

# Queensland Health

## Statewide Weekly Influenza Surveillance Report

Reporting Period: 1<sup>st</sup> January 2013 – 10<sup>th</sup> November 2013

### Summary

	Year to Date	Recent Week (ISO week)
<b>All Influenza Notifications</b>	4,797	117
<b>Influenza A*</b>	3,128	61
A(H1N1)pdm09 <sup>†</sup>	613	1
A/H3N2	177	0
Un-subtyped	2,338	60
<b>Influenza B</b>	1,669	57
<b>Un-typed</b>	0	0
<b>Number of Confirmed Influenza Hospitalisations (Queensland public hospitals only)</b>	458	8

\*Subtype counts/proportions may be subject to change as further laboratory results become available

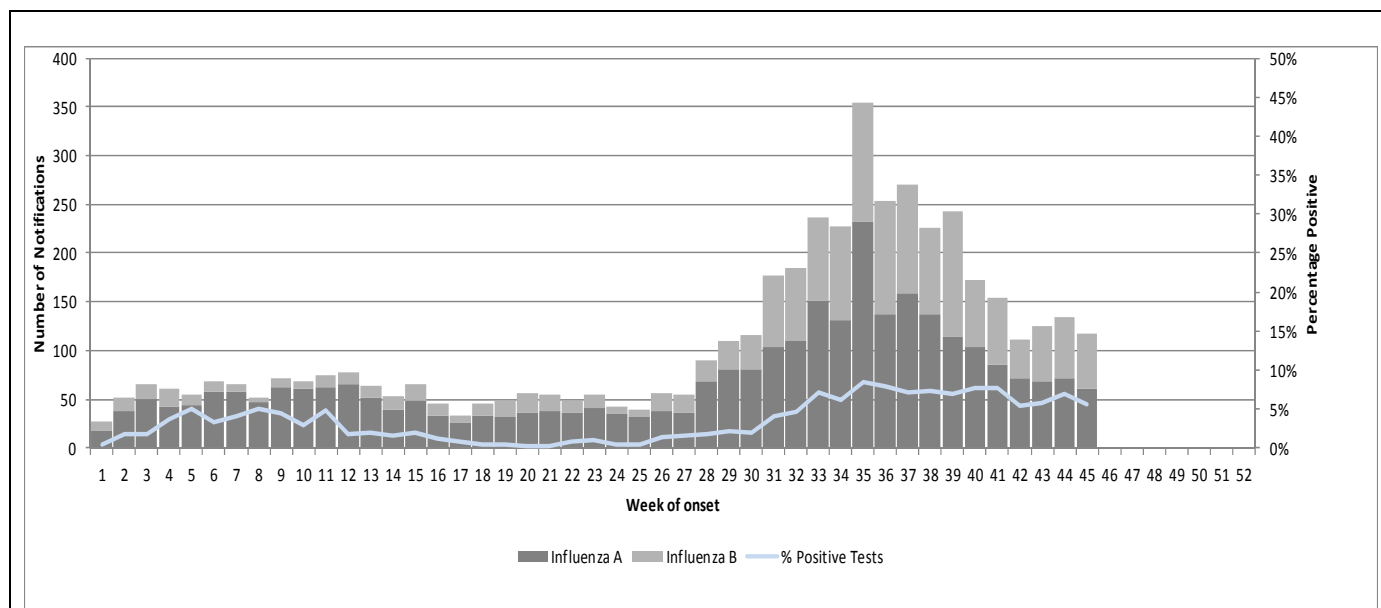
<sup>†</sup>World Health Organisation (WHO) standard abbreviation for the influenza strain associated with the 2009 pandemic, also known as A/California/7/2009 (H1N1)

**Australian Influenza Vaccine Committee (AIVC)  
decision on the influenza vaccine composition for  
Australia 2013**  
[http://www.influenzacentre.org/surveillance\\_vaccines.htm](http://www.influenzacentre.org/surveillance_vaccines.htm)

A (H1N1): an A/California/7/2009 (H1N1) - like virus, 15 µg HA per dose  
A (H3N2): an A/Victoria/361/2011 (H3N2) - like virus, 15 µg HA per dose  
B: a B/Wisconsin/1/2010 - like virus, 15 µg HA per dose

### Influenza Notifications

Year to date (YTD) there have been 4,797 notifications of influenza in Queensland. Subtype is recorded for 790 of the 3,128 notifications of influenza A, comprising 613 A(H1N1)pdm09 and 177 A/H3N2. Thirty-five percent (1,669) of YTD notifications have been influenza B. In the most recent week 49% of notifications were type B.



