Summary

- All indicators of influenza virus activity continue to increase.
- GP consultation rates for combined flu/FLI increased from 195.2/100,000 population (updated) in week 52 to 274.4/100,000 in week 1 (41% increase).
  - flu/FLI rates remain well above the Northern Ireland threshold (70/100,000 population);
  - flu/FLI rates remain highest in the 15–44 year age group.
- Out-of-hours flu/FLI call rates have decreased from 139.7 per 100,000 population in week 52 to 115.7 per 100,000 in week 1. Flu/FLI rates were highest in the 1–4 year age group.
- The number of influenza A (H1N1) 2009 detections increased from 200 (updated) in week 52 to 204 in week 1.
- One influenza A(H3) detection.
- 39 influenza B detections.
- Respiratory syncytial virus (RSV) weekly detections increased from 66 (updated) in week 52 to 79 in week 1 (20% increase).
- As of noon, Wednesday 12 January 2011, there were a total of 17 swine flu related deaths since 1 November 2010. Information regarding co-morbidities was available for 16 cases, of these 14 had co-morbidities.

Note
The figures for previous weeks included in this bulletin are updated with data from returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

Introduction
Data to monitor influenza activity in Northern Ireland is collected from the following sources:

- GP sentinel surveillance representing 11.6% of the 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 and number of virology flu detections from week 20 2010

Please note change in Y axis scale of this graph

Figure 2: Sentinel GP consultation rate for combined flu and flu-like illness 2008/09–2010/11
Figure 3: Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 20 2010

Please note change in Y axis scale of this graph

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

Please note change in Y axis scale of this graph

Comments:

The GP consultation rate increased from 195.2 (updated) per 100,000 population in week 52 to 274.4 per 100,000 population in week 1 (41% increase). Rates are higher than the same week in previous years (Figures 2 & 4) but below the pandemic peak of 280.6 per 100,000 in October 2009.

All age-specific group rates have increased. The highest age-specific combined rates in week 1 remain in the 15-44 year age group where rates increased from 262.0 (updated) in week 52 to 375.3 per 100,000 population (43% increase) in week 1. The second highest rate was in the 45-64 year age group (Figure 3).
Out-of-hours (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

Please note change in X and Y axis scale of this graph

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

Please note change in Y axis scale of this graph
Comments

The number of calls to OOH centres (all diagnoses) in week 1 decreased by 20% compared with week 52. This is partly due to there only being one bank holiday during week 1 compared with two in the previous week. OOH call rates for flu/FLI have also decreased from 139.7 per 100,000 population in week 52 to 115.7 per 100,000 population in week 1. The highest age-specific rate was in the 1–4 year age group closely followed by 15–44 year age group.

The proportion of total calls due to flu/FLI calls increased from 10.8% in week 52 to 11.1% in week 1 (3% increase).

Note

Data from week 15 onwards represents all seven OOH databases.

Respiratory outbreaks

There were no further respiratory outbreaks reported to the PHA during week 1.

Virology data

<table>
<thead>
<tr>
<th>Source</th>
<th>Specimens Tested</th>
<th>(H1N1) 2009</th>
<th>A(H3)</th>
<th>Influenza B</th>
<th>RSV</th>
<th>Total influenza Positive</th>
<th>% Influenza Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentinel</td>
<td>33</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>11</td>
<td>33%</td>
</tr>
<tr>
<td>Non-sentinel</td>
<td>674</td>
<td>196</td>
<td>1</td>
<td>36</td>
<td>78</td>
<td>233</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>707</td>
<td>204</td>
<td>1</td>
<td>39</td>
<td>79</td>
<td>244</td>
<td>35%</td>
</tr>
</tbody>
</table>

Table 2: Cumulative total week 40 2010 – week 1 2011

<table>
<thead>
<tr>
<th></th>
<th>(H1N1) 2009</th>
<th>A(H3)</th>
<th>Flu B</th>
<th>RSV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>111</td>
<td>0</td>
<td>15</td>
<td>206</td>
<td>332</td>
</tr>
<tr>
<td>5-14</td>
<td>36</td>
<td>0</td>
<td>21</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>15-64</td>
<td>422</td>
<td>0</td>
<td>50</td>
<td>19</td>
<td>491</td>
</tr>
<tr>
<td>65+</td>
<td>44</td>
<td>1</td>
<td>11</td>
<td>10</td>
<td>66</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>All ages</td>
<td>613</td>
<td>1</td>
<td>97</td>
<td>240</td>
<td>951</td>
</tr>
</tbody>
</table>
### Table 3: Cumulative total week 40 2010 – week 1 2011

