

Statewide Weekly Influenza Surveillance Report

**Reporting Period:
1 January to 18 October 2015**

Influenza Surveillance Report

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For more information contact:

Office of the Chief Health Officer\Epidemiology and Research Unit, CDB, Department of Health, GPO Box 48, Brisbane QLD 4001, email epi@health.qld.gov.au, phone 332 89728.

An electronic version of this document is available at

http://www.health.qld.gov.au/ph/cdb/sru_influenza.asp

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1. Summary

	2015 Year to Date*	Recent Week (12 October – 18 October)
All Influenza Notifications	27,061	227
Influenza A [†]	9,062	135
A(H1N1)pdm09 [‡]	155	0
A/H3N2	1,223	16
Subtype unavailable	7,684	119
Influenza B	17,999	92
Type unavailable	0	0
Influenza Hospitalisations [§]	1,522 (ICU: 144)	16 (ICU: 1)

* Includes recent week

[†] Subtype counts/proportions may be subject to change as further laboratory results become available

[‡] World Health Organization (WHO) standard abbreviation for the influenza strain associated with the 2009 pandemic, also known as A/California/7/2009 (H1N1)

[§] Queensland public hospitals only

^{||} New admissions to ICU during the recent week

<p>Australian Influenza Vaccine Committee (AIVC) decision on the influenza vaccine composition for Australia 2015 http://www.influenzacentre.org/surveillance/vaccines.htm</p>	<p>Trivalent Vaccine</p> <ul style="list-style-type: none"> ▪ A (H1N1): an A/California/7/2009 (H1N1) - like virus, 15 µg HA per dose ▪ A (H3N2): an A/Switzerland/9715293/2013 (H3N2) - like virus, 15 µg HA per dose ▪ B: a B/Phuket/3073/2013 (Yamagata lineage) - like virus, 15 µg HA per dose <p>Quadrivalent Vaccine Viruses listed above, plus the additional B virus:</p> <ul style="list-style-type: none"> ▪ B/Brisbane/60/2008 (Victoria lineage) - like virus, 15 µg HA per dose.
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2. Influenza notifications

Recent week onset (12 October to 18 October) there were 227 notifications.

- 135 (59%) were typed as influenza A and 92 (41%) influenza B
 - 16 influenza A have been subtyped: all were A/H3N2
 - Subtype is unavailable for 119 influenza A cases.

YTD 2015 (1 January to 18 October) there have been 27,061 notifications.

- 9,062 (33%) were typed as influenza A and 17,999 (67%) influenza B
 - 1,378 influenza A have been subtyped: 155 (11%) were A(H1N1)pdm09 and 1,223 (89%) were A/H3N2
 - Subtype is unavailable for 7,684 influenza A cases.

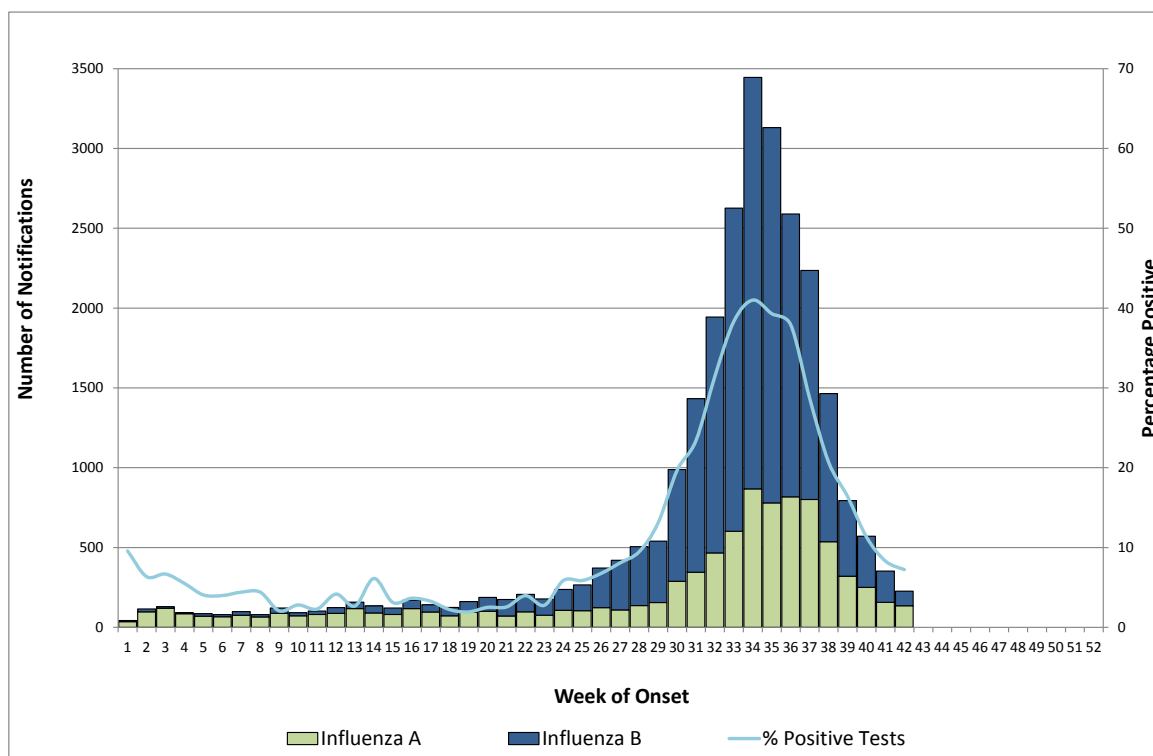


Figure 1 Weekly influenza notifications in Queensland by type and percentage of positive tests (public laboratory system only) by week of testing, 1 January 2015 to 18 October 2015. *Data extracted from NOCS and AUSLAB 20 October 2015.*

