

# HPA Weekly National Influenza Report

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



01 April 2009 (Week 14)

\*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), NHS Direct (England and Wales) and Q Surveillance (England, Northern Ireland, Scotland and Wales).

## Covered in this report:

Data, except that from ONS, MOSA and non-UK sources: 16/03/09 - 29/03/09 (Weeks 12 & 13, 2009)

Data from ONS, MOSA and non-UK sources: 09/03/09 - 22/03/09 (Weeks 11 & 12, 2009)

## Summary

Influenza activity is low across the UK.

In weeks 12 and 13/09 GP consultation rates decreased and remained below baseline levels in England and Wales. In Scotland the rate stayed constant and below baseline levels. In Northern Ireland the consultation rate has decreased and remains at low levels, but thresholds have not yet been set. The proportions of cold/flu and fever calls to NHS direct in England and Wales remain low.

In week 13/09, ten specimens tested positive for influenza virus (two A (H3) and eight B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported two influenza A, and sixteen influenza B positive specimens in week 13/09. Five Scottish influenza B-positive specimens were reported in week 13/09. Three respiratory disease outbreaks were reported in week 12/09 in England. The proportion of people over 65 years who have received this season's influenza vaccine was 74.1% in week 05/09, and 47.2% in those aged under 65 years in risk groups. Characterisation of 658 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched to the current influenza vaccine.

In western Europe the seasonal epidemic is over, but several countries in other parts of Europe reported medium intensity activity in week 12/09. Influenza B virus detections are currently dominant in over 50% of the countries.

## Antiviral drug susceptibility testing

Since week 40/08 all of the 229 influenza A (H3) isolates tested for drug sensitivity have been found to be sensitive to oseltamivir and zanamivir, but resistant to amantadine. Eighty-six influenza A (H1) specimens have been tested for anti-viral drug resistance, 85 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Thirty-five influenza B specimens have been tested and all were 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

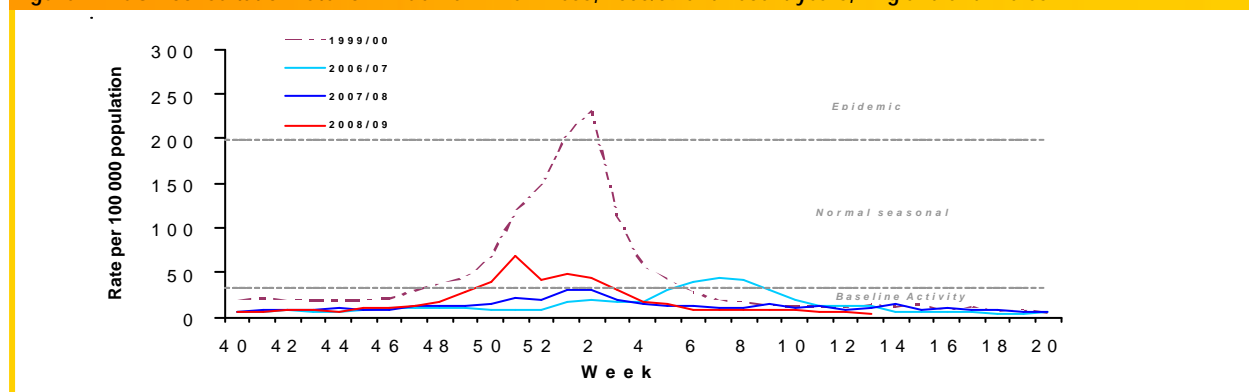
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate\*\* decreased from 6.2 per 100,000 in week 12/09 to 3.1 per 100,000 in week 13/09. This rate remains well below the baseline threshold of 30 per 100,000. In the same time period the rate in the north decreased from 3.4 per 100,000 to 2.5 per 100,000, in the central region it decreased from 6.1 per 100,000 to 2.5 per 100,000 and

in the south the rate decreased from 7.2 per 100,000 in week 12/09 to 3.7 per 100,000 in week 13/09. The highest rate is still in the 15-44 year (4.7 per 100,000 in week 13/09) group (Figure 2).

