

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 3 (14 - 20 January 2013)

Summary

- GP consultation rates have decreased below the Northern Ireland threshold of 70 per 100,000 population.
- GP consultation rates for combined 'flu/FLI decreased from 72.4 per 100,000 population in week 2 to 53.9 per 100,000 population in week 3, 2013 (26% decrease).
- OOH consultation rates for 'flu/FLI also decreased slightly from 10.2 per 100,000 population in week 2 to 9.3 per 100,000 population in week 3, 2013 (9% decrease).
- Influenza positivity rate of respiratory specimens have decreased this week. In week 3, 2013 there were 12 positive detections of influenza B, 2 influenza A(H1N1)pdm09 and 1 influenza A (untyped). Influenza B continues to be the predominant type.
- RSV activity continues to decrease with levels lower than the same period last year.
- There were 3 new admissions to ICU confirmed with influenza in week 3, 2013. This brings the total admitted to ICU that have been confirmed with influenza to 11.
- The first death in a patient with laboratory confirmed influenza admitted to critical care was reported in week 3, 2013.
- There were no confirmed influenza or other respiratory outbreaks reported to PHA in week 3, 2013.

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);
- Critical Care Network for Northern Ireland reports on critical care patients with confirmed influenza.

Sentinel GP Consultation Data

Figure 1. Sentinel GP consultation rate for combined flu and flu-like illness 2010/11 - 2012/13

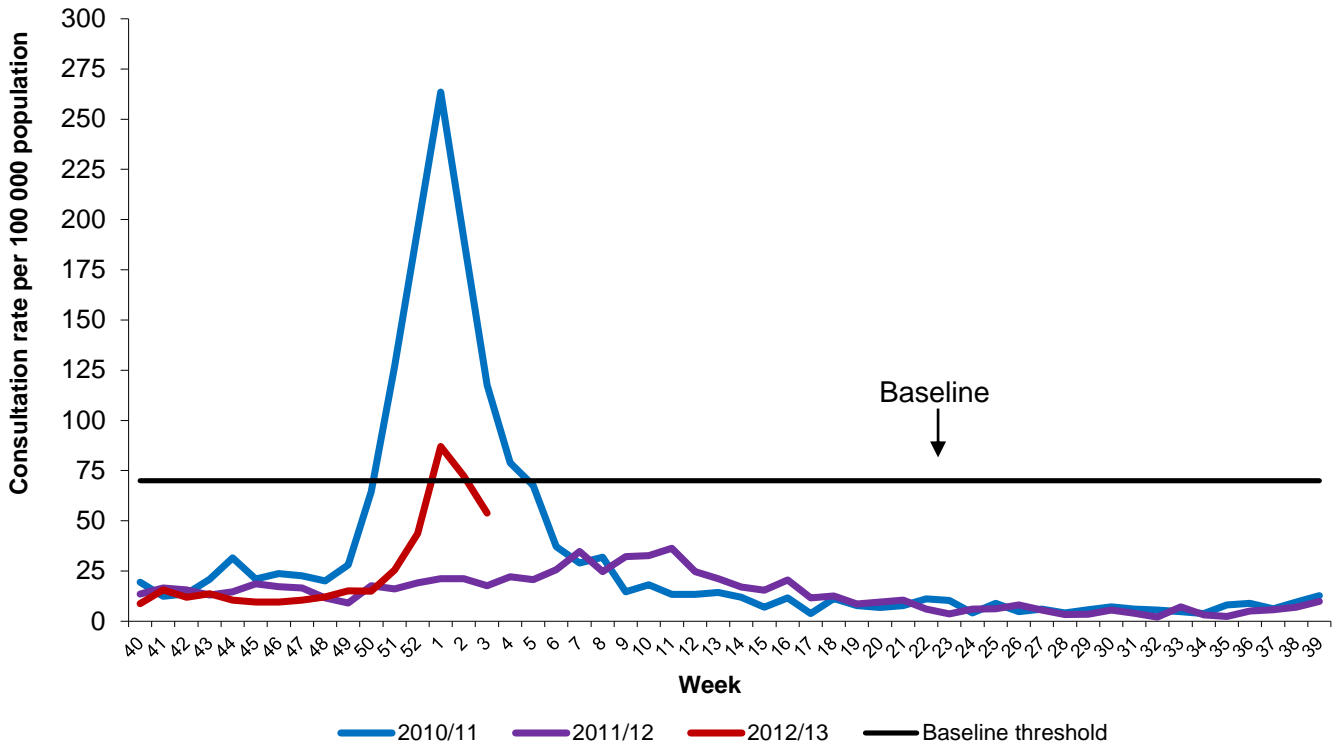


Figure 2. Sentinel GP combined consultation rate and number of influenza positive detections 2007/08 – 2012/13.

