

HPA Weekly National Influenza Report

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



18 March 2009 (Week 12)

*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: 02/03/09 - 22/03/09 (Weeks 10 & 11, 2009)

Data from ONS, MOSA and non-UK sources: 23/02/09 - 15/03/09 (Weeks 09 & 10, 2009)

Summary

Influenza activity is low across the UK.

In weeks 10 and 11/09 GP consultation rates decreased and remained below baseline levels in England. In Scotland the rate stayed constant and below baseline levels. The Welsh influenza rate has increased slightly but is still below the baseline. 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 11/09, seven specimens tested positive for influenza virus (one A (H1), four A (H3) and two B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported two influenza A, and nine influenza B positive specimens in week 11/09. Eight Scottish influenza-positive specimens were reported in week 11/09. Two influenza B outbreaks have been reported in the last two weeks 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 623 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 week 10/09 most countries in central/eastern Europe reported medium influenza intensity while activity continued to decline to low levels in western Europe. While influenza A(H3) was still the predominant circulating virus, the proportion of influenza B virus detections continued to increase.

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

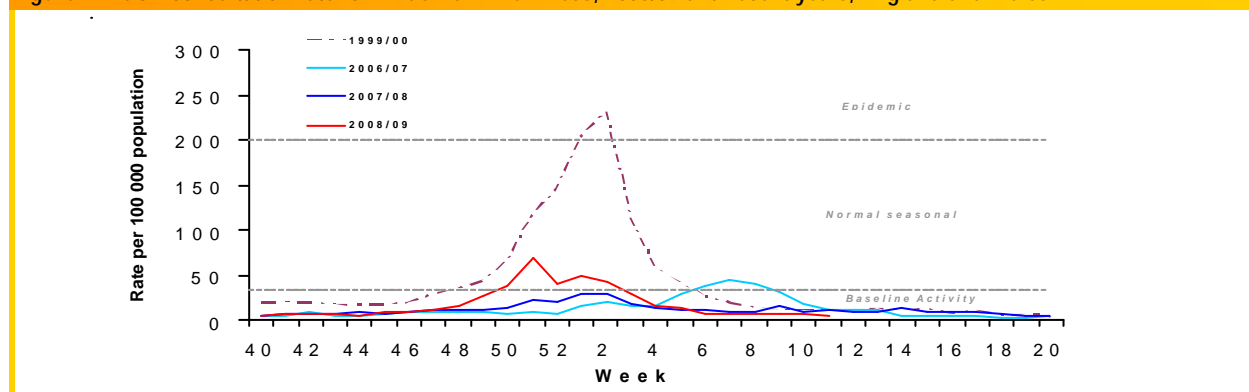
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** decreased from 7.6 per 100,000 in week 10/09 to 6.4 per 100,000 in week 11/09. This rate remains below the baseline threshold of 30 per 100,000. In the same time period the rate in the north decreased from 4.6 per 100,000 to 1.5 per 100,000, in the central region it increased slightly from 6.1 per 100,000 to 7.1 per

100,000 and in the south the rate decreased from 9.8 per 100,000 in week 10/09 to 7.6 per 100,000 in week 11/09. The highest rate is still in the 15-44 year (8.3 per 100,000 in week 11/09) group (Figure 2).

