

HPA Weekly National Influenza Report

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



10 December 2008 (Week 50)

*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) and NHS Direct (England and Wales).

Covered in this report:

Data, except that from ONS, MOSA and non-UK sources: 24/11/08 - 07/12/08 (Weeks 48 and 49, 2008)

Data from ONS, MOSA and non-UK sources: 17/11/08 - 30/11/08 (Weeks 47 and 48, 2008)

Summary

During weeks 48/08 and 49/08, influenza activity across the UK appeared to be increasing. GP consultation rates have increased sharply but remain within baseline levels in England, they have also increased slightly and remain within baseline in Scotland and Wales. In Northern Ireland the rate has greatly increased but thresholds have not yet been set. Thresholds for NHS Direct in England and Wales have been exceeded. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during weeks 48/08 and 49/08, 139 were positive for influenza A, eight A (H1) and 131 A (H3) and two for influenza B. Other NHS and HPA laboratories in England and Wales reported 97 influenza A and one influenza B positive specimens during these two weeks. Four Scottish and eight Northern Irish influenza A positive specimens were reported in weeks 48 and 49/08. Nine outbreaks of respiratory illness were reported from England and Northern Ireland in week 49/08, several have been confirmed as influenza A and others are still under investigation. The weekly vaccine uptake rates for the over 65 years increased from 69.7% in week 48/08 to 71.4% in week 49/08 and in the under 65 years at risk group it increased from 42.2% to 43.4% in the same time period. Influenza activity was at low levels throughout the rest of Europe with 11 countries reporting increasing activity in week 48/08.

As influenza activity is increasing, we will now be publishing full reports weekly.

Antiviral drug susceptibility test

Neuraminidase inhibitor susceptibility testing on 30 A (H3) isolates since week 36/08 showed that all are sensitive to oseltamivir and zanamivir but resistant to amantadine. All of the four influenza B isolates received since week 36/08 are sensitive to oseltamivir and zanamivir. Twenty-three of 24 A (H1) specimens tested in the same time frame are resistant to oseltamivir but sensitive to zanamivir and amantadine. The majority of these resistant viruses come from the south west of England with the remaining from Wales and northern England. Two influenza A (H1) isolates have been found to be resistant to oseltamivir in Scotland this season.

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>

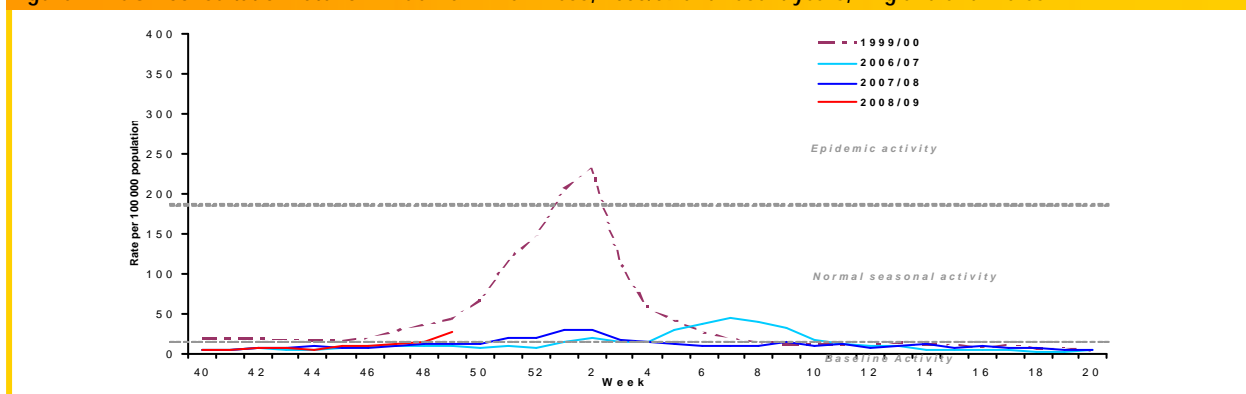
The overall influenza-like illness incidence rate** remained below the baseline activity threshold (30 per 100,000) at 16.5 per 100,000 in week 48/08 and nearly doubled to 27.6 per 100,000 in week 49/08 (Figure 1).