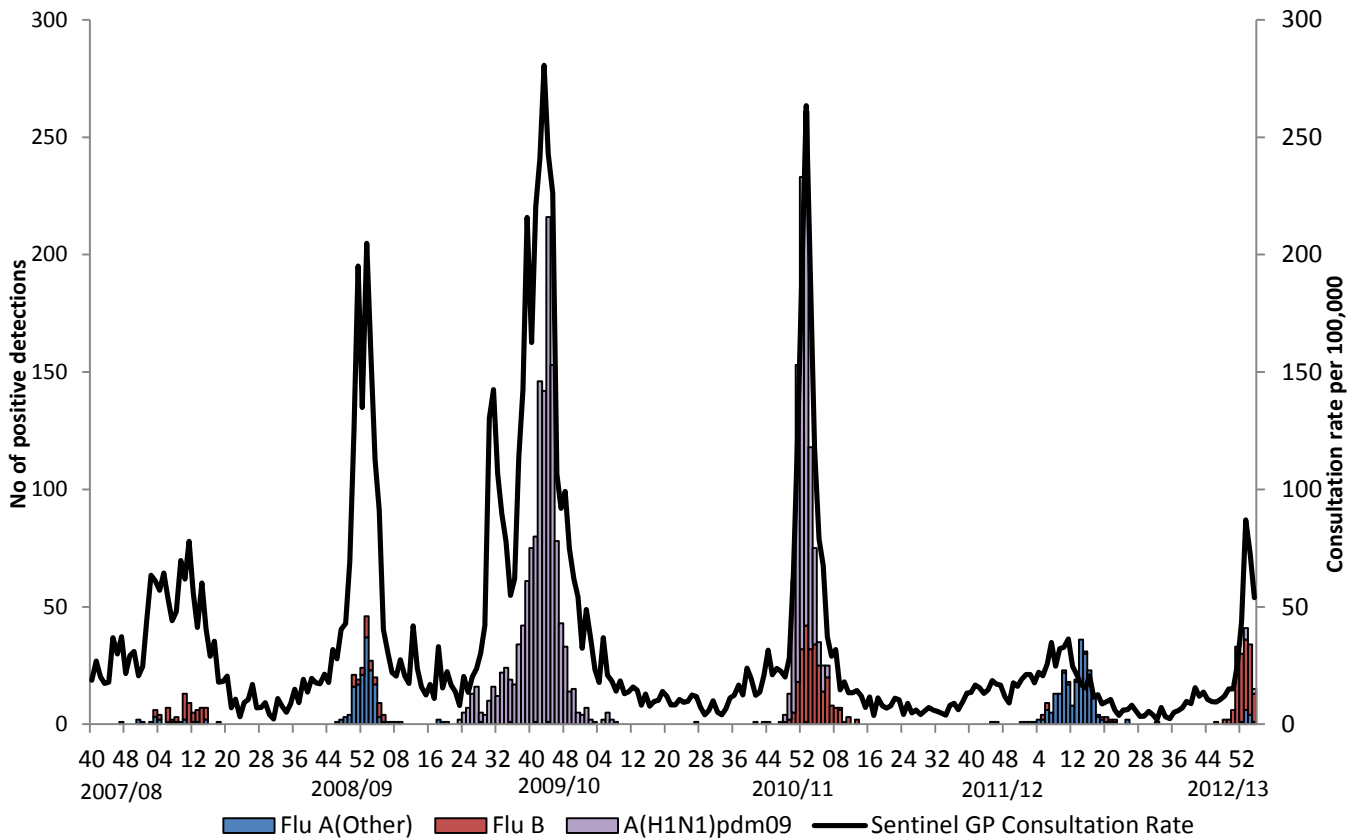
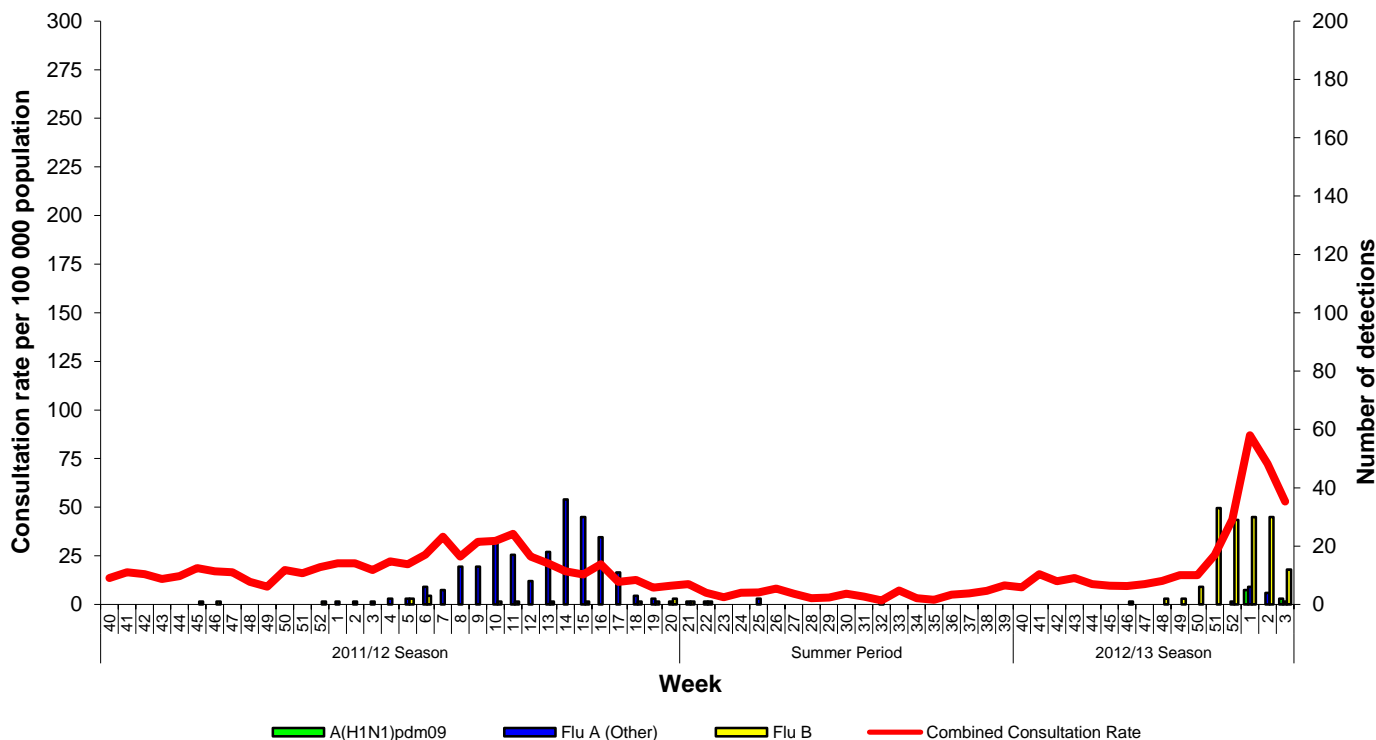


