

Influenza Weekly Surveillance Bulletin

Northern Ireland, Weeks 19-20 (4 May 2015 – 17 May 2015)

Summary

- GP Influenza activity in Northern Ireland has slightly increased but most indicators remain at a low level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have fluctuated across the two-week period, decreasing to 7.0 per 100,000 in week 19, then increasing to 14.5 per 100,000 in week 20, 2015. Rates remain below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population.
- The OOH consultation rate for flu/FLI increased in week 19 to 5.5 per 100,000 population and decreased to 2.8 per 100,000 population in week 20, 2015. The rate remained low in all age groups in week 20, with the highest rate noted among those aged 0-4 years.
- RSV activity has increased in weeks 19 and 20, 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 two new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 68 ICU patients with confirmed influenza this season to date.
- There was one death in ICU patients with laboratory confirmed influenza reported since the last bulletin. There have been ten 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 19 or 20, 2015.
- EuroMOMO reported no excess all-cause mortality in weeks 19 or 20, 2015.

Please note that this is the last bulletin of the 2014-15 influenza season, the PHA would like to extend their thanks to all who have collaborated and contributed throughout the 2014-15 influenza season.

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

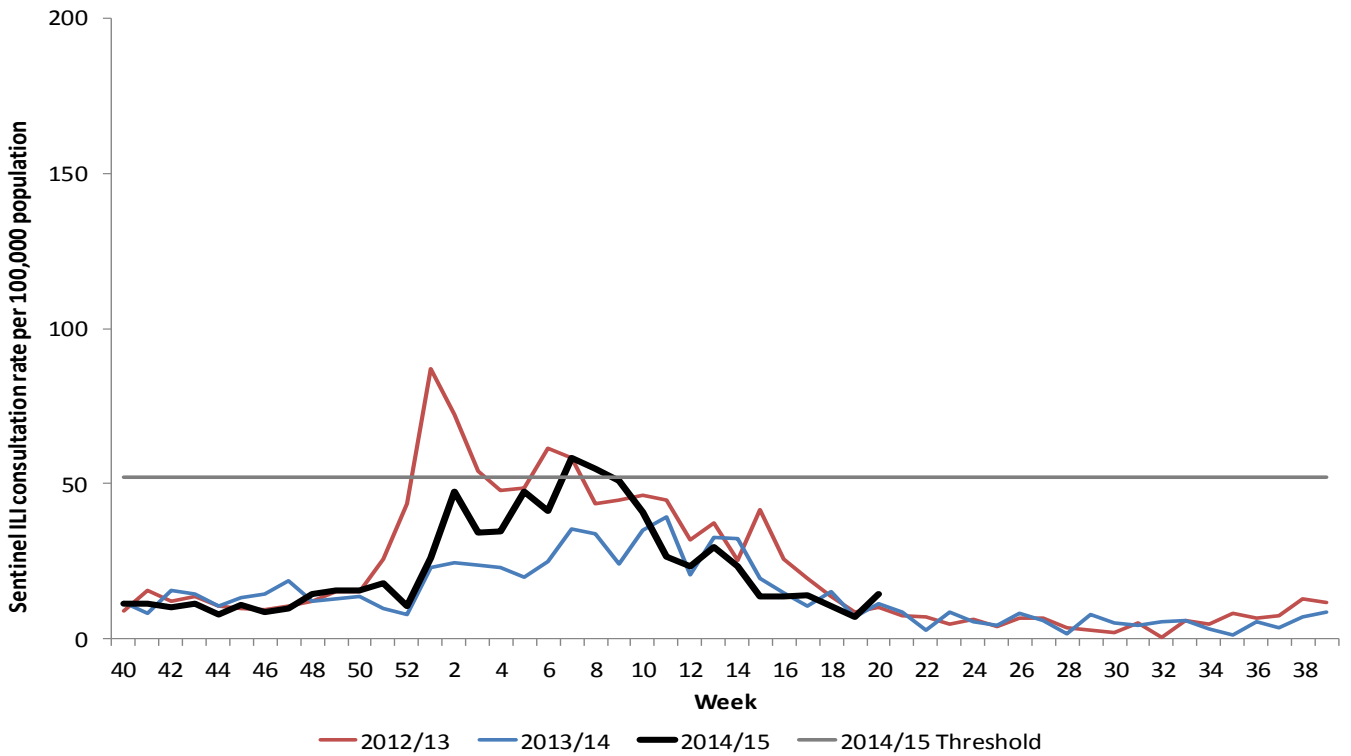


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

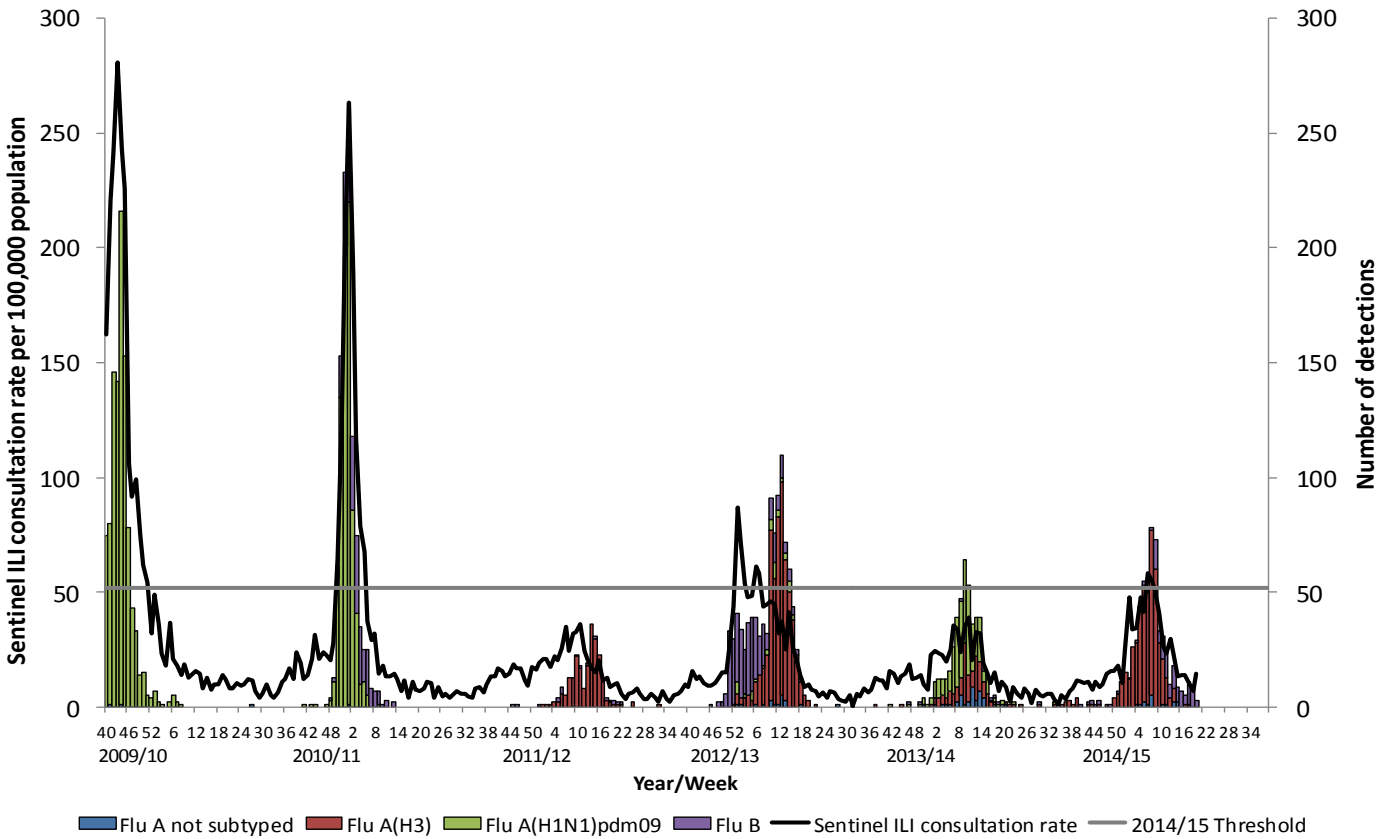
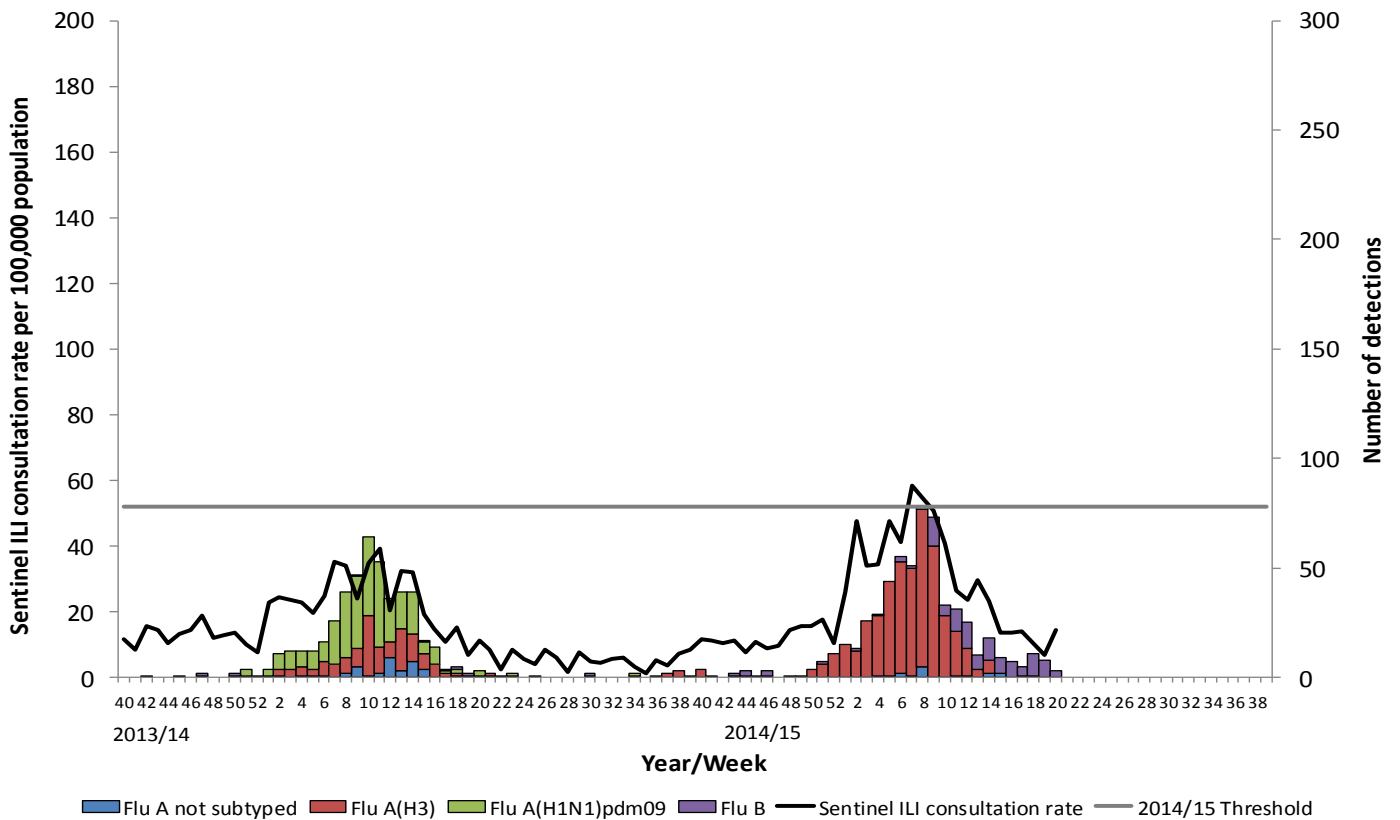