- Statewide notification counts (Figure 1) reached a peak in week 34 (week beginning 17 August) with 3,445 notifications. Notifications are expected to return to pre-season levels within the next few weeks.
- A proportion of influenza positive specimens received by Forensic and Scientific Services (FSS) from other laboratories are sent to the World Health Organization Collaborating Centre for Reference and Research on Influenza (WHO CC, Melbourne) for further characterisation. Figure 2 summarises results for specimens received by FSS, including those sent to WHO CC. Influenza A isolates which have been further characterised are consistent with the vaccine strains (page 1). YTD the influenza B isolates that have been further

characterised indicate that approximately 72% have been B/Phuket (Yamagata lineage) and 28% B/Brisbane (Victoria lineage). However, as the season evolved a sustained increasing trend in the proportion of B/Brisbane (Victoria lineage) relative to B/Phuket (Yamagata lineage) was observed. Please note that the most recent months' data may be incomplete at the time of publication and are subject to update as additional results become available.

- The southern and central regions both reached their peak in 34 (week beginning 17 August), with 1,761 and 1,486 notifications respectively. The tropical region showed mainly sporadic activity with a small increase in notifications between weeks 32 (week beginning 3 August) and 35 (week beginning 24 August) followed by a plateau of approximately 200 weekly notifications for the following four weeks (Figure 3).
- The statewide percentage of positive tests (public laboratories) in the most recent week was 7% compared with 41% in week 34. The recent week's percentage positive for southern, central and tropical regions was 8%, 5% and 12% respectively; each representing a reduction compared with week 34.
- YTD 2015 notification counts are summarised by region and Hospital and Health Service (HHS) in Table 1.
- Figure 4 shows the YTD age and gender distribution of notifications.
 - More notifications were received for females (53%) than males (47%).
 - Mean and median ages were 32 and 27 years respectively, with a range of less than 12 months to 103 years.

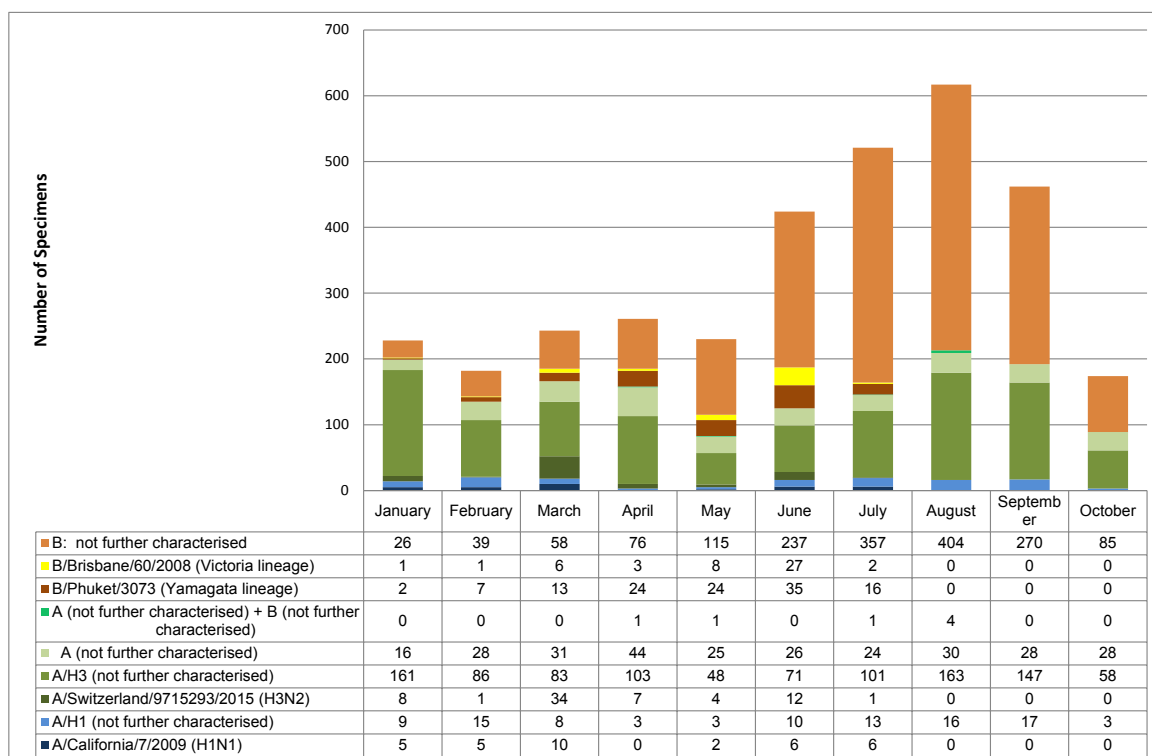


Figure 2 Type, subtype and lineage results for influenza positive specimens received by Forensic and Scientific Services (FSS), Health Support Queensland, including those sent to the World Health Organization Collaborating Centre for Reference and Research on Influenza (WHO CC, Melbourne), Data received on 20 October 2015 and published with permission from FSS and WHO CC.