The rate in the northern region increased from 8.1 per 100,000 in week 48/08 to 15.1 per 100,000 in week 49/08

08, an increase from 20.1 per 100,000 to 37.5 per 100,000 was seen in the central region and in the south it increased from 17.6 per 100,000 to 25.1 per 100,000 in weeks 48 and 49/08 respectively. The rate was highest in the 15-44 year age group at 32.1 per 100,000 in week 49/08 (Figure 2).

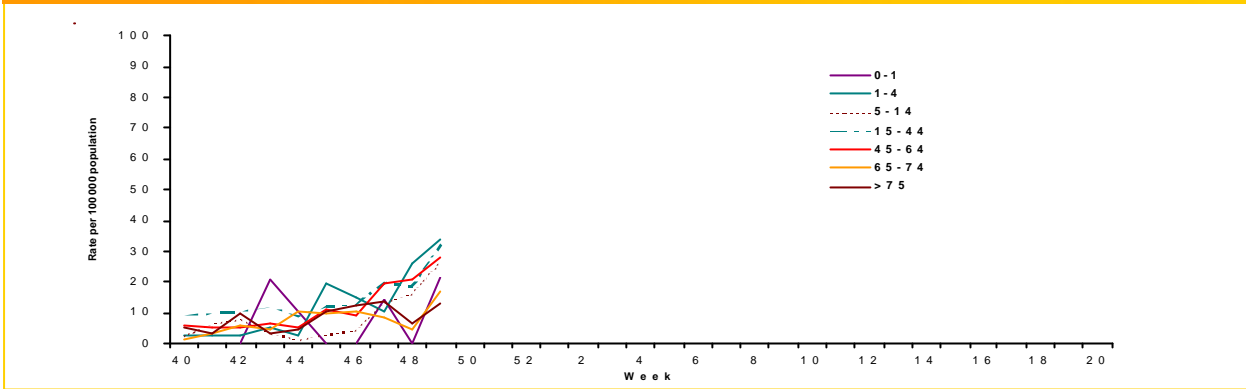
The rate for acute bronchitis has been increasing steadily over the season, it increased from 132.7 per 100,000 in week 48/08 to 151.9 per 100,000 in week 49/08.

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/>

GP consultation rates for influenza increased from 19.0 per 100,000 in week 48/08 to 20.0 per 100,000 in week 49/08. Activity remains below the Scottish baseline threshold of 50 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 weeks 48/08 and 49/08, 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 14 per 100,000 in week 48/08 to 19 per 100,000 in week 49/08. The highest rates have consistently been in the 15-44 year age group. In both weeks the rates were highest in London, Northern Ireland and the West Midlands.

Northern Ireland

CDSC Northern Ireland

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

The combined rate for influenza and influenza-like illness nearly doubled from 42.8 per 100,000 (updated rate) in week 48/08 to 69.2 per 100,000 in week 49/08 (Figure 3). This rate has consistently been highest in the 15-64 year age group. No threshold has been set for Northern Ireland.

