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Influenza Weekly Surveillance Bulletin

Northern Ireland, Weeks 17-18 (20 April 2015 – 03 May 2015)

Summary

- GP Influenza activity in Northern Ireland has decreased and most indicators remain at a low level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have fluctuated across the 2-week period, increasing to at 14.1 per 100,000 in week 17, then decreasing to 10.4 per 100,000 in week 18, 2015. Rates remain below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population.
- The OOH consultation rate for flu/FLI decreased in week 17 to 3.5 per 100,000 population and remained stable at 3.7 per 100,000 population in week 18, 2015. The rate remained relatively low in most age groups in week 18, with the highest rate again noted among those aged 15-44 years.
- RSV activity has decreased in weeks 17 and 18, 2015.
- Influenza vaccine uptake to 31st March 2015 was 73.4% for those aged 65 and over, 71.8% for those aged under 65 and in an at risk group, 54.4% among 2-4 year old children and 79.7% among children in P1 to P7.
- There have been five new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 66 ICU patients with confirmed influenza this season to date.
- There were no deaths in ICU patients with laboratory confirmed influenza reported since the last bulletin. There have been nine deaths in ICU patients with laboratory confirmed influenza this season to date.
- There have been no new confirmed influenza outbreaks reported to PHA in weeks 17 or 18, 2015.
- EuroMOMO reported no excess all-cause mortality in weeks 17 or 18, 2015.

Introduction

In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place.

Additional surveillance systems are:

- GP sentinel surveillance representing 11.7% of Northern Ireland population;
- GP Out-of-Hours surveillance system representing the entire population;
- Virological reports from the Regional Virus Laboratory (RVL);
- Mortality data from Northern Ireland Statistics and Research Agency (NISRA);
- Excess mortality estimations are also provided by Public Health England using the EuroMOMO (Mortality Monitoring in Europe) model based on raw death data supplied by NISRA;
- Critical Care Network for Northern Ireland reports on critical care patients with confirmed influenza;