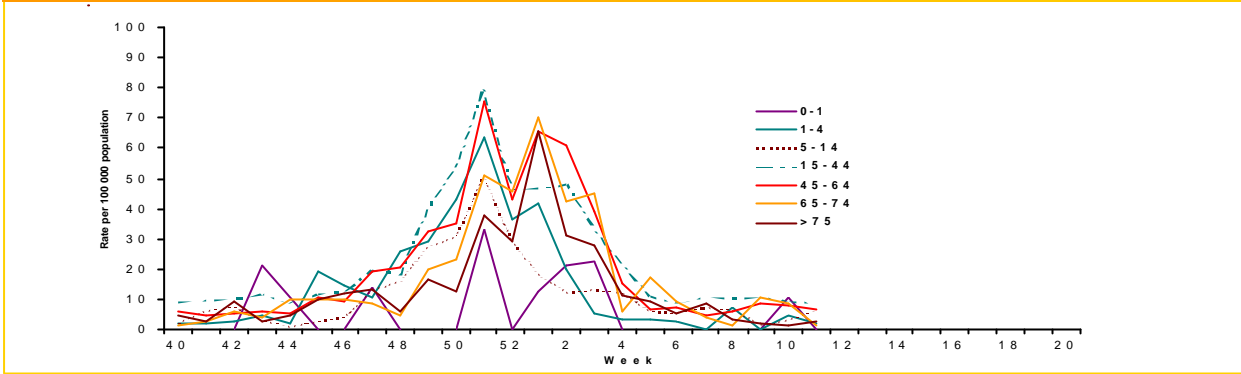
The overall rate for acute bronchitis decreased from 81.5 per 100,000 in week 10/09 to 77.6 per 100,000 in week 11/09. In week 11/09 the highest rate was in the under one year group at 221.6 per 100,000 which was decreased from 301.8 per 100,000 in week 10/09. In the over 75s it decreased from 237.6 to 207.3 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 increased slightly from 1.7 per 100,000 in week 10/09 to 2.5 per 100,000 in week 11/09. 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 20.5 per 100,000 in week 10/09 (updated rate) to 15.5 per 100,000 in week 11/09 (Figure 3). The highest rate was in the 65-74 year group at 31.2 per 100,000. 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 6 per 100,000 in weeks 10/09 and 11/09 (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 10 and 11/09, around 3200 practices reported from across the UK covering a population of around 22 million. The rate of influenza-like illness was stable at 5.2 per 100,000 in week 10/09 and 5.1 per 100,000 in week 11/09. The rates have decreased are remained stable in all the age groups with the highest rates in the 15-44 year age group (6.5 per 100,000 in week 11/09). The rates were highest in Northern Ireland and London.

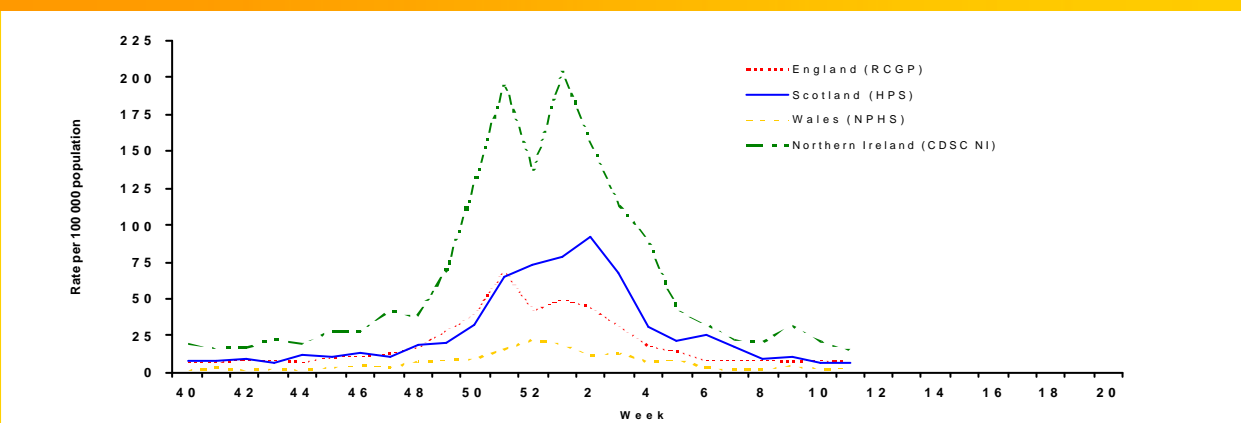
NHS Direct total call activity

England and Wales

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

The proportion of cold/flu calls was 0.4% in both week 10 and 11/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year olds increased slightly from 5.7% in week 10/09 to 6.3% in week 11/09, 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)

In week 09/09, 23 schools reported, in week 10/09 19 schools did. There were 46 new episodes of upper respiratory tract infection (URTI) in week 09/09 giving a rate of 6.6 per 1000, this rate stayed constant in week 10/09 (35 new episodes). In both weeks there were two

new cases of influenza or ILI giving a rate of 0.3 per 1000 in week 09/09 and 0.4 per 1000 in week 10/09.

The peak rate of URTI was in week 50 at 118.4 per 1000 (260 episodes) and for ILI it was in week 49/08 at 10.4 per 1000 (23 episodes).