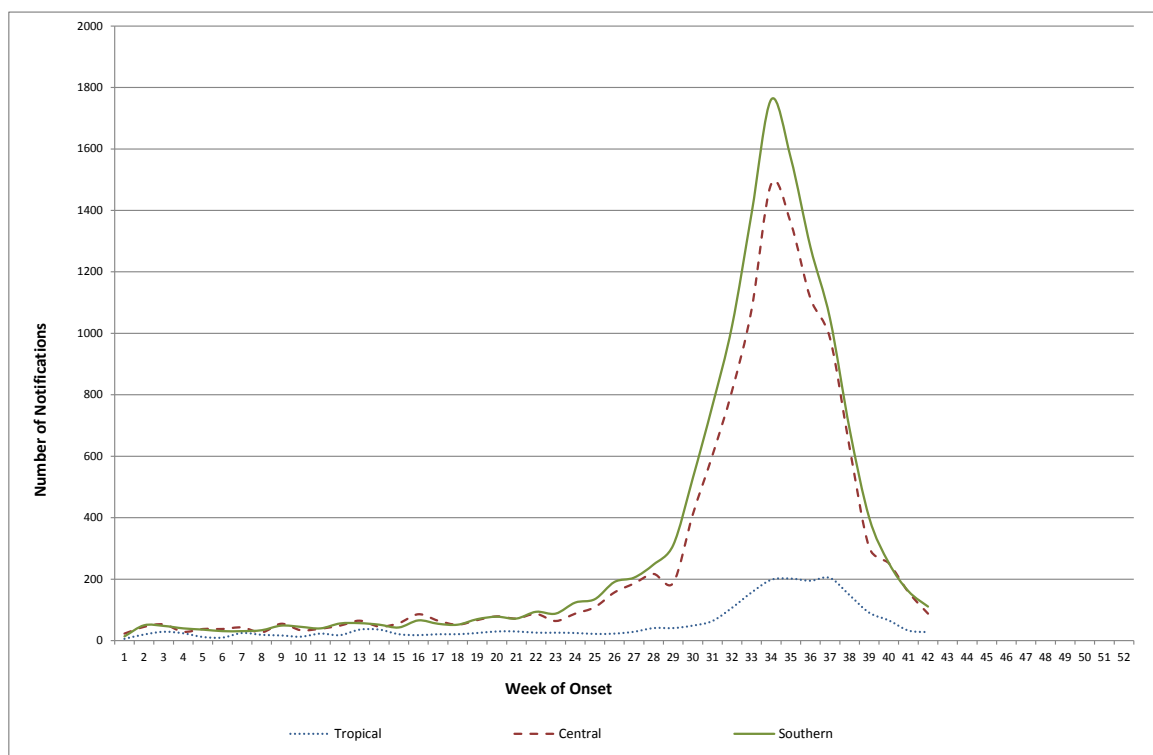


Figure 3 Weekly influenza notifications by region, 1 January to 18 October 2015. *Data extracted from NOCS 20 October 2015.*

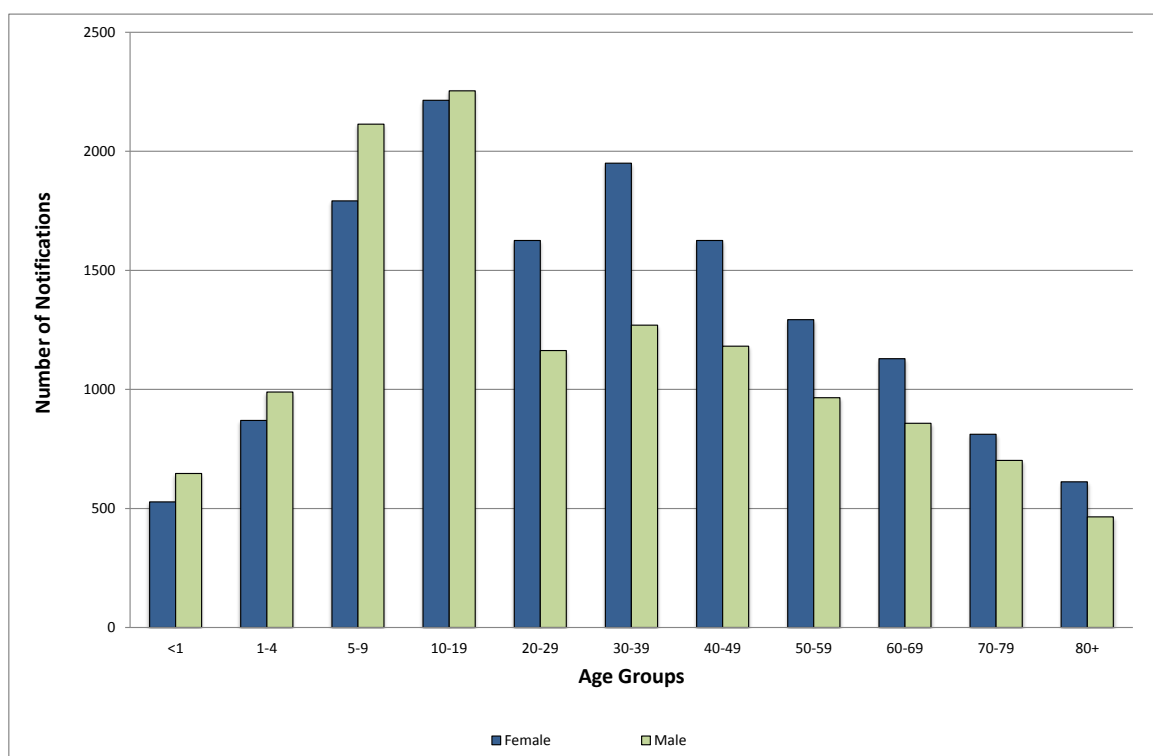


Figure 4 YTD 2015 influenza notifications in Queensland by age group and gender, 1 January to 18 October 2015. *Data extracted from NOCS 20 October 2015.*

