

## Influenza Weekly Surveillance Bulletin

Northern Ireland, Weeks 7 and 8 (13 – 26 February 2012)

### Summary

- Influenza activity in Northern Ireland remains low, most indices increased in week 7 but decreased again in week 8 with an overall small increase compared to the last report.
- The GP combined consultation rate increased from 25.9 per 100,000 population in week 6 to 30.6 per 100,000 population in week 7 however, in week 8 the rate decreased to 24.7 per 100,000 population. Rates continue to remain well below the Northern Ireland threshold (70/100,000 population).
- Out of hours Call rates for flu/FLI decreased from 8.1 per 100,000 population in week 6 to 7.4 per 100,000 population in week 7, with week 8 relatively stable at 7.5 per 100,000 population.
- There were 15 influenza A(H3), one influenza A (untyped) and no influenza B detections in weeks 7 and 8, 2012.
- There were 120 RSV detections in weeks 7 and 8, 2012.
- There was one confirmed influenza patient in critical care (level 2 and 3) in Northern Ireland in weeks 7 and 8, this represents the first such case this season.
- There have been no reports of any influenza-associated deaths in ICU patients with confirmed influenza this season.

### Introduction

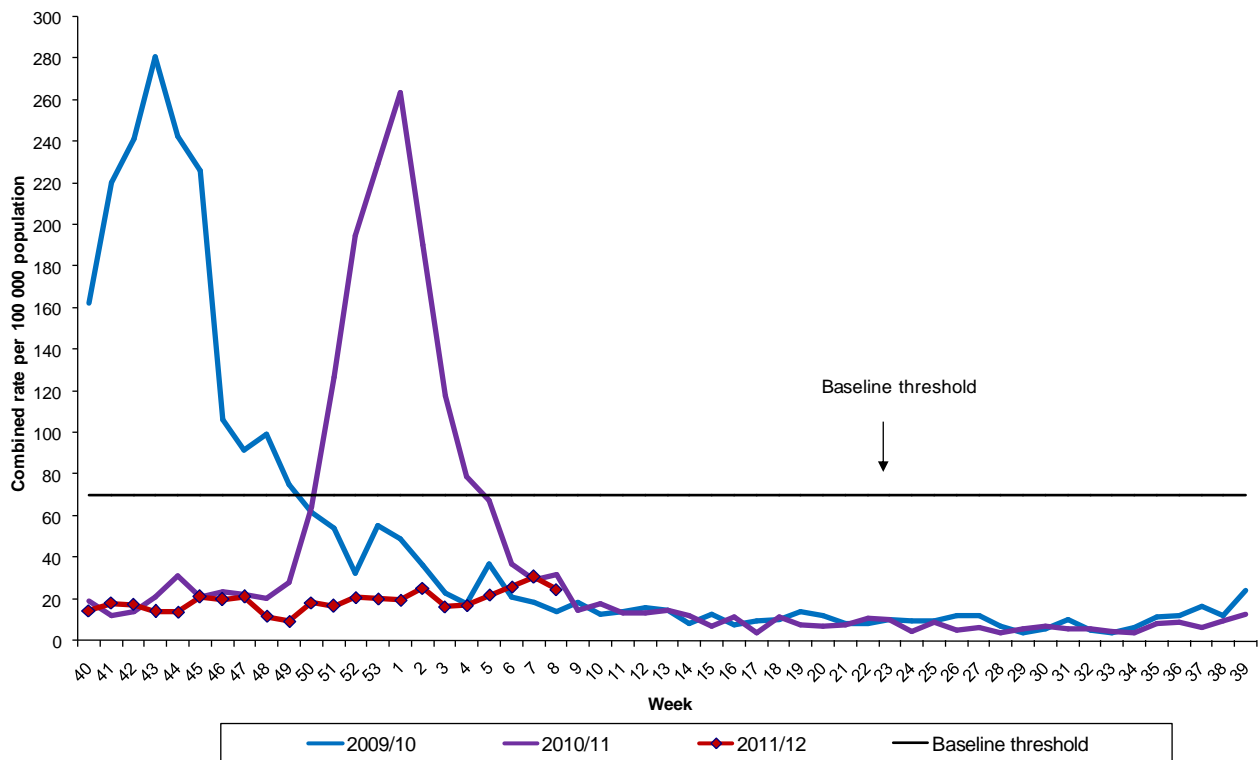
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place. A new development for this winter will be surveillance of critical care patients in hospitals with confirmed influenza.

