

Public 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 May 2017.

## May 2017 update

- The 2017 influenza season has not begun.
- Flu activity during May remained well below winter influenza levels.
- During May the majority of notifications were for Influenza A; there were 29 notifications of influenza A and 7 of Influenza B.
- Surveillance of community influenza-like illness continued to indicate low activity.

## Influenza Notifications

There were 36 notifications of laboratory-confirmed influenza during May 2017 (Table 1). This was higher than the five-year May average (16 notifications) though still within inter-seasonal levels (Figure 1). Residents from the Southern region accounted for the largest proportion of notifications during May (49 per cent).

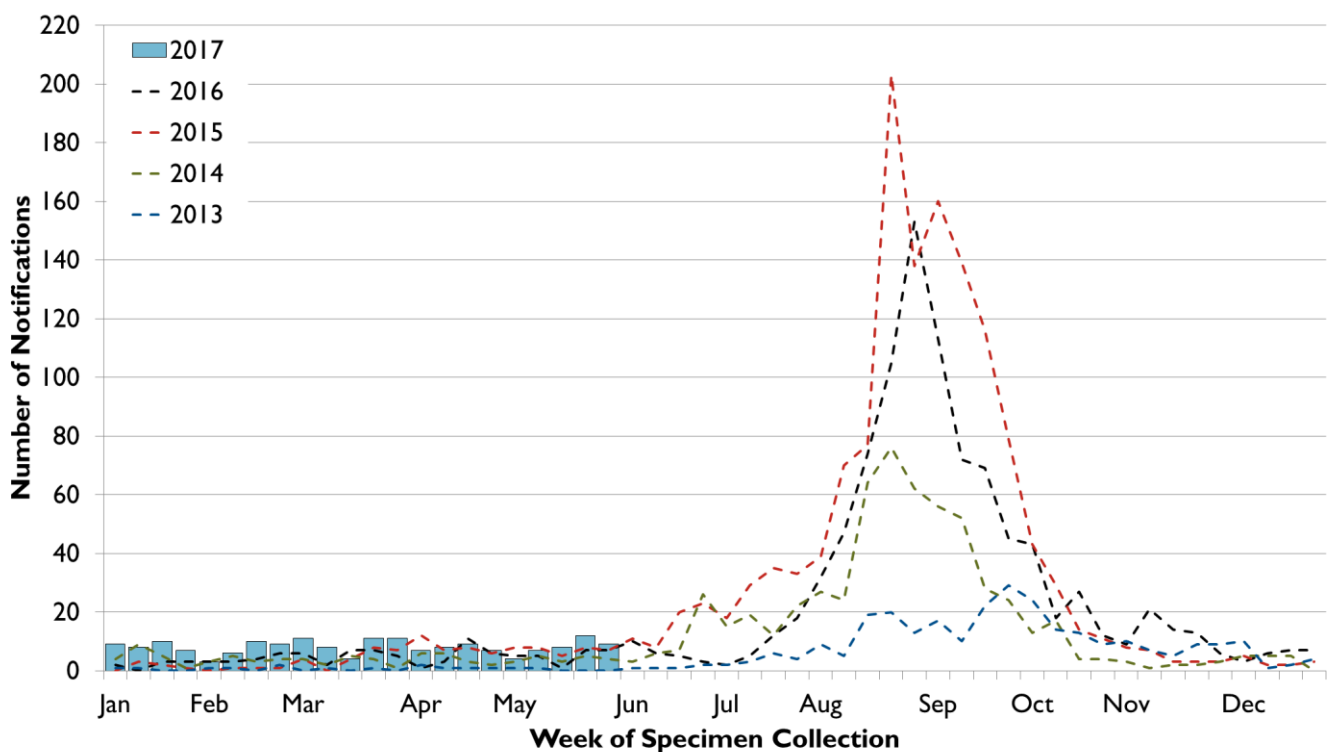


Figure 1: Notifications of influenza in Tasmania, by week, to Sunday 4 June 2017

From 1 January to 30 May there were 175 notifications of laboratory-confirmed influenza. Subtyping was reported for 40 Influenza A notifications (54 per cent of those tested by PCR); 34 notifications of A(H3N2) and six of A(H1N1). One notification of Influenza B had lineage reported, this was B/Victoria.

