

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 1 (31 December 2012 – 6 January 2013)

Summary

- GP consultation rates for combined 'flu/FLI have increased above the Northern Ireland threshold of 70 per 100,000 population for the first time this season.
- The GP combined 'flu/FLI consultation rate increased from 43.7 per 100,000 population in week 52, 2012, to 87.0 per 100,000 population in week 1, 2013 (99% increase).
- OOH consultation rates for 'flu/FLI decreased from 34.8 per 100,000 population in week 52, 2012 to 28.0 per 100,000 population in week 1, 2013 (20% decrease); however, this reduction would be expected following the holiday period.
- Influenza positivity rate of respiratory specimens continues to increase. In week 1, 2013 there were 16 detections of influenza B, 2 influenza A(H1N1)2009 and 2 influenza A(untyped) bringing the total of influenza B detections to 89 and influenza A to 5 this season so far.
- RSV activity has decreased with 30 RSV positive detections in week 1, 2013.
- There was one laboratory confirmed influenza case admitted to critical care in Northern Ireland in week 1, 2013. This brings the total confirmed influenza cases admitted to critical care to four.
- There were no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in week 1, 2013 with no deaths reported so far this season.
- There were no confirmed influenza or other respiratory outbreaks reported to PHA in week 1, 2013.

Introduction

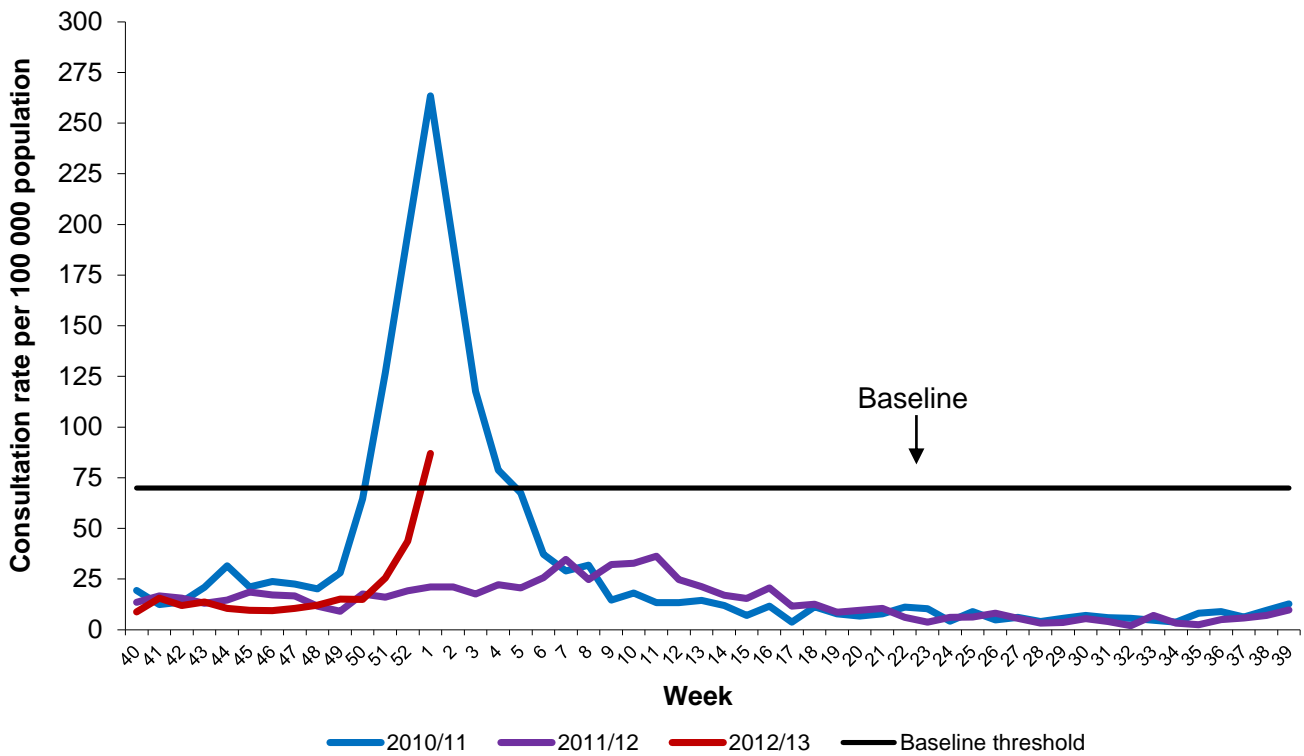
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place.

