

HPA Weekly National Influenza Report

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



28 January 2009 (Week 05)

*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: 19/01/09 - 25/01/09 (Week 04, 2009)

Data from ONS, MOSA and non-UK sources: 12/12/08 - 18/01/09 (Week 03, 2009)

Summary

Influenza activity is decreasing across the UK.

In week 04/09 GP consultation rates decreased to below threshold levels in England and Scotland. In Wales the rate has decreased and remains below baseline. In Northern Ireland the consultation rate has decreased but thresholds have not yet been set. The proportions of cold/flu and fever calls to NHS direct in England and Wales have decreased, and remain below baseline levels.

In week 04/09, 31 specimens tested positive for influenza virus (two influenza A (H1), 23 influenza A (H3) and six influenza B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported 42 influenza A, and four influenza B positive specimens in week 04/09. Thirty-nine Scottish and 10 Northern Irish influenza-positive specimens were reported in week 04/09. Three outbreaks of laboratory confirmed influenza A were reported recently in care homes in southern England. The proportion of people over 65 years who have received this season's influenza vaccine was 74% in week 04/09, and 46.8% in those aged under 65 years in risk groups. Characterisation of 472 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched to the current influenza vaccine.

Influenza activity continued to intensify and spread across Europe, with most countries reporting medium to high intensity in week 03/04.

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. Thirty-eight influenza A (H1) specimens have been tested for anti-viral drug resistance, 37 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. 12 influenza B specimens have been tested 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

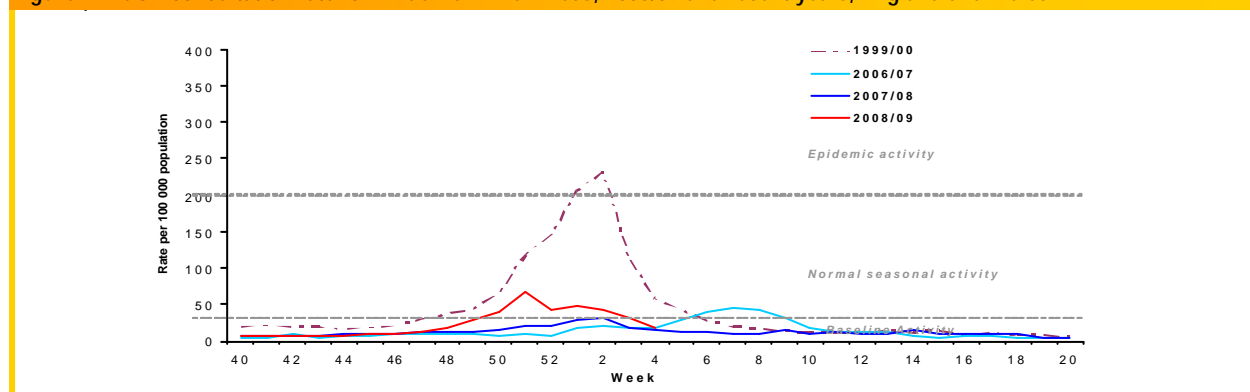
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** decreased from 31.6 per 100,000 in week 03/09 to 16.8 per 100,000 in week 04/09. This rate is now below the baseline threshold of 30 per 100,000. The rates for all three regions decreased correspondingly. The rate in the northern region was the lowest at 10 per 100,000, in the central region it was 14.1 per 100,000 and in the

south the rate was 20.8 per 100,000. The rates have decreased in most age groups with the highest now in the 45-64 year (20.3 per 100,000) and 15-44 year (19.2 per 100,000) groups. (Figure 2).

