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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 5 (28 January – 3 February 2013)

Summary

- GP consultation rates continue to stay below the Northern Ireland threshold of 70 per 100,000 population.
- GP consultation rates for combined 'flu/FLI in week 5 were 48.4 per 100,000 population, similar to those of the previous week (47.9 per 100,000 population).
- OOH consultation rates for 'flu/FLI increased slightly again from 11.3 per 100,000 population in week 4 to 13.5 per 100,000 population in week 5, 2013 (19% increase).
- Influenza positivity rate of respiratory specimens have increased again this week. In week 5, 2013 there were 22 positive detections of influenza B, 5 influenza A(untyped) and 2 influenza A(H3). Influenza B remains the predominant type.
- RSV activity continues to decrease although there was a slight increase in positivity rates.
- There was 1 new admission to ICU confirmed with influenza in week 5, 2013. This brings the total admitted to ICU that have been confirmed with influenza to 13.
- There were no deaths reported in patients with laboratory confirmed influenza admitted to ICU in week 5, 2013.
- There was one confirmed influenza outbreak (influenza A) reported to PHA in week 5, 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

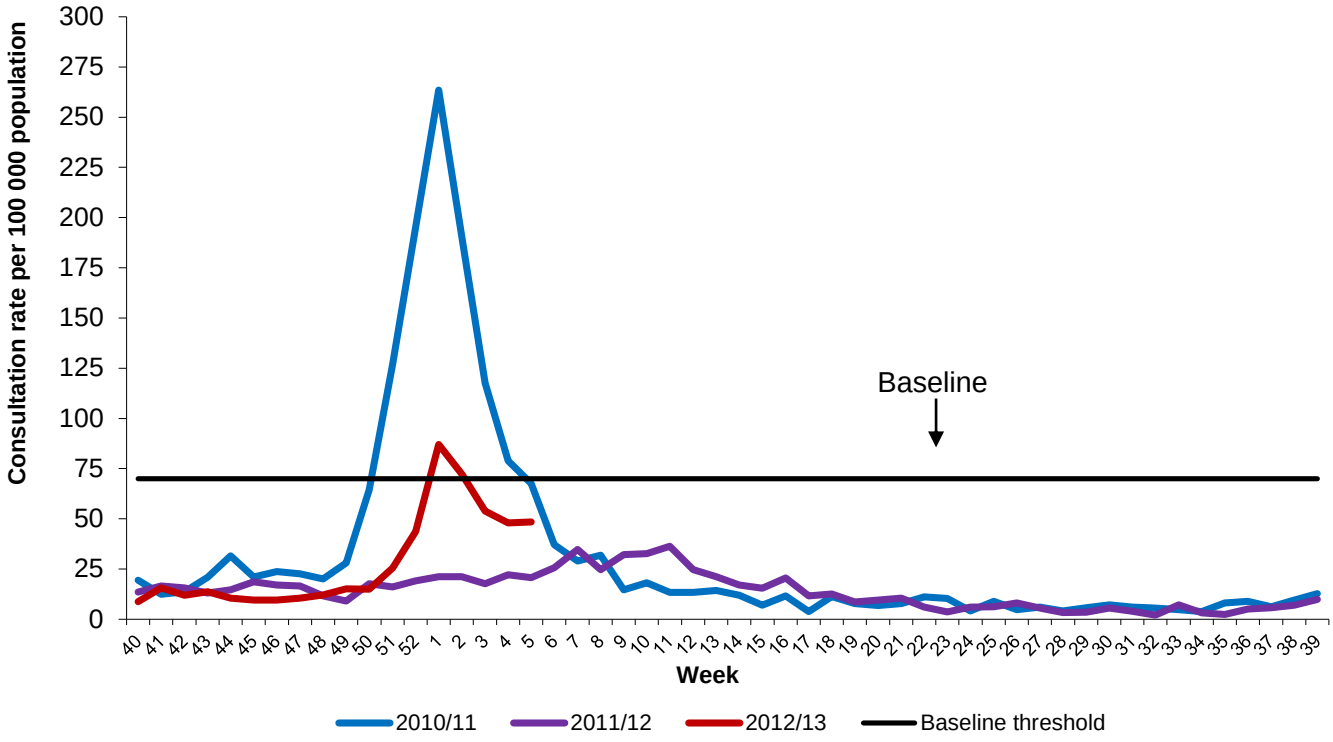


Figure 2. Sentinel GP combined consultation rate and number of influenza positive detections 2007/08 – 2012/13.

