

HPA Weekly National Influenza Report

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



26 November 2008 (Week 48)

*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: 10/11/08 - 23/11/08 (Weeks 46 and 47, 2008)

Data from ONS, MOSA and non-UK sources: 03/11/08 - 16/11/08 (Weeks 45 and 46, 2008)

Summary

During weeks 46/08 and 47/08, influenza activity across the UK remained at low levels. Activity is still at baseline levels in England, Scotland and Wales; thresholds have not yet been set for Northern Ireland. Some clinical indicators of influenza have increased in England and Northern Ireland but have decreased slightly in Scotland and Wales. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during weeks 46/08 and 47/08, 45 were positive for influenza A, three A (H1) and 42 A (H3) and one for influenza B. Other NHS and HPA laboratories in England and Wales reported 27 influenza A and three influenza B positive specimens during these two weeks. Three influenza A positive specimens were reported from Scotland in week 46/08 and three influenza A (H3) from Northern Ireland in week 47/08. One outbreak of respiratory illness was reported from a school in Wales in week 47/08; one sample tested positive for influenza A. The weekly vaccine uptake rates for the over 65 years increased from 62.5% in week 45/08 to 66% in week 46/08 and in the under 65 years at risk group it increased from 35% to 37.9% in the same time period. Vaccine uptake data is not currently available for week 47/08. Influenza activity was at low levels throughout the rest of Europe.

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. Fourteen of fifteen 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>

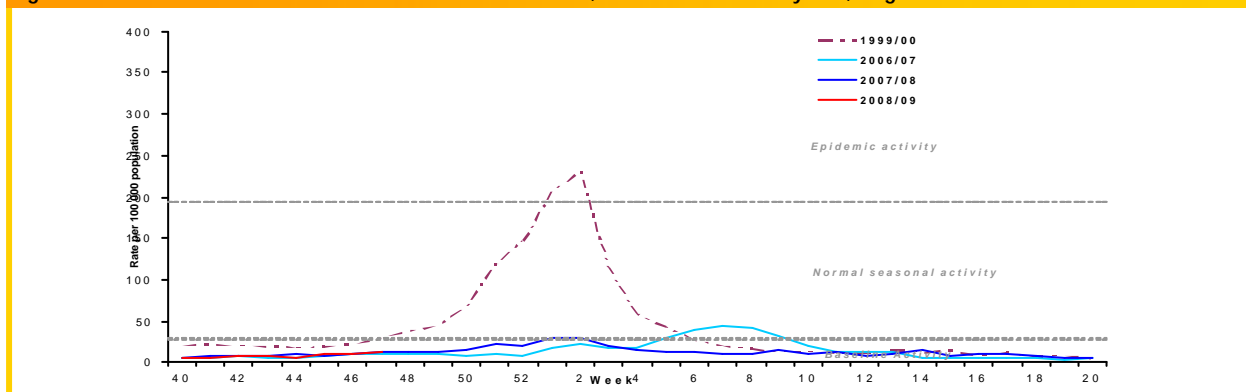
The overall influenza-like illness incidence rate** remained below the baseline activity threshold (30 per 100,000) at 10.4 per 100,000 in week 46/08 which then increased to 12.6 per 100,000 in week 47/08 (Figure 1).

The rate in the northern region decreased from 9.2 per 100,000 in week 46/08 to 7.2 per 100,000 in week 47/08,

an increase from 9 per 100,000 to 15.7 per 100,000 was seen in the central region and the rate remained constant in the south at 12.1 per 100,000 and 12.5 per 100,000 in weeks 46 and 47/08 respectively. The rate was highest in the 15-44 year age group at 17.1 per 100,000 in week 47/08 (Figure 2).

