

HPA Weekly National Influenza Report

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



24 December 2008 (Week 52)

*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: 15/12/08 - 21/12/08 (Week 51, 2008)

Data from ONS, MOSA and non-UK sources: 08/12/08 - 14/12/08 (Week 50, 2008)

Summary

Influenza activity is widespread across the UK and has continued to increase from week 50 to week 51/08. GP consultation rates have increased and are exceeding threshold levels in England and Scotland, they have also increased but remain within baseline in Wales. In Northern Ireland the consultation rate has greatly increased but thresholds have not yet been set. Proportions of calls to NHS Direct in England and Wales relating to colds/flu and fever have increased and remain above baseline levels. Calls to NHS 24 in Scotland are also increasing. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during week 51/08, 148 were positive for influenza A; three A (H1) and 145 A (H3), and eight for influenza B. Other NHS and HPA laboratories in England and Wales reported 131 influenza A and two influenza B positive specimens in week 51/08. Thirty-one Scottish and 20 Northern Irish influenza positive specimens were reported in week 51. Eleven outbreaks of respiratory illness were reported recently from various areas of England in care homes, schools and a hospital. 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 in risk groups. Characterisation of 200 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 was increasing throughout the rest of Europe with four countries reporting 'medium' levels and 11 reporting increasing activity in week 50/08.

Antiviral drug susceptibility testing

Neuraminidase inhibitor susceptibility testing on 73 A (H3) isolates since week 40/08 showed that all are sensitive to oseltamivir and zanamivir but resistant to amantadine. Both of the two influenza B isolates tested since week 40/08 are sensitive to oseltamivir and zanamivir. Twenty-nine of 30 A (H1) specimens tested in the same time frame are resistant to oseltamivir but sensitive to zanamivir and amantadine. The majority of these oseltamivir-resistant viruses come from the south west of England. Two influenza A (H1) isolates have been found to be resistant to oseltamivir in Scotland this season, one of which has been confirmed by Cfl.

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

England and Wales

Royal College of General Practitioners

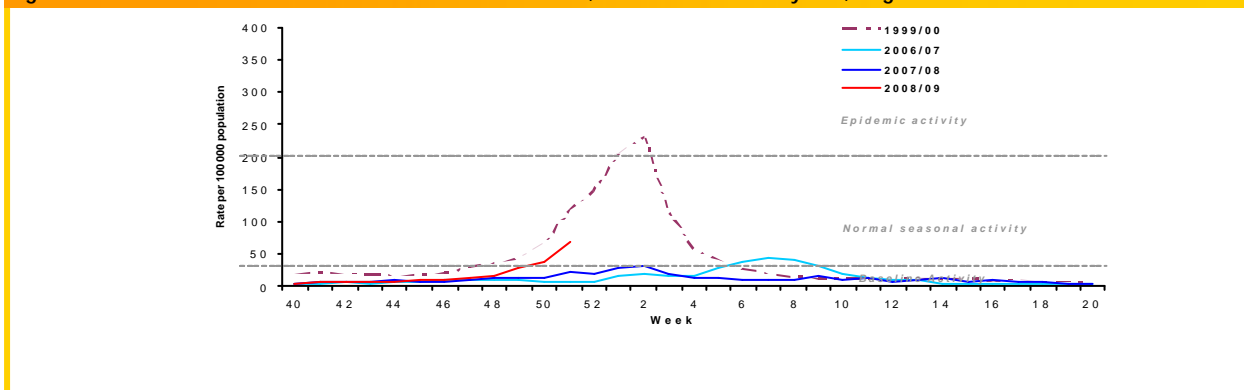
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** increased from 39.5 per 100,000 in week 50/08 to 68.5 per 100,000 in week 51/08, this is well above the baseline threshold of 30 per 100,000. The rate in the northern region was lowest at 43.8 per 100,000, an increase from 16.4 per 100,000 in week 50/08. The

highest rate in week 51/08 was in the central region at 81.7 per 100,000 and in the south the rate was 67.8 per 100,000. The rates were highest in the 15-44 year age group at 79.7 per 100,000 and in the 45-64 year age group at 75.6 per 100,000 in week 51/08 (Figure 2).

