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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 13 (23 March 2015 – 29 March 2015)

Summary

- GP Influenza activity in Northern Ireland has slightly increased although most indicators remain at a low level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have increased to 29.5 per 100,000 in week 13, 2015, but remain below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population. The OOH consultation rate for flu/FLI has slightly increased in week 13 to 7.6 per 100,000 population. The rate however remained relatively low in most age groups with the highest rate noted among those aged 15-44 years.
- RSV activity has slightly decreased in week 13, 2015.
- Influenza vaccine uptake to 31st January 2015 was 71.7% for those aged 65 and over, 69.0% for those aged under 65 and in an at risk group, 53.8% among 2-4 year old children and 79.6% among children in P1 to P7.
- There have been two new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 57 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 week 13, 2015.
- In week 13 2015, no significant all-cause excess mortality was reported through the EuroMOMO algorithm.
- In week 13, 2015 there were fewer than five attendances for influenza like illness across the contributing emergency departments.

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;
- Emergency department syndromic surveillance system (EDSSS) which includes attendance data from 5 emergency departments in Northern Ireland.

Sentinel GP Consultation Data

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

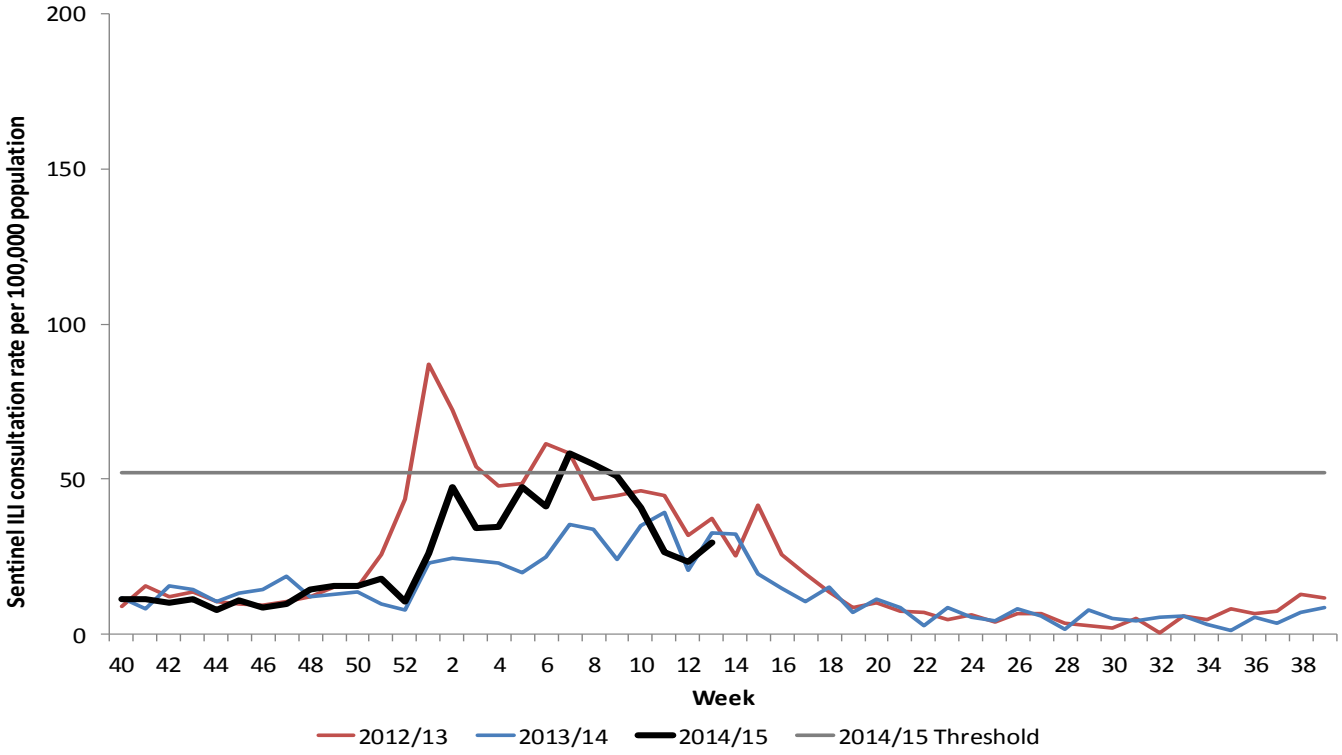


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

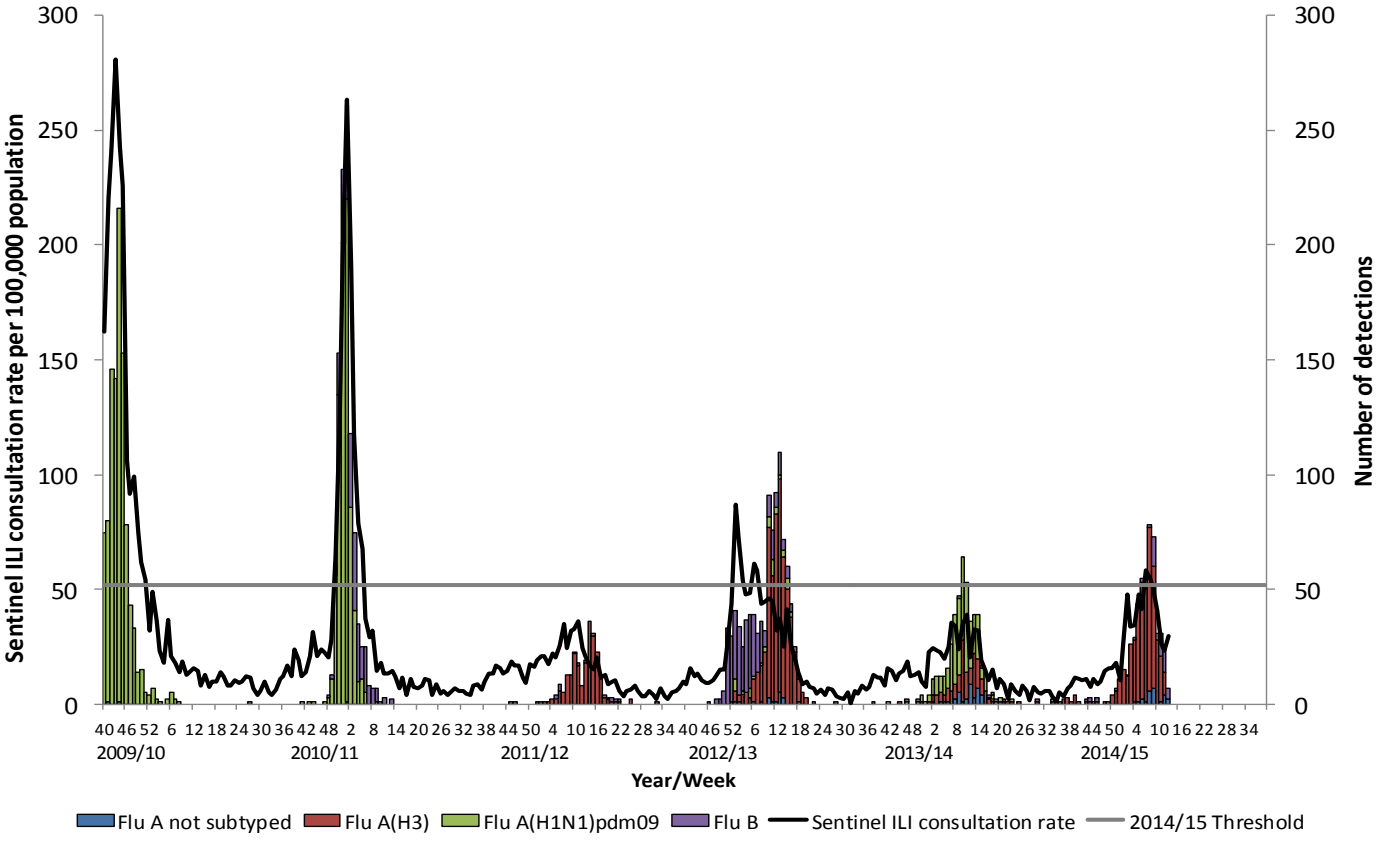
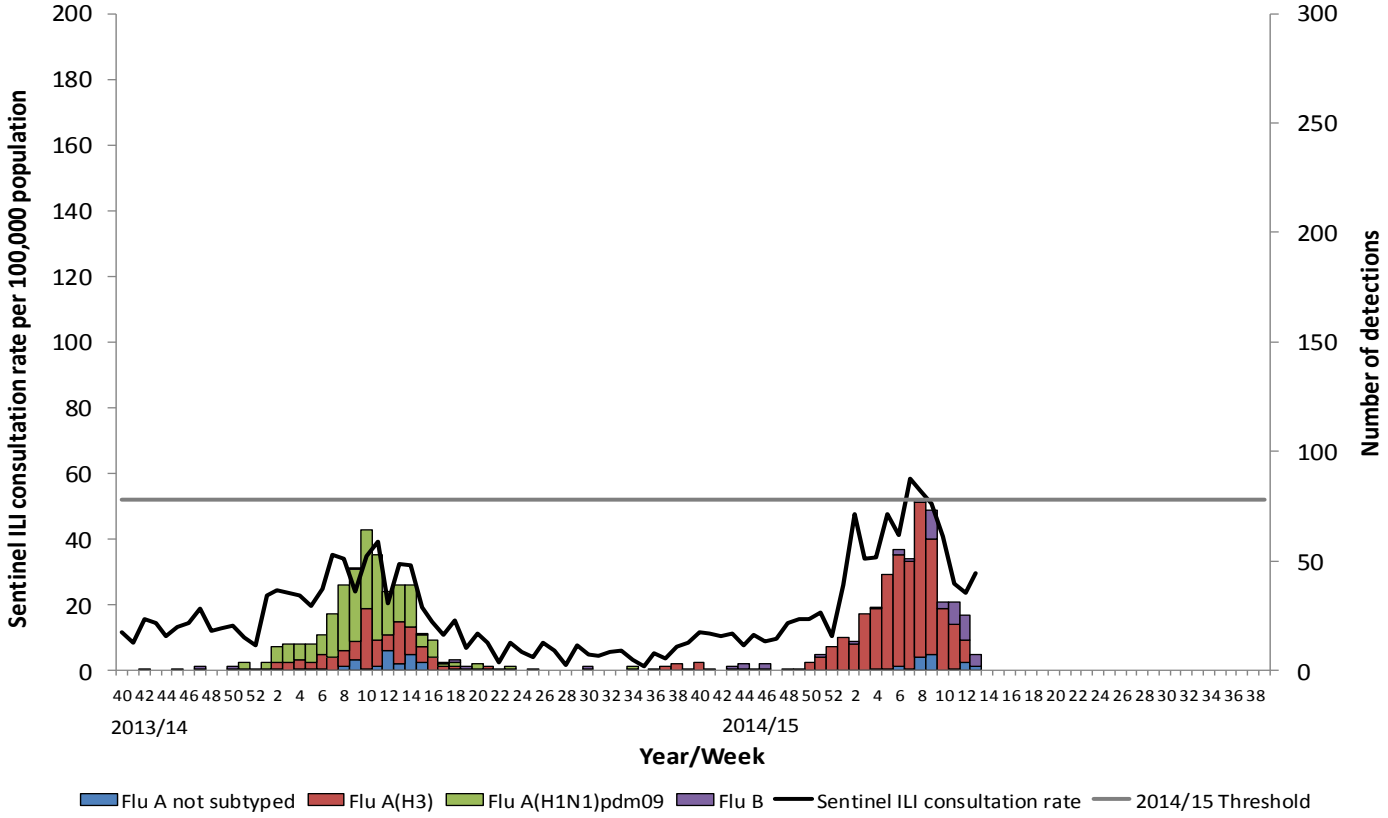