Figure 3. Sentinel GP consultation rate for combined flu and flu-like illness and number of virology 'flu detections from week 40, 2011

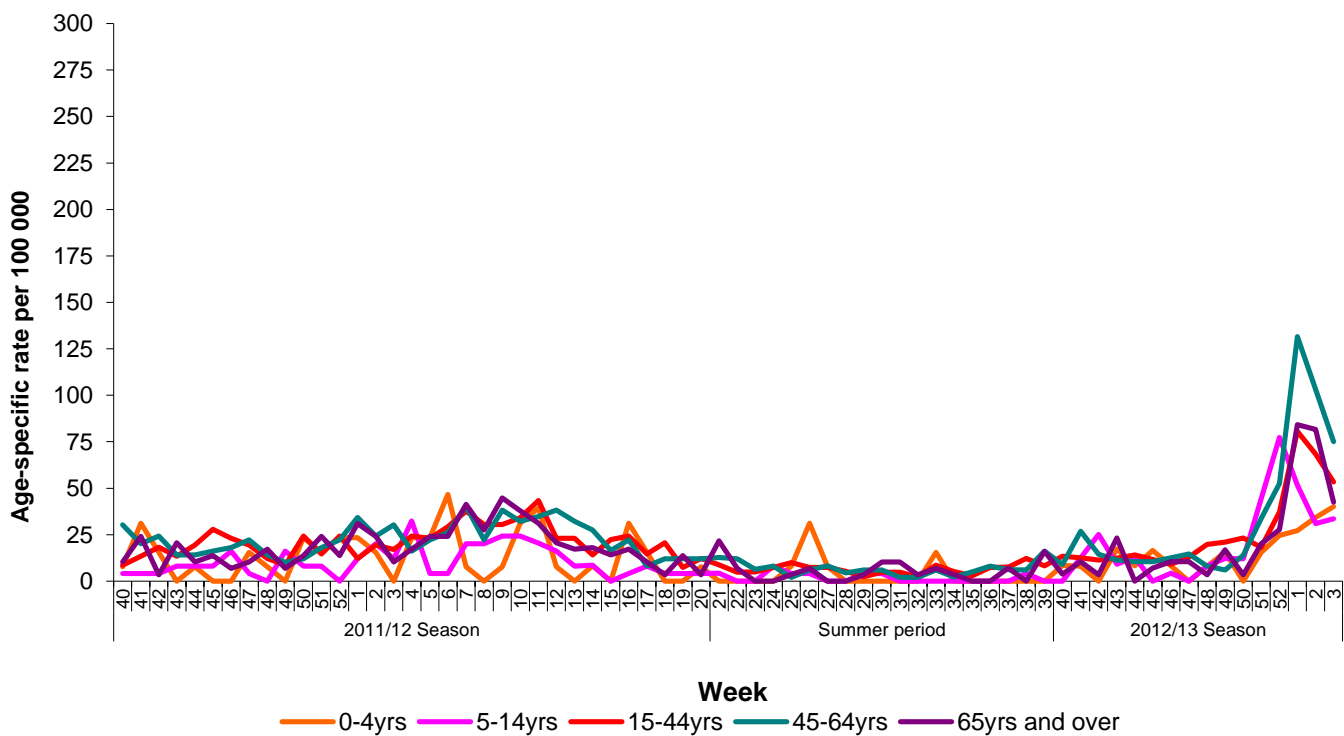


Comment

GP consultation rates for combined 'flu/FLI have decreased again from 72.4.0 per 100,000 population in week 2 to 53.9 per 100,000 population in week 3, 2013 (26% decrease) and are now below the Northern Ireland threshold of 70 per 100,000 population. However, as can be seen from figure 2 previous years have also had more than one peak during a flu season. Consultation rates remain substantially higher than the same weeks in the previous year but lower than those for the 2010/11 season (Figures 1, 2 and 3).