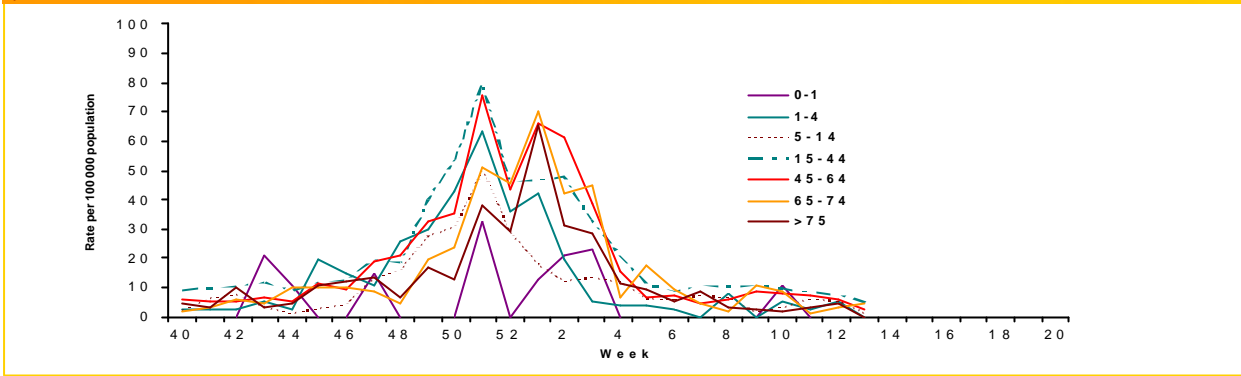
The overall rate for acute bronchitis increased from 77.9 per 100,000 in week 12/09 to 92.6 per 100,000 in week 13/09. In week 13/09 the highest rate was in the under one year group at 346.7 per 100,000 which was increased from 206.2 per 100,000 in week 12/09. In the over 75s it also increased from 201.3 to 240.9 per 100,000.

Figure 1: RCGP consultation rate for influenza – like illness, 2008/09 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.



**Wales**

**National Public Health Service**

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

GP consultation rates for influenza decreased slightly from 1.8 per 100,000 in week 12/09 to 1.2 per 100,000 in week 13/09. Both figures are below the baseline threshold of 25 consultations per 100,000 (Figure 3).

**Northern Ireland**

**CDSC Northern Ireland**

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

The combined rate for influenza and influenza-like illness decreased from 42.0 per 100,000 in week 12/09 (updated rate) to 20.5 per 100,000 in week 13/09 (Figure 3). No threshold has been set for Northern Ireland.

**Scotland**

**Health Protection Scotland**

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

GP consultation rates for influenza remained stable at 4 per 100,000 in weeks 12/09 and 13/09 (Figure 3). This remains below the Scottish baseline threshold of 50 consultations per 100,000.

**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 12 and 13/09, around 3200 practices reported from across the UK covering a population of around 22 million. The rate of influenza-like illness was stable at 4.8 per 100,000 in both weeks 12 and 13/09. The rates are low in all age groups with the highest rates in the 15-44 year age group (5.9 per 100,000 in week 13/09). The rates were highest in London.