Sentinel GP Consultation Data

Figure 1. Sentinel GP consultation rates for flu/FLI 2012/13 - 2014/15

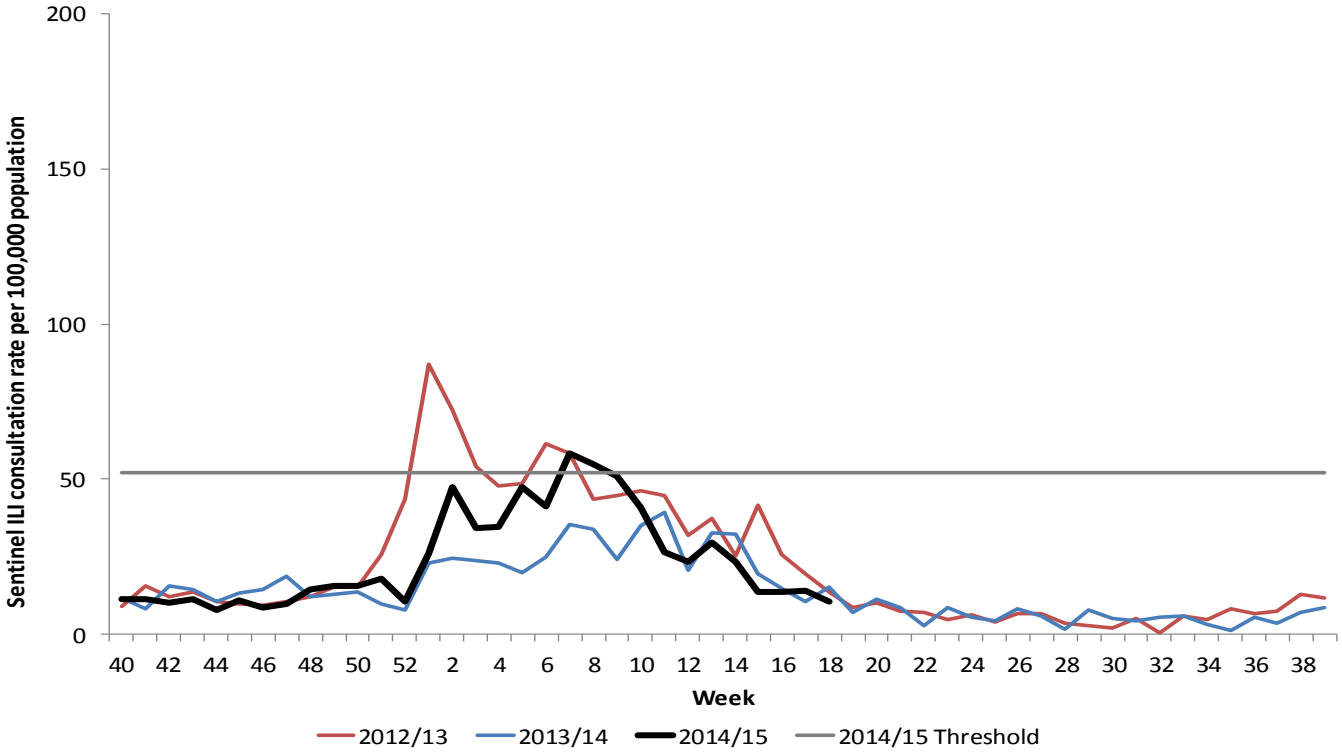


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

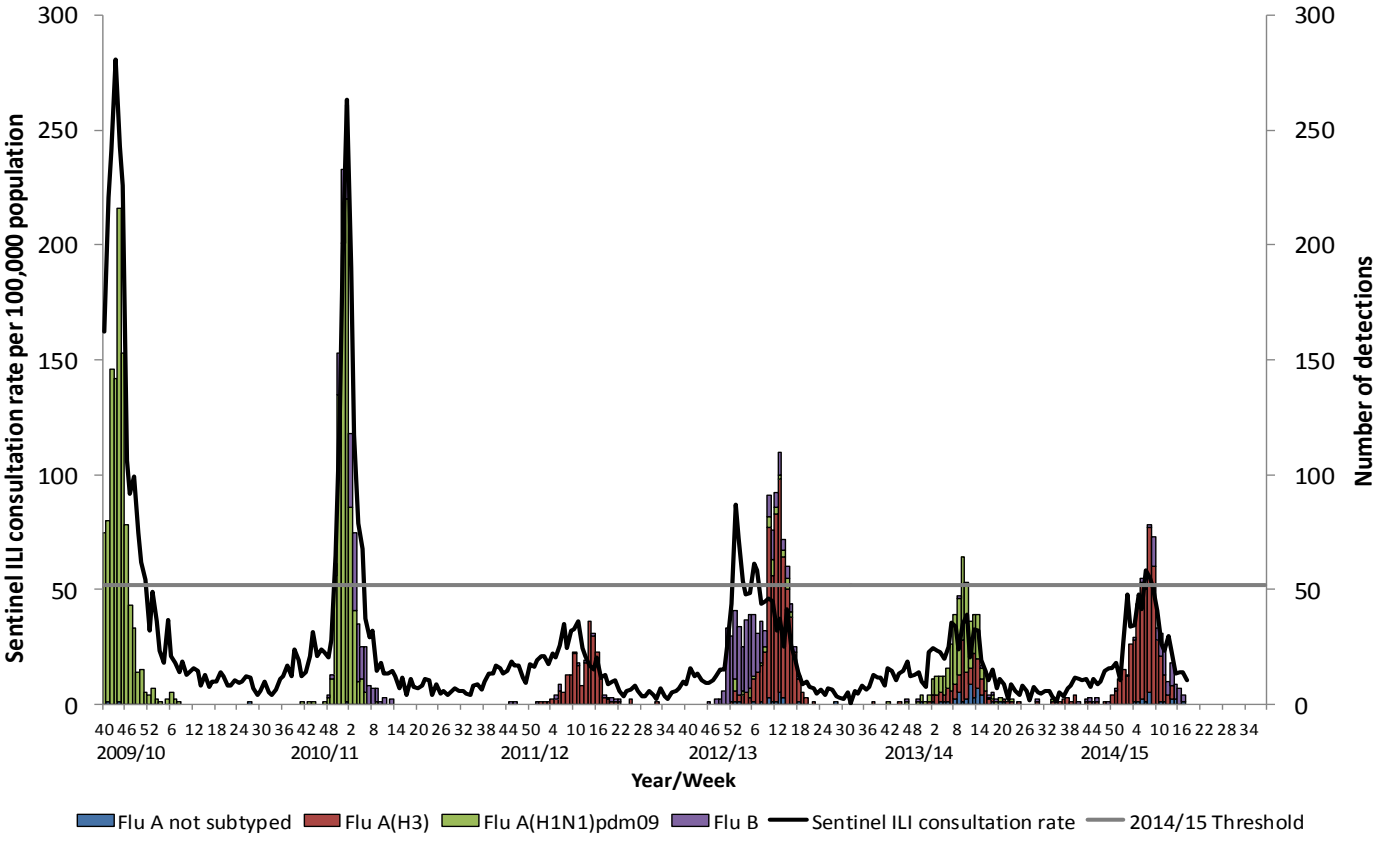
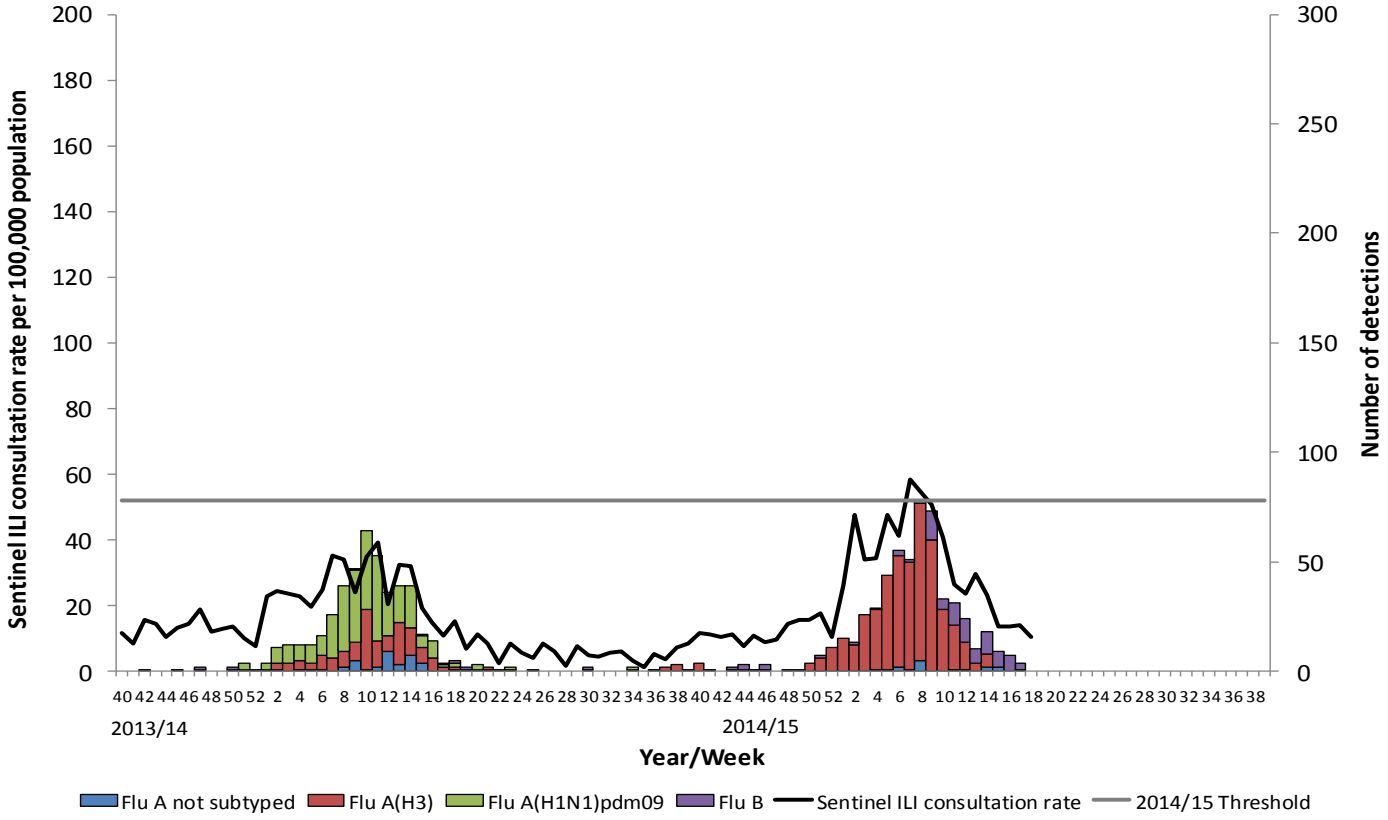


