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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20 December 2018
Community influenza surveillance
Number of acute respiratory outbreaks by institution, UK

Number of outbreaks by institution:
- Care home
- Hospital
- School
- Other

Legend:
- Blue: Care home
- Purple: Hospital
- Red: School
- Green: Other

2017/18 - total no. of outbreaks
Number of acute respiratory outbreaks by PHE Centre

<table>
<thead>
<tr>
<th></th>
<th>Outbreaks reported in week 50</th>
<th>Cumulative number of outbreaks since week 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHE North East</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>PHE North West</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>PHE Yorkshire and Humber</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>PHE East Midlands</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>PHE West Midlands</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>PHE East of England</td>
<td>3</td>
<td>49</td>
</tr>
<tr>
<td>PHE London</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>PHE South East</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>PHE South West</td>
<td>5</td>
<td>36</td>
</tr>
</tbody>
</table>
Influenza-like illness GP consultation rates
RCGP ILI consultation rate, England

ILI rate per 100,000

Week number

<3.1 Baseline threshold  3.1 to 24.7 Low  24.7 to 72.1 Medium
72.1 to 115.6 High  115.6+ Very high
GP ILI consultations in the UK for all ages with MEM thresholds applied

*The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity (based on 10 seasons excluding 2009/10), in a standardised approach across Europe. For MEM threshold values for each country, please visit: https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#clinical-surveillance-through-primary-care.*

<table>
<thead>
<tr>
<th>GP ILI consultation rates (all ages)</th>
<th>Week number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td>England (RCGP)</td>
<td>4.2</td>
</tr>
<tr>
<td>Wales</td>
<td>7.0</td>
</tr>
<tr>
<td>Scotland</td>
<td>7.1</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>3.8</td>
</tr>
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</table>

20 December 2018
Influenza-confirmed hospitalisations
Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population, England, since week 40 2018

*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 ICU/HDU influenza admission rate per 100,000 trust catchment population by PHE Centre, North East, North West and Yorkshire and Humber, since week 40 2018

Rate of ICU/HDU admission per 100,000 trust catchment population

- 2018/19 - North East
- 2018/19 - North West
- 2018/19 - Yorkshire and Humber

Week number

20 December 2018
Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population by PHE Centre, East Midlands, West Midlands and East of England since week 40 2018

- 2018/19 - East Midlands
- 2018/19 - West Midlands
- 2018/19 - East of England
Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population by PHE Centre, South East, South West and London, since week 40 2018

Rate of ICU/HDU admissions per 100,000 trust catchment population

- 2018/19 - South East
- 2018/19 - South West
- 2018/19 - London
Influenza confirmed ICU admissions (USISS mandatory) by age and influenza subtype, since week 40 2018

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>A(H1N1)pdm09</th>
<th>A(H3N2)</th>
<th>A unknown subtype</th>
<th>A not subtyped</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td></td>
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<tr>
<td>5-14</td>
<td></td>
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<tr>
<td>15-44</td>
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</tr>
<tr>
<td>45-64</td>
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<tr>
<td>65-74</td>
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<tr>
<td>75+</td>
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</tbody>
</table>
Weekly hospitalised influenza case rate per 100,000 trust catchment population, England, since week 40 2018

Weekly hospitalised influenza admission rate per 100,000 trust catchment population by PHE region, since week 40 2018
Influenza confirmed hospital admissions (USISS sentinel) by age and influenza subtype, since week 40 2018
All-cause mortality
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in 65+ year olds, England

20 December 2018
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE North of England

- 2014/15: A(H3N2)
- 2015/16: A(H1N1)pdm09
- 2016/17: A(H3N2)
- 2017/18: B and A(H3N2)

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

20 December 2018
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE Midlands and East of England

- 2014/15: A(H3N2)
- 2015/16: A(H1N1)pdm09
- 2016/17: A(H3N2)
- 2017/18: B and A(H3N2)
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE London

![Excess Mortality Graph]

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

**Year Week**
- 2014/15 A(H3N2)
- 2015/16 A(H1N1)pdm09
- 2016/17 A(H3N2)
- 2017/18 B and A(H3N2)
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE South of England

Number of deaths

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

Year week:
- 2014/15 A(H3N2)
- 2015/16 A(H1N1)pdm09
- 2016/17 A(H3N2)
- 2017/18 B and A(H3N2)
Microbiological surveillance
DataMart: Number and proportion of samples positive for influenza, by type, England

- Influenza A (n)
- Influenza B (n)
- Total influenza (%)
- 2017/18 total influenza (%)

Week number (of sample)

Number of positive specimens

Proportion positive

20 December 2018
DataMart: Number and proportion of samples positive for influenza, by type, PHE North East of England

Week number (of sample)

Number of positive samples

Proportion positive (%)

FluA (n)

FluB (n)

Influenza A (%)

Influenza B(%)
DataMart: Number and proportion of samples positive for influenza, by type, PHE North West of England
DataMart: Number and proportion of samples positive for influenza, by type, PHE East Midlands of England

- FluA (n)
- FluB (n)
- Influenza A (%)
- Influenza B(%)
DataMart: Number and proportion of samples positive for influenza, by type, PHE West Midlands of England
DataMart: Number and proportion of samples positive for influenza, by type, PHE East of England

Week number (of sample) vs Proportion positive (%)

Number of positive samples

<table>
<thead>
<tr>
<th>FluA (n)</th>
<th>FluB (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza A (%)</td>
<td>Influenza B(%)</td>
</tr>
</tbody>
</table>
DataMart: Number and proportion of samples positive for influenza, by type, PHE London
DataMart: Number and proportion of samples positive for influenza, by type, PHE South East of England

Week number (of sample)

Proportion positive (%)

Number of positive samples

FluA (n)

Influenza A (%)

FluB (n)

Influenza B(%)

20 December 2018
DataMart: Number and proportion of samples positive for influenza, by type, PHE South West of England.
DataMart: Proportion of samples positive for influenza, by age group

Proportion positive

Week number

65+yrs  45-64yrs  15-44yrs  5-14yrs  <5yrs

20 December 2018
DataMart: Proportion of samples positive for other viruses

- Rhinovirus
- Parainfluenza
- hMPV
- Adenovirus

Proportion positive vs. Week number
Influenza vaccination
Seasonal influenza vaccine uptake in targeted groups, 2018/19, England

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

2018/19 season indicated by bold lines, 2017/18 season indicated by fainter dashed lines
Seasonal influenza vaccine uptake in targeted groups, 2018/19, England

2018/19 season indicated by bold lines, 2017/18 season indicated by fainter dashed lines.
Links

• Sources of UK flu surveillance data:

• Weekly flu report