

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 31 July 2019.

July 2019 Update

- Community syndromic surveillance in Tasmanian suggested a decrease in influenza-like illness activity towards the end of July 2019.
- Laboratory-confirmed influenza notifications peaked at 150 cases during early July (week 28). Notifications are similar for this time of year compared to previous years.
- The number of influenza tests conducted during July was over 2.5 times the amount during July 2018.
- The proportion of tests positive for influenza declined during late July.
- One hundred and sixty-two patients have been admitted to the Royal Hobart Hospital with influenza between 1 April and 2 August 2019.
- Widespread influenza activity was reported across most of Australia during July 2019. Clinical severity for the season to date across Australia, as measured through the proportion of patients admitted directly to intensive care, and deaths attributed to influenza, is low.

Influenza activity

The influenza season is different almost every year. This is related to many factors including the influenza strains and subtypes that are circulating, the population groups most affected, the susceptibility of the population, and changes that may occur to the viruses during the year. Our surveillance systems at a state and national level help us to understand influenza activity and severity.

Influenza-like illness

FluTracking (Community Syndromic Surveillance)

FluTracking is a national, 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 the University of Newcastle, 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 Monday 8 April 2019, three weeks earlier than usual due to increased influenza activity across Australia. An average of 3 800 Tasmanians are participating each week, an increase on 2018 participation (3 150 Tasmanians per week).

Reports of influenza-like illness (fever plus cough) in Tasmanian participants increased to 2.2 per cent during the third week of July (week 29) before declining to 1.6 per cent during the last week of July (Figure 1). Sixty-seven per cent of participants with fever and cough during July also reported absenteeism from normal duties. This reported absenteeism was lower than June (73 per cent).