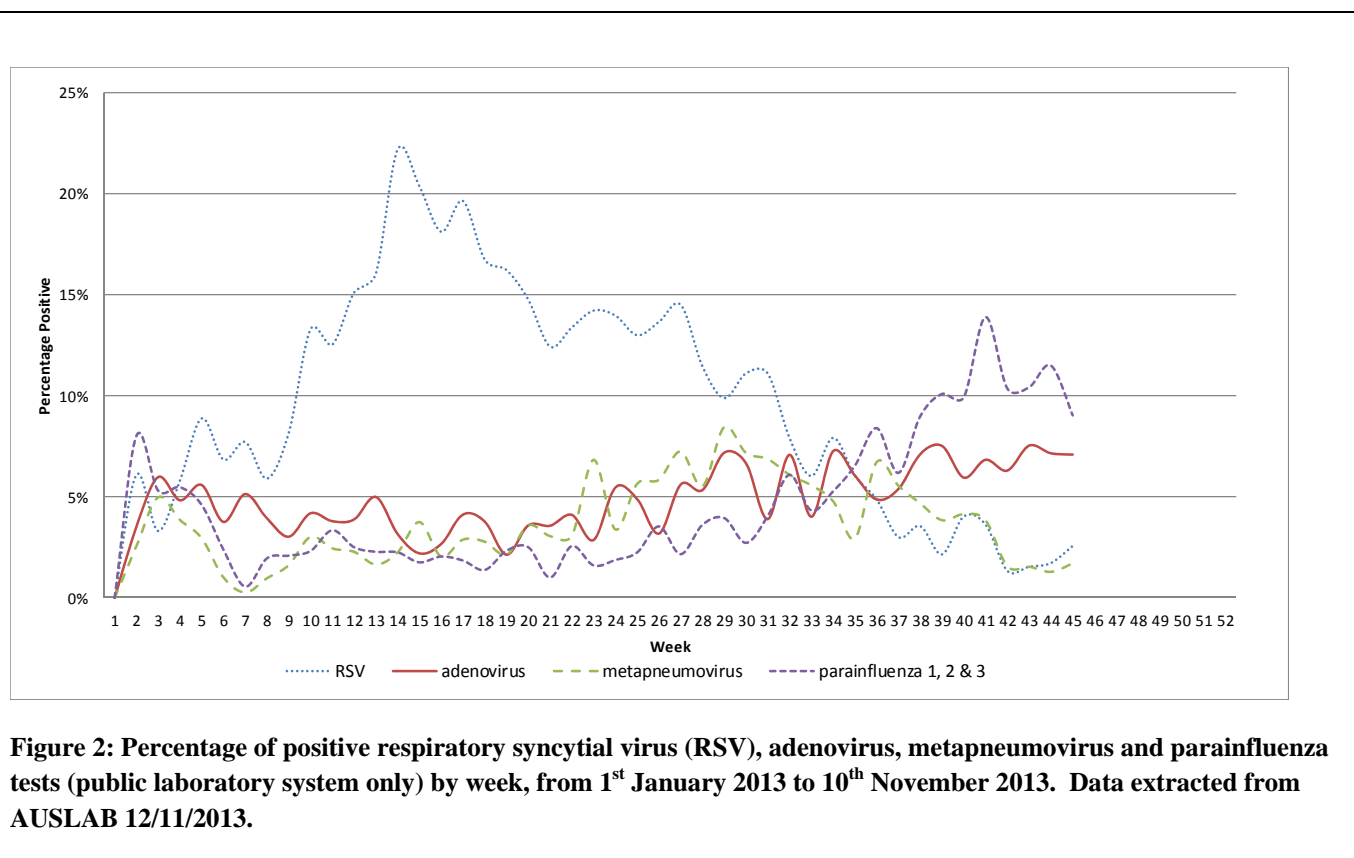
**Figure 1: Influenza notification counts in Queensland by type, week of onset and percentage of positive tests (public laboratory system only) by week of testing, 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from NOCS 12/11/2013 and AUSLAB 12/11/2013.**

Figure 1 shows Queensland notifications for influenza A and B by week of onset. Data were obtained from the Queensland Notifiable Conditions Register (NOCS). The 2013 YTD notification count of 4,797 is less than the five year mean (10,232.8) for the same period. Although weekly notifications have decreased since the peak in week 35, counts have reached a plateau during the most recent four weeks but numbers remain above baseline levels. Recent week's data may be incomplete and subject to adjustment in future reports.

It is important to note that the profile of influenza notifications is not the same each year, especially with regard to the start and peak of the season. Comparison of YTD data, or counts during a particular week across years, may be misleading. In addition, there have been changes to diagnostic methods and test requesting practices in recent years, which may influence counts.

Figure 1 also shows the percentage of positive influenza tests, performed in the public laboratory sector in Queensland, by week of testing for 2013 to 12th November. Data were obtained from the public laboratory information system (AUSLAB). The number of positive tests can be influenced by many factors, including the amount of testing done. However, the percentage of positive tests may be a more accurate indicator of disease frequency in the population and would be expected to change as the influenza season progresses. In the recent week, 5.5% (25/451) of tests were positive compared with 8.4% (49/585) in the peak notification week (35). The laboratory test data presented in Figure 1 should be interpreted with caution, as they may not be representative of influenza testing across all laboratories. Data obtained from some private laboratories had a similar percentage positive of 5.2% (8/153) for the recent week.

Figure 2 shows the percentage of positive tests for respiratory syncytial virus (RSV), adenovirus, metapneumovirus and parainfluenza viruses (1 – 3) identified through the public laboratory system. Infection with these viruses is not notifiable, but they are important causes of influenza like illness (ILI).