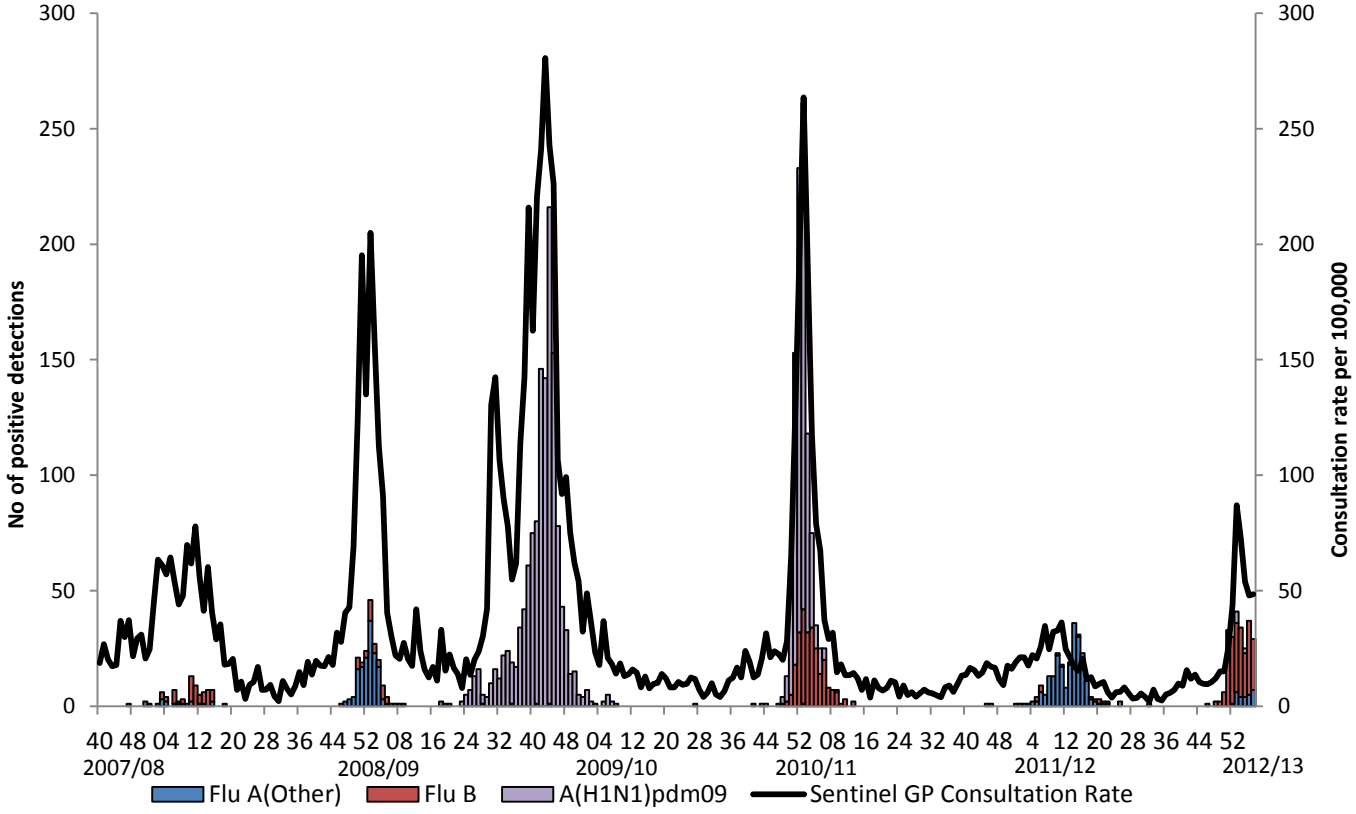
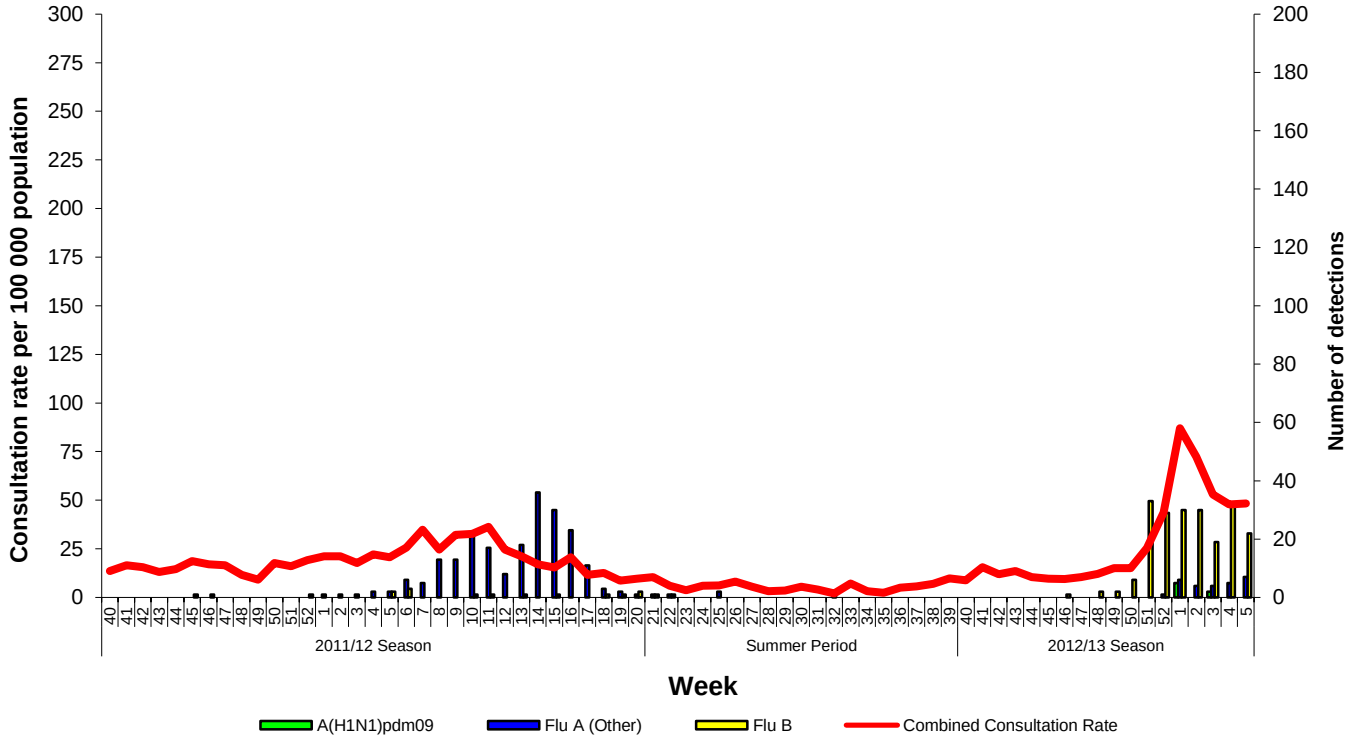


