

# HPA Weekly National Influenza Report

Summary of UK\* surveillance of influenza and other seasonal respiratory illness



12 November 2008 (Week 46)

\*Incorporating data from the Royal College of General Practitioners (RCGP) (England and Wales), The National Public Health Service for Wales (NPHS), Health Protection Scotland (HPS), Communicable Disease Surveillance Centre Northern Ireland (CDSC Northern Ireland), the Office for National Statistics (ONS) (England and Wales), Medical Officers of Schools Association (MOSA) (England) and NHS Direct (England and Wales).

## Covered in this report:

Data, except that from ONS, MOSA and non-UK sources: 27/10/08 - 09/11/08 (Weeks 44 and 45, 2008)

Data from ONS, MOSA and non-UK sources: 20/10/08 - 02/11/08 (Weeks 43 and 44, 2008)

## Summary

During weeks 44/08 and 45/08, influenza activity across the UK remained at low levels. Activity is still at baseline levels in England, Scotland and Wales; thresholds have not yet been set for Northern Ireland. Some clinical indicators of influenza have increased in England, Wales and Northern Ireland but have decreased slightly in Scotland. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during weeks 44/08 and 45/08, 17 were positive for influenza A, three A (H1) and 14 A (H3). Other NHS and HPA laboratories in England and Wales reported 24 influenza A and one influenza B positive specimens during these two weeks. One influenza A was reported from Scotland in week 44/08 and one influenza B from Northern Ireland in week 45/08. One outbreak of respiratory illness was reported from a school in London; one of five samples was tested positive for influenza A (H3). This outbreak is still under investigation. The weekly vaccine uptake rates for the over 65 years increased from 56.1% in week 44/08 to 64.2% in week 45/08 and in the under 65 years at risk group increased from 30.4% to 31.5% in the same time period. Influenza activity was at low levels throughout the rest of Europe.

## Antiviral drug susceptibility test

Neuraminidase inhibitor susceptibility testing on 10 out of 27 A (H3) isolates since week 36/08 showed that all of them are sensitive to oseltamivir and zanamivir but resistant to amantadine. Nine of ten A (H1) specimens tested in the same time frame are resistant to oseltamivir but sensitive to zanamivir. Eight of these nine resistant viruses have been tested for amantadine susceptibility and are all sensitive. All of the 3 influenza B isolates received are sensitive to oseltamivir and zanamivir.

## Clinical indices of acute respiratory illness (England, Wales, Scotland and Northern Ireland)

### England and Wales

Royal College of General Practitioners

<http://www.rcgp.org.uk/bru/index.asp>

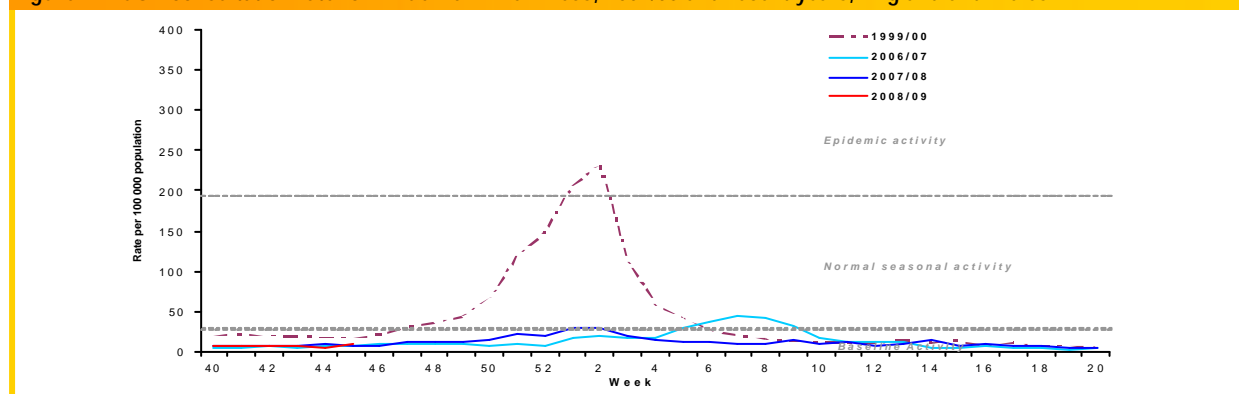
The overall influenza-like illness incidence rate\*\* remained low at 9.6 per 100,000 in week 45/08, although this has increased from 6.6 per 100,000 in week 44/08. The rate remains below the baseline activity threshold of 30 per 100,000 (Figure 1).