Additional surveillance systems are:

- GP sentinel surveillance representing 11.7% of Northern Ireland population;
- GP Out of hours surveillance system;
- Virological reports from the Regional Virus Laboratory (RVL);
- Mortality data from 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**

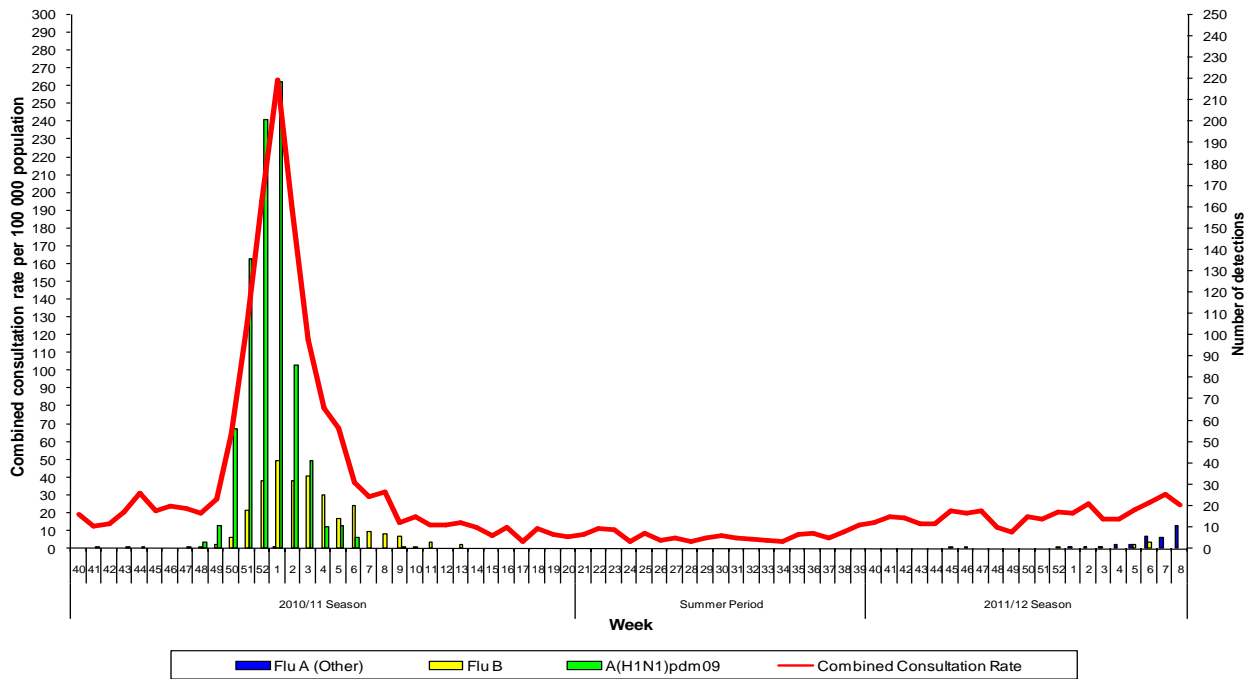


**Note:** 2009 had 53 weeks for surveillance purposes, therefore, an additional data point has been inserted in the graph for 2010/11 and 2011/12 at week 53 based on the average of weeks 52 and 1.

### Comment

The GP combined consultation rate increased from 25.9 per 100,000 population in week 6 to 30.6 per 100,000 population in week 7 however, in week 8 the rate decreased to 24.7 per 100,000 population. Rates continue to remain well below the Northern Ireland threshold of 70 per 100,000 population (Figures 1 and 2).