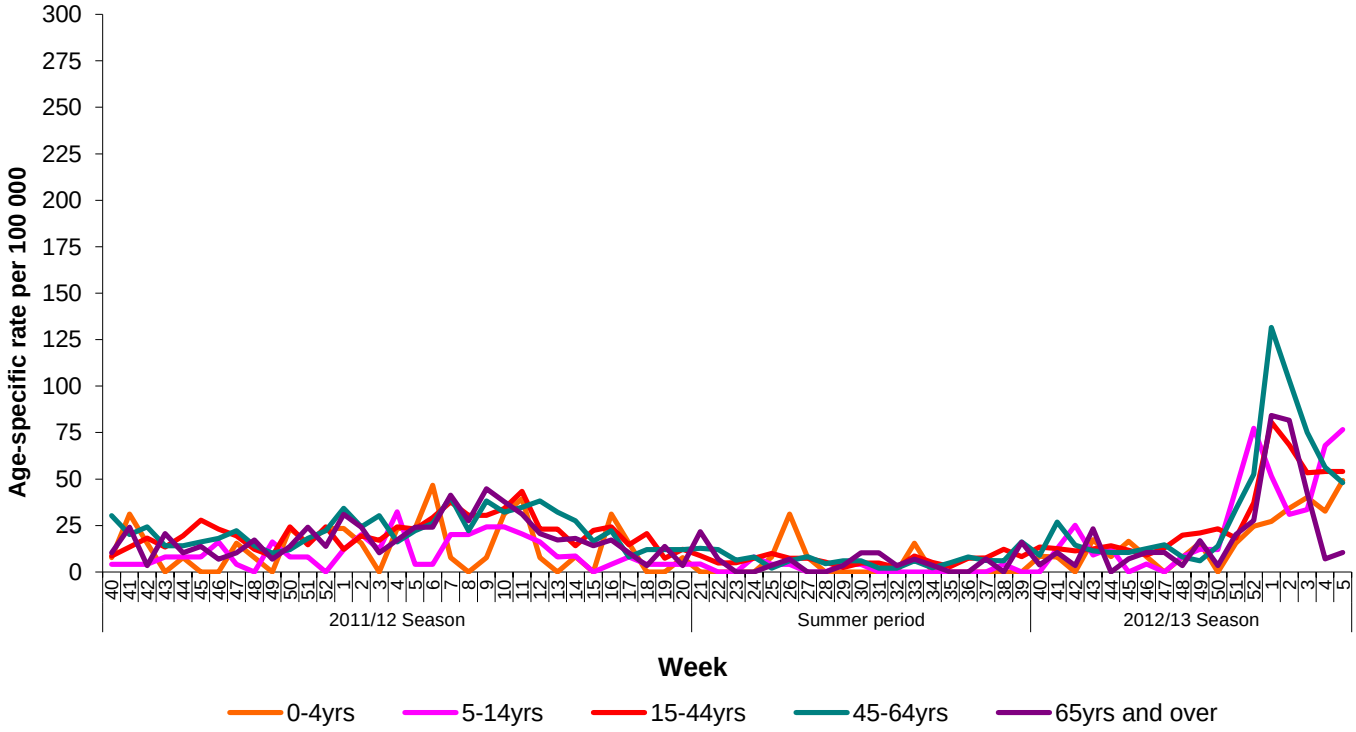
Figure 3. Sentinel GP consultation rate for combined flu and flu-like illness and number of virology 'flu detections from week 40, 2011



Comment

GP consultation rates for combined 'flu/FLI in week 5 were 48.4 per 100,000 population, similar to those of the previous week (47.9 per 100,000 population) and rates remain below the Northern Ireland threshold of 70 per 100,000 population. Consultation rates continue to be substantially higher than the same weeks in the previous year but lower than those for the 2010/11 season (Figures 1, 2 and 3).