Regional rates of influenza-like illness have increased

from week 44/08 to 45/08 but remained low, with the central region having the highest rate at 12.3 per 100,000 in week 45/08. The rate was highest in the 15-44 year age group at 11.5 per 100,000 in week 45/08 (Figure 2).

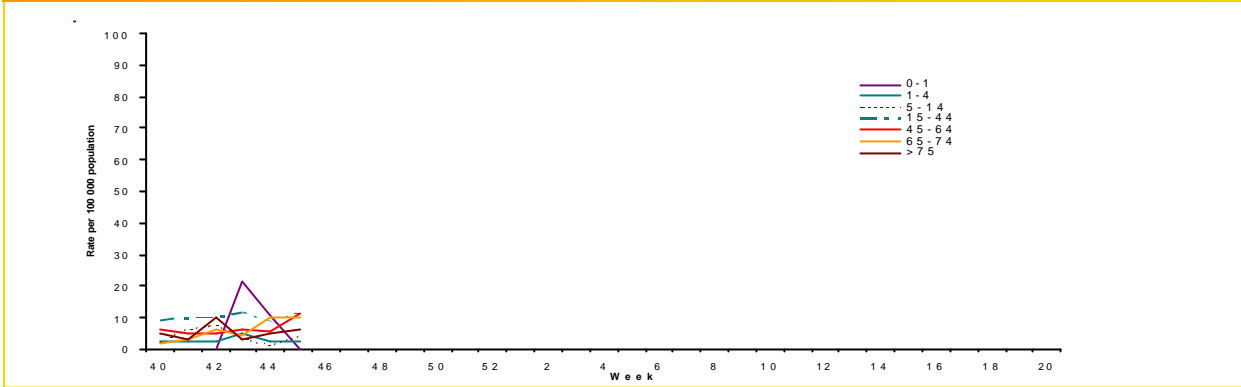
The rate for acute bronchitis increased from 92.5 per 100,000 in week 44/08 to 103.4 per 100,000 in week 45/08. The episode incidence rate was highest in the 0-1 year age group at 432.1 per 100,000 in week 44/08, which then decreased slightly to 422.7 per 100,000 in the same age group in week 45/08.

Figure 1: RCGP consultation rate for influenza – like illness, 2007/08 and recent years, England and Wales



\*\* RCGP incidence rates in this report only refer to first or new episodes of infection diagnosed by a GP.

Figure 2 RCGP Episode incidence rates for influenza-like illness (ILI) by age group, England and Wales.



**Scotland**

**Health Protection Scotland**

<http://www.hps.scot.nhs.uk/>

GP consultation rates for influenza decreased from 12.0 per 100,000 in week 44/08 to 11.0 per 100,000 in week 45/08. Activity remains below the Scottish baseline threshold of 50 consultations per 100,000 (Figure 3).

**QSurveillance**

HPA and Nottingham University Division of Primary Care.

<http://www.qresearch.org>

This primary care surveillance system uses QSurveillance, a database of general practice derived data. During weeks 44/08 and 45/08, approximately 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of around 21 million. The rate of influenza-like illness increased from 6.4 per 100,000 in week 44/08 to 8.7 per 100,000 in week 45/08. The highest rates have consistently been in the 15-44 year age group. In week 44/08, the highest rates were in London and in week 45/08 they were highest in London, Northern Ireland and West Midlands.