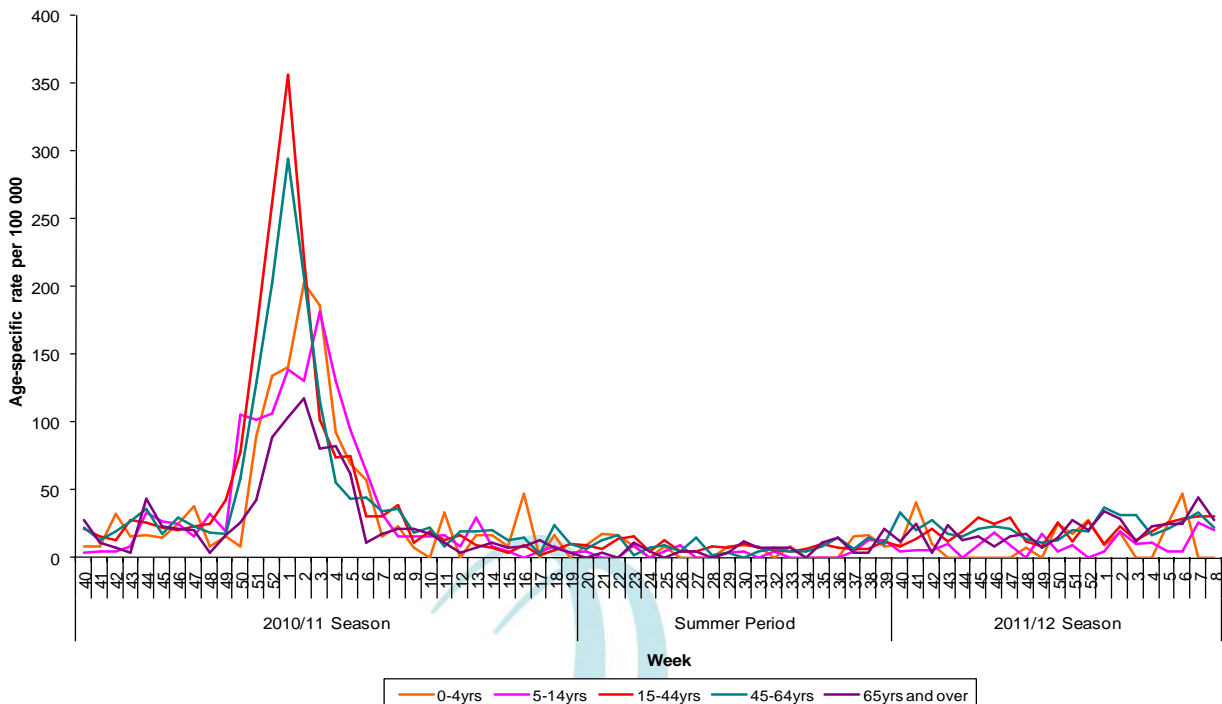
**Figure 2. Sentinel GP consultation rate for combined flu and flu-like illness and number of virology flu detections from week 40 2010**