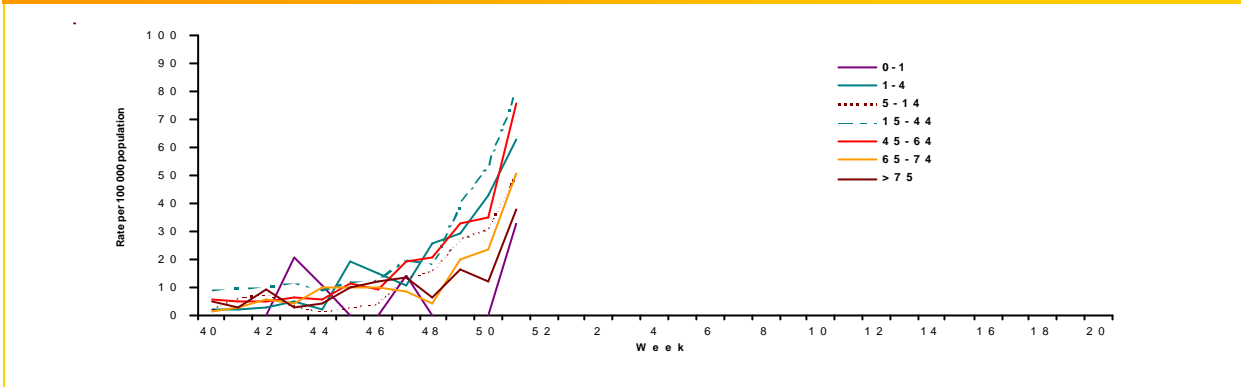
The rate for acute bronchitis has been increasing steadily over the season, it increased to 218.7 per 100,000 in week 51/08. The highest rate is now in the over 75 year group at 582.2 per 100,000 in week 51/08.

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.



Scotland

Health Protection Scotland
[\(http://www.hps.scot.nhs.uk/\)](http://www.hps.scot.nhs.uk/)

GP consultation rates for influenza increased from 33.0 per 100,000 in week 50/08 to 65.0 per 100,000 in week 51/08 (Figure 3). This exceeds the Scottish baseline threshold of 50 consultations per 100,000, suggesting that influenza viruses are circulating in the community. In accordance with NICE guidelines, physicians in Scotland have been advised to prescribe anti-viral drugs for treatment or prophylaxis of influenza in appropriate cases.

Northern Ireland

CDSC Northern Ireland
[\(http://www.cdscni.org.uk/\)](http://www.cdscni.org.uk/)

The combined rate for influenza and influenza-like illness increased from 124.3 (updated rate) per 100,000 in week 50/08 to 196.5 per 100,000 in week 51/08 (Figure 3). The highest rate was 289.8 per 100,000 in the 45-64 year age group (50.6 per 100,000 in week 51/08). The rates were highest in Northern Ireland and London.

Wales

National Public Health Service
<http://www.wales.nhs.uk/sites/home.cfm?OrgID=368>