**Northern Ireland**

**CDSC Northern Ireland**

<http://www.cdscni.org.uk/>

The combined rate for influenza and influenza-like illness increased from 18.3 per 100,000 (updated rate) in week 44/08 to 27.9 per 100,000 in week 45/08 (Figure 3). No threshold has been set for Northern Ireland.

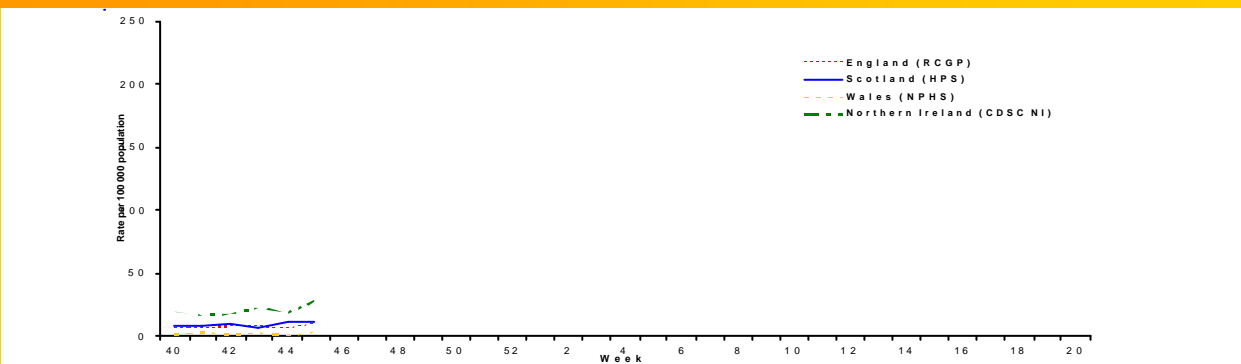
**Wales**

**National Public Health Service**

<http://www.wales.nhs.uk/sites/home.cfm?OrgID=368>

GP consultation rates for influenza increased from 0.4 per 100 000 in week 44/08 to 3.0 per 100,000 in week 45/08. Both figures are well below the baseline threshold of 25 consultations per 100,000 (Figure 3).

Figure 3 GP Consultation rates for influenza/influenza-like illness in the U.K



**NHS Direct total call activity**

**England and Wales**

<http://www.nhsdirect.nhs.uk/>

Cold/flu and fever calls were low and within the baseline levels during weeks 44/08 and 45/08. The proportion of cold/flu calls remained the same at 0.5% in weeks 43 to 45/08 (the threshold is set at 1.2%). Fever calls in the 5-14 age group made up 4.8% of the total calls in week 45/08 which was increased from 3.9% in week 44/08, both are lower than the threshold of 9%.

**Medical Officers of Schools Association (MOSA)**

During week 44/08, 12 schools reported data, this is fewer than usual as some schools are still on half-term holidays. No new episodes of influenza like illness were reported. Twenty-three new episodes of upper respiratory tract infection were reported equalling the rate of 4.9 per 1000 population. Week 43/08 was half-term so no data was reported.

## Laboratory indices of acute respiratory illness

### Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

95 community specimens and 18 hospital specimens were tested during weeks 44/08 and 45/08. Seventeen specimens tested positive for influenza A viruses in weeks 44/08 and 45/08 (Table 1). Six specimens were further characterised: four A/Solomon Island/3/2006 (H1)-like which is similar to the vaccine strain, one A (H1) Brisbane/59/2007 (H1N1)-like (vaccine strain) and one A (H3) A/Brisbane/10/2007 (H3N2)-like (vaccine strain) (Figure 4). All 12 influenza A (H1) specimens and 11 of 26 A (H3) received to date come from Southern England (table 1).