**Figure 2: Percentage of positive respiratory syncytial virus (RSV), adenovirus, metapneumovirus and parainfluenza tests (public laboratory system only) by week, from 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from AUSLAB 12/11/2013.**

Figure 3 shows the influenza notifications by tropical, central and southern regions of the state. These regions are aggregate areas of Hospital and Health Services (HHS) used only for surveillance purposes. Please refer to Table 2 and Appendix 1 (HHS/regional map) for further information. Notifications in the tropical region have remained sporadic for much of 2014 following early activity during the first few months of the year. Counts in this region increased slightly during the most recent three weeks but

appear to have reached a plateau. Notifications in both central and southern regions have been steadily decreasing since their respective peaks in week 35 but remain above baseline. Recent week's data may be incomplete and subject to adjustment in future reports.

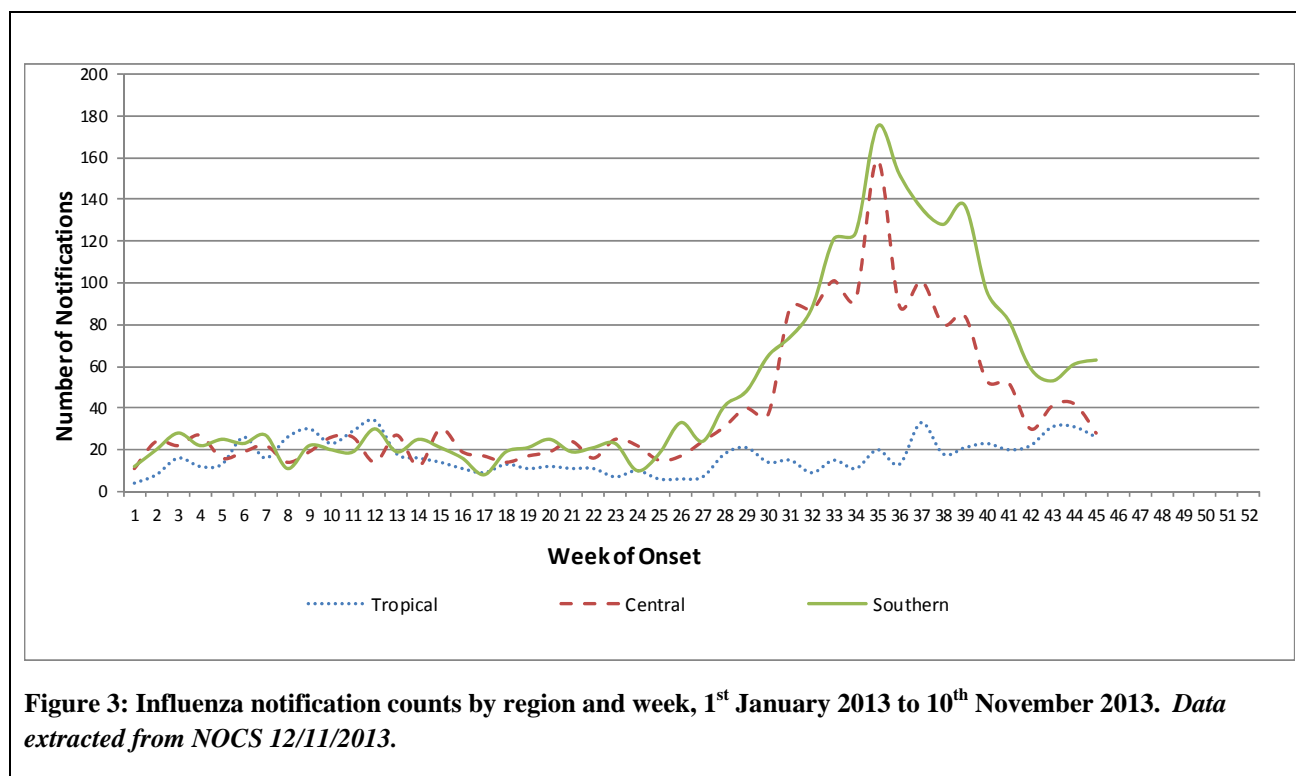
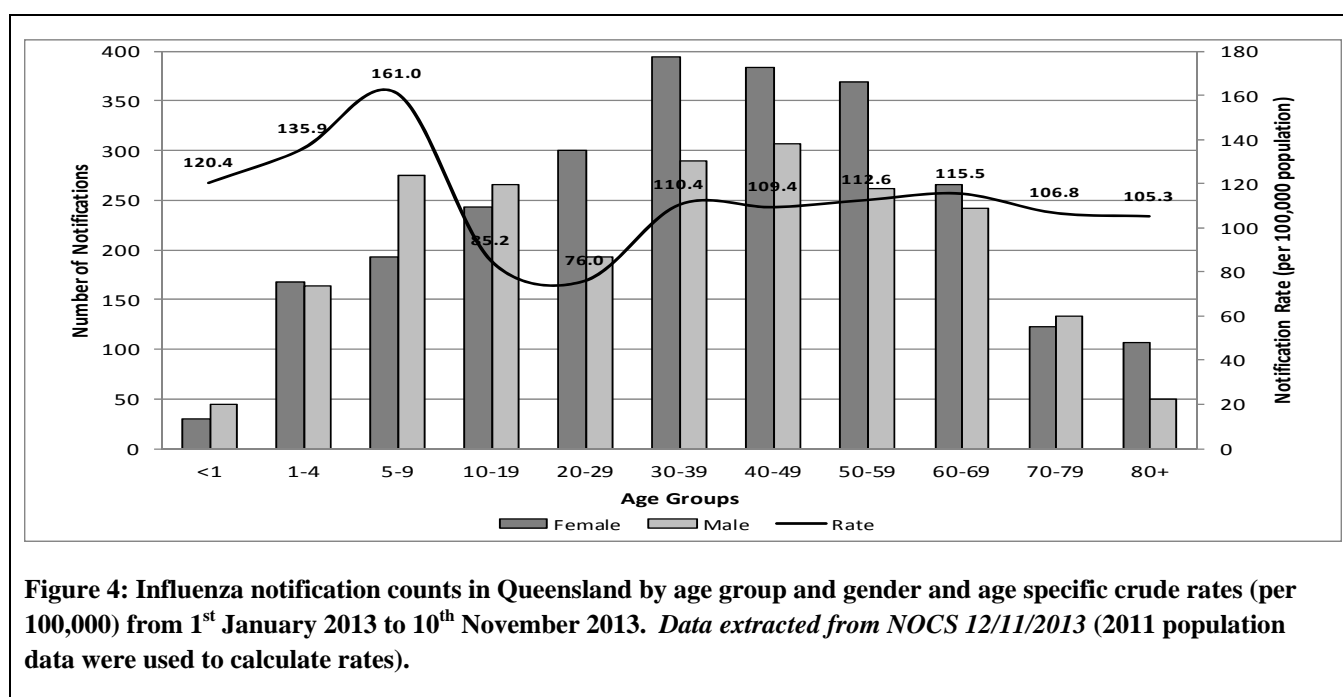


