

Population Health Services produce the fluTAS Report to provide information about the level of influenza (flu) in Tasmania. Multiple surveillance data sources are used to obtain measures of influenza activity in the community.

This surveillance report describes influenza activity in Tasmania during the period 1 January to 31 August 2018.

August 2018 Update

- Influenza activity during August 2018 remained low and similar to inter-seasonal levels.
- Rhinovirus was the most common respiratory virus detected in patients presenting with influenza-like-illness (ILI) to the RHH during August 2018.
- There have been no outbreaks of influenza notified in Tasmania during January to August 2018.

Influenza Notifications

There were 33 notifications of laboratory-confirmed influenza during August 2018 (Table 1). This was substantially lower than the five-year August average (485 notifications). Weekly influenza notifications have remained at a low inter-seasonal level throughout 2018. The expected increase in weekly notifications observed during the July to October period of previous years was not observed during August 2018 (Figure 1).

No outbreaks of influenza were notified during January to August 2018.

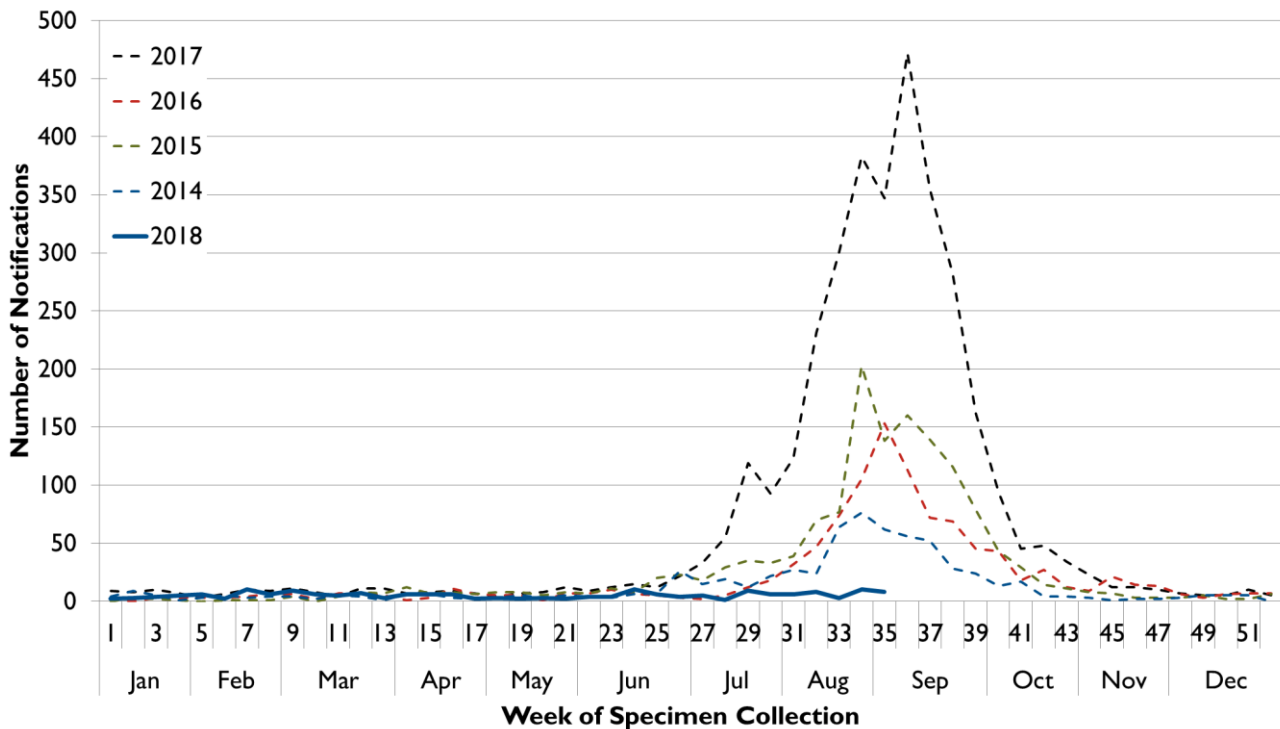


Figure 1: Notifications of influenza in Tasmania, by week, 1 January 2014 to Sunday 2 September 2018

From 1 January to 31 August 2018 there were 180 notifications of laboratory-confirmed influenza (Table 1).