No institutional outbreaks of influenza were notified between January and May 2017.

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.

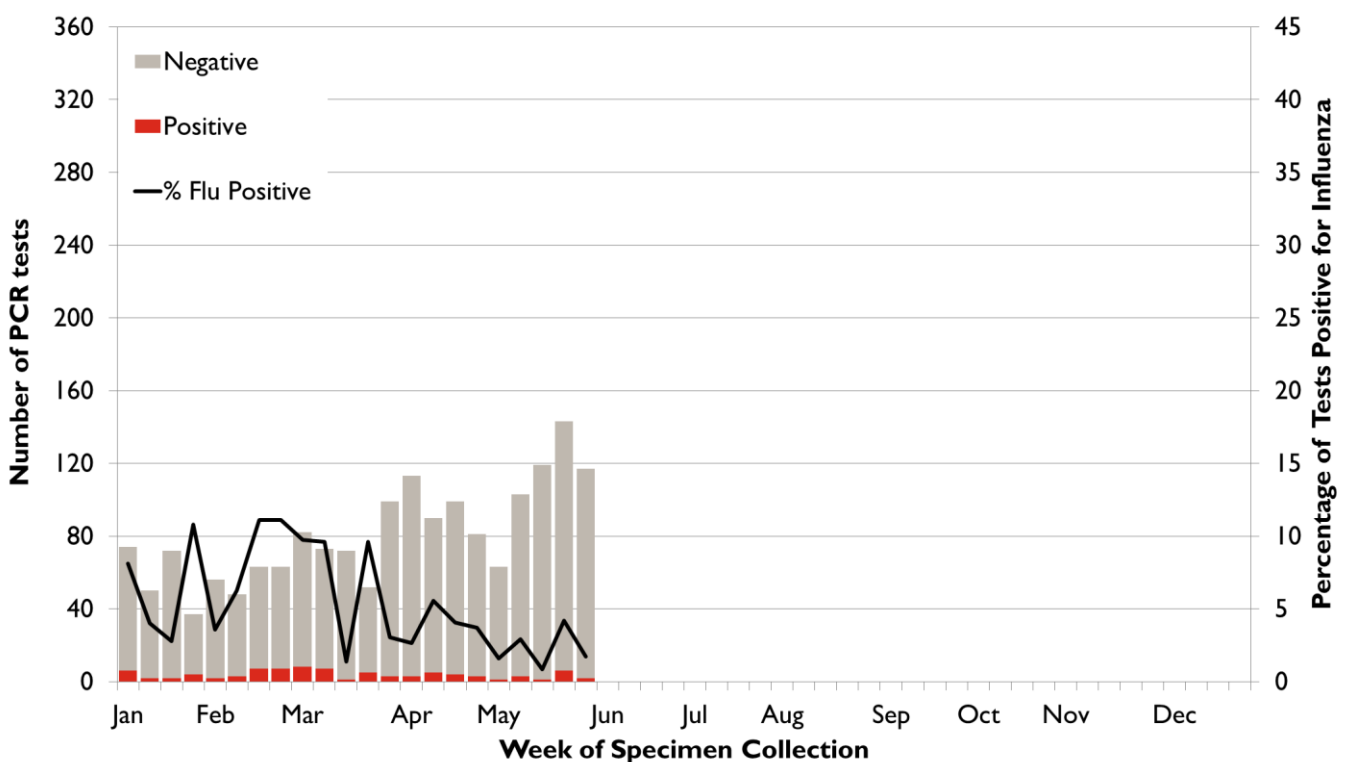
Table 1: Notifications of influenza in Tasmania by subtype and month, 1 January to 30 May 2017