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



Comment

GP consultation rates for combined ‘flu/FLI have increased above the Northern Ireland threshold of 70 per 100,000 population for the first time this season. The GP combined ‘flu/FLI consultation rate increased from 43.7 per 100,000 population in week 52, 2012, to 87.0 per 100,000 population in week 1, 2013 (99% increase) and consultation rates for week 1 were substantially higher than the same weeks in the previous year but lower than those for the 2010/11 season (Figures 1 and 2). It should be noted that bank holidays in both weeks 52, 2012 and week 1, 2013 may have impacted on the consultation rates.

Consultation rates based on the Apollo surveillance programme by LCG show the highest rates for flu like illness in the South Eastern and Western areas.

Figure 2. Sentinel GP consultation rate for combined flu and flu-like illness and number of virology 'flu detections from week 40 2011

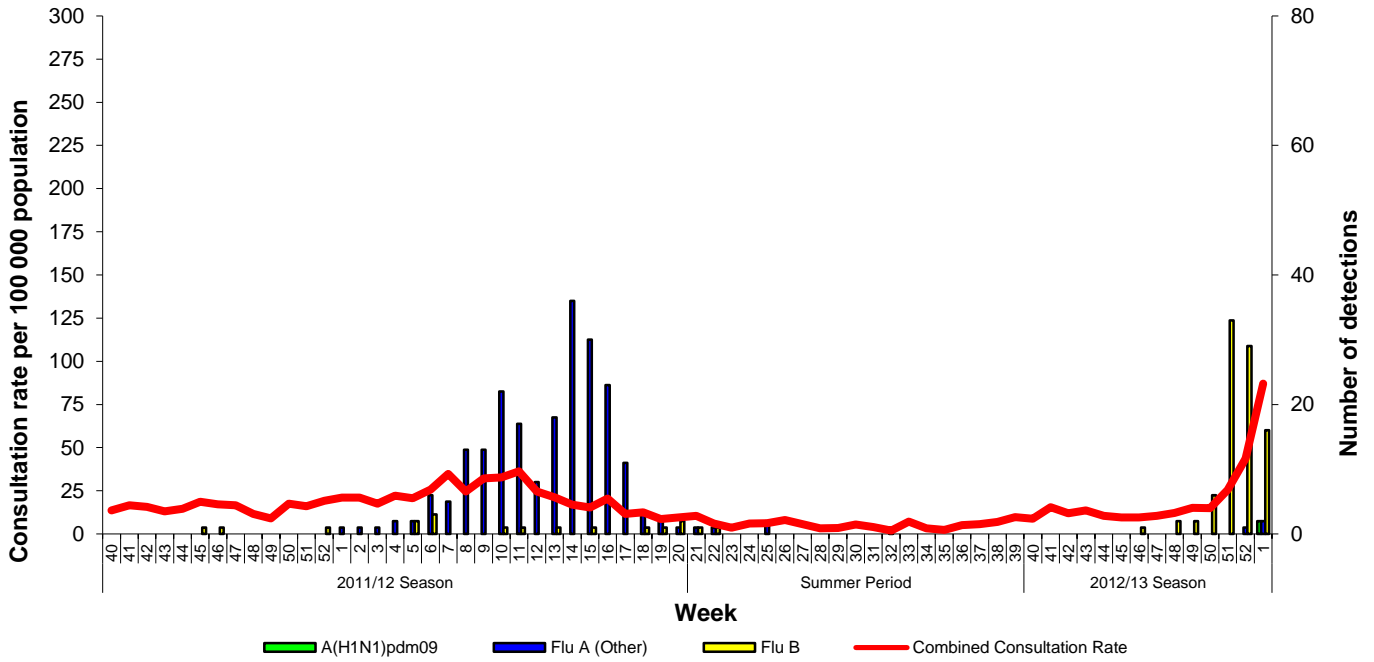
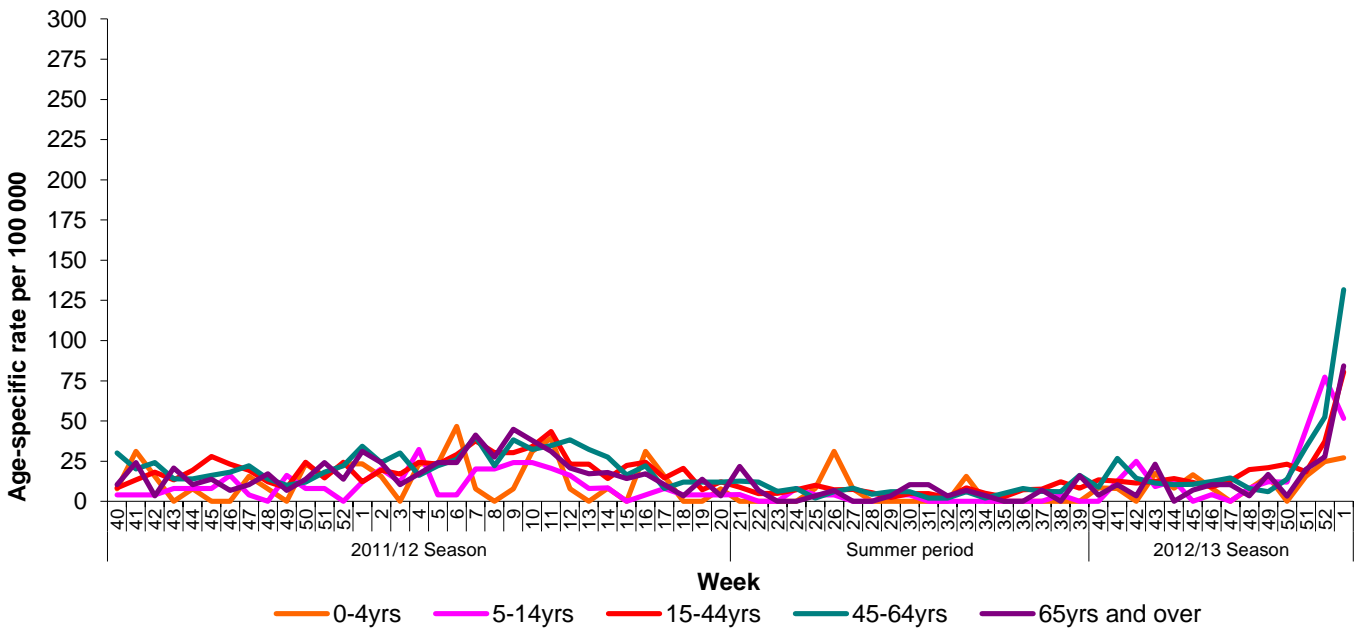


