

HPA Weekly National Influenza Report

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



21 January 2009 (Week 04)

*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: 12/01/09 - 18/01/09 (Week 03, 2009)

Data from ONS, MOSA and non-UK sources: 05/12/08 - 11/01/09 (Week 02, 2009)

Summary

Influenza activity is decreasing across the UK.

In week 03/09 GP consultation rates remained above the threshold levels but have decreased in England and Scotland. In Wales the rate has increased slightly but remains below baseline. In Northern Ireland the consultation rate has decreased but thresholds have not yet been set. The proportion of cold/flu calls to NHS direct in England and Wales has decreased, and the proportion of fever calls in those aged 5-14 has increased slightly but remains below baseline.

In week 03/09 48 specimens tested positive for influenza virus (six influenza A (H1), 39 influenza A (H3) and three influenza B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported 95 influenza A, and three influenza B positive specimens in week 03/09. Seventy-six Scottish and 13 Northern Irish influenza positive specimens were reported in week 03/09. Six outbreaks of respiratory illness were reported recently in care homes, a hospital and a school in different parts of England. The proportion of people over 65 years who have received this season's influenza vaccine was 73.9% in week 03/09, and 46.5% in those aged under 65 years in risk groups. Characterisation of 375 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched to the current influenza vaccine.

Most European countries reported influenza activity of medium intensity with only a limited number of countries, mostly in east and north east Europe, reporting low influenza activity in week 02/09.

Antiviral drug susceptibility testing

Since week 40/08 all of the influenza A (H3) isolates that have been tested for drug sensitivity have been found to be sensitive to oseltamivir and zanamivir, but resistant to amantadine. Forty influenza A (H1) specimens have been tested for anti-viral drug resistance, 39 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Two influenza B specimens have been tested so far and both 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

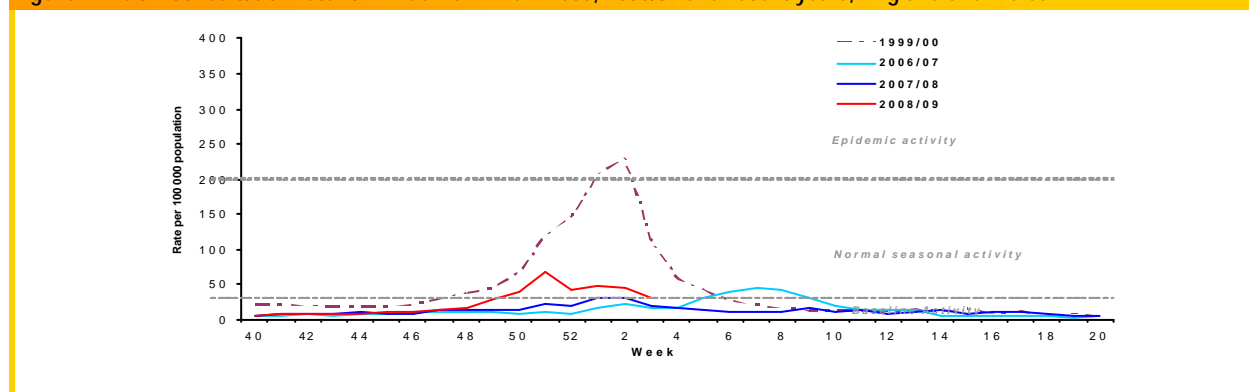
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** decreased from 44.3 per 100,000 in week 02/09 to 31.6 per 100,000 in week 03/09. This rate is still above the baseline threshold of 30 per 100,000. The rates for all three regions decreased correspondingly. The rate in the northern region was lowest at 22.2 per 100,000, in the central region it was 26.9 per 100,000 and in the south the rate was 38.2 per 100,000. The rates have

decreased in most age groups with the highest now in the 65-74 year group at 45.2 per 100,000, which is a slight increase from the rate of 42.3 per 100,000 in the previous week, but is not as high as the peak in this age group of 70.2 per 100,000 in week 01/09. (Figure 2).