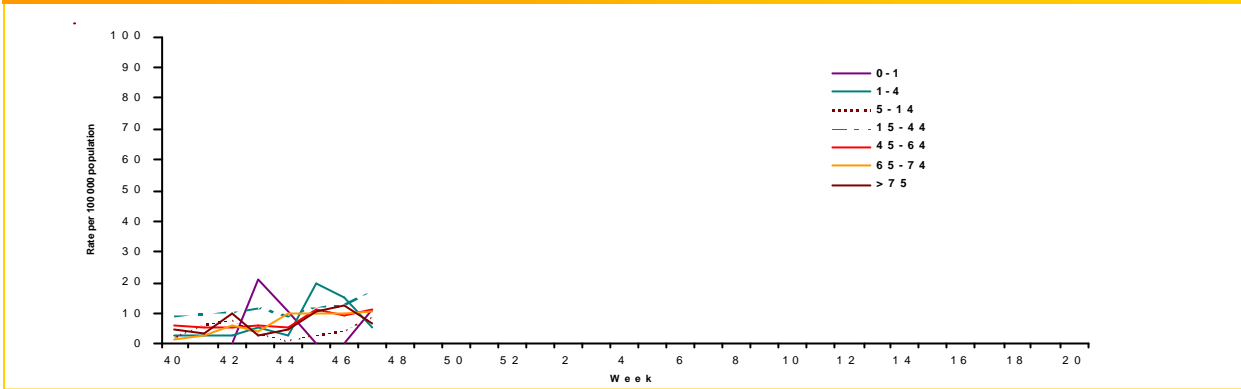
The rate for acute bronchitis has been increasing steadily over the season, it increased from 110.3 per 100,000 in week 46/08 to 119.4 per 100,000 in week 47/08. The episode incidence rate was highest in the 0-1 year age group at 694.8 per 100,000 in week 47/08.

Figure 1: RCGP consultation rate for influenza – like illness, 2007/08 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 decreased from 13.0 per 100,000 in week 46/08 to 11.0 per 100,000 in week 47/08. 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 46/08 and 47/08, approximately 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of around 21 million. The rate of influenza-like illness increased from 9.8 per 100,000 in week 46/08 to 10.3 per 100,000 in week 47/08. The highest rates have consistently been in the 15-44 year age group. In weeks 46 and 47/08 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 26.5 per 100,000 (updated rate) in week 46/08 to 44.7 per 100,000 in week 47/08 (Figure 3). No threshold has been set for Northern Ireland.

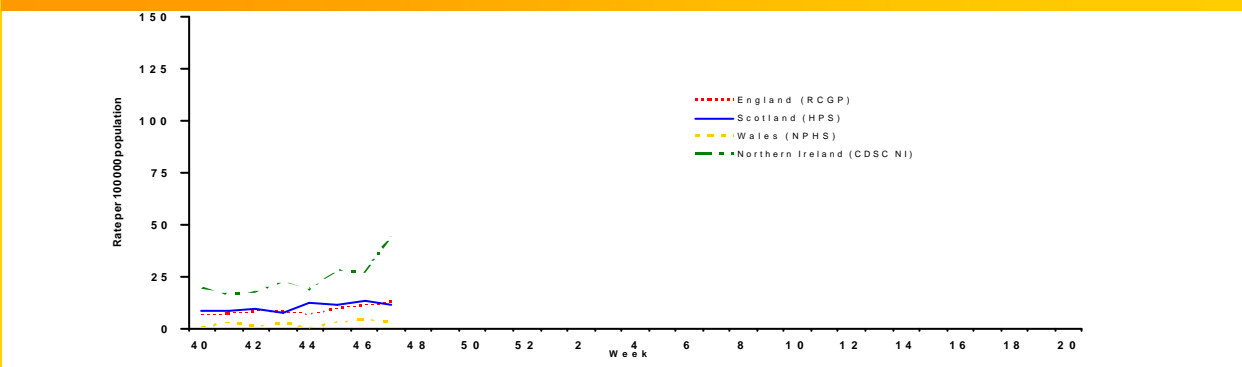
Wales

National Public Health Service

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

GP consultation rates for influenza decreased from 4.2 per 100 000 in week 46/08 to 2.9 per 100,000 in week 47/08. 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 were low and within the baseline levels during weeks 46/08 and 47/08. The proportion of cold/flu calls remained the same at 0.6% in weeks 46 and 47/08 (the threshold is set at 1.2%). Fever calls in the 5-14 age group made up 6.3% of the total calls in week 47/08 which was similar to 6.4% in week 44/08, both are lower than the threshold of 9%.

Medical Officers of Schools Association (MOSA)

During weeks 45 and 46/08, 21 schools reported data. There were no new episodes of influenza like illness reported in week 45/08 and ten episodes in week 46/08 giving a rate of 4.8 per 1000. The rate of upper respiratory tract infection in week 45/08 was 4.9 per 1000 population (32 new episodes) which increased to 7.0 (42 new episodes) in week 46/08.