Figure 3. Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 40 2011



Comment

With the exception of the 5-14 year age group all age-specific consultation rates have increased in week 1, 2013. Consultation rates in the 15-44, 45-64 and over 65 year old age groups all increased substantially, with only a small increase in the 0-4 year age group. The highest age-specific 'flu/FLI consultation rate in week 1 2013 was in the 45-64 year age group. Small numbers in some of the age groups may contribute to fluctuations in rates (Figure 3).

Out-of-Hours (OOH) Centres Call Data

Figure 4. OOH call rate for flu and flu-like illness, 2010/11 – 2012/13

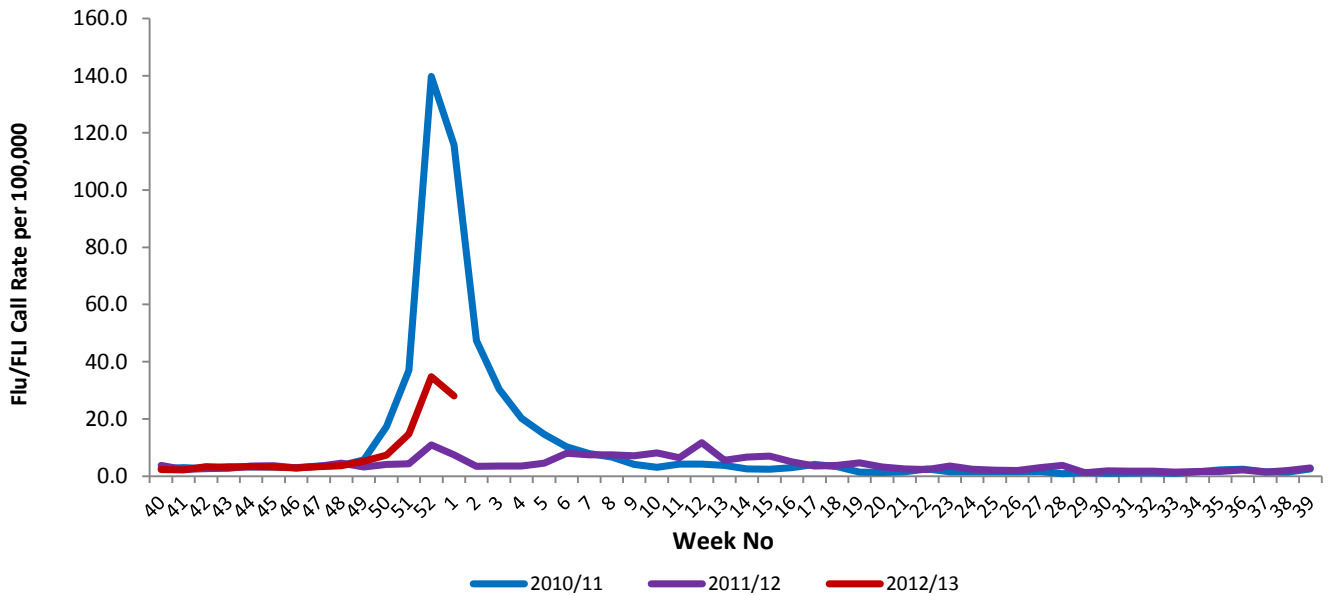
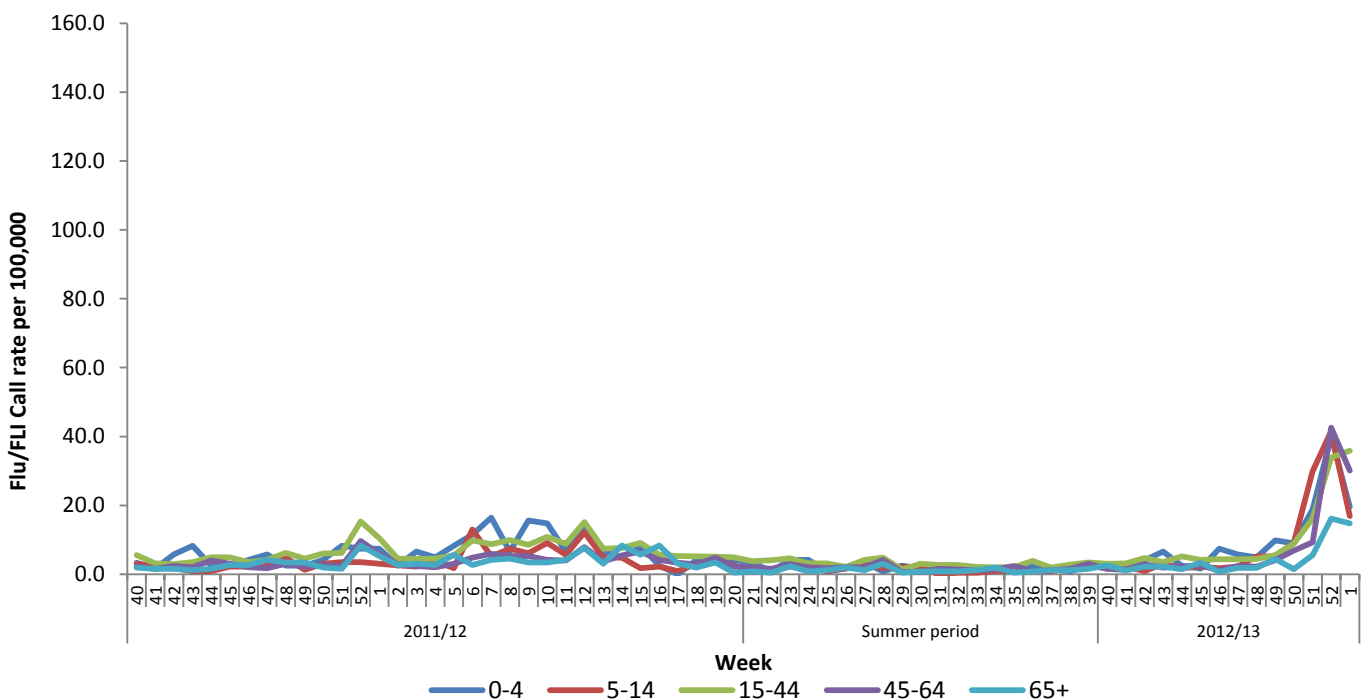


Figure 5. OOH Call rates of flu and flu-like illness by age-group from week 40 2011