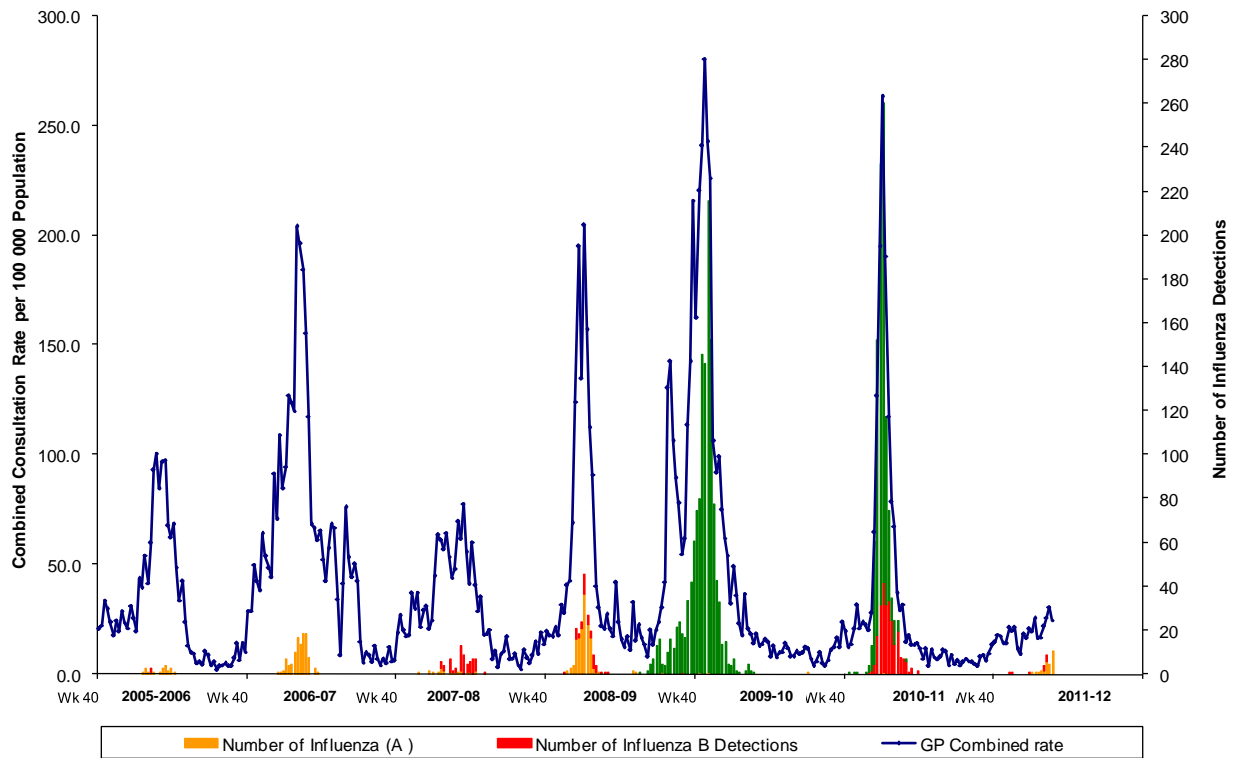
**Comment**

Age specific rates in the 5-14 year age group increased in weeks 7 and 8 compared with the previous two weeks. There were no consultations for flu or flu-like illness reported in the 0-4 year age group in weeks 7 and 8. Small numbers in some of the age groups will contribute to weekly fluctuations in rates (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**

