



Summary

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 flu activity in the community.

This report describes flu activity in Tasmania up to Sunday **27 September 2015**. Available data over this period indicate:

- The 2015 winter flu season continued in September with notifications gradually declining.
- During September Influenza B virus was the most frequently detected cause of flu.
- To date in 2015 three-quarters of flu notifications have been from the south of the state.
- Flu testing in Tasmanian laboratories peaked during August and September.
- Influenza-like Illness (ILI) reports from Tasmanian FluTracking participants peaked in late August through early September and are now declining.

Influenza Notifications

Tasmanian laboratories must notify the Director of Public Health of evidence of flu in specimens collected from patients. These specimens are usually nose or throat swabs, less often a blood sample. The best test for flu involves PCR¹ to detect influenza virus RNA present in a nose or throat swab.

Since the fluTAS Report of 9 September 2015, 513 notifications of laboratory-diagnosed flu in Tasmanian residents have been notified to the Director of Public Health. A **total of 1 290 notifications** of flu have been notified since the start of 2015. Most notifications relate to residents in the south of the state (see Table 1).

Influenza A virus has been responsible for slightly more than half of notifications since the start of 2015: 710 notifications or 55 per cent (see Table 2). The remaining notifications were of Influenza B virus: 580 notifications or 45 per cent. From available data this is the largest number of Influenza B notifications during a single year in Tasmania.

Weekly notifications counts related to flu A peaked during the second-last week of August. The peak in flu B notifications was two weeks later during the first week of September. Notifications of flu declined during September but have not yet returned to inter-seasonal levels (see Figure 1).

¹ Polymerase Chain Reaction

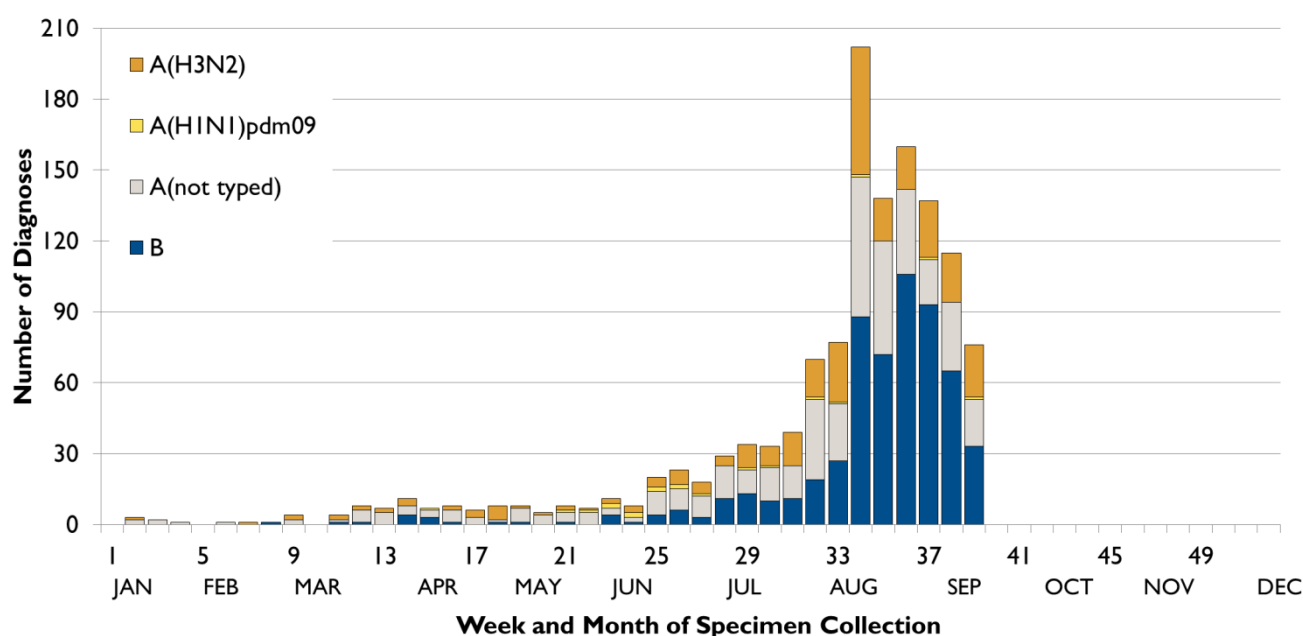
Table 1: Flu Notifications by Region of Tasmania, 27 September 2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
North	1	1	3	5	10	8	34	66	81	-	-	-	209
North-West	2	2	2	5	10	9	17	46	52	-	-	-	145
South	3	4	19	22	11	51	90	409	327	-	-	-	936

