

## Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 40 (28 September 2015 – 4 October 2015)

This is the first bulletin of the 2015/16 season and will be released initially on a fortnightly basis. However once flu activity begins to increase it will be produced on a weekly basis.

This bulletin provides an update on trends since the last bulletin, which was published in week 20 (May 2015), and the end of season report for 2014/15.

(<http://www.publichealth.hscni.net/publications/surveillance-influenza-northern-ireland-2014-2015>).

### Summary

- Influenza activity in Northern Ireland remains at low levels.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) remain below the 2015/16 pre-epidemic Northern Ireland threshold of 49.4 per 100,000 population at 8.0 per 100,000 population in week 40, with all indicators remaining at low levels.
- The OOH consultation rate for flu/FLI remained low over the summer period and continues to be low in week 40 at 2.5 per 100,000 population. The rate remained low in all age groups with the 15-44 and 45-64 years age groups showing a slight increase.
- RSV activity has remained low over the summer period and in week 40.
- There were no admissions to ICU with confirmed influenza reported in week 40, 2015.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in week 40, 2015.
- There were no confirmed influenza outbreaks reported to PHA in week 40, 2015.

### Introduction

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

Surveillance systems include:

- 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 2013/14 - 2015/16

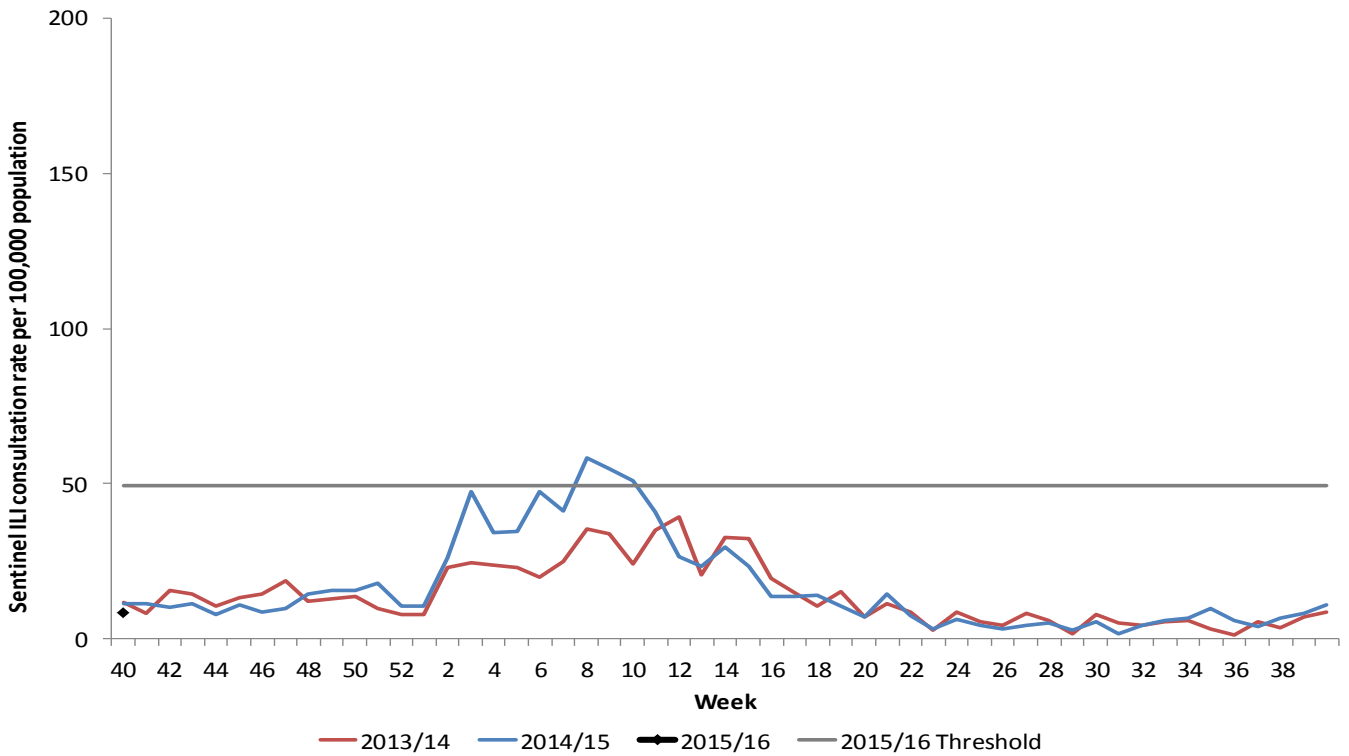
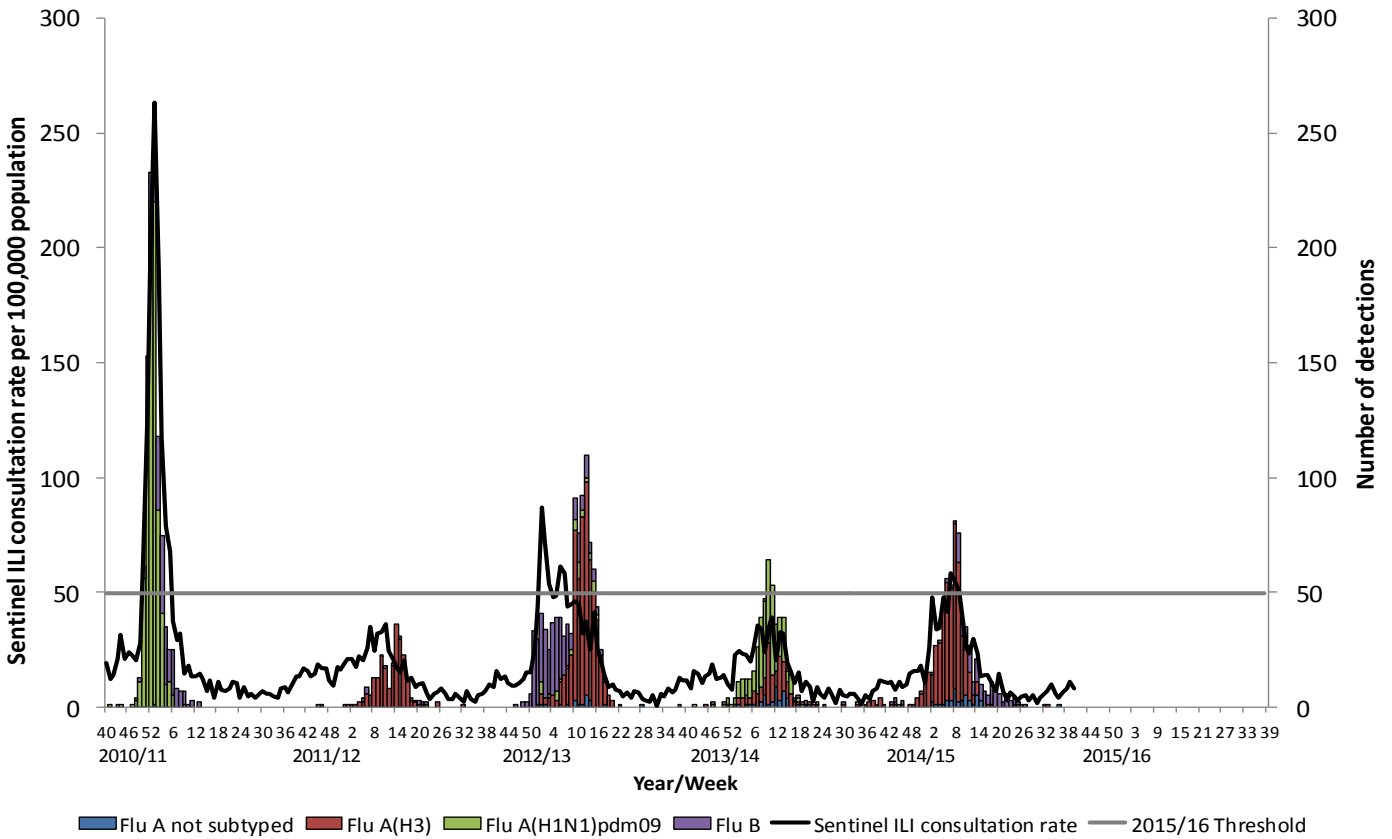
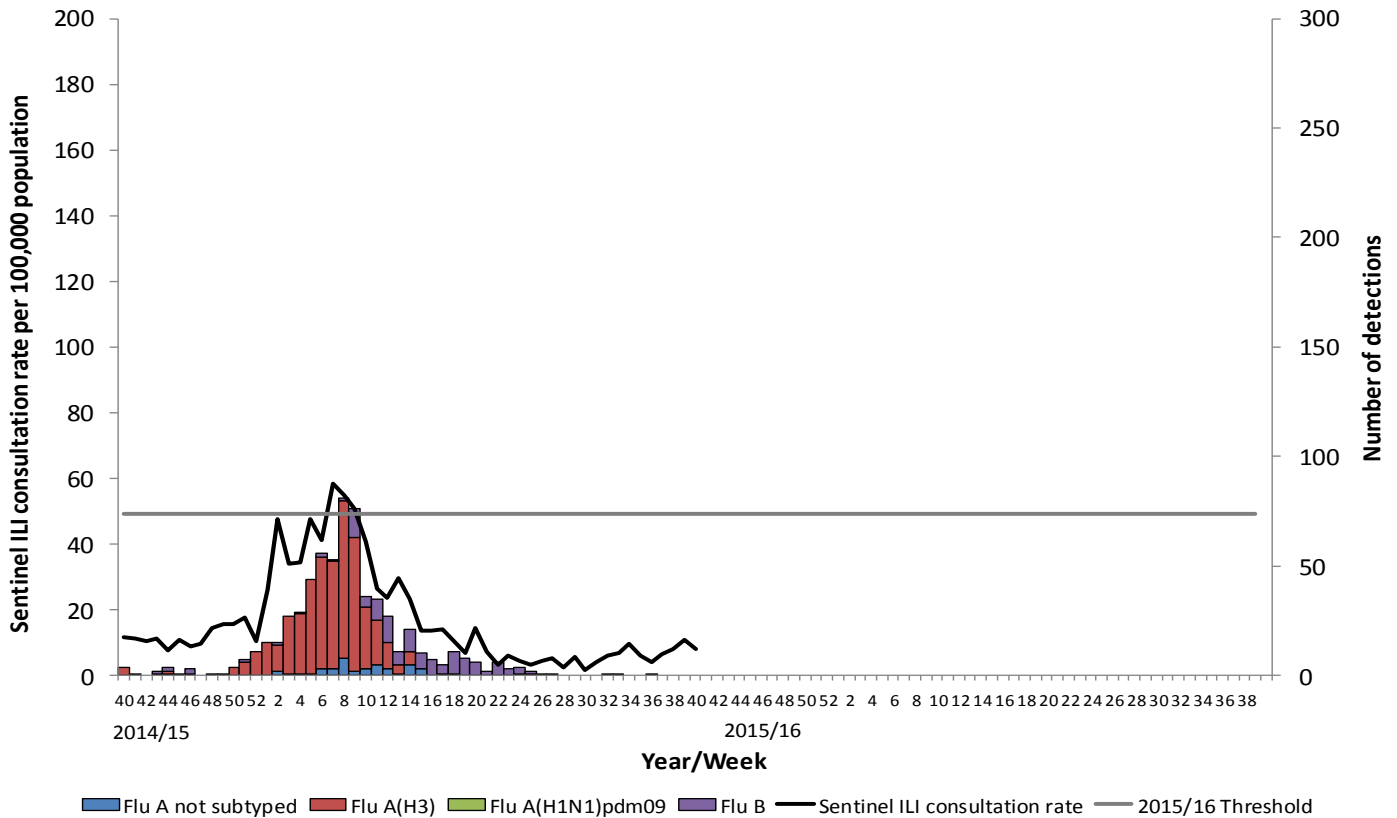