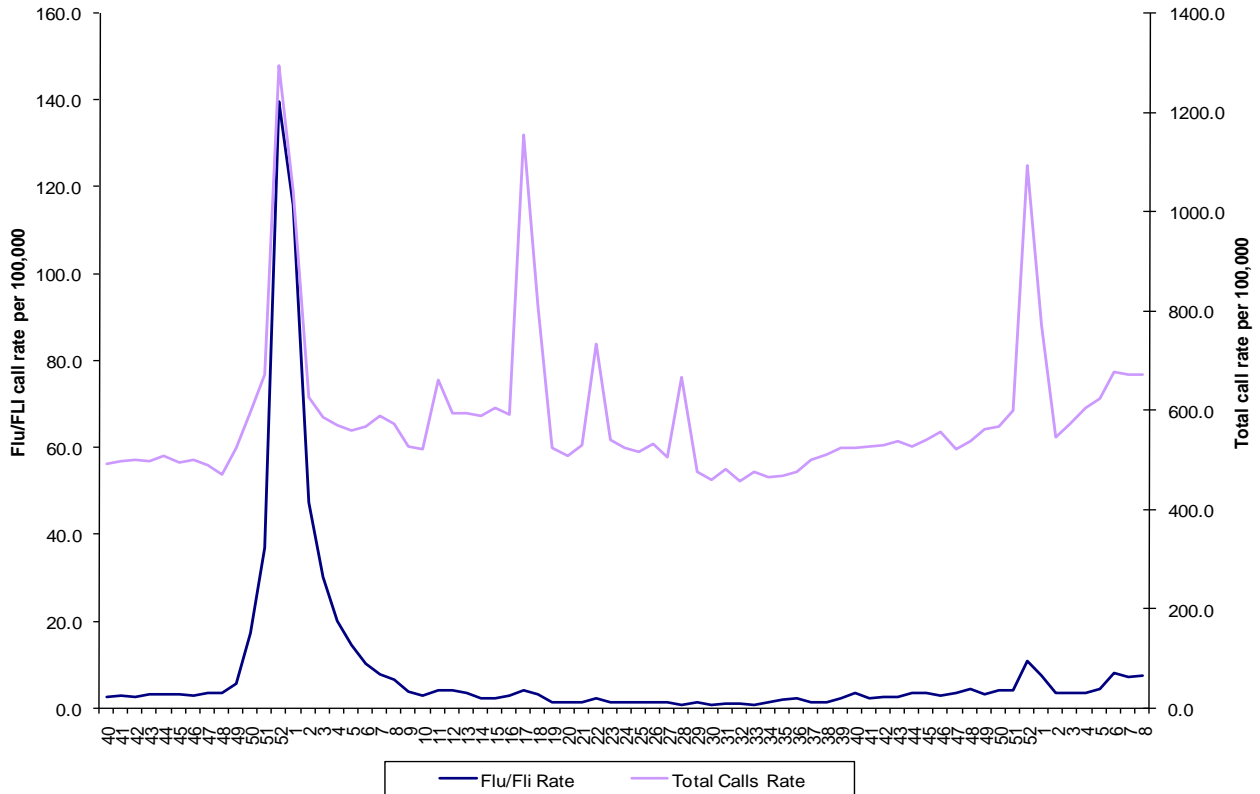


**Comment**

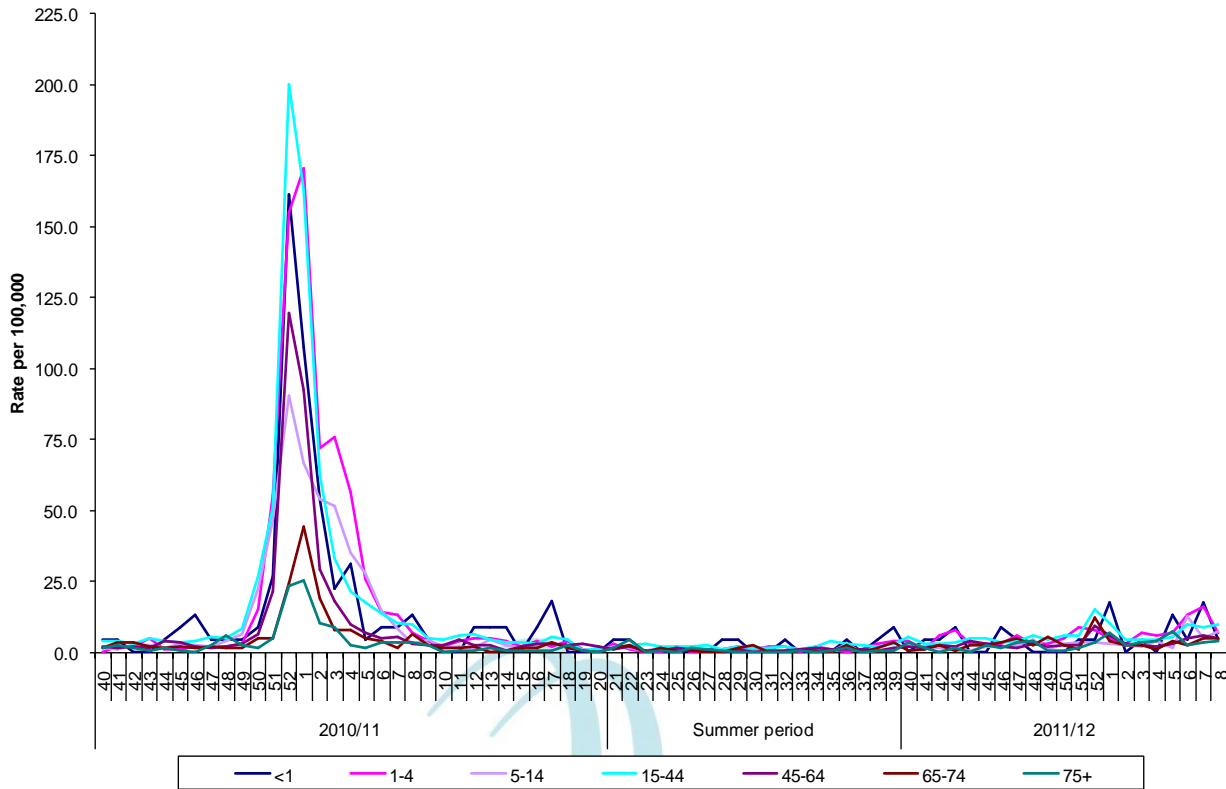
While there has been a delayed start to the circulation of influenza virus this winter there has been a slight increase in most flu indices from weeks 4 to 7 (Figure 4).

## Out of hours centres call data

**Figure 5. Out of hours 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

Out of hours call rates for flu/FLI decreased from 8.1 per 100,000 population in week 6 to 7.4 per 100,000 population in week 7, with week 8 relatively stable at 7.5 per 100,000 population. Rates for weeks 7 and 8 are similar to the same weeks last year (7.3 per 100,000 population). There has been minor fluctuations in weeks 7 and 8 in the age specific flu/FLI rates. Small numbers in some of the age groups contribute to fluctuations in rates (Figures 5 and 6).