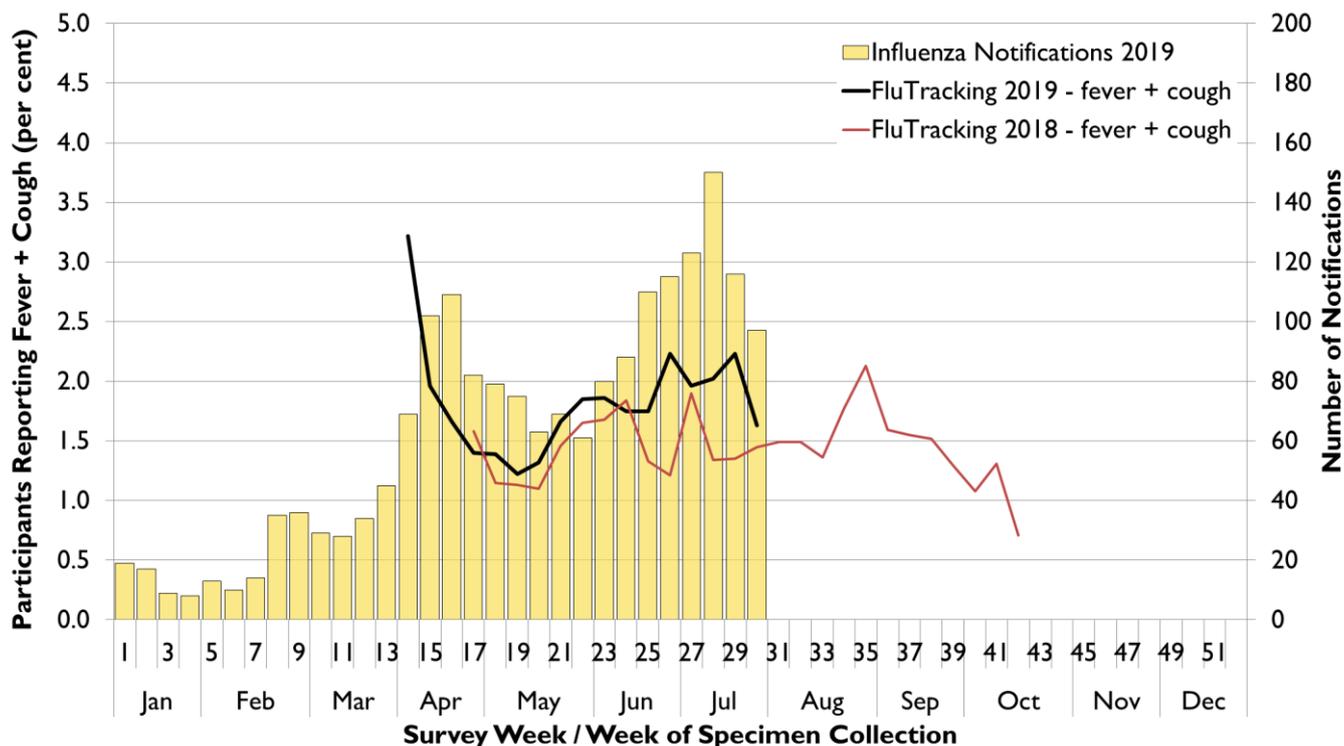


Figure 1: Percentage of Tasmanian *FluTracking* participants reporting fever and cough, week ending Sunday 28 July 2019.

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 participate in Tasmania. ASPREN is a joint initiative of the Royal Australian College of General Practitioners and the University of Adelaide. Further information is available at aspren.dmac.adelaide.edu.au

For the fortnight ending Sunday 14 July 2019, ASPREN reported that in Tasmania, the average level of ILI activity was less-than 25 out of 1 000 consultations. This was described as ‘normal’ activity.

Notifications of laboratory-confirmed Influenza to Public Health Services

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

There were 525 cases of influenza notified in Tasmania during July 2019. Between 2015 and 2018 an average of 120 cases of influenza were notified during the month of July.

Since 1 January 2019 a total of 1 926 cases of influenza have been notified.

Weekly influenza case numbers increased to a peak of 150 cases during the second week of July (Figure 2) and then decreased.

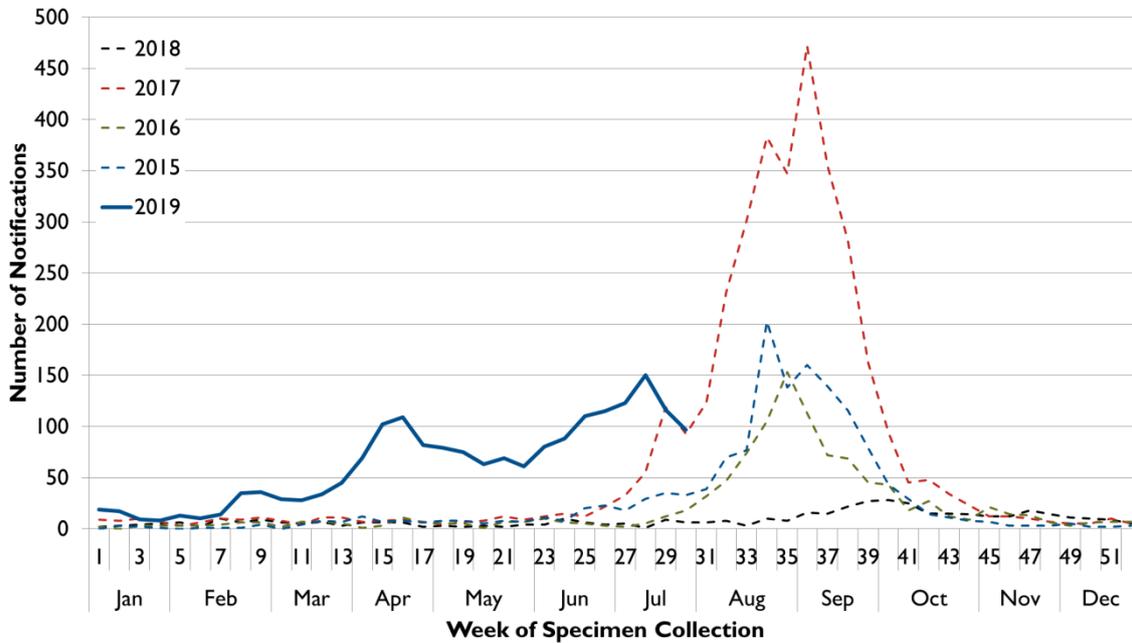


Figure 2: Notifications of influenza in Tasmania, by week, 1 January 2015 to Sunday 28 July 2019.