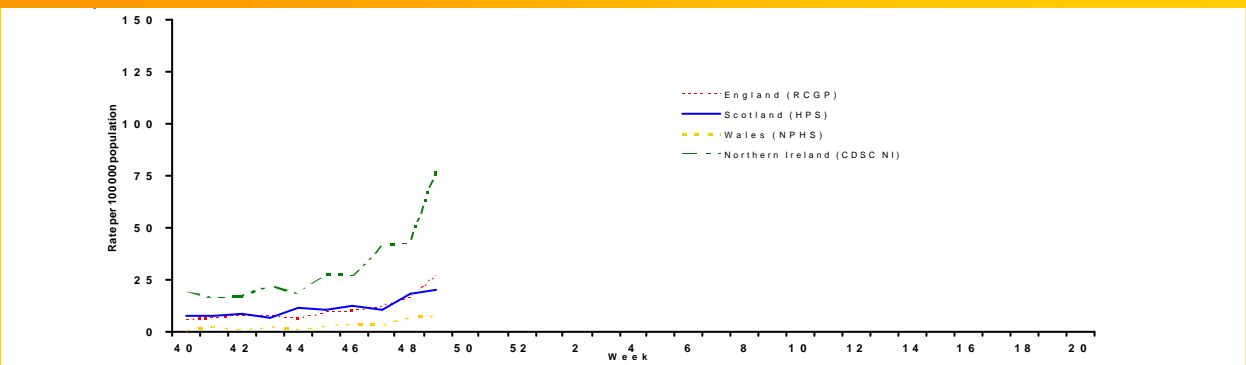
Wales

National Public Health Service

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

GP consultation rates for influenza increased from 6.9 per 100,000 in week 48/08 to 7.8 per 100,000 in week 49/08. Both figures are well below the baseline threshold of 25 consultations per 100,000 (Figure 3).

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/>

Cold/flu and fever calls increased and exceeded the baseline levels from week 48/08 to 49/08. The proportion of cold/flu calls increased from 0.9% in week 48 to 1.2% in week 49/08 (1.2% is the threshold). Fever calls in the 5-14 age group made up 8.1% of the total calls in week 48/08, this increased to 10.0% in week 49/08 which exceeds the threshold of 9%.

Medical Officers of Schools Association (MOSA)

During weeks 47 and 48/08, 21 and 20 schools, respectively, reported data. There were two new episodes of influenza like illness reported in week 47/08 giving a rate of 0.36 per 1000 and 21 new episodes in week 48/08 giving a rate of 3.85 per 1000. The rate of upper respiratory tract infection in week 47/08 was 17.3 per 1000 population (97 new episodes) which decreased to 7.7 (42 new episodes) in week 48/08.

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

Fifty-one specimens tested positive for influenza A viruses in week 48/08 and 88 in week 49/08 (Table 1). Since week 40/08 129 viruses have been characterised: 14 A/Solomon Islands/3/2006 (H1)-like which is similar to the vaccine strain, two A (H1) Brisbane/59/2007 (H1N1)-like (vaccine strain) and 103 A (H3) A/Brisbane/10/2007 (H3N2)-like (vaccine strain) (Figure 4). The majority of influenza A (H1) specimens received to date come from Southern England (table 1).

Neuraminidase inhibitor susceptibility testing on 30 A (H3) isolates since week 36/08 showed that all of them are sensitive to oseltamivir and zanamivir but resistant to amantadine. Of the 24 A (H1) specimens received and tested, 23 are resistant to oseltamivir but sensitive to zanamivir and amantadine. These specimens are from Northern and Southern England and Wales (table 1). Three

further influenza A(H1) isolates are undergoing resistance testing at the moment. Four influenza B isolates have been received and tested and all are 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 37 in week 48/08 to 60 in week 49/08 and the number of RSV positives decreased slightly (from 454 to 437) in the same time period. To date, a higher number of influenza A positive specimens have come from 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 type (subtype)	Influenza Detections by PCR and Isolation			
	A (H1)	A (H3)	B	RSV*
Week 48/08	3	48	1	7
Week 49/08	5	83	1	5
Cumulative to date (week 40/08 – 49/08)				
Northern England	3	40	1	1
Central England	1	78	3	4
Southern England	21	126	1	21
Wales	1	2	0	0
Scotland	1	2	0	0
Northern Ireland	0	0	0	0
Cumulative Total	27	248	5	26