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



Comment

The age-specific consultation rates for the 0-4, 5-14 and over 65 year age groups all increased this week compared to week 4, with the rates in the 45-64 year age group decreasing and those for the 15-44 year age group similar to the previous week. Similar to the out of hours 'flu/FLI consultation rates the highest age-specific consultation rate was in the 5-14 year age group. 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

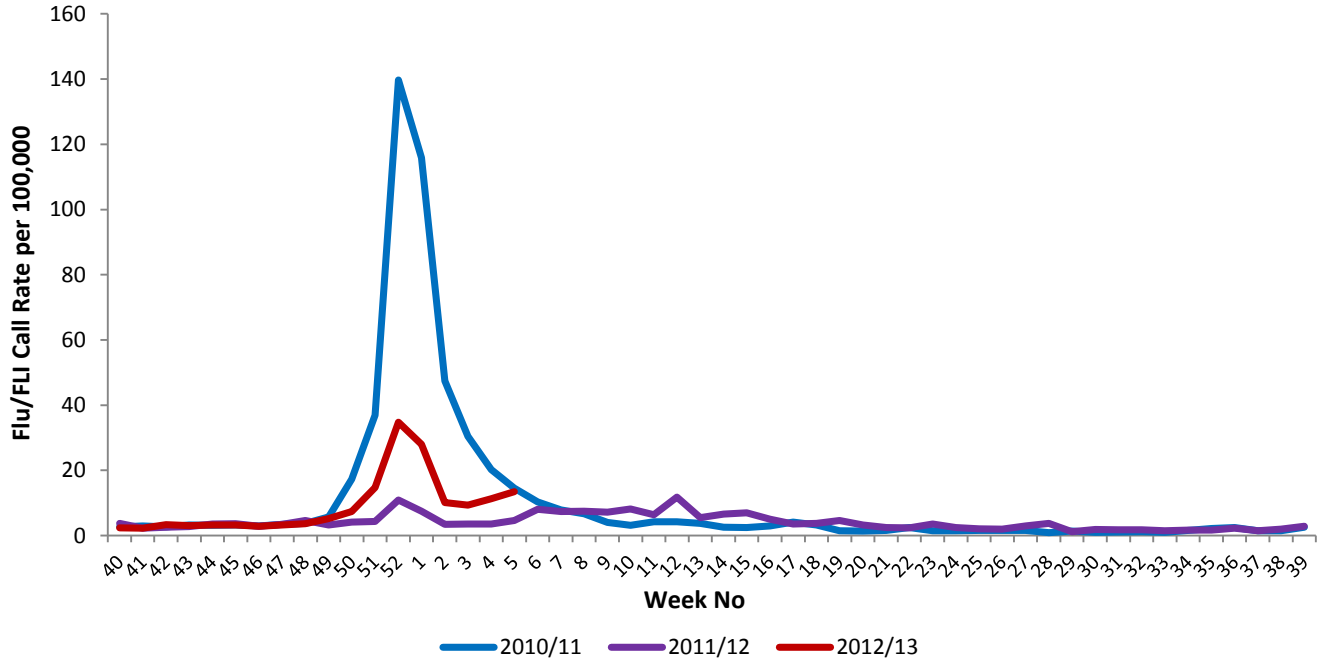
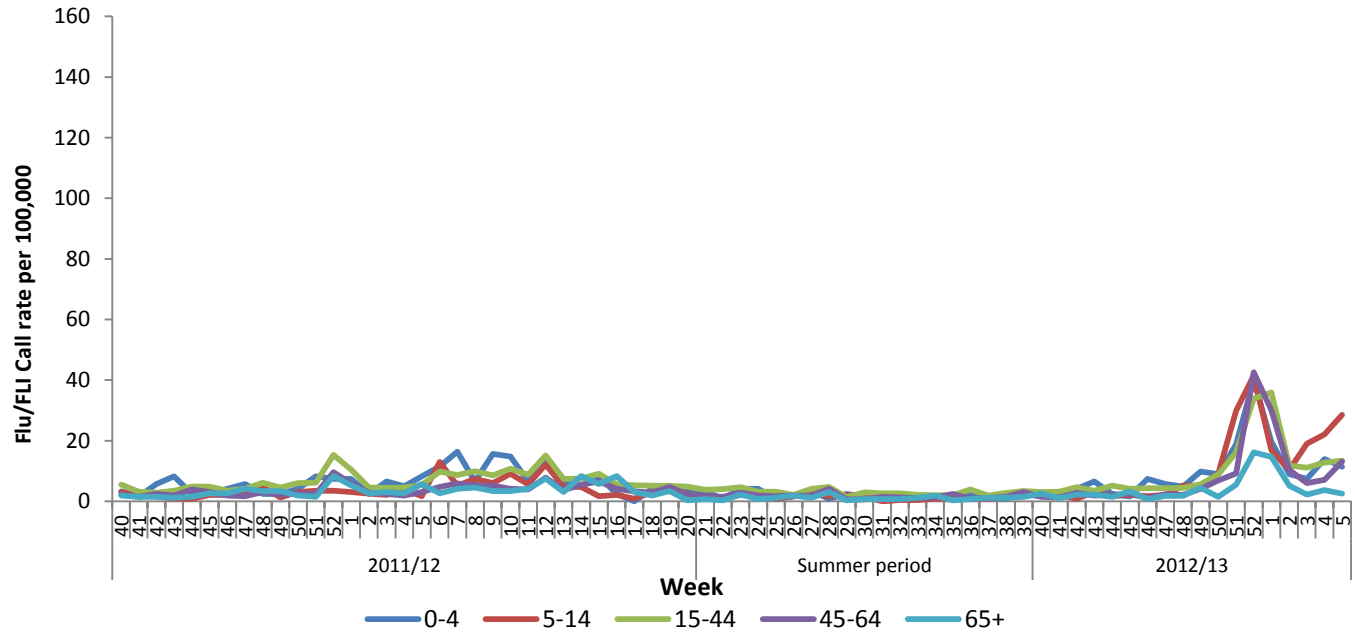