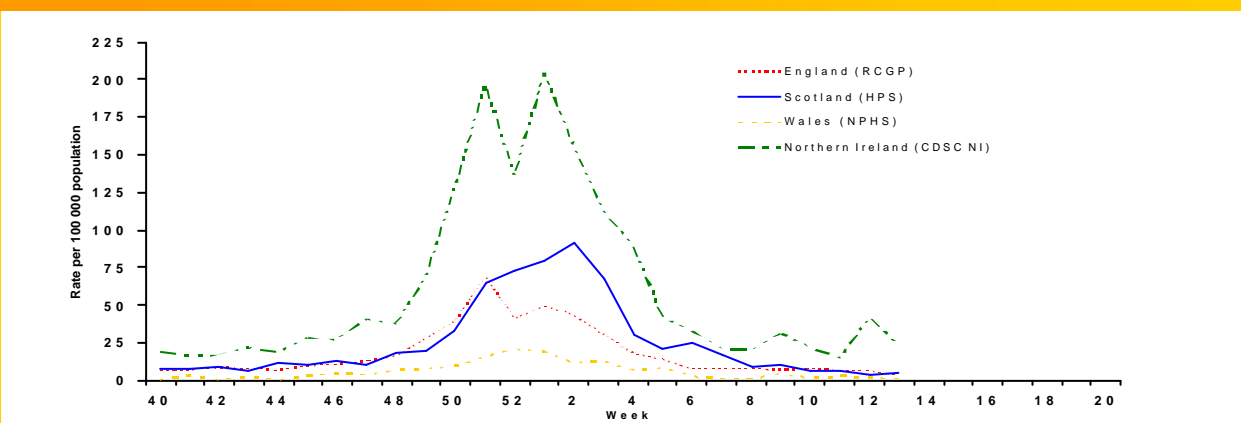
**NHS Direct total call activity**

**England and Wales**

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

The proportion of cold/flu calls was 0.4% in both weeks 12 and 13/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year-olds was stable at 6.5% in week 12/09 and 6.4% in week 13/09, it remains below the threshold of 9%.

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



**Medical Officers of Schools Association (MOSA)/HPA surveillance of illness in boarding schools**

The peak rate of upper respiratory tract infection (URTI) was in week 50/08 at 118.4 per 1000 (260 episodes) and for influenza-like illness (ILI) it was in week 49/08 at 10.4 per 1000 (23 episodes).

There are no results from the MOSA scheme for weeks 11 or 12/09 due to school holidays.

## Laboratory indices of acute respiratory illness

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

In weeks 12 and 13/09 12 specimens tested positive for influenza; two A (H3) and ten B. Since week 40/08 the majority of influenza A (H1) isolates have come from the south west of England, but influenza A (H3) has been more common in all regions (table 1).

Since week 40/08 658 viruses have been characterised: 58 A (H1) Brisbane/59/2007 (H1N1)-like, 524 A (H3) A/ Brisbane/10/2007 (H3N2)-like, six B/Florida/4/2006-like (vaccine strains), and 70 B/Malaysia/2506/2004-like.

Since week 40/08, all 229 A (H3) isolates tested have been found to be resistant to amantadine, but sensitive to oseltamivir and zanamivir. Eighty-six influenza A (H1) specimens have been tested; 85 were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Thirty-five influenza B specimens have been tested; all were sensitive to oseltamivir and zanamivir.

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 type (subtype)	A (H1)	A (H3)	B	RSV*
Week 12/09	0	0	2	0
Week 13/09	0	2	8	0
<b>Cumulative to date (week 40/08 – 13/09)</b>				
NE England	3	30	12	0
NW England	10	181	25	1
Yorkshire/Humber	13	190	15	9
East Midlands	8	168	4	3
West Midlands	4	107	5	7
East of England	2	242	17	12
London	10	325	41	9
SE England	3	200	21	12
SW England	36	141	10	2
Northern Ireland	0	10	0	0
Scotland	7	26	2	0
Wales	6	9	0	0
Unknown Region	1	0	1	0
<b>Cumulative Total</b>	<b>105</b>	<b>1630</b>	<b>153</b>	<b>55</b>

\* RSV detection is by PCR only

Thirteen specimens were submitted through the RCGP scheme in week 12/09 of which one was positive for influenza B, in week 13/09 four were submitted; one was positive for influenza A (H3) and two for influenza B (figure 4).

### HPA Virological Surveillance of Influenza (England)

This parallel GP sentinel scheme was terminated for the 2008/09 season in week 12/09. Between weeks 40/08 and 12/09, 985 specimens were submitted and 323 (33%) were positive for influenza; 280 influenza A and 43 influenza B.

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

There were two specimens positive for influenza A in week 13/09. The number of influenza B positive specimens has increased from six in week 12/09 to 16 in week 13/09 (Table 2).