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

Forty-five specimens tested positive for influenza A viruses in weeks 46/08 and 47/08 (Table 1). Since week 40/08 57 viruses have been characterised: nine A/Solomon Island/3/2006 (H1)-like which is similar to the vaccine strain, two A (H1) Brisbane/59/2007 (H1N1)-like (vaccine strain) and 46 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 15 A (H1) specimens received and tested, 14 are resistant to oseltamivir but sensitive to zanamivir and amantadine. These specimens are from Northern and Southern England and Wales (table 1). Four

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 decreased slightly from 16 in week 46/08 to 11 in week 47/08 and the number of RSV positives increased slightly (from 320 to 351) in the same time period. To date, a similar number of influenza A and B positive specimens have come from each area of England with fewer from Wales. (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 46/08	1	23	0	3
Week 47/08	2	19	1	0
Cumulative to date (week 40/08 – 47/08)				
Northern England	1	18	0	1
Central England	0	28	0	2
Southern England	17	34	1	10
Wales	1	2	0	0
Scotland	0	0	0	0
Northern Ireland	0	0	0	0
Cumulative Total	19	82	1	13

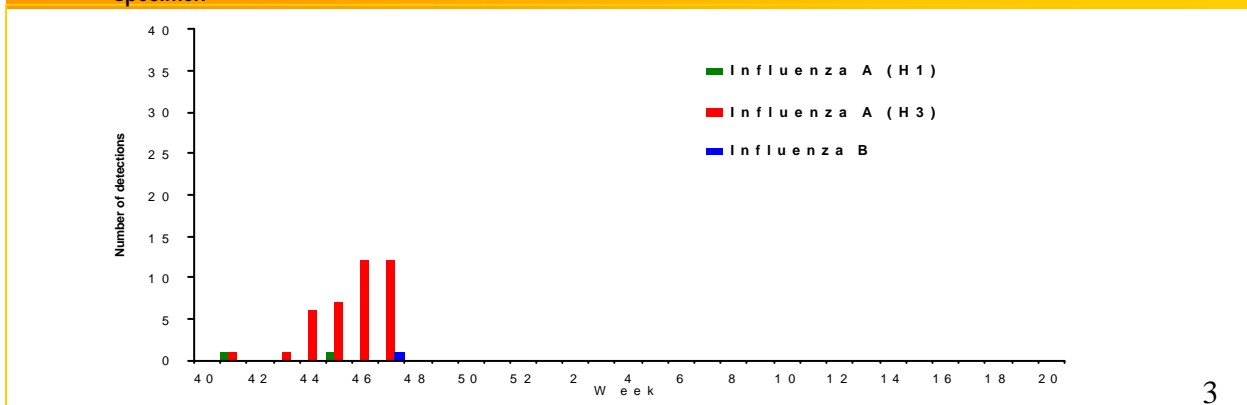
* RSV detection is by PCR only

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 46/08	16	0	320
Week 47/08	11	3	351
Cumulative to Date (week 40/08 - 47/08)			
Northern England	18	2	540
Central England	17	2	174
Southern England	19	2	279
Wales	6	0	77
Cumulative Total	60	6	1070

*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)

This parallel GP sentinel scheme reported four out of 28 (14.3%) influenza A positive and one (3.6%) influenza B positive specimens during weeks 46/08 and 47/08. To date, eight of the 14 oseltamavir-resistant A (H1) specimens have come from this scheme. Two specimens were positive for RSV and two for other respiratory viruses in the same time period.

Virological data from Northern Ireland

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

The first three influenza A (H3) samples were reported in week 47/08, two sentinel and one non-sentinel. In week 46/08 21 non-sentinel samples were positive for RSV and in week 47/08 this number was 29.

Virological data from Scotland

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

During week 46/08, out of 20 sentinel samples, which were received through SERVIS, three were positive for influenza A and one for RSV. Thirty-two routine samples reported from hospital and community sources were tested in week 46/08, one was positive for influenza A and 31 positive for RSV. In week 47/08 22 sentinel samples were received, three were positive for influenza A and three for RSV. Fifty-seven non-sentinel samples were also tested of which five for positive for influenza A and 52 for RSV.

Two influenza A (H1) isolates from Scotland this season have been found to be resistant to oseltamivir.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