Figure 6. OOH Call rates of flu and flu-like illness by age-group from week 40 2011



Comment

OOH consultation rates for 'flu/FLI increased slightly again from 11.3 per 100,000 population in week 4 to 13.5 per 100,000 population in week 5, 2013 (19% increase). Call rates for 'flu/FLI continue to be higher than the same period in the previous year (4.6 per 100,000 population) but are similar to the rate in week 5, 2010/11 (14.6 per 100,000 population). There were only minor changes in the age-specific rates for the 0-4, 15-44 and over 65 year age groups; however, both the 5-14 and 15-44 year age groups showed increases. Rates for the 5-14 year age group have been increasing since week 2 and display the highest age-specific rate in week 5, 2013. 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 5, 2013								
Source	**Specimens Tested**	AH3	A(H1N1) pdm09	A (untyped)	Influenza B	RSV	**Total influenza Positive**	**% Influenza Positive**
Sentinel	8	0	0	2	5	0	7	88%
Non-sentinel	98	2	0	3	17	16	22	22%
Total	**106**	**2**	**0**	**5**	**22**	**16**	**29**	**27%**

Table 2. Cumulative Total Week 40, 2012 - Week 5, 2013						
	AH3	**A(H1N1) pdm09**	**A (untyped)**	**Flu B**	**Total Influenza**	**RSV**
0-4	5	3	2	44	**54**	649
5-14	1	1	0	62	**64**	19
15-64	9	3	3	77	**92**	53
65+	5	0	2	23	**30**	52
Unknown	0	0	0	0	**0**	5
All ages	**20**	**7**	**7**	**206**	**240**	**778**

Table 3. Cumulative Total Week 40, 2012 - Week 5, 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	2	**2**	3	5	3	2	42	**52**	646
5-14	0	0	0	6	**6**	0	1	1	0	56	**58**	19
15-64	1	0	1	34	**36**	5	8	3	2	43	**56**	48
65+	1	0	1	2	**4**	0	4	0	1	21	**26**	52
Unknown	0	0	0	0	**0**	0	0	0	0	0	**0**	5
All ages	**2**	**0**	**2**	**44**	**48**	**8**	**18**	**7**	**5**	**162**	**192**	**770**

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.