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2010/11 – 2015/16



**Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2014**

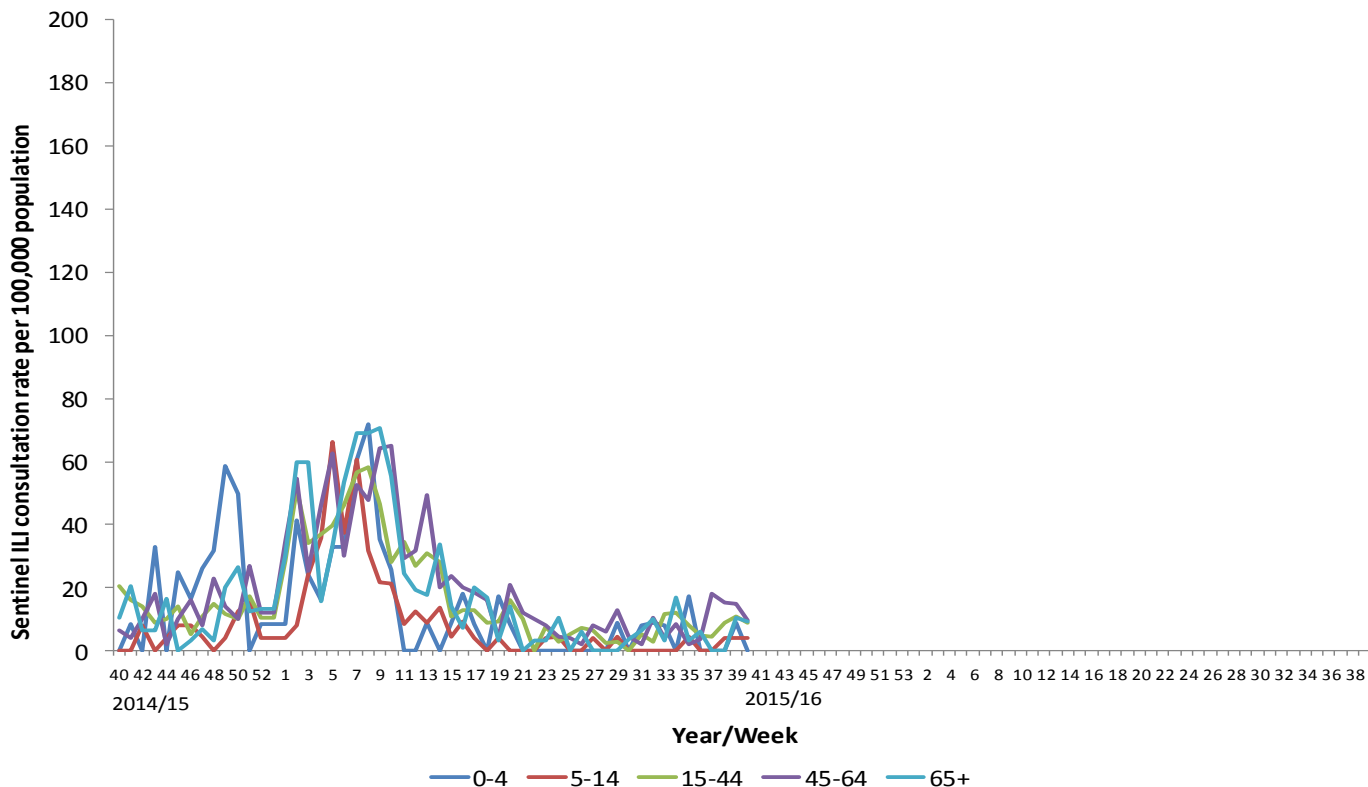


**Comment**

GP consultation rates remained relatively low throughout the summer period from weeks 21 to 39, peaking at 10.9 per 100,000 population in week 39. In week 40 the GP consultation rate remained low and decreased from the previous week to 8.0 per 100,000 population. The rate for week 40, 2015 is lower than the same week in previous years.

Rates remain well below the new pre-epidemic Northern Ireland 2015/16 threshold of 49.4 per 100,000 population (Figures 1, 2 and 3).