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

In weeks 10 and 11/09 10 specimens tested positive for influenza; two A (H1), five A (H3) and three 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 40/08 642 viruses have been characterised: 57 A (H1) Brisbane/59/2007 (H1N1)-like, 521 A (H3) A/ Brisbane/10/2007 (H3N2)-like, five B/Florida/4/2006-like (vaccine strains), and 59 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 10/09	1	1	1	0
Week 11/09	1	4	2	0
Cumulative to date (week 40/08 – 11/09)				
NE England	3	30	11	0
NW England	10	175	18	1
Yorkshire/Humber	13	178	15	9
East Midlands	8	161	4	3
West Midlands	2	106	4	7
East of England	2	230	11	12
London	10	321	32	9
SE England	3	198	19	12
SW England	36	135	7	2
Northern Ireland	0	9	0	0
Scotland	7	26	2	0
Wales	6	9	0	0
Unknown Region	1	0	0	0
Cumulative Total	102	1578	123	55

* RSV detection is by PCR only

HPA Virological Surveillance of Influenza (England)

One sample was submitted from this parallel GP sentinel scheme in week 10/09, it was positive for influenza B. Between weeks 40/08 and 11/09, 962 specimens have been submitted and 320 (33%) have been positive for influenza; 279 influenza A and 41 influenza B.

Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A has decreased from three in week 10/09 to two in week 11/09 and the number of influenza B positives has decreased from 10 to nine (Table 2).

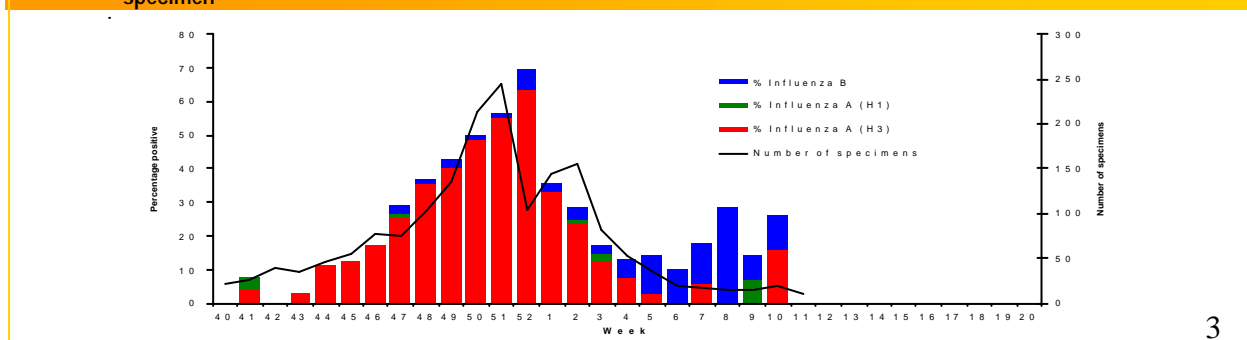
Please note that these data are provisional.

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 10/09	3	10	67
Week 11/09	2	9	51
Cumulative to Date (week 40/08 - 11/09)			
Northern England	296	57	1541
Central England	396	29	871
Southern England	445	51	2242
Wales	61	3	348
Cumulative Total	1198	140	5002

*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 10 and 11/09 no specimens were positive for influenza but 10 non-sentinel specimens were positive for RSV.

Virological data from Wales

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

To date this season 16 (15 A and one B) of 90 (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 weeks 10 and 11/09, four of 44 sentinel samples were positive for influenza (one A (H1) and three B). Twenty-nine routine samples from hospital and community sources were also tested in weeks 10 and 11/09; 11 were positive for influenza; two A (one A(H1)) and nine B. Eighteen non-sentinel samples were positive for RSV.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 10/09 an estimated 9676 deaths were registered. In week 09/09, an estimated 1420 (14.4%) of 9847 registered deaths were due to respiratory illness, this is similar to 14.6% (1513/10,391) 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 was observed in weeks 09 or 10/09.