Figure 4 shows the 2013 YTD influenza notifications by age group and gender. The highest influenza notification rate (161.0 per 100,000 population) has been in the 5-9 year age group. The lowest rate (76.0 per 100,000 population) has been in the 20-29 year age group. The median age was 37 years and the age range was <1 to 103 years. Overall, there were more notifications in females (54%) than males (46%).



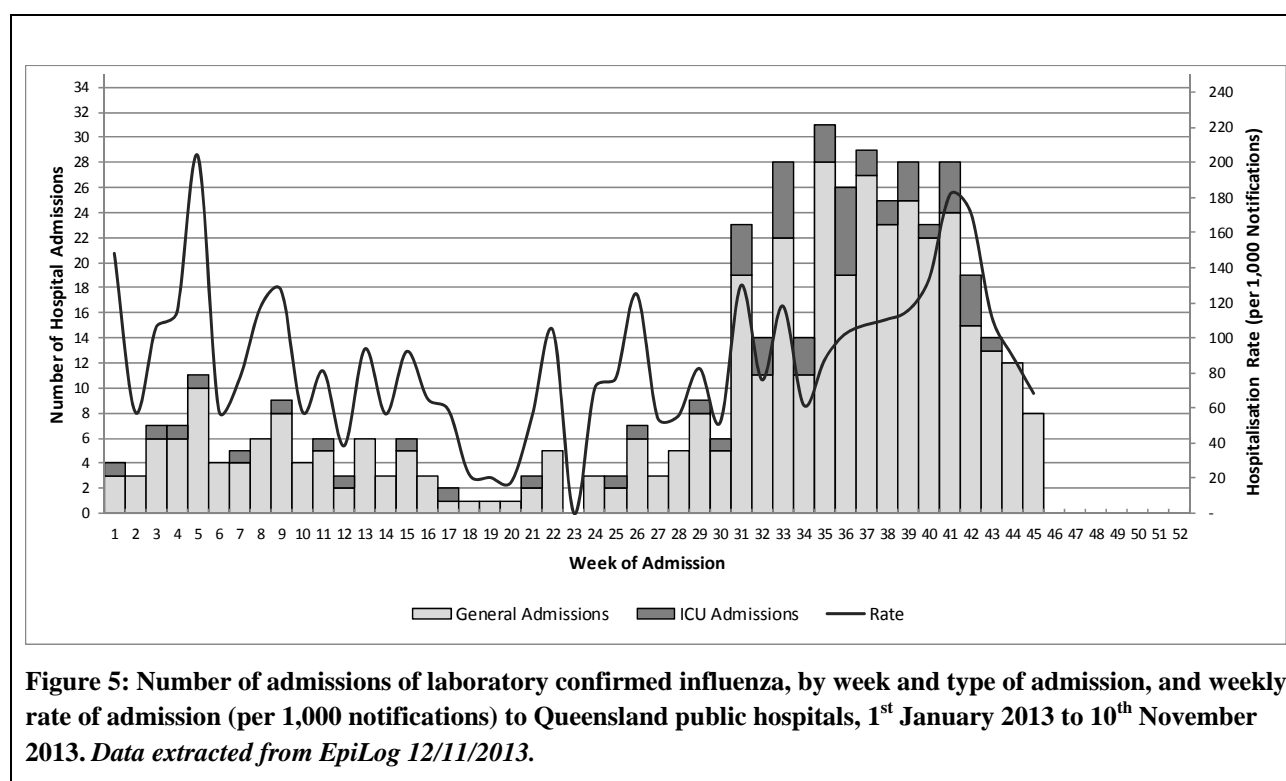
## Influenza Hospitalisations

Figure 5 shows the number of laboratory confirmed influenza admissions to public hospitals in Queensland, by week and admission type, detected through the EpiLog<sup>1</sup> system. YTD 2013 there have been 458 admissions, including 58 to intensive care units (ICU). There were eight admissions recorded for the most recent week, with none admitted to ICU. Figure 5 also shows the rate of laboratory confirmed influenza admissions to public hospitals per 1,000 notifications, by week. Recent week's data may be incomplete and subject to adjustment in future reports.

