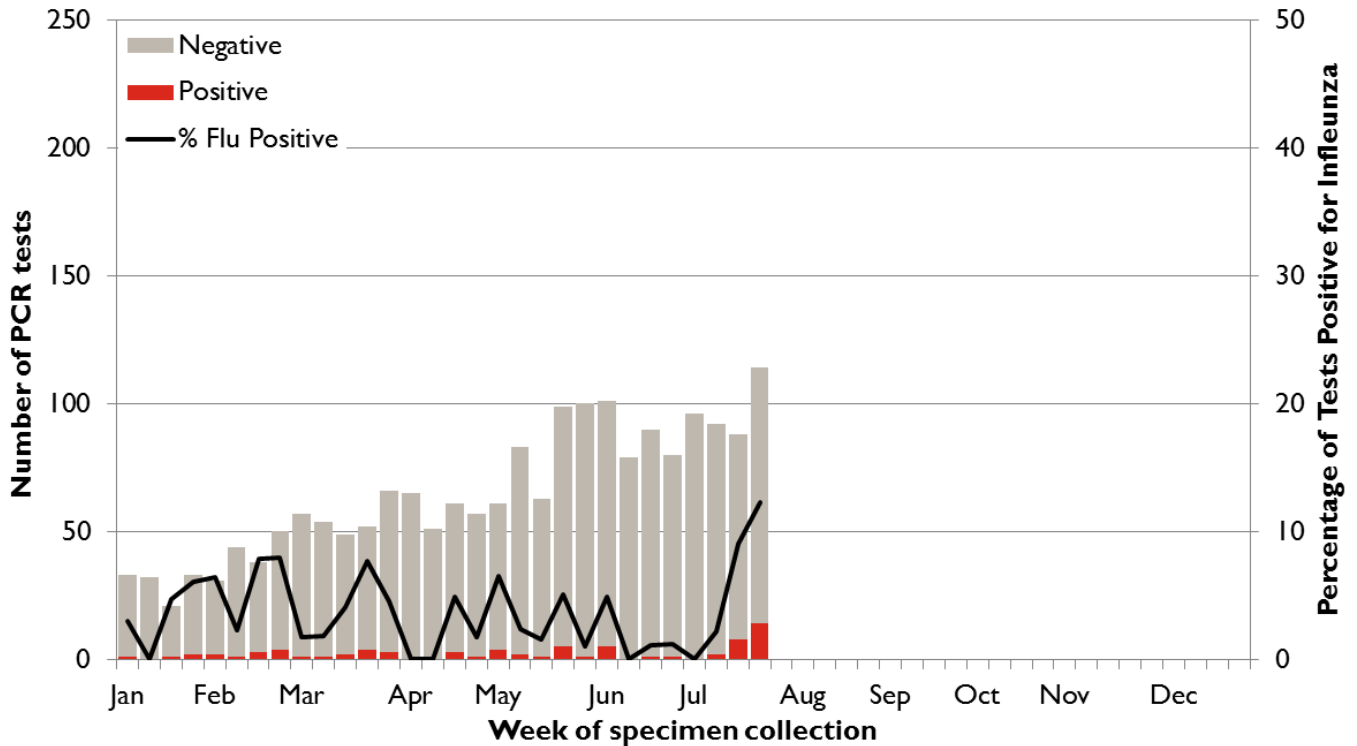
A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and influenza-like illnesses. Some people with these symptoms will visit their doctor. The decision whether to test someone for influenza rests with their treating doctor, and depends on their symptoms. The best test for influenza 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.

² Influenza notifications from January to July 2016.

Since the start of 2016, 55 per cent of influenza was diagnosed by PCR (nose and throat swabs). The remaining cases were diagnosed by a blood test (serology).

During July there was an average of 98 weekly PCR tests performed. This was an increase in testing compared with the January to May period (average 52 per week). The proportion of tests positive for influenza increased from one per cent to 12 per cent during July 2016 (see Figure 2). In past years the proportion of weekly tests typically increased above 10 per cent during the early weeks of Tasmanian (winter) influenza seasons.

Figure 2: Influenza tests via PCR by week during 2016 (week ending 31 July)

