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

Influenza Section
Immunisations and Countermeasures Division
Centre for Infectious Disease Surveillance and Control
Public Health England
respscidsc@phe.gov.uk
Community influenza surveillance
Number of acute respiratory outbreaks by institution, UK

Week of report

- Care home
- Hospital
- School
- Other

2017/18 - total no. of outbreaks

Number of outbreaks

0 50 100 150 200 250 300

40 44 48 52 4 8 12 16 20
### Number of acute respiratory outbreaks by PHE Centre

<table>
<thead>
<tr>
<th>Centre</th>
<th>Outbreaks reported in week 10</th>
<th>Cumulative number of outbreaks since week 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHE North East</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>PHE North West</td>
<td>5</td>
<td>164</td>
</tr>
<tr>
<td>PHE Yorkshire and Humber</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>PHE East Midlands</td>
<td>5</td>
<td>107</td>
</tr>
<tr>
<td>PHE West Midlands</td>
<td>2</td>
<td>116</td>
</tr>
<tr>
<td>PHE East of England</td>
<td>7</td>
<td>163</td>
</tr>
<tr>
<td>PHE London</td>
<td>3</td>
<td>56</td>
</tr>
<tr>
<td>PHE South East</td>
<td>5</td>
<td>161</td>
</tr>
<tr>
<td>PHE South West</td>
<td>6</td>
<td>167</td>
</tr>
</tbody>
</table>
Influenza-like illness GP consultation rates
GP ILI consultations in the UK for all ages with MEM thresholds applied


| GP ILI consultation rates (all ages) | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| England (RCGP)                      | 4.2| 3.9| 4.5| 3.6| 3.6| 5.3| 5.2| 6.4| 6.2| 7.6| 8.1| 9.4| 8.4| 14.8| 19.2| 19.6| 17.5| 19.7| 23.1| 21.1| 15.7| 12.1| 9.1 |
| Wales                               | 7.0| 3.6| 4.2| 6.6| 6.3| 6.4| 4.5| 4.7| 6.5| 3.2| 4.5| 9.0| 9.5| 14.7| 20.5| 22.9| 15.7| 20.5| 21.4| 17.2| 17.5| 8.2 | 8.7 |
| Scotland                            | 7.1| 5.8| 4.0| 3.8| 2.8| 7.6| 4.0| 4.7| 5.6| 4.0| 6.5| 10.1| 6.9| 17.7| 26.7| 18.0| 28.4| 32.7| 32.3| 27.2| 20.8| 10.2| 10.5 |
| Northern Ireland                    | 3.8| 3.5| 3.8| 3.6| 5.0| 6.3| 4.5| 5.6| 6.0| 8.4| 8.9| 9.0| 13.5| 18.9| 14.4| 12.4| 14.5| 16.2| 14.5| 11.1| 9.0 | 5.9 |

14 March 2019
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
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
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

Week number

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

- **A(H1N1)pdm09**
- **A(H3N2)**
- **A unknown subtype**
- **A not subtyped**
- **B**

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>1-4</td>
<td>0</td>
</tr>
<tr>
<td>5-14</td>
<td>0</td>
</tr>
<tr>
<td>15-44</td>
<td>0</td>
</tr>
<tr>
<td>45-64</td>
<td>1000</td>
</tr>
<tr>
<td>65-74</td>
<td>0</td>
</tr>
<tr>
<td>75+</td>
<td>0</td>
</tr>
</tbody>
</table>

14 March 2019
Weekly hospitalised influenza case 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 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

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

Number of deaths

- Deaths (corrected)
- 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)

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Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE London

![Graph showing excess mortality by week of death through the EuroMOMO algorithm in all ages, PHE London. The graph includes data for different seasons and years, with years labeled 2014/15, 2015/16, 2016/17, and 2017/18. The graph also indicates the baseline and upper 2 and 6 z-score limits.]
Excess mortality (all causes) by week of death through the EuroMOMO algorithm in all ages, PHE South of England

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

Year week:
- 2014-40
- 2015-40
- 2016-39
- 2017-39
- 2018-39

Seasonal influenza:
- 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
DataMart: Number and proportion of samples positive for influenza, by type, PHE North East of England

Week number (of sample)

Proportion positive (%)

Number of positive samples

FluA (n)
Influenza A (%)

FluB (n)
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 Yorkshire and Humber
DataMart: Number and proportion of samples positive for influenza, by type, PHE East Midlands of England

Week number (of sample) vs. Proportion positive (%) and Number of positive samples

- FluA (n)
- Flub (n)
- Influenza A (%)
- Influenza B(%)

14 March 2019
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
DataMart: Number and proportion of samples positive for influenza, by type, PHE London

Week number (of sample)

Proportion positive (%)

Number of positive samples

FluA (n)
Influenza A (%)

FluB (n)
Influenza B(%)

14 March 2019
DataMart: Number and proportion of samples positive for influenza, by type, PHE South East of England
DataMart: Number and proportion of samples positive for influenza, by type, PHE South West of England

- **FluA (n)**
- **FluB (n)**
- **Influenza A (%)**
- **Influenza B(%)**

![Graph showing number of positive samples and proportion positive for influenza, by type, over time.](image)
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

Proportion positive

Week number

Rhinovirus
Parainfluenza
hMPV
Adenovirus
Influenza vaccination
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
Seasonal influenza vaccine uptake in targeted groups, 2018/19, England

Vaccine uptake (%) vs. Week number

- 2 years
- 3 years

Legend:
- 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