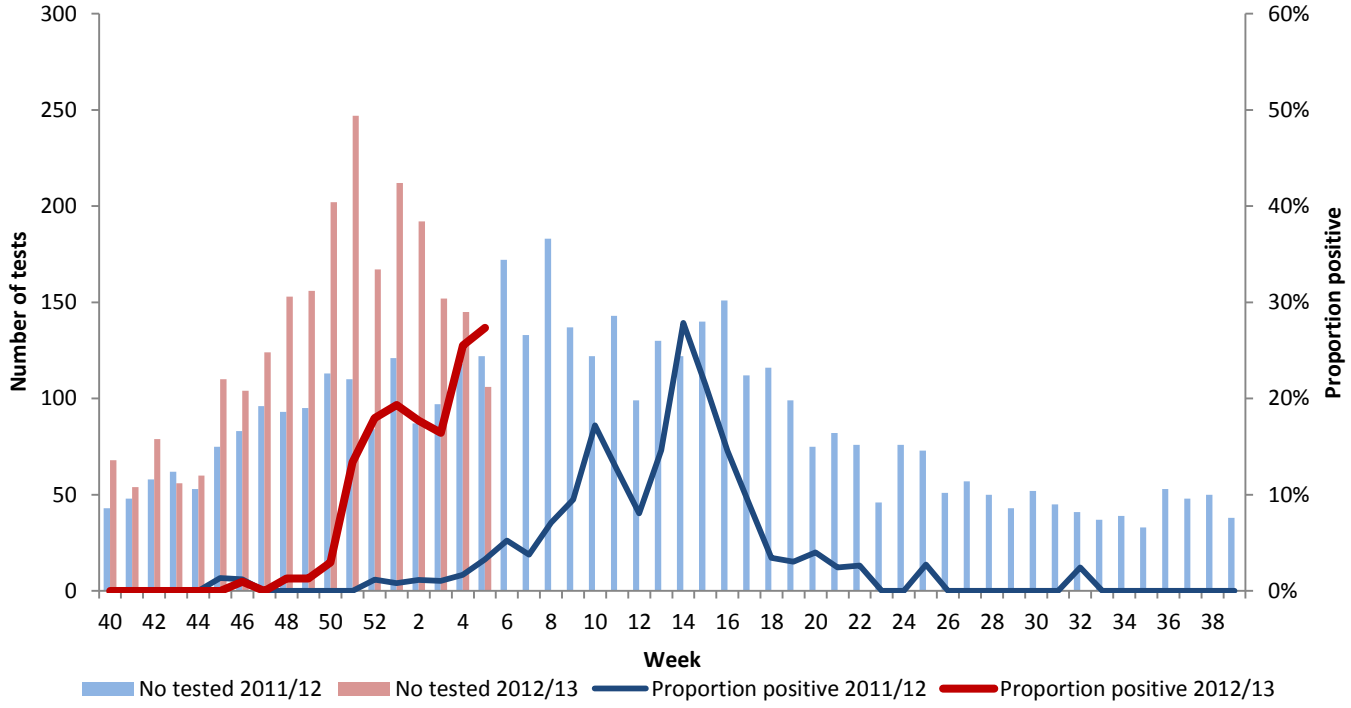
Sentinel and non-sentinel samples are tested for influenza and for RSV. Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

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

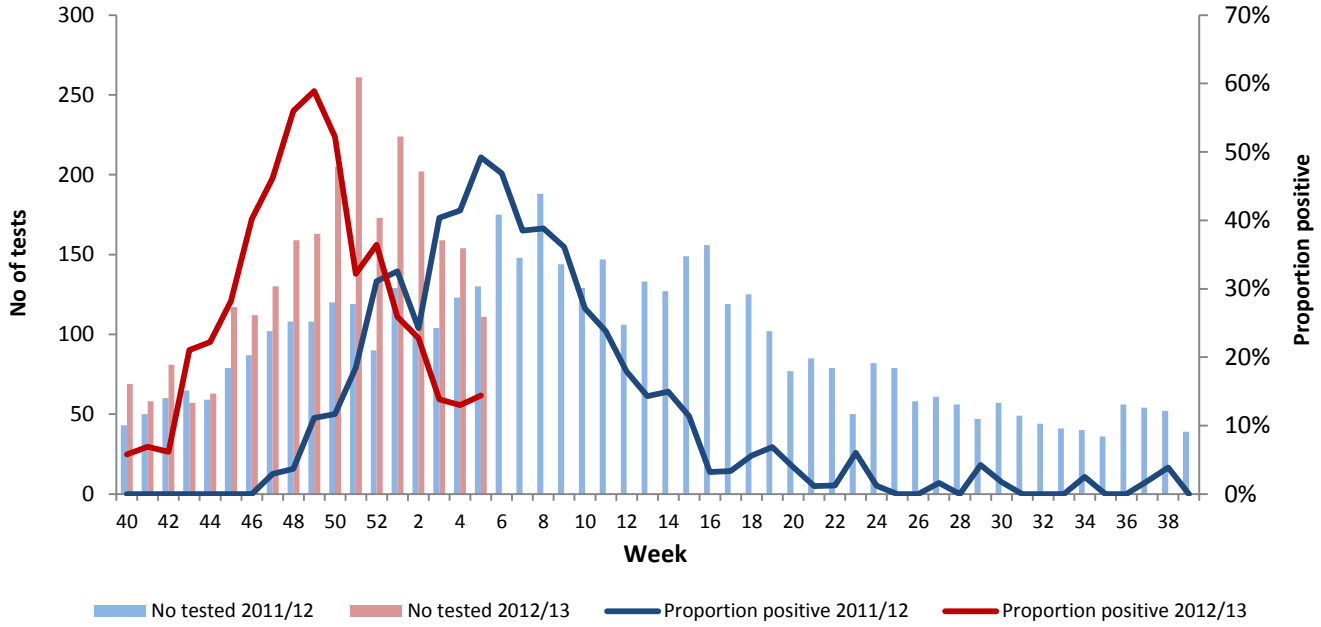
Numbers of specimens submitted for testing remain high in comparison with the previous year but are decreasing. However, influenza positivity rates have continued to increase in week 5, 2013. There were 106 specimens submitted for testing in week 5, 2013, of which there were 22 positive detections of influenza B, 5 influenza A(untyped) and 2 influenza A(H3). Influenza B continues to be the predominant type with a total of 206 detections so far this season (86% of all influenza detections), and a further 34 detections of influenza A (20 influenza A(H3), 7 A(H1N1)pdm09 and 7 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