The majority of notifications (99) were in the southern region of Tasmania. There were 52 notifications for residents of the North and 28 for the North-West. One overseas visitor was diagnosed with influenza in Tasmania during this period.

Table 1: Notifications of influenza in Tasmania by subtype and month, 1 January to 31 August 2018

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	2018 YTD
Influenza A	9	15	17	10	7	11	14	26	109
A(H1N1)	0	2	0	0	0	1	1	2	6
A(H3N2)	2	5	2	3	0	1	1	1	15
A (not typed)	7	8	15	7	7	9	12	23	88
Influenza B	8	11	8	11	6	13	7	7	71
Total Influenza	17	26	25	21	13	24	21	33	180

Notifications of influenza are based on positive laboratory tests. Many people with flu-like illness choose not to attend medical care, or are not tested when they attend for a variety of reasons. As a result the notifications only represent a small proportion of influenza illness in the community.

Laboratory testing

Influenza testing

A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and influenza-like illnesses. The best test for influenza is a Polymerase Chain Reaction (PCR) test, which detects influenza virus genetic material (RNA). The number of influenza PCR tests being performed by Tasmanian laboratories can indicate the level of respiratory illness in the community.

Of the 180 notifications of influenza between January and August 2018, 71 (39 per cent) were tested using a serology test and 109 (61 per cent) were tested using a PCR test.

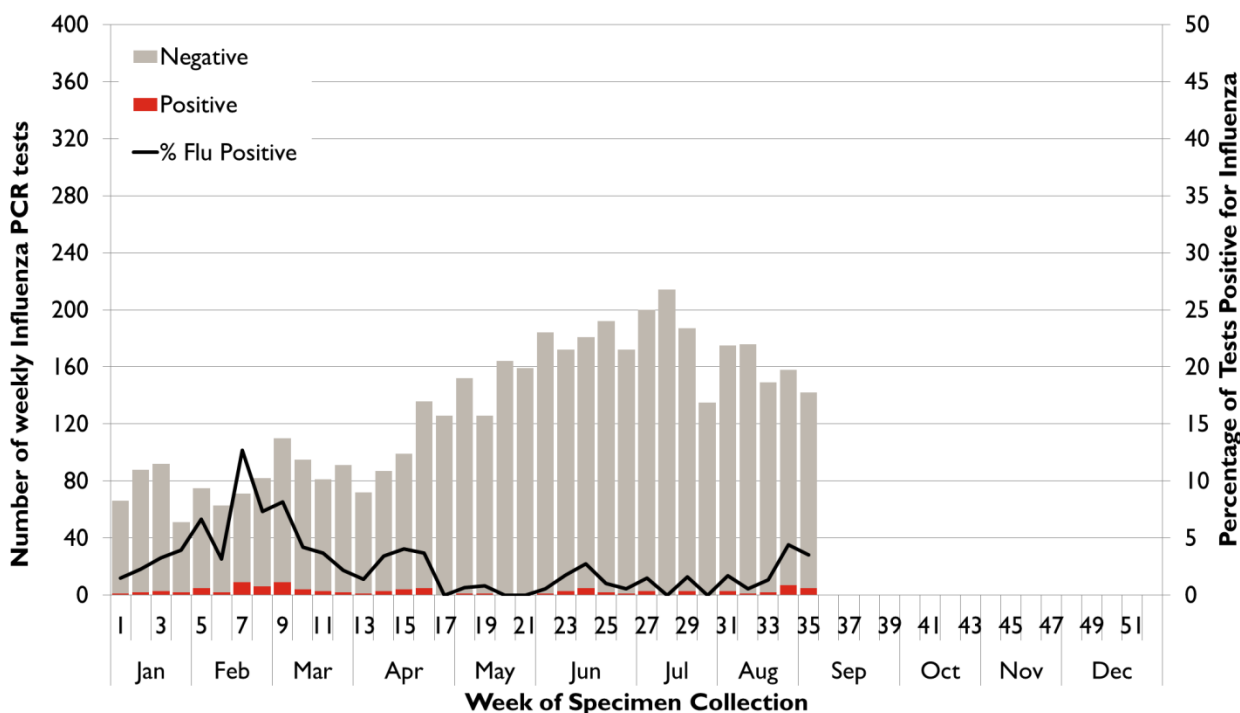


Figure 2: Statewide Influenza PCR testing, 1 January to Sunday 2 September 2018

During August 2018 an average of 156 PCR tests for influenza were conducted per week. This was a decrease on the testing conducted during July (average 182 tests per week) (Figure 2). For comparison, an average of 705 PCR tests were conducted per week during August 2017; the peak period of the 2017 influenza season.

