

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 the period 1 January to 30 April 2017.

2017 summary: January to April

- The 2017 influenza season has not begun.
- Although inter-seasonal influenza notification numbers were greater than the five year average for the same period, flu activity is still well below winter influenza levels.
- During this period the majority of notifications were for Influenza A; there were 119 notifications of influenza A (86 per cent) and 19 of Influenza B (14 per cent).

Influenza Notifications

From 1 January to 30 April 2017, there were 138 notifications of laboratory-confirmed influenza (Table 1). This was higher than expected (the five-year average for these four months was 48 notifications) though still within the expected inter-seasonal levels (Figure 1). This increase was seen in notifications of both Influenza A virus (119) and Influenza B virus (19).

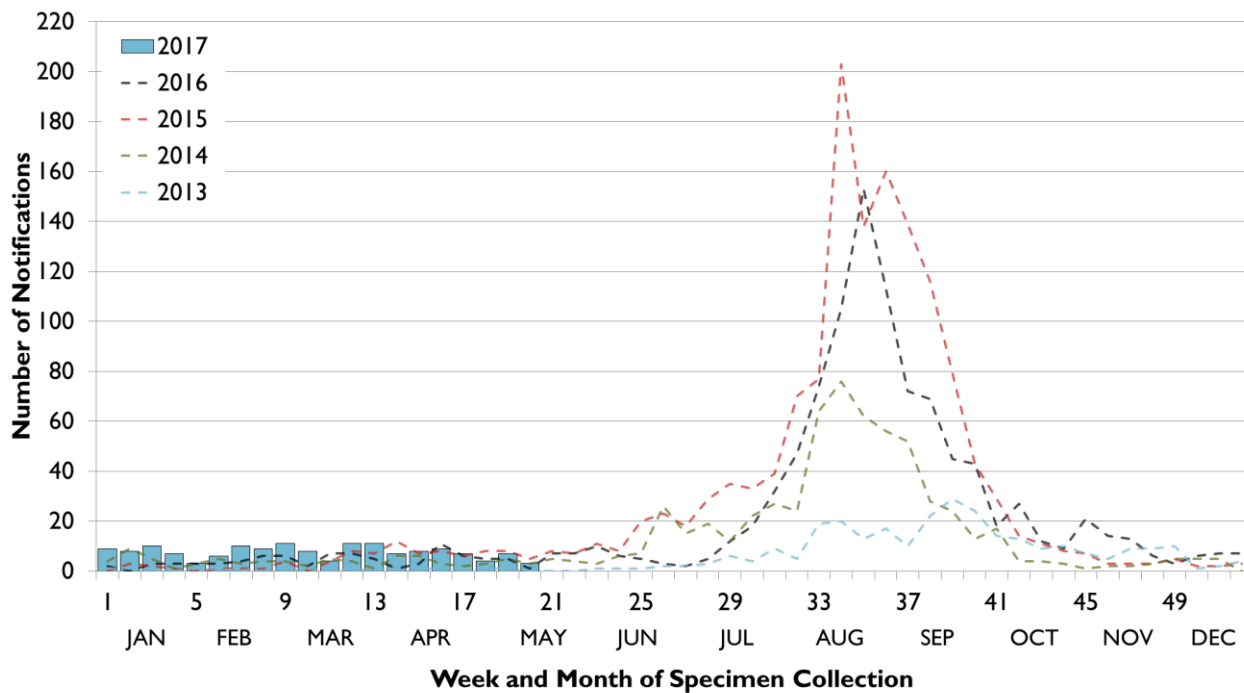


Figure 1: Notifications of influenza in Tasmania, by week, 1 January 2012 to 30 April 2017

Subtyping was reported for 34 notifications (52 per cent of those tested by PCR), with 29 identified as A(H3N2) and five A(H1N1).

Residents from the Southern region accounted for the largest proportion of notifications during this period (65 per cent). No institutional outbreaks of influenza were notified between January and April 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 April 2016

	Jan	Feb	Mar	Apr	2017 YTD
Influenza A	34	29	34	22	119
<i>A(H1N1)</i>	3	1	1	0	5
<i>A(H3N2)</i>	6	10	8	5	29
<i>A (not typed)</i>	25	18	25	17	85
Influenza B	1	3	7	8	19
Total Influenza	35	32	41	30	138

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.

