

## Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 15 (9 – 15 April 2012)

### Summary

- Influenza activity in Northern Ireland remains low.
- The GP combined flu'/FLI consultation rate decreased from 17.0 per 100,000 population in week 14 to 15.4 per 100,000 population in week 15 (9% decrease). However, this may be due to the bank holiday period.
- Out-of-hours (OOH) call rates for 'flu/FLI increased slightly from 6.6 per 100,000 population in week 14 to 7.0 per 100,000 population in week 15. This increase would be expected given the bank holiday period.
- There were 22 influenza A(H3) and eight influenza A (untyped) cases in week 15, 2012.
- There were 16 RSV detections in week 15, 2012.
- Two confirmed influenza A cases were admitted to critical care in Northern Ireland in week 15, bringing the total admitted to critical care with confirmed influenza so far this season to nine.
- There has been one report of a laboratory confirmed influenza death in a patient admitted to critical care in week 15.
- There were five respiratory outbreaks reported to the PHA in week 15. Three of these were confirmed as influenza A(H3). To date this season, there have been seven outbreaks reported to the PHA that have been confirmed as influenza A(H3).
- The decrease in the proportion of influenza-positive sentinel specimens together with the growing number of countries reporting continuously decreasing trends in the incidence of ILI or ARI indicate that the epidemic peak has passed in almost all European countries.

### Introduction

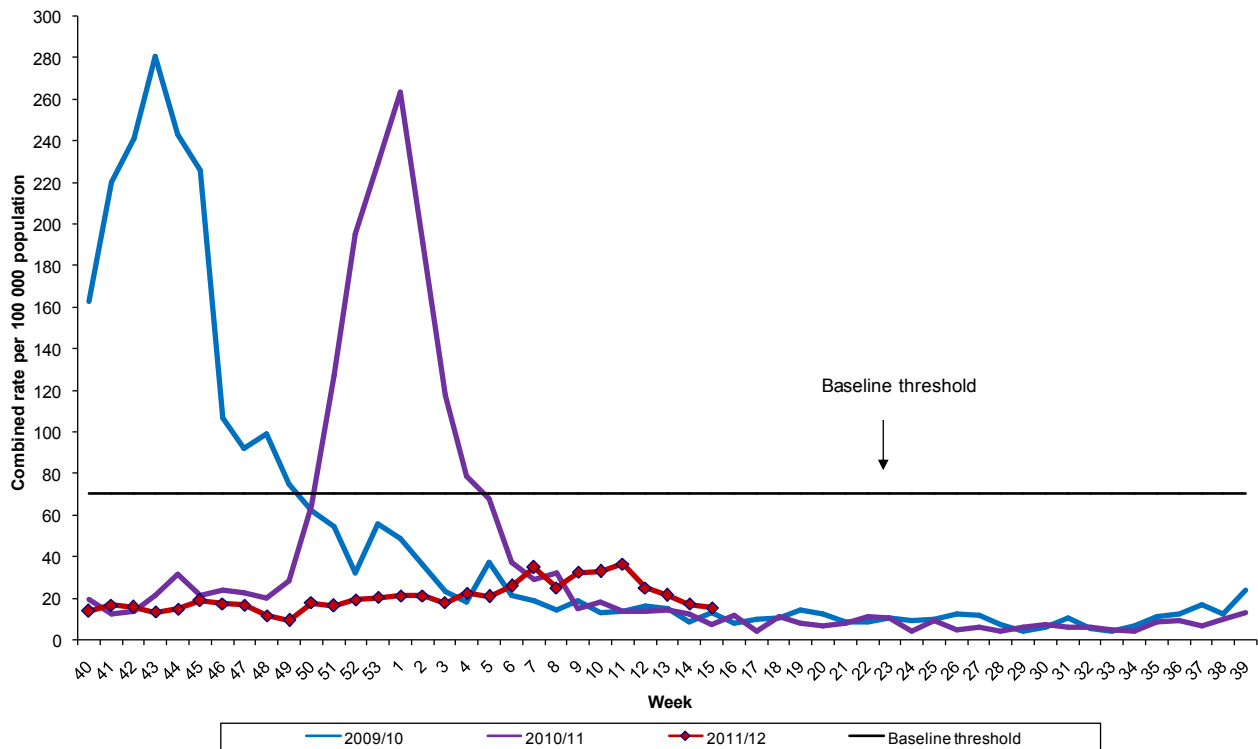
To monitor influenza activity in Northern Ireland, a number of surveillance systems are in place. A new development for the 2011/12 season is surveillance of critical care patients in hospitals with confirmed influenza.