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

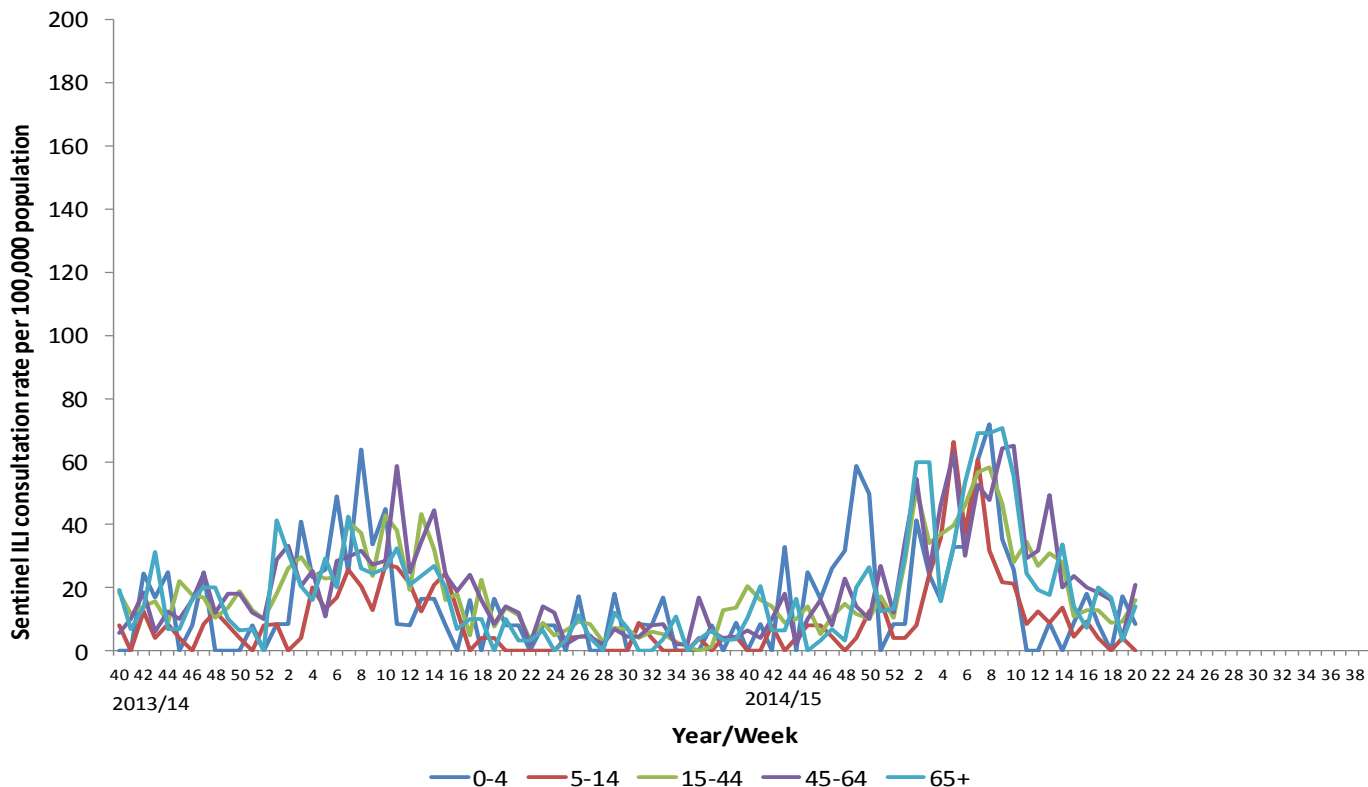


Comment

GP consultation rates have fluctuated across the two-week period, decreasing in week 19 to 7.0 per 100,000 population from 10.4 the previous week, and then increasing in week 20 to 14.5 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 20, 2015 are higher than noted during the same period in both the 2013/14 and 2012/13 seasons (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 fluctuated among almost all age groups across weeks 19 and 20, 2015.