Table 2: Laboratory-diagnosed Influenza, Tasmania, 27 September 2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015 ⁽²⁾
Influenza A	389	208	1 294	95	189	1 008	206	590	710
Influenza B	26	176	1	12	174	85	90	81	580
Total Influenza	415	384	1 295	107	363	1 093	296	671	1 290
Predominant subtype of Influenza A	unknown	unknown	H1N1	H1N1	H1N1	H3N2	H1N1	H1N1 & H3N2	H3N2

Figure 1: Laboratory-diagnosed Influenza by subtype and week of specimen collection up to 27 September 2015 (week 39)



Some flu laboratory isolates undergo further testing to identify subtypes. To date 283 Influenza A notifications have been identified as being an A(H3N2) subtype³ while 19 have been identified as the A(H1N1) subtype⁴. Four influenza B isolates have been typed identified as being of B/Yamagata lineage and three as being of B/Victoria lineage.

² Current number of diagnoses up to and including 27 September 2015

³ Where the Influenza Neuraminidase ("N") typing of an A(H3) isolate is not reported this is assumed to be N2 i.e. A(H3N2).

⁴ This subtype was first associated with the 2009 swine influenza pandemic. It continues to circulate globally as a typical seasonal influenza subtype.

During August and September 2015 eight flu outbreaks were reported in aged-care facilities. Of the residents and staff affected, 62 had laboratory-confirmed flu; Influenza A(H3N2) was the strain identified in the majority of outbreaks.

Circulating flu strains appear to have affected age-groups differently. Influenza A(H3N2) notification rates were highest among in older Tasmanians, whereas Influenza B notification rates were highest among children aged five to nine years.