Comment

OOH consultation rates for 'flu/FLI decreased from 34.8 per 100,000 population in week 52, 2012 to 28.0 per 100,000 population in week 1, 2013 (20% decrease); however, this reduction would be expected following the holiday period. Call rates for 'flu/FLI remain higher than the same period in the previous year (7.5 per 100,000 population) although still much lower than the rate in week 1, 2010/11 (115.8 per 100,000 population). With the exception of the 15-44 year age group (6% increase) all age-specific rates have also decreased. The highest rate in week 1, 2013 was in the 15-44 year age group. 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 1, 2013

Source	Specimens Tested	AH3	A(H1N1) pdm2009	A (untyped)	Influenza B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	10	0	0	1	4	1	5	50%
Non-sentinel	89	0	2	1	12	29	15	17%
Total	99	0	2	2	16	30	20	20%

Table 2. Cumulative Total Week 40, 2012 - Week 1, 2013

	AH3	A(H1N1) pdm2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	1	1	1	20	23	555
5-14	0	0	0	25	25	16
15-64	0	1	1	37	39	35
65+	0	0	0	7	7	35
Unknown	0	0	0	0	0	4
All ages	1	2	2	89	94	645

Table 3. Cumulative Total Week 40, 2012 - Week 1, 2013

	Sentinel						Non-sentinel					
	AH3	A(H1N1) pdm2009	A (untyped)	Flu B	Total Influenza	RSV	AH3	A(H1N1) pdm2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	0	0	0	1	1	3	1	1	1	19	22	552
5-14	0	0	0	4	4	0	0	0	0	21	21	16
15-64	0	0	1	13	14	1	0	1	0	24	25	34
65+	0	0	0	1	1	0	0	0	0	6	6	35
Unknown	0	0	0	0	0	0	0	0	0	0	0	4
All ages	0	0	1	19	20	4	1	2	1	70	74	641

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.

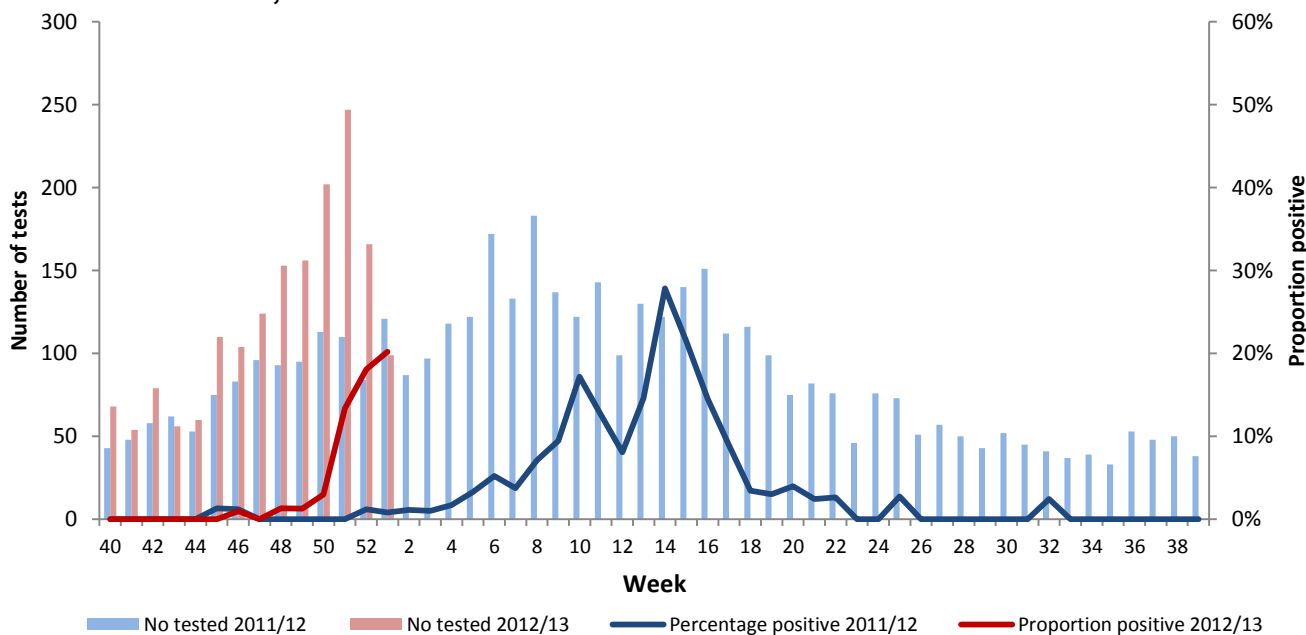
Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

