PHE Influenza Surveillance graphs

• Influenza activity in the United Kingdom is monitored using a variety of surveillance systems. The National Influenza Report which interprets the data is published weekly.

• National and subnational outputs from the various surveillance systems are grouped according to the following categories:
  – Community influenza surveillance
  – Influenza-like illness GP consultation rates
  – Influenza-confirmed hospitalisations
  – All-cause mortality
  – Microbiological surveillance
  – Influenza vaccination

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24 May 2018
Community influenza surveillance
Number of acute respiratory outbreaks by institution, UK
## Number of acute respiratory outbreaks by PHE Region

<table>
<thead>
<tr>
<th></th>
<th>Outbreaks reported in week 20</th>
<th>Cumulative number of outbreaks since week 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHE North of England</td>
<td>2</td>
<td>544</td>
</tr>
<tr>
<td>PHE Midlands and East of England</td>
<td>4</td>
<td>608</td>
</tr>
<tr>
<td>PHE London</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>PHE South of England</td>
<td>1</td>
<td>638</td>
</tr>
</tbody>
</table>
Influenza-like illness GP consultation rates
RCGP ILI consultation rate, England

ILI rate per 100,000

Week number

<13.1 Baseline threshold 13.1 to <24.2 Low 24.2 to <68.7 Medium

68.7 to <108.9 High 108.9+ Very high

24 May 2018
GP ILI consultations in the UK for all ages with MEM thresholds applied

<table>
<thead>
<tr>
<th>GP ILI consultation rates (all ages)</th>
<th>Week number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</td>
</tr>
<tr>
<td>England (RCGP)</td>
<td>6.8 5.4 5.9 6.1 5.0 6.4 5.3 7.8 6.5 11.4 18.9 21.0 37.3 53.1 54.1 52.1 43.0 34.0 29.1 29.1 18.3 20.3 18.6</td>
</tr>
<tr>
<td>Wales</td>
<td>5.7 6.5 6.6 5.4 5.0 6.2 6.4 5.9 6.4 8.7 13.2 16.7 36.4 62.0 74.6 52.9 52.4 44.3 42.5 33.3 25.9 24.6 17.3</td>
</tr>
<tr>
<td>Scotland</td>
<td>10.0 15.3 8.3 10.8 12.4 11.7 10.3 9.1 9.4 18.4 32.5 40.3 44.9 107.2 113.9 102.1 82.3 45.5 30.3 39.4 35.1 28.5 24.9 26.4</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>3.4 3.9 3.7 3.3 4.0 3.6 4.5 5.3 4.0 8.2 10.1 20.7 22.7 52.6 65.2 52.1 44.2 29.0 30.6 25.2 23.6 16.7 18.3</td>
</tr>
</tbody>
</table>

Influenza-confirmed hospitalisations
Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population, England, since week 40 2017

Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population by PHE region, since week 40 2017

2017/18 - North
2017/18 - South
2017/18 - Midlands + East
2017/18 - London
Influenza confirmed ICU admissions (USISS mandatory) by age and influenza subtype, since week 40 2017

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>A(H1N1)pdm09</th>
<th>A(H3N2)</th>
<th>A unknown subtype</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Weekly hospitalised influenza case rate per 100,000 trust catchment population, England, since week 40 2017

The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for ICU/HDU admission rates for the start of influenza activity (based on 6 seasons) in a standardised approach across Europe. For MEM threshold values, please visit: https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#disease-severity-and-mortality-data
Weekly hospitalised influenza admission rate per 100,000 trust catchment population by PHE region, since week 40 2017

- 2017/18 - North
- 2017/18 - Midlands + East
- 2017/18 - London
- 2017/18 - South

Rate of hospitalisation/100,000

Week number
Influenza confirmed hospital admissions (USISS sentinel) by age and influenza subtype, since week 40 2017
All-cause mortality
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in 65+ year olds, England
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE North of England

- **2013/14**: A(H1N1)pdm09
- **2014/15**: A(H3N2)
- **2015/16**: A(H1N1)pdm09
- **2016/17**: A(H3N2)
- **2017/18**: A(H1N1)pdm09

<table>
<thead>
<tr>
<th>Year周</th>
<th>Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-40</td>
<td>A(H1N1)pdm09</td>
</tr>
<tr>
<td>2014-40</td>
<td>A(H3N2)</td>
</tr>
<tr>
<td>2015-40</td>
<td>A(H1N1)pdm09</td>
</tr>
<tr>
<td>2016-39</td>
<td>A(H3N2)</td>
</tr>
<tr>
<td>2017-39</td>
<td>A(H1N1)pdm09</td>
</tr>
</tbody>
</table>

- Deaths (corrected)
- Upper 2 z-score limit
- Upper 6 z-score limit
- Upper 8 z-score limit
- Upper 10 z-score limit

24 May 2018
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE Midlands and East of England.
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE London
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE South of England

- **Deaths (corrected)**
- **Baseline**
- **Upper 2 z-score limit**
- **Upper 6 z-score limit**
- **Upper 8 z-score limit**
- **Upper 10 z-score limit**

**Year week**

<table>
<thead>
<tr>
<th>Year</th>
<th>Week</th>
<th>Virus Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/14</td>
<td>A(H1N1)pd m09</td>
<td></td>
</tr>
<tr>
<td>2014/15</td>
<td>A(H3N2)</td>
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<td>2017/18</td>
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</tr>
</tbody>
</table>

24 May 2018
Microbiological surveillance
DataMart: Number and proportion of samples positive for influenza, by type, England

- Influenza A (n)
- Influenza B (n)
- Total influenza (%)
- 2016/17 total influenza (%)

Week number (of sample) vs. Proportion positive and Number of positive specimens
DataMart: Number and proportion of samples positive for influenza, by type, PHE North of England
DataMart: Number and proportion of samples positive for influenza, by type, PHE Midlands and East of England

![Graph showing number and proportion of samples positive for influenza, by type, PHE Midlands and East of England.](image-url)
DataMart: Number and proportion of samples positive for influenza, by type, PHE London

![Bar chart showing number and proportion of samples positive for influenza A and B by week number.](chart.png)
DataMart: Number and proportion of samples positive for influenza, by type, PHE South of England

- **Week number (of sample)**
  - Influenza A(n)
  - Influenza B(n)
  - Influenza A (%)
  - Influenza B (%)

**Proportion positive (%)**

**Number of positive samples**
DataMart: Proportion of samples positive for influenza, by age group

Week number

Proportion positive

65+yrs
45-64yrs
15-44yrs
5-14yrs
<5yrs
DataMart: Proportion of samples positive for other viruses

- Rhinovirus
- Parainfluenza
- hMPV
- Adenovirus

Week number

Proportion positive
Influenza vaccination
Seasonal influenza vaccine uptake in targeted groups, 2017/18, England

- 65+yrs
- <65yrs at risk
- All pregnant women

2017/18 season indicated by bold lines, 2016/17 season indicated by fainter dashed lines
Seasonal influenza vaccine uptake in targeted groups, 2017/18, England

Vaccine uptake (%)

Week number

2017/18 season indicated by bold lines, 2016/17 season indicated by fainter dashed lines

2 years
3 years
Links

• Sources of UK flu surveillance data:

• Weekly flu report