

HPA Weekly National Influenza Report

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



14 January 2009 (Week 03)

*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: 05/01/09 - 11/01/09 (Week 02, 2009)

Data from ONS, MOSA and non-UK sources: 29/12/08 - 04/01/09 (Week 01, 2009)

Summary

Influenza activity continues to be widespread across the UK. In week 01/09 GP consultation rates remained above the threshold levels but have decreased in England, in Scotland the rate is above baseline and has increased and in Wales it has decreased and remains below baseline. In Northern Ireland the consultation rate has decreased but thresholds have not yet been set.

In week 01/09 70 specimens tested positive for influenza (four influenza A (H1), 61 influenza A (H3) and five influenza B) from the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported 168 influenza A, and four influenza B positive specimens in week 02/09. Forty-two Scottish and 25 Northern Irish influenza positive specimens were reported in week 02/09. Seven outbreaks of respiratory illness were reported recently in care homes the east of England and London. The proportion of people over 65 years who have received this season's influenza vaccine was 73.6% in week 02/09, and 46.2% in those aged under 65 years in risk groups. Characterisation of 347 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched by the current influenza vaccine. Influenza activity is reported to be increasing throughout the rest of Europe with two countries reporting 'high' level and 11 countries reporting 'medium' levels of influenza activity in week 01/09.

Antiviral drug susceptibility testing

Since week 40/08 101 influenza A (H3) specimens have been found resistant to amantadine, of these 74 have been tested and found sensitive to oseltamivir and zanamivir. Forty influenza A (H1) specimens have been tested for antiviral drug 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.

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

England and Wales

Royal College of General Practitioners

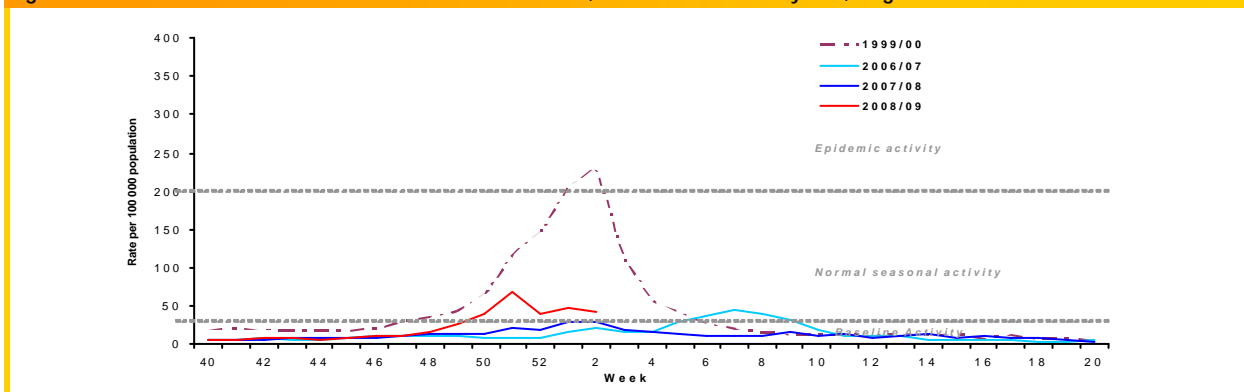
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** decreased from 51 per 100,000 in week 01/09 to 44.3 per 100,000 in week 02/09. 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 24.1 per 100,000, in the central region it was 46.9 per 100,000 and in the

south the rate was 48.7 per 100,000. The rates have decreased in most age groups but remain high in the 15-44 year group at 47.9 per 100,000 and in the 45-64 year group at 62.1 per 100,000 (Figure 2).