In weeks 19 and 20, 2015 GP consultation rates for combined flu' and flu'-like-illness among those aged 0-4, 5-14, 45-64 and 65 years and over have fluctuated across the period, with rates among the younger age groups increasing in week 19 then decreasing in week 20, while rates among the older age groups decreased in week 19 and increased in week 20. Please note that small numbers may have contributed to fluctuations in rates.

GP Flu/FLI consultation rates among those aged 15-44 years have slightly increased across weeks 19 and 20, while those aged 45-64 years were the highest age-specific consultation rate in week 20, 2015. Age-specific GP flu/FLI consultations have remained relatively low in recent weeks and for most age groups are similar to the levels seen near the beginning of the season (Figure 4).

Out-of-Hours (OOH) Centres Call Data

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

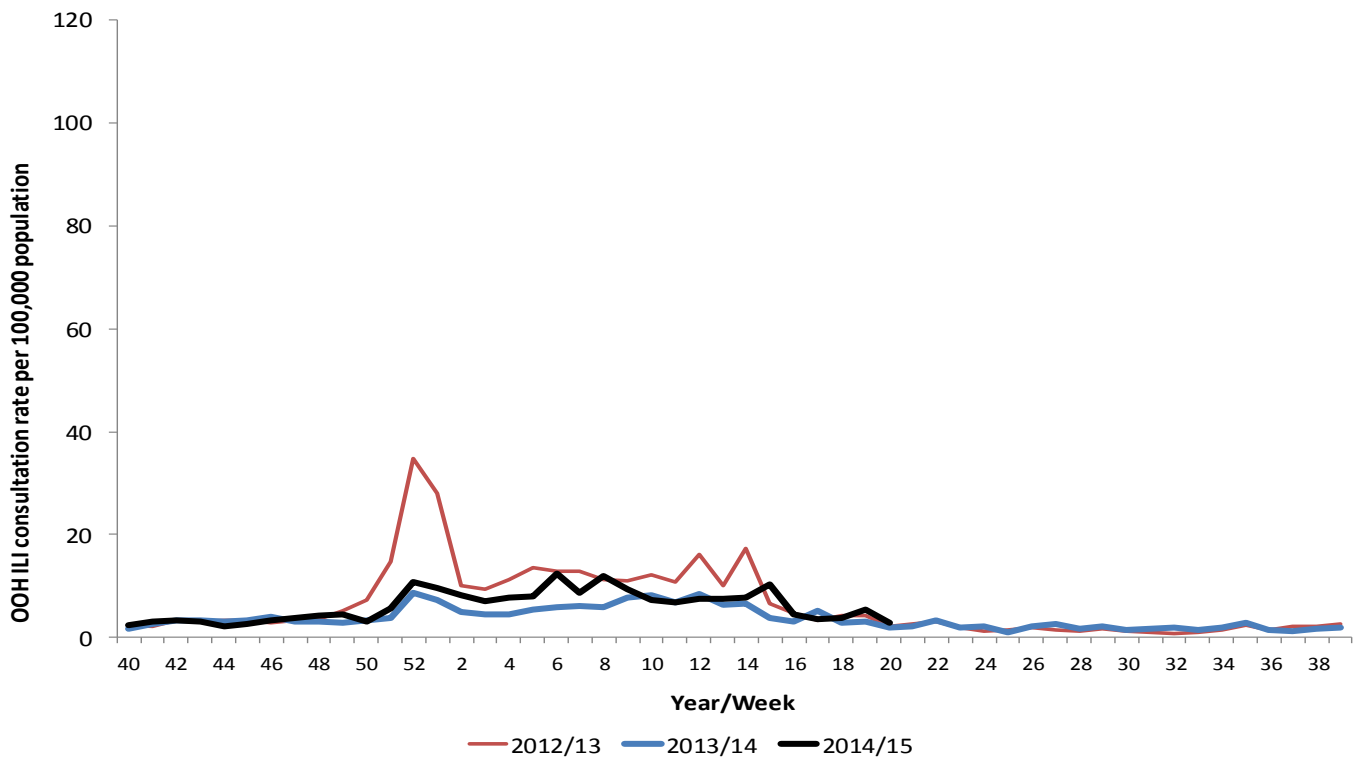
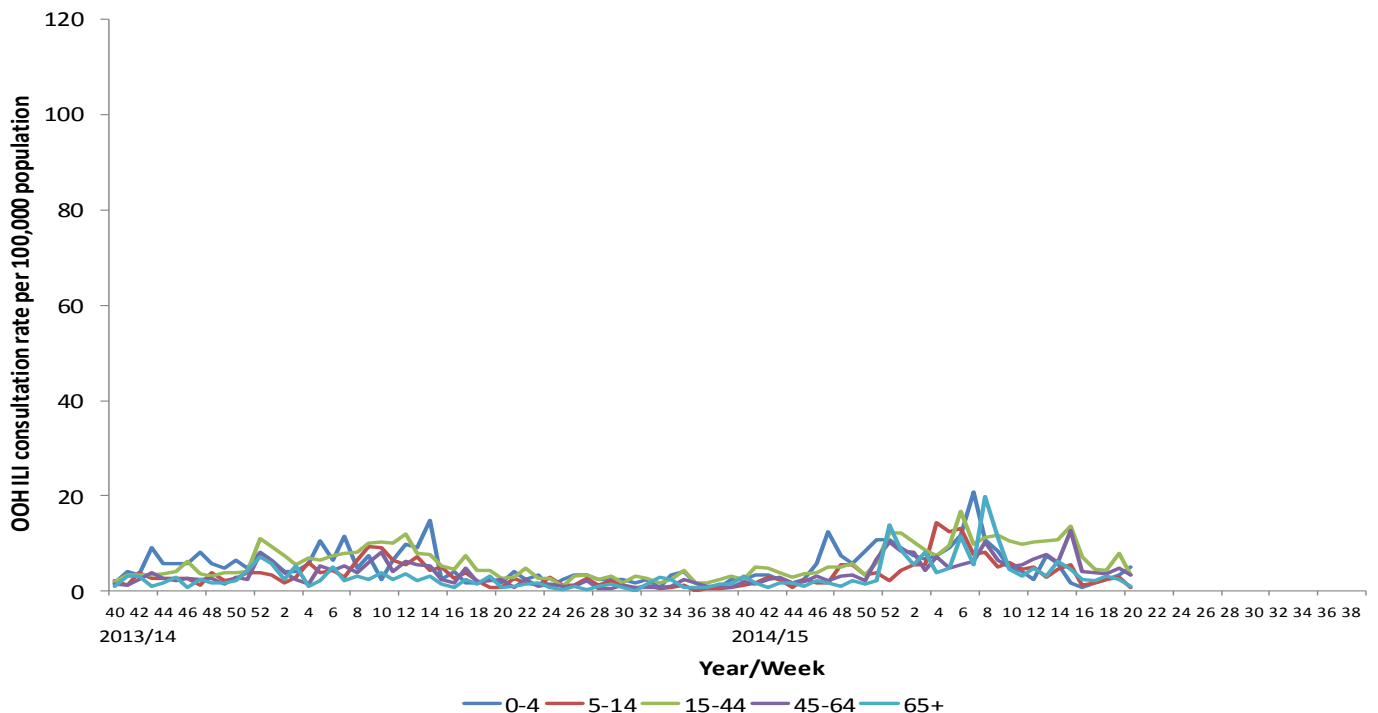