	Jan	Feb	Mar	Apr	May	2017 YTD
<b>Influenza A</b>	<b>34</b>	<b>29</b>	<b>34</b>	<b>23</b>	<b>29</b>	<b>149</b>
<i>A(H1N1)</i>	3	1	1	0	1	6
<i>A(H3N2)</i>	6	10	8	5	5	34
<i>A (not typed)</i>	25	18	25	18	23	109
<b>Influenza B</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>26</b>
<i>B/Victoria lineage</i>	0	0	1	0	0	1
<i>B/Yamagata lineage</i>	0	0	0	0	0	0
<i>B (not typed)</i>	1	3	6	8	7	25
<b>Total Influenza</b>	<b>35</b>	<b>32</b>	<b>41</b>	<b>31</b>	<b>36</b>	<b>175</b>

## 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 PCR test, which detects influenza virus genetic material (RNA) in a nose or throat swab. The number of influenza PCR tests being performed by Tasmanian laboratories can indicate the level of respiratory illness in the community.



Of the 175 notifications of influenza between January and May 2017, 80 (46 per cent) were tested using a serology test and 95 (54 per cent) were tested using a PCR test.

During May 545 PCR tests for influenza were conducted. This represented a 59 per cent increase on testing conducted during April (343 tests). The weekly proportion of tests positive for influenza ranged from one to four per cent per week during this period, with an average of two per cent positivity (Figure 2). This is consistent with expected proportions for the inter-seasonal period.

### 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 six other respiratory viruses most commonly reported in Tasmania.

There were a total of 301 PCR tests performed at the RHH during May 2017, which represented a 58 per cent increase on the tests performed during April (190 tests). A total of 925 tests have been performed since the start of 2017.

In May, the most commonly detected pathogen was Rhinovirus (56 per cent). Detections of Respiratory Syncytial Virus (RSV) increased from 9 per cent during April to 23 per cent during May (Figure 3). Influenza A virus (3 per cent) and Influenza B virus (2 per cent) remained low.

The proportion of tests with no pathogen detected remained stable across April (49 per cent) and May (48 per cent).