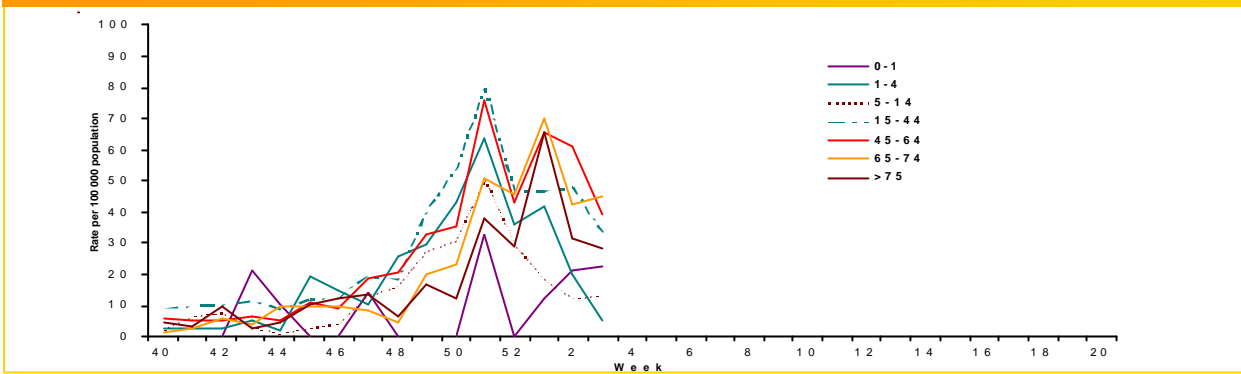
The rate for acute bronchitis also decreased from 182.7 per 100,000 in week 02/09 to 129.8 per 100,000 in week 03/09. The highest rate is still in the over 75 year group at 416.7 per 100,000 in week 02/09, though this has decreased from 542.1 per 100,000 in week 02/09.

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 increased slightly from 11.6 per 100,000 in week 02/09 to 12.8 per 100,000 in week 03/09. 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 157.3 per 100,000 in week 02/09 to 112.6 per 100,000 in week 03/09 (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 decreased from 92.0 per 100,000 in week 02/09 to 68.0 per 100,000 in week 03/09 (Figure 3). This still exceeds 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 week 03/09, over 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of over 21 million. The rate of influenza-like illness decreased from 30.3 per 100,000 in week 02/09 to 18.7 per 100,000 in week 03/09. The highest rate is in the 45-64 year age group (25.1 per 100,000). The rates were highest in Northern Ireland, the south west of England and London.

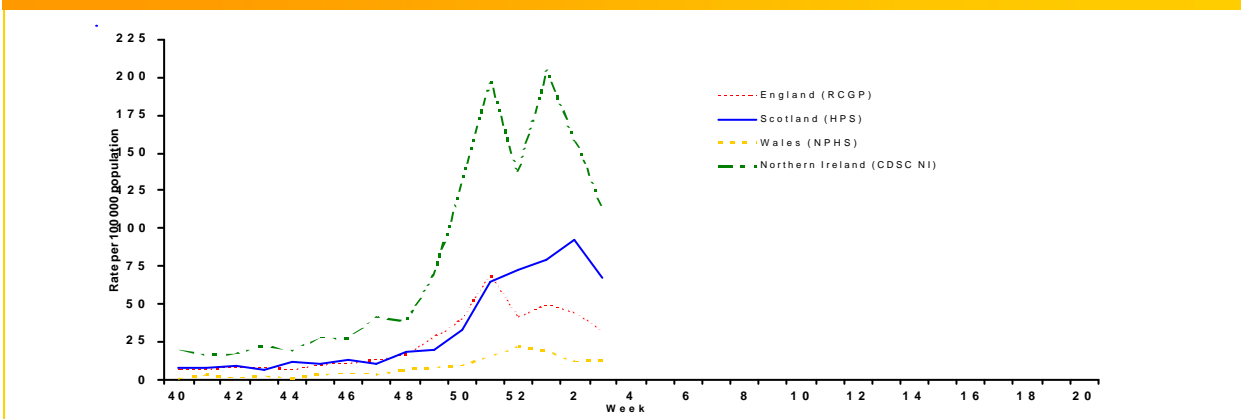
NHS Direct total call activity

England and Wales

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

The proportions of cold/flu calls decreased from 1.2% in week 02/09 to 0.8% in week 03/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year olds increased from 4.9% in week 02/09 to 6.6% in week 03/09 but 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)

