Influenza

Weekly Surveillance Bulletin
Week 49 (2 December – 8 December 2019)

Community Activity

<table>
<thead>
<tr>
<th>Week</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019/20</td>
<td>40</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td>2018/19</td>
<td>48</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Flu Intensity: Baseline | Low | Medium | High | Very High

GP consultation rates for ‘flu/flu-like-illness’ (‘flu/FLI’) (2 Dec – 8 Dec 2019)

<table>
<thead>
<tr>
<th>Age</th>
<th>In-Hours</th>
<th>Out-of-hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ages</td>
<td>[Graph]</td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td>[Graph]</td>
<td></td>
</tr>
<tr>
<td>45-64</td>
<td>[Graph]</td>
<td></td>
</tr>
<tr>
<td>15-44</td>
<td>[Graph]</td>
<td></td>
</tr>
<tr>
<td>5-14</td>
<td>[Graph]</td>
<td></td>
</tr>
<tr>
<td>0-4</td>
<td>[Graph]</td>
<td></td>
</tr>
</tbody>
</table>

Circulating strains this season to date

To date there have been four flu outbreaks; three in a Care Home setting and one in a Hospital setting

Influenza vaccine uptake 2019-20

Vaccine uptake rates up to 30th November 2019 will appear here in next week’s bulletin.

Annual Influenza Surveillance Report 2018-19

The end of season report, Surveillance of Influenza in Northern Ireland 2018-19 is now available to download here
GP consultation rates for ‘flu/flu-like-illness’ (‘flu/FLI’)

![Graph showing GP consultation rates for 'flu/FLI' from 2010/11 to 2019/20. The baseline MEM threshold for Northern Ireland is 14.7 per 100,000 population for 2019-20. Low activity is 14.7 to <23.9, moderate activity 23.9 to <73.9, high activity 73.9 to <121.7 and very high activity is >121.7.]

**Figure 1. Northern Ireland GP consultation rates for ‘flu/FLI’ 2018/19 – 2019/20, 2010/11 for comparison**

The baseline MEM threshold for Northern Ireland is 14.7 per 100,000 population for 2019-20. Low activity is 14.7 to <23.9, moderate activity 23.9 to <73.9, high activity 73.9 to <121.7 and very high activity is >121.7.

**Comment**

The GP flu/FLI consultation rate during week 49, 2019 was 29.2 per 100,000 population, a slight increase from week 48, 2019 (28.2 per 100,000). This is higher than the same time last year (6.0 per 100,000). Activity remains in the moderate threshold for Northern Ireland (23.9 to <73.9 per 100,000) (Figure 1).

Flu/FLI consultation rate was highest in those aged 5-14 years in week 49 (41.1 per 100,000 population). Consultation rates increased in all age groups, with the exception of those aged 0-4 and 5-14 years, which decreased from week 48. Rates are higher in all age groups compared to the same period last year (week 49, 2018-19).
Figure 2. Northern Ireland Out of Hours (OOH) consultation rates for ‘flu/FLI’ 2018/19 – 2019/20

Comment

The flu/FLI consultation rate in Primary Care Out-of-Hours (OOH) Centres during week 49 was 19.3 per 100,000 population, an increase from week 48, 2019 (13.4 per 100,000). This is higher than the same time last year (5.6 per 100,000).

In week 49 the percentage of calls to an OOH Centre due to flu/FLI was 3.1%. This is an increase from week 48 (2.1%) and the same period last year (1%).

Rates were highest in those aged 0-4 years in week 49 (48.1 per 100,000 population). Rates are higher in all age groups compared to the same period.
Virology

Figure 3. Weekly number of flu laboratory reports from week 40, 2018 with weekly GP consultation rates for ‘flu/FLI’
Table 1. Virus activity in Northern Ireland by source, Week 49, 2019-20

<table>
<thead>
<tr>
<th>Source</th>
<th>Specimens tested</th>
<th>Flu AH3</th>
<th>Flu A(H1N1) 2009</th>
<th>Flu A (Untyped)</th>
<th>Flu B</th>
<th>RSV</th>
<th>Total Influenza Positive</th>
<th>% Influenza Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentinel</td>
<td>25</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>11</td>
<td>44%</td>
</tr>
<tr>
<td>Non-sentinel</td>
<td>853</td>
<td>340</td>
<td>7</td>
<td>46</td>
<td>3</td>
<td>84</td>
<td>396</td>
<td>46%</td>
</tr>
<tr>
<td>Total</td>
<td>878</td>
<td>349</td>
<td>8</td>
<td>47</td>
<td>3</td>
<td>88</td>
<td>407</td>
<td>46%</td>
</tr>
</tbody>
</table>