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

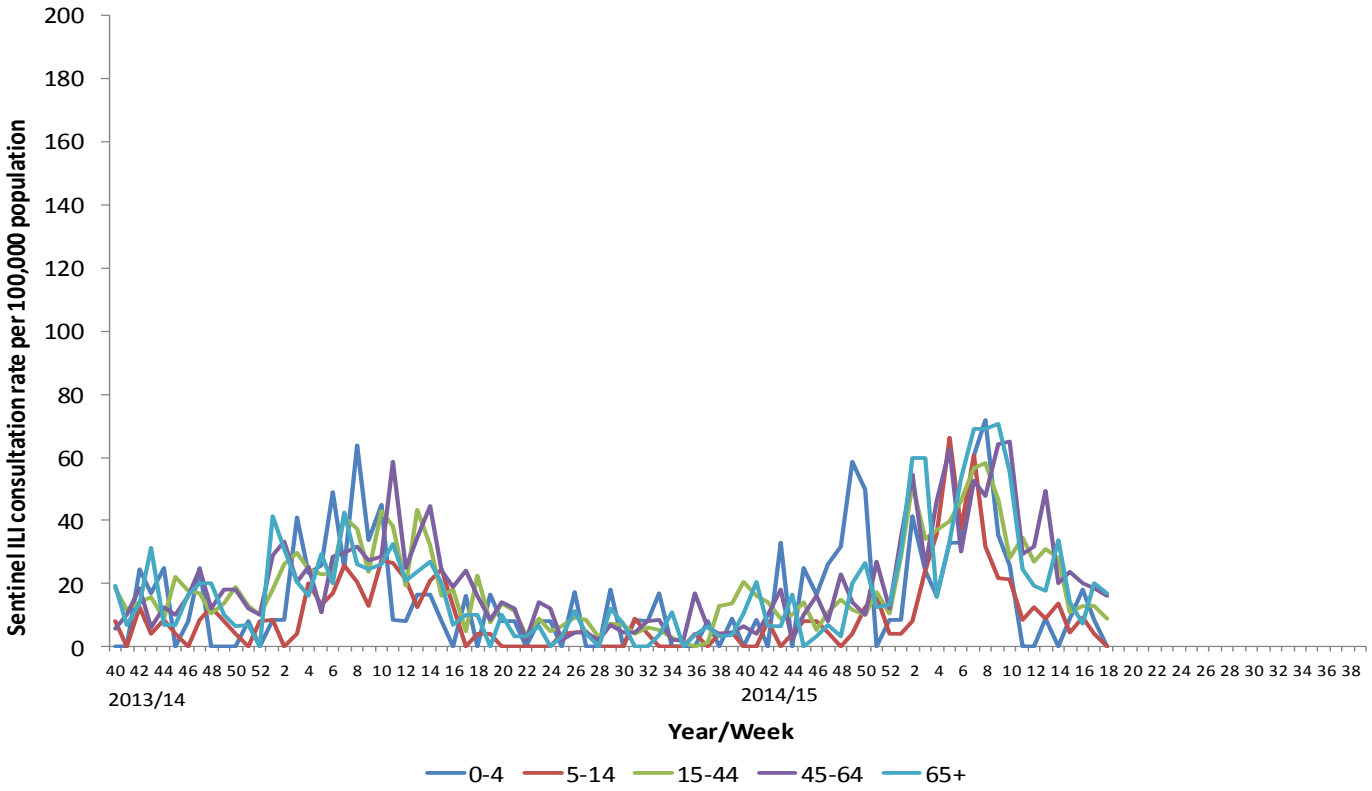


Comment

GP consultation rates have fluctuated across the 2-week period, increasing slightly in week 17 to 14.1 per 100,000 population from 13.8 the previous week, and then decreasing in week 18 to 10.4 per 100,000 population. Rates remain below the pre-epidemic Northern Ireland 2014/15 threshold of 52.0 per 100,000.

GP Flu/FLI consultations in week 18, 2015 are lower than noted during the same period in both 2013/14 and 2012/13 (Figures 1, 2 and 3).

Figure 4. Sentinel GP age-specific consultation rates for flu/FLI from week 40, 2013



Comment

Sentinel GP flu/FLI consultations have decreased among most age groups across weeks 17 and 18, 2015.

In weeks 17 and 18, 2015 GP Flu/FLI consultation rates for combined flu' and flu'-like-illness decreased among those aged 0-4, 5-14 and 45-64 years, while rates among those aged 15-44 and 65 years and over have fluctuated across the period, increasing in week 17 then decreasing in week 18. Those aged 45-64 years again represent the highest age-specific consultation rate in week 18, 2015.

Age-specific GP flu/FLI consultations have generally decreased in recent weeks and for most age groups are similar to the levels seen earlier in the season (Figure 4).