There were 16 RSV detections in week 5, 2013 with positivity rates remaining similar to the previous two weeks. From week 40 of the current season there have been a total of 778 RSV positive detections reported, of which 83% 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 was one new admission to ICU confirmed with influenza in week 5, 2013. To date there have been 13 cases (7 adults, 6 children) admitted to ICU that have been confirmed with influenza; eight of which were confirmed with influenza B, four with influenza A(H3) and one influenza A(H1N1)pdm09.

Mortality Surveillance

There were no deaths reported in patients with laboratory confirmed influenza admitted to ICU in week 5, 2013; with the total this season remaining at one.

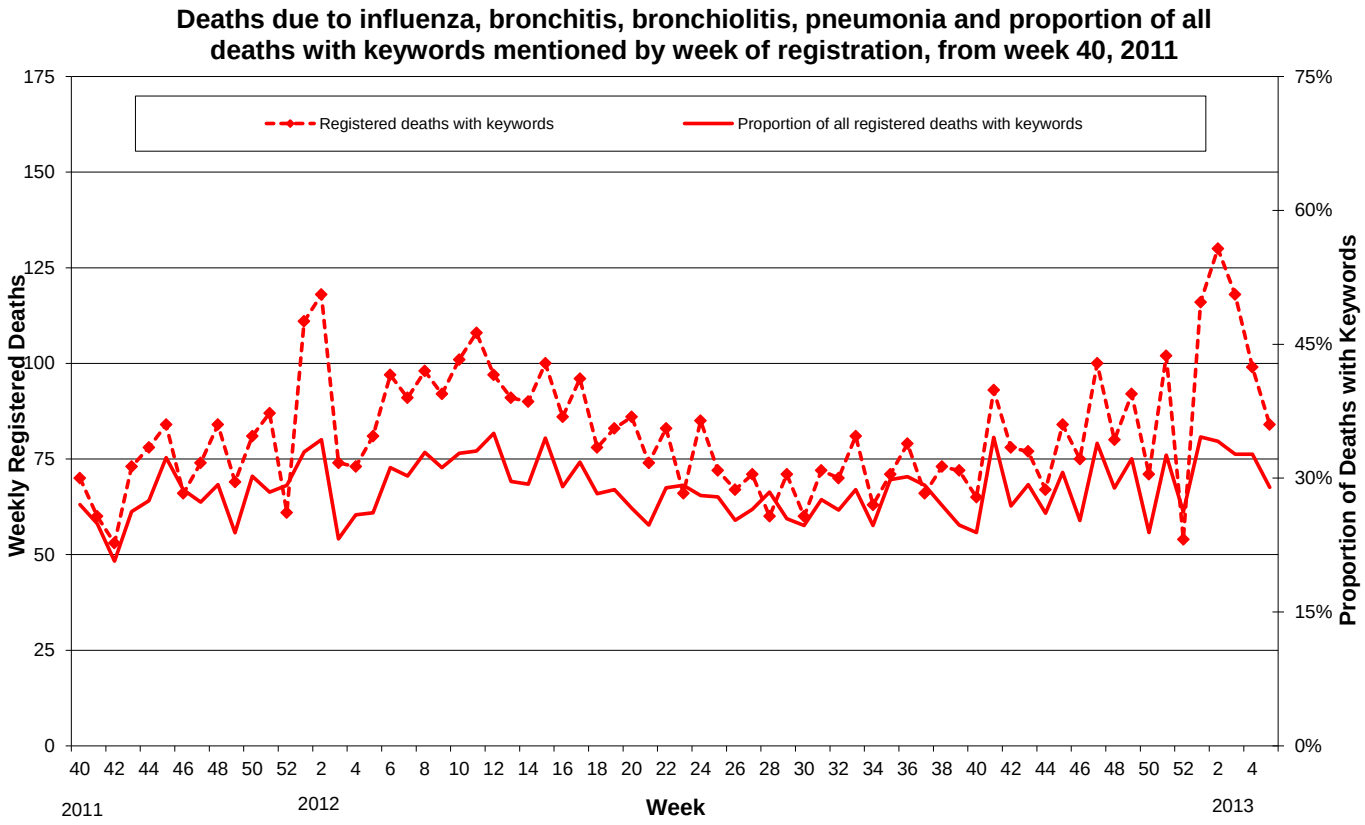
Outbreak Surveillance

There was one confirmed influenza A outbreak in a residential care unit reported to the Public Health Agency during week 5, 2013. This is the first confirmed influenza outbreak this season.