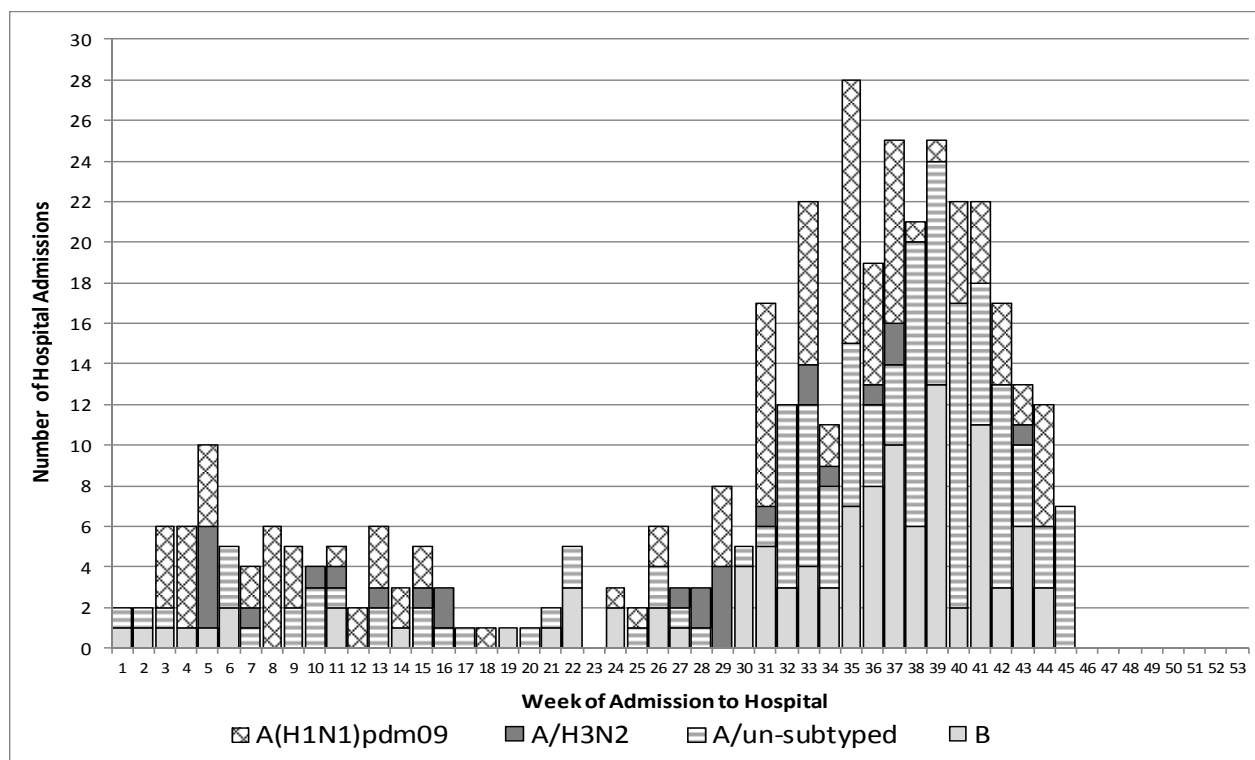
Figure 6 shows the number of admissions to public hospitals by influenza type (A and B), influenza A subtype (A(H1N1)pdm09, A/H3N2 and A/unsubtyped) and week of admission. These data were obtained by linkage of records from NOCS and EpiLog. In the recent week, seven admissions were due to unsubtyped influenza A. If further information becomes available this will be adjusted in future reports. Please note that there may be slight discrepancies between the count shown in Figure 5 compared with Figure 6, due to technical issues associated with the data linkage process. Where this occurs, the count shown in Figure 5 (which is also summarised in the table on page 1 of the report), should be taken as the more accurate.

Figure 7 shows the age and gender distribution of the 2013 YTD confirmed influenza admissions to public hospitals, as detected by the EpiLog system. Figure 7 also shows the age specific hospitalised proportion per 1,000 notifications. The highest proportion (219.2 per 1,000 notifications) has been in the less than one year age group. The lowest (30.4 per 1,000 notifications) has been in the 20-29 year age group. The median age of hospitalised cases was 44 years with a range of <1 to 97 years. Overall, there were more males (52%) than females (48%) hospitalised.