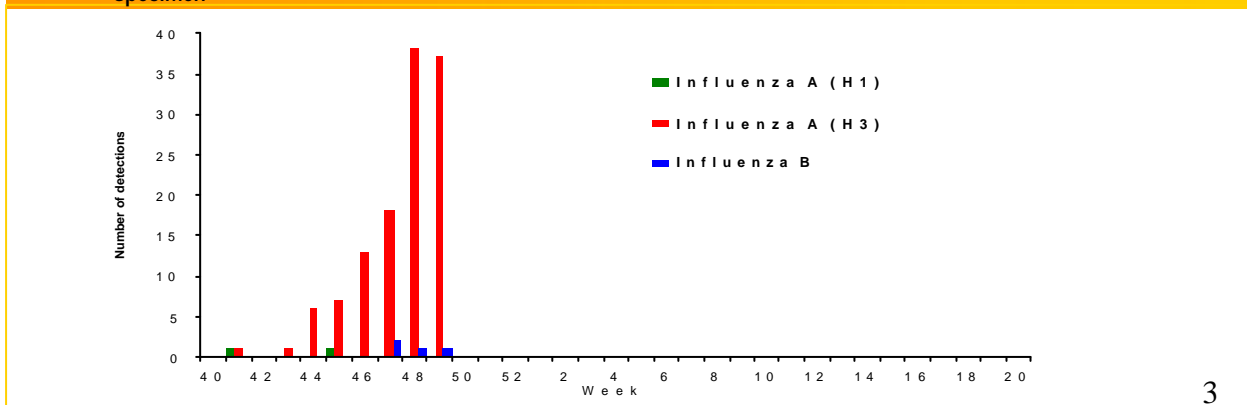
* RSV detection is by PCR only

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 48/08	37	0	454
Week 49/08	60	1	437
Cumulative to Date (week 40/08 - 49/08)			
Northern England	38	3	874
Central England	45	2	306
Southern England	78	2	1029
Wales	9	0	117
Cumulative Total	170	7	2326

*Detections of RSV by isolation are not included.

Figure 4 : Total (Community and Hospital) Influenza detections (PCR and Isolation) characterised by RVU,Cfl, by week of specimen



HPA Cfl Virological Surveillance of Influenza (England)

In week 48/08 this parallel GP sentinel scheme reported 12 out of 49 (24.5%) influenza A positive specimens, in week 49/08 five of 11 (45.5%) specimens were positive for influenza A and one for influenza B. Two specimens were positive for RSV and five for other respiratory viruses in the same time period.

Virological data from Northern Ireland

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

Eight influenza A positive samples were reported in weeks 48/08 and 49/08, two sentinel and six non-sentinel. In week 48/08 30 non-sentinel samples were positive for RSV and in week 49/08 this number was 37.

Virological data from Scotland

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

During weeks 48/08 and 49/08, four (7.3%) out of 55 sentinel samples, were positive for influenza A and six for RSV. Eighty-one routine samples reported from hospital and community sources were also tested; 14 (17.3%) were positive for influenza A and 68 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 25 sentinel samples (week 45/08) and nine non-sentinel samples have been positive for influenza A. In week 48/08 eight sentinel samples were tested; none were positive for influenza and one was positive for another respiratory virus.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

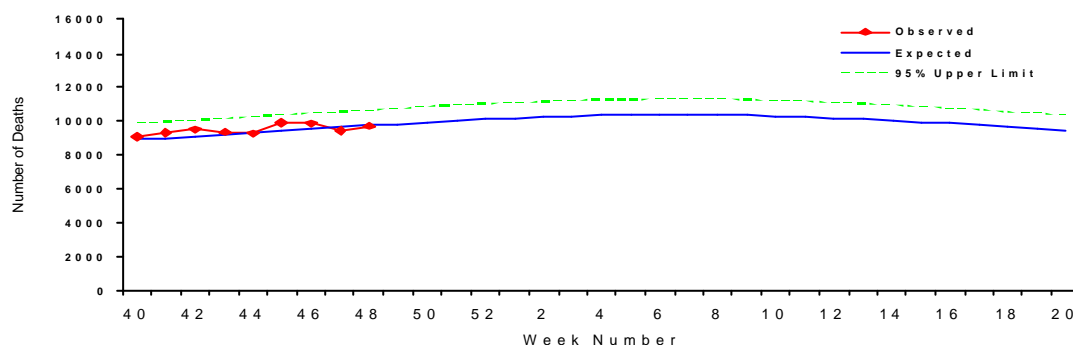
The number of deaths registered in England and Wales increased from 9430 in week 47/08 to 9717 in week 48/08. The number of deaths due to all respiratory diseases (as underlying cause) stayed constant at 1251 (13.3%) in week 47/08 and 1252 (12.9%) in week 48/08. The weekly all cause registered deaths are shown in Figure 5. No excess deaths were detected in either week.