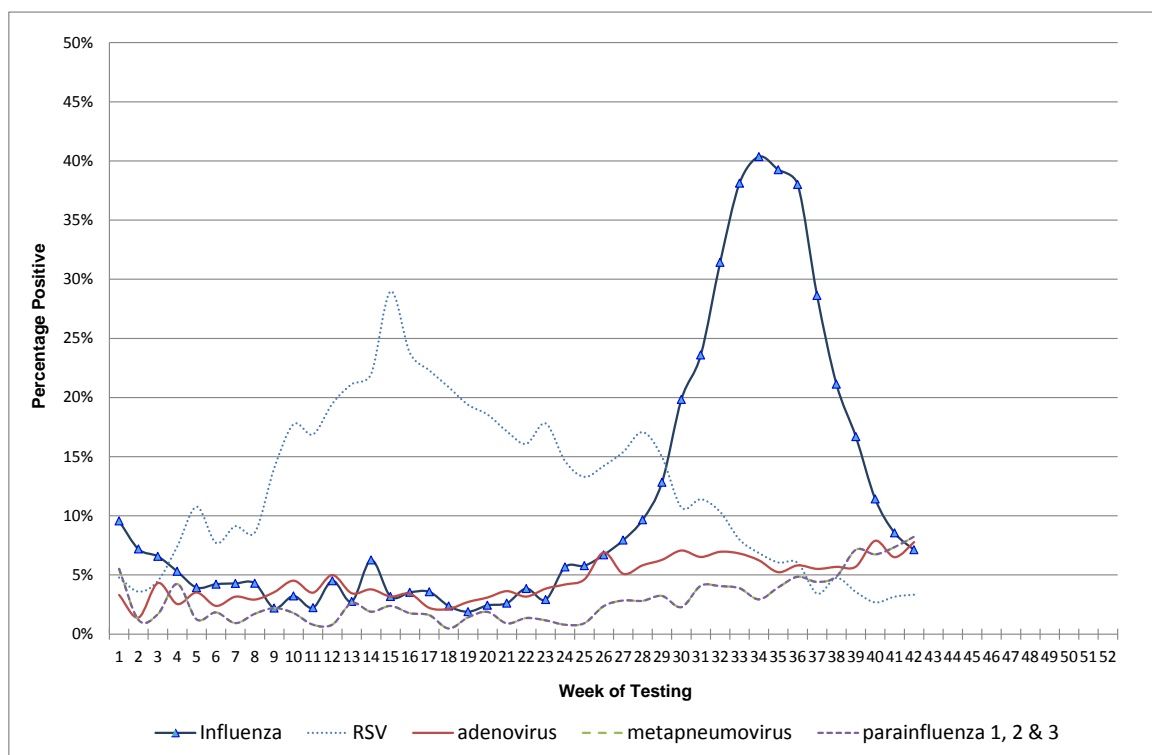


Figure 5 Percentage of positive influenza, respiratory syncytial virus (RSV), adenovirus, metapneumovirus and parainfluenza tests (public laboratory system only) by week of testing, 1 January 2015 to 18 October 2015. *Data extracted from AUSLAB 20 October 2015.*

- Figure 5 shows the percentage of positive tests for influenza as well as non-notifiable respiratory viruses, which are important causes of influenza like illness.

Table 1 Influenza notifications by week of onset, Region* and Hospital and Health Service (HHS), 1 January 2015 to 18 October 2015. *Data extracted from NOCS 20 October 2015.*

Region	Hospital & Health Service	Week of onset																									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Tropical	Torres and Cape	2	4	4	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Cairns and Hinterland	2	6	16	10	4	6	9	14	9	11	13	13	14	14	8	5	8	8	9	11	8	7	8	7	9	8
	North West	0	2	1	0	0	0	0	0	1	0	2	0	0	4	0	1	1	1	1	0	0	1	0	0	1	0
	Townsville	2	6	6	4	4	2	13	3	5	2	6	5	15	15	11	9	10	8	10	14	19	13	14	15	8	10
	Mackay	0	2	2	7	3	2	2	1	2	0	2	0	7	3	2	3	2	4	4	5	3	5	4	3	4	5
Central	Central Queensland	1	3	4	2	3	2	3	2	6	3	4	3	2	1	2	1	5	7	6	5	3	5	5	6	9	9
	Central West	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0
	Wide Bay	4	3	5	2	2	3	7	1	3	1	7	3	3	2	6	7	12	6	6	6	7	11	9	22	24	25
	Sunshine Coast	3	10	12	2	2	5	6	8	14	10	6	15	7	12	15	9	11	8	13	17	13	14	9	11	18	23
	Metro North	15	29	32	23	30	28	27	15	32	20	22	28	53	30	34	69	36	30	42	51	49	57	41	48	56	99
Southern	Metro South	7	32	29	18	24	15	18	26	31	22	18	33	42	31	18	38	34	29	33	42	24	44	49	73	69	95
	Darling Downs	1	5	7	7	4	6	3	2	6	6	2	4	3	5	3	8	6	10	8	8	11	6	5	11	11	18
	West Moreton	0	4	3	3	3	2	1	2	1	4	2	8	5	5	4	6	5	2	5	5	5	9	6	16	13	26
	South West	0	0	0	0	1	1	0	0	0	0	1	0	1	1	0	4	1	0	0	1	1	1	1	0	1	1
	Gold Coast	6	9	9	12	5	7	9	4	11	13	17	11	6	10	18	10	10	11	24	22	31	34	27	25	42	52
Queensland (Total)		43	115	130	93	86	79	99	80	121	92	102	123	158	134	121	170	141	125	162	187	174	207	178	237	266	371