Additional surveillance systems are:

- GP sentinel surveillance, representing 11.7% of the Northern Ireland population;
- GP OOH surveillance system;
- virological reports from the Regional Virus Laboratory (RVL);
- mortality data from the Northern Ireland Statistics and Research Agency (NISRA).

## Sentinel GP Consultation Data

**Figure 1: Sentinel GP consultation rate for combined flu and flu-like illness 2009/10 – 2011/12**

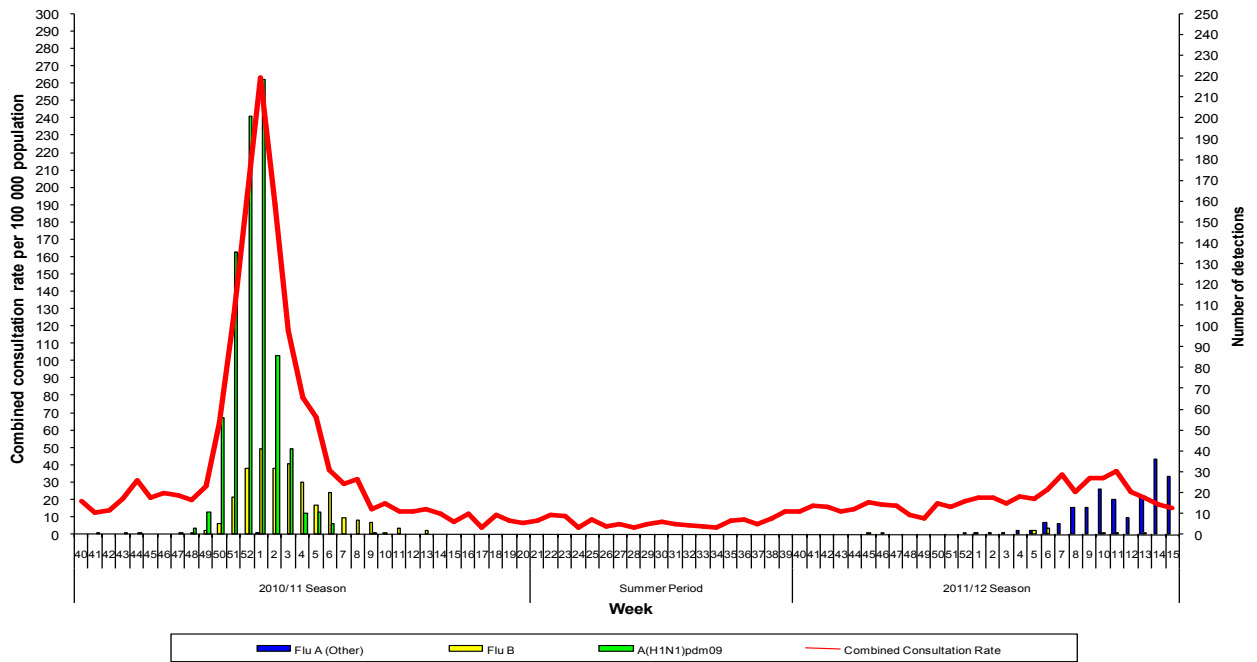


**Note:** 2009 had 53 weeks for surveillance purposes, therefore, an additional data point has been inserted in the graph for 2010/11 and 2011/12 at week 53 based on the average of weeks 52 and 1.

### Comment

The GP combined flu’/FLI consultation rate decreased from 17.0 per 100,000 population in week 14 to 15.4 per 100,000 population in week 15 (9% decrease). However, this is probably due to the bank holiday period when GP surgeries were closed. Rates remain slightly higher than for the same weeks last year, but remain well below the Northern Ireland threshold of 70 per 100,000 population (Figures 1 and 2).