Out-of-Hours (OOH) Centres Call Data

Figure 5. OOH call rate for flu/FLI, 2012/13 – 2014/15

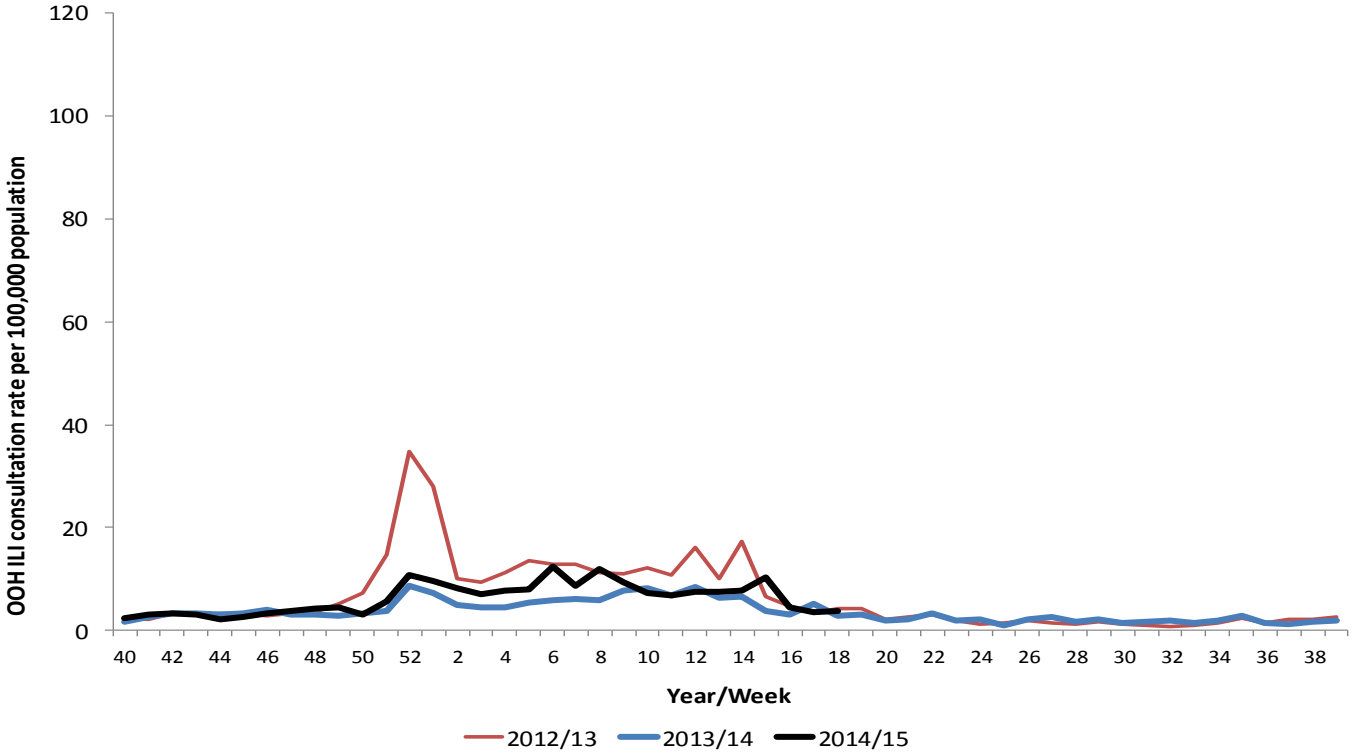
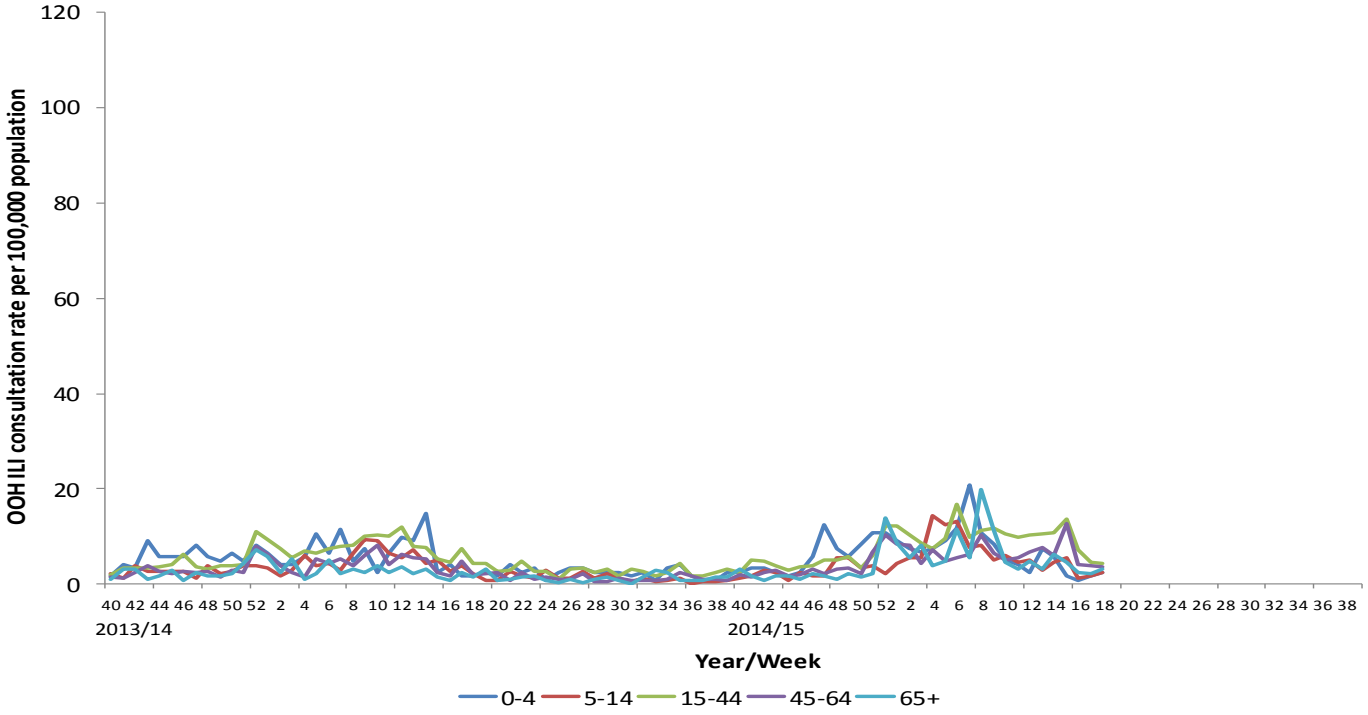


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has generally decreased in weeks 17 and 18. Rates in week 17, 2015 decreased to 3.5 per 100,000 population from 4.6 per 100,000 in week 16, while rates in week 18 remained relatively stable at 3.7 per 100,000 population. The OOH consultation rate in week 18, 2015 is also slightly higher than the same period in 2013/14 but lower than noted in 2012/13 (Figures 5 and 6).