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 in week 5, 2012 decreased from 33% in week 4 to 29% in week 5, 2013. In week 5, 2013 there were 290 registered deaths of which 84 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 but active influenza transmission began around week 49/2012, approximately six weeks earlier than in the 2011/2012 season.

- For week 4/2013, approximately two-thirds of the 29 countries reporting indicated medium-intensity transmission, wide geographic spread and increasing trends in a range of combinations, as reported for week 3/2013.
- For week 4/2013, the proportion of influenza-positive sentinel specimens was high (52%), representing an increase on week 3/2013 (45%).
- Since week 40/2012, a fairly even distribution of influenza virus types has been observed, 50% each for type A and type B viruses Among influenza A viruses, an increasing proportion of A(H1)pdm09 over A(H3) has been reported during the past two weeks.
- For week 4/2013, 71 hospitalised laboratory-confirmed influenza cases were reported by five countries (Belgium, Ireland, Romania, Spain, and the UK), 36 (51%) tested positive for influenza A viruses and 35 (49%) for type B viruses.
- Influenza activity continued to rise in week 4/2013 across Europe, although the epidemic may have passed its peak in some north-western countries such as Norway and the UK.

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 regionally, though nationally most indicators of transmission began to decrease. Influenza A(H3N2) was the most commonly detected virus subtype. The United States of America reported a sharp increase in the number of pneumonia and influenza-related deaths among adults aged 65+ years.
- Europe in general reported increasing influenza virus detections over the past weeks, though activity started to decrease in some countries in the northwest. The most commonly detected virus across the continent was A(H1N1)pdm09, while influenza B virus predominated in several countries of western Europe.
- In the temperate countries of Asia influenza virus detections increased in the last weeks, while it remained low in most of tropical Asia.
- Influenza activity in North Africa and the Middle East declined overall in the last several weeks, though a few countries reported increases. Influenza A(H1N1)pdm09 was the most commonly detected virus in the region.

- Low level activity was noted in most tropical countries, with slight increases observed in the Plurinational State of Bolivia and Paraguay.
- Influenza in countries of the southern hemisphere were 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, while influenza activity remains elevated overall, it is decreasing in parts of the country but increasing in others. In particular, flu activity is declining in the East and increasing in the West of the country. Key indicators reflecting severity, such as hospitalizations and deaths, remain significantly elevated again this week, with the greatest impact occurring among people 65 and older. Below is a summary of the key indicators for the week of January 20-26:

- For the week of January 20-26, the proportion of people seeing their health care provider for influenza-like illness (ILI) decreased but remains above the national baseline. However, all regions except for two (in the West) are showing stable or declining levels of ILI activity.
- Forty-two states reported widespread geographic influenza activity for the week of January 20-26, 2013. This decreased from 47 states in the previous week. Geographic spread data show how many areas within a state or territory are seeing flu activity.
- Since October 1, 2012, 7,224 laboratory-confirmed influenza-associated hospitalizations have been reported; an increase of 1,033 hospitalizations from the previous week. This translates to a rate of 25.9 influenza-associated hospitalizations per 100,000 people in the United States. In general, hospitalization rates seem to be leveling off, but remain high among people 65 and older, who account for more than half of all reported hospitalizations.
- 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 decreased slightly this week, but is still well above the epidemic threshold. Most deaths are occurring among people 65 and older.
- Nationally, the percentage of respiratory specimens testing positive for influenza in the United States during the week of January 20-26 continued to decrease.
- 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 20-26, 2,141 of the 2,701 influenza-positive tests reported to CDC were influenza A and 560 were influenza B viruses. Of the 1,107 influenza A viruses that were subtyped, approximately 95% were H3 viruses and 5% were 2009 H1N1 viruses.
- Since October 1, 2012, CDC has antigenically characterized 920 influenza viruses, including 66 2009 influenza A (H1N1) viruses, 556 influenza A (H3N2) viruses and 298 influenza B viruses.

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

Canada

- In week 4, several indicators of influenza activity decreased: the percentage of positive laboratory tests for influenza, the ILI consultation rate, the proportion of antiviral prescriptions, and the number of adult and paediatric influenza-associated hospitalizations reported by the PCIRN-SOS and IMPACT networks.
- Many regions across Canada continue to report widespread and localized influenza activity and 104 new influenza outbreaks were reported.
- The ILI consultation rate decreased but continues to be above the expected range for this time of year.

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