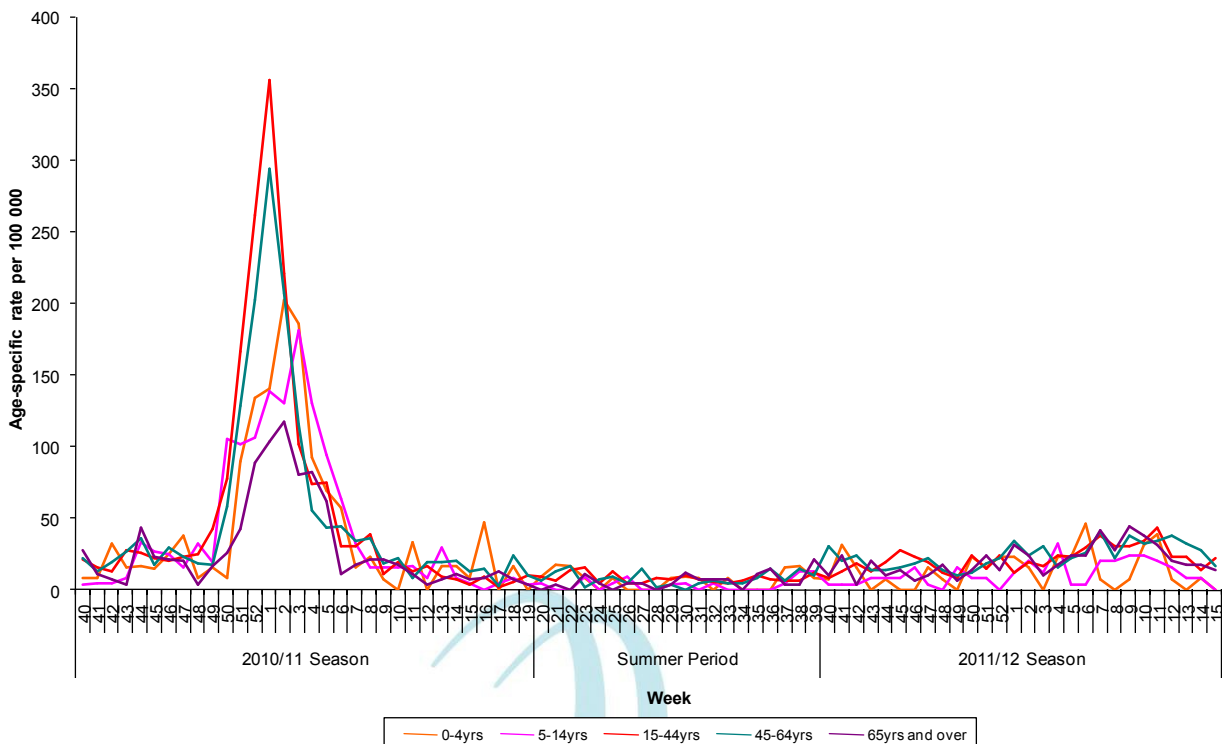
**Figure 2: Sentinel GP consultation rate for combined flu and flu-like illness and number of virology 'flu detections from week 40, 2010**