Neuraminidase inhibitor susceptibility testing on 10 out of 27 A (H3) isolates since week 36/08 showed that all of them are sensitive to oseltamivir and zanamivir but resistant to amantadine. Of the ten A (H1) specimens received and tested, nine are resistant to oseltamivir but

sensitive to zanamivir. Eight of the resistant viruses were tested for susceptibility to amantadine and are sensitive. Three influenza B isolates have been received and tested and all are sensitive to oseltamivir and zanamivir.

Please note that these data are provisional.

### Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A doubled from 8 in week 44/08 to 16 in week 45/08 and the number of RSV positives increased from 135 to 325 in the same time period. To date, the highest number of influenza A positive specimens have come from Southern England. (Table 2).

Please note that these data are provisional.

**Table 1 "Detections" (PCR and isolation) of influenza and RSV made by RVU (Cfl) Reference Laboratory. Samples from community and hospital sources, by week of report.**

Influenza Detections by PCR and Isolation				
Influenza type ( subtype)	A (H1)	A (H3)	B	RSV*
Week 44/08	0	7	0	1
Week 45/08	3	7	0	5
<b>Cumulative to date (week 40/08 – 45/08)</b>				
Northern England	0	5	0	1
Central England	0	8	0	0
Southern England	12	11	0	8
Wales	0	2	0	0
Scotland	0	0	0	0
Northern Ireland	0	0	0	0
<b>Cumulative Total</b>	<b>12</b>	<b>26</b>	<b>0</b>	<b>9</b>

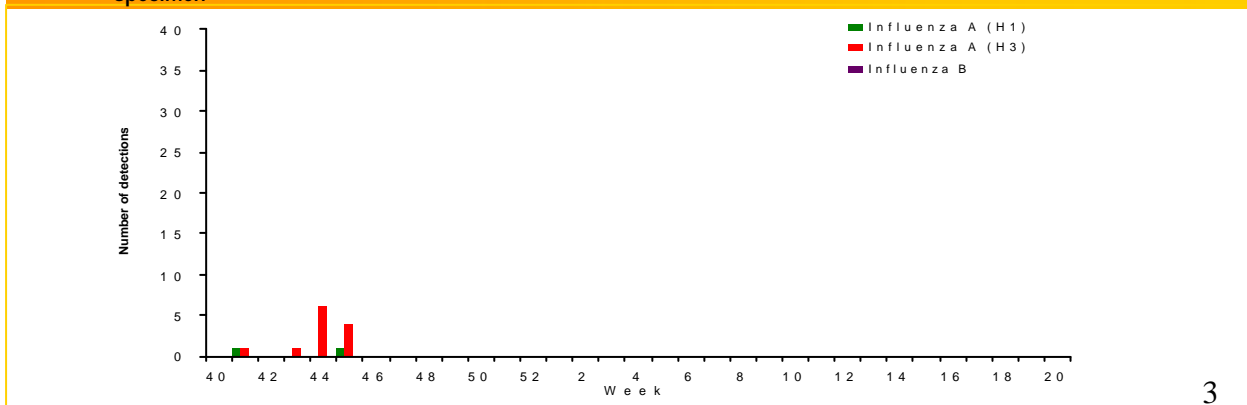
\* RSV detection is by PCR only

**Table 2 "Detections" (isolation, PCR, direct immunofluorescence and paired sera tests) of influenza and RSV reported to Cfl by NHS and HPA microbiology laboratories. Data for England and Wales by RCGP region, by week of report**

	Detection (isolates, DIF and PCR)		
	Influenza A	Influenza B	RSV*
Week 44/08	8	0	135
Week 45/08	16	1	325
<b>Cumulative to Date (week 40/08 - 45/08)</b>			
Northern England	8	2	301
Central England	10	1	174
Southern England	19	0	279
Wales	4	0	28
<b>Cumulative Total</b>	<b>41</b>	<b>3</b>	<b>782</b>

\*Detections of RSV by isolation are not included.

