Summary

- Influenza activity is very low across the UK.
- In week 42 (ending 24 October), the weekly influenza/influenza-like illness (ILI) consultation rates increased slightly in England, Wales and Scotland and decreased in Northern Ireland. All GP consultation rates are well below baseline levels. Consultation rates for acute bronchitis have increased slightly and those for pneumonia remain low.
- There has been no acute respiratory disease outbreaks reported in week 43.
- Three specimens have been reported as positive for influenza through sentinel GP surveillance in week 42 in England (one influenza A H1N1 (2009), one influenza A untyped and one influenza B); no positive sentinel specimens were reported from Wales, Scotland and Northern Ireland.
- The number of respiratory syncytial virus (RSV) detections is low while the proportion of specimens positive for rhinovirus remains high.
- By week 42, the proportion of people in England aged over 65 years who had received the 2010/11 influenza vaccine was currently 40.4%, while in those aged under 65 in a risk group it was 22.5%.
- Influenza activity in the temperate regions of the Southern Hemisphere is continuing to decline. In most of the temperate regions of the Northern Hemisphere, the level of activity is still low. Influenza virus A (H3N2) continues to be the most frequently detected virus worldwide. Most of the influenza A (H3N2) viruses are A/Perth/16/2009-like, which is the virus strain included in the seasonal vaccines for the Northern and Southern Hemispheres.

Weekly consultation rates in national sentinel schemes

Influenza/influenza-like illness

In week 42 (ending 24 October), the weekly influenza/influenza-like illness (ILI) consultation rate increased slightly in England, Scotland and Wales while it decreased in Northern Ireland (figure 1).

The overall RCGP (England and Wales) ILI consultation rate increased slightly from 8.4 to 9.6 per 100,000. This rate remains well below the winter baseline activity threshold of 30 per 100,000 (figures 1 and 2).

The rate increased or remained stable in all regions from week 41 to week 42; in the north from 4.5 to 9.4 per 100,000, in the central region from 9.1 to 9.5 per 100,000 and in the south from 9.4 to 9.8 per 100,000.

The consultation rates in the RCGP scheme increased or were stable in most age groups. The highest rate was in the 75 year and over age group (increased from 7.4 per 100,000 in week 41 to 20.6 per 100,000 in week 42) (figure 3).

For further information and data from this scheme please see the RCGP website.

The combined influenza/ILI rate in Northern Ireland has increased slightly from 12.4 to 13.7 per 100,000, and remains below the threshold of 70 per 100,000 (figure 1).

In Northern Ireland in week 42, the rates were highest in the 1-4 year (42.3 per 100,000) and 45-64 year (19.1 per 100,000) age groups.

For further information and data from Northern Ireland please see the Public Health Agency website.
The ILI rate in Scotland increased slightly from 28.9 to 37.3 per 100,000 and remains below the baseline threshold of 50 per 100,000 (figure 1).

In Scotland in week 42, the rates were highest in the under 1 and 1-4 year age groups.

For further information and data from Scotland please see the Health Protection Scotland website.

The Welsh influenza rate increased slightly from 8.1 to 9.7 per 100,000 but remains below the baseline threshold of 25 per 100,000 (figure 1). It should be noted that a change in the surveillance system used by Wales has led to an overall increase in reported rates.

For further information and data from Wales please see the Public Health Wales website.

In the HPA/QSurvillence® scheme the overall rate increased from 7.2 to 8.1 per 100,000.

The HPA/QSurvillence® rates were also increased slightly in most age groups. All rates were under 10 per 100,000.

The highest weekly ILI rates through QSurvillence® in week 42 were in the London (increased from 13.3 to 14.8 per 100,000) and West Midlands (increased from 7.3 to 10.6 per 100,000) SHAs; rates in all other SHAs were below 10 per 100,000 (figure 4).

For further information and data from this scheme please see the Real-time Syndromic Surveillance page on the HPA website.

Other respiratory indicators

The overall weekly consultation rate for acute bronchitis in England and Wales through the RCGP scheme increased slightly from 105.9 in week 41 to 114.3 per 100,000 in week 42.

The acute bronchitis rates were highest in the 75+ and under 1 year groups at 333.1 and 255.9 per 100,000 respectively (figure 5).