Laboratory Testing

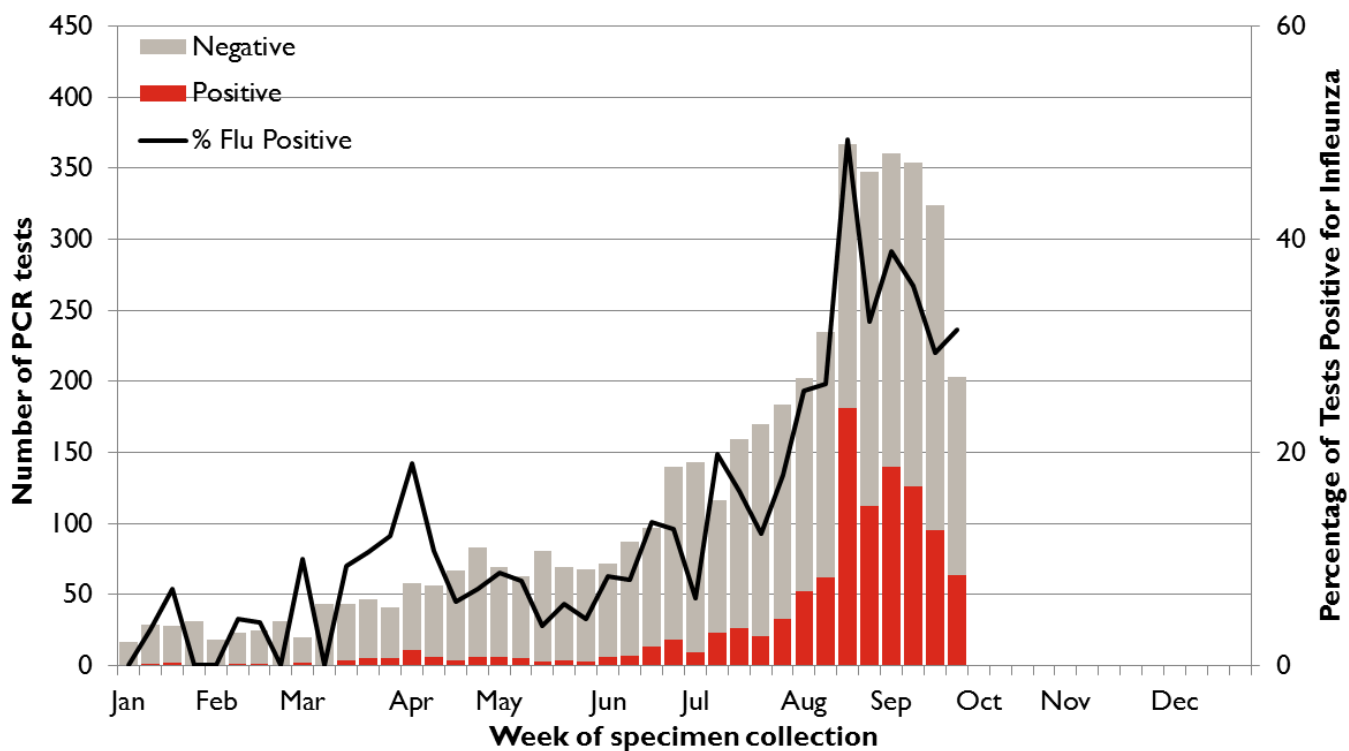
Laboratory Testing Effort

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 flu rests with their treating doctor, and depends on their symptoms. The best test for flu 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.

Since the start of 2015 most flu (93 per cent) has been diagnosed by PCR tests.

A large amount of flu PCR testing was conducted during September 2015. While the number of weekly tests declined towards the end of the month, weekly test counts remained at a level similar to the peak period of past winter flu seasons in Tasmania. Following a peak in August the proportion of tests positive for flu remained high in September with an average of 34 percent positive (see Figure 2).

Figure 2: Influenza tests via PCR by week during 2015 (at 27 September)