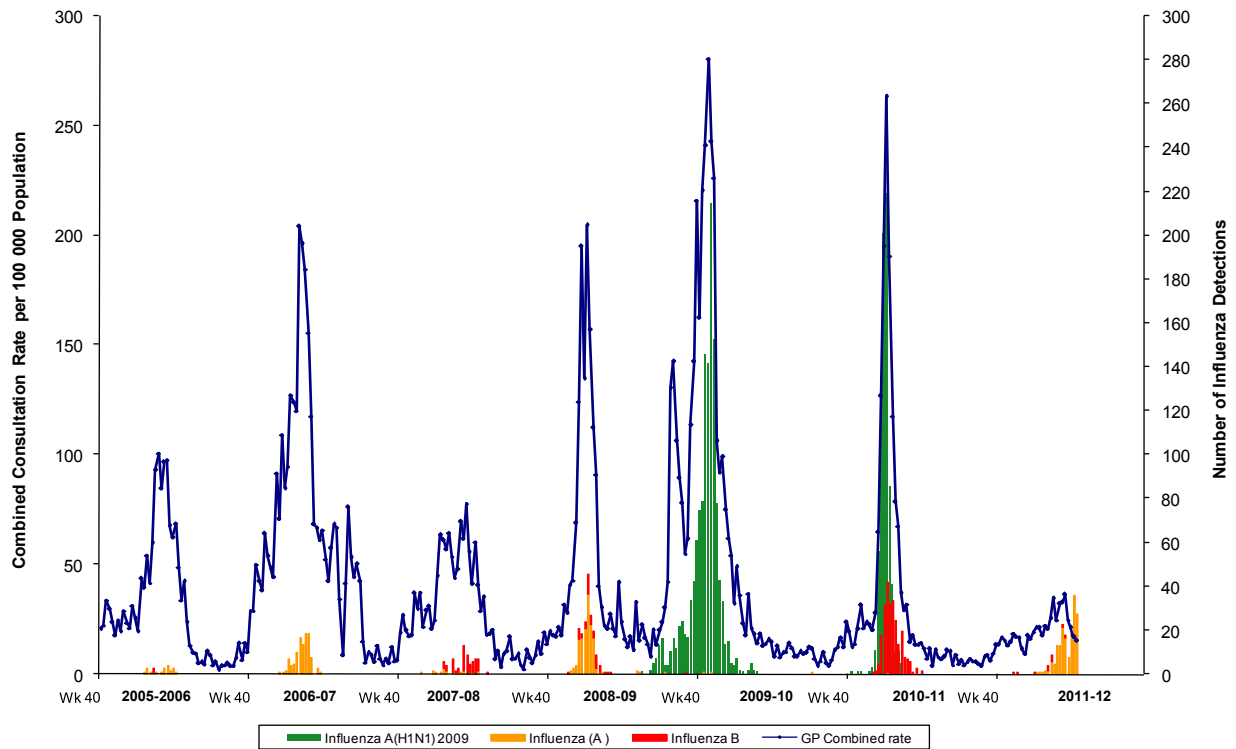
**Comment**

Flu'/FLI age-specific consultation rates remain low and have decreased compared to week 14, with the exception of the 15–44 years age group, which has increased slightly and was also the highest age-specific rate in week 15 (Figure 3).