Influenza testing

There was more Influenza testing conducted in Tasmania during July than in June (Figure 3). An average of 489 PCR tests per week were conducted during July, a 15 per cent increase on June testing (average 424 tests per week). The highest number of influenza tests occurred during the second-last week of July 2019 (544 tests). Testing conducted during July 2019 was more-than 2.5 times the amount of testing conducted during July 2018 (average 184 tests per week).

Proportion of tests positive for influenza

The weekly proportion of tests positive for influenza plateaued during early July before declining to 20 per cent at the end of the month (Figure 3).

During 2014 to 2018, on average, 11 per cent of weekly influenza tests were positive during July (range zero to 31 per cent positive).

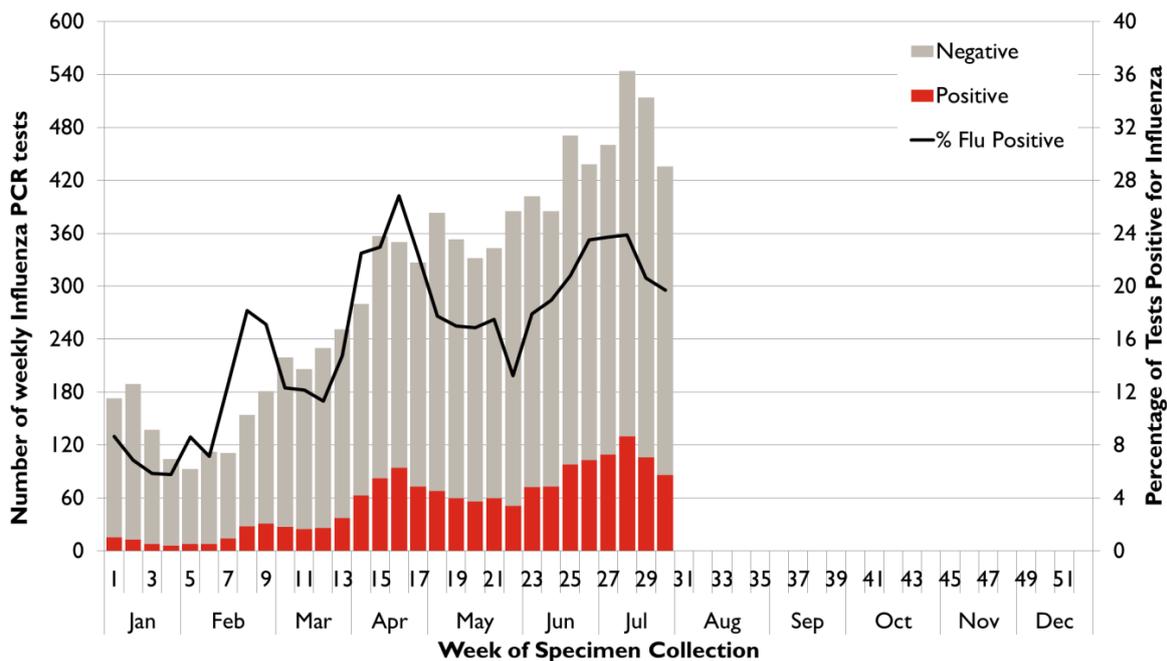


Figure 3: Statewide Influenza PCR testing, 1 January to Sunday 28 July 2019.