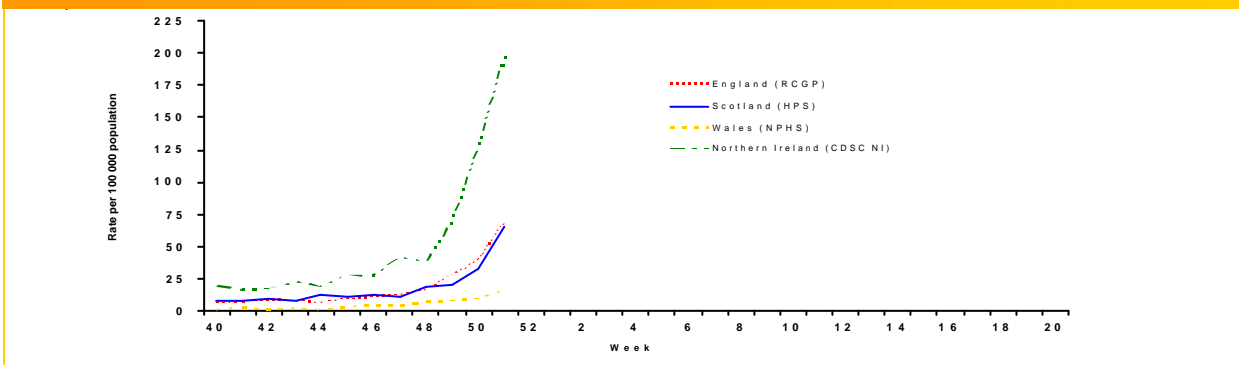
GP consultation rates for influenza increased from 9.3 per 100,000 in week 50/08 to 15.6 per 100,000 in week 51/08. Both figures are well below the baseline threshold of 25 consultations per 100,000 (Figure 3).

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 51/08, over 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of over 22 million. The rate of influenza-like illness increased from 28 per 100,000 in week 50/08 to 42.7 per 100,000 in week 51/08. The highest rates have consistently been in the 15-44 year age group (50.6 per 100,000 in week 51/08). The rates were highest in Northern Ireland and London.

Figure 3 GP Consultation rates for influenza/influenza-like illness in the U.K



NHS Direct total call activity
 England and Wales
<http://www.nhsdirect.nhs.uk/>

The proportions of cold/flu and fever calls are over the baseline and are still increasing. The proportion of cold/flu calls increased from 1.6% in week 50/08 to 2.1% in week 51/08 (1.2% is the threshold). Fever calls in the 5-14 age group made up 12.3% of the total calls in week 51/08, an increase from 11.5% in week 50/08 which exceeds the threshold of 9%.

Medical Officers of Schools Association (MOSA)

There is no data for weeks 49 and 50/08 as the school students are on holiday

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

One hundred and fifty-six specimens tested positive for influenza in week 51/08 (Table 1). Since week 40/08 200 viruses have been characterised: 22 A (H1) Brisbane/59/2007 (H1N1)-like, 174A (H3) A/Brisbane/10/2007 (H3N2)-like, one B/Florida/4/2006-like which are all vaccine strains, three A/Solomon Islands/3/2006 (H1)-like which is similar to the vaccine strain, and eight B/Malaysia/2506/2004-like. 54.1% of specimens from the RCGP surveillance scheme were positive for influenza in week 51/08, this is above the threshold of 30% (figure 4).

Neuraminidase inhibitor susceptibility testing on 73 A (H3) isolates since week 40/08 showed that all of them are sensitive to oseltamivir and zanamivir but resistant to amantadine. Of the 30 A (H1) specimens received and tested, 29 are resistant to oseltamivir but sensitive to zanamivir and amantadine. These specimens are from

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 50/08	4	97	4	2
Week 51/08	3	145	8	1
Cumulative to date (week 40/08 – 51/08)				
Northern England	6	96	7	2
Central England	5	150	2	5
Southern England	24	293	9	22
Wales	1	2	0	0
Scotland	1	3	0	0
Northern Ireland	0	5	0	0
Cumulative Total	37	549	18	29

* RSV detection is by PCR only

England, Scotland and Wales (table 1). Seven further influenza A(H1) isolates are undergoing resistance testing at the moment. Two influenza B isolates have been tested and are both 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 109 in week 50/08 to 131 in week 51/08 and the number of RSV positives decreased (from 380 to 327) in the same time period. To date, a higher number of influenza A positive specimens have come from central and southern England. (Table 2).