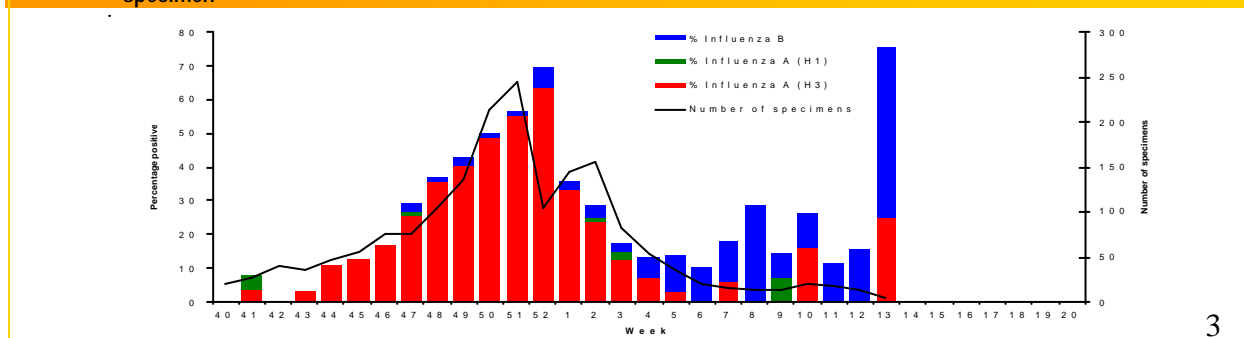
Please note that these data are provisional.

**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**

	Influenza A	Influenza B	RSV*
Week 12/09	0	6	37
Week 13/09	2	16	40
<b>Cumulative to Date (week 40/08 - 13/09)</b>			
Northern England	298	65	1578
Central England	396	35	881
Southern England	446	58	2271
Wales	61	4	351
<b>Cumulative Total</b>	<b>1201</b>	<b>162</b>	<b>5081</b>

\*Detections of RSV by isolation are not included.

**Figure 4 : Proportion of RCGP specimens positive for influenza detected (PCR and Isolation) by RVU,Cfl, by week of specimen**



## Virological data from Northern Ireland

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

In weeks 12 and 13/09 no specimens were positive for influenza but eight non-sentinel specimens were positive for RSV.

## Virological data from Wales

(<http://www.wales.nhs.uk/>)

To date this season 17 (15 A and two B) of 93 (18%) sentinel samples and 84 (79 A and five B) non-sentinel samples have been positive for influenza.

## Virological data from Scotland

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

During week 13/09, five of 31 sentinel samples were positive for influenza B. Seven routine samples from hospital and community sources were also tested in week 13/09; all were positive for influenza B.

## Other Reports (UK)

### Mortality Data

#### Office for National Statistics

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

In week 12/09 an estimated 9212 deaths were registered. In week 11/09, an estimated 1295 (13.4%) of 9698 registered deaths were due to respiratory illness, this is a slight decrease from 14.1% (1361/9676) in the previous week. In the seven week period from week 50/08 to week 05/09, HPA estimates that there have been approximately 9200\* all-cause excess deaths compared to the expected number at this time of year. It should be noted that this excess mortality is due to all causes and cannot be specifically attributed to influenza. No excess has been observed since week 05/09.

Figure 5 shows the estimated weekly all-cause registered deaths.

\* Provisional data, above threshold

### Outbreak Reports:

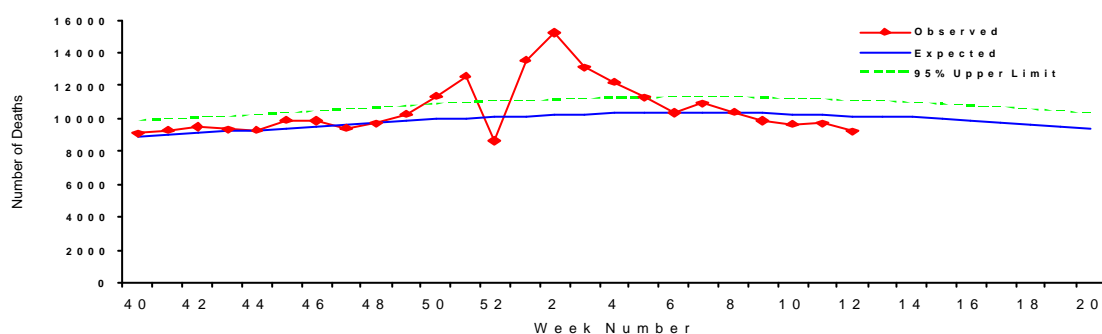
In week 12/09, three outbreaks of respiratory disease in schools were reported to CfI, two in London and one in north east England. One was confirmed as influenza B, one as rhinovirus and the third is still under investigation. No outbreaks were reported in week 13/09.