In week 02/09 25 schools reported data. There were 13 new episodes of upper respiratory tract infection giving a rate of 1.94 per 1000, which is low compared to the peak this season in week 50/08 with 260 episodes giving

a rate of 118.4 per 1000. In week 02/09 there were five new episodes of influenza or ILI which gives a rate of 0.75 per 1000. This is also low compared to the peak of 23 episodes and a rate of 10.4 per 1000 in week 49/08

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

In week 03/09 48 specimens tested positive for influenza; six A (H1), 39 A (H3) and 3 B (table 1). Since week 40/08 347 viruses have been characterised: 34 A (H1) Brisbane/59/2007 (H1N1)-like, 321 A (H3) A/Brisbane/10/2007 (H3N2)-like, four B/Florida/4/2006-like which are all vaccine strains, and 16 B/Malaysia/2506/2004-like. 19.1% of specimens from the RCGP surveillance scheme were positive for influenza in week 03/09 (figure 4), this is a decrease from 26.7% positive in week 02/09. Since week 40/08, all 101 A (H3) isolates that have been tested have been found to be resistant to amantadine, of these 74 have been tested and found to be sensitive to oseltamivir and zanamivir. Forty influenza A (H1) specimens have been tested for anti-viral resistance since week 40/08, 39 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Two influenza B specimens have been tested so far and 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 Detections by PCR and Isolation				
Influenza type (subtype)	A (H1)	A (H3)	B	RSV*
Week 02/09	4	61	5	3
Week 03/09	6	39	3	3
Cumulative to date (week 40/08 – 02/09)				
Northern England	11	211	15	5
Central England	11	278	6	10
Southern England	38	550	27	28
Wales	2	7	0	0
Scotland	1	2	0	0
Northern Ireland	0	7	0	0
Cumulative Total	63	1055	48	43

* RSV detection is by PCR only

HPA Cfl Virological Surveillance of Influenza (England)

Four (20%) of 20 samples submitted in weeks 01 and 02/09 from this parallel GP sentinel scheme were positive for influenza A. Between weeks 40/08 and 02/09, 645 specimens have been submitted and 213 (33%) have been positive for influenza; 200 influenza A and 13 influenza B.

Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A has decreased from 168 in week 02/09 to 95 in week 03/09, the number of influenza B positives has stayed fairly constant at three in week 03/09 and the number of RSV positives decreased (from 264 to 219) in the same time period (Table 2).

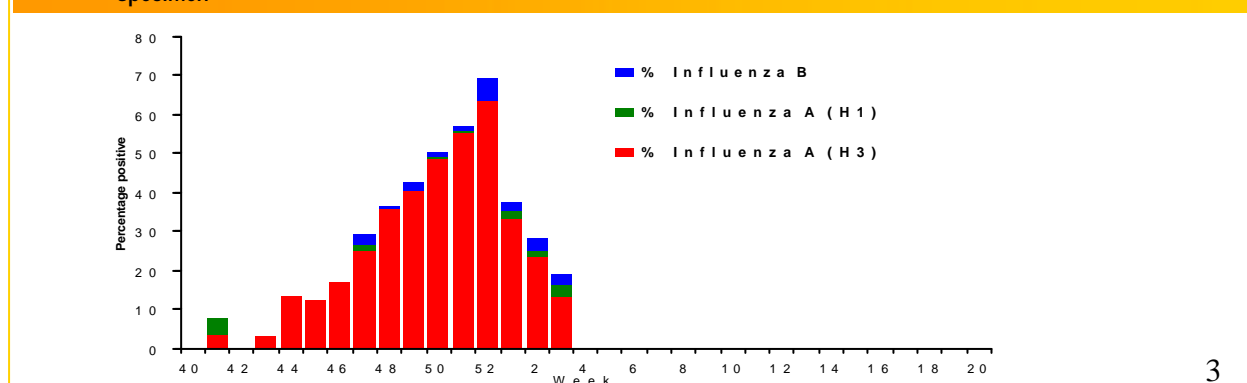
Please note that these data are provisional.