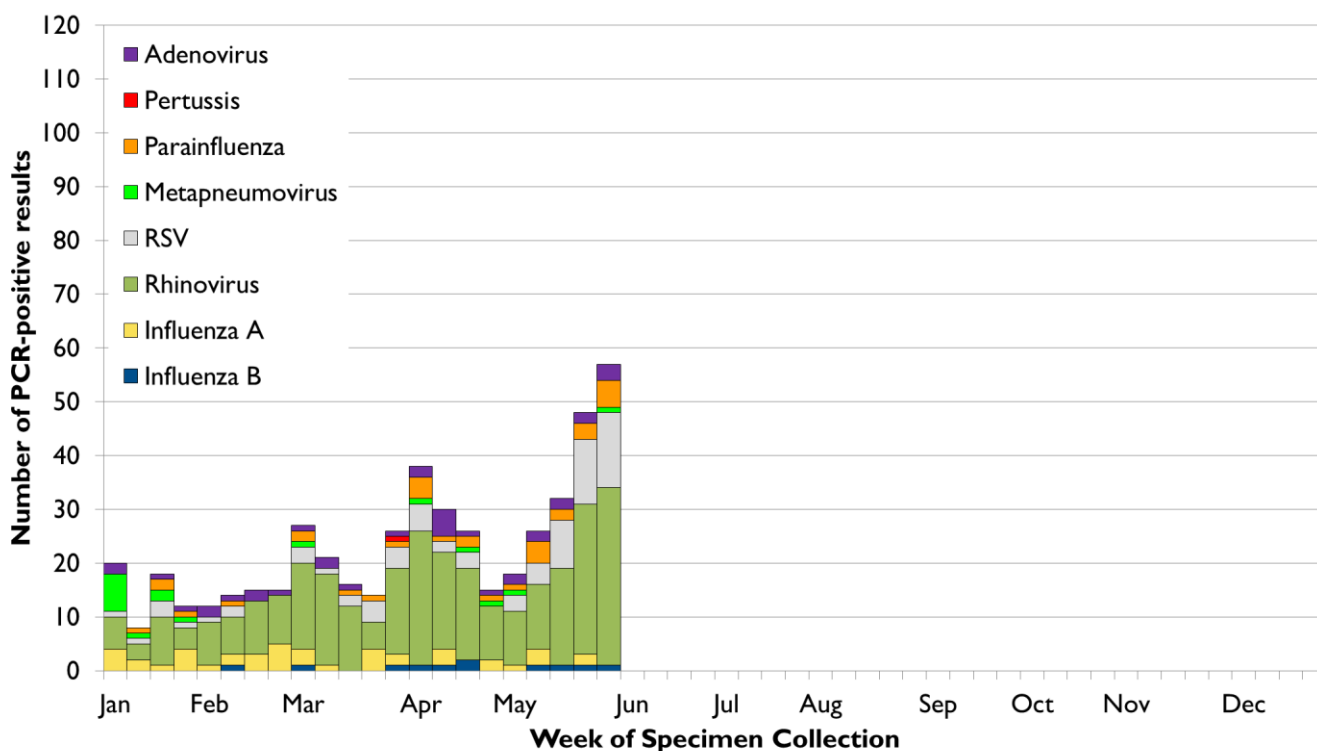


Figure 3: Respiratory pathogen detections in Tasmania, by week, to Sunday 4 June 2017

# National surveillance systems

## Syndromic Surveillance

Influenza-like illness (ILI) is the term used to describe any presentation of illness with flu like symptoms, where the diagnosis of influenza is a possibility. However, a similar set of symptoms can be caused by common cold and other respiratory illnesses. During the annual influenza season, the proportion of the population experiencing symptoms of ILI who have influenza usually increases. Surveillance of ILI and the proportion of people with ILI that test positive for influenza can provide an indication of the community levels of respiratory illness.

### 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 on the World Wide Web at [www.flutracking.net](http://www.flutracking.net) and on Facebook: [www.facebook.com/Flutracking](https://www.facebook.com/Flutracking).

*FluTracking* commenced reporting on 1 May 2017. An average of 2 650 Tasmanians have participated each week since 24 April 2017; a level of participation similar to 2016 (average of 2 606 Tasmanians per week).

Between 24 April and 4 June 2017 an average of 1.4 per cent of Tasmanian participants reported a new episode of ILI (fever plus cough) each week (Figure 4). Of these participants, 61 per cent also reported absenteeism from normal duties due to illness.