## Virology data

**Table 1. Virus activity in Northern Ireland Weeks 7 & 8 2012**

Source	Specimens tested	A(H1N1) pdm09	AH3	A (untyped)	Influenza B	RSV	Total influenza positive	% Influenza positive
Sentinel	8	0	2	0	0	0	2	25%
Non-sentinel	289	0	13	1	0	120	14	5%
<b>Total</b>	<b>297</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>120</b>	<b>16</b>	<b>5%</b>

**Table 2. Cumulative total week 40 2011 - week 8 2012**

	(H1N1) 2009	AH3	A (untyped)	Flu B	Total influenza	RSV
<b>0-4</b>	0	12	0	3	<b>15</b>	470
<b>5-14</b>	0	3	0	2	<b>5</b>	12
<b>15-64</b>	0	6	1	2	<b>9</b>	15
<b>65+</b>	0	7	0	1	<b>8</b>	11
<b>Unknown</b>	0	0	0	0	<b>0</b>	0
<b>All ages</b>	<b>0</b>	<b>28</b>	<b>1</b>	<b>8</b>	<b>37</b>	<b>508</b>

**Table 3. Cumulative Total week 40 2011 - week 8 2012**

	Sentinel					Non-sentinel					
	(H1N1) 2009	AH3	Flu B	Total Influenza	RSV	(H1N1) 2009	AH3	A (untyped)	Flu B	Total Influenza	RSV
<b>0-4</b>	0	0	0	<b>0</b>	1	0	12	0	3	<b>15</b>	469
<b>5-14</b>	0	1	0	<b>1</b>	0	0	2	0	2	<b>4</b>	12
<b>15-64</b>	0	3	1	<b>4</b>	1	0	3	1	1	<b>5</b>	14
<b>65+</b>	0	1	0	<b>1</b>	0	0	6	0	1	<b>7</b>	11
<b>Unknown</b>	0	0	0	<b>0</b>	0	0	0	0	0	<b>0</b>	0
<b>All ages</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>7</b>	<b>31</b>	<b>506</b>

### Note

All virology data is 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.

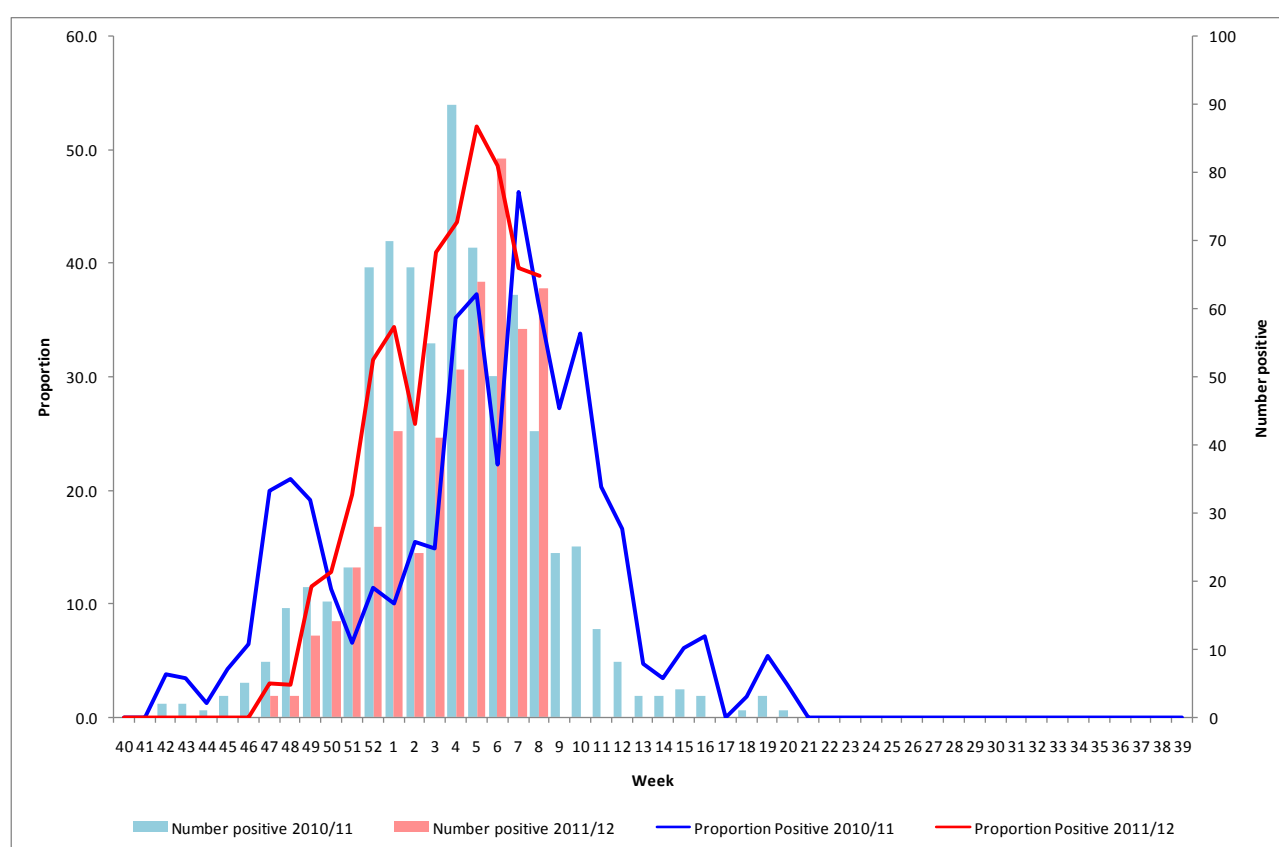
Sentinel and non-sentinel samples are tested for influenza and for RSV.