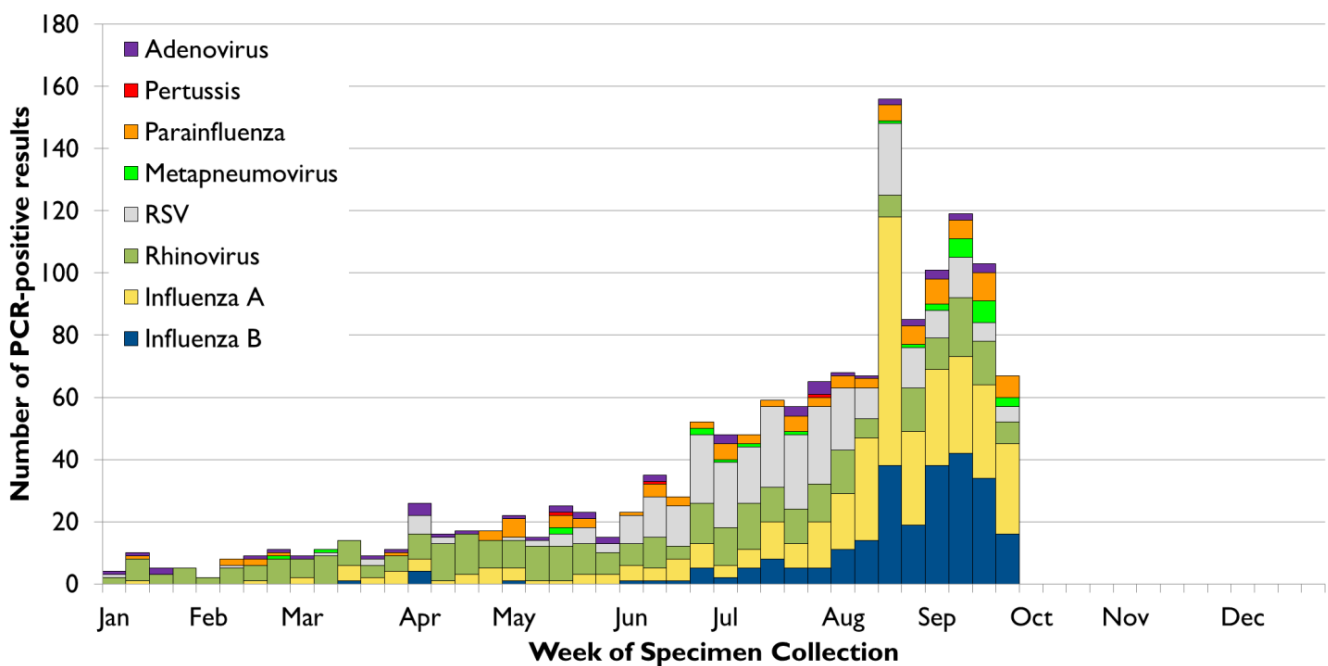
Other Respiratory Pathogens

The Royal Hobart Hospital performs PCR tests on nose and throat swabs that detect flu and multiple non-influenza respiratory pathogens that cause illness. These specimens have been collected statewide mostly from emergency department and hospitalised patients. The monitoring of non-influenza respiratory pathogen activity can help the interpretation of testing activity and syndromic surveillance trends.

There were 20 per cent more respiratory pathogen tests conducted during September than in August (data not shown). There were fewer tests during the last week of September.

Influenza B virus (33 per cent) and Influenza A (31 per cent) were the most commonly detected respiratory pathogens. Respiratory Syncytial Virus (RSV) accounted for eight per cent of detections during September.

Figure 3: Respiratory pathogen detections, 2015 (at 27 August)



Influenza-like Illnesses (Syndromic Surveillance)

Influenza-like illness (ILI) is much more common than laboratory-diagnosed flu. For much of the year, common colds and other respiratory illnesses make up most of the ILI in the community. During the annual flu season, the proportion of the population experiencing symptoms of ILI who have flu usually increases. It is therefore useful to monitor the proportion of people reporting ILI, regardless of the cause.