Consultation rates based on the Apollo surveillance programme by LCG also show decreases in most areas.

Figure 4. Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 40 2011



Comment

Age-specific consultations rates in the 15-44, 45-64 and over 65 age groups decreased further in week 3, with small increases in both the 0-4 and 5-14 year age groups. Similar to the previous two weeks consultation rates remain highest in the 45-64 year age group in week 3, 2013. Small numbers in some of the age groups can contribute to fluctuations in rates (Figure 4).

Out-of-Hours (OOH) Centres Call Data

Figure 5. OOH call rate for flu and flu-like illness, 2010/11 – 2012/13

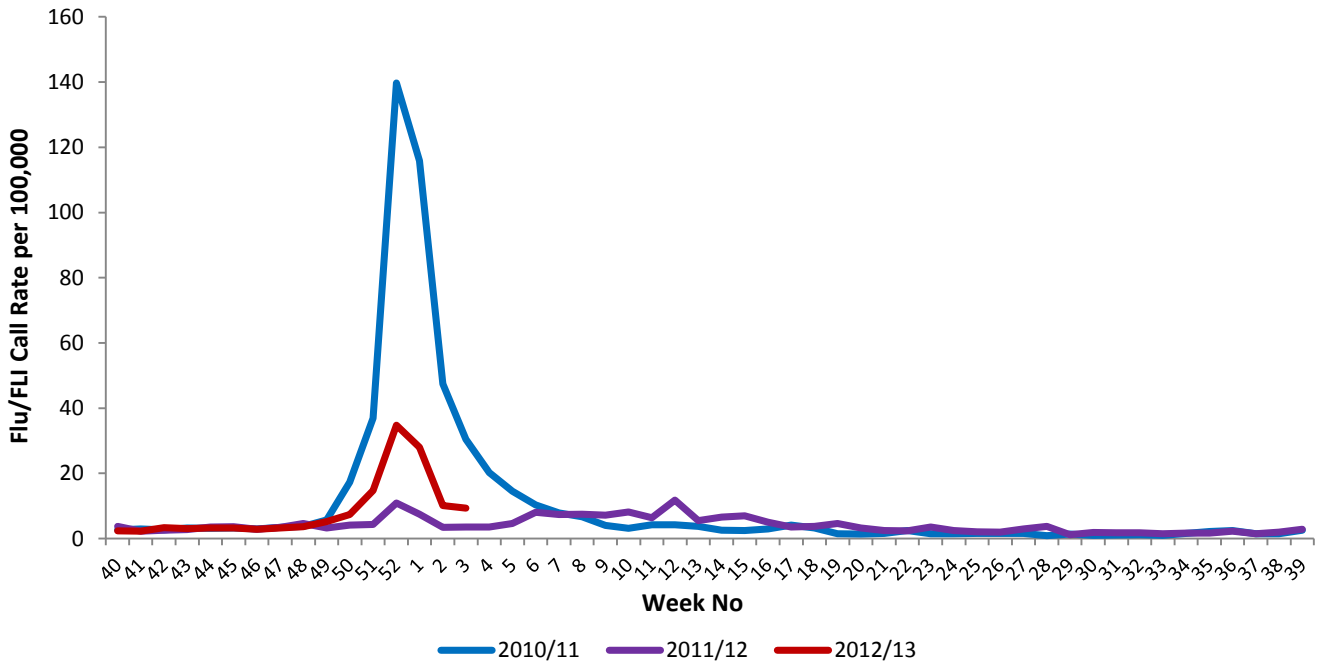
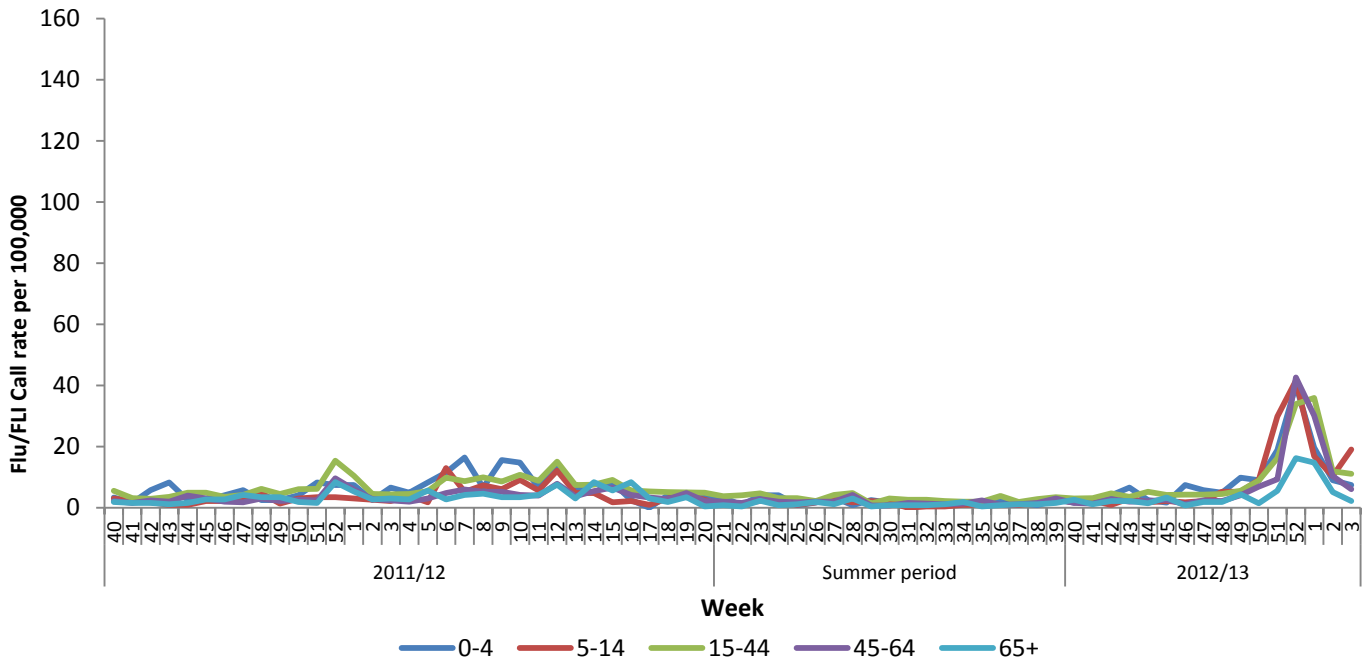