**Figure 4. Sentinel GP age-specific consultation rates for flu/FLI from week 40, 2014**



**Comment**

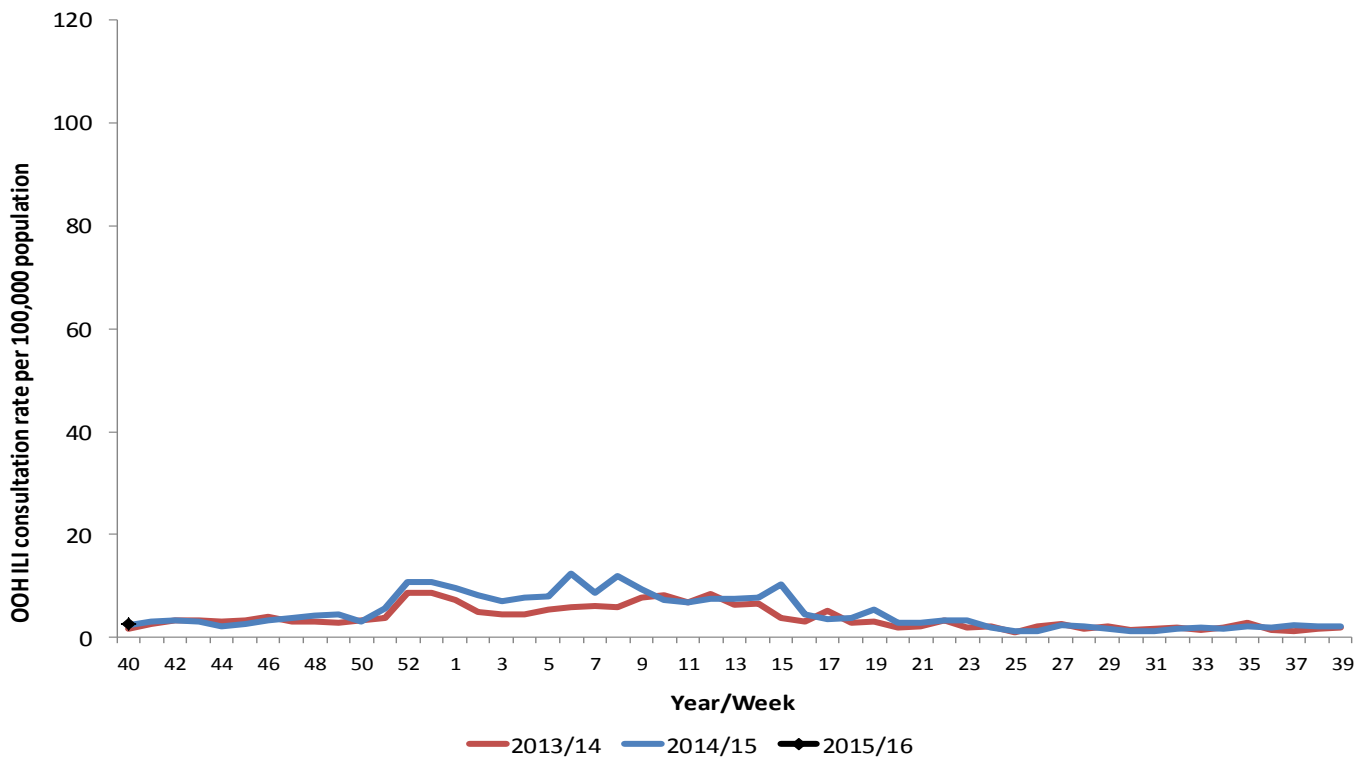
GP consultations remained low for all age groups throughout the summer from weeks 21 to 39, however small numbers may have contributed to some fluctuations in rates throughout the summer period.

In week 40 all age groups showed a decrease in consultation rates when compared with the previous week, with age-specific rates remaining at similar levels to those observed during the summer months.