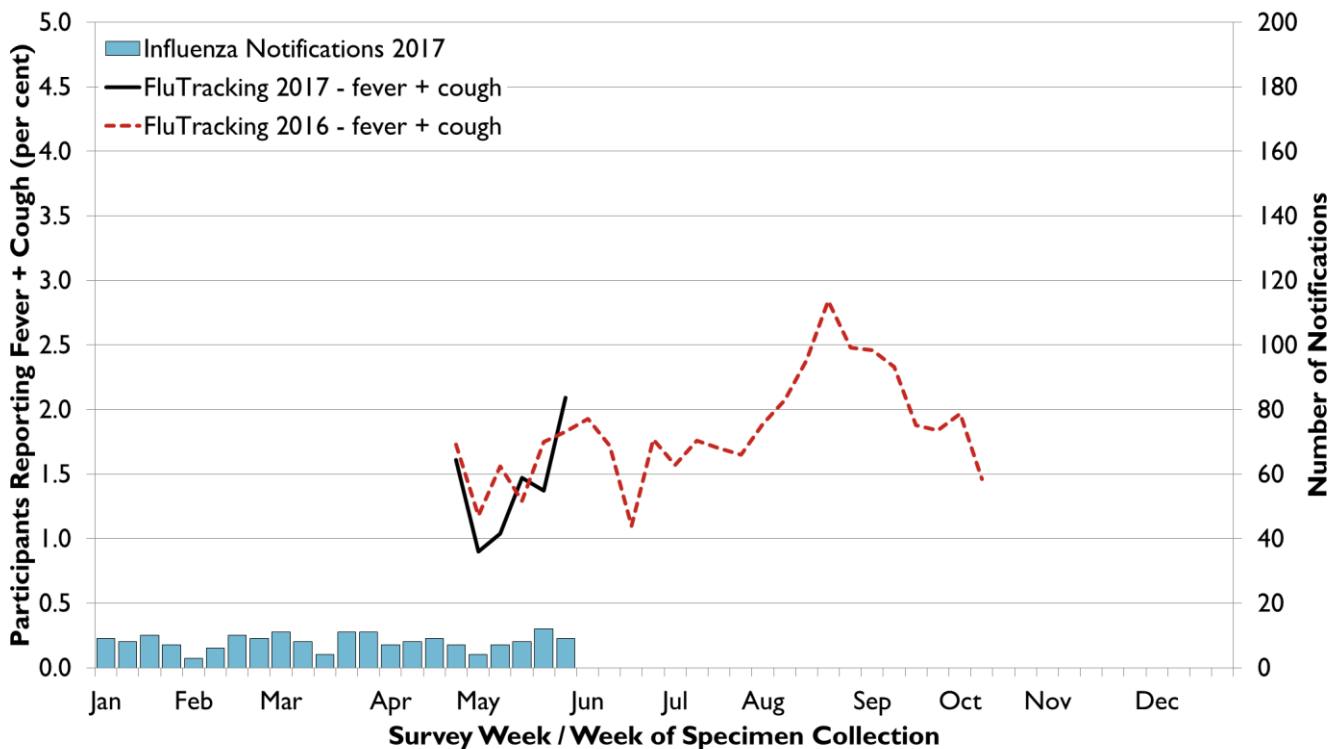


Figure 4: Percentage of Tasmanian *FluTracking* participants reporting fever and cough, week ending Sunday 4 June 2017

## **ASPREN (General Practice Syndromic Surveillance)**

The Australian Sentinel Practices Research Network (ASPREN) includes registered sentinel General Practitioners (GPs) across Australia who report fortnightly on the number patients presenting with fever, cough and fatigue. Five GPs are registered in Tasmania, four located in Greater Hobart and one in the North-West. 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](http://www.dmac.adelaide.edu.au/aspren).

During May, influenza-like illness activity reported in Tasmanian ASPREN Practices was considered to be at inter-seasonal levels.

## **FluCAN (Influenza Hospital Admissions)**

The Influenza Complications Alert Network (FluCAN) reports on influenza-related hospitalisations and complications in sentinel hospitals Australia-wide during 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 2 June 2017 there were 103 hospital admissions of confirmed influenza reported by sentinel hospitals Australia-wide. Five were direct admissions to an ICU. Of the 103 admissions reported, seven occurred within the one participating Tasmanian hospital (Royal Hobart Hospital).

During this period FluCAN described the seasonal status as 'increasing pre-seasonal 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](http://www.health.gov.au/flureport).

National reporting for 2017 has not commenced. Reports for the 2016 influenza season are available at [www.health.gov.au/flureport](http://www.health.gov.au/flureport).

# Annual Influenza Vaccine

## Composition of 2017 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](http://www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc).

The AIVC met in October 2016 to recommend the influenza viruses to be used in influenza vaccines for 2017. The committee recommended the following:

- Trivalent (three-strain) vaccines should contain the following
  - **A (H1N1)**: an A/Michigan/45/2015 (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**: a/Phuket/3073/2013-like virus.

\* There has been replacement of the A/California/7/2009 (H1N1)pdm09-like virus component to A/Michigan/45/2015 (H1N1)pdm09-like virus. This is the first time the recommended A(H1N1) strain has changed since 2010.

Further information on the composition of influenza vaccines is available at [www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia](http://www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia).

All influenza vaccines included in the National immunisation Program in 2017 are quadrivalent vaccines.

## Is vaccination recommended?

Annual influenza vaccination is recommended for anyone over the age of 6 months who wishes to reduce the likelihood of influenza and its complications.

The quadrivalent vaccine is strongly recommended and available without cost<sup>#</sup> under the National Immunisation Program 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](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/immunise-influenza).

<sup>#</sup> Please note there may be a consultation fee for the health care provider to administer the vaccine.