Region	Hospital & Health Service	Week of onset																												YTD Total
		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			
Tropical	Torres and Cape	1	0	1	2	1	3	3	1	4	4	5	2	1	1	2	0											48		
	Cairns and Hinterland	10	10	11	14	21	35	46	58	50	76	87	38	33	8	9	6											749		
	North West	1	1	1	4	3	6	19	20	23	8	10	12	4	1	2	0											131		
	Townsville	12	26	20	21	25	37	44	83	86	65	68	79	41	45	15	19											915		
	Mackay	5	4	8	8	14	26	45	36	39	42	34	17	12	11	5	3											386		
Central	Central Queensland	31	26	14	30	38	53	87	146	131	138	145	112	52	43	18	2											1,168		
	Central West	0	0	0	2	1	1	3	24	16	17	18	8	4	1	2	1											102		
	Wide Bay	18	23	7	23	19	13	31	43	45	34	42	24	18	25	12	13											577		
	Sunshine Coast	31	34	41	81	135	155	235	311	293	218	189	118	57	51	42	15											2,279		
	Metro North	105	134	126	273	407	590	722	964	868	698	587	366	171	131	83	57											7,278		
Southern	Metro South	108	132	157	290	444	632	784	930	807	664	527	365	191	104	69	62											7,160		
	Darling Downs	17	10	19	37	47	63	147	157	197	186	173	92	59	47	22	12											1,451		
	West Moreton	25	27	26	56	83	118	149	203	195	152	99	65	38	25	13	12											1,431		
	South West	0	0	8	8	2	5	10	15	13	8	11	14	11	6	4	1											132		
	Gold Coast	56	79	101	140	192	207	301	454	364	280	241	152	102	72	54	24												3,254	
Queensland (Total)		420	506	540	989	1,432	1,944	2,626	3,445	3,131	2,590	2,236	1,464	794	571	352	227	-	-	-	-	-	-	-	-	-	-	27,061		

*Regions defined here are aggregates of HHS used for surveillance purposes only and are not official geographical areas

3. Influenza hospitalisations (public hospitals)

Public hospital admissions with confirmed influenza:

- In the recent week (12 October to 18 October) there were 16 admissions including one to ICU.
- YTD 2015 there have been 1,522 admissions, including 144 to intensive care.

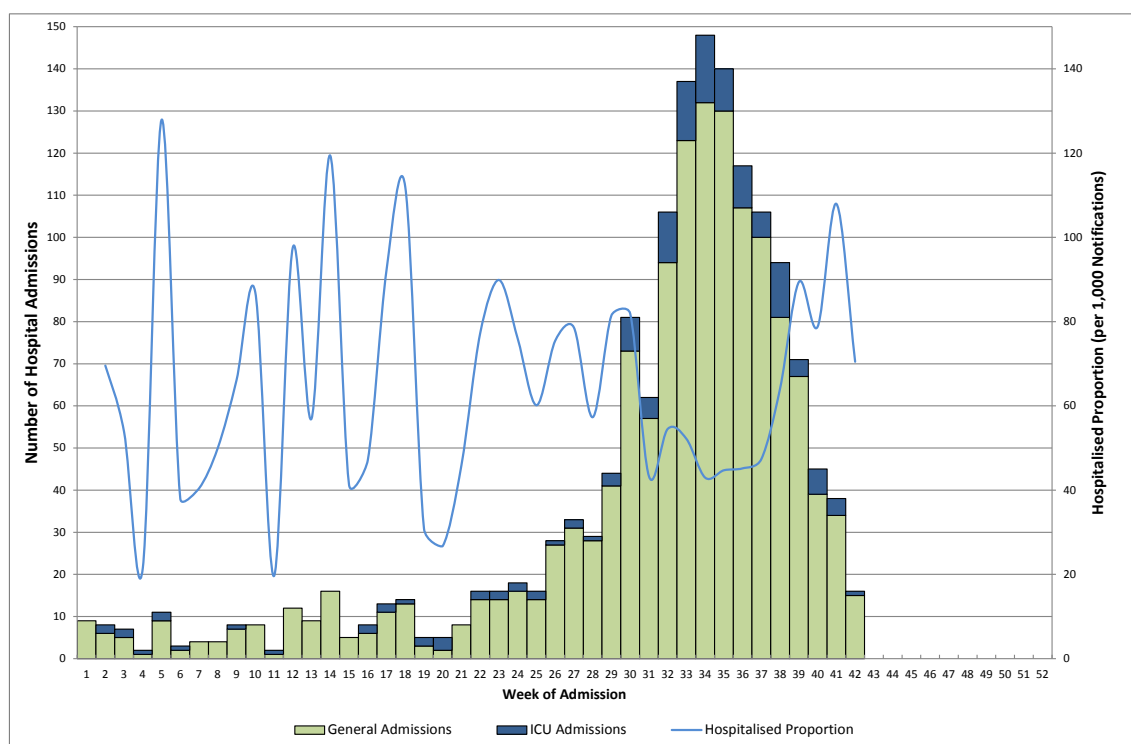


Figure 6 Laboratory confirmed influenza admissions (n=1,522) by week and type of admission, and weekly proportion of admitted patients (per 1,000 notifications) to Queensland public hospitals, 1 January 2015 to 18 October 2015. *Data extracted from EpiLog 20 October 2015.*

- Hospital admissions (Figure 6) reached a peak in week 34 with a total of 148 admissions including 16 to ICU.
- Influenza B dominated hospital admissions in Queensland residents until week 28, after which influenza A predominated (Figure 7).
- Please note that an additional data series has been included in Figure 7 to represent patients admitted with influenza A and B co-infection.
- The bed occupancy (Figure 8) reached a peak in week 35 with a total of 161 including 20 to ICU.

