

HPA Weekly National Influenza Report

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



7 January 2009 (Week 02)

*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: 29/12/08 - 04/01/09 (Week 01, 2009)

Data from ONS, MOSA and non-UK sources: 22/12/08 - 28/12/08 (Week 52, 2008)

Summary

Influenza activity continues to be widespread across the UK. GP consultation rates remained above the threshold levels in England and Scotland in week 01/09. In England the rate has increased from week 52/08 to week 01/09 but is lower than the week 51/08 peak; data from week 01/09 is also incomplete due to the new year bank holiday so it is difficult to interpret. In Scotland the consultation rate has increased and in Wales it has decreased and has remained below baseline. In Northern Ireland the consultation rate has increased to a similar level to the peak of week 51/08 but thresholds have not yet been set.

In week 01/09 90 specimens tested positive for influenza (three influenza A (H1), 81 influenza A (H3) and six influenza B) from the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported 200 influenza A, and one influenza B positive specimen in week 01/09. Fifty-five Scottish and 45 Northern Irish influenza positive specimens were reported in week 01/09. Eight outbreaks of respiratory illness were reported recently in care homes, a school and two hospital units in England. The proportion of people over 65 years who have received this season's influenza vaccine was 72% in week 50/08, and 44.2% in those aged under 65 years in risk groups. Characterisation of 218 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 one country reporting 'high' level and six countries reporting 'medium' levels of influenza activity in week 51/08.

Antiviral drug susceptibility testing

Forty influenza A (H1) specimens have been tested for anti-viral drug resistance since week 40/08, 39 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. One hundred and one influenza A (H3) specimens have been found resistant to amantadine, of these 74 have been tested and found sensitive to oseltamivir and zanamivir. 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

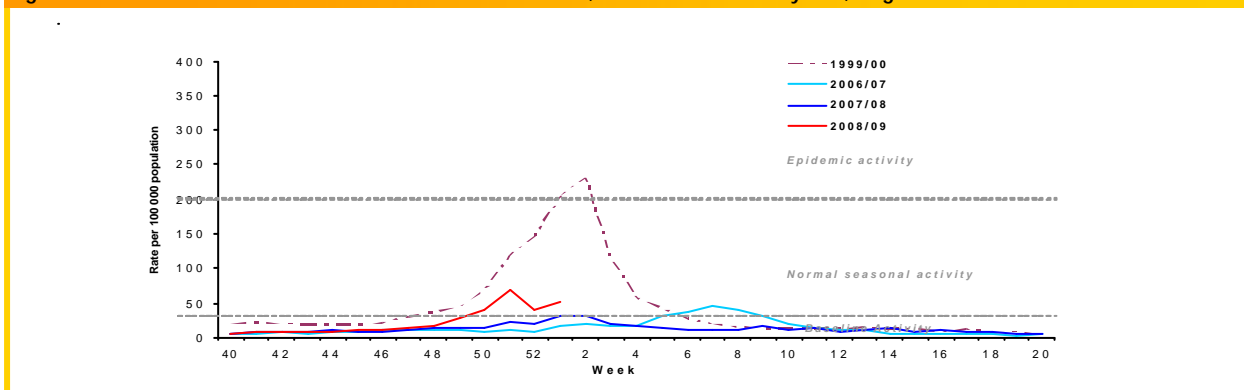
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** increased from 41.5 per 100,000 in week 52/08 to 51 per 100,000 in week 01/09. This rate is above the baseline threshold of 30 per 100,000 but not as high as the week 51/08 rate, which was 68.5. The rates for all three regions increased correspondingly. The rate in the northern region was lowest at 30.3 per 100,000. The

highest rate in week 01/09 was in the central region at 57.2 per 100,000 and in the south the rate was 53.8 per 100,000. The rates are now highest in the 65-74 year age group at 70.2 per 100,000 (Figure 2).