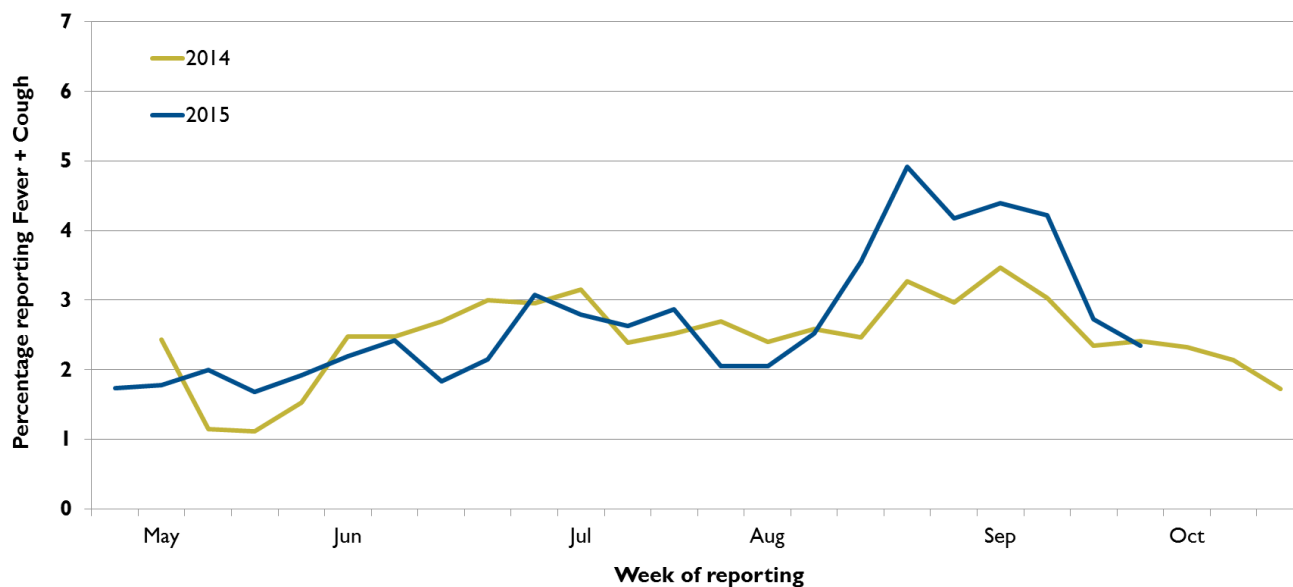
FluTracking

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 at www.flutracking.net.

During 2015 around 2 300 Tasmanians have participated in FluTracking each week.

There was a higher-proportion of Tasmanian participants reporting ILI between late August and early September (see Figure 4). The timing of this increase coincided with the increase in flu notifications. ILI reports from participants around Tasmania declined during late September. During the August and September periods ILI has been more frequently reported by unvaccinated⁵ participants (data not shown).

Figure 4: Percentage of Tasmanian FluTracking participants reporting fever and cough, 27 September 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 latest report (No. 19) described influenza-like illness (ILI) consultations in Tasmania as being at a 'Normal' level. During the fortnight ending 20 September 2015 the level of ILI consultation at urban practices was reported to be 10 out of 1 000 consultations. A peak of 47 out of 1 000 consultations being ILI-related was reported for urban practices during late July 2015. For rural practices a peak of 24 out of 1 000 consultations being ILI-related was reported for the latest fortnight (ending 20 September 2015). These ILI consultation rates are similar to past winter flu-seasons.

Other Measures of Flu Activity

FluCAN

The Influenza Complications Alert Network (FluCAN) reports on flu-related hospitalisations and complications in sentinel hospitals in each state including Tasmania. On 28 September 2015 FluCAN reported 'declining mid-season influenza activity' nationally. A total of 76 adult flu hospitalisations have been reported to FluCAN from the single participating Tasmanian hospital since 1 April 2015.

⁵ FluTracking participants are asked if they have received the 2015 influenza vaccine.

Interstate activity

The Australian Influenza Surveillance Report is compiled from a number of data sources including laboratory-confirmed notifications to NNDSS, sentinel flu-like illness reporting from general practitioners and emergency departments, workplace absenteeism and laboratory testing. The current national report is available at www.health.gov.au/flureport.

The report for the fortnight ending 11 September 2015 described the national flu activity as having declined following the seasonal peak in mid-August. The Northern Territory and Tasmania at that time were the only jurisdictions continuing to report an increase in flu. Surveillance systems monitoring influenza-like illness (ILI) were also reporting decreasing activity. Influenza B was the predominant virus circulating nationally during the fortnight ending 11 September 2015. The seasonal flu vaccines were reported to continuing to be a good match for circulating strains.

Annual Flu Vaccine

The contents of the annual flu vaccine are reviewed late each year, aiming to produce vaccines for the following year that provide protection from flu strains likely to be common during winter. Advice on the formulation of annual flu vaccines is provided by the Australian Influenza Vaccine Committee:

www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc.

The formulation of the 2015 vaccine is described at www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia.

Annual vaccination is recommended in the National Immunisation Program and is free* for Tasmanians at risk of severe flu, including:

- anyone aged 65 and over
- Indigenous children aged six months to five years
- Indigenous people aged 15 years or over
- pregnant women
- any person six months of age and over with a chronic condition predisposing to severe flu illness that needs regular medical follow-up or hospitalisation such as: cardiac disease, respiratory disease including severe asthmatics, kidney disease, diabetes, impaired immunity, neuromuscular disease.

* The cost of the vaccine is covered for these groups; there may be a consultation fee for the medical provider to administer the vaccine.



The **fluTAS Report** is a fortnightly flu season update produced by the DHHS Public Health Services to inform healthcare organisations and the public about flu activity in Tasmania.

Alongside routine surveillance of diseases in Tasmania, the report combines multiple data sources to obtain a measure of flu 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.