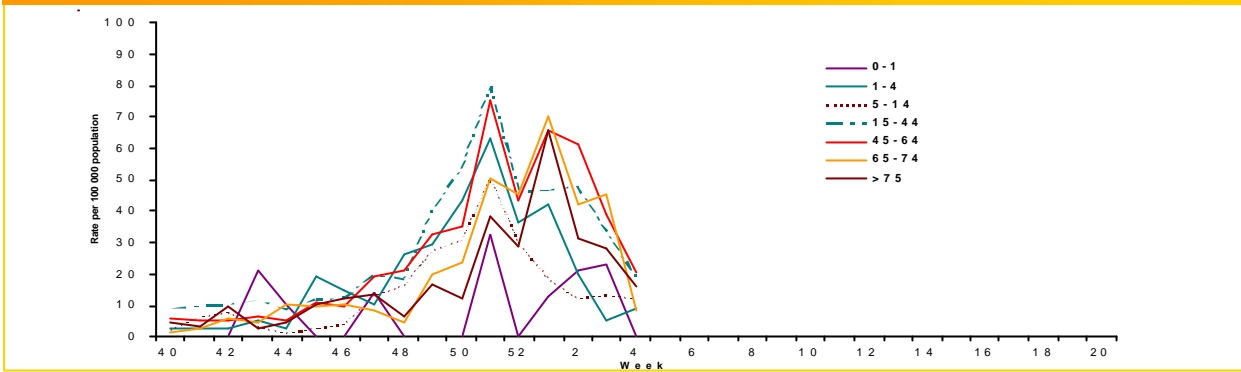
The rate for acute bronchitis also decreased from 129.8 per 100,000 in week 03/09 to 103.6 per 100,000 in week 04/09. The highest rate is still in the over 75 year group at 300.1 per 100,000 in week 04/09, though this has decreased from 416.7 per 100,000 in week 03/09.

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 decreased from 12.8 per 100,000 in week 03/09 to 6.8 per 100,000 in week 04/09. 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 112.6 per 100,000 in week 03/09 to 89.4 per 100,000 in week 04/09 (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 68 per 100,000 in week 03/09 to 31 per 100,000 in week 04/09 (Figure 3). This is now 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 week 04/09, around 3200 practices reported from across the UK covering a population of over 20 million. The rate of influenza-like illness decreased from 18.7 per 100,000 in week 03/09 to 12.8 per 100,000 in week 04/09. The rates have decreased in all the age groups with the highest rate still in the 45-64 year age group (15.3 per 100,000). The rates were highest in Northern Ireland, the south west, south central and London regions of England.

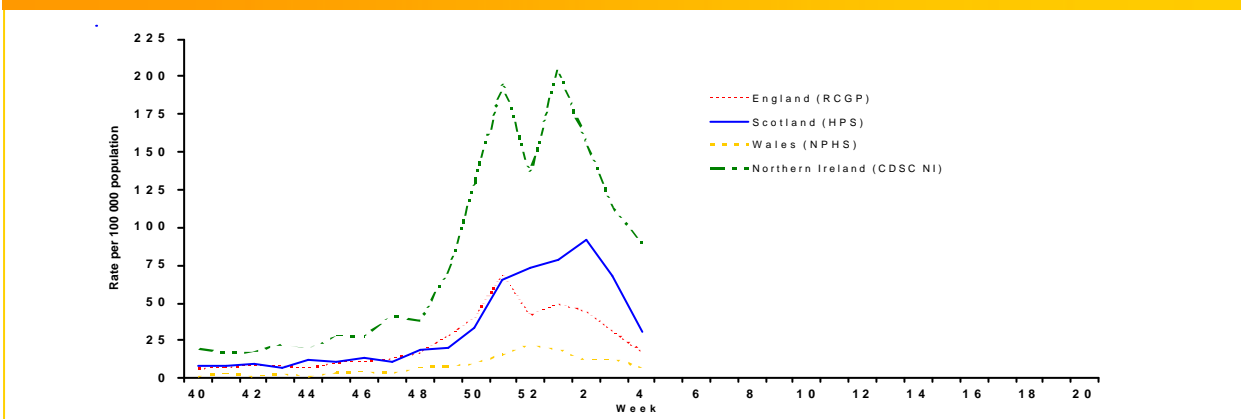
NHS Direct total call activity

England and Wales

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

The proportions of cold/flu calls decreased from 0.8 % in week 03/09 to 0.6% in week 04/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year olds decreased from 6.6% in week 03/09 to 5.6% in week 04/09 and 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 03/09 20 schools reported data. There were 40 new episodes of upper respiratory tract infection giving a rate of 7.06 per 1000, this is increased from the previous week's rate of 1.94 per 1000 but low compared to the peak this season in week 50/08 with 260 episodes

giving a rate of 118.4 per 1000. In week 03/09 there were 11 new episodes of influenza or ILI which gives a rate of 1.94 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 04/09 31 specimens tested positive for influenza; two A (H1), 23 A (H3) and 6 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 40/08 472 viruses have been characterised: 44 A (H1) Brisbane/59/2007 (H1N1)-like, 407 A (H3) A/Brisbane/10/2007 (H3N2)-like, four B/Florida/4/2006-like (vaccine strains), and 21 B/Malaysia/2506/2004-like.