The overall weekly consultation rate for pneumonia from the RCGP scheme was 1.3 per 100,000. This is similar compared to recent weeks and is within expected levels for this time of year.

Community surveillance

The overall call rate to NHS Direct in week 42 was 164.9 per 100,000.

The overall proportion of calls for cold/flu was 1.1%, which is no change from the previous week, and just below the threshold of 1.2%. By age group, the highest proportion was in the under 1 year group at 3.0%, and the lowest in the 5-14 year age group at 0.6% (figure 6).

The proportion of calls for fever in the 5-14 year age group increased from 5.2% to 6.3%, which is below the threshold of 9%.

Regionally the cold/flu calls were highest at 1.4% in the East of England SHA and 1.3% in London and South Central SHAs.

For further information and data from this scheme please see the Real-time Syndromic Surveillance page on the HPA website.

There have been no outbreaks of acute respiratory disease in institutions in the UK reported in the last week. Outbreaks should be reported to the local Health Protection Unit and Respdcsc@hpa.org.uk.
Microbiological surveillance

Six samples positive for influenza (three influenza A H1N1 (2009), one influenza A untyped and two influenza B) have been reported from English laboratories to Data Mart in week 42 (figure 7).

The proportion of samples positive for rhinovirus through Data Mart has remained high, while it remains low for parainfluenza virus and adenovirus. The number of RSV detections is also low, but has increased slightly in recent weeks.

Of the 57 samples submitted via the two English GP-based sentinel schemes in week 42, three were positive for influenza (one influenza A H1N1 (2009), one influenza A untyped and one influenza B) (table 1).

Since week 40, one specimen has been reported as positive for influenza through the sentinel GP scheme in Northern Ireland (table 1).

Table 1: Sentinel virological surveillance in the UK

<table>
<thead>
<tr>
<th>Week</th>
<th>England</th>
<th>Scotland</th>
<th>Northern Ireland</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>1/72 (1.4%)</td>
<td>0/15 (0%)</td>
<td>0/0 (0%)</td>
<td>0/0 (0%)</td>
</tr>
<tr>
<td>41</td>
<td>2/88 (2.3%)</td>
<td>0/12 (0%)</td>
<td>1/7 (0%)</td>
<td>0/0 (0%)</td>
</tr>
<tr>
<td>42</td>
<td>3/57 (5.3%)</td>
<td>0/7 (0%)</td>
<td>0/6 (0%)</td>
<td>0/0 (0%)</td>
</tr>
</tbody>
</table>

In the 12 weeks up to 17 October 2010, over 85% of all isolates of *Staphylococcus aureus*, *Streptococcus pneumoniae* and *Haemophilus influenzae* reported as tested, were susceptible to the antibiotics tetracycline and co-amoxiclav (table 2). There have been no significant changes in susceptibility in recent years.

Table 2: Antimicrobial susceptibility surveillance, E&W

<table>
<thead>
<tr>
<th>Organism</th>
<th>Tetracyclines</th>
<th>Co-amoxiclav</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Specimens tested (N)</td>
<td>Specimens susceptible (%)</td>
</tr>
<tr>
<td><em>S. aureus</em></td>
<td>2,446</td>
<td>94</td>
</tr>
<tr>
<td><em>S. pneumoniae</em></td>
<td>1,422</td>
<td>85</td>
</tr>
<tr>
<td><em>H. influenzae</em></td>
<td>5,489</td>
<td>99</td>
</tr>
</tbody>
</table>

*S. pneumoniae* isolates are not routinely tested for susceptibility to co-amoxiclav, however laboratory results for benzyl-penicillin are extrapolated to determine sensitivity to other beta-lactams such as co-amoxiclav.

Disease severity and mortality data

HPA receives weekly death registrations from the Office for National Statistics.

In week 41, an estimated 9,218 all-cause deaths were registered, which was a slight increase from 9,195 in week 40. This remains within expected levels for the time of year (figure 8).

Vaccine uptake

By week 42, the proportion of people in England aged over 65 years who had received the 2010/11 influenza vaccine was currently 40.4%, while in those aged under 65 in a risk group it was 22.5%. For further information on the 2010/11 seasonal influenza vaccine programme see the Department of Health Green Book.