**Figure 4 : Total ( Community and Hospital) Influenza detections (PCR and Isolation) characterised by RVU,Cfl, by week of specimen**



## HPA Cfl Virological Surveillance of Influenza (England)

This parallel GP sentinel scheme reported 2 out of 41 (4.9%) influenza A positive cases during weeks 44/08 and 45/08. To date, six of the nine oseltamivir-resistant A (H1) specimens have come from this scheme. Three specimens were positive for RSV and two for other respiratory viruses in the same time period.

## Virological data from Northern Ireland

(<http://www.cdscni.org.uk/>)

One sentinel sample was tested in week 45/08 which was positive for influenza B, this is the first of the season. Of the 49 non-sentinel samples tested, 18 were positive for RSV.

## Virological data from Scotland

(<http://www.show.scot.nhs.uk/sciehl/>)

During week 45/08 out of 27 sentinel samples, which were received through SERVIS, four were positive for RSV, of which one was also positive for parainfluenza 3, three for rhinovirus and one for human metapneumovirus. All 15 routine samples reported from hospital and community sources were positive for RSV. In week 44/08 the first influenza A positive sample of the season was reported from a non-sentinel community source.

## Other Reports (UK)

### Mortality Data

#### Office for National Statistics

(<http://www.statistics.gov.uk/>)

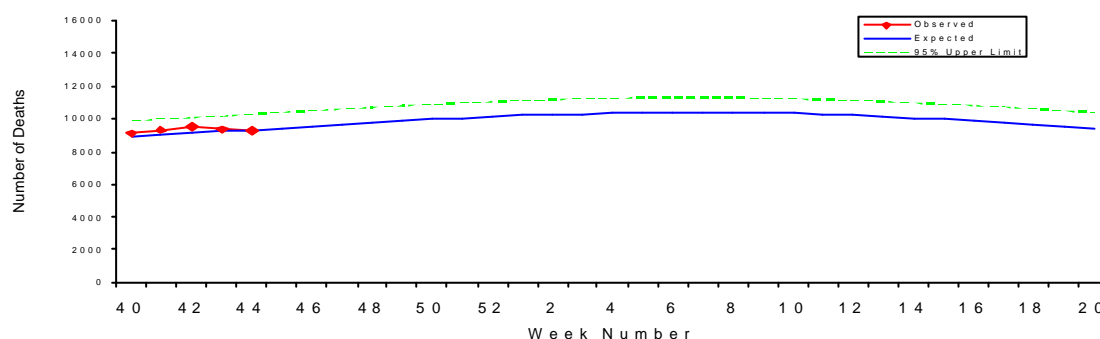
The number of deaths registered in England and Wales decreased from 9353 in week 43/08 to 9280 in week 44/08. Deaths due to all respiratory diseases (as underlying cause) slightly decreased from 1226 (12.6%) to 1118 (12%) during these same weeks. The weekly all cause registered deaths are shown in Figure 5. No excess deaths were detected.

### Outbreak Reports:

One outbreak was reported in week 44/08 from a school in London. One of five specimens tested is positive for influenza A (H3).

Cfl would welcome any reports of influenza outbreak investigations. Please email any reports to [respdsc@hpa.org.uk](mailto:respdsc@hpa.org.uk).

Figure 5 : Weekly all cause registered deaths in England and Wales



## Flu Vaccination Campaign 2008/09 (England)

The weekly data on flu vaccination uptake in England have shown a steady increasing trend since the start of the campaign in September 2008 from a sample of GPs in England.

The uptake rates for the over 65 years increased from 56.1% in week 44/08 to 64.2% in week 45/08. The uptake rates for the under 65 years at risk group increased from 30.4% in week 44/08 to 31.5% in week 45/08.

It should be noted that the week 45/08 data is provisional.