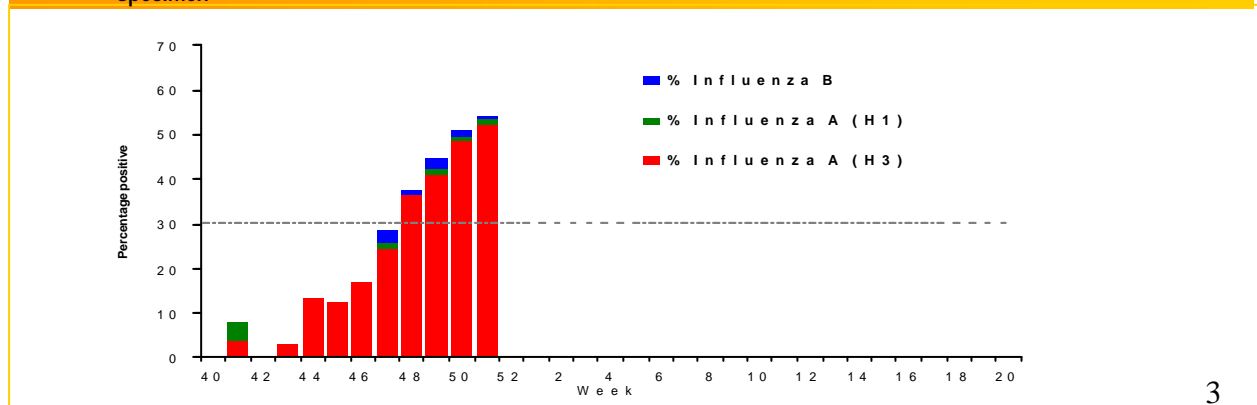
Please note that these data are provisional.

Table 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 50/08	109	2	380
Week 51/08	131	2	327
Cumulative to Date (week 40/08 - 51/08)			
Northern England	95	4	1072
Central England	156	4	449
Southern England	148	3	1326
Wales	13	0	182
Cumulative Total	414	11	3029

*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 Cfl Virological Surveillance of Influenza (England)

In week 51/08 this parallel GP sentinel scheme reported 15 out of 29 (51.7%) influenza positive specimens; 14 influenza A and one influenza B. One specimen was positive for another virus in the same time period. Since week 40/08 479 specimens have been submitted and 135 (28.2%) have been positive for influenza; 125 influenza A and ten influenza B.

Virological data from Northern Ireland

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

Fourteen sentinel samples were tested in week 51/08 of which 13 (92.9%) were positive for influenza (12 A and one B). Of the 80 non-sentinel samples tested, seven (8.8%) were positive for influenza (six A and one B) and 33 for RSV.

Virological data from Scotland

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

During week 51/08, seven (20%) out of 35 sentinel samples were positive for influenza A, two for RSV and seven for other respiratory viruses. Fifty-two routine samples reported from hospital and community sources were also tested; 24 (46.2%) were positive for influenza A (one A (H1) and 22 A (H3)) and 22 were positive for RSV. Two influenza A (H1) isolates from Scotland this season have been found to be resistant to oseltamivir.

Virological data from Wales

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

To date this season one of 30 sentinel samples (week 45/08) and 16 non-sentinel samples have been positive for influenza A. In week 50/08 two sentinel samples were tested; neither were positive for influenza.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

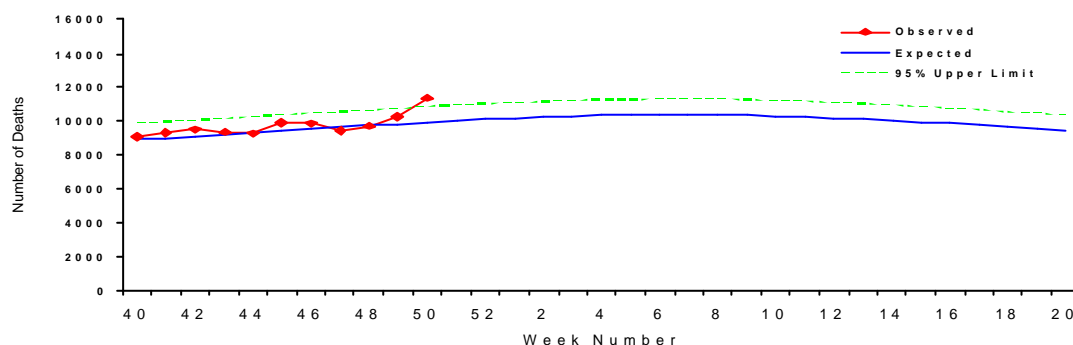
The number of deaths registered in England and Wales increased from 10,258 in week 49/08 to 11,360 in week 50/08. The number of deaths due to all respiratory diseases (as underlying cause) increased from 1447 (14.1%) in week 49/08 to 1712 (15.1%). The weekly all cause registered deaths are shown in Figure 5. In week 50/08 it is estimated that there were approximately 500 excess deaths reported compared to previous years.