**Figure 3: Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 40, 2010**



**Figure 4: Sentinel GP combined consultation rate and number of influenza positive detections 2005/06 – present.**

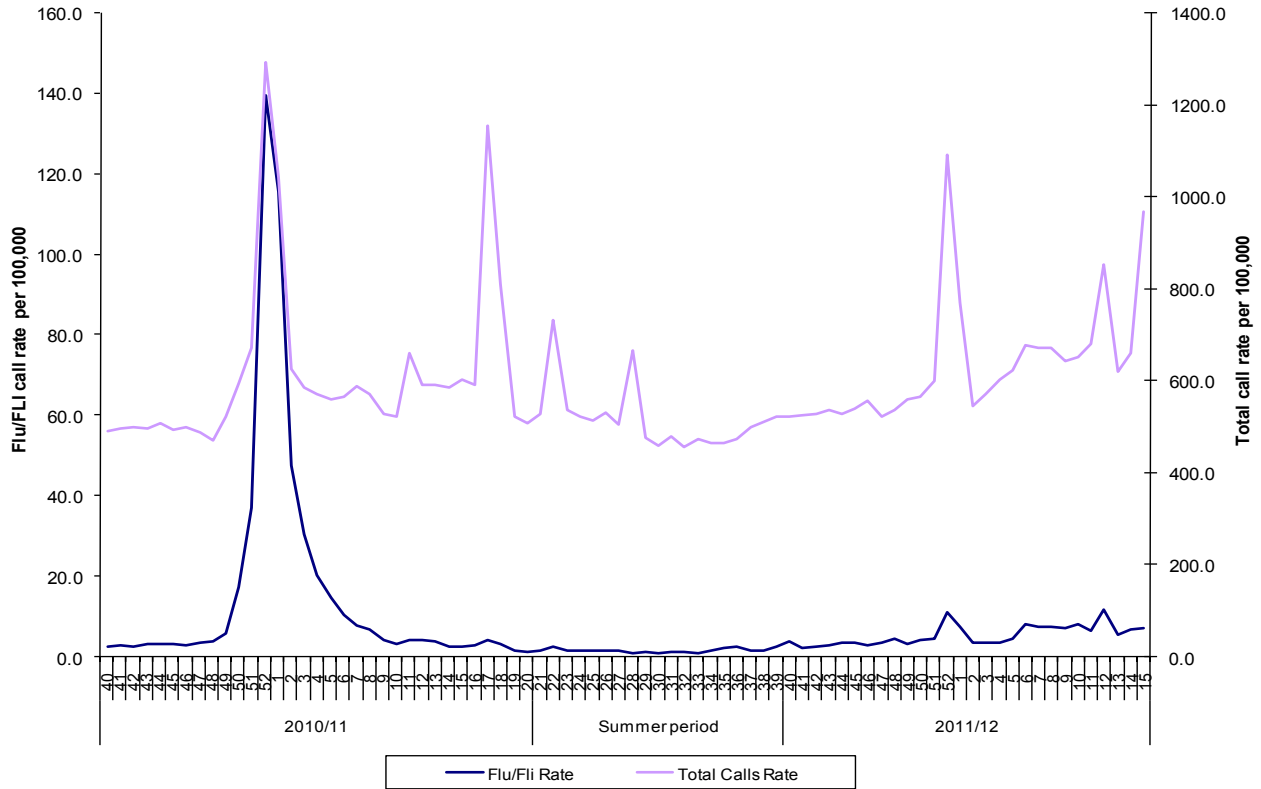


### Comment

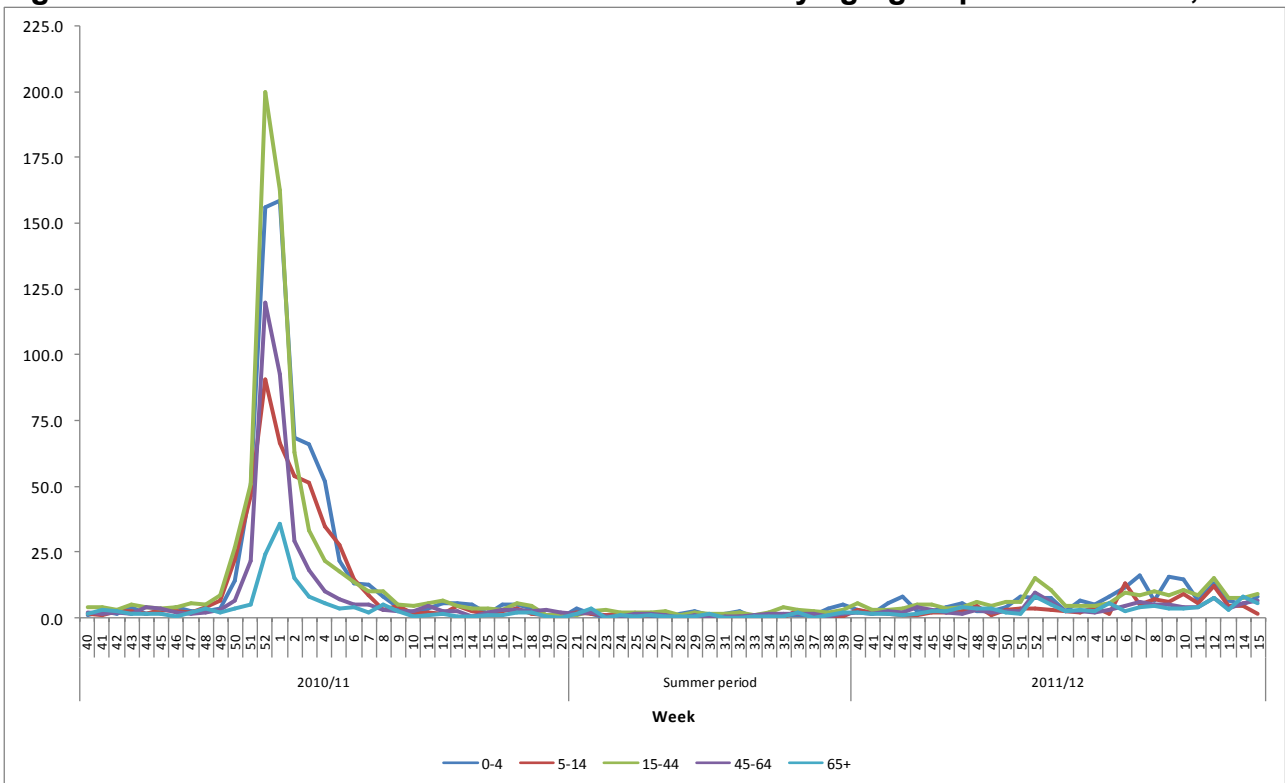
Sentinel GP flu'/FLI combined consultation rates and numbers of positive influenza detections by type from 2005/06 influenza season to present can be seen in Figure 4.

## OOH centres call data

**Figure 5: OOH total call rate (all diagnoses) and call rate for flu and flu-like illness from week 40, 2010**



**Figure 6: OOH call rates of flu and flu-like illness by age-group from week 40, 2010**



## Comment

OOH call rates for 'flu/FLI increased slightly from 6.6 per 100,000 population in week 14 to 7.0 per 100,000 population in week 15. However, an increase would be expected given the bank holiday period. Rates for week 15 remain higher than for the same week last year (2.4 per 100,000 population). The highest age-specific rate in week 15 was in the 15–44 years age group. Age-specific rates continue to remain low, with small numbers in some of the age groups contributing to fluctuations in rates (Figures 5 and 6).

## Virology data

**Table 1: Virus activity in Northern Ireland, week 15, 2012**

Source	Specimens tested	AH3	A (untyped)	Influenza B	RSV	Total influenza positive	% influenza positive
Sentinel	4	2	0	0	0	2	50%
Non-sentinel	123	20	8	0	16	28	23%
<b>Total</b>	<b>127</b>	<b>22</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>30</b>	<b>24%</b>

**Table 2: Cumulative total, week 40, 2011 – week 15, 2012**

	AH3	A (untyped)	Flu B	Total influenza	RSV
<b>0–4</b>	52	2	3	<b>57</b>	653
<b>5–14</b>	14	1	2	<b>17</b>	19
<b>15–64</b>	38	4	4	<b>46</b>	25
<b>65+</b>	59	5	2	<b>66</b>	16
<b>Unknown</b>	0	0	0	<b>0</b>	0
<b>All ages</b>	<b>163</b>	<b>12</b>	<b>11</b>	<b>186</b>	<b>713</b>