Table 2. Cumulative virus activity from all sources by age group, Week 40 - 49, 2019-20

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Flu AH3</th>
<th>Flu A(H1N1) 2009</th>
<th>Flu A (Untyped)</th>
<th>Flu B</th>
<th>Total Influenza</th>
<th>RSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>126</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>140</td>
<td>380</td>
</tr>
<tr>
<td>5-14</td>
<td>141</td>
<td>1</td>
<td>18</td>
<td>2</td>
<td>162</td>
<td>20</td>
</tr>
<tr>
<td>15-64</td>
<td>393</td>
<td>15</td>
<td>43</td>
<td>4</td>
<td>455</td>
<td>90</td>
</tr>
<tr>
<td>65+</td>
<td>267</td>
<td>3</td>
<td>26</td>
<td>2</td>
<td>298</td>
<td>107</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All ages</td>
<td>927</td>
<td>26</td>
<td>92</td>
<td>10</td>
<td>1055</td>
<td>597</td>
</tr>
</tbody>
</table>

Table 3. Cumulative virus activity by age group and source, Week 40 - Week 49, 2019-20

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Sentinel</th>
<th>Non-sentinel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flu AH3</td>
<td>Flu A(H1N1) 2009</td>
<td>Flu A (Untyped)</td>
</tr>
<tr>
<td>0-4</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>5-14</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>15-64</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>65+</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All ages</td>
<td>60</td>
<td>3</td>
</tr>
</tbody>
</table>

Note

Additional virology testing has been undertaken at local laboratories. This bulletin includes this data along with the data from the Regional Virology Laboratory.

All virology data are 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.
In week 49, 407 samples were positive for flu (349 Flu A(H3), eight Flu A(H1N1), 47 Flu A(untyped), three Flu B) from 878 submitted for testing in laboratories across Northern Ireland.

Positivity for week 49 (46%) is higher than this time last year (7%).

11 of the 25 samples submitted by the GP based sentinel scheme were positive for flu (nine Flu A(H3), one Flu A(H1N1), one Flu A(untyped); 44% positivity) (Figures 3 and 4; Tables 1, 2 and 3).
Respiratory Syncytial Virus (RSV)

Figure 5. Number of samples tested for RSV and proportion positive, 2018/19 – 2019/20, all sources

Comment

In week 49, 88 samples were positive for RSV, with positivity (11%) lower than the same period last season (19%).

The majority (64%) of cases since week 40 have occurred in children aged 0-4 years (Table 2 and Figure 5).
Hospital Surveillance (Non-ICU/HDU)

![Graph showing hospitalisation testing positive for influenza by week of specimen, 2018/19 – 2019/20](image)

Figure 6. Weekly number of hospitalisations testing positive for influenza by week of specimen, 2018/19 – 2019/20

**Comment**

In week 49, 346 hospitalisations tested positive for flu (302 Flu A(H3), seven Flu A(H1N1), 35 Flu A(untyped) and two Flu B). This is an increase compared to the same time last year (Figure 6).

Of note, not all positive specimens may have been reported as this point.
ICU/HDU Surveillance

![Graph showing confirmed ICU/HDU influenza cases by week of specimen, 2018/19 – 2019/20](image)

**Comment**

Data are collected on laboratory confirmed influenza patients and deaths in critical care (level 2 and level 3). There were 17 new admissions to ICU with confirmed influenza reported to the Public Health Agency (PHA) during week 49. So far this season there has been 32 admissions to ICU with confirmed influenza (21 Flu A(H3), three Flu A(H1N1), seven Flu A(untyped) and one Flu A&B) reported to the PHA (Figure 7).

Of the 32 admissions to ICU, 50% (n=16) were male. The ages ranged from <1 year to 86 years, with a median age of 56 years and a mean age of 49 years. 72% (n=23) were classed as being in a vaccine risk group, of which vaccination status was known for 43% (n=10), <5 were vaccinated this season.
Outbreaks

During week 49 there were two confirmed respiratory outbreaks reported to the PHA Health Protection acute response duty room; one in a Care Home setting and one in a Hospital setting (both Flu A(untyped)). To date, there has been a total of four confirmed respiratory outbreaks reported, three in a Care Home setting and one in a Hospital setting (four Flu A(untyped)).