The OOH flu/FLI rate has generally decreased among most age groups across weeks 17 and 18, 2015. The OOH consultation rate for flu/FLI has steadily decreased among the 15-44 and 45-64 year age groups in both weeks 17 and 18, while rates among those aged 65 years and over displayed a decrease in week 17 but increased in week 18. OOH flu/FLI rates among those aged 0-4 and 5-14 years have steadily increased across the 2-week period, while rates among those aged 15-44 years again represent the highest age-specific OOH GP flu/FLI consultation rate in week 18, 2015.

The proportion of OOH total calls has also decreased across weeks 17 and 18, 2015 and represented less than 1% of total calls to the OOH service in both weeks.

Virology Data

Table 1. Virus activity in Northern Ireland, Week 17 - 18, 2014/15

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	5	0	0	0	2	0	2	40%
Non-sentinel	182	1	0	1	8	6	10	5%
Total	187	1	0	1	10	6	12	6%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 18, 2014/15

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	33	3	3	6	45	447
5-14	34	1	0	5	40	27
15-64	145	14	7	52	218	129
65+	242	6	7	31	286	133
Unknown	1	0	0	0	1	1
All ages	455	24	17	94	590	737

Table 3. Cumulative virus activity, Week 40 - Week 18, 2014/15

	Sentinel						Non-sentinel					
	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	1	0	0	0	1	0	32	3	3	6	44	447
5-14	7	0	0	0	7	2	27	1	0	5	33	25
15-64	40	4	2	16	62	22	105	10	5	36	156	107
65+	16	1	0	0	17	8	226	5	7	31	269	125
Unknown	0	0	0	0	0	0	1	0	0	0	1	1
All ages	64	5	2	16	87	32	391	19	15	78	503	705

Note

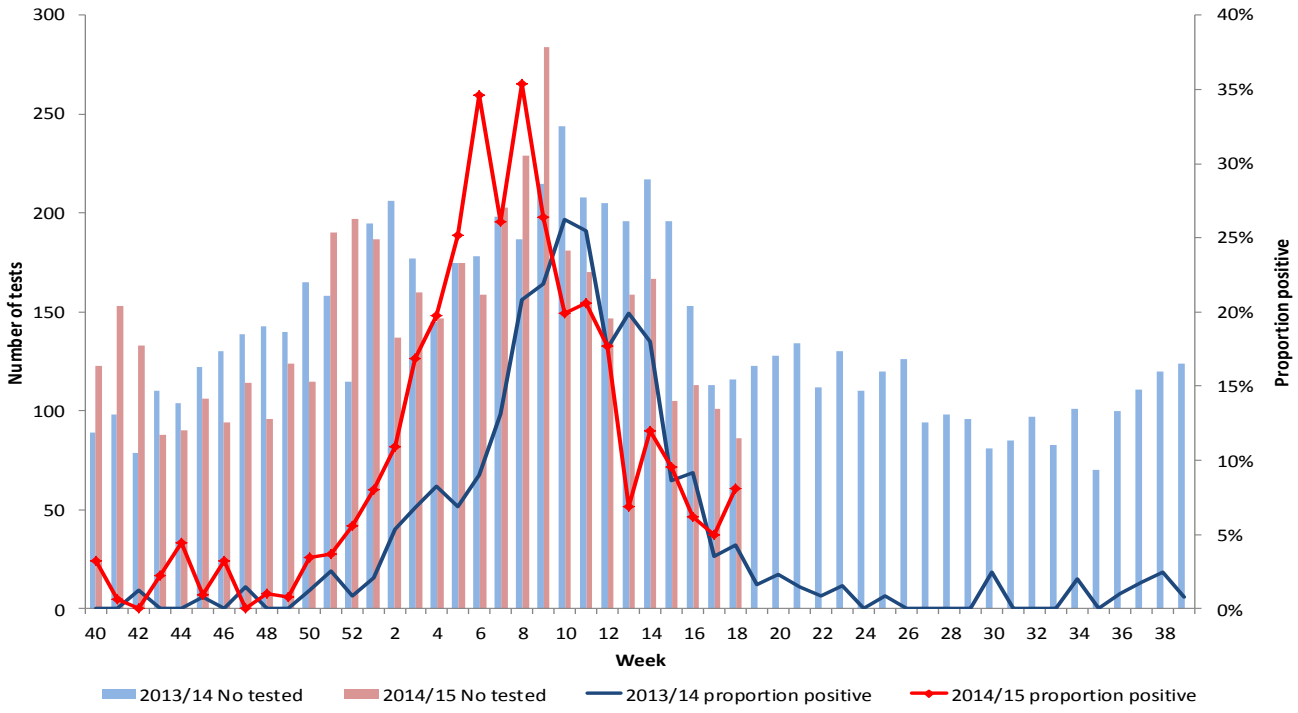
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

Sentinel and non-sentinel samples are tested for influenza and for RSV. Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