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

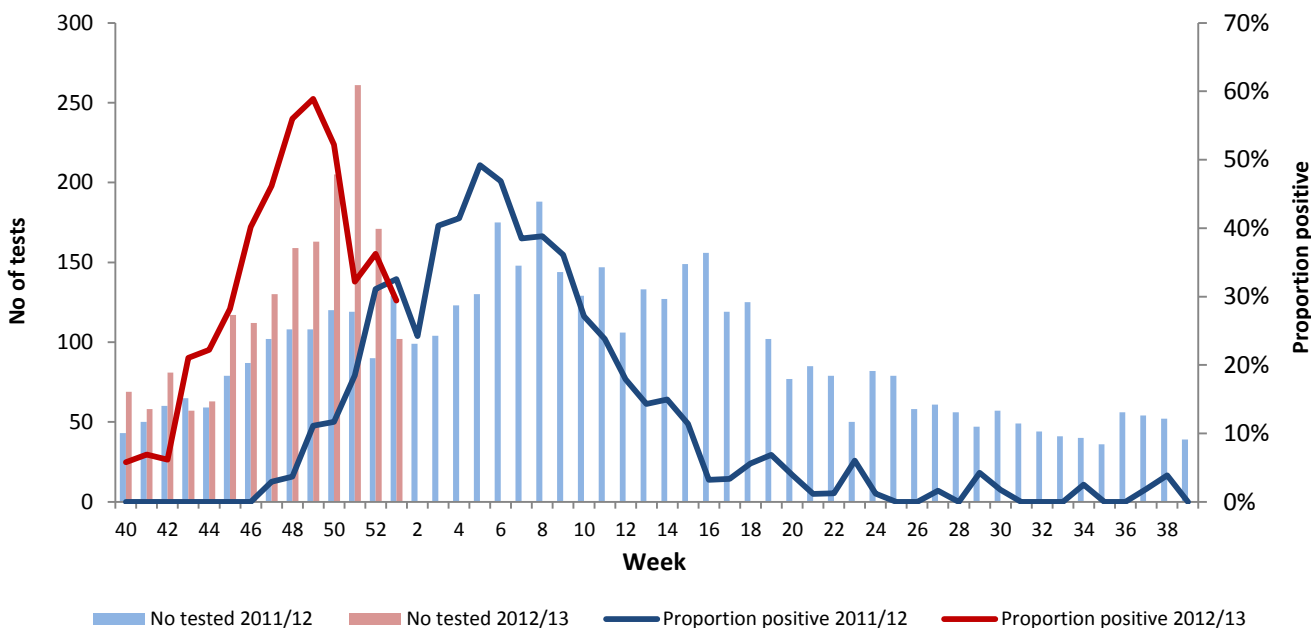
Numbers of specimens submitted for testing remain high. There were 99 specimens submitted for testing in week 1, 2013, of which there were 16 positive detections of influenza B, 2 influenza A(H1N1)2009 and 2 influenza A(untyped). This brings the total number of influenza B detections this season to 89 and the total for influenza A to 5. Influenza positivity rates for respiratory specimens have increased compared to week 52, 2012 (Figure 6).

Figure 6. Number of samples tested for influenza and proportion positive, 2011/12 and 2012/13, all sources



Respiratory Syncytial Virus

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



Comment

There were 30 RSV detections in week 1, 2013. The RSV positivity rate continued to decrease from 36% in week 52, 2012 to 29% in week 1, 2013. From week 40 of the current season there have been a total of 645 RSV positive detections reported, of which 86% fall in the 0-4 year age group. RSV positivity trends are similar to 2011/12 but are approximately four weeks earlier (Figure 7).

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 was one new admission to ICU confirmed with influenza in week 1, 2013. To date there have been four cases admitted to ICU that have been confirmed with influenza three of which were confirmed with influenza B and one with influenza A.

Mortality Surveillance

There were no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in week 1, 2013 with none reported so far this season.