Other circulating respiratory illness

Many viruses cause the ‘common cold’ and ‘influenza-like illnesses’. The Royal Hobart Hospital (RHH) laboratory performs a PCR test that detects influenza A and B viruses, as well as seven other respiratory pathogens commonly associated with respiratory illness. Most individuals tested were from emergency department presentations and hospitalised patients to the RHH.

More respiratory PCR tests were performed by the RHH during July than during June 2019: an increase of 19 per cent.

The most commonly detected respiratory pathogens during July 2019 were Rhinovirus (26 per cent), Influenza A virus (24 per cent) and Respiratory Syncytial Virus (RSV) (23 per cent).

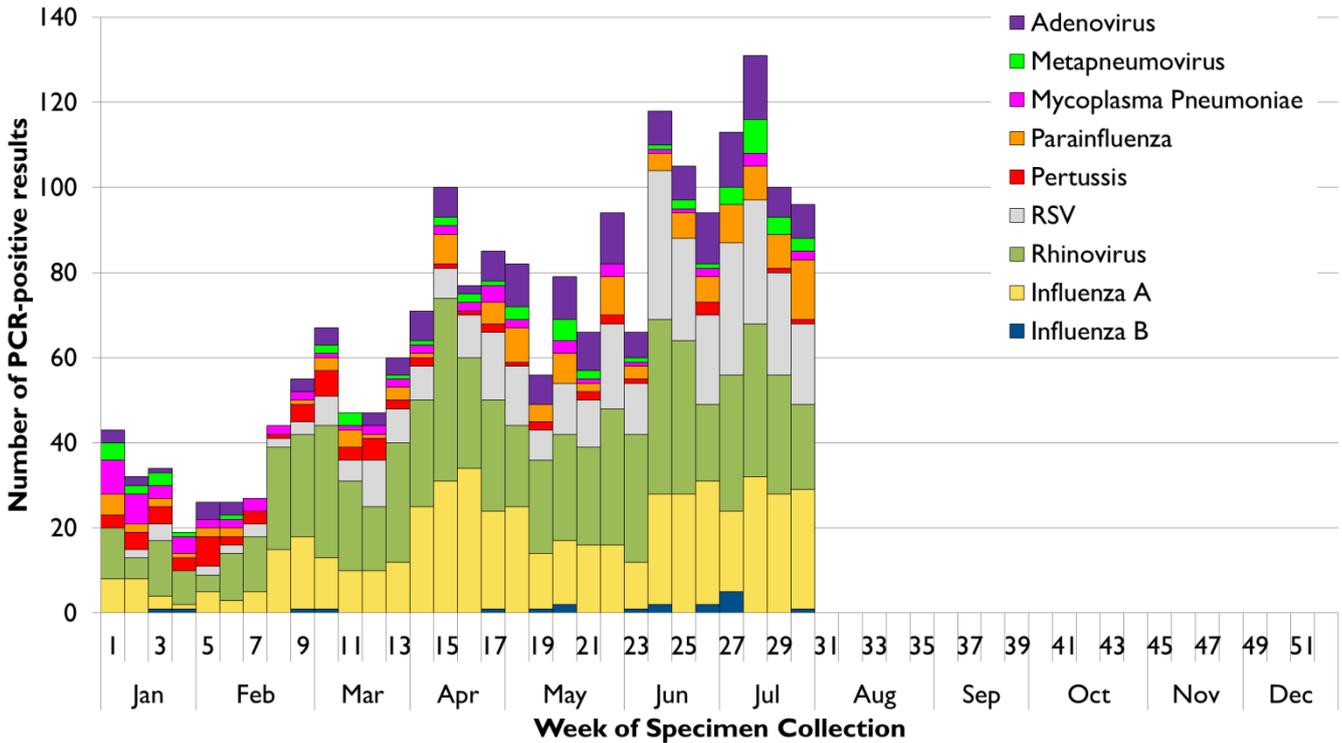


Figure 4: Respiratory pathogen detections, 1 January to Sunday 28 July 2019.