The weekly proportion of tests positive for influenza increased from one to four per cent per week during August 2018 (Figure 2). During August of the previous year positivity ranged from 37 to 41 per cent and indicated the peak period of the 2017 influenza season.

Other respiratory pathogens

The monitoring of non-influenza respiratory pathogen activity provides an indication of the proportion of respiratory infections caused by influenza. This proportion can give us some information about the timing of the season, as generally a larger proportion of respiratory illness is caused by influenza during the influenza season.

The Royal Hobart Hospital (RHH) performs a PCR test on samples from patients presenting with a respiratory illness that detects influenza and multiple other pathogens that cause similar symptoms. These data are only available from the RHH, which is a public laboratory and the majority of specimens collected and tested are from emergency department presentations and hospitalised patients. FluTAS reports on Influenza A, Influenza B, and seven other respiratory viruses most commonly reported in Tasmania.

There were 391 PCR tests performed during August 2018; a 10 per cent decrease on July 2018 testing (437 tests). This was a significantly lower than testing during August 2017 (1 088 tests).

The most commonly detected pathogens during August 2018 were Rhinovirus (35 per cent), Respiratory Syncytial Virus (RSV) (24 per cent) and Parainfluenza virus (17 per cent). Four people (two per cent) had Influenza A virus detected. There were no detections of Influenza B virus reported during August.

The proportion of August 2018 tests with one or more pathogens detected (42 per cent) was lower than July 2018 (55 per cent). For comparison, 60 per cent of July 2017 tests resulted in one or more pathogens being detected: of those, 62 per cent were detections of Influenza A or Influenza B virus.

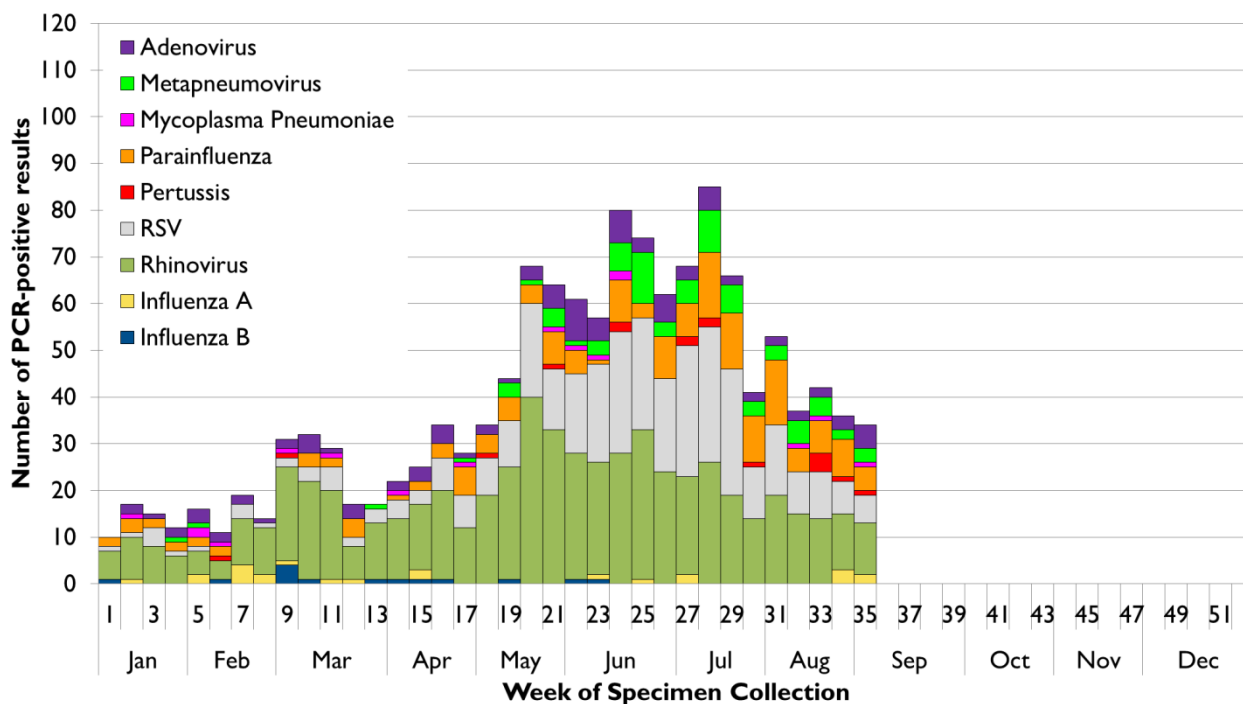


Figure 3: Respiratory pathogen detections, 1 January to Sunday 2 September 2018.