**Table 3: Cumulative total, week 40, 2011 – week 15, 2012**

	Sentinel					Non-sentinel				
	AH3	A (untyped)	Flu B	Total influenza	RSV	AH3	A (untyped)	Flu B	Total influenza	RSV
<b>0–4</b>	2	0	0	<b>2</b>	2	50	2	3	<b>55</b>	651
<b>5–14</b>	1	0	0	<b>1</b>	0	13	1	2	<b>16</b>	19
<b>15–64</b>	4	0	1	<b>5</b>	2	34	4	3	<b>41</b>	23
<b>65+</b>	4	0	0	<b>4</b>	0	55	5	2	<b>62</b>	16
<b>Unknown</b>	0	0	0	<b>0</b>	0	0	0	0	<b>0</b>	0
<b>All ages</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>4</b>	<b>152</b>	<b>12</b>	<b>10</b>	<b>174</b>	<b>709</b>

### Note

All virology data are provisional. The virology figures for previous weeks included in this bulletin 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 RSV.

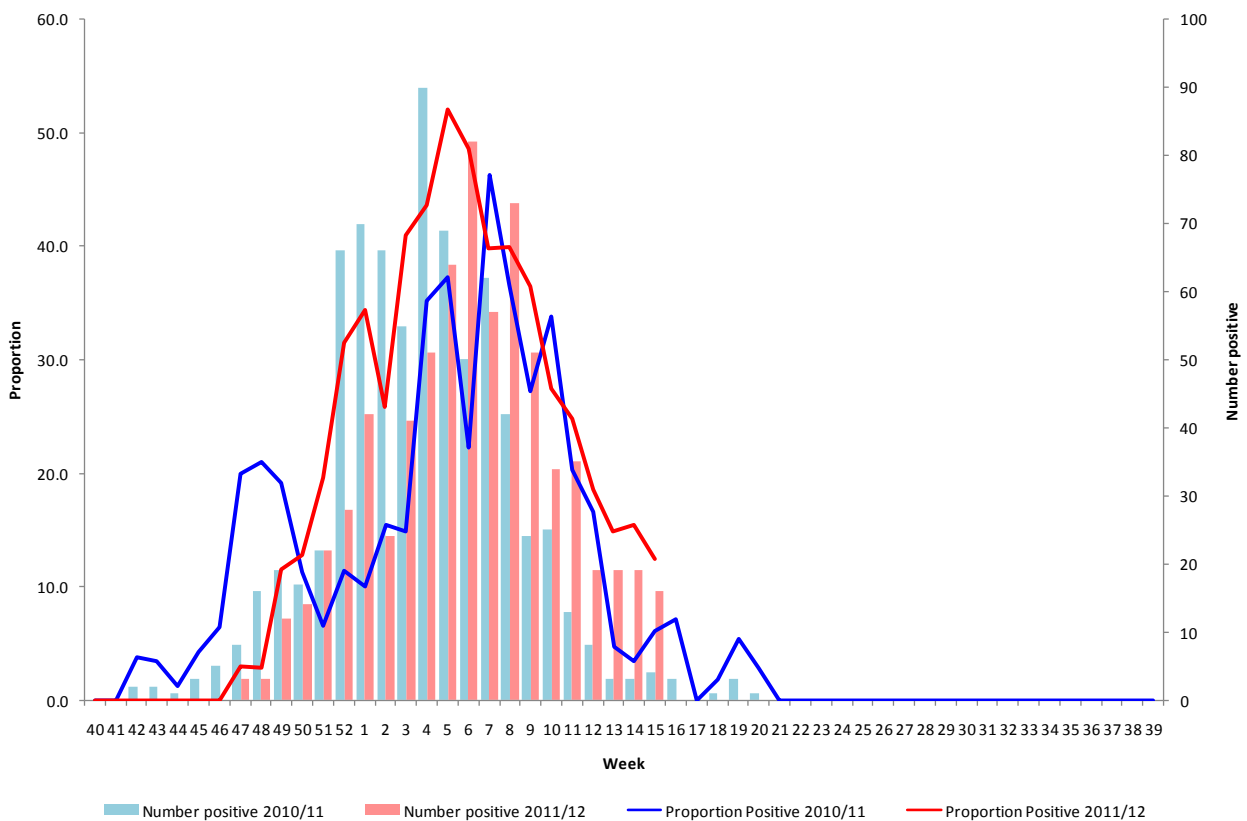
Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

## Comment

There were 127 specimens (four sentinel and 123 non-sentinel) tested by the RVL during week 15, 2012. Twenty influenza A(H3) and eight influenza A (untyped) cases were reported from non-sentinel sources, with an additional two influenza A(H3) positive detection reported from sentinel sources. This brings the total laboratory confirmed influenza detections this season to 186 (6%): 163 influenza A(H3), 12 influenza A (untyped) and 11 influenza B (see Tables 1–3).