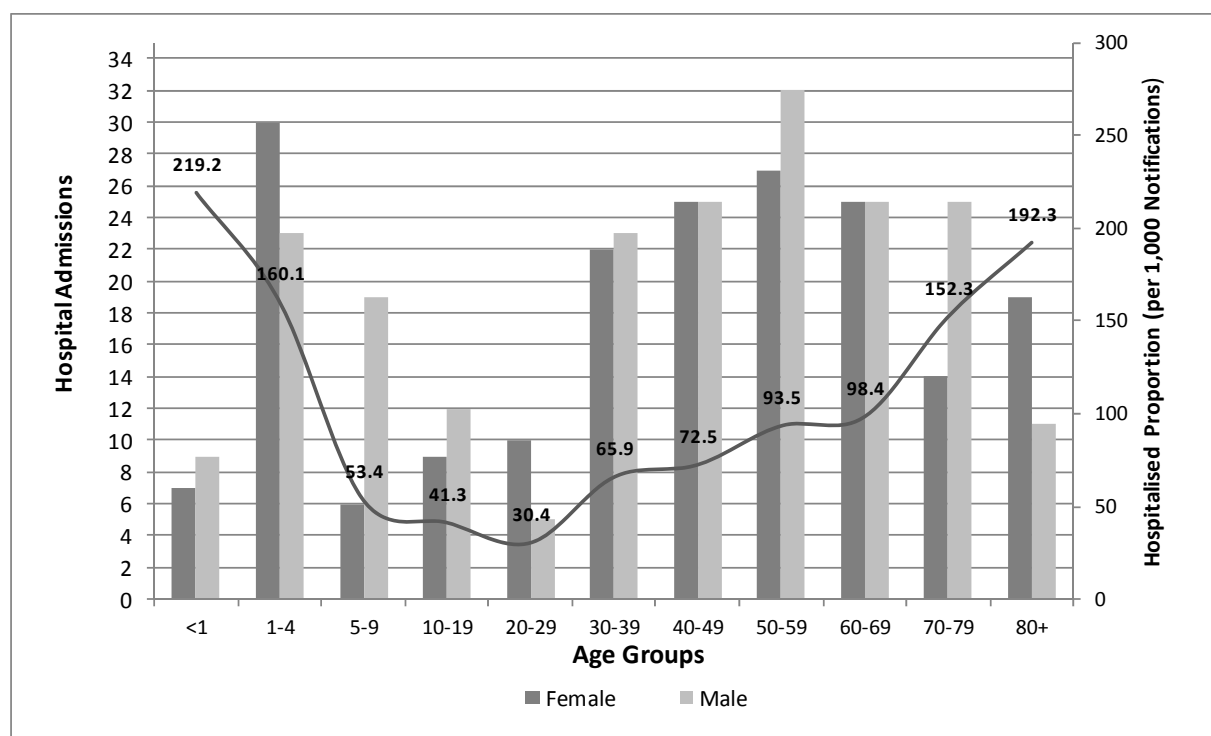
Table 1 shows the geographical distribution of the 2013 YTD hospital admissions. Counts and proportions per 1,000 notifications are shown by HHS. Caution should be used in interpreting the proportions due to the small numbers involved. The weekly notification counts by HHS are shown in Table 2. Please note that there may be a discrepancy between the total count shown in Table 1 and Figure 5. This is associated with the process of data extraction from EpiLog and is unavoidable. Where this occurs, the count shown in Figure 5 should be taken as the more accurate.



<sup>1</sup> EpiLog is a web based application developed by Queensland Health, which generates admission records for confirmed influenza cases through interfaces with the inpatient information and public laboratory databases. Records can also be generated manually.



**Figure 6: Laboratory confirmed influenza admission counts, in Queensland public hospitals, by influenza type, subtype and week of admission, 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from EpiLog and NOCS 12/11/2013.**



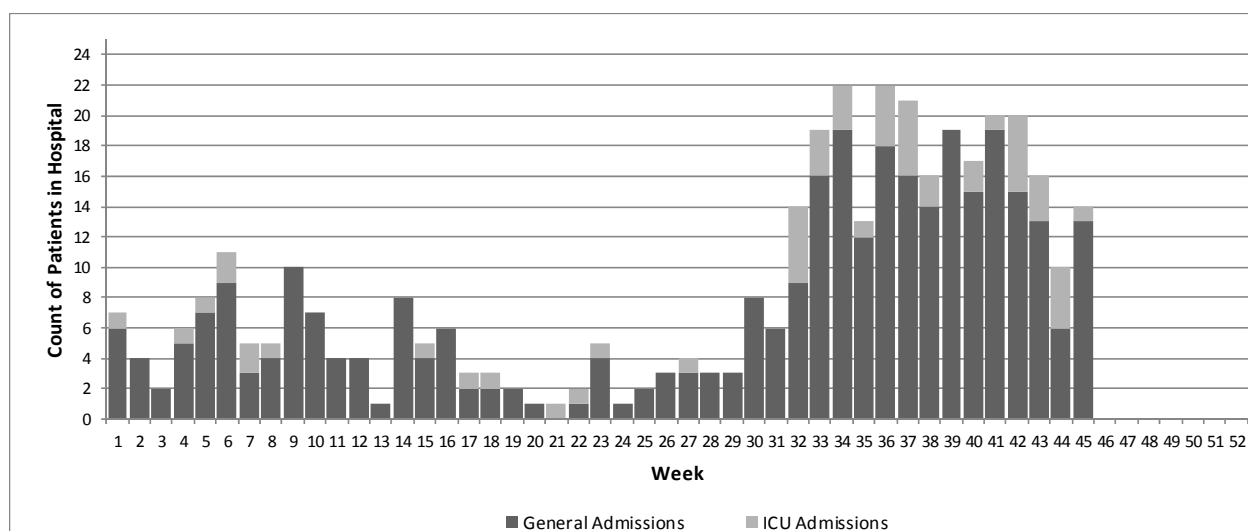
**Figure 7: Laboratory confirmed influenza admission counts, in Queensland public hospitals, by age group and gender and the age specific hospitalised proportion per 1,000 notifications, 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from EpiLog 12/11/2013.**