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

	Detection (isolates, DIF and PCR)		
	Influenza A	Influenza B	RSV*
Week 02/09	168	4	264
Week 03/09	95	3	219
Cumulative to Date (week 40/08 - 03/09)			
Northern England	267	17	1355
Central England	328	8	623
Southern England	384	4	1894
Wales	46	0	279
Cumulative Total	1025	29	4151

*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/>)

Five sentinel samples were tested in week 03/09 of which three (21%) were positive for influenza (two A and one B). Of the 62 non-sentinel samples tested, 10 (16%) were positive for influenza (nine A and one B) and 12 for RSV.

Virological data from Wales

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

In week 02/09 two (13%) of 15 sentinel samples were positive for influenza A. To date this season 15 of 77 (19%) sentinel samples and 49 non-sentinel samples have been positive for influenza A.

Virological data from Scotland

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

During week 03/09, 12 (29%) out of 41 sentinel samples were positive for influenza; nine A (three A (H3)) and three B. Two sentinel samples were positive for RSV and two were positive for other viruses. One hundred and five routine samples were also tested; 64 (77%) were positive for influenza; 54 A and ten B; two of the influenza A positive samples were also positive for RSV and 41 further were positive for RSV alone.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 02/09 an estimated 15,233 deaths were registered, with 3334 (21.9%) giving respiratory disease as an underlying cause. In week 01/09 an estimated 3035 (22.4%) of 13,560 registered deaths were due to respiratory illness. In the five week period from week 50/08 to week 02/09 HPA estimates that there have been approximately 6300 all-cause excess deaths compared 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. The estimated weekly all-cause registered deaths are shown in figure 5.

* Provisional data, above threshold

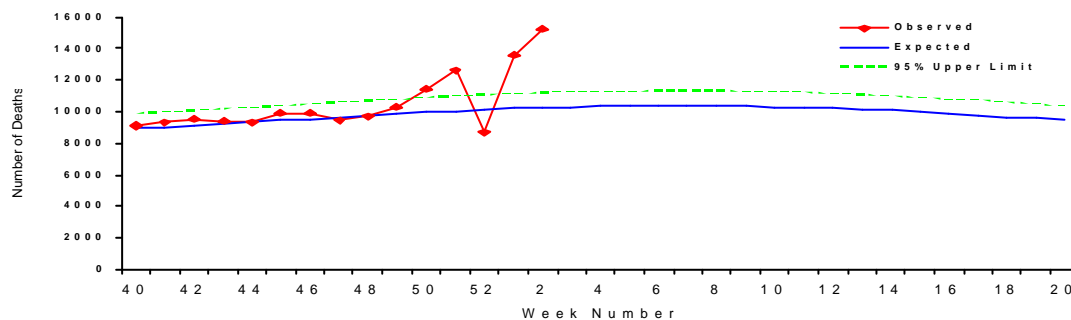
Outbreak Reports:

There have been six outbreaks of respiratory disease reported recently, four of which have been confirmed as influenza A. Four are from care homes in England; one in the east of the country, two in the south east, one in the west Midlands, which may be linked to an outbreak in a hospital in the same area. One outbreak has been reported from a school in Yorkshire and the Humber.

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

http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1231490117848 or by emailing the influenza team on 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 is taken weekly from a sample of GPs in England.

Steady increasing trends have been seen since the start of the campaign in September 2008.

In week 03/09 the proportion vaccinated in the over 65 year age group reached 73.9% and in the under 65 years at risk group, the proportion vaccinated was 46.5%.

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 19 January WHO reported three cases of influenza A (H5N1) in different provinces of China, one has died. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 397 of which 249 (63%) have died.