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has fluctuated in weeks 19 and 20. Rates in week 19, 2015 increased to 5.5 per 100,000 population from 3.7 per 100,000 in week 18, while rates in week 20 decreased to 2.8 per 100,000 population. The OOH consultation rate in week 20, 2015 is also slightly higher than noted during the same period in both 2013/14 and 2012/13 (Figures 5 and 6).

The OOH consultation rate for flu/FLI increased slightly among those aged 0-4 years in weeks 19 and 20, while rates among those aged 65 years and have over steadily decreased across the period. OOH flu/FLI rates among those aged 5-14, 15-44 and 45-64 years have fluctuated across the two-week period, increasing in week 19 and then decreasing in week 20. Rates among those aged 0-4 years represent the highest age-specific OOH GP flu/FLI consultation rate in week 20, 2015.

The proportion of OOH total calls has also fluctuated slightly across weeks 19 and 20, 2015 but has represented less than 1% of total calls to the OOH service throughout.

Virology Data

Table 1. Virus activity in Northern Ireland, Week 19 - 20, 2014/15

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	2	0	0	0	2	0	2	100%
Non-sentinel	156	0	0	0	9	14	9	6%
Total	158	0	0	0	11	14	11	7%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 20, 2014/15

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	33	3	3	7	46	451
5-14	34	1	0	6	41	29
15-64	145	14	7	62	228	136
65+	243	6	6	35	290	134
Unknown	1	0	0	0	1	1
All ages	456	24	16	110	606	751

Table 3. Cumulative virus activity, Week 40 - Week 20, 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	7	45	451
5-14	7	0	0	0	7	2	27	1	0	6	34	27
15-64	40	4	2	18	64	22	105	10	5	44	164	114
65+	16	1	0	0	17	8	227	5	6	35	273	126
Unknown	0	0	0	0	0	0	1	0	0	0	1	1
All ages	64	5	2	18	89	32	392	19	14	92	517	719