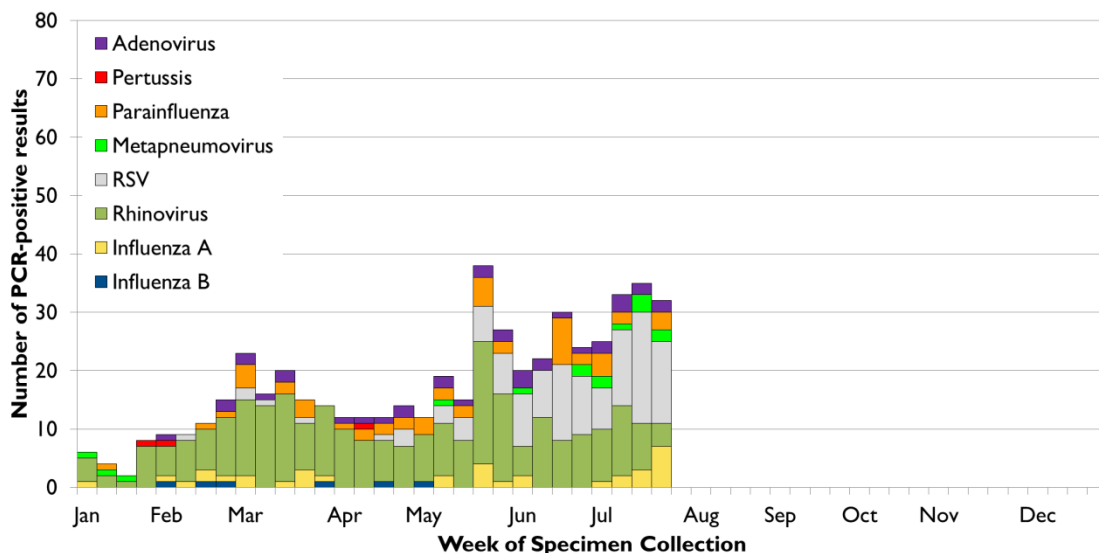


Other Respiratory Pathogens

The monitoring of non-influenza respiratory pathogen activity can help the interpretation of testing activity and syndromic surveillance trends. The Royal Hobart Hospital performs an extended range of 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.

During July 2016 detections of Respiratory Syncytial Virus (RSV) increased to be the most commonly detected pathogen (42 per cent). Weekly rhinovirus detections declined. A small number of tests were positive for Influenza A virus and it accounted for 22 per cent of detected pathogens during the final week of July. No detections of Influenza B virus were reported during July (see Figure 3).

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.

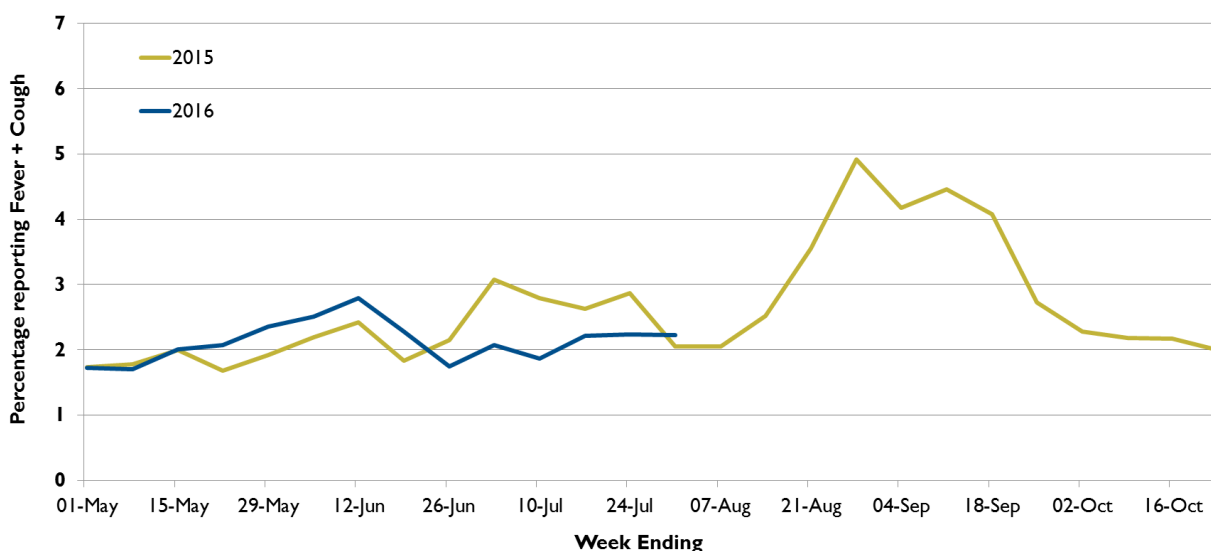
FluTracking

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. An average of approximately 2 600 Tasmanians have participated in FluTracking each week.

On average over two per cent of Tasmanian participants reported fever and cough each week during July (see figure 4), less than that seen the corresponding time last year. Over 60 per cent of these individuals reported absenteeism from their normal duties as a result of their illness.

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. 13) described influenza-like illness (ILI) consultations in Tasmania as 'Normal'. This corresponds to ILI consultation rates between 5 and 24 per 1 000 consultations. During the fortnight ending 3 July, participating urban practices reported four out of 1 000 consultations as being related to ILI. Rural practices reported a slightly higher rate; seven out of 1 000 consultations.

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 5 August 2016 as 'increasing season activity'. The single participating Tasmanian hospital reported five influenza hospitalisations since April 2016.

The details of recent FluCAN activity are presented in the Australian Influenza Surveillance Report (see *Interstate Activity*).

Interstate activity

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

The routine Australian Influenza Surveillance Report is published by the Australian Government Department of Health and is available at www.health.gov.au/flureport. The report for the fortnight ending 22 July 2016 reported increasing influenza activity in some regions, indicative of early influenza seasonal activity. Overall influenza A(H3N2) was the predominant strain in circulation. The highest rates of influenza since the start of 2016 appear to be in children less than 5 years of age and adults aged 85 years and over.

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 health care 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.