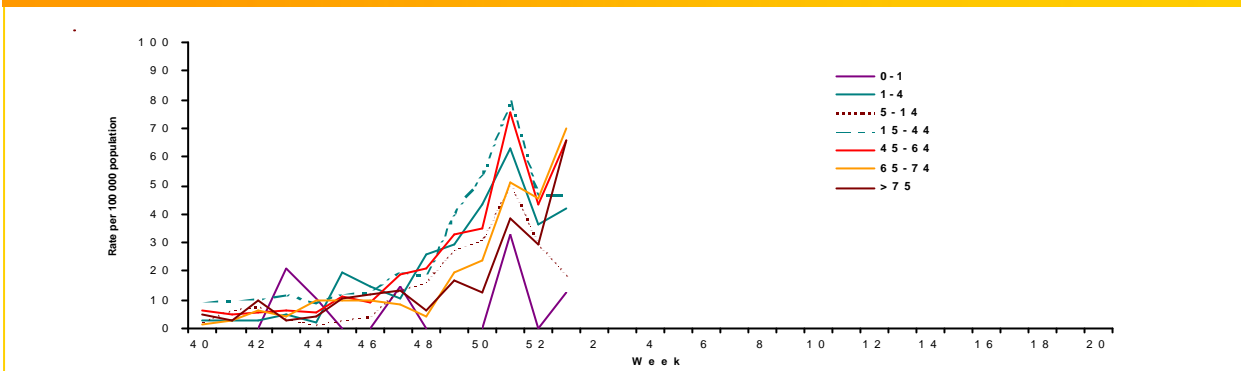
The rate for acute bronchitis increased for this week (01/09) as well to 202.3 per 100,000 compared to 133.7 per 100,000 in week 52/08. The highest rate is now in the over 75 year group at 655.7 per 100,000 in week 01/09.

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 21.5 per 100,000 in week 52/08 to 18.8 per 100,000 in week 01/09. 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 increased from 136.3 per 100,000 in week 52/08 to 192.1 per 100,000 in week 01/09 (Figure 3), this is almost as high as the highest rate so far this season of 196.5 per 100,000 in week 51/08. 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 73.0 per 100,000 in week 52/08 to 79.0 per 100,000 in week 01/09 (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 01/09, 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 25.0 per 100,000 in week 52/08 to 34.0 per 100,000 in week 52/08. The highest rates are in the 45-64 and 65-74 year age groups. The rates were highest in Northern Ireland, the south east coast and the south west of England.

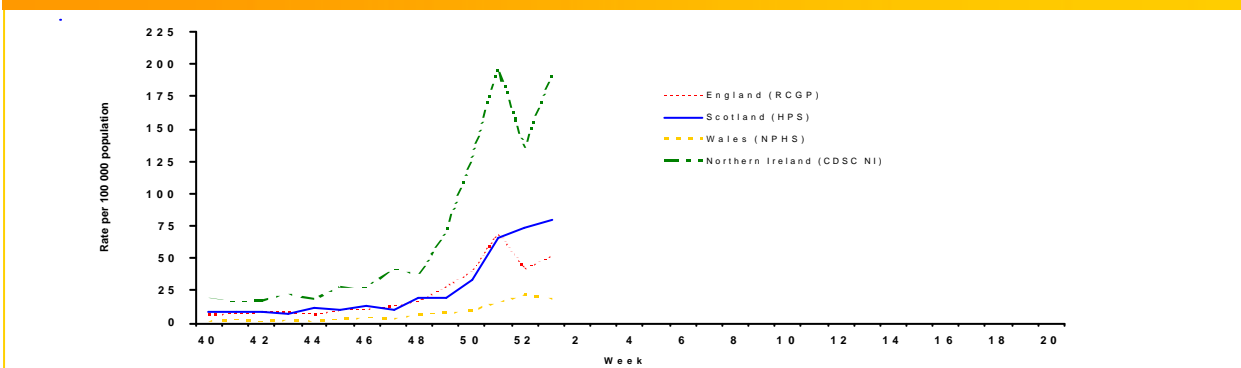
NHS Direct total call activity

England and Wales

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

The proportions of cold/flu and fever calls decreased from week 51/08 to week 01/09. The proportion of cold and flu decreased from 2.0% in week 52/08 to 1.6% in week 01/09, this is still about the threshold of 1.2%. The proportion of fever calls in 5-14 year old was highest in week 51/08 at 12.3% and decreased to 8.9% and 5.2% in weeks 52/08 and 01/09 respectively: the final two figures are 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 01/09 90 specimens tested positive for influenza; 3 influenza A (H1), 81 influenza A (H3) and 6 influenza B (table 1). Since week 40/08 288 viruses have been characterised: 31 A (H1) Brisbane/59/2007 (H1N1)-like, 246 A (H3) A/Brisbane/10/2007 (H3N2)-like, one B/Florida/4/2006-like which are all vaccine strains, and ten B/Malaysia/2506/2004-like.

37.7% of specimens from the RCGP surveillance scheme were positive for influenza in week 01/09 (figure 4), this is a decrease from 70.7% positive in week 52/08.

Forty influenza A (H1) specimens have been tested for antiviral resistance since week 40/08, 39 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. One hundred and one influenza A (H3)

specimens have been found resistant to amantadine, of these 74 have been tested and found sensitive to oseltamivir and zanamivir. Two influenza B specimens have been tested so far and were sensitive to oseltamivir and zanamivir.