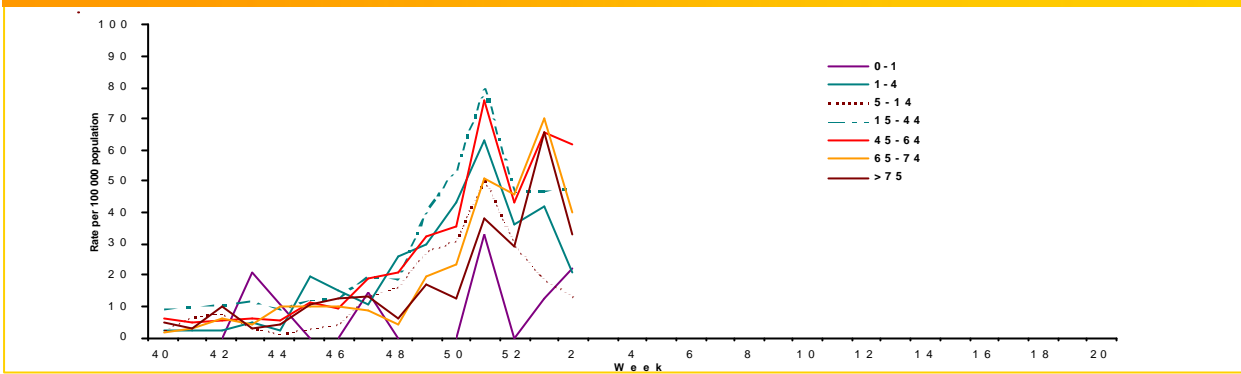
The rate for acute bronchitis also decreased from 202.3 per 100,000 in week 01/09 to 182.7 per 100,000 in week 02/09. The highest rate is still in the over 75 year group at 542.1 per 100,000 in week 02/09, though this has decreased from 655.7 per 100,000 in week 01/09.

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 18.8 per 100,000 in week 01/09 to 11.6 per 100,000 in week 02/09. 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 204.9 (updated rate) per 100,000 in week 01/09 to 157.3 per 100,000 in week 02/09 (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 increased from 79.0 per 100,000 in week 01/09 to 92.0 per 100,000 in week 02/09 (Figure 3). This 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 02/09, over 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of over 21 million. The rate of influenza-like illness increased from 34.0 per 100,000 in week 01/09 to 30.3 per 100,000 in week 02/09. The highest rate is in the 45-64 year age group. The rates were highest in Northern Ireland, the south west of England and London.

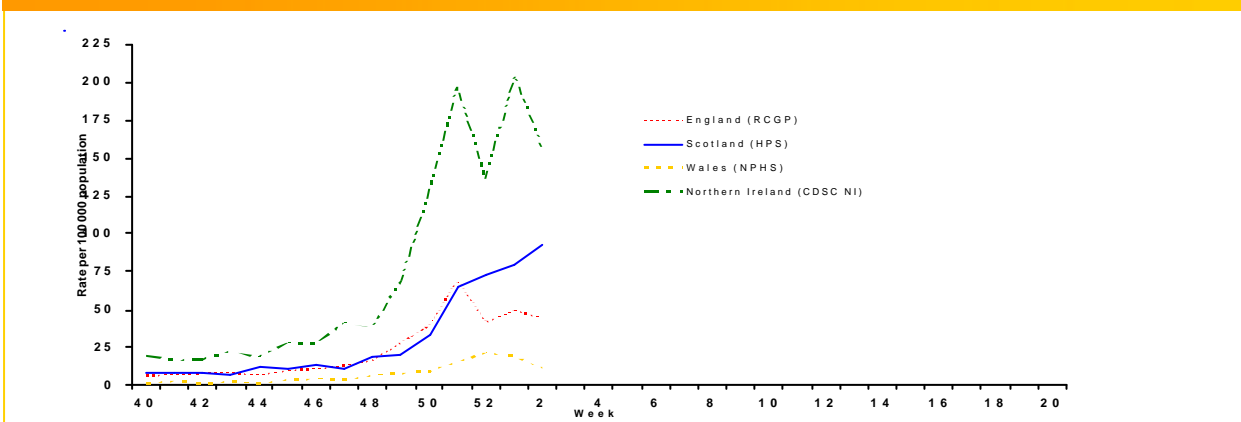
NHS Direct total call activity

England and Wales

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

The proportions of cold/flu and fever calls decreased from week 01/09 to week 02/09. The proportion of cold and flu calls decreased from 1.6% in week 01/09 to 1.2% in week 02/09 (1.2% is the threshold). The proportion of fever calls in 5-14 year olds decreased from 5.2% in week 01/09 to 4.9% in week 02/09 which is 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)

There is no data for weeks 49, 50, 51, 52/08 and 01/09 as the school students are on holiday

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

In week 02/09 70 specimens tested positive for influenza; four A (H1), 61 A (H3) and 5 B (table 1). Since week 40/08 347 viruses have been characterised: 33 A (H1) Brisbane/59/2007 (H1N1)-like, 297 A (H3) A/Brisbane/10/2007 (H3N2)-like, four B/Florida/4/2006-like which are all vaccine strains, and 13 B/Malaysia/2506/2004-like. 26.7% of specimens from the RCGP surveillance scheme were positive for influenza in week 02/09 (figure 4), this is a decrease from 37.7% positive in week 01/09. Since week 40/08 101A (H3) specimens have been found resistant to amantadine, of these 74 have been tested and found 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 01/09	3	81	6	2
Week 02/09	4	61	5	3
Cumulative to date (week 40/08 – 02/09)				
Northern England	11	192	14	3
Central England	9	261	6	8
Southern England	32	503	22	27
Wales	2	7	0	0
Scotland	1	2	0	0
Northern Ireland	0	7	0	0
Cumulative Total	55	972	42	38