Reports regarding the uptake of the pandemic (H1N1) 2009 vaccine in the 2009/10 season are now available to download from the Department of Health website. In total, 40.3% of healthcare workers and 37.6% of GP patients of all ages, who were in a clinical risk group, received the vaccine.
**International Situation**

**WHO influenza update** 20 October 2010

Influenza activity in the temperate regions of the Southern Hemisphere is continuing to decline. In most of the temperate regions of the Northern Hemisphere, the level of activity is still low. Influenza virus A (H3N2) continues to be the most frequently detected virus world wide. Most of the influenza A (H3N2) viruses are A/Perth/16/2009-like, which is the virus strain included in the seasonal vaccines for the Northern and Southern Hemispheres.

**Southern hemisphere temperate countries:** New Zealand's influenza activity has decreased since late August and is now under baseline for the third consecutive week. The most common influenza virus detected this season in New Zealand is H1N1 (2009). In Australia the influenza surveillance indicated an increase in the activity in the last week of September. Australia has had a co-circulation of mainly H1N1 (2009) and influenza B. In the southern cone of South America, Chile continues to report high transmission of influenza but since mid September the activity has declined. The predominant virus circulating in Chile has been A(H3N2) with co-circulation of H1N1 (2009) in lower numbers. Detections of other respiratory viruses such as respiratory syncytial virus are also declining. Argentina and Uruguay have both had a season with mostly influenza type B, and are now reporting a decrease in number of virus detections. In South Africa influenza activity continues to decline, after a season where the majority of the laboratory confirmed cases were influenza type B, but with co-circulation of influenza A(H3N2) and smaller numbers of H1N1 (2009).

**Tropical zone:** In the tropical areas of the world most countries are reporting decreased influenza activity, but some countries in Southeast Asia, Central and South America are experiencing an increase in transmission intensity due to mainly influenza A(H3N2). In Central America influenza activity is declining, with influenza A(H3N2) being the most frequently reported virus since August 2010. In the Caribbean, Jamaica is reporting an increased number of severe acute respiratory infections (SARI) with influenza A(H3N2) being the most predominant virus detected. Mexico had an earlier start than normal for the influenza season, with most of the viruses being influenza A(H3N2). The activity peaked in August-September and both influenza like-illness (ILI) and severe acute respiratory disease (SARI) are still declining. In South America, Colombia is currently reporting increased influenza activity due to mainly A(H3N2) viruses, with co-circulation of H1N1 (2009) and some influenza B.

In South Asia, India's country-wide outbreak of mainly H1N1 (2009) has peaked and there is now a lower incidence of new cases and deaths in all regions being reported. In South East Asia, neighbouring countries Thailand and Cambodia are currently reporting an increased number of influenza virus detections. In Thailand influenza H1N1 (2009) viruses are dominating but there is also an increasing number of influenza A(H3N2) detections and a lower number of influenza B. In Cambodia influenza A(H3N2) is the predominant influenza virus circulating. In China, Hong Kong Special Administrative Region the sentinel surveillance system for general practitioners shows a decreasing ILI activity during the last weeks.

African countries in the tropical zone are reporting on low influenza activity. Low numbers of H1N1 (2009) viruses were detected in West Africa. Low but sustained transmission of seasonal A (H3N2) continues to be reported from eastern Africa, notably from Kenya. Data from Cameroon and Central African Republic shows sporadic influenza type B, A(H3N2) and H1N1 (2009) activity in the central African region.

**Northern hemisphere temperate countries:** China is reporting declining influenza virus activity in both the Northern and Southern region. Since mid August, both regions have had predominantly influenza A (H3N2). Northern America still has low influenza activity. Canada had a slight increase in ILI activity, together with a small increase in the proportion of positive influenza specimens, mainly influenza A (H3N2) viruses. In the U.S. ILI activity is below baseline in all regions. The European Region is still reporting low levels of influenza activity, with sporadic detections of influenza A (H3N2), H1N1 (2009) and influenza B.

**Avian influenza:** Since 2003 a total of 507 human cases of H5N1 avian influenza have been reported to WHO from 15 countries. Of this 507, 302 (60%) have reportedly died (20 of 39, 51% in 2010). The latest cases were one 35 year-old male and one 40 year-old female from Indonesia. Both are reported to have had exposure to poultry and there is no epidemiological link between the two cases. The male case died, bringing the total avian influenza deaths in Indonesia to 141 of 170 cases (83%). For further information, see the WHO website.

**Acknowledgements**

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