Data Source: The National Influenza Vaccine Uptake Monitoring Programme (HPA/DH)

## Avian Influenza

The WHO continues to monitor and report on new cases of human infection with A(H5N1) avian influenza when they occur.

There have been no new human cases since the last cases reported from Indonesia on 10 September 2008.

According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 387 of which 245 (63%) have died.

### Useful link:

Situation updates from WHO (human):

[http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

Situation summary from the HPA (avian and human):

[http://www.hpa.org.uk/infections/topics\\_az/influenza/avian/situation\\_update.htm](http://www.hpa.org.uk/infections/topics_az/influenza/avian/situation_update.htm)

## Influenza activity outside the UK

### Europe

#### European Influenza Surveillance System (EISS)

[www.eiss.org](http://www.eiss.org)

In weeks 43 and 44/08, low level of seasonal influenza activity was seen across all 26 European countries participating in the EISS, sporadic activity was reported in England, Ireland and Poland and no activity in the remaining 23 countries.

Out of the total 224 respiratory specimens collected by sentinel physicians during week 44/08, eight (3.6%) specimens tested positive for influenza, one type A not subtyped, six A(H3) and one type B. In addition, ten non-sentinel specimens tested positive including one A(H1N1), one A(H3N2) and eight influenza A not subtyped. These positive specimens were reported from six countries; Belgium, Denmark, England, Ireland, Norway and Poland.

Since week 40/08, 13 viruses have been characterised; 12 of these 13 seem to be a good match to the strains recommended for the 2008-09 vaccine and the thirteenth was B/Malaysia/2506/2004-like.

### Ireland

#### Health Protection Surveillance Centre (HPSC)

<http://www.hpsc.ie/>

Influenza activity in Ireland during weeks 44 and 45/08 were at low levels. In week 44/08 the ILI consultation rate was 6.4 per 100,000 (11 consultations) and remained constant at 6.5 per 100,000 in week 45/08. Of the 11 consultations for ILI in week 44/08, 10 were in the 15-64 age group and one in the 65+ age group.

Seven sentinel specimens were tested in weeks 44 and 45/08, all of which were negative for influenza. Of 135 non-sentinel specimens tested, two were positive for influenza A and 34 for RSV.

### Canada

#### Public Health Agency of Canada

<http://www.phac-aspc.gc.ca/fluwatch/index.html>

During weeks 43 and 44/08, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity and five regions reporting sporadic influenza activity in week 44/08. Six specimens tested positive for influenza in these two weeks.

Since 1 September 2008, four influenza viruses have been characterised: one influenza A/Brisbane/59/2007(H1N1)-like, two influenza B/Florida/4/2006-like and one B/Malaysia/2506/2004-like. A/Brisbane/59/2007(H1N1) and B/Florida/4/2006 are the components recommended for the 08/09 influenza vaccine. The influenza A (H1N1) isolate has been found to be resistant to oseltamivir.

### United States of America

#### Centers for Disease Control and Prevention (CDC)

<http://www.cdc.gov/flu/weekly/>

During weeks 43 and 44/08, a low level of influenza activity was reported. Fifteen states, the District of Columbia and Puerto Rico reported sporadic influenza activity in week 44/08 and 35 states reported no activity.

In week 43/08 WHO and NREVSS laboratories reported 1251 specimens tested for influenza viruses, five (0.4%) of which were positive. In week 44/08, 1780 specimens were tested, 11 (0.62%) of which were positive: two influenza A (H1), one influenza A (H3), seven influenza A (not subtyped) and one influenza B virus.

Since week 40/08 one influenza virus has been characterised as B/Florida/04/2006-like, which is antigenically similar to one of the components recommended for the 2008-09 vaccine.

#### Other country reports can be obtained from the World Health Organisation:

<http://www.who.int/csr/disease/influenza/en/>

## Acknowledgements

Data for this report were collated by the Influenza/Respiratory Virus Team:

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