Outbreak Reports:

Nine respiratory illness outbreaks were reported in week 49/08; three in care homes (one confirmed influenza A (H3) in Northern Ireland and two in South East England); four in schools (Yorkshire and the Humber, South West England, South East England and London); one confirmed influenza A (H1) from a hospital ward in North West England and one from an army barracks in South East England. Most are still under investigation

Cfl would welcome any reports of influenza outbreak investigations. 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. The proportion vaccinated in the over 65 year age group increased from 69.7% in week 48/08 to 71.4% in week 49/08. In the under 65 years at risk group, the proportion vaccinated increased from 42.2% in week 48/08 to 43.4% in week 49/08.

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. A report by WHO on 9 December confirms two further human cases of A(H5N1) avian influenza in Indonesia, of which one has died. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 389 of which 246 (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 weeks 47 and 48/08, low levels of seasonal influenza activity were seen across all 26 European countries participating in the EISS. In week 48/08 sporadic activity was reported in eleven countries and increasing activity was reported in England, Estonia, Hungary, Latvia, Lithuania, Poland, Portugal, Serbia, Slovakia, Spain, and Sweden.

Out of the total 536 respiratory specimens collected by sentinel physicians during week 48/08, 65 (12.1%) specimens tested positive for influenza, 12 type A (not subtyped), 49 A (H3), two A (H1) and two type B. In addition, 72 non-sentinel specimens tested positive including 47 influenza A (not subtyped), 20 A (H3), one A (H1), and four type B. These positive specimens were reported from 11 countries.

Since week 40/08, 79 viruses have been characterised; 76 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining three were B/Malaysia/2506/2004-like.

Ireland

Health Protection Surveillance Centre (HPSC)

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

In week 48/08 the Irish ILI consultation rate was 10.9 per 100,000 and increased sharply to 20.3 per 100,000 in week 49/08 (39 consultations).

In week 48/08 one of four (25%) sentinel specimens tested positive for influenza A and 40 of 106 non-sentinel specimens tested were positive for RSV. In week 49/08 six of 12 (50%) sentinel samples were positive for influenza; five A and one B. Thirty of 97 non-sentinel samples were positive for RSV in week 49/08.

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 48/08, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity and 13 regions reporting sporadic influenza activity in week 48/08. An increase in the consultation rates and number of viruses detected has been reported. Eighteen of 1818 (1.0%) specimens tested positive for influenza in week 48/08.

Since 1 September 2008, six influenza viruses have been characterised: one influenza A/Brisbane/59/2007(H1N1)-like, two A/Brisbane/10/2007 (H3N2)-like, two influenza B/Florida/4/2006-like and one B/Malaysia/2506/2004-like. 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 48/08, a low level of influenza activity was reported. One state (Hawaii) reported local activity, Puerto Rico and 22 states reported sporadic influenza activity and the District of Columbia and 22 states reported no activity.

In week 48/08 WHO and NREVSS laboratories reported 2136 specimens tested for influenza viruses, 43 (2.0%) of which were positive: four influenza A (H1), two A (H3), 26 A (not subtyped).

Since week 40/08 30 influenza viruses have been characterised; 20 A/Brisbane/59/2007 (H1N1)-like, 3 A/Brisbane/10/2007 (H3N2)-like, four B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and three from the B/Victoria lineage. Of the 25 influenza A (H1) viruses tested this season, 24 have been found to be resistant to oseltamivir.

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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