## Respiratory syncytial virus (RSV)

**Figure 7: Number of non-sentinel samples tested for RSV and proportion positive, 2010/11 and 2011/12**



## Comment

The proportion of specimens that tested positive for RSV decreased from 15% (updated) in week 14 to 12% in week 15. The proportion of positive RSVs for week 15 remains higher than for the same week last year (6%). The proportion of RSV positive specimens peaked at 52% in week 5, 2012. Of 2,921 non-sentinel specimens tested by the RVL this season to date, 24% (n=709) were positive for RSV. In week 15, there were 16 detections, compared with 19 (updated) in week 14 (Figure 7).

## Hospital surveillance

Two confirmed influenza A(H3) cases were admitted to critical care in Northern Ireland in week 15, bringing the total admitted to critical care with confirmed influenza A(H3) so far this season to nine.

Across the UK, since week 40, 2011, there have been 242 ICU/HDU influenza admissions reported through the USISS mandatory scheme, with 24 (9.9%) resulting from influenza A(H1N1)pdm09, 78 (32.2%) from influenza A(H3N2), 127 (52.5%) from A (subtype not known) and 13 (5.4%) from influenza B.

## Mortality surveillance

There has been one report of a laboratory confirmed influenza death in a patient admitted to critical care in week 15.

## Outbreak surveillance

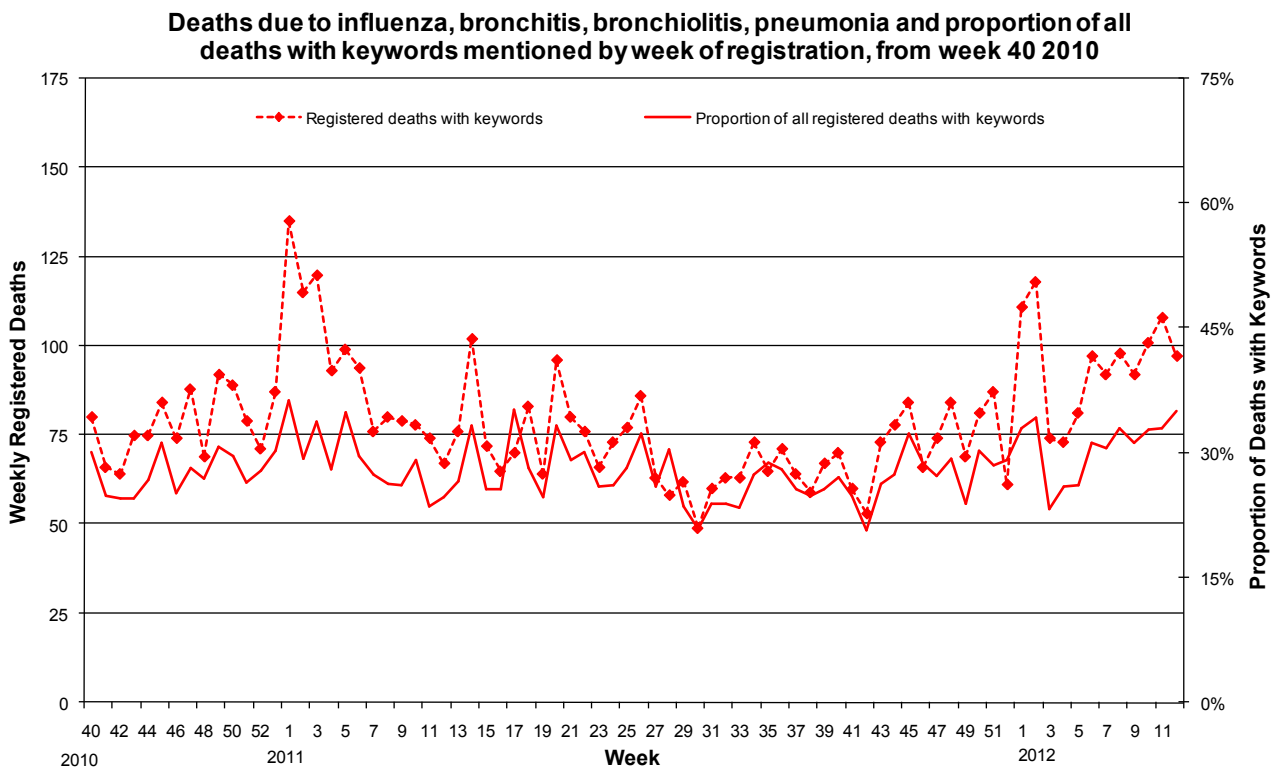
There were five respiratory outbreaks (three confirmed influenza AH3) in residential care units reported to the Public Health Agency during week 15. This brings the total number of outbreaks reported up until week 15 to nine (seven confirmed influenza A(H3)).