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

* Provisional data, above threshold

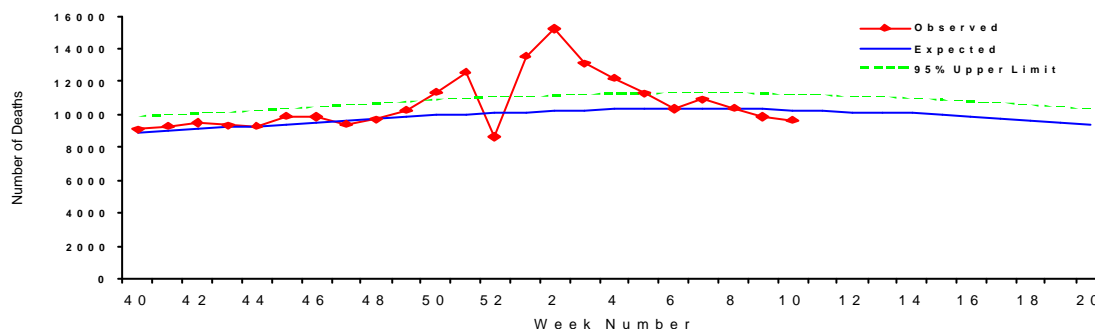
Outbreak Reports:

Two influenza B outbreaks have been reported in the last two weeks, one in a school in south east England and one in a care home in north west England.

So far this season, 67 outbreaks have been reported, the majority, 40 (60%), from care homes, 18 (27%) have been from schools and the remainder from army barracks (three), hospitals (five) or other locations (one). In 56 of the outbreaks, samples were taken and of these, influenza A was detected in at least one sample from 43 (77%) outbreaks, and influenza B from four.

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 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 10 and 11 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 411 of which 256 (62.3%) 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 increased slightly from 3.3 (updated rate) per 100,00 in week 10/09 to 6.8 per 100,000 population in week 11/09. Both figures are below the Irish baseline threshold of 17.8 per 100,000.

In weeks 10 and 11/09, two of three sentinel samples were positive for influenza (one A (H3) and one B), four of 113 non-sentinel samples were positive for RSV.

Europe

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

Most countries in central/eastern Europe reported medium influenza intensity while activity continued to decline to low levels in western Europe. While influenza A(H3) was still the predominant circulating virus, the proportion of influenza B virus detections continued to increase.

In week 10/09, influenza activity was reported as high in Croatia and Greece, medium in 16 countries, and low in 19. Widespread influenza activity was reported in ten countries, regional activity in seven, local activity in eight and sporadic or no activity in the remaining 12.

Of the 1747 respiratory specimens collected by sentinel physicians during week 10/09, 472 (27%) tested positive for influenza, 101 type A (not subtyped), 118 A (H3), three A (H1) and 250 type B. In addition, 644 non-sentinel specimens tested positive including 189 influenza A (not subtyped), 251 A (H3), 72 A (H1), and 132 type B.

Since week 40/08, 3056 viruses have been characterised; 2623 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 433 (14.2%) were B/Malaysia/2506/2004-like.

Canada

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

During weeks 09 and 10/09, influenza activity continued to increase with two regions reporting widespread activity, 15 reporting localized 37 reporting sporadic or no activity. The proportion of samples positive for influenza increased to 18.6% (1092/5878) in week 10/09. Thirty-one new influenza outbreaks were reported in week 10/09 (16 in care homes, 13 in schools and two in other locations).

Since 1 September 2008, 547 influenza viruses have been characterised: 117 influenza A/Brisbane/59/2007(H1N1)-like, 87 A/Brisbane/10/2007 (H3N2)-like, six influenza B/Florida/4/2006-like and 337 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine.

All of 217 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 09 and 10/09, influenza levels remained high. In week 10/09 35 states reported widespread activity, 14 states reported regional activity, the District of Columbia and one state reported local influenza activity and Puerto Rico reported sporadic influenza activity.

In week 10/09 the proportion of samples positive for influenza was 23% (1252/5446): 193 influenza A (H1), 21 A (H3), 497 A (not subtyped) and 541 influenza B.

Since week 40/08 596 influenza viruses have been characterised; 391 A/Brisbane/59/2007 (H1N1)-like, 53 A/Brisbane/10/2007 (H3N2)-like, 37 B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 115 from the B/Victoria lineage.

Of the 422 influenza A (H1) viruses tested this season, 417 (98.8%) 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:

Estelle McLean, Joy Field 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