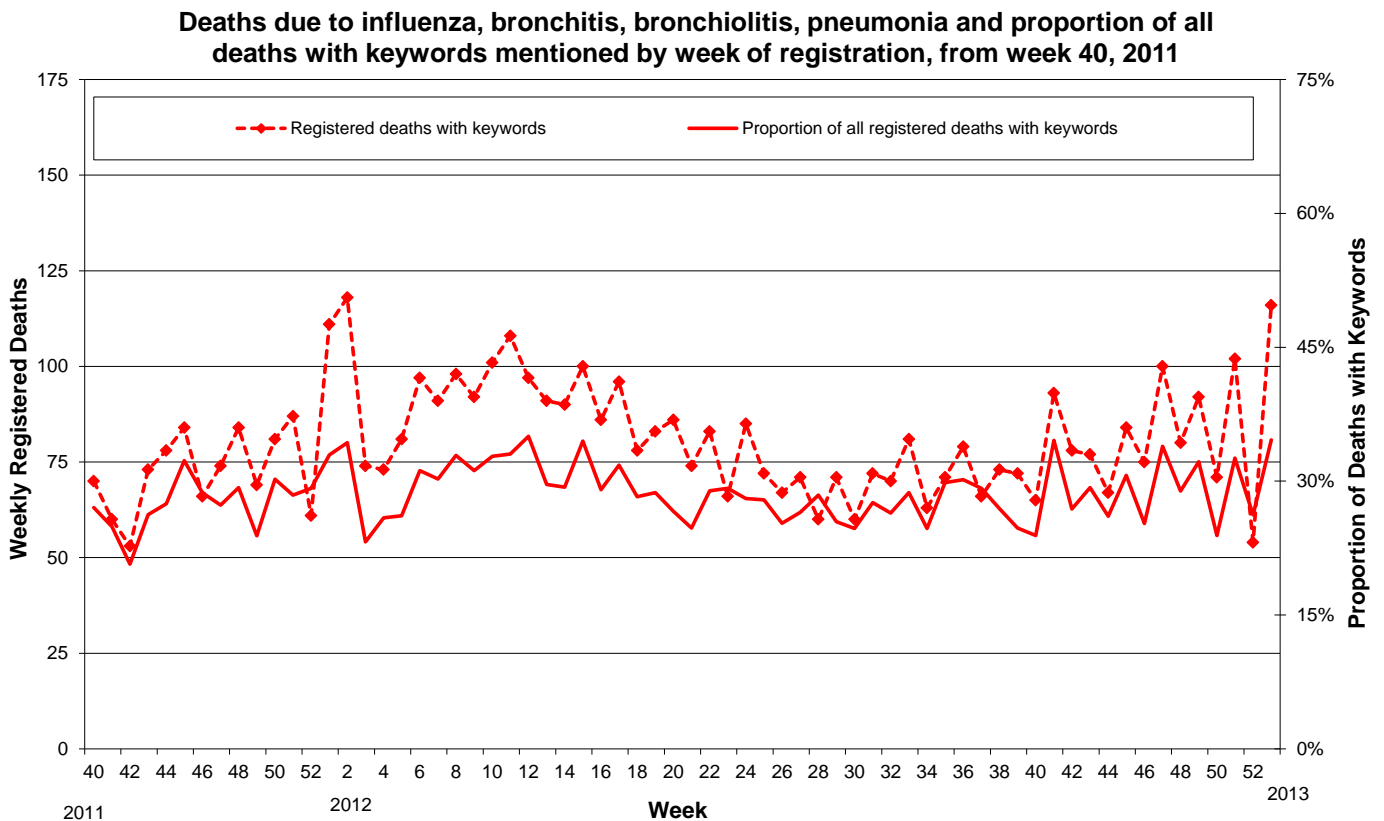
Outbreak Surveillance

There were no confirmed influenza or other respiratory outbreaks in residential care units reported to the Public Health Agency during week 1, 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 increased from 26% in week 52, 2012 to 35% in week 1, 2013. In week 1, 2013 there were 335 registered deaths of which 116 related to these specific respiratory infections. The large increase in the number of death registrations is expected following the holiday period in week 52.

Vaccine Uptake

As at the end of November 2012, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 71.2%, while the uptake in those aged under 65 in an at-risk group was 71.5% (provisional data). This compares with 72.6% uptake in the over 65 years, and 74.6% in the under 65 at-risk group for the same period last year.

International Summary

Europe

- During week 52/2012, four countries (France, Italy, the Netherlands and Norway) reported medium intensity transmission; geographic spread of influenza activity was reported as widespread by five countries (Belgium, Denmark, France, Norway and the UK (England)); and nine countries reported increasing trends.
- Of 375 specimens from sentinel patients, 25% were positive for influenza virus; a small decrease compared with 27% in the previous week. This may be related to a lower number of physician consultations over the New Year holiday.
- Since week 40/2012, 46% of sentinel specimens were type A and 54% were type B, though the proportion of B viruses has decreased somewhat in recent weeks. Subtyping of type A viruses has shown proportions of 56% A(H3) and 44% A(H1).
- Viruses characterised to date match well with the vaccine viruses.
- Countries undertaking surveillance of laboratory-confirmed severe influenza cases requiring hospitalisation are starting to report increasing numbers of such individuals.
- Influenza activity continues to rise in a number of EU/EEA countries, especially in western Europe. Greater numbers of severe laboratory-confirmed cases are now being reported.