Comment

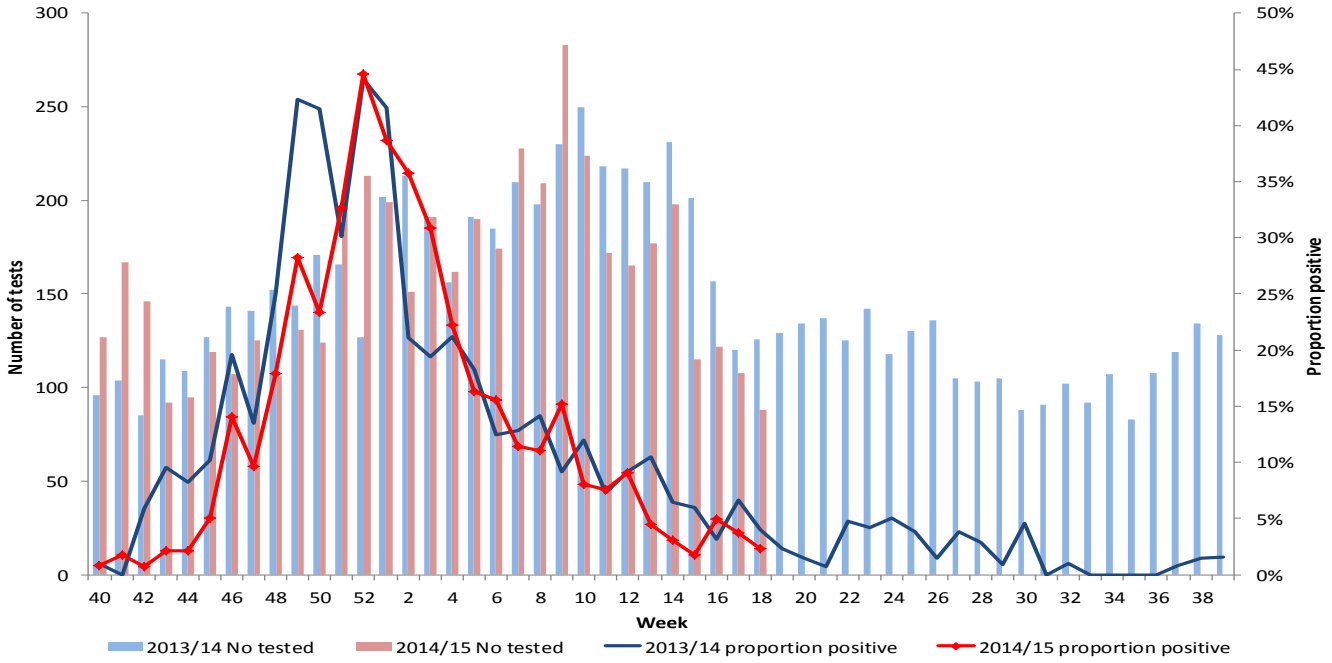
During weeks 17 and 18, 2015 there were 187 specimens submitted for testing, of which 10 were confirmed as influenza B, 1 as influenza A(H3) and 1 as influenza A untyped (typing awaited). The number detected in week 17 was lower than the number detected in week 16 while the number detected increased in week 18. The number of positive detections in week 18, 2015 is higher than the number of positive detections during the same period last year. Positivity rates for influenza decreased slightly to 5% in week 17 from 6% in week 16 and increased to 8% in week 18, 2015- however data are provisional and more accurate data will be available in the next bulletin. The proportion positive in week 18, 2015 is higher than the same period in 2013/14 but lower than that noted during the same period in 2012/13 (Figure 7).

Figure 7. Number of samples tested for influenza and proportion positive, 2013/14 and 2014/15, all sources



Respiratory Syncytial Virus

Figure 8. Number of samples tested for RSV and proportion positive, 2013/14 and 2014/15, all sources



Comment

There were 6 RSV positive detections in weeks 17 and 18, 2015 combined with positivity rates steadily decreasing from 5% in week 16 to 4% and 2% in weeks 17 and 18 respectively, however this should be interpreted with caution as the most recent week's data is at this stage incomplete – more accurate data will be available in the next bulletin. The positivity rate in both weeks is lower than noted during the same period in 2013/14 but higher than in and 2012/13. There have been a total of 737 detections of RSV since the beginning of the 2014-15 influenza season of which 61% fall within the 0-4 years age group (Figure 8, Table 2).

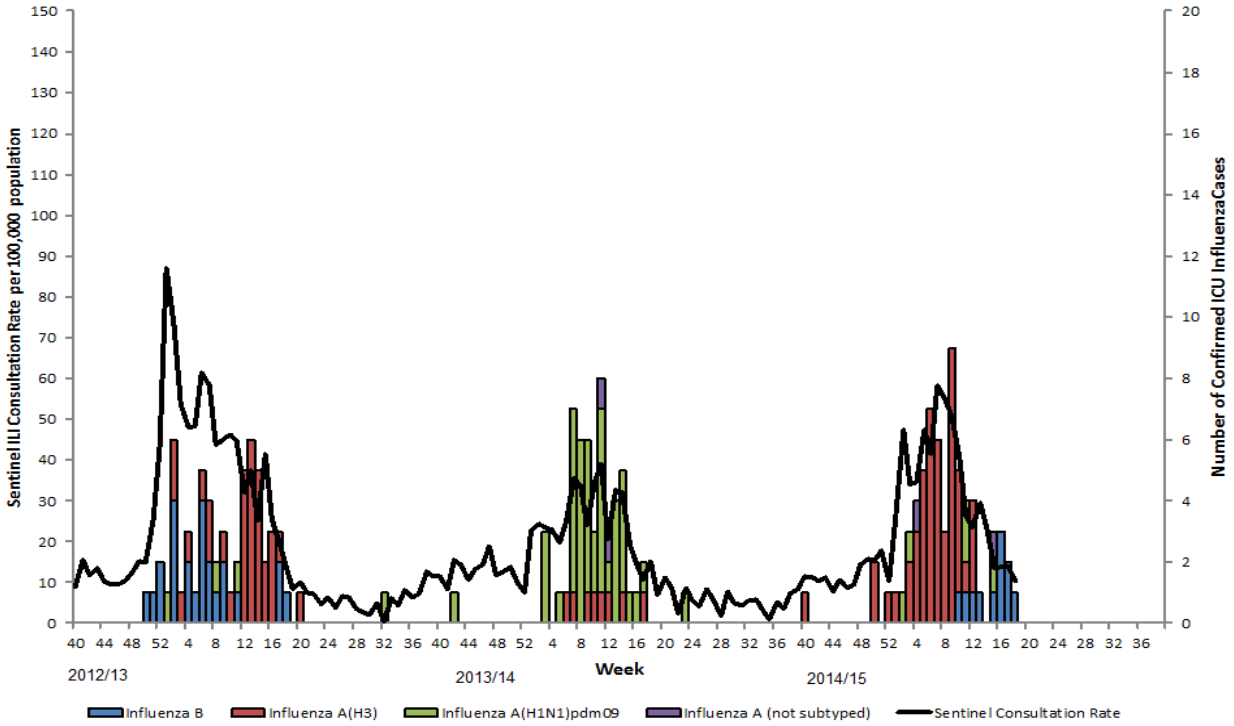
Influenza Vaccine Uptake

To 31st March 2015, vaccine uptake for those aged 65 years and over was 73.4%, lower than the same period last season (75.4%); while 71.8% of those under 65 and in an at risk group had received the vaccine, lower than in the 2013/14 season when 76.4% had received the vaccine during the same period.