Outbreak Reports:

Eleven respiratory outbreaks have been reported recently; six in schools or universities (south east and south west England, Yorkshire and the Humber and London), four in care homes (north west and south west England and Yorkshire and the Humber) and one in a hospital in the South East. Four of these have been confirmed as influenza A and some are still be investigated.

Cfl welcomes reports of respiratory illness outbreaks. Please email any reports to respdsc@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 week 51/08.

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

Influenza activity outside the UK

Europe

European Influenza Surveillance System (EISS)

www.eiss.org

In week 50/08, four countries reported medium activity, a further 11 reported increasing, but below baseline activity, widespread activity was reported from England and Portugal, regional activity in Northern Ireland, local activity in Spain and France, sporadic activity in 11 countries and 12 reported no activity.

Out of the total 757 respiratory specimens collected by sentinel physicians during week 50/08, 196 (25.9%) specimens tested positive for influenza, 45 type A (not subtyped), 135 A (H3), six A (H1) and ten type B. In addition, 159 non-sentinel specimens tested positive including 139 influenza A (not subtyped), 15 A (H3), one A (H1), and four type B. These positive specimens were reported from 15 countries.

Since week 40/08, 129 viruses have been characterised; 127 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining two were B/Malaysia/2506/2004-like.

Ireland

Health Protection Surveillance Centre (HPSC)

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

In week 51/08 the Irish ILI consultation rate was 61.6 per 100,000 which was a 50% increase from the updated rate of 38.1 per 100,000 in week 50/08. Both rates are well over the Irish baseline threshold of 17.8 per 100,000.

In week 51/08 six of seven (85.7%) sentinel specimens tested positive for influenza (five influenza A and one influenza B) and five of 69 non-sentinel specimens tested were positive for influenza A and 15 for RSV.

This season so far two viruses have been characterised as A/Brisbane/10/2007 (H3N2)-like.

Canada

Public Health Agency of Canada

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

During week 50/08, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity and 15 regions reporting sporadic influenza activity and one region reporting localised activity. Overall there was a slight increase in the consultation rates. Thirty of 1671 (1.8%) specimens tested positive for influenza in week 50/08. One outbreak was reported in a school.

Since 1 September 2008, 16 influenza viruses have been characterised: one influenza A/Brisbane/59/2007(H1N1)-like, two A/Brisbane/10/2007 (H3N2)-like, three influenza B/Florida/4/2006-like and 10 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine. The influenza A (H1N1) isolate has 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 week 50/08, a low level of influenza activity was reported. Three states (Hawaii, Texas and Virginia) reported local activity, Puerto Rico, the District of Columbia and 36 states reported sporadic influenza activity and 11 states reported no activity.

In week 50/08 WHO and NREVSS laboratories reported 2949 specimens tested for influenza viruses, 103 (3.5%) of which were positive: 28 influenza A (H1), three A (H3), 48 A (not subtyped) and 24 influenza B.

Since week 40/08 69 influenza viruses have been characterised; 49 A/Brisbane/59/2007 (H1N1)-like, 5 A/Brisbane/10/2007 (H3N2)-like, four B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and nine from the B/Victoria lineage. Of the 50 influenza A (H1) viruses tested this season, 49 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

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