National surveillance systems

FluCAN

The Influenza Complications Alert Network (FluCAN) reports on influenza-related hospitalisations and complications in sentinel hospitals Australia-wide during each influenza season. This system aims to provide an indication of severity of the influenza season and identify groups at higher risk of influenza related hospital admission. The details of recent FluCAN activity are published in the Australian Influenza Surveillance Report (see *Interstate Activity*).

From 3 April to 31 August 2018 there were 328 hospital admissions of confirmed influenza reported by sentinel hospitals Australia-wide. Thirty-two were admissions to an ICU. During this period FluCAN described activity across participating hospitals as ‘low influenza activity’.

Four out of the 328 influenza admissions were to the one participating Tasmanian hospital, the Royal Hobart Hospital. These were all non-ICU admissions.

FluTracking (Community Syndromic Surveillance)

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 at www.flutracking.net and on Facebook www.facebook.com/Flutracking

FluTracking recommenced on 30 April 2018. An average of 3 200 Tasmanians have participated each week; an increase on 2017 participation (average 2 710 Tasmanians per week).

Influenza-like illness (fever plus cough) in Tasmanian participants increased towards the end of August 2018 (Figure 4). Between 1.4 and 2.25 per cent of Tasmanian participants reported a new episode of ILI during weeks 32 to 35. Of these participants, 64 per cent also reported absenteeism from normal duties due to illness.