This season for the first time, all children aged between 2 and 4 years and all those in P1 – P7 have been offered the seasonal influenza vaccine. To 31st March 2015, vaccine uptake among 2-4 year old children was 54.4%, while uptake among children in P1 – P7 was 79.7%.

ICU/HDU Surveillance

Figure 9. Confirmed ICU influenza cases by week of specimen*, with sentinel ILI consultation rate, 2014-15



Comment

Similar to last year data will be collected on numbers of laboratory confirmed influenza patients and laboratory confirmed influenza deaths in critical care (level 2 and level 3) in Northern Ireland for this season. *Figure 9 provides an overview of the confirmed flu ICU activity during the 2012/13, 2013/14 and 2014/15 seasons.*

There have been five new ICU patients confirmed with influenza since the last bulletin. To date there have been 66 ICU patients with confirmed influenza, of which 48 have been confirmed as influenza A (H3), 11 as influenza B, 5 as influenza A (H1N1)pdm09, and 2 as influenza A untyped (typing awaited) (Figure 9 and table 4).

Up to week 18, 2015, of the 66 ICU patients with confirmed influenza 55 had co-morbidities, were pregnant or were aged over 65, of which provisionally 50 met the criteria for inclusion in an influenza vaccine clinical risk group. To date, 46% (n=23) of those meeting the criteria for inclusion in a clinical risk group are reported to have received the influenza vaccine.

There were no deaths in ICU patients with laboratory confirmed influenza reported since the last bulletin. To date, there have been nine deaths in ICU patients with laboratory confirmed influenza.

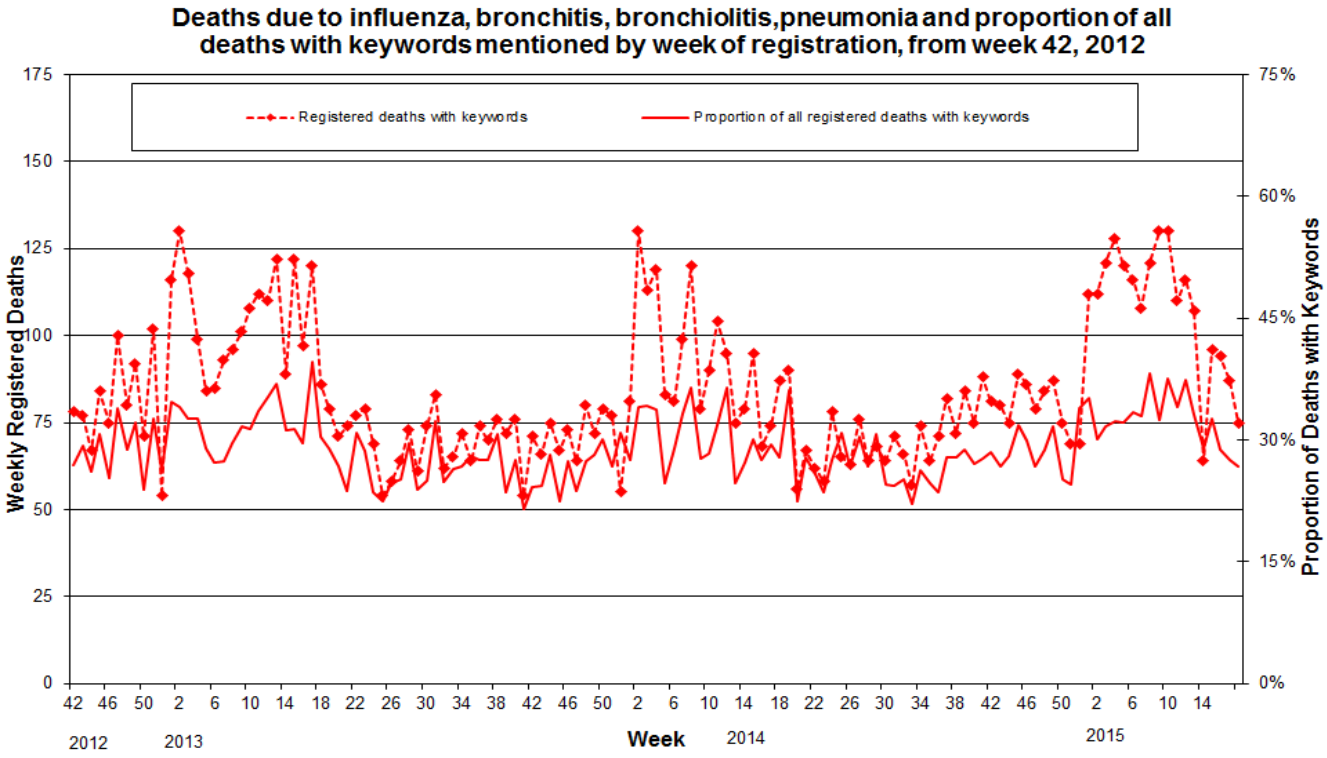
Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in weeks 17 or 18, 2015. There have been a total of 28 confirmed influenza outbreaks reported so far this season, of which 26 have been confirmed as influenza A (H3) and 2 as influenza B. This compares with a total of three outbreaks for the duration of the 2013/14 season.