Mortality

The Northern Ireland Statistics and Research Agency (NISRA) provide the weekly number of respiratory associated deaths and its proportion of all-cause registered deaths.

Respiratory associated deaths include those that are attributable to influenza, other respiratory infections or their complications. This includes “bronchiolitis, bronchitis, influenza or pneumonia” keywords recorded on the death certificate.

Figure 8. Weekly registered deaths and proportion of all deaths with keywords, by week of registration from week 40, 2018
Comment

In week 49, 103 respiratory associated deaths out of 351 all-cause deaths were reported (29%). These trends are broadly the same as the same period in 2018/19 (Figure 8).

EuroMOMO

There was no excess all-cause mortality reported in Northern Ireland in week 49. There was no excess all-cause mortality reported in Northern Ireland to date this season.

Please note this data is provisional due to the time delay in registration; numbers may vary from week to week.

Information on mortality from all causes is provided for management purpose from Public Health England. Excess mortality is defined as a statistically significant increase in the number of deaths reported over the expected number for a given point in time. This calculation allows for a weekly variation in the number of deaths registered and takes account of deaths registered retrospectively. Information is used to provide an early warning to the health service of any seasonal increases in mortality to allow further investigation of excess detections.

There is no single cause of ‘additional’ deaths in the winter months but they are often attributed in part to cold weather (e.g. directly from falls, fractures, road traffic accidents), through worsening of chronic medical conditions e.g. heart and respiratory complaints and through respiratory infections including influenza.

For more information on EuroMOMO and interactive maps of reporting across the season please see http://www.euromomo.eu/index.html
Influenza Weekly Surveillance Bulletin

Influenza Vaccine Uptake

The 2019-20 seasonal flu vaccine programme officially commenced on 1st October 2019.

This year the children’s flu vaccine programme delivered in primary care started in mid to late October.

Figures overleaf represent the first figures collected up to 31st October and so only reflect one month or less of data depending on the eligible group.

<table>
<thead>
<tr>
<th>Table 4. Influenza vaccine uptake rates, 2019-20 and 2018-19*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>All 2 to 4 year olds</td>
</tr>
<tr>
<td>All pregnant women</td>
</tr>
<tr>
<td>All individuals under 65 years with a chronic medical</td>
</tr>
<tr>
<td>condition</td>
</tr>
<tr>
<td>All individuals 65 years and over</td>
</tr>
<tr>
<td>Primary school children (4 to 11 year olds)**</td>
</tr>
<tr>
<td>Frontline health care workers employed by a Trust***</td>
</tr>
<tr>
<td>Frontline social care workers employed by a Trust**</td>
</tr>
</tbody>
</table>

* Public vaccination figures are based on GP practice returns which are lower for the reporting period but will be more representative of the public uptake figures in the next update later in the season.
** Proportion of primary school children who were offered the vaccine and were vaccinated (up to 31 October 2019).
*** Uptake data was not available for NIAS therefore figures for Northern Ireland (up to 31 October 2019) are based on the five HSC Trusts only.

Guidance on Use of Antivirals

The Department of Health have published a letter from the Chief Medical Officer on the use of antiviral agents for the treatment and prophylaxis of seasonal influenza (4th December 2019).
Further Information and International/National Updates

Further information
Further information on influenza is available at the following websites:

- PHA Seasonal Influenza
- nidirect Flu Vaccination
- PHE Seasonal Influenza Guidance - Data and Analysis
- WHO Influenza
- ECDC Seasonal Influenza

National updates
Detailed influenza weekly reports can be found at the following websites:

England: PHE Weekly National Flu Report
Scotland: HPS Weekly National Seasonal Respiratory Report
Wales: Public Health Wales Influenza Surveillance Report
Republic of Ireland: HPSC Seasonal Influenza Surveillance Reports

International updates
Europe (ECDC and WHO): Flu News Europe
Worldwide (WHO): WHO Influenza Surveillance Monitoring
USA (CDC): Weekly U.S. Influenza Surveillance Report
Acknowledgements

We would like to extend our thanks to all those who assist us in the surveillance of influenza in particular the sentinel GPs, Out-of-Hours Centres, Apollo Medical, Regional Virus Laboratory, Critical Care Network for Northern Ireland and Public Health England. Their work is greatly appreciated and their support vital in the production of this bulletin.

The author also acknowledges the Northern Ireland Statistics and Research Agency (NISRA) and the General Register Office Northern Ireland (GRONI) for the supply of data used in this publication. NISRA and GRONI do not accept responsibility for any alteration or manipulation of data once it has been provided.

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