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

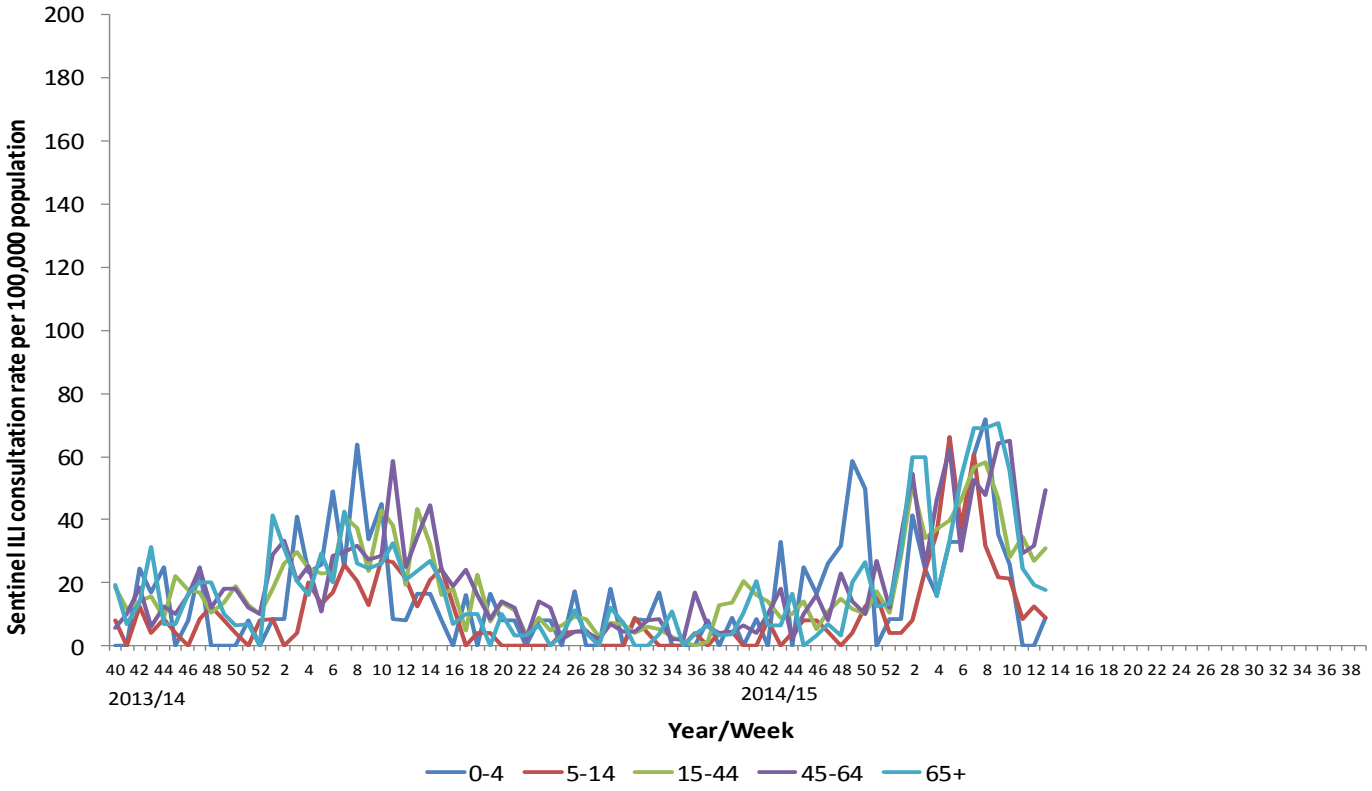


Comment

GP consultation rates have increased in week 13 to 29.5 per 100,000 from 23.5 per 100,000 in week 12, 2015 but remain below the pre-epidemic Northern Ireland 2014/15 threshold of 52.0 per 100,000.

GP Flu/FLI consultations in week 13, 2015 are however 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 slightly increased among most age groups in week 13, 2015, with the exception of the 5-14 and 65 years and over age groups where decreases were noted.

In week 13, GP Flu/FLI consultation rates for combined flu' and flu'-like-illness increased among those aged 0-4, 15-44 and 45-64 years, while rates among those aged 5-14 and 65 years and over have decreased. Those aged 45-64 years again represent the highest age-specific consultation rate this week.