Figure 6. OOH Call rates of flu and flu-like illness by age-group from week 40 2011



Comment

OOH consultation rates for ‘flu/FLI decreased further from 10.2 per 100,000 population in week 2 to 9.3 per 100,000 population in week 3, 2013 (9% decrease). Call rates for ‘flu/FLI remain higher than the same period in the previous year (3.6 per 100,000 population) but still much lower than the rate in week 3, 2010/11 (30.4 per 100,000 population). With the exception of the 5-14 year age group, which displays the highest age specific rate in week 3, all age-specific rates have also decreased. Small numbers in some of the age groups can contribute to fluctuations in rates (Figures 4 and 5).

Virology Data

Table 1. Virus activity in Northern Ireland Week 3, 2013

Source	Specimens Tested	AH3	A(H1N1) pdm09	A (untyped)	Influenza B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	13	0	0	1	3	0	4	31%
Non-sentinel	96	0	2	0	9	18	11	11%
Total	109	0	2	1	12	18	15	14%

Table 2. Cumulative Total Week 40, 2012 - Week 3, 2013

	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV
0-4	2	3	1	28	34	624
5-14	0	1	0	37	38	16
15-64	5	3	1	62	71	47
65+	2	0	1	18	21	46
Unknown	0	0	0	0	0	5
All ages	9	7	3	145	164	738

Table 3. Cumulative Total Week 40, 2012 - Week 3, 2013

	Sentinel						Non-sentinel					
	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV
0-4	0	0	0	1	1	3	2	3	1	27	33	621
5-14	0	0	0	5	5	0	0	1	0	32	33	16
15-64	1	0	0	27	28	4	4	3	1	35	43	43
65+	0	0	1	1	2	0	2	0	0	17	19	46
Unknown	0	0	0	0	0	0	0	0	0	0	0	5
All ages	1	0	1	34	36	7	8	7	2	111	128	731

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.

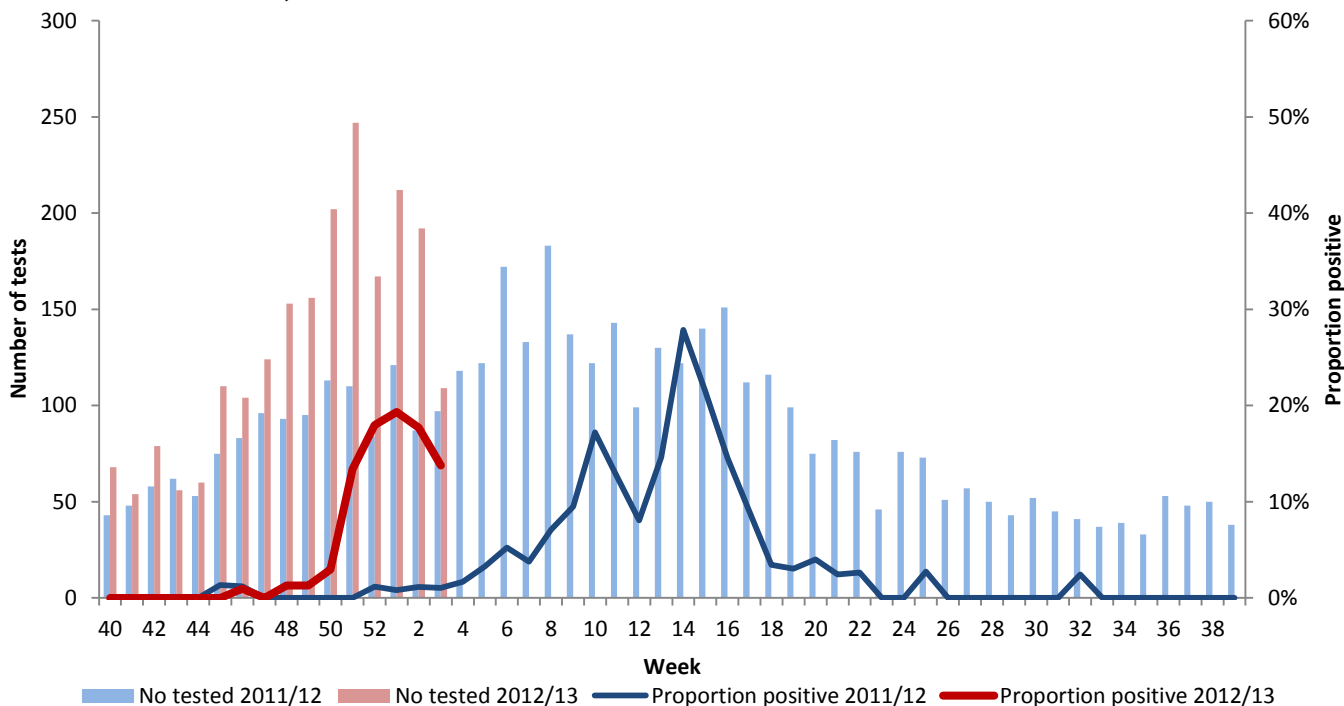
Sentinel and non-sentinel samples are tested for influenza and for RSV. Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