Note

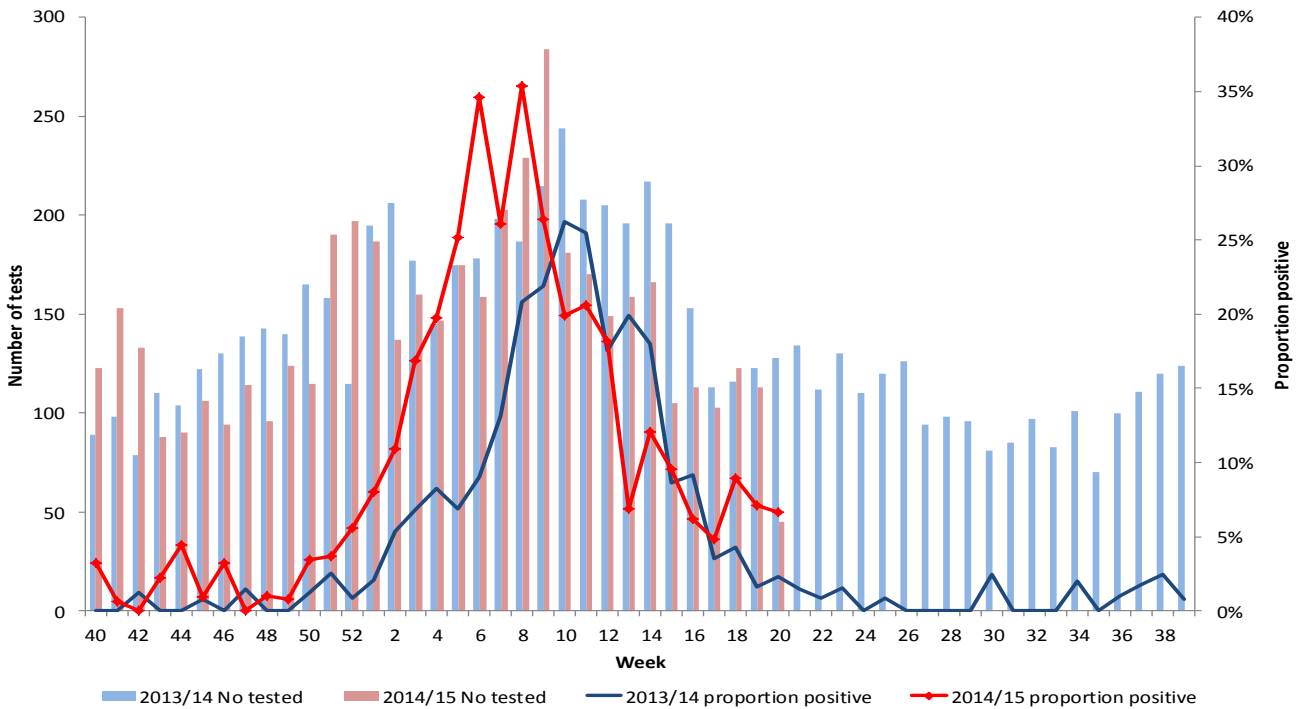
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

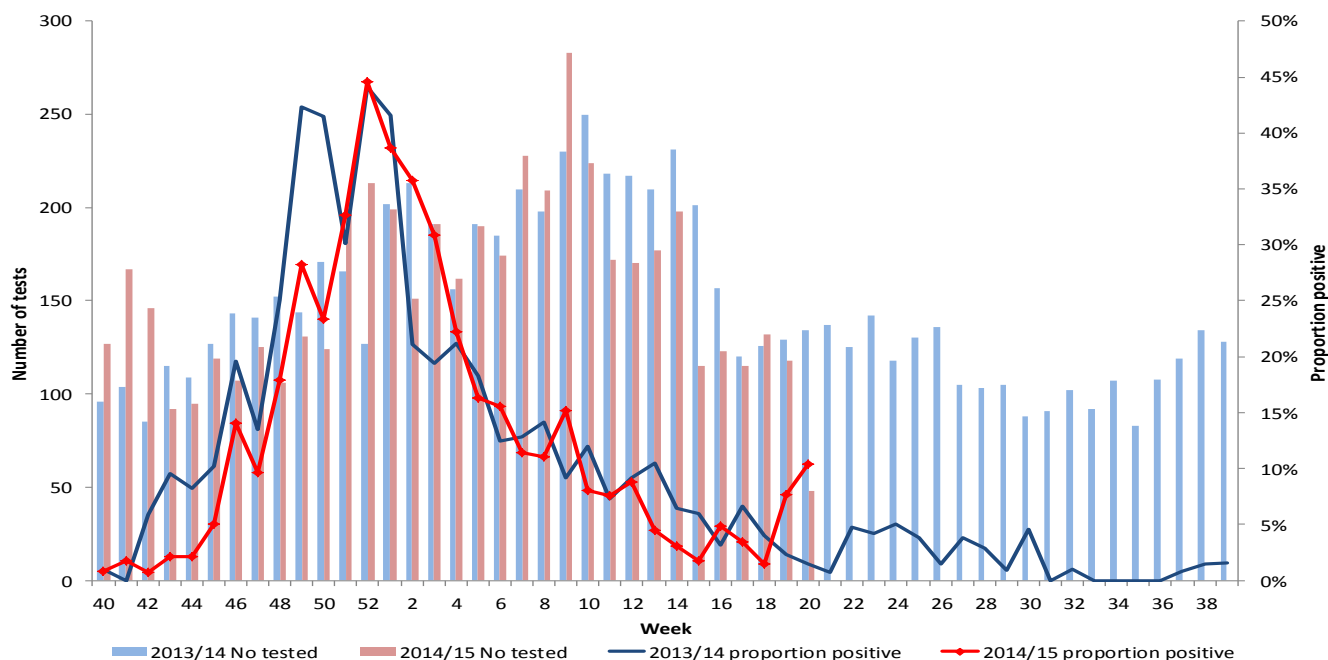
During weeks 19 and 20, 2015 there were 158 specimens submitted for testing, of which 11 were confirmed as influenza B. The number of detections decreased weekly from week 18. The number of positive detections in week 20, 2015 is however similar to the number of positive detections during the same period in past two years. Positivity rates for influenza decreased from 9% in week 18 to 7% in week 19, remaining stable in week 20- however data are provisional and more accurate data will be available in the end of season report. The proportion of samples tested that were positive for flu in week 20, 2015 is higher than the same period in both the 2013/14 and 2012/13 influenza seasons (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 14 positive detections of RSV in weeks 19 and 20, 2015 combined, with positivity rates increasing from 2% in week 18 to 8% and then 10% in weeks 19 and 20 respectively—however this should be interpreted with caution as the most recent week’s data is provisional – more accurate data will be available in the end of season report. The positivity rate in weeks 19 and 20 are higher than noted during the same period in both 2012/13 and 2013/14 . Since the beginning of the 2014-15 influenza season there have been a total of 751 detections of RSV, of which 60% fall within the 0-4 years age group (Figure 8, Table 2).