In spite of the slight rise this week, age-specific GP flu/FLI consultations have generally decreased in recent weeks and are close 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

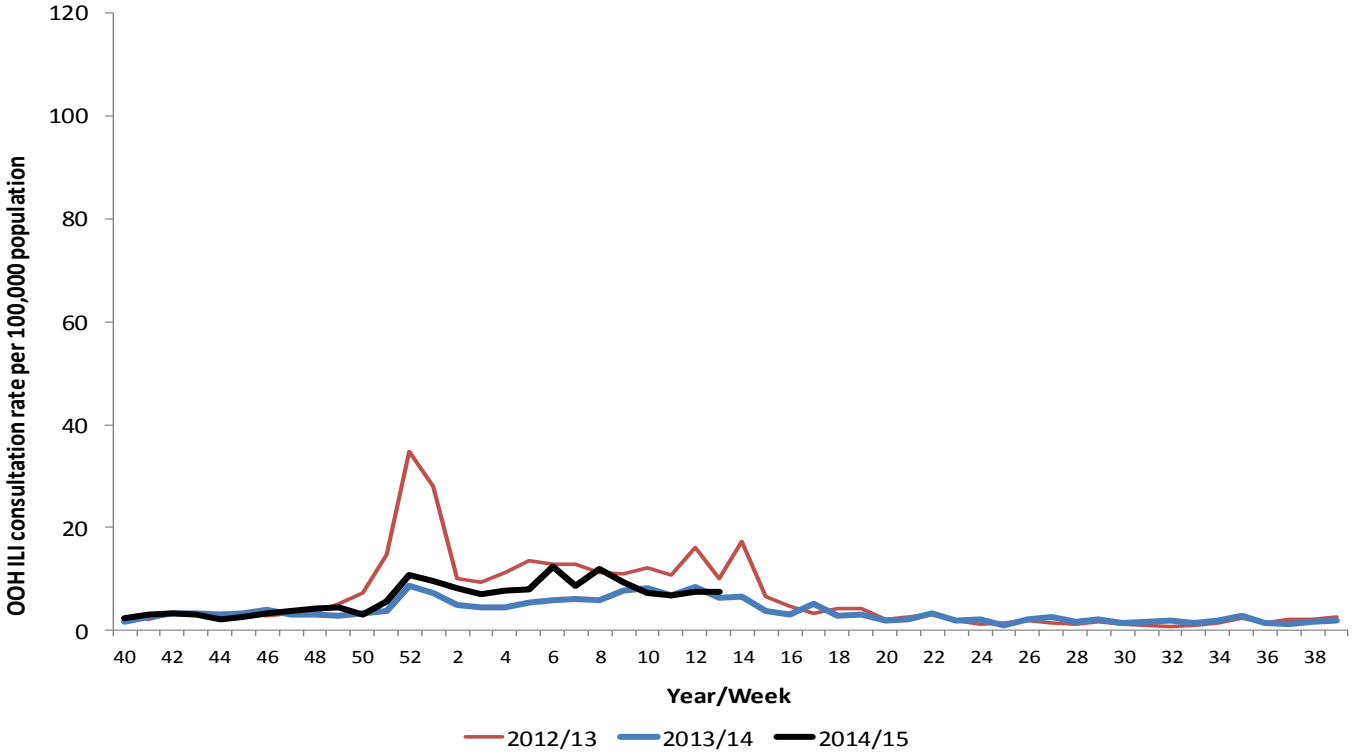
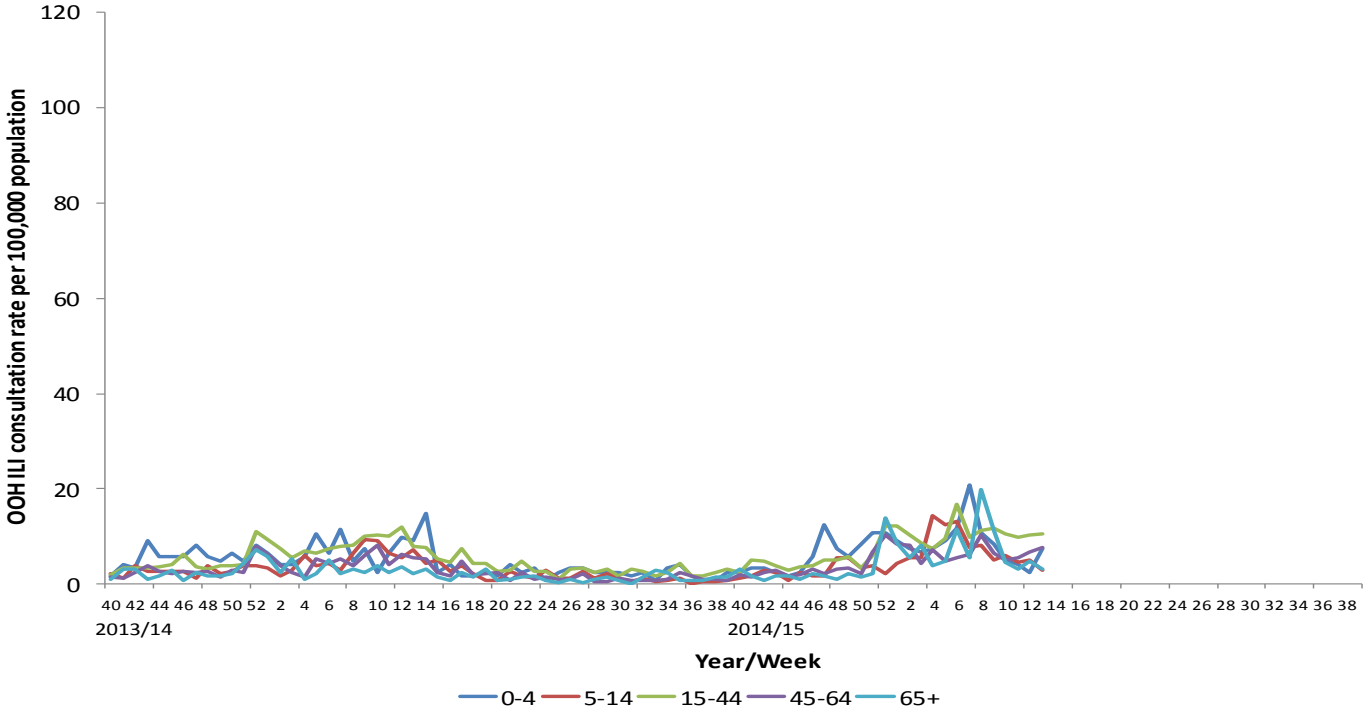