With effect from week 50 all samples submitted for pertussis testing are also now routinely tested for influenza. This will have an impact on specimen numbers and may affect positivity rates.

Comment

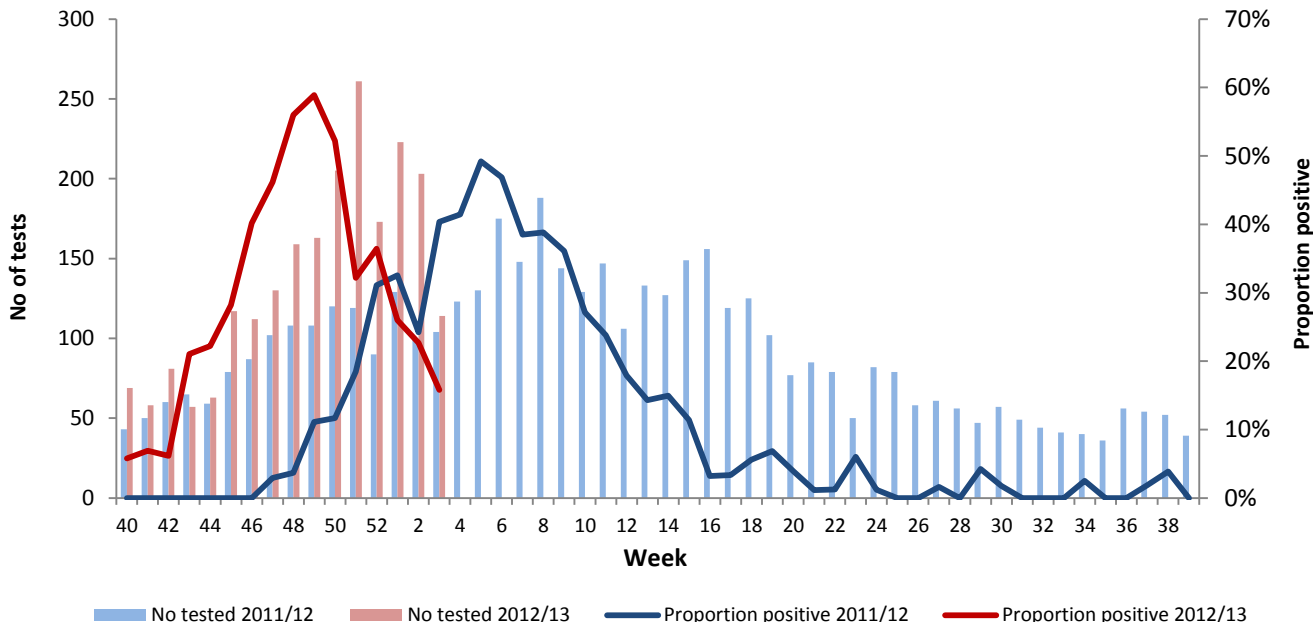
Numbers of specimens submitted for testing remain at high levels in comparison with the previous year, with influenza positivity rates decreasing this week. There were 109 specimens submitted for testing in week 3, 2013, of which there were 12 positive detections of influenza B, 2 influenza A(H1N1)pdm2009 and 1 influenza A (untyped). Influenza B continues to be the predominant type with a total of 145 detections so far this season (88% of all influenza detections), and a further 19 detections of influenza A (9 influenza A(H3), 7 A(H1N1)pdm09 and 3 A(untyped)). (Figure 7).

Figure 7. Number of samples tested for influenza and proportion positive, 2011/12 and 2012/13, all sources



Respiratory Syncytial Virus

Figure 8. Number of samples tested for RSV and proportion positive, 2011/12 and 2012/13, all sources



Comment

RSV positivity rates decreased again from 23% in week 2 to 16% in week 3, 2013 with rates lower than the same period last year. There were 18 RSV detections in week 3, 2013. From week 40 of the current season there have been a total of 738 RSV positive detections reported, of which 85% fall in the 0-4 year age group. RSV positivity trends are similar to 2011/12 but are approximately four weeks earlier (Figure 8).

Hospital Surveillance

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 coming season.