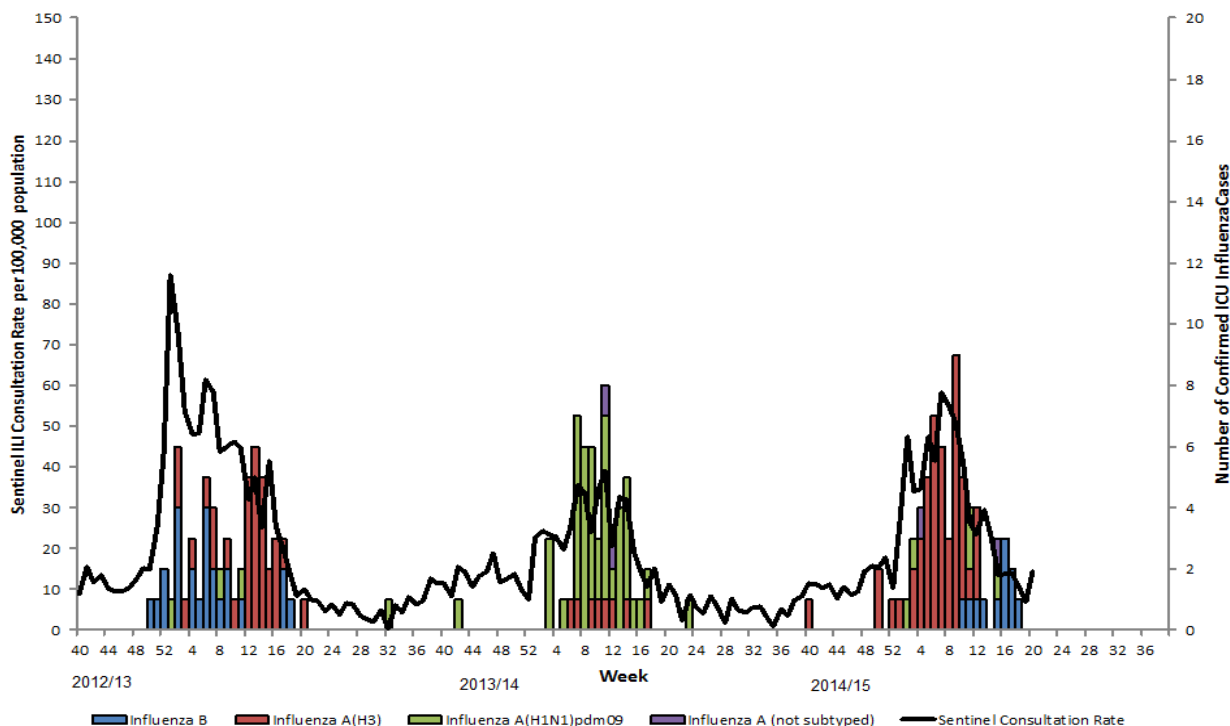
Influenza Vaccine Uptake

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 two new ICU patients confirmed with influenza since the last bulletin. To date there have been 68 ICU patients with confirmed influenza, of which 48 have been confirmed as influenza A (H3), 13 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 20, 2015, of the 68 ICU patients with confirmed influenza 57 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, 48% (n=24) of those meeting the criteria for inclusion in a clinical risk group are reported to have received the influenza vaccine.

There was one death in ICU patients with laboratory confirmed influenza reported since the last bulletin. To date, there have been ten deaths in ICU patients with laboratory confirmed influenza.