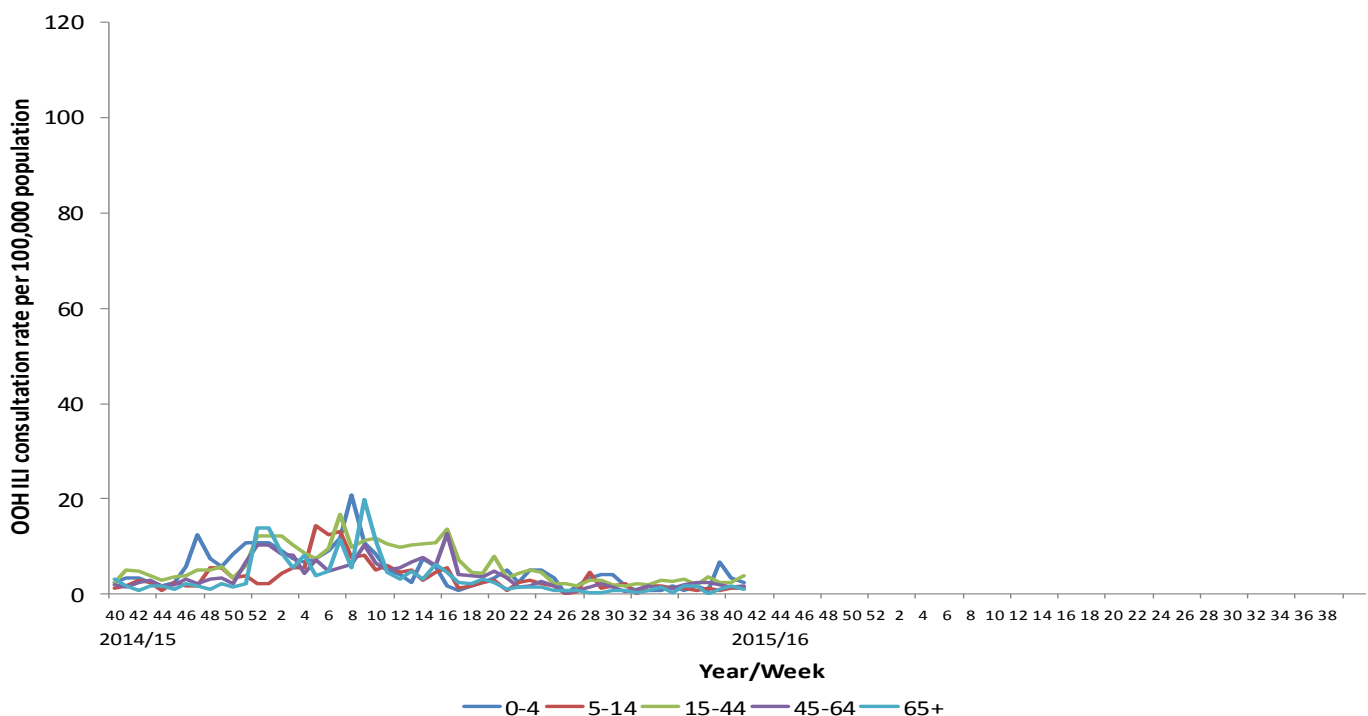
In general, GP consultation rates for combined flu’ and flu’-like-illness in all age groups have remained fairly steady in recent weeks; however, rates among those aged 45-64 years have been noticeably higher than other age groups while still remaining low. The highest age-specific consultation rate in week 40, 2015, was in the 45-64 years age group (Figure 4).

## Out-of-Hours (OOH) Centres Call Data

**Figure 5. OOH call rate for flu/FLI, 2013/14 – 2015/16**



**Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2014**



### Comment

The OOH consultation rate for flu/FLI remained low throughout the summer period, peaking at 3.4 per 100,000 population in weeks 22 and 23. Similar to previous years the OOH flu/FLI consultation rate was also low in week 40 at 2.5 per 100,000 population (compared with 1.7 and 2.3 per 100,000 population in week 40, 2013 and 2014 respectively). The OOH flu/FLI rate remained low in all age groups, similar to the same period in 2014/15. In week 40, 2015 age-

specific rates increased among the 15-44 and 45-64 years age groups while rates among all other age groups decreased in comparison with week 39 (Figures 5 and 6).

## Virology Data

**Table 1. Virus activity in Northern Ireland, Week 40, 2015/16**

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	1	0	0	0	0	0	0	0%
Non-sentinel	85	0	0	0	0	4	0	0%
<b>Total</b>	<b>86</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0%</b>

**Table 2. Cumulative virus activity in Northern Ireland, Week 40, 2015/16**

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	0	0	0	0	0	2
5-14	0	0	0	0	0	1
15-64	0	0	0	0	0	1
65+	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
<b>All ages</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>

**Table 3. Cumulative virus activity, Week 40, 2015/16**

	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	0	0	0	0	0	0	0	0	0	0	0	2
5-14	0	0	0	0	0	0	0	0	0	0	0	1
15-64	0	0	0	0	0	0	0	0	0	0	0	1
65+	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>All ages</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>

### 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.

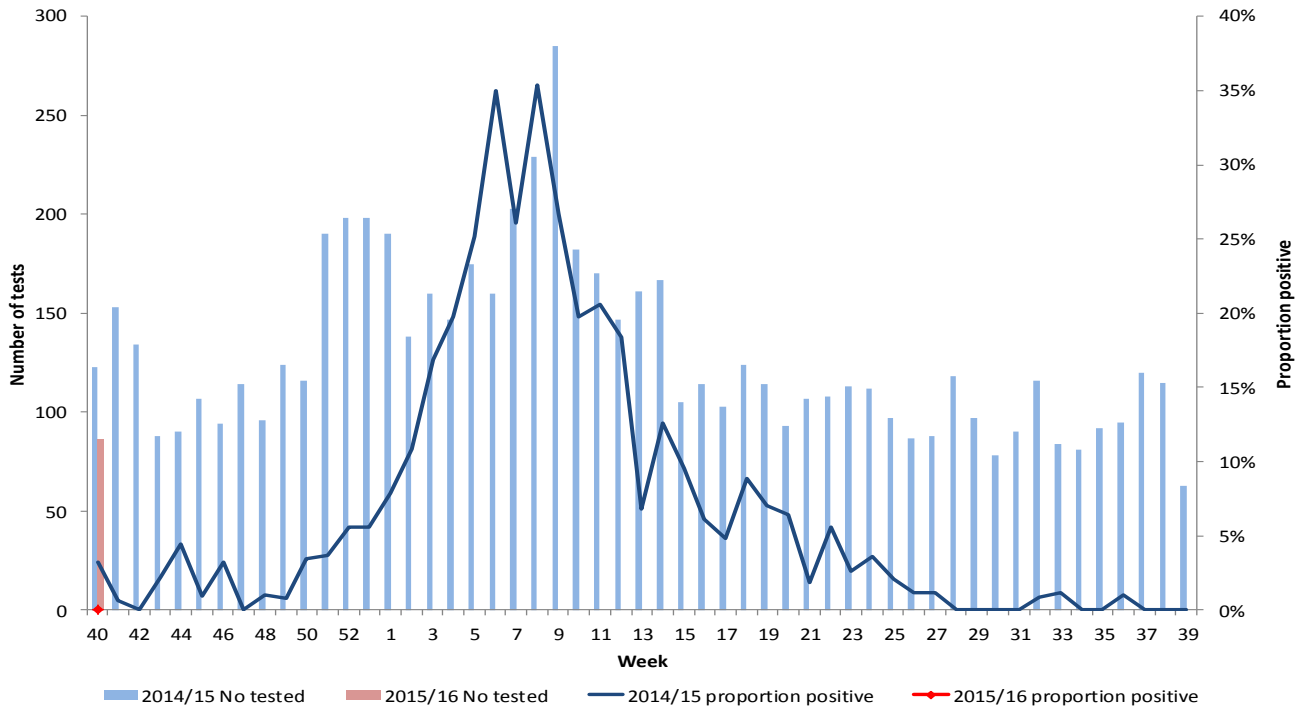
Sentinel and non-sentinel samples are tested for influenza and for RSV. Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