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

Worldwide (WHO)

- Reporting of influenza activity has been irregular in the past two weeks due to the holiday season in many countries. As a result, overall virus detections reported have dropped off although in most countries in the northern temperate regions, influenza activity appears to have continued rising.
- Many countries of North America, Europe, north Africa, eastern Mediterranean and temperate Asia have reported increasing influenza activity over the past weeks. North China has started its influenza season.
- In tropical Asia, influenza activity was similar to previous weeks, with persistent low-level circulation.
- Influenza activity in sub-Saharan Africa has declined in most countries, with the exception of the Democratic Republic of Congo and Ghana.
- 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 activity in countries of the southern hemisphere is currently at inter-seasonal levels.

- Several unconfirmed media stories have reported a number of deaths related to infection with influenza A(H1N1)pdm09 in different parts of the world. As with other seasonal influenza viruses, it is expected that some deaths would occur with infection, in particular now when influenza season starts in Northern Hemisphere. These reports at times refer to this A(H1N1)pdm09 virus as “swine flu”, causing some confusion with other viruses that recently reported in the United States. A(H1N1)pdm09 virus has been circulating in humans for more than 3 years and now is a seasonal human influenza virus.

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

USA

According to this week’s FluView report, influenza activity continues to increase in the United States with most of the country now experiencing high levels of influenza-like-illness. These current levels of ILI are nearing what have been peak levels of ILI during moderately severe seasons in the past. This FluView update contains data for the week of December 23-29, 2012.

Below is a summary of the key indicators:

- The proportion of people seeing their health care provider for influenza-like illness (ILI) is above the national baseline for the fourth consecutive week having climbed sharply from 2.8% to 5.6% over the past 4 weeks.
- Twenty-nine states and New York City are now reporting high ILI activity. Last week 16 states reported high ILI activity. Additionally, 9 states reported moderate levels of ILI activity.
- Forty-one states are reporting widespread geographic influenza activity for the week of December 23-29, 2012; an increase from 31 states the previous week.
- Since October 1, 2012, 2,257 laboratory-confirmed influenza-associated hospitalizations have been reported; an increase of 735 hospitalizations from the previous week. This translates to a rate of 8.1 influenza-associated hospitalizations per 100,000 people in the United States. Hospitalization data are collected from 15 states to calculate a rate of laboratory-confirmed influenza-associated hospitalizations that is reasonably representative of the nation. These data do not reflect the actual total number of influenza-associated hospitalizations in the United States.
- The proportion of deaths attributed to pneumonia and influenza (P&I) based on the 122 Cities Mortality Reporting System was slightly below the epidemic threshold.
- Nationally, the percentage of respiratory specimens testing positive for influenza in the United States during the week of December 23-29 decreased from 36.7% in the previous week to 31.6%.
- 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 December 23-29, 2,346 of the 2,961 influenza positive tests reported to CDC were influenza A and 615 were influenza B viruses. Of the 1,234 influenza A viruses that were subtyped, 98% were H3 viruses and 2% were 2009 H1N1 viruses.

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

Canada

- Influenza activity in Canada continues to rise with increases in all indicators in weeks 51 and 52.
- A total of 4632 laboratory detections of influenza were reported, of which 97.7% were for influenza A viruses, predominantly A(H3N2).
- 127 new influenza outbreaks were reported, 87 of which were in long-term care facilities.
- 114 new paediatric influenza-associated hospitalizations were reported through the IMPACT network, and 176 hospitalizations including 15 deaths among adults ≥ 20 years of age were reported through Aggregate surveillance.
- The ILI consultation rate increased, but remains within the expected range for this time of year.
- Similar to previous years, older adults (persons aged ≥ 65 years) are the most affected this season; with 41.3% of laboratory detections to date, increased outbreaks in long-term care facilities, higher hospitalization rates and a high proportion of antiviral prescriptions among those ≥ 75 years.

<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:

Paul Cabrey
Information Officer
Public Health Agency
028 90263386

Cathriona Kearns
Epidemiological Scientist
Public Health Agency
028 90263386

Email: flusurveillance@hscni.net

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.