**Table 1: YTD laboratory confirmed influenza admissions to public hospitals in Queensland by Hospital and Health Service (HHS), 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from EpiLog 12/11/2013 and NOCS 12/11/2013.**

Region	Hospital & Health Service	YTD Hospital Admissions	YTD Notifications	Admission Proportion (per 1,000 notifications)
Tropical	Torres Strait-Northern Peninsula	1	19	52.6
	Cape York	2	42	47.6
	Cairns and Hinterland	33	274	120.4
	North West	3	8	375.0
	Townsville	29	302	96.0
	Mackay	15	109	137.6
Central	Central Queensland	3	121	24.8
	Central West	0	5	0.0
	Wide Bay	4	194	20.6
	Sunshine Coast	13	275	47.3
	Metro North	99	1178	84.0
Southern	Metro South	79	1270	62.2
	Darling Downs	30	341	88.0
	West Moreton	13	195	66.7
	South West	0	27	0.0
	Gold Coast	62	431	143.9
	Children's Health Queensland	17	n.a.	n.a.
<b>Total</b>		<b>403</b>	<b>4,791</b>	<b>84.1</b>

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

Figure 8 shows the number of inpatients in public hospitals (bed occupancy), with laboratory confirmed influenza, during each week since 1<sup>st</sup> January 2013 regardless of week of admission. This is distinct from the data in Figure 5, which show new admissions during each week. Occupancy reflects both admission numbers and length of hospital stay.



**Figure 8: Hospital occupancy: Number of patients with laboratory confirmed influenza in public hospitals in Queensland by week and admission type, 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from EpiLog 12/11/2013.**

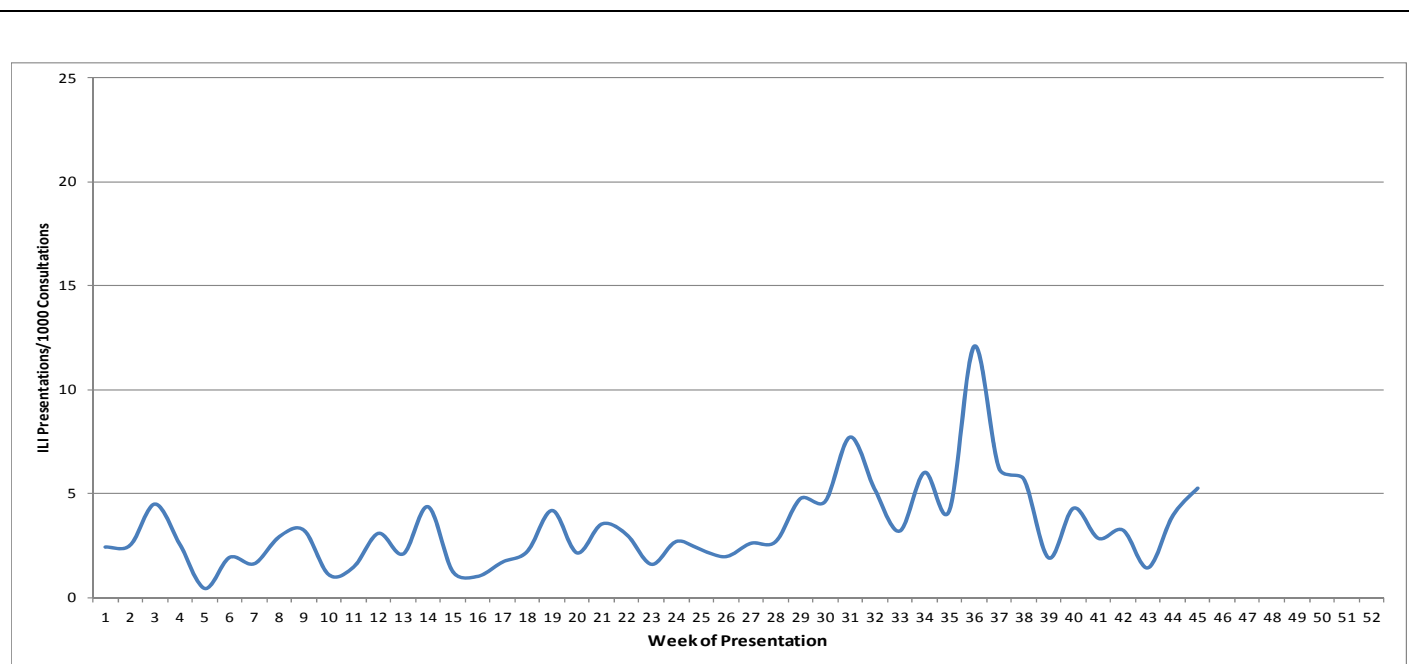
## Australian Sentinel Practices Research Network (ASPREN)

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).

General practitioners (GP) participating in the ASPREN program contribute data on the proportion of consultations which are ILI related. Currently there are 35 Queensland GPs registered with ASPREN, although the weekly participation rate may vary. During the most recent week 26% of GPs contributed data.