## Comment

During the summer period, there were 22 laboratory confirmed detections of influenza, of which 18 were confirmed as influenza B, 2 as influenza A (H3) and 1 as influenza A (not sub-typed); higher than the previous summer period. However, positivity rates for influenza have remained low throughout the summer season, and this trend has continued in week 40.

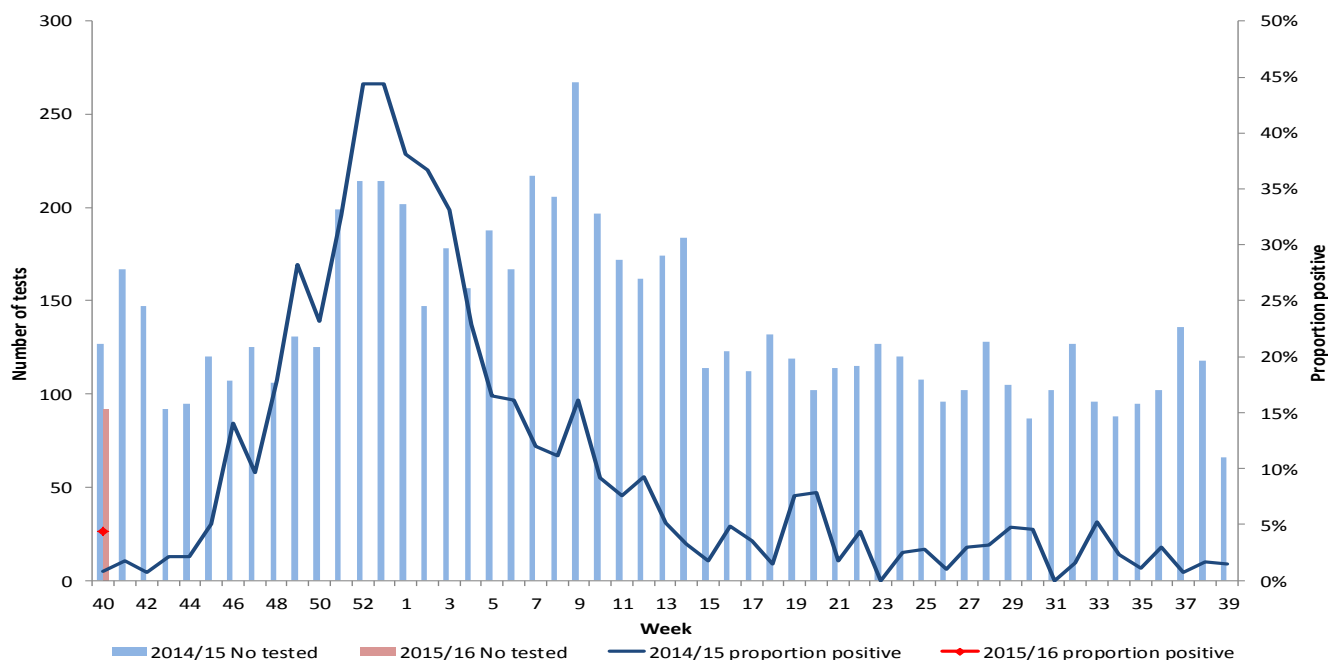
There were 86 specimens submitted for testing in week 40, 2015, of which there were no positive detections of influenza (Figure 7).

**Figure 7. Number of samples tested for influenza and proportion positive, 2014/15 and 2015/16, all sources**



## Respiratory Syncytial Virus

**Figure 8. Number of samples tested for RSV and proportion positive, 2014/15 and 2015/16, all sources**



### Comment

There were forty-seven RSV positive detections during the summer period from week 21 to 39, a substantially higher number than the nineteen detected during the summer of 2013-14, however positivity rates remained low throughout. In week 40 there were four RSV positive detections reported (Figure 8 and table 2).

## Influenza Vaccine Uptake

During the 2014-15 influenza season vaccine uptake in those aged 65 years and above was 73.4%, similar to the same period in 2013/14 (75.4%); and uptake rate for the under 65 and in an at risk group population was 71.8%, lower than in 2013/14 when 76.4% received the vaccine during the same period.