<table>
<thead>
<tr>
<th>AGE</th>
<th>(H1N1) 2009</th>
<th>Flu B</th>
<th>RSV</th>
<th>Total</th>
<th>(H1N1) 2009</th>
<th>A(H3)</th>
<th>Flu B</th>
<th>RSV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>109</td>
<td>0</td>
<td>15</td>
<td>205</td>
<td>329</td>
</tr>
<tr>
<td>5-14</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>30</td>
<td>0</td>
<td>20</td>
<td>3</td>
<td>53</td>
</tr>
<tr>
<td>15-64</td>
<td>48</td>
<td>5</td>
<td>2</td>
<td>55</td>
<td>374</td>
<td>0</td>
<td>45</td>
<td>17</td>
<td>436</td>
</tr>
<tr>
<td>65+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>44</td>
<td>1</td>
<td>11</td>
<td>10</td>
<td>66</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>All ages</td>
<td>56</td>
<td>6</td>
<td>3</td>
<td>65</td>
<td>557</td>
<td>1</td>
<td>91</td>
<td>237</td>
<td>886</td>
</tr>
</tbody>
</table>

**Note**

All virology data is provisional. Positive specimens refer to the date of specimen, however number of specimens tested refers to the date of laboratory reports and not the date the specimen was received by the laboratory. Sentinel samples are tested for influenza including influenza A (H1N1) 2009, flu B, and RSV. Non-sentinel samples are tested for the above, plus: bocavirus, coronavirus, metapneumovirus, parainfluenza, respiratory adenovirus and rhinovirus.

Please note that cumulative virology figures can include updated figures for previous weeks due to laboratory results that may have arrived after publication of the bulletin.

**From week 46 not all specimens will be tested for ‘other’ respiratory viruses, this may lead to a reduction in the numbers being tested for these viruses. However, this will not affect the numbers being tested for influenza or RSV.**

**Comments**

In week 1 there were 707 specimens (33 sentinel) submitted for testing to the Regional Virus Laboratory. There were 244 positive influenza specimens in this period; 204 influenza A (H1N1) 2009, 39 influenza B and one influenza A(H3). The majority of influenza detections were in the 15–64 year age group.

Currently the median age for influenza A (H1N1) 2009 is 29 years with the median age for influenza B 24 years.
Figure 7: The number of samples tested (sentinel and non-sentinel) for influenza in Northern Ireland from week 40 2010, with the proportion positive

Comment

The proportion of samples (sentinel and non-sentinel) that tested positive for all flu types in week 1 was 35% (29% influenza A and 6% influenza B) and has fallen from a peak positivity rate of 42% in week 51.

Other respiratory viruses

Figure 8: Weekly cases of RSV viruses in Northern Ireland from week 40 2010

Comments

RSV detections increased from 66 (updated) in week 52 to 79 detections in week 1 (20% increase) and remains principally in hospitalised infants (0–4 years).

As few specimens are currently being tested for other respiratory viruses (excluding RSV) we will no longer report on these viruses.
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

Deaths due to influenza, bronchitis, bronchiolitis, pneumonia and proportion of all deaths with keywords mentioned by week of registration, 2009-10

Comments

The proportion of deaths related to respiratory keywords increased from 30% in week 52 to 36% in week 1. In week 1 there were 372 registered deaths of which 135 related to these specific respiratory infections. Deaths registered in the first week of January are often raised due to deaths being registered after the holiday period.

As of noon, Wednesday 12 January 2011, there were a total of 17 swine flu related deaths since 1 November. Information regarding co-morbidities was available for 16 cases, of these 14 had co-morbidities.

Note

The definition of a swine flu related death is: “Death caused directly by swine flu (Part I of the death certificate); Swine flu contributed to death (Part II of death certificate) and/or patient tested positive for swine flu”.
Vaccine uptake

As at the end of November 2010, the proportion of people in Northern Ireland aged 65 years and over who had received the 2010/11 seasonal influenza vaccine was 66.5%, while the uptake in those aged under 65 in an at risk group was 56.4% (provisional data). This compares with 73% uptake in the over 65 years, and 69.9% in the under 65 at risk group for the same period last year.

Further information

Further information on influenza is available at the following websites:

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.ndsc.ie/hpsc/

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 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.