## Comment

There were 297 specimens (8 sentinel and 289 non-sentinel) tested by the Regional Virus Laboratory during weeks 7 and 8, 2012. Thirteen influenza A(H3) and one influenza A (untyped) positive detections were reported from non-sentinel sources, with an additional two influenza A(H3) positive detections reported from sentinel sources. This brings the total laboratory confirmed influenza detections this season to 37 (28 influenza A(H3), 1 influenza A (untyped) and 8 influenza B), (Tables 1 – 3).

## Other respiratory viruses

**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 50% (updated) in weeks 5 and 6 to 39% in weeks 7 and 8. The proportion of positive RSVs for weeks 7 and 8 is slightly lower than the same weeks last year (42%). 93% of all RSV detections so far this season are in the 0-4 year age group. In weeks 7 and 8 there were 120 detections compared with 146 (updated) detections in weeks 5 and 6 (Figure 7).

## Hospital surveillance

There was one confirmed influenza A(H3) patient in critical care (level 2 and 3) in Northern Ireland in weeks 7 and 8, this represents the first such case this season. There have been no deaths in those with laboratory confirmed influenza in critical care to date this season.

In the UK, since week 40 2011, there have been a total of 124 ICU/HDU influenza admissions across the USISS mandatory scheme with 23 (18.5%) resulting from influenza A(H1N1)pdm09, 22 (17.7%) from influenza A(H3N2), 72 from A (subtype not known) and 7 (5.6%) from influenza B.