So far this season, 70 outbreaks have been reported, the majority, 40 (57%), from care homes, 18 (30%) have been from schools and the remainder from army barracks (three), hospitals (five) or other locations (one). In 57 of the outbreaks, samples were taken and of these, influenza A was detected in at least one sample from 43 (75%) outbreaks, and influenza B from six.

CfI welcomes reports of respiratory illness outbreaks. A reporting form can be found at:

[http://www.hpa.org.uk/web/HPAwebFile/HPAweb\\_C/1231490117848](http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1231490117848) or by emailing the influenza team on [respcdsc@hpa.org.uk](mailto:respcdsc@hpa.org.uk).

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



## Flu Vaccination Campaign 2008/09 (England)

Data on influenza vaccination uptake were taken weekly from a sample of GPs in England.

Steady increasing trends were seen from the start of the campaign in September 2008.

The final weekly data were taken in week 05/09 when the proportion vaccinated in the over 65 year age group reached 74.1% and in the under 65 years at risk group, the proportion was 47.2%. The proportion of carers vaccinated by week 05/09 was 38.9%

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.

On 23 and 30 March 2009 WHO reported two new cases of influenza A (H5N1) in Egypt. Both are reported to be hospitalised. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 413 of which 256 (62%) have died.

### Useful links:

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

### Ireland

Health Protection Surveillance Centre (HPSC)

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

The Irish ILI consultation rate increased slightly from 2.4 (updated rate) per 100,000 in week 12/09 to 3.8 per 100,000 population in week 13/09. Both rates are below the Irish baseline threshold of 17.8 per 100,000.

In weeks 12 and 13/09, one sentinel sample was tested but was negative for influenza, six of 91 non-sentinel samples were positive for RSV.

### Europe

European Influenza Surveillance System (EISS)

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

In week 12/2009, the Russian Federation continued to report high influenza activity. In all countries in western Europe the seasonal epidemic is over though several countries in other parts of Europe reported medium intensity activity. Influenza B virus detections are currently dominant in over 50% of the countries.

In week 12/09, influenza activity was reported as high in Croatia and four of seven Russian regions, medium in 13 countries, and low in 25. Widespread influenza activity was reported in four countries, regional activity in five, local activity in six and sporadic or no activity in the remaining 23.

Of the 1261 respiratory specimens collected by sentinel physicians during week 12/09, 274 (22%) tested positive for influenza, 40 type A (not subtyped), 48 A (H3), one A (H1) and 185 type B. In addition, 533 non-sentinel specimens tested positive including 158 influenza A (not subtyped), 171 A (H3), 67 A (H1), and 137 type B.

Since week 40/08, 3110 viruses have been characterised; 2522 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 588 (18.9%) were B/Malaysia/2506/2004-like.

### Canada

Public Health Agency of Canada

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

In weeks 11 and 12/09, influenza activity remained high; three regions reported widespread activity, 16 reported localized and 29 reported sporadic or no activity. The proportion of samples positive for influenza was 17.9% (824/4592) in week 12/09. Thirty new influenza outbreaks were reported in week 12/09 (10 in care homes, 14 in schools, three in hospitals and three in other locations).

Since 1 September 2008, 694 influenza viruses have been characterised: 154 influenza A/Brisbane/59/2007(H1N1)-like, 132 A/Brisbane/10/2007 (H3N2)-like, seven influenza B/Florida/4/2006-like and 361 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine.

All of 275 influenza A (H1N1) isolates that have been tested have 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 11 and 12/09, influenza levels were high but decreasing. In week 12/09 24 states reported widespread activity, 19 states reported regional activity, six states reported local influenza activity and the District of Columbia and one state reported sporadic influenza activity.

In week 10/09 the proportion of samples positive for influenza decreased to 21.4% (1104/5161): 158 influenza A (H1), 27 A (H3), 339 A (not subtyped) and 580 influenza B. Influenza A (H1) has been predominant overall this season but the proportion of influenza B is increasing regionally and nationally.

Since week 40/08, 807 influenza viruses have been characterised; 510 A/Brisbane/59/2007 (H1N1)-like, 86 A/Brisbane/10/2007 (H3N2)-like, 44 B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 167 from the B/Victoria lineage.

Of the 554 influenza A (H1) viruses tested this season, 549 (99.1%) have been found to be resistant to oseltamivir, but all are sensitive to zanamivir.

**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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