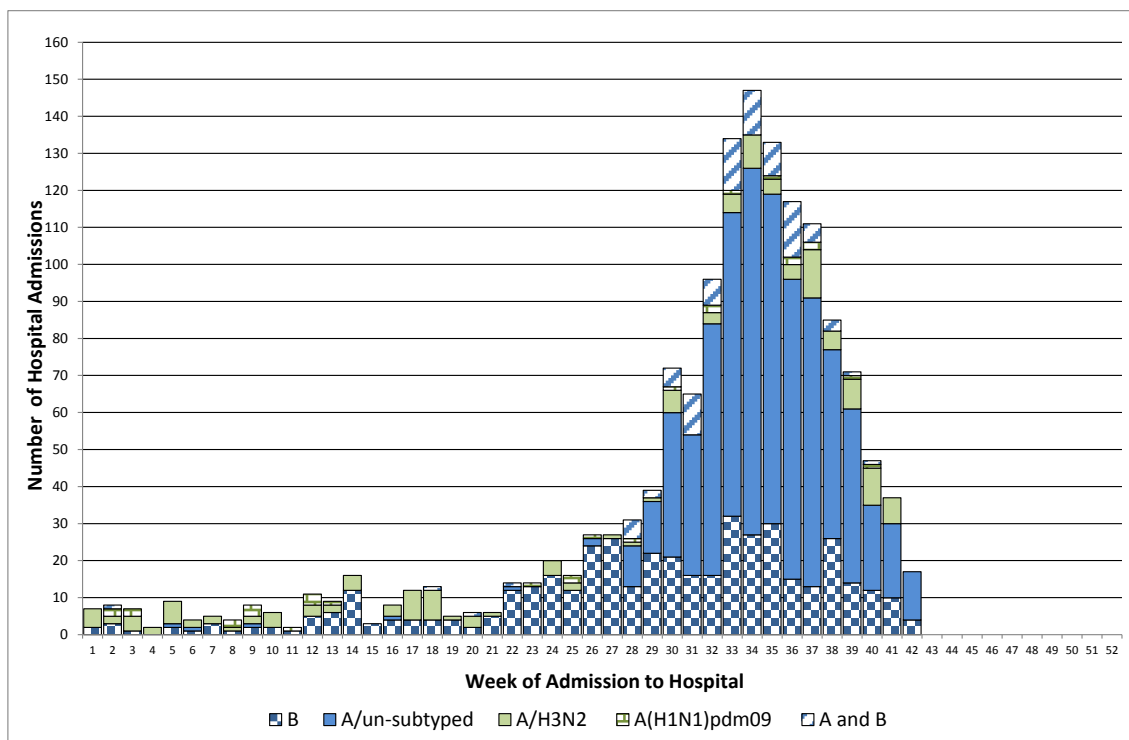


Figure 7 Laboratory confirmed influenza admissions in Queensland residents (n=1,471), to Queensland public hospitals, by the influenza type, subtype and week of admission, 1 January 2015 to 18 October 2015. Data extracted from NOCS and EpiLog 20 October 2015.

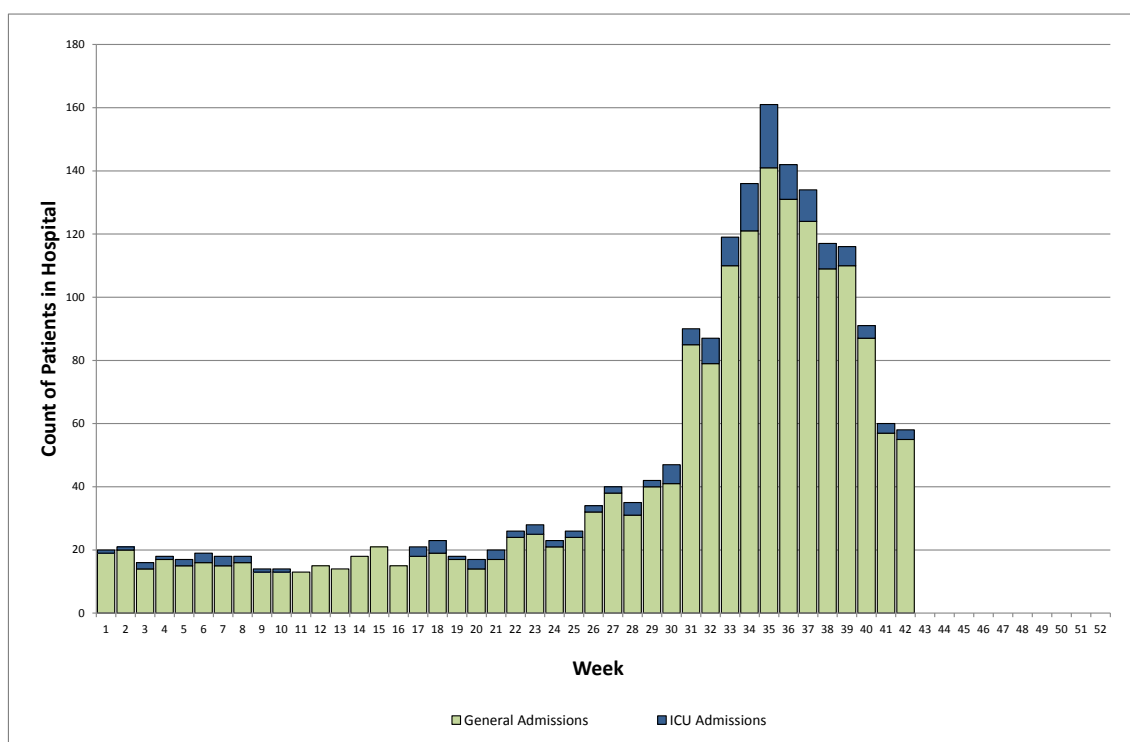


Figure 8 Bed occupancy for patients with laboratory confirmed influenza in Queensland public hospitals by admission type and week, 1 January 2015 to 18 October 2015. Data extracted from EpiLog 20 October 2015.

Table 2 YTD 2015 laboratory confirmed influenza notifications and admissions to Queensland public hospitals, by Region and Hospital and Health Service (HHS), 1 January 2015 to 18 October 2015. *Data extracted from EpiLog and NOCS 20 October 2015.*

Region	Hospital & Health Service	YTD Notifications	YTD Hospital Admissions	Admission Proportion (per 1,000 notifications)
Tropical	Torres and Cape	48	7	145.8
	Cairns and Hinterland	749	92	122.8
	North West	131	13	99.2
	Townsville	915	101	110.4
	Mackay	386	28	72.5
Central	Central Queensland	1,168	35	30.0
	Central West	102	9	88.2
	Wide Bay	577	30	52.0
	Sunshine Coast	2,279	80	35.1
	Metro North	7,278	315	43.3
Southern	Metro South	7,160	287	40.1
	Darling Downs	1,451	83	57.2
	West Moreton	1,431	50	34.9
	South West	132	5	37.9
	Gold Coast	3,254	278	85.4
	*Children's Health Queensland	n.a.	109	n.a.
Total		27,061	1,522	56.2

* Children's Health Queensland is a hospital HHS, not a residential HHS.