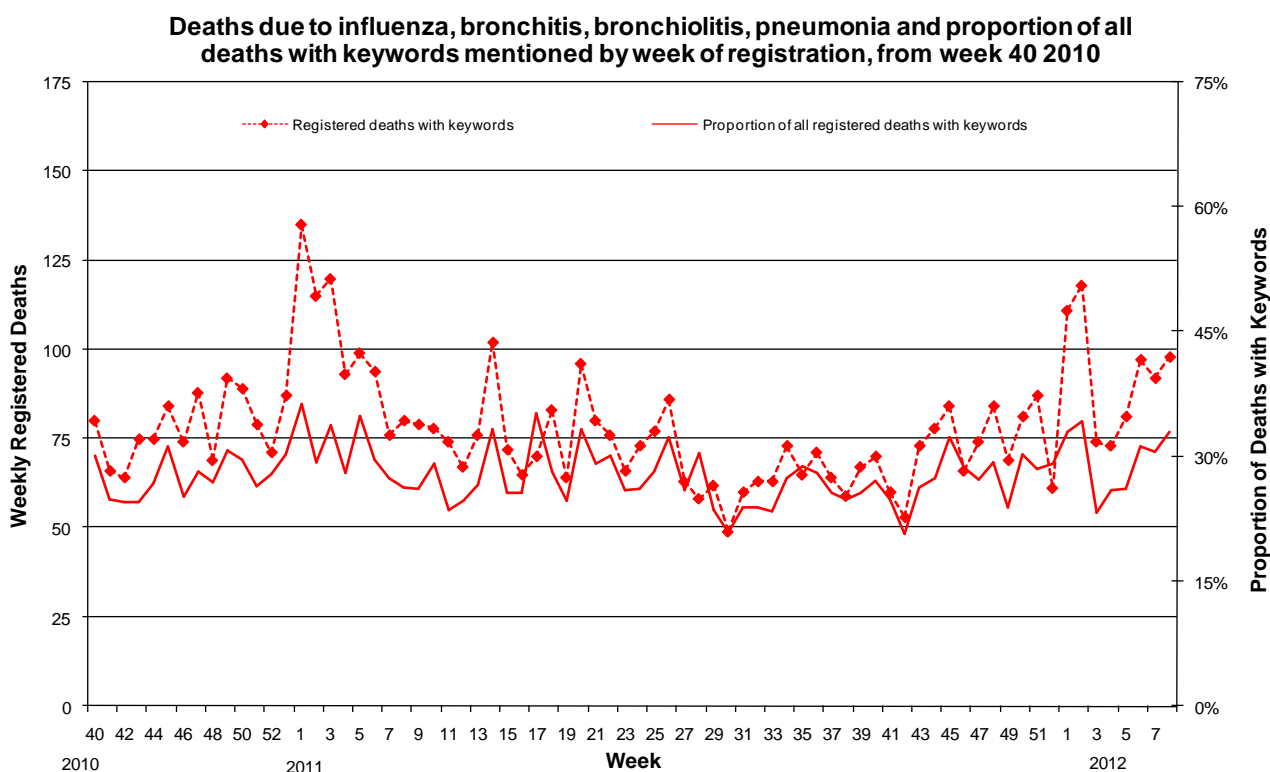


## Mortality data

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.

In addition this winter there will be reporting of deaths with confirmed influenza in patients in critical care (level 2 and level 3).

**Figure 8. Weekly registered deaths**



### Comments:

The proportion of deaths related to respiratory keywords over this period increased from 29% in weeks 5 and 6 to 32% in weeks 7 and 8. In weeks 7 and 8 there were 599 registered deaths of which 190 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 2011-2012 influenza season started later than in recent seasons and has been without any clear geographic progression. Medium or high intensity was reported by 18 countries and increasing trends by 19 countries.

Of 1,873 sentinel specimens tested, 927 (49.5%) were positive for influenza virus, which is a similar percentage to that observed during the two previous weeks. Of the 2,901 influenza viruses detected from sentinel and non-sentinel sources during week 7/2012, 96.1% were type A and 3.9% were type B. Of the 1,085 influenza A viruses subtyped, 98.2% were A(H3) and 1.8% were A(H1)pdm09.

No resistance to the neuraminidase inhibitors (oseltamivir and zanamivir) has been reported so far this season.

The influenza A(H3) and B viruses circulating this season have moved genetically and antigenically away from 2011–2012 seasonal vaccine viruses. This prompted WHO to recommend different vaccine viruses for the 2012-2013 seasonal vaccine.

The national influenza season epidemics in Europe may be approaching their peak in the first affected countries and remain dominated by A(H3) viruses.

[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 7 (February 12-18, 2012), influenza activity in the United States increased slightly, but remained relatively low.

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

## Canada

Influenza activity in Canada in week 7 is similar to the previous week; activity remains low in the Territories and in a few other regions across the country. The national ILI consultation rate increased this week compared to the previous week and remains within expected levels for this time of year.

[http://www.phac-aspc.gc.ca/fluwatch/11-12/w07\\_12/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/11-12/w07_12/index-eng.php)

## Worldwide (WHO)

As at 17 February 2012:

- Influenza activity in the temperate regions of the northern hemisphere remains low overall. It has continued to increase in the United States and Canada, though overall activity is low. Some countries of western Europe, North Africa, and northern China appear to have reached peak transmission but activity continues to increase in eastern Europe. The levels of both mild and severe disease have been relatively low compared to previous years in most areas reporting.
- Countries in the tropical zone reported low levels of influenza activity with the exception of a few countries in the Americas and parts of southern Asia.
- The most commonly detected virus type or subtype throughout the northern hemisphere temperate zone has been influenza A(H3N2) with the exception of Mexico, where influenza A(H1N1)pdm09 is the predominant subtype circulating, and China and the surrounding countries which are reporting a predominance of influenza type B.
- Notable differences have been reported in the distribution of viruses in severe cases and between age groups. In Canada, influenza A(H1N1)pdm09 accounted for 27% of all influenza A viruses that have been subtyped in <5 year olds but only 5% of subtyped influenza A viruses in cases over the age of 65 years. In Europe, influenza A(H1N1)pdm09 was disproportionately found in cases admitted to hospital for severe acute respiratory infection compared to outpatient cases of influenza-like illness (13-20% vs. ~1.5% respectively).
- Nearly all influenza A viruses detected were antigenically related to the viruses contained in the current northern hemisphere trivalent vaccine.
- Oseltamivir resistance continues to be observed at very low levels and has not increased notably over levels reported in previous seasons.

[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.**