* RSV detection is by PCR only

HPA Cfl Virological Surveillance of Influenza (England)

Two (28.6%) of 7 samples submitted in weeks 01 and 02/09 from this parallel GP sentinel scheme were positive for influenza A. Between weeks 40/08 and 02/08, 626 specimens have been submitted and 207 (33.1%) have been positive for influenza; 194 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 200 in week 01/09 to 168 in week 02/09 and the number of influenza B positives increased from one in week 01/09 to four in week 02/09, the number of RSV positives decreased (from 295 to 264) in the same time period (Table 2).

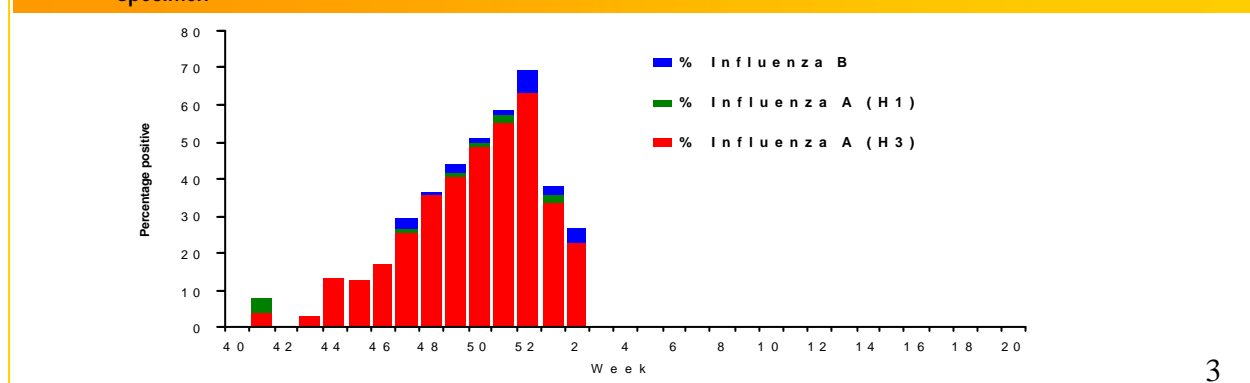
Please note that these data are provisional.

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 01/09	200	1	295
Week 02/09	168	4	264
Cumulative to Date (week 40/08 - 02/09)			
Northern England	234	15	1278
Central England	296	7	577
Southern England	358	4	1805
Wales	41	0	265
Cumulative Total	929	26	3925

*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/>)

Fourteen sentinel samples were tested in week 02/09 of which six (42.9%) were positive for influenza A. Of the 92 non-sentinel samples tested, 19 (20.7%) were positive for influenza (15 A and four B) and 27 for RSV.

Virological data from Wales

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

In week 01/09 three of ten sentinel samples were positive for influenza A. To date this season 13 of 62 (21%) sentinel samples and 34 non-sentinel samples have been positive for influenza A.

Virological data from Scotland

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

During week 01/09, eight (29.6%) out of 27 sentinel samples were positive for influenza; seven A (three A (H3)) and one B. Three sentinel samples were positive for RSV and six were positive for other viruses. Forty-four routine samples were also tested; 34 (77.2%) were positive for influenza; 33 A (27 A (H3)) and one B; three of the influenza A positive samples were also positive for RSV and 10 further were positive for RSV alone.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 51 there were 12,564 registered deaths, of which 2279 (18.1%) had respiratory disease as the underlying cause, in week 52/08 this total number of deaths decreased to 8664, with 1681 (19.4%) due to respiratory disease. This large decrease is likely due to the holiday period in week 52/08 and the total number increased again in week 01/09 to 13,560 (total due to respiratory disease in week 01/09 not yet available). HPA estimates there to have been 5888* (95% CI 3711-8065) excess all-cause deaths reported in England and Wales for the four-week period week 50/08 to week 1/09. The weekly all cause registered deaths are shown in Figure 5.