Figure 9 shows the number of ILI presentations per 1,000 GP consultations by week. There were 5.3 presentations per 1,000 consultations in the most recent week compared with a peak of 12.1 during week 36. Please note that recent week's data may be incomplete and subject to adjustment in future reports.

Further information about ASPREN can be found at <http://www.racgp.org.au/aspreen>.



**Figure 9: Influenza Like Illness (ILI) presentations per 1,000 GP consultations in Queensland by week, 1<sup>st</sup> January 2013 to 10<sup>th</sup> November 2013. Data extracted from ASPREN 12/11/2013.**

**Table 2: Influenza notifications by week of onset, Region\* and Hospital and Health Service (HHS) Queensland, 2013 (as on 10<sup>th</sup> November 2013).**

*Data extracted from NOCS 12/11/2013.*

Data extracted from NCBS 12/11/2013.																											
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 Strait-Northern Peninsula	0	0	0	0	0	0	0	0	3	4	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cape York	0	0	1	1	2	3	6	12	9	1	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0
	Cairns and Hinterland	0	2	7	6	6	18	6	11	13	5	10	6	3	4	5	6	2	4	6	2	5	2	3	2	1	3
	North West	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
	Townsville	3	4	4	4	5	5	4	1	4	12	11	6	6	10	7	4	5	6	3	9	4	8	3	8	4	2
	Mackay	1	0	2	1	0	0	0	2	1	1	3	18	6	2	1	1	0	3	2	1	2	1	1	0	0	0
Central	Central Queensland	1	1	0	1	1	2	0	4	1	2	2	1	3	0	2	3	3	0	5	1	3	1	3	2	2	0
	Central West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
	Wide Bay	1	2	5	2	0	1	3	2	5	3	5	2	10	3	7	2	5	3	2	2	2	3	9	2	2	1
	Sunshine Coast	2	2	7	9	2	2	7	2	4	7	2	5	3	0	3	3	2	0	0	7	6	2	4	2	4	4
	Metro North	7	19	10	15	13	14	12	6	9	14	17	6	11	9	17	11	6	11	10	9	13	10	9	16	7	12
Southern	Metro South	5	13	13	17	14	14	17	9	13	13	10	16	8	11	12	12	6	11	10	12	15	14	12	7	9	13
	Darling Downs	3	4	6	4	7	7	6	1	2	4	2	8	5	9	7	2	2	6	6	9	4	5	7	3	2	8
	West Moreton	1	1	3	1	1	0	1	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	3	5
	South West	1	0	1	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	0	1	1	0	0	1	0	0
	Gold Coast	2	2	5	0	3	2	3	1	6	1	6	4	5	4	1	2	0	1	4	3	0	2	2	0	4	7
Queensland (Total)		27	52	66	61	54	68	65	51	71	69	74	78	64	53	65	46	34	46	49	56	54	48	55	42	39	56

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 Strait-Northern Peninsula	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	19
	Cape York	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	42
	Cairns and Hinterland	0	5	4	6	3	3	6	5	9	8	9	9	11	11	6	10	12	10	9	-	-	-	-	-	-	-	274
	North West	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	3	1	0	-	-	-	-	-	-	-	14
	Townsville	5	12	15	5	11	5	5	3	6	3	14	3	5	10	9	7	12	14	16	-	-	-	-	-	-	-	302
	Mackay	1	0	2	2	1	0	4	3	5	2	10	6	5	2	4	2	4	6	1	-	-	-	-	-	-	-	109
Central	Central Queensland	4	3	3	2	5	2	4	5	4	3	3	5	6	9	5	1	6	3	4	-	-	-	-	-	-	-	121
	Central West	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	-	-	-	-	-	-	-	5
	Wide Bay	6	6	7	5	5	4	11	7	10	4	9	5	7	4	6	3	3	4	4	-	-	-	-	-	-	-	194
	Sunshine Coast	6	4	4	5	11	5	12	11	25	21	13	6	13	10	12	7	5	7	7	-	-	-	-	-	-	-	275
	Metro North	8	18	26	25	67	76	74	69	120	61	76	64	57	30	28	19	27	28	12	-	-	-	-	-	-	-	1178
Southern	Metro South	13	21	28	40	42	55	70	75	96	87	80	80	74	57	45	29	26	22	24	-	-	-	-	-	-	-	1270
	Darling Downs	3	11	8	4	6	7	16	19	17	11	15	12	12	12	6	17	8	13	15	-	-	-	-	-	-	-	341
	West Moreton	2	3	7	6	7	8	11	4	20	17	9	15	16	14	9	8	3	6	8	-	-	-	-	-	-	-	195
	South West	0	0	0	0	0	0	0	4	5	2	2	2	1	0	0	0	1	0	0	-	-	-	-	-	-	-	27
	Gold Coast	6	6	5	15	19	18	24	22	37	35	30	19	34	13	22	5	15	20	16	-	-	-	-	-	-	-	431
Queensland (Total)		55	90	109	116	177	184	237	227	354	254	270	226	242	172	154	111	125	134	117	-	-	-	-	-	-	-	4797

\*Regions used in this report are not official geographical entities but are defined, for surveillance purposes only, using aggregated HHS.



## Appendix 1: Hospital and Health Services (2012 edition) with Regions