Mortality Data

Weekly mortality data is provided from Northern Ireland Statistics and Research Agency. The data relates to the number of deaths from selected respiratory infections (some of which may be attributable to influenza, and other respiratory infections or complications thereof) registered each week in Northern Ireland. This is not necessarily the same as the number of deaths occurring in that period. Searches of the medical certificates of the cause of death are performed using a number of keywords that could be associated with influenza (bronchiolitis, bronchitis, influenza and pneumonia). Death registrations containing these keywords are presented as a proportion of all registered deaths.

Figure 9. Weekly registered deaths



Comment

The proportion of deaths related to respiratory keywords has steadily decreased from 29% in week 16, to 28% in week 17 and further to 27% in week 18, 2015. In week 18 there were 281 registered deaths of which 75 related to the specific respiratory infections.

EuroMOMO

EuroMOMO reported no overall all-cause excess mortality in weeks 17 or 18, 2015. Significant excess mortality has been reported in weeks 3, 4, 8 and 9 this season. This data is provisional due to the time delay in registration; numbers may vary from week to week.

International Summary

Europe

Week 17, 2015:

Influenza activity continued to decrease in most of the 37 reporting countries: the proportion of influenza-virus-positive specimens from sentinel sources decreased from 25% in week 16/2015 to 20% in week 17. Since week 51/2014, the positivity rate has been over the threshold of 10%, indicating seasonal influenza activity.

- Low intensity of influenza activity was reported by 32 countries.
- Influenza A(H1N1)pdm09, A(H3N2) and type B viruses continued to circulate in the WHO European Region, but type B viruses accounted for 92% of sentinel detections in week 17/2015.
- Low numbers of hospitalized influenza cases were reported.
- Excess all-cause mortality among people aged 65 years and above, concomitant with increased influenza activity and the predominance of A(H3N2) viruses, had been observed in most countries participating in the European project for monitoring excess mortality for public health action (EuroMOMO), but has now abated (see the EuroMOMO website).
- Antigenic drift in A(H3N2) viruses was observed in the 2014–2015 influenza season, so the northern hemisphere vaccine did not provide broad protection against A(H3N2) viruses. Despite some antigenic drift among B/Yamagata viruses, the A(H1N1)pdm09 and B/Yamagata components in the vaccine are likely to protect against circulating viruses.
- Of all the influenza viruses screened for reduced susceptibility to neuraminidase inhibitors, only four A(H3N2) viruses and two A(H1N1)pdm09 viruses have shown genetic or phenotypic evidence of reduced susceptibility: one A(H3N2) virus to oseltamivir and zanamivir and the other five to oseltamivir only.

http://www.flunewseurope.org/

Worldwide (WHO) and CDC

As at 4th May 2015:

Influenza activity declined further in the northern hemisphere with mainly influenza B virus circulation and was low in most regions globally.

- In North America influenza activity continued to decrease and was close to inter-seasonal levels with influenza B virus predominant in the last weeks. During week 16 (April 19-25, 2015), influenza activity continued to decrease in the United States. Of 8,294 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 16, 542 (6.5%) were positive for influenza. Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.0%. Two regions reported ILI at or above region-specific baseline levels.
- In Europe, influenza activity continued to decline in most countries. Influenza B virus remained predominant in recent weeks.
- In northern Africa, influenza activity decreased almost to inter-seasonal levels.
- In western Asia, a decrease in influenza activity mainly associated with A(H1N1)pdm09 virus was observed in the last weeks.
- In the temperate countries of Asia, influenza activity of mainly influenza B virus was further declining.
- In tropical countries of the Americas, influenza activity was low in most countries.
- In tropical Asia, influenza activity and influenza-like illness (ILI) activity continued to decrease in southern Asia, where influenza A(H1N1)pdm09 virus predominated. Influenza activity has continued to decrease from its peak in southern China including Hong Kong Special Administrative Region, China. In the southern hemisphere, influenza activity remained at inter-seasonal levels.
- In tropical countries of the Americas, influenza activity remained low in most countries.
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- Based on FluNet reporting (as of 30 April 2015 12:00 UTC), National Influenza Centres (NICs) and other national influenza laboratories from 89 countries, areas or territories reported data for the time period from 5 April 2015 to 18 April 2015. The WHO GISRS laboratories tested more than 65 361 specimens. 8249 were positive for influenza viruses, of which 2566 (31.1%) were typed as influenza A and 5683 (68.9%) as influenza B. Of the sub-typed influenza A viruses, 670 (37.6%) were influenza A(H1N1)pdm09 and 1114 (62.4%) were influenza A(H3N2). Of the characterized B viruses, 1127 (95.0%) belonged to the B-Yamagata lineage and 59 (5.0%) to the B-Victoria lineage.

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

http://www.cdc.gov/flu/weekly/

Acknowledgments

We would like to extend our thanks to all those who assist us in the surveillance of influenza in particular the sentinel GPs, Out-of-Hours Centres, Regional Virus Laboratory, Critical Care Network for Northern Ireland, Public Health England and NISRA. Their work is greatly appreciated and their support vital in the production of this bulletin.

Further information

Further information on influenza is available at the following websites:

http://www.fluawareni.info Now on Facebook (Flu Aware NI)

https://www.gov.uk/government/organisations/public-health-england

http://www.publichealth.hscni.net

http://www.who.int http://ecdc.europa.eu

http://euroflu.org

Flusurvey, an online flu surveillance system run by the PHE and London School of Hygiene and Tropical Medicine was launched in 2013/14 and will continue into 2014/15. For further information and please see the Flusurvey website.

Detailed influenza weekly reports can be found at the following websites:

Northern Ireland:
http://www.publichealth.hscni.net/directorate-public-health/health-protection/seasonal-influenza

England, Scotland and Wales:
https://www.gov.uk/government/collections/seasonal-influenza-guidance-data-and-analysis#epidemiology

Republic of Ireland:
http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Surveillance/InfluenzaSurveillanceReports/

For further information on the Enhanced Surveillance of Influenza in Northern Ireland scheme or to be added to the circulation list for this bulletin please contact:

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