* Provisional data

Outbreak Reports:

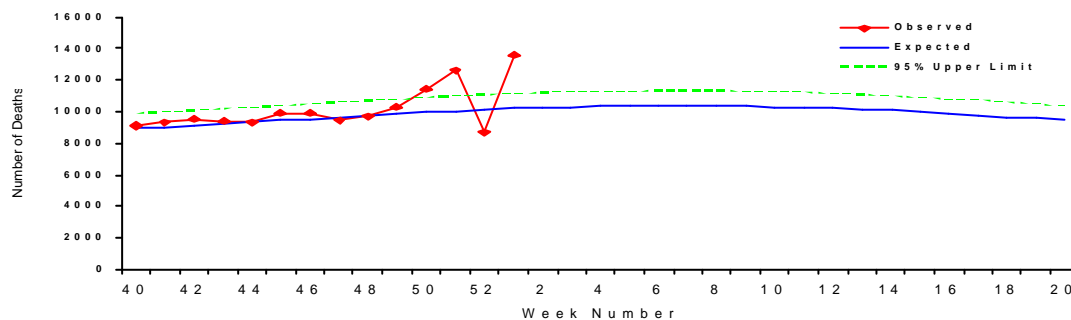
There have been seven outbreaks of respiratory disease reported recently. All seven are from care homes in England; six in the east of the country and one in London. Four have been confirmed as influenza A and one as humanmetapneumovirus.

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 02/09 the proportion vaccinated in the over 65 year age group reached 73.6% and in the under 65 years at risk group, the proportion vaccinated was 46.2%.

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 7 January WHO reported two cases of influenza A (H5N1), one in Viet Nam and one in China, the latter has died. On 14 January WHO reported a further case in Egypt. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 394 of which 248 (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 increased from 99 (updated rate) per 100,00 in week 01/09 to 125 per 100,000 population in week 02/09. Both rates are well above the Irish baseline threshold of 17.8 per 100,000 population.

In week 02/09 26 (76.5%) of 34 sentinel samples were positive for influenza (17 A (one A(H1) and nine B) and seven (7.4%) of 95 non-sentinel samples were positive for influenza (six A and one B).

United States of America

Centers for Disease Control and Prevention (CDC)

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

During week 01/09, similar levels of influenza activity as the previous week were reported. Four states reported regional activity, 11 states reported local influenza activity, the District of Columbia and 30 states reported sporadic influenza activity, and five states reported no activity.

In week 01/09 WHO and NREVSS laboratories reported 2488 specimens tested for influenza viruses, 79 (3.2%) of which were positive: 10 influenza A (H1), five A (H3), 55 A (not subtyped) and 9 influenza B.

Since week 40/08 110 influenza viruses have been characterised; 68 A/Brisbane/59/2007 (H1N1)-like, 13 A/Brisbane/10/2007 (H3N2)-like, nine B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 20 from the B/Victoria lineage. Of the 88 influenza A (H1) viruses tested this season, 86 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 01/09, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity, 16 regions reporting sporadic activity and two reporting localised influenza activity. Overall, there was an increase in the consultation rates. Eighty-seven of 2633 (3.3%) specimens tested positive for influenza in and one influenza outbreak was reported in a hospital in week 01/09.

Since 1 September 2008, 33 influenza viruses have been characterised: ten influenza A/Brisbane/59/2007(H1N1)-like, one A/Brisbane/10/2007 (H3N2)-like, three influenza B/Florida/4/2006-like and 19 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine.

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

Europe

European Influenza Surveillance System (EISS)

www.eiss.org

In week 01/09, influenza activity reached high intensity in Portugal and Ireland and medium intensity in Austria, Denmark, England, France, Germany, Italy, Luxembourg, Spain, Sweden, Switzerland, the Netherlands, and Northern Ireland. Geographical spread was reported as widespread in Denmark, England, France, Italy, Portugal, Sweden, and Northern Ireland; regional in Germany, Spain, the Netherlands and Wales; local in two countries; sporadic in nine countries; and no activity was reported in seven.

Out of the total 662 respiratory specimens collected by sentinel physicians during week 01/09, 239 (36.1%) specimens tested positive for influenza, 75 type A (not subtyped), 141 A (H3), five A (H1) and 18 type B. In addition, 531 non-sentinel specimens tested positive including 467 influenza A (not subtyped), 53 A (H3), three A (H1), and nine type B. These positive specimens were reported from 19 of the 26 countries reporting in week 01, included the first positive specimens from Estonia.

Since week 40/08, 262 viruses have been characterised; 256 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining six 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 and Richard Pebody

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