Geographical distribution of activity

The majority of the 529 influenza cases during July 2019 were reported in the South (282 cases, 53 per cent). There were 205 cases (39 per cent) in the North and 42 cases (eight per cent) in the North-West.

Between 1 January and 31 July 2019 there were 1 271 cases in the South, 507 cases in the North and 144 cases in the North-West.

Virology

During July 2019 most cases (492 cases, 93 per cent) were due to the Influenza A virus. The remaining 37 cases (seven per cent) were due to Influenza B virus.

A small proportion of Influenza A viruses undergo further subtyping. Since 1 January 2019 the most commonly reported (81 per cent) subtype has been Influenza A(H3N2). The H3N2 strain is associated with greater morbidity and mortality in older adults.

Influenza Severity

FluCAN (Influenza cases admitted to a Hospital)

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*). The Royal Hobart Hospital participates in FluCAN.

From 1 April to 2 August 2019 there were 2 615 hospital admissions of laboratory-confirmed influenza reported by sentinel hospitals Australia-wide. One hundred and seventy admissions (seven per cent) were to an intensive care unit (ICU). During the week ending 2 August, FluCAN described activity across participating hospitals as 'stable influenza activity'.

Of the 2 615 hospital admissions reported Australia-wide, 162 patients with influenza were admissions to the Royal Hobart Hospital. Of the 162 admissions, 11 were admitted to the ICU (seven per cent).

Vaccine effectiveness

Influenza viruses are continually changing, making the targeting of an effective vaccine an annual challenge.

Nationally interim vaccine effectiveness estimates are determined using GP presentation and hospitalisation data (for example FluCAN, ASPREN and VicSPIN data). Vaccine effectiveness data is not yet available.

Preliminary vaccine effectiveness (VE) estimates are based on incomplete data and may change once all data from the season are collated. Final estimates produced after the season returns to baseline levels are more reliable.

The estimated effectiveness of the vaccine may depend on several factors – the outcome being measured, the age group predominantly affected (vaccine effectiveness is generally lower in older people than in younger adults and children), and the match between vaccine and circulating influenza strains (generally protection against infection A/H1N1 is greater than against A/H3N2).

Interstate activity

The Australian Influenza Surveillance Report is compiled from several 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.

The key messages from the report describing national activity for the period 15 July to 28 July 2019 were:

- **Activity** – Currently, influenza and influenza-like illness (ILI) activity is slightly higher than average for this time of year compared to previous years. However, the disparity between this season and previous years has been decreasing over the last few weeks. At the national level, notifications of laboratory-confirmed influenza have decreased in the past fortnight; however, this may be due in some measure to data entry backlogs.
- **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.
- **Virology** – The majority of confirmed influenza cases reported nationally were influenza A in the year to date (82 per cent) and past fortnight (79 per cent). After an increase in the proportion of cases attributed to influenza B since early May, the proportion has declined in the past month.

Annual Influenza Vaccine

Composition of 2019 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 (TGA) by the Australian Influenza Vaccine Committee (AIVC): www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc

The AIVC met on 10 October 2018 to recommend the influenza viruses to be used in influenza vaccines for 2019. The TGA accepted the recommendations of the AIVC.

This year there is a new A strain (H3N2) and a new strain for the B Victoria lineage. Influenza virus strains included in the 2019 seasonal influenza vaccines are:

- A (H1N1): an A/Michigan/45/2015 (H1N1)pdm09 like virus
- A (H3N2): an A/Switzerland/8060/2017 (H3N2) like virus
- B: a B/Colorado/06/2017 like virus (not included in the trivalent vaccine)
- B: a B/Phuket/3073/2013 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 2019 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)
- All Aboriginal and Torres Strait Islander people aged 6 months and over
- Adults aged 65 and over
- Pregnant women at any stage in their pregnancy
- Adults and children aged from 6 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