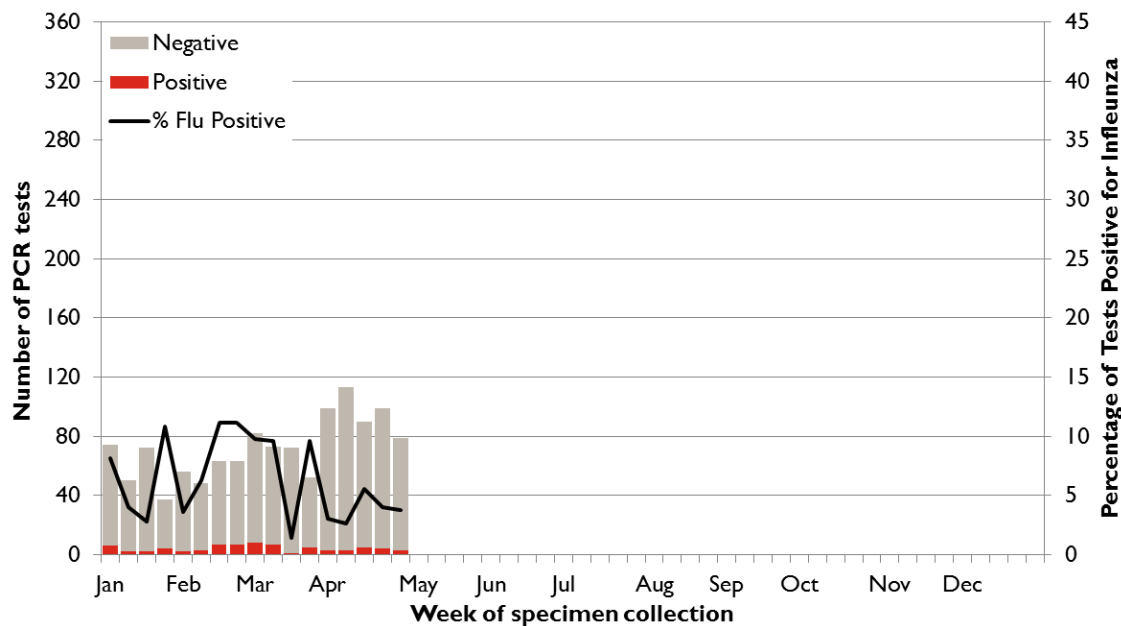


Figure 2: Statewide Influenza PCR testing, 1 January to 30 April 2017

Of the 138 notifications of influenza between January and April 2017, 58 (42 per cent) were tested using a serology test and 80 (58 per cent) were tested using a PCR test.

From 1 January to 30 April, 1 222 PCR tests for influenza were conducted. This represented a 54 per cent increase on the testing conducted during the same period of 2016 (794 tests). The weekly proportion of tests positive for influenza between January and April 2017 ranged from zero to 11 per cent per week, with an average of 6.4 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 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 622 tests performed between 1 January and 30 April 2017, which was 39 per cent greater than the same period of 2016 (449 tests). The most commonly detected pathogens were Rhinovirus (58 per cent), Influenza A virus (11 per cent) and Respiratory Syncytial Virus (RSV) (10 per cent) (Figure 3). Of the tests conducted, 52 per cent had no pathogen detected. This is similar to the same period in 2016 (58 per cent).

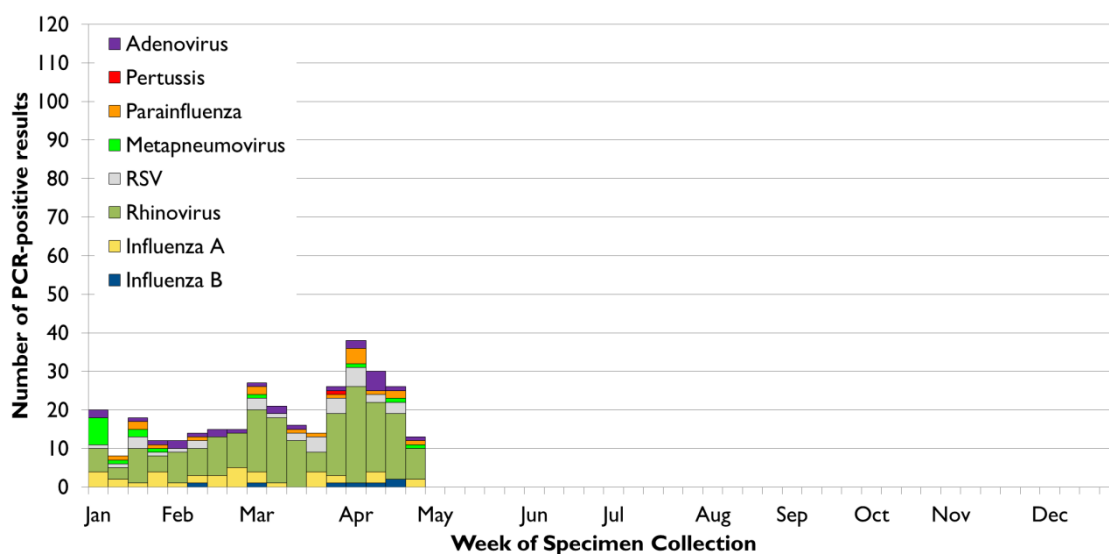


Figure 3: Respiratory pathogen detections, 1 January to 30 April 2017

National surveillance systems

FluCAN

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*).

FluCAN surveillance began on 1 April 2017. From 1 April to 28 April 2017, a total of 37 hospital admissions due to influenza were reported in participating hospitals Australia-wide. This is 'low pre-season activity'. In this period there were no hospital admissions with confirmed influenza reported by the one participating Tasmanian hospital.

ASPREN (General Practice 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 season, and community levels of respiratory illness.

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.

ASPREN reporting for the period 1 January to 12 March 2017 indicated 'baseline' to 'no activity' in participating Tasmanian practices. Nationally presentations of ILI to participating GPs increased slightly in April.

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 on 1 May 2017.

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.

National reporting for 2017 has not commenced. Reports for the 2016 influenza season are available at 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.

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.

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[#] 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.

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