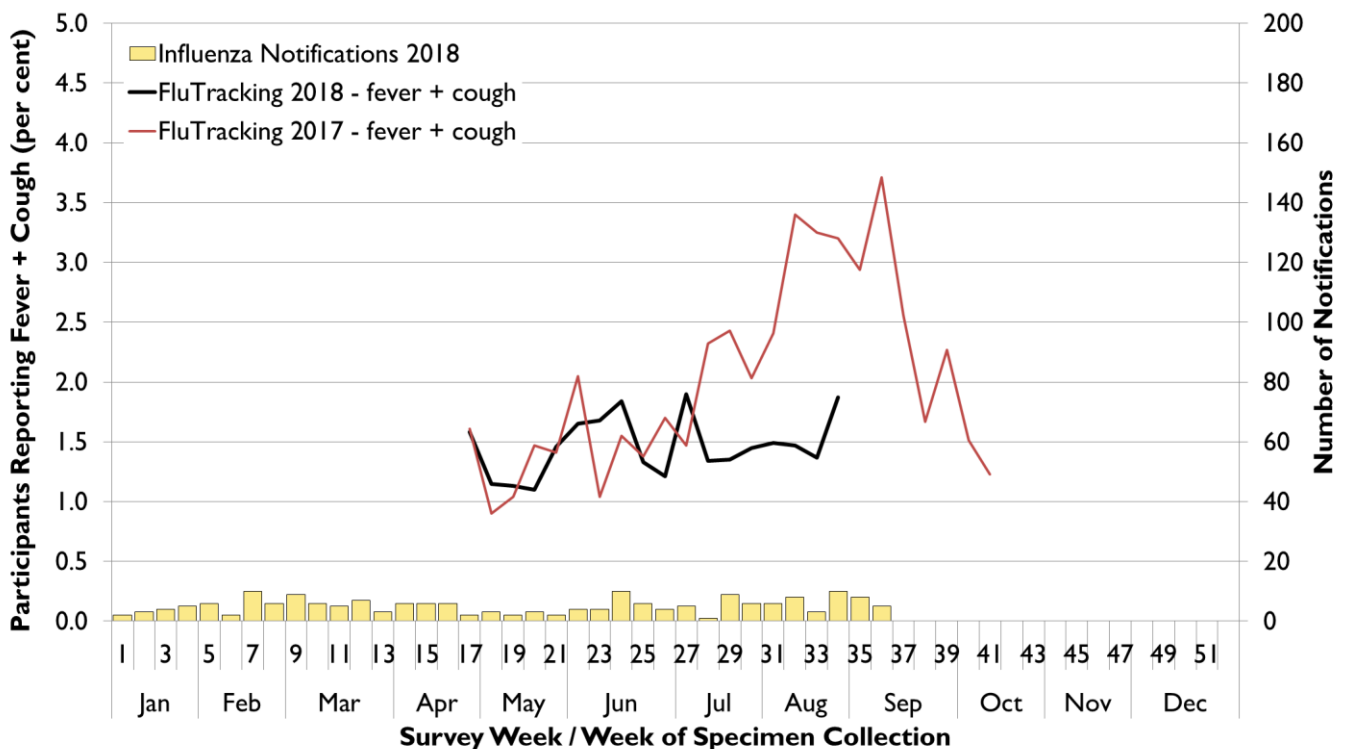


Figure 4: Percentage of Tasmanian *FluTracking* participants reporting fever and cough, week ending Sunday 2 September 2018

ASPREN (General Practice Syndromic Surveillance)

The Australian Sentinel Practices Research Network (ASPREN) includes registered sentinel General Practices (GPs) across Australia who report fortnightly on the number of patients presenting with influenza-like illness (ILI). Five GPs are registered in Tasmania. ASPREN is a joint initiative of the Royal Australian College of General Practitioners and University of Adelaide. Further information is available at aspren.dmac.adelaide.edu.au

The ASPREN report for the period 30 July to 12 August 2018 indicated baseline activity in participating Tasmanian GPs, with between one to two consultations out of every 1 000 due to an ILI presentation. In contrast, presentations of ILI to participating GPs nationally decreased significantly during this period. National ILI rates during this period remained steady at between four and six cases per 1 000 consultations.

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, 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.

National reporting for 2018 has commenced. The key messages from the report describing national activity for the period 13 August to 26 August 2018 were:

- **Activity** – Person to person transmission of influenza and influenza-like illness (ILI) in the community is low and remains within or below the bounds of previous years. Rhinovirus was the most common respiratory virus detected in patients presenting with ILI to sentinel general practices this fortnight.
- **Severity** – Clinical severity for the season to date, as measured through the proportion of patients admitted directly to ICU, and deaths attributed to influenza, is low.
- **Impact** – Currently, the impact of circulating influenza on society is low.
- **Virology** – This fortnight, the majority of confirmed influenza cases reported nationally were influenza A (85 per cent).

Annual Influenza Vaccine

Composition of 2018 influenza vaccines

The annual influenza vaccine is 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 2017 to recommend the influenza viruses to be used in influenza vaccines for 2018. The TGA accepted the recommendations of the AIVC.

Composition of influenza vaccines in 2018:

- Trivalent (three-strain) vaccines should contain the following
 - **A (H1N1)**: an A/Michigan/45/2015 (H1N1)pdm09-like virus
 - **A (H3N2)**: an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus
 - **B**: a B/Phuket/3073/2013-like virus
- Quadrivalent (four-strain) vaccines should contain the trivalent strains listed above plus an additional B strain
 - **B**: a B/Brisbane/60/2008-like virus.

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

Is vaccination recommended?

Annual influenza vaccination is recommended for anyone over the age of six months who wishes to reduce the likelihood of influenza and its complications. Annual vaccination can help to reduce the spread of influenza and protect vulnerable members of the community.

Influenza vaccines in 2018 are free[#] in Tasmania for people at greater risk of contracting and developing severe complications from influenza. Free vaccine is available through General Practitioners for the following people:

- All children aged from six months to under five years (state funded in 2018)
- Aboriginal and Torres Strait Islander people aged 15 years and over
- Adults aged 65 and over (two enhanced trivalent vaccines in 2018)
- Pregnant women at any stage in their pregnancy.
- Adults and children aged from six months with chronic medical conditions such as heart, lung, liver or kidney diseases, asthma, diabetes, cancer, impaired immunity and neuromuscular conditions.

For more information see flu.tas.gov.au or beta.health.gov.au/topics/immunisation

[#] Please note there may be a consultation fee for the healthcare provider to administer the vaccine.

Further Information

For the latest information on influenza in Tasmania visit flu.tas.gov.au

Past fluTAS reports are available at dhhs.tas.gov.au/publichealth/communicable_diseases_prevention_unit