Please note that these data are provisional.

Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A has increased from 145 in week 52/08 to 200 in week 01/09 and the number of influenza B positives decreased from 10 in week 52/08 to 1 in week 01/09, the number of RSV positives decreased (from 333 to 295) in the same time period. To date, a higher number of influenza A positive specimens have come from central and southern England. (Table 2).

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 52/08	4	98	5	2
Week 01/09	3	81	6	2
Cumulative to date (week 40/08 – 52/08)				
Northern England	10	164	13	2
Central England	9	214	3	8
Southern England	29	443	18	24
Wales	2	6	0	0
Scotland	1	2	0	0
Northern Ireland	0	7	0	0
Cumulative Total	51	836	34	34

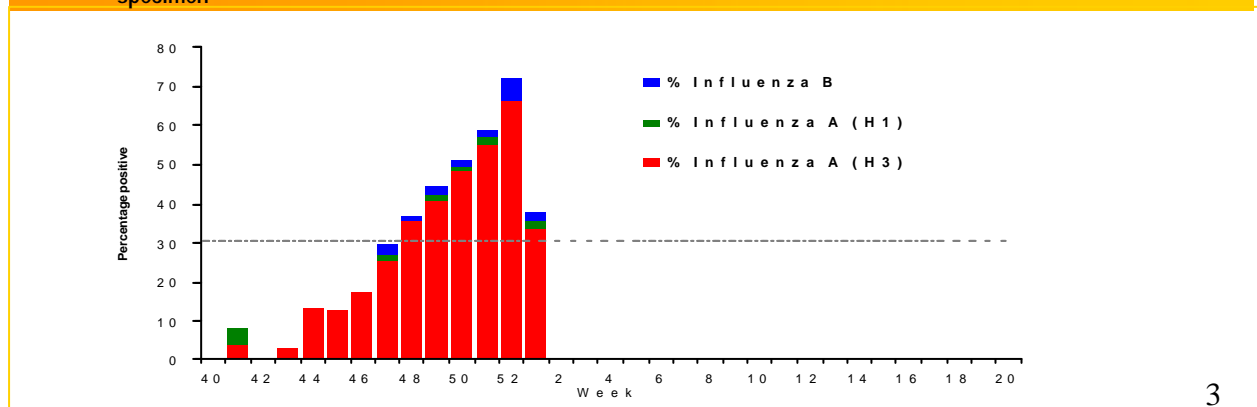
* RSV detection is by PCR only

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 52/08	145	10	333
Week 01/09	200	1	295
Cumulative to Date (week 40/08 - 01/09)			
Northern England	178	13	1201
Central England	255	5	542
Southern England	295	4	1668
Wales	32	0	246
Cumulative Total	760	22	3657

*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



HPA CfI Virological Surveillance of Influenza (England)

Thirty-seven (48.7%) of 76 week 51/08 samples and 24 (52.2%) of 46 week 52/08 samples from this parallel GP sentinel scheme were positive for influenza (59 A and 2 B). Between weeks 40/08 and 52/08, 584 specimens have been submitted and 192 (32.9%) have been positive for influenza; 181 influenza A and 11 influenza B.

Virological data from Northern Ireland

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

Thirty-two sentinel samples were tested in week 01/09 of which 23 (71.9%) were positive for influenza (18 A and five B). Of the 59 non-sentinel samples tested, 22 (37.3%) were positive for influenza (19 A and three B) and 27 for RSV.

Virological data from Scotland

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

During week 01/09, 12 (42.9%) out of 28 sentinel samples were positive for influenza; 11 influenza A (one A (H1) and four A (H3)) and one influenza B. One sentinel sample was positive for RSV and five were positive for other viruses. Fifty-seven routine samples reported from hospital and community sources were also tested; 43 (71.9%) were positive for influenza; 41 for influenza A (six A (H1) and 27 A (H3)) and two influenza B; seven of the influenza A positive samples were also positive for RSV and 14 further were positive for RSV alone.