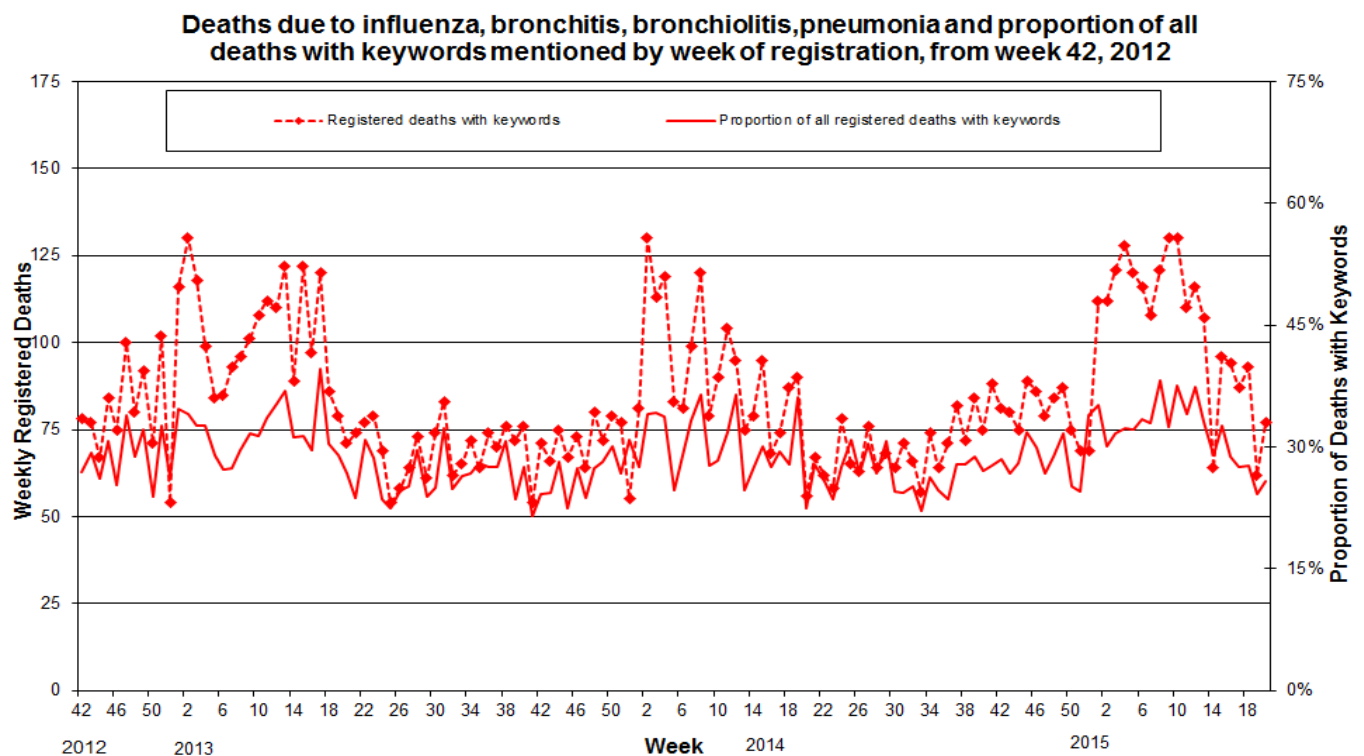
Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in weeks 19 or 20, 2015. There have been a total of 28 confirmed influenza outbreaks reported 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 decreased from 28% in week 18, to 24% in week 19, but has risen slightly to 26% in week 20, 2015. In week 20 there were 299 registered deaths of which 77 related to the specific respiratory infections.

EuroMOMO

EuroMOMO reported no overall all-cause excess mortality in weeks 19 or 20, 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 19, 2015:

Influenza activity continued to decrease in most of the 49 reporting countries in the WHO European Region: the proportion of influenza virus-positive specimens from sentinel sources decreased from 14% in week 18 to 9% in week 19, the first time since week 51/2014 that the positivity rate has been below the 10% seasonal threshold.

- Forty countries reported low intensity influenza activity.
- Influenza A(H1N1)pdm09, A(H3N2) and type B viruses continued to circulate in the Region; type B viruses accounted for 67% of sentinel detections in week 19/2015.
- Excess all-cause mortality among people aged 65 years and over, 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 the excess mortality has abated (see the EuroMOMO website).
- Owing to the antigenic drift in a proportion of A(H3N2) viruses was observed in the 2014–2015 influenza season, the vaccine for the northern hemisphere 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 of the vaccine are likely to protect against circulating viruses.
- Of all the influenza viruses screened for reduced susceptibility to neuraminidase inhibitors, only five A(H3N2) and two A(H1N1)pdm09 viruses showed genetic or phenotypic evidence of reduced susceptibility.

<http://www.flunewseurope.org/>

Worldwide (WHO) and CDC

As at 18th May 2015:

Globally, influenza activity has been low. In the northern hemisphere influenza activity was nearing inter-seasonal levels and in the southern hemisphere influenza activity remained low. Countries in the tropical zones reported low influenza activity with the exception of some countries in tropical Asia and west Africa.

- In North America influenza activity continued to decrease and was near inter-seasonal levels. Continued but decreasing influenza B circulation resulted in a slow decline of the influenza season. During week 18 (May 3-9, 2015), influenza activity continued to decrease in the United States. Of 7,533 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 18, 372 (4.9%) were positive for influenza. Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 1.2%, which is below the national baseline of 2.0%. All 10 regions reported ILI below region-specific baseline levels.
- In Europe, influenza activity mainly associated with influenza B virus continued to decline in most countries.
- In northern Africa, influenza activity decreased to almost inter-seasonal levels with mainly influenza B detections in the last weeks.
- In western Asia, influenza activity decreased further, with predominantly influenza A(H1N1)pdm09 detections in recent weeks, especially in Jordan.
- In the temperate countries of Asia, there was little to no activity throughout the region with only a few influenza B detections in the past weeks.
- In tropical countries of the Americas, influenza activity remained low in most countries, with the exception of Guatemala which showed a slight increase in influenza A(H3N2) detections.
- In tropical Asia, influenza activity was low and in general continued to decrease in most countries. In west Africa, several countries reported increased influenza detections.
- In the southern hemisphere, influenza activity remained at low or inter-seasonal levels.
- Based on FluNet reporting (as of 12 May 2015 14:05 UTC), National Influenza Centres (NICs) and other national influenza laboratories from 86 countries, areas or territories reported data for the time period from 19 April 2015 to 2 May 2015. The WHO GISRS laboratories tested more than 51 009 specimens. 4728 were positive for influenza viruses, of which 1234 (26.1%) were typed as influenza A and 3494 (73.9%) as influenza B. Of the sub-typed influenza A viruses, 456 (53.8%) were influenza A(H1N1)pdm09 and 391 (46.2%) were influenza A(H3N2). Of the characterized B viruses, 285 (94.7%) belonged to the B-Yamagata lineage and 16 (5.3%) 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/>

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