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has increased slightly in week 13. Rates in week 13, 2015 have slightly increased to 7.6 per 100,000 population from 7.4 per 100,000 in week 12, and although higher than the same period in 2013/14, are lower than the same period in 2012/13 (Figures 5 and 6).

The OOH flu/FLI rate has increased among most age groups in week 13, 2015. The OOH consultation rate for flu/FLI has increased among those aged 0-4, 15-44 and 45-64 years, while rates among those aged 5-14 and 65 years and over have decreased compared to the previous week. Rates among those aged 15-44 years again represent the highest age-specific OOH GP flu/FLI consultation rate this week.

The proportion of OOH total calls has also slightly increased from 1.1% in week 12 to represent 1.3% of total calls to the OOH service in week 13, 2015.

Virology Data

Table 1. Virus activity in Northern Ireland, Week 13, 2014/15

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	4	0	0	1	1	0	2	50%
Non-sentinel	100	0	0	1	4	6	5	5%
Total	104	0	0	2	5	6	7	7%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 13, 2014/15

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	33	2	1	4	40	433
5-14	34	1	0	4	39	27
15-64	135	10	12	30	187	125
65+	231	6	12	19	268	129
Unknown	1	0	0	0	1	1
All ages	434	19	25	57	535	715

Table 3. Cumulative virus activity, Week 40 - Week 13, 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	2	1	4	39	433
5-14	7	0	0	0	7	2	27	1	0	4	32	25
15-64	36	2	7	11	56	22	99	8	5	19	131	103
65+	16	1	0	0	17	7	215	5	12	19	251	122
Unknown	0	0	0	0	0	0	1	0	0	0	1	1
All ages	60	3	7	11	81	31	374	16	18	46	454	684

Note

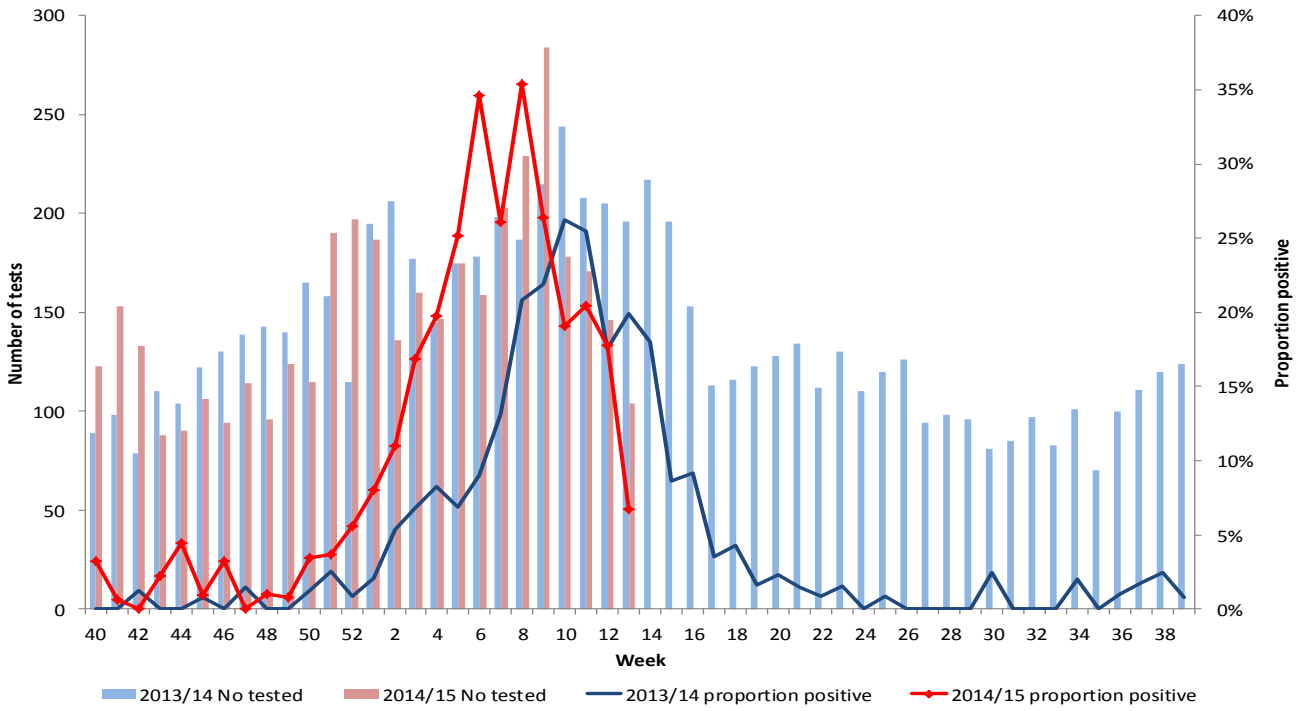
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