Useful links:

Situation updates from WHO (human):

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

Influenza activity outside the UK

Ireland

Health Protection Surveillance Centre (HPSC)

[\(http://www.hpsc.ie/\)](http://www.hpsc.ie/)

The Irish ILI consultation rate decreased from 120.5 (updated rate) per 100,00 in week 02/09 to 103.1 per 100,000 population in week 03/09. Both rates are well above the Irish baseline threshold of 17.8 per 100,000 population.

In week 03/09 14 (50%) of 34 sentinel samples were positive for influenza (seven A (H3), five A untyped and two B) and three (2.5%) of 122 non-sentinel samples were positive for influenza A and ten for RSV.

United States of America

Centers for Disease Control and Prevention (CDC)

[\(http://www.cdc.gov/flu/weekly/\)](http://www.cdc.gov/flu/weekly/)

During week 02/09, influenza levels remained low but increased from the previous week. One state (Virginia) reported widespread activity, five states reported regional activity, 10 states reported local influenza activity, the District of Columbia, Puerto Rico and 33 states reported sporadic influenza activity, and one state reported no activity.

In week 01/09 WHO and NREVSS laboratories reported 3394 specimens tested for influenza viruses, 242 (7.1%) of which were positive: 47 influenza A (H1), 11 A (H3), 156 A (not subtyped) and 28 influenza B.

Since week 40/08 158 influenza viruses have been characterised; 93 A/Brisbane/59/2007 (H1N1)-like, 13 A/Brisbane/10/2007 (H3N2)-like, 17 B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 35 from the B/Victoria lineage. Of the 103 influenza A (H1) viruses tested this season, 101 have been found to be resistant to oseltamivir, but all are sensitive to zanamivir.

Canada

Public Health Agency of Canada

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

During week 02/09, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity, 19 regions reporting sporadic activity and three reporting localised influenza activity. Overall, there was a decrease in the consultation rates. One hundred and eighteen of 3306 (3.6%) specimens tested positive for influenza and two influenza outbreaks were reported in week 01/09.

Since 1 September 2008, 69 influenza viruses have been characterised: 16 influenza A/Brisbane/59/2007(H1N1)-like, two A/Brisbane/10/2007 (H3N2)-like, four influenza B/Florida/4/2006-like and 47 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine.

Forty-three influenza A (H1N1) isolates have been tested and found to be resistant to oseltamivir.

Europe

European Influenza Surveillance System (EISS)

www.eiss.org

Most European countries are now experiencing influenza activity of medium intensity. Only a limited number of countries, mostly in east and north east Europe are still reporting low influenza activity. In week 02/09, influenza activity was reported as high in Switzerland and Ireland, medium intensity in 17 countries and low in 10 countries. Geographical spread was reported as widespread in 14 countries; regional in three countries; local in two countries; sporadic in six countries; and no activity was reported in four.

Out of the total 1448 respiratory specimens collected by sentinel physicians during week 02/09, 573 (39.6%) specimens tested positive for influenza, 274 type A (not subtyped), 262 A (H3), seven A (H1) and 30 type B. In addition, 702 non-sentinel specimens tested positive including 584 influenza A (not subtyped), 98 A (H3), four A (H1), and 16 type B.

Since week 40/08, 374 viruses have been characterised; 360 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 14 were B/Malaysia/2506/2004-like.

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:

Estelle McLean, Joy Field, Richard Pebody and John Watson

Respiratory and Systemic Infections Department
HPA Centre for Infections, 61 Colindale Avenue
London NW9 5EQ, United Kingdom
Tel: (0)20 8327 7768; Fax: (0)20 8200 7868
E-mail: respcdsc@hpa.org.uk

Maria Zambon, Joanna Ellis, Angie Lackenby, Alison Bermingham and Praveen Sebastianpillai

Respiratory Virus Unit, Virus Reference Department
HPA Centre for Infections, 61 Colindale Avenue
London NW9 5HT, United Kingdom
Tel: (0)20 8327 6239; Fax: (0)20 8205 8195
E-mail: ernvl@hpa.org.uk

If you wish to be included on our email notification list please send your address to: respcdsc@hpa.org.uk