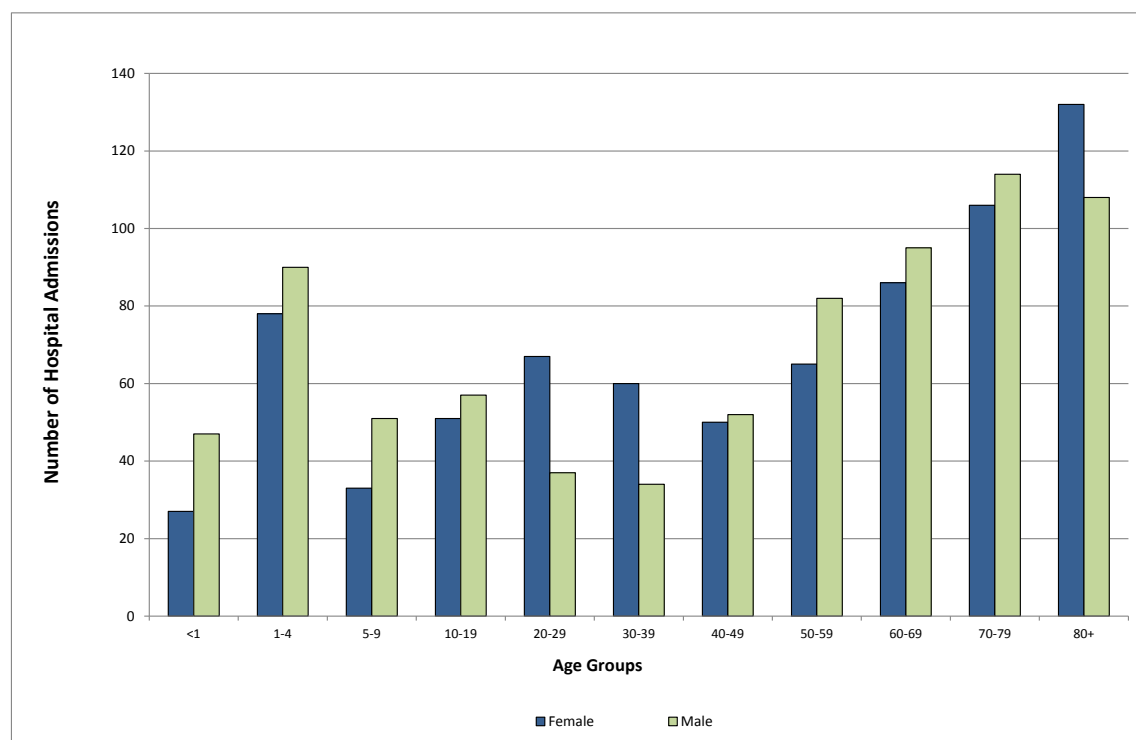


Figure 9 Laboratory confirmed influenza admissions to Queensland public hospitals, by age group and gender, 1 January 2015 to 18 October 2015. *Data extracted from EpiLog and NOCS 20 October 2015.*

- YTD 2015 similar numbers of males and females have been hospitalised.
- Mean and median ages were 46 and 52 years respectively, with a range of less than 12 months to 99 years.

4. Australian Sentinel Practices Research Network (ASPREN)

ASPREN is a national syndromic surveillance program co-ordinated by the Discipline of General Practice at the University of Adelaide and The Royal Australian College of General Practitioners. One of the conditions under surveillance is influenza like illness (ILI).

Figure 10 shows the number of ILI presentations per 1,000 GP consultations by week, with 4.1 presentations per 1,000 consultations in the most recent week. Recent week's data may be incomplete and subject to update as further data becomes available.

Further information about ASPREN can be found at

<https://www.dmac.adelaide.edu.au/aspren/asprenMIServlet?page=index>

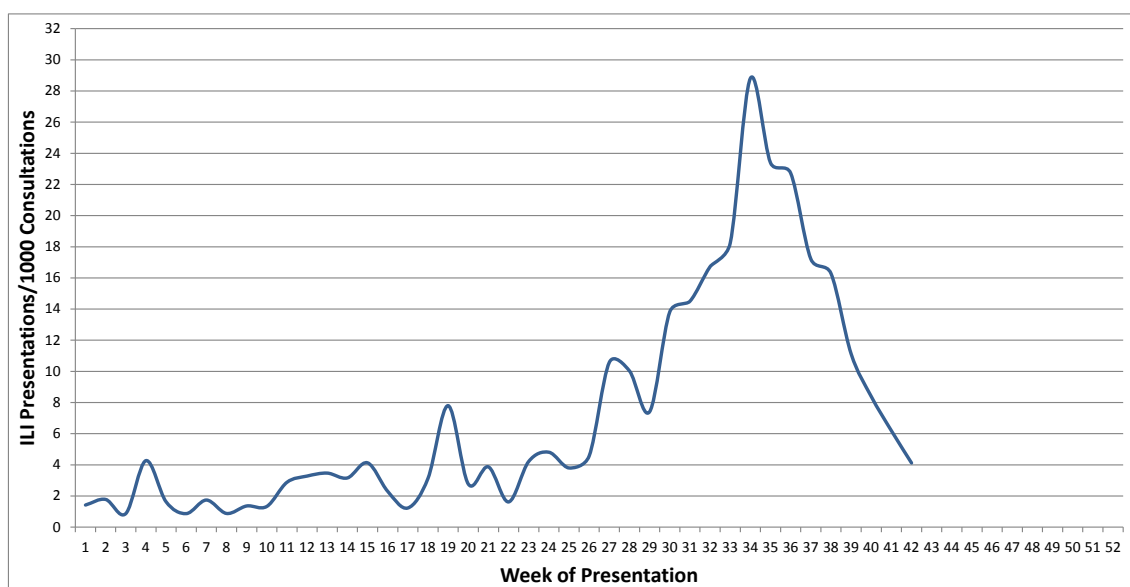


Figure 10 Influenza like illness presentations per 1,000 GP consultations in Queensland by week, 1 January 2015 to 18 October 2015. *Data extracted from ASPREN 20 October 2015.*