There were three new admissions to ICU confirmed with influenza in week 3, 2013. To date there have been 11 cases admitted to ICU that have been confirmed with influenza; seven of which were confirmed with influenza B, two with influenza A(H3), one influenza A(H1N1)pdm09 and one influenza A(untyped).

Mortality Surveillance

The first death this season in a patient with laboratory confirmed influenza admitted to critical care was reported in week 3, 2013.

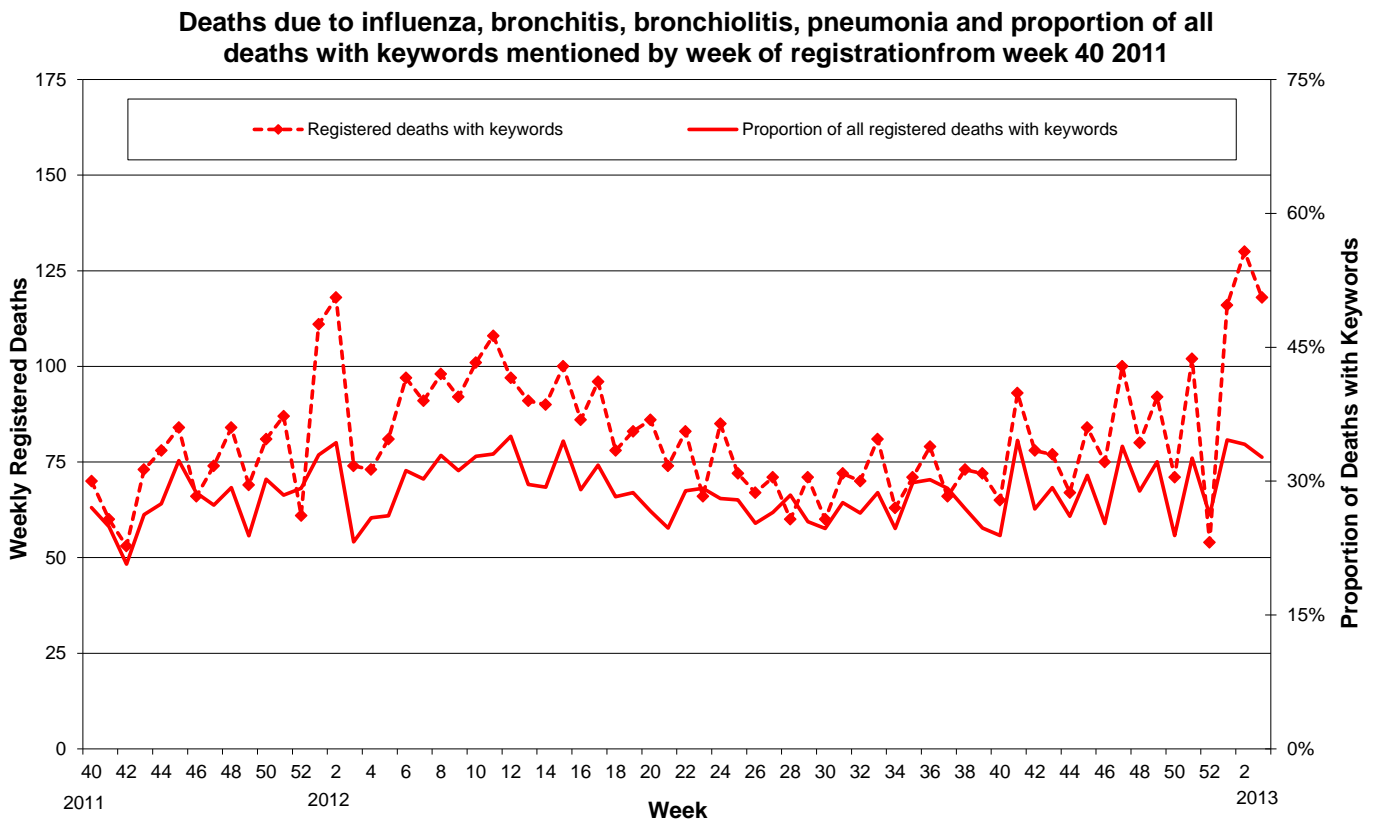
Outbreak Surveillance

There were no confirmed influenza or other respiratory outbreaks in residential care units reported to the Public Health Agency during week 3, 2013.

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



Comments:

The proportion of deaths related to respiratory keywords decreased slightly from 34% in week 2 to 33% in week 3, 2013. In week 3, 2013 there were 361 registered deaths of which 118 related to these specific respiratory infections.

Vaccine Uptake

As at the end of December 2012, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 73.8%, while the uptake in those aged under 65 in an at-risk group was 76.2% (provisional data). This compares with 75.6% uptake in the over 65 years, and 79.8% in the under 65 at-risk group for the same period last year.

International Summary

Europe

Weekly reporting on influenza surveillance in Europe for the 2012–13 season started in week 40/2012 and the period of influenza transmission began around week 49/2012, considerably earlier than in 2011/2012.