Since week 40/08, all 152 A (H3) isolates that have been tested have been found to be resistant to amantadine, of these 82 have been tested and found to be sensitive to oseltamivir and zanamivir. Thirty-eight influenza A (H1) specimens have been tested for anti-viral resistance since week 40/08, 37 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Twelve influenza B specimens have been tested so far and were sensitive to oseltamivir and zanamivir.

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 03/09	6	39	3	3
Week 04/09	2	23	6	4
Cumulative to date (week 40/08 – 04/09)				
NE England	2	25	7	0
NW England	6	130	2	1
Yorkshire/Humber	6	93	8	6
East Midlands	6	105	1	2
West Midlands	2	91	1	6
East of England	1	178	10	11
London	7	224	16	7
SE England	2	166	4	12
SW England	33	91	2	2
Northern Ireland	0	7	0	0
Scotland	1	2	0	0
Wales	2	7	0	0
Cumulative Total	68	1119	51	47

* RSV detection is by PCR only

Five of 41 (12%) specimens from the RCGP surveillance scheme were positive for influenza in week 04/09 (figure 4), this is a decrease from 17% positive in week 03/09.

Please note that these data are provisional.

HPA Virological Surveillance of Influenza (England)

Seven (32%) of 22 samples submitted in weeks 03 and 04/09 from this parallel GP sentinel scheme were positive for influenza A. Between weeks 40/08 and 04/09, 707 specimens have been submitted and 217 (33%) have been positive for influenza; 217 influenza A and 14 influenza B.

Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A has decreased from 95 in week 03/09 to 42 in week 04/09 and the number of influenza B positives has stayed fairly constant at four in week 04/09 (Table 2).

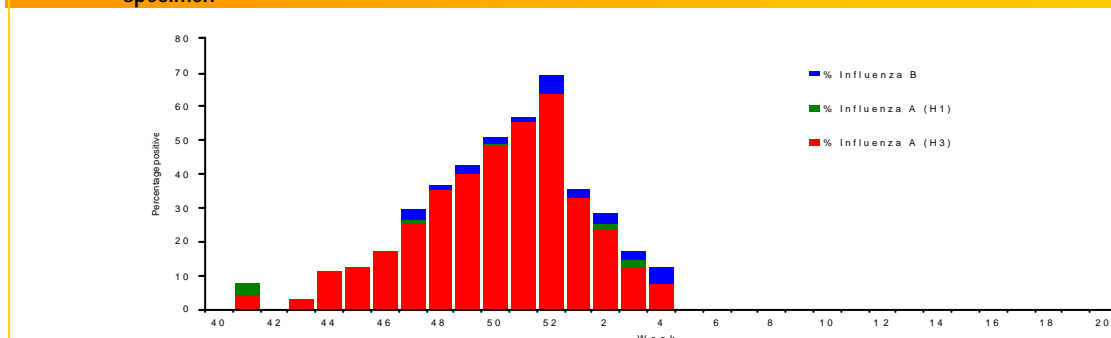
Please note that these data are provisional.

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 03/09	95	3	219
Week 04/09	42	4	141
Cumulative to Date (week 40/08 - 04/09)			
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/>)

Ten sentinel samples were tested in week 04/09 of which five were positive for influenza (four A and one B). Of the 49 non-sentinel samples tested, five (10%) were positive for influenza (two A and three B).

Virological data from Wales

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

In week 03/09 two sentinel samples were tested and one was positive for influenza B. To date this season 16 of 79 (20%) sentinel samples and 57 non-sentinel samples have been positive for influenza.

Virological data from Scotland

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

During week 04/09, six (19%) out of 32 sentinel samples were positive for influenza; two A (one A (H3)) and four B. Two sentinel samples were positive for RSV and six were positive for other viruses. Fifty-nine routine samples were also tested; 33 (56%) were positive for influenza; 29 A (4 A(H1) and 20 A (H3)) and four B; two of the influenza A positive samples were also positive for RSV and 26 further were positive for RSV alone.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 03/09 an estimated 13,128 deaths were registered. In week 02/09 an estimated 3459 (22.7%) of 15,233 registered deaths were due to respiratory illness.

In the six week period from week 50/08 to week 03/09 HPA estimates that there have been approximately 8200* 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. The estimated weekly all-cause registered deaths are shown in figure 5.