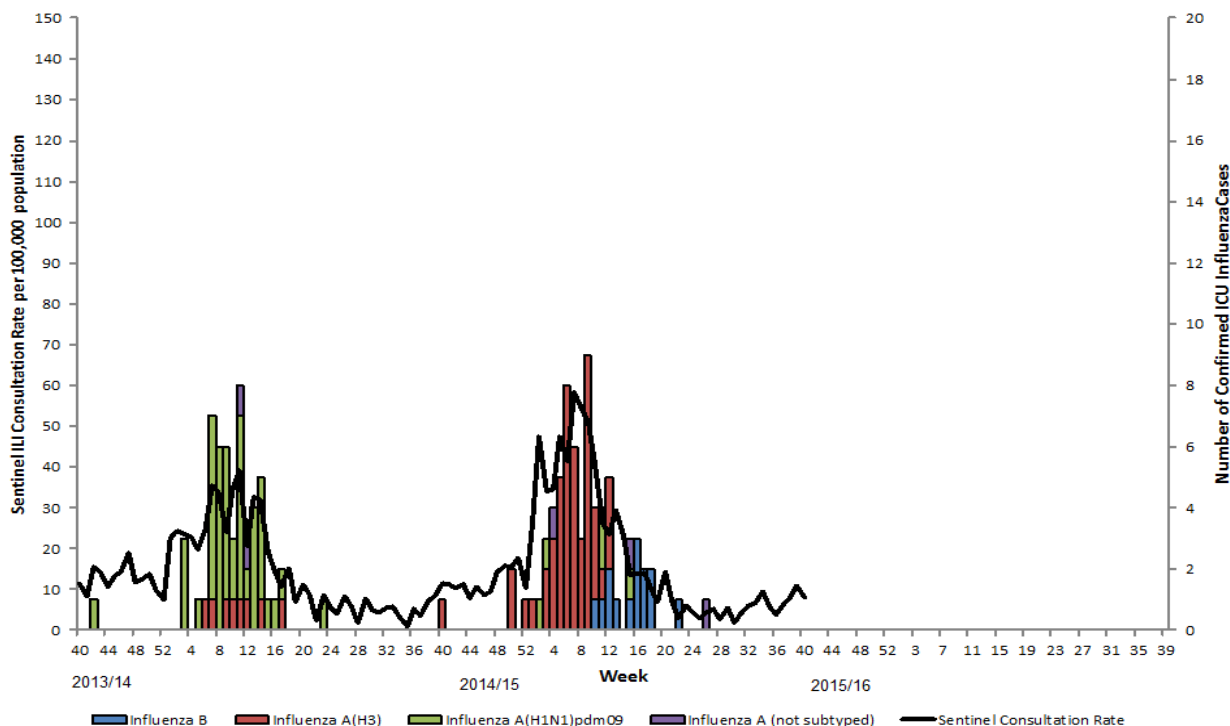
In 2014/15 the vaccination was extended to include all children aged between 2 and 4 years, who received the vaccine through primary care, and all those in P1 – P7, who received the vaccine through their school health team. To 31<sup>st</sup> March 2015, vaccine uptake among 2-4 year old children was 54.4%, while uptake among children in P1 – P7 was 79.7%.

Similar to 2014-15, seasonal flu immunisation in the 2015-16 season will be offered to all pre-school children aged 2 years or more through their GP, and to all those in P1-P7 through their school health team. Most children will receive the nasal-spray vaccine.



## ICU/HDU Surveillance

**Figure 9. Confirmed ICU influenza cases by week of specimen, with sentinel ILI consultation rate, 2015-16**



### 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.

There were two admissions to ICU confirmed with influenza reported over the summer period (weeks 22 and 26). One was typed as influenza A (not sub-typed) and the other as influenza B.

There were no admissions to ICU confirmed with influenza reported in week 40, 2015.

There were no deaths in ICU patients with laboratory confirmed influenza reported from week 21 to week 39 in the 2014/15 season, or in week 40 in the 2015/16 season.