## Mortality data

Weekly mortality data are provided by NISRA. The data relate 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 on 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 8: Weekly registered deaths**



## Comment

The proportion of deaths related to respiratory keywords increased from 30% in week 14 to 34% in week 15. In week 15, there were 290 registered deaths, of which 100 related to these specific respiratory infections.

## Vaccine uptake

As at the end of January 2012, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 76.6%, while the uptake in those aged under 65 in an at-risk group was 82.5% (provisional data). This compares with 72.7% uptake in the over 65 years, and 70.7% in the under 65 at-risk group for the same period last year.

## International summary

### Europe

The 2011/12 influenza season started late, has been without any clear geographic progression across Europe, and transmission has been declining in a number of countries since around week 9. The following points are noteworthy from week 14:

- Decreasing trends were reported by 20 countries, 18 of which have done so for at least two consecutive weeks, while no country reported an increasing trend.
- Of 439 sentinel specimens tested, 30.1% were positive for influenza virus. This proportion has decreased for six consecutive weeks from a peak of nearly 60% in week 8. Of the positive sentinel specimens, 65.2% were type A and 34.8% were type B. This is the highest proportion of B-type viruses in sentinel samples so far this season.
- There has been a degree of heterogeneity in the antigenicity of the A(H3) viruses this season and an imperfect fit with the A(H3) component in the seasonal vaccine.
- Since week 40, 2011, a total of 1,685 SARI cases, including 97 fatalities, have been reported by seven countries. Of these cases, most were influenza-related.
- No resistance to neuraminidase inhibitors (oseltamivir and zanamivir) has been reported so far this season.

The decrease in the proportion of influenza-positive sentinel specimens together with the growing number of countries reporting continuously decreasing trends in the incidence of ILI or ARI indicate that the epidemic peak has passed in almost all European countries.

However, the proportion of positive specimens indicates that the level of influenza circulation is still considerable in Europe. As often observed late in the season, the proportion of influenza B viruses among detected influenza viruses has been increasing over the past eight weeks.

[http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL\\_INFLUENZA/EPIDEMIOLOGICAL\\_DATA/Pages/Weekly\\_Influenza\\_Surveillance\\_Overview.aspx](http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx)

### USA

During week 14 (April 1–7, 2012), influenza activity was elevated in some areas of the United States, but declined nationally and in most regions.

An overview of US influenza can be viewed at: <http://www.cdc.gov/flu/weekly/>

## Canada

During week 14, overall influenza activity in Canada continued to decline. However, activity remains elevated in some regions of the country (ie Atlantic Region, Ontario, Alberta and British Columbia). The ILI consultation rate increased on the previous week but remains within expected levels.

[http://www.phac-aspc.gc.ca/fluwatch/11-12/w14\\_12/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/11-12/w14_12/index-eng.php)

## Worldwide (WHO)

As at 13 April 2012:

- In most areas of the northern hemisphere temperate regions, influenza activity appears to have peaked and is declining. In North America, influenza indicators have remained elevated in some areas of the United States, but declined in the last couple of weeks. Although activity remains elevated across several regions in Canada, declining trends have started to be observed. Similarly, in Europe and northern Asia, nearly every country has now passed its peak of transmission and has reported declining activity.
- The most commonly detected virus type or subtype throughout Europe and North America (except Mexico) has been influenza A(H3N2), although the proportion of influenza B detection has been increasing towards the end of the season in North America. In Mexico, influenza A(H1N1)pdm09 has been the most common influenza virus circulating. China and the surrounding countries of northern Asia are still reporting a predominance of influenza type B virus.
- Increasing genetic and antigenic diversity has been noted in H3N2 viruses in the later part of the influenza season.
- No significant change in antiviral resistance has been reported so far this season.

[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)

## Further information

Further information on influenza is available at the following websites:

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

<http://www.hpa.org.uk>

<http://www.publichealth.hscni.net>

<http://www.who.int>

<http://ecdc.europa.eu>

<http://euroflu.org>

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

England, Scotland and Wales:

<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/EpidemiologicalData/>

Republic of Ireland:

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Surveillance/InfluenzaSurveillanceReports/20112012Season/>

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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## Acknowledgements

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**This report was compiled by Cathriona Kearns, Paul Cabrey, and Dr Brian Smyth.**