Virological data from Wales

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

To date this season seven of 45 sentinel samples and 28 non-sentinel samples have been positive for influenza A.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

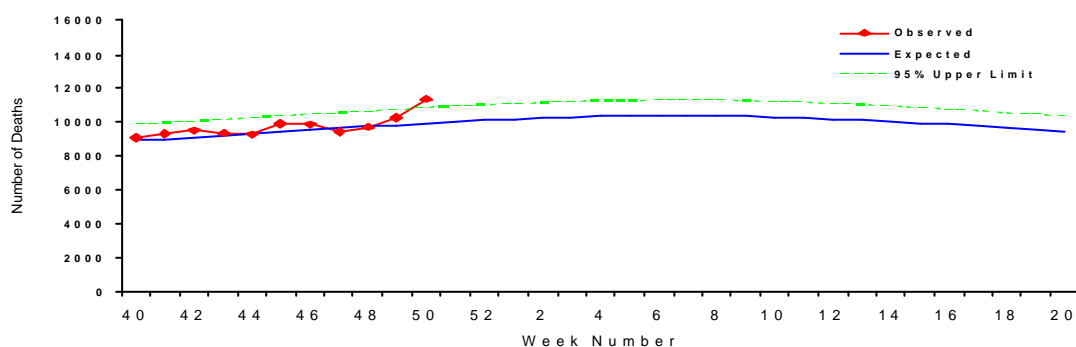
The data for the number of deaths registered in England and Wales are not yet available for weeks 51 and 52/08. In week 50 there were 11,360 registered deaths and it is estimated that there were approximately 500 excess deaths in that week compared to previous years. The weekly all cause registered deaths up to week 50/08 are shown in Figure 5.

Outbreak Reports:

Eight outbreaks of respiratory illness have been reported in England recently; five in care homes (two in the east, one in south east, one in Yorkshire and the Humber and one in the west Midlands) of which three have been confirmed as influenza A; one in a school in the north east; one in a unit for young physically disabled people also in the north east and one confirmed as RSV in a neonatal unit in London.

CfI welcomes reports of respiratory illness outbreaks. Please email any reports to 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 50/08 the proportion vaccinated in the over 65 year age group was 72% and in the under 65 years at risk group, the proportion vaccinated was 44.2%.

No vaccine uptake data is available for weeks 51/08 to 01/09. It should be noted that all data is provisional.

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. Since 16 December there have been no further cases of avian influenza confirmed by WHO.

According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 391 of which 247 (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 4

Influenza activity outside the UK

Europe

European Influenza Surveillance System (EISS)

www.eiss.org

In week 52/08, influenza activity reached high intensity in Portugal and medium intensity in France, Ireland, Italy, Spain, England and Northern Ireland. Geographical spread was reported as sporadic in five countries; local in Italy; regional in the Netherlands, Spain and Wales, and widespread in France, Portugal, England and Northern Ireland.

Out of the total 2650 respiratory specimens collected by sentinel physicians during week 52/08, 224 (8.5%) specimens tested positive for influenza, 71 type A (not subtyped), 140 A (H3), seven A (H1) and six type B. In addition, 223 non-sentinel specimens tested positive including 196 influenza A (not subtyped), 14 A (H3), one A (H1), and 12 type B. These positive specimens were reported from 16 of the 21 countries reporting in week 52, included the first positive specimens from Greece and Malta.

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.

Ireland

Health Protection Surveillance Centre (HPSC)

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

The Irish ILI consultation rate increased from 72.9 per 100,00 in week 52/08 to 100.6 per 100,000 population in week 01/09. Both rates are well above the Irish baseline threshold of 17.8 per 100,000 population.

In weeks 52/08 and 01/09 24 of 49 sentinel samples were positive for influenza (16 A and eight B) and 12 of 197 non-sentinel samples were positive for influenza (11 A and one B).

Canada

Public Health Agency of Canada

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

During week 52/08, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity, 16 regions reporting sporadic activity and one reporting localised influenza activity. Overall there was a slight decrease in the consultation rates. Fifty-five of 2012 (2.7%) specimens tested positive for influenza in week 52/08. One influenza outbreak was reported in a long-term care facility in week 52/08.

Since 1 September 2008, 20 influenza viruses have been characterised: three influenza A/Brisbane/59/2007(H1N1)-like, two A/Brisbane/10/2007 (H3N2)-like, three influenza B/Florida/4/2006-like and 12 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine. Five 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 52/08, an increasing level of influenza activity was reported. Three states reported regional activity; ten states reported local influenza activity; The District of Columbia and 30 states reported sporadic influenza activity, six states reported no activity and one state did not report.

In week 52/08 WHO and NREVSS laboratories reported 2610 specimens tested for influenza viruses, 130 (5.0%) of which were positive: 18 influenza A (H1), four A (H3), 83 A (not subtyped) and 25 influenza B.

Since week 40/08 104 influenza viruses have been characterised; 69 A/Brisbane/59/2007 (H1N1)-like, seven 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 73 influenza A (H1) viruses tested this season, 72 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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