- Of 26 countries reporting clinical data in week 2/2013, 14 reported medium- or high-intensity transmission and 19 reported increasing trends. At present, indications of higher transmission levels are mostly coming from the north west of Europe.
- Of 1 238 sentinel specimens tested across 20 countries in week 2/2013, 521 (42%) were positive for influenza virus – a high percentage and similar to that seen in the two previous weeks.
- Of the 2102 influenza virus detections in sentinel specimens since week 40/2012, 991 (47%) were type A, and 1111 (53%) were type B viruses. Among the A viruses subtyped the proportions of A(H1) pdm09 (52%) and A(H3) (48%) were very similar.
- Since week 40/2012, 383 hospitalised laboratory-confirmed influenza cases have been reported, of which 14 had a fatal outcome. There are some early indications of increases in overall mortality in older people associated with the influenza epidemics.
- In the UK there has been an apparent rise in a specific, severe pneumonia due to toxin-producing strains of *Staphylococcus aureus* (PVL-SA), possibly associated with influenza.
- Influenza activity continued to increase in week 2/2013 across Europe, with reports of severe cases from a number of countries. The patterns of virus co-circulation being identified in the EU/EEA are different from that being reported by North America where A(H3) viruses are dominant.

http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx

Worldwide (WHO)

- Influenza activity in North America remained high with some indications that activity might have peaked in areas. Some but not all indicators of severity in the United States of America and Canada have been slightly higher than in previous recent seasons. The onset of the season was earlier than usual and coincided with circulation of other respiratory viruses. Influenza A(H3N2) predominates in North America with A(H1N1)pdm09 being uncommon.
- Many countries in Europe and temperate Asia are reporting increasing influenza activity with A(H1N1)pdm09 being relatively more prominent in Europe than in North America.

- Some countries in the Eastern Mediterranean and the North Africa have reported declining detections of influenza positive samples. Influenza A(H1N1)pdm09 is predominant in the region.
- In tropical Asia, the influenza activity is similar to previous weeks, with persistent low-level circulation.
- Influenza activity in sub-Saharan Africa has declined in most countries.
- In the Caribbean, central America and tropical south America, influenza activity decreased to low levels, except for Bolivia, where there is increasing circulation of influenza A(H3N2)
- Influenza in countries of the southern hemisphere are currently at inter-seasonal levels

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

USA

According to the latest FluView report, influenza activity remains high and widespread across the nation. While activity indicators that rose early -- like influenza-like-illness and the percent of respiratory specimens testing positive for influenza -- are beginning to show declines, indicators that reflect severity are now rising. It's typical for severity indicators to lag a few weeks behind early activity indicators. This week, a high proportion of influenza-associated hospitalizations and deaths are occurring in people 65 and older. Seasons when H3N2 viruses are predominant tend to be associated with greater severity in terms of more hospitalizations and deaths. This FluView update contains data for the week of January 6-12, 2013.

Below is a summary of the key indicators:

- The proportion of people seeing their health care provider for influenza-like illness (ILI) decreased from 4.8% in the previous week to 4.6% for the week of January 6-12 but remains above the national baseline for the sixth consecutive week.
- Thirty states and New York City are now reporting high ILI activity; an increase from 24 states last week. Additionally, 10 states are reporting moderate levels of ILI activity.
- Forty-eight states reported widespread geographic influenza activity for the week of January 6-12, 2013. This increased from 47 states in the previous week.
- Since October 1, 2012, 5,249 laboratory-confirmed influenza-associated hospitalizations have been reported; an increase of 1,539 hospitalizations from the previous week. This translates to a rate of 18.8 influenza-associated hospitalizations per 100,000 people in the United States.
- Influenza-associated hospitalization rates continue to be highest among people 65 and older. Of the 5,249 influenza-associated hospitalizations that have been reported this season, 49.6% have been among people 65 and older.
- The proportion of deaths attributed to pneumonia and influenza (P&I) based on the 122 Cities Mortality Reporting System increased sharply; remaining above the epidemic threshold for the second consecutive week.
- Nationally, the percentage of respiratory specimens testing positive for influenza in the United States during the week of January 6-12 decreased from 34% in the previous week to 29.4% (Last week CDC reported 32.8% positive. This number increased after additional reports were submitted.)
- Influenza A (H3N2), 2009 influenza A (H1N1), and influenza B viruses have all been identified in the U.S. this season. During the week of January 6-12, 3,003 of the 3,638 influenza positive tests reported to CDC were influenza A and 635 were influenza B viruses. Of the 1,648

influenza A viruses that were subtyped, 97% were H3 viruses and 3% were 2009 H1N1 viruses.

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

Canada

- The percentage of positive laboratory tests for influenza declined in week 02; however, more regions across Canada reported widespread and localized influenza activity and 130 new influenza outbreaks were reported.
- The ILI consultation rate increased and is well above the expected range for this time of year.
- A total of 3744 laboratory detections of influenza were reported, of which 97.8% were for influenza A viruses, predominantly A(H3N2).
- 51 new paediatric influenza-associated hospitalizations were reported through the IMPACT network.
- 44 new adult influenza-associated hospitalizations were reported through the PCIRN-SOS network.

<http://www.phac-aspc.gc.ca/fluwatch/>

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/>

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

Public Health Agency wish to thank NISRA, the sentinel GPs, Out-of-Hours Centres, Regional Virus Laboratory, Critical Care Network for Northern Ireland and all who have contributed to the surveillance system and who have contributed towards this report.

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