### Outbreak Surveillance

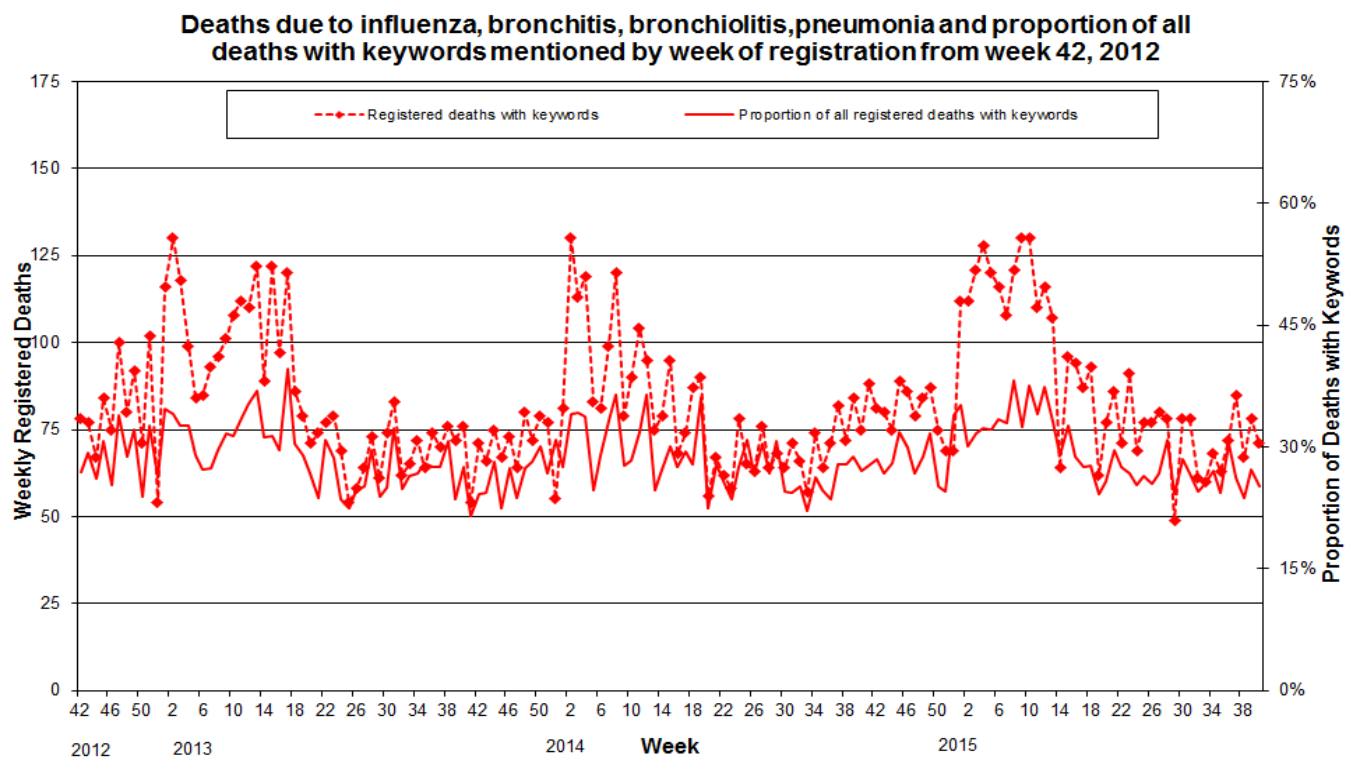
During the 2014-15 summer period from weeks 21 to 39 there were four respiratory outbreaks reported, none of which were confirmed with influenza. One was confirmed as rhinovirus.

There were no confirmed influenza outbreaks reported in week 40, 2015.

## 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 remained fairly stable throughout the summer period, peaking at 30% in both weeks 21 and 36. During week 40, 2015 the proportion of registered deaths decreased to 25%, from 27% the previous week, lower than the same period in during the past two years.

The number of registered deaths due to respiratory keywords followed a similar trend. In week 40 there were there were 282 registered deaths of which 71 related to these specific respiratory infections, down from 78 the previous week.

## International Summary

### Europe

Weeks 36 – 39, 2015:

- Twenty countries that reported through all four weeks indicated low intensity of influenza activity over the period covered by this report.
- A few countries reported sporadic influenza virus detections.
- One sentinel specimen tested positive for influenza B virus.

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

### Worldwide (WHO) and CDC

As at 5<sup>th</sup> October 2015:

Globally, influenza activity generally decreased or remained low, with only a few countries reporting elevated respiratory illness levels.

- In the Northern Hemisphere, influenza activity continued at low, inter-seasonal levels with sporadic detections. Increased respiratory syncytial virus (RSV) activity was reported in the United States of America (USA).
- Few influenza detections were reported by countries in Africa. In Eastern Africa, in countries with reported influenza activity, influenza type A viruses predominated. In Western Africa, influenza activity decreased overall.
- In tropical countries of the Americas, Central America and the Caribbean, influenza activity remained at low levels, with the exception of Cuba, where high numbers of severe acute respiratory infections (SARI) were still reported, associated with influenza A(H1N1)pdm09 virus and RSV. Colombia experienced slightly elevated acute respiratory activity (ARI) in recent weeks with elevated RSV activity.
- In tropical Asia, countries in Southern and South East Asia reported low influenza activity overall except in India and Lao People's Democratic Republic where increased activity mainly due to A(H1N1)pdm09 virus in India and A(H3N2) virus in Lao PDR continued to be reported. Influenza activity declined in southern China.
- In temperate South America, respiratory virus activity decreased or remained low in general. However, ILI activity remained elevated in Chile with increasing influenza A(H1N1)pdm09 detections.
- In South Africa, influenza activity remained at low levels with influenza type B viruses predominating in recent weeks.
- In Australia, influenza activity in general seemed to be past the peak except in South Australia where it continued to rise with predominantly influenza B virus followed by influenza A(H3N2) virus detections. In New Zealand, influenza activity may have peaked in the second week of August with influenza A(H3N2) and B viruses predominating during the season. ILI activity was still above the seasonal threshold but below the alert threshold.
- The vaccine recommendation for the 2016 southern hemisphere winter season was made and can be consulted at this link below:
- National Influenza Centres (NICs) and other national influenza laboratories from 71 countries, areas or territories reported data to FluNet for the time period from 07 September 2015 to 20 September 2015\* (data as of 2015-10-01 12:17:00 UTC). The WHO GISRS laboratories tested more than 35084 specimens during that time period. 2096 were positive for influenza viruses, of which 1722 (82.2%) were typed as influenza A and 374

(17.8%) as influenza B. Of the sub-typed influenza A viruses, 305 (21.3%) were influenza A(H1N1)pdm09 and 1124 (78.7%) were influenza A(H3N2). Of the characterized B viruses, 110 (92.4%) belonged to the B-Yamagata lineage and 9 (7.6%) to the B-Victoria lineage.

[http://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/index.html](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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