5. FluTracking

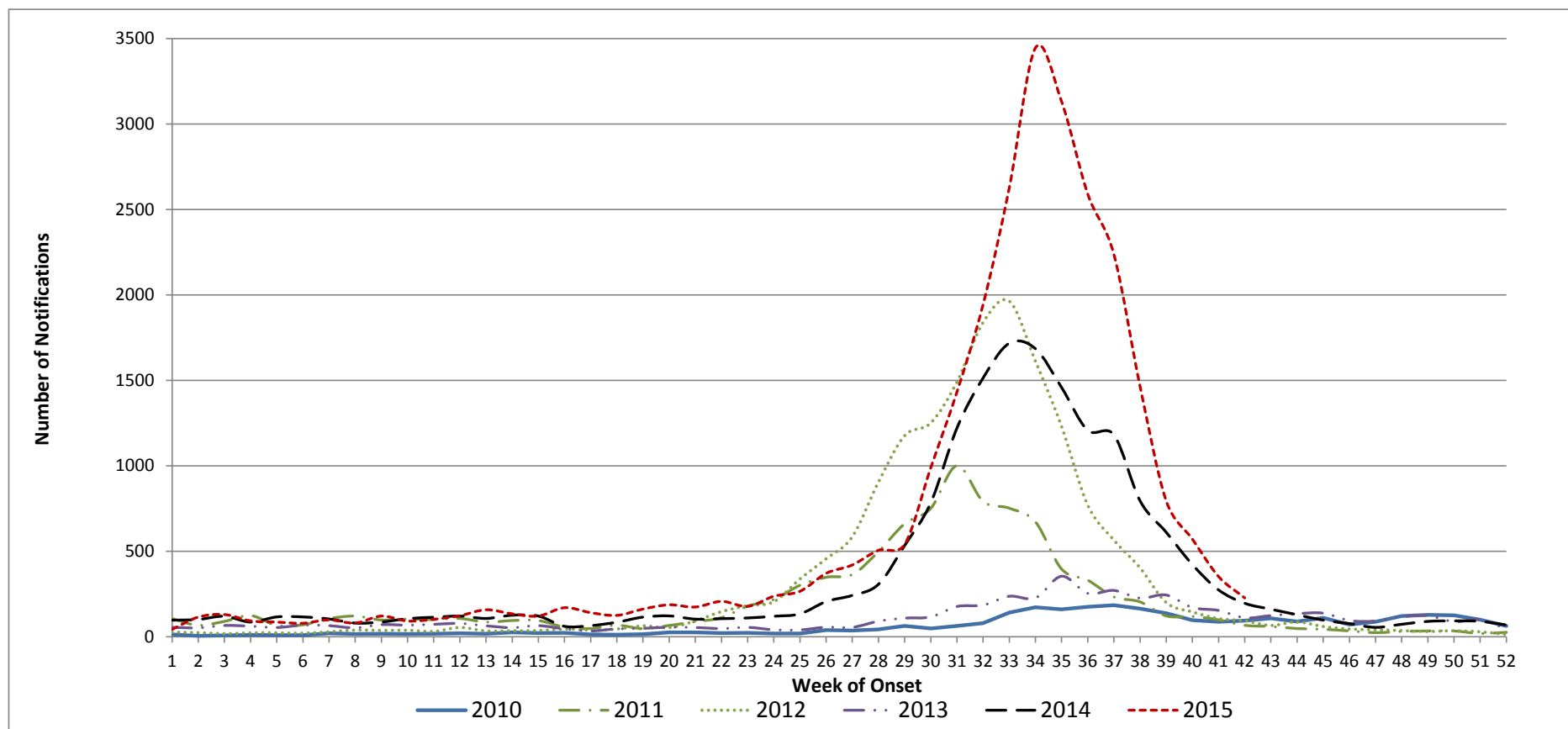
FluTracking is an online surveillance initiative run jointly by Hunter New England (NSW Health), The University of Newcastle, The Hunter Medical Research Institute and Business Continuity Institute (Australasia). Currently there are around 20,000 participants across Australia.

The system gathers data on the emerging influenza season by collating and reporting responses to online weekly surveys. Participation is quick and easy, open to any individual who is resident in Australia and can include family and friends.

If you would like to find out more about FluTracking, or register to participate, please go to <http://www.flutracking.net/Info>

6. Appendices

Appendix 1: Laboratory confirmed influenza notifications, by week of onset, 1 January 2010 to 18 October 2015. Data extracted from NOCS 20 October 2015



Appendix 2: Hospital and Health Services (2015 edition) with Regions

**Hospital and Health Services, Queensland Health
by Recognised Public Hospitals
and Primary Health Centres**



Prepared by: Statistical Reporting and Coordination, Health Statistics Branch, 29 January 2015
Hospital and Health Services by recognised public hospitals and primary health centres as at 29 November 2014

Regions and Hospital and Health Services		
Tropical	Central	Southern
Torres and Cape	Central Queensland	Metro South
Cairns and Hinterland	Central West	Darling Downs
North West	Wide Bay	West Moreton
Townsville	Sunshine Coast	South West
Mackay	Metro North	Gold Coast