* Provisional data, above threshold

Outbreak Reports:

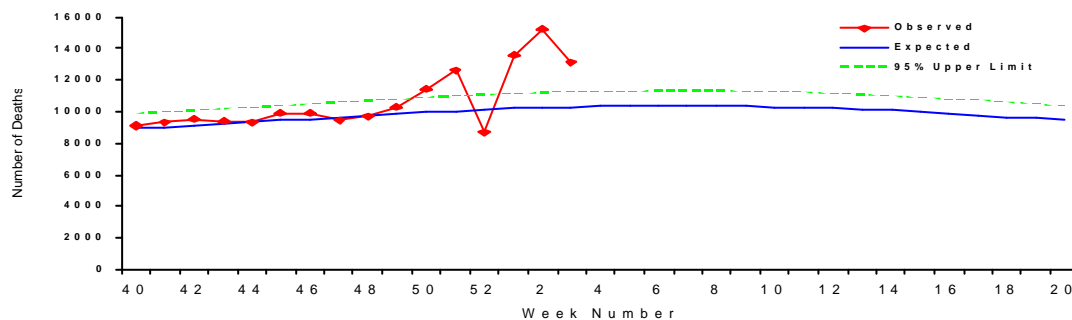
There have been three outbreaks of respiratory disease reported recently: all confirmed as influenza A and from care homes in southern England. So far this season, 66 outbreaks have been reported, the majority, 38 (58%), from care homes, 17 (26%) have been from schools and the remainder from army barracks (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 41 (72%) outbreaks.

Cfl 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 04/09 the proportion vaccinated in the over 65 year age group reached 74% and in the under 65 years at risk group, the proportion was 46.8%. The proportion of carers vaccinated by week 04/09 was 37.5%

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. Between 22 and 27 January WHO reported six new cases of influenza A (H5N1) in Indonesia (two), China (three) and Egypt (one), four (from Indonesia and China) have died. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 403 of which 254 (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/>)

The Irish ILI consultation rate decreased sharply from 100.6 (updated rate) per 100,00 in week 03/09 to 43.4 per 100,000 population in week 04/09. The rate is still above the Irish baseline threshold of 17.8 per 100,000 population.

In week 04/09 nine (64%) of 14 sentinel samples were positive for influenza (three A (H3), two A (H1) and two B) and five of 89 non-sentinel samples were positive for influenza (three A and two B) and 14 for RSV.

Europe

European Influenza Surveillance System (EISS)
(www.eiss.org)

Influenza activity continued to intensify and spread across Europe, with most countries reporting medium to high intensity. In week 03/09, influenza activity was reported as high in Austria, Denmark, Ireland, Luxembourg and Switzerland, medium intensity in 15 countries and three parts of the UK (England, Scotland and Northern Ireland) and low in eight countries. Geographical spread was reported as widespread in 16 countries; regional in two countries; local in three countries; and sporadic or no activity in ten countries.

Out of the total 2287 respiratory specimens collected by sentinel physicians during week 03/09, 968 (42.3%) specimens tested positive for influenza, 409 type A (not subtyped), 492 A (H3), 31 A (H1) and 36 type B. In addition, 742 non-sentinel specimens tested positive including 540 influenza A (not subtyped), 185 A (H3), six A (H1), and 11 type B.

Since week 40/08, 794 viruses have been characterised; 772 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 22 were B/Malaysia/2506/2004-like.

Canada

Public Health Agency of Canada
(<http://www.phac-aspc.gc.ca/fluwatch/index.html>)

During week 03/09, influenza activity was reported to be increasing, though the majority of the influenza surveillance regions (28) still reported no activity, 20 regions reported sporadic activity and six reported localised influenza activity. Overall, there was a slight increase in the consultation rates. The proportion of samples positive for influenza increased to 5.5% (170/3111). Five new influenza outbreaks were reported.

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

United States of America

Centers for Disease Control and Prevention (CDC)
(<http://www.cdc.gov/flu/weekly/>)

During week 03/09, influenza levels continued to slowly increase. One state (Virginia) reported widespread activity, six states reported regional activity, 11 states reported local influenza activity, the District of Columbia, Puerto Rico and 30 states reported sporadic influenza activity, and two states reported no activity.

In week 03/09 WHO and NREVSS laboratories reported 3544 specimens tested for influenza viruses, 409 (11.5%) of which were positive: 44 influenza A (H1), four A (H3), 298 A (not subtyped) and 63 influenza B.

Since week 40/08 207 influenza viruses have been characterised; 142 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.

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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