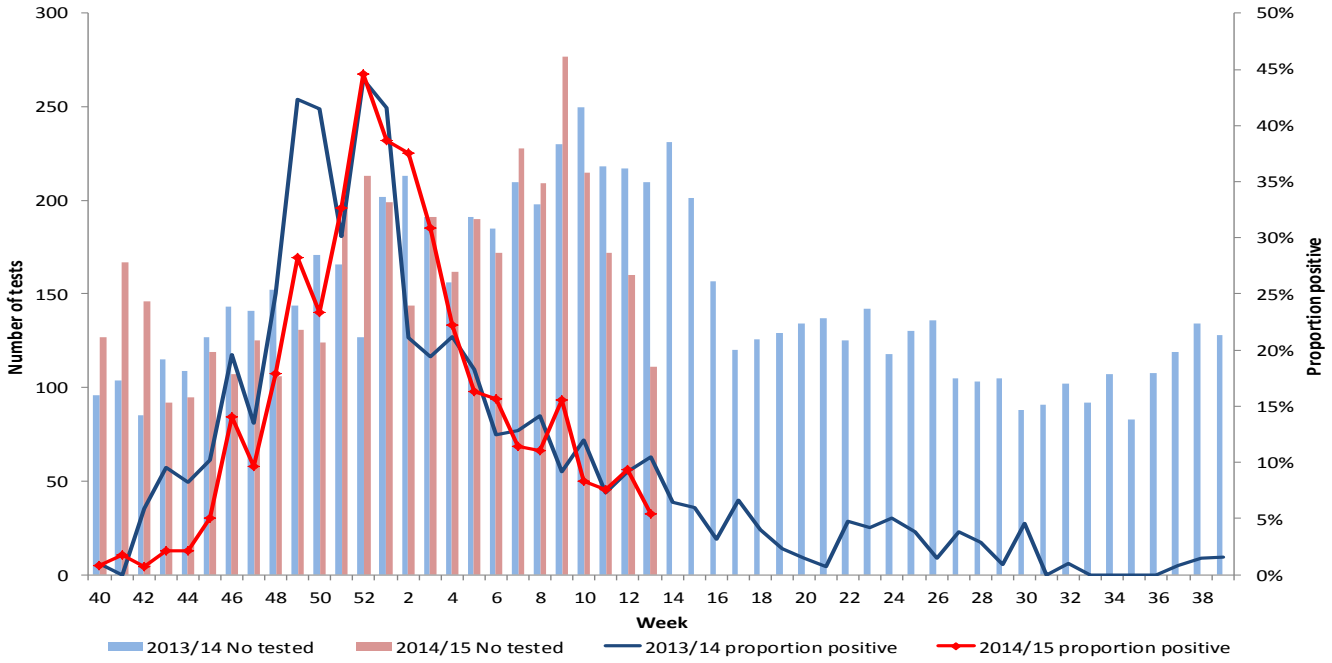
During week 13, 2015 there were 104 specimens submitted for testing, of which 5 were confirmed as influenza B and 2 as influenza A untyped (typing awaited). This is lower than the number detected in week 12 and lower than the number of positive detections during the same period last year. Positivity rates for influenza have decreased this week to 7% from 18% the previous week, however data are provisional and more accurate data will be available in the next bulletin. The proportion positive in week 13, 2015 is lower than the same period in both 2013/14 and 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 week 13, 2015 with positivity rates decreasing to 5% from 9% in week 12, 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 is lower than noted during the same period in 2013/14 but higher than in 2012/13. There have been a total of 715 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 January 2015, provisional data suggested that vaccine uptake for those aged 65 years and over was 71.7%, lower than the same period in last season (73.6%); while 69.0% of those under 65 and in an at risk group had received the vaccine, lower than in the 2013/14 season when 74.4% had received the vaccine during the same period.

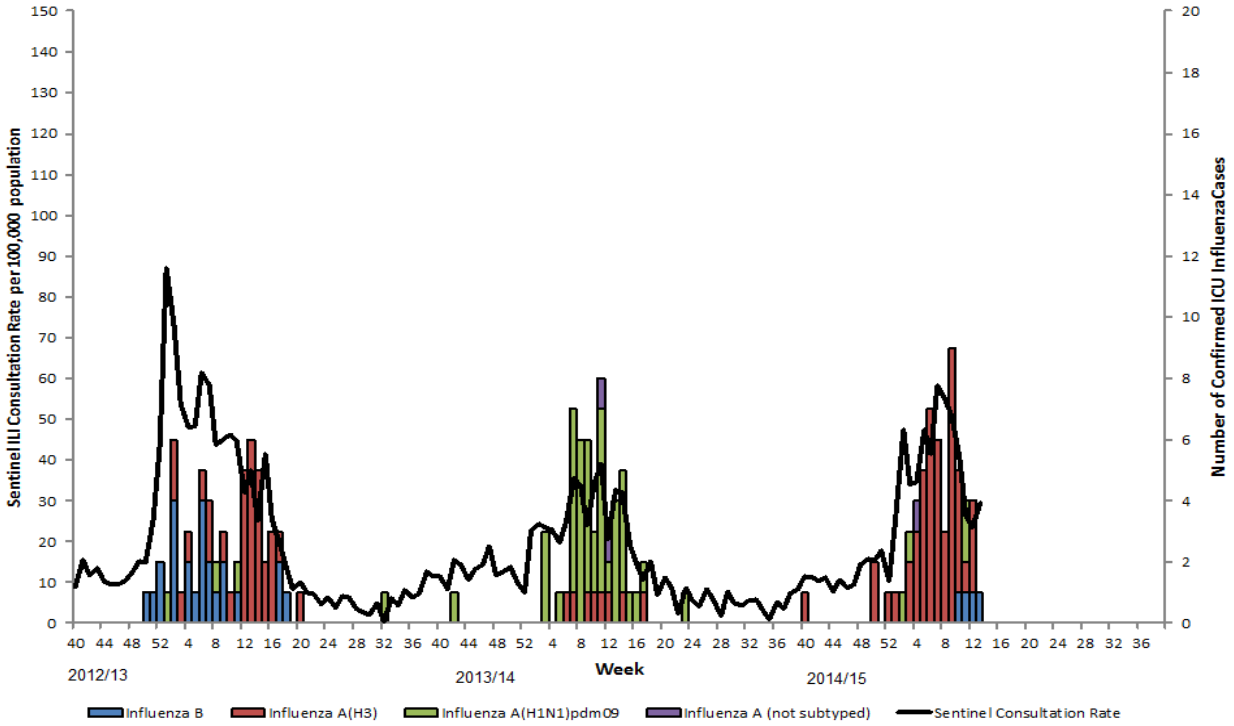
This season for the first time, all children aged between 2 and 4 years and all those in P1 – P7 have been offered the seasonal influenza vaccine. To 31st January 2015, provisional data suggested that vaccine uptake among 2-4 year old children was 53.8%, while provisional uptake among children in P1 – P7 was 79.6%.

Emergency Department Syndromic Surveillance System

In week 13, 2015 there were fewer than five influenza-like-illness (ILI) attendances reported in EDSSS. Later in the season the bulletin will include a graphical representation of ILI attendances if numbers increase.

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 two ICU patients confirmed with influenza since the last bulletin. To date there have been 57 ICU patients with confirmed influenza, of which 48 have been confirmed as influenza A (H3), 4 as influenza A (H1N1)pdm09, 4 as influenza B, and 1 as influenza A untyped (typing awaited) (Figure 9 and table 4).

Up to week 13, 2015, of the 57 ICU patients with confirmed influenza 48 had co-morbidities, were pregnant or were aged over 65, of which provisionally 43 met the criteria for inclusion in an influenza vaccine clinical risk group. To date, 49% (n=21) 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.

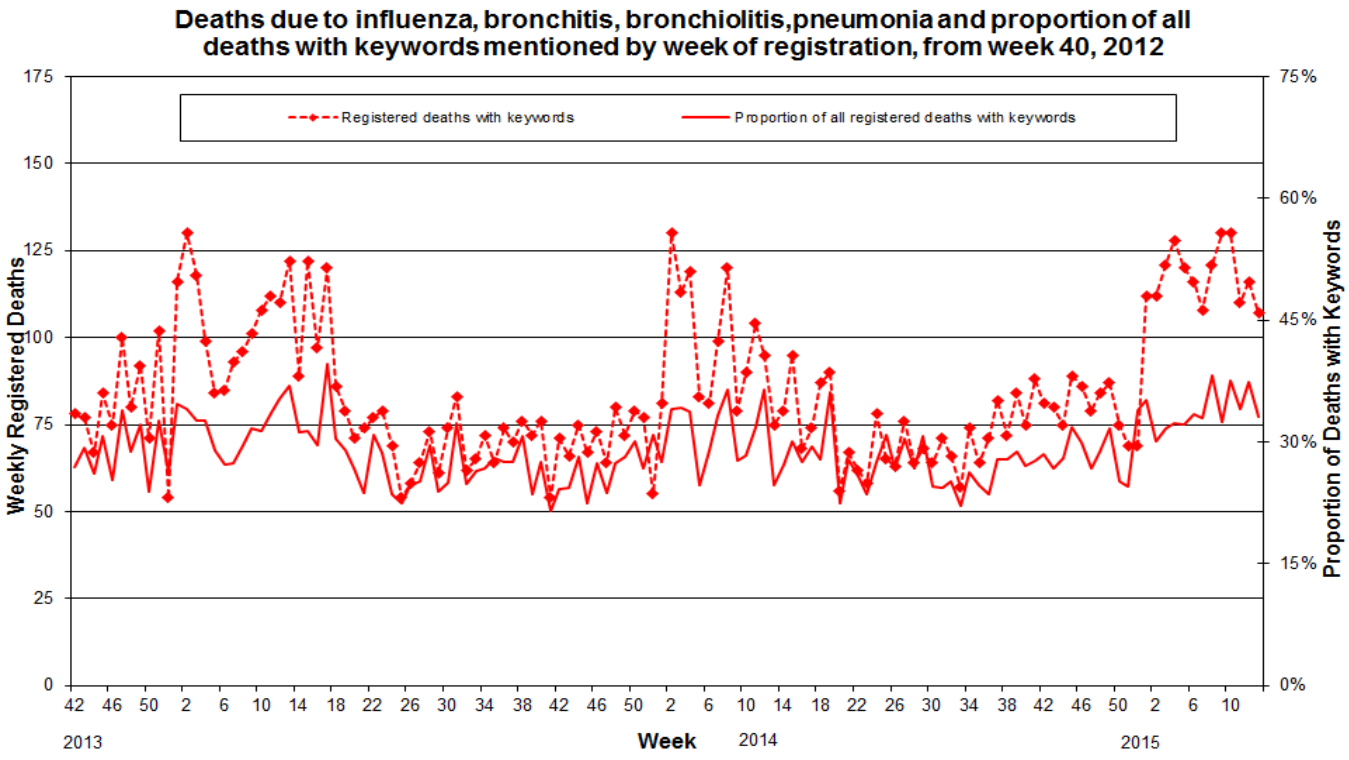
Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in week 13, 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 decreased to 33% in week 13, 2015 from 37% in week 11. In week 13, 2015, there were 323 registered deaths of which 107 related to these specific respiratory infections.

EuroMOMO

No significant excess all-cause mortality was reported in week 13 in Northern Ireland either overall and or in the specific age groups. Significant excess mortality has been reported in weeks 3, 4, 5 and 8, 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 12, 2015:

Influenza activity is decreasing in most reporting countries but the proportion of influenza virus positive samples remains high (41%).

- Influenza A(H1N1)pdm09, A(H3N2) and type B viruses continued to circulate in the Region, with an increasing proportion of type B viruses.
- Hospitalized influenza cases were reported mainly among people aged 65 years and above (53%).
- Excess all-cause mortality among people aged 65 years and above, concomitant with increased influenza activity and the predominance of A(H3N2) viruses, has been observed in most countries participating in the EuroMOMO project (see EuroMOMO).
- Approximately two thirds of the A(H3N2) viruses characterized so far show antigenic differences compared to the virus included in the 2014-2015 northern hemisphere influenza vaccine. The observed reduction in effectiveness of the A(H3N2) component of the vaccine might have contributed to the excess mortality reported among older age groups. The A(H1N1)pdm09 and B components of the vaccine are likely to be effective.
- There are no indications of reduced sensitivity of influenza A or B viruses to the neuraminidase inhibitors oseltamivir or zanamavir

http://www.flunewseurope.org/

Worldwide (WHO) and CDC

As at 23rd March 2015:

Globally, influenza activity remained elevated in the northern hemisphere with influenza A(H3N2) viruses predominating, although some countries in Asia, Europe and North Africa reported high levels of activity associated with influenza A(H1N1)pdm09 viruses.

- In North America, influenza activity was decreasing but remained above the threshold. Influenza A(H3N2) viruses predominated so far this season. During week 11 (March 15-21, 2015), influenza activity continued to decrease, but remained elevated in the United States. Of 12,824 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 11, 1,358 (10.6%) were positive for influenza. Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.2%, above the national baseline of 2.0%. Six regions reported ILI at or above region-specific baseline levels.
- In Europe, influenza activity appeared to have peaked in many countries. Influenza A(H3N2)virus continued to be predominant.
- In northern Africa and the middle East, influenza activity continued to decrease with influenza A(H1N1)pdm09 viruses predominating, except in Egypt, where there was co-circulation with influenza A(H3N2) and influenza B viruses.
- In the temperate countries of eastern Asia, influenza A(H3N2) was predominant Asia with very little influenza A(H1N1)pdm09 virus activity, while in western Asia, influenza A(H1N1)pdm09 and influenza B were predominant.
- In tropical countries of the Americas, influenza activity remained low with mainly A(H3N2) viruses detected.
- In tropical Asia, influenza activity patterns varied with influenza(H1N1)pdm09 predominant in Bhutan and India, influenza A(H3N2) predominant in the Hong Kong Special Administrative Region, and influenza B predominant in south China.
- In the southern hemisphere, influenza activity continued at inter-seasonal levels.
- The term “swine flu” has recently been used incorrectly to refer to the seasonal influenza A(H1N1)pdm09 virus which infects humans during influenza season. The term “swine flu” means influenza viruses that circulate in swine population (pigs) and infect pigs. A(H1N1)pdm09 is not “swine flu” virus. Please see the link below for more information on the terminology of influenza viruses infections in humans.
- Based on FluNet reporting (as of 19 March 2015 13:25 UTC), National Influenza Centres (NICs) and other national influenza laboratories from 95 countries, areas or territories reported data for the time period from 22 February 2015 to 7 March 2015. The WHO GISRS laboratories tested more than 111 964 specimens. 27 176 were positive for influenza viruses, of which 17 711 (65.2%) were typed as influenza A and 9464 (34.8%) as influenza B. Of the sub-typed influenza A viruses, 3383 (33.9%) were influenza A(H1N1)pdm09 and 6594 (66.1%) were influenza A(H3N2). Of the characterized B viruses, 1903 (97.1%) belonged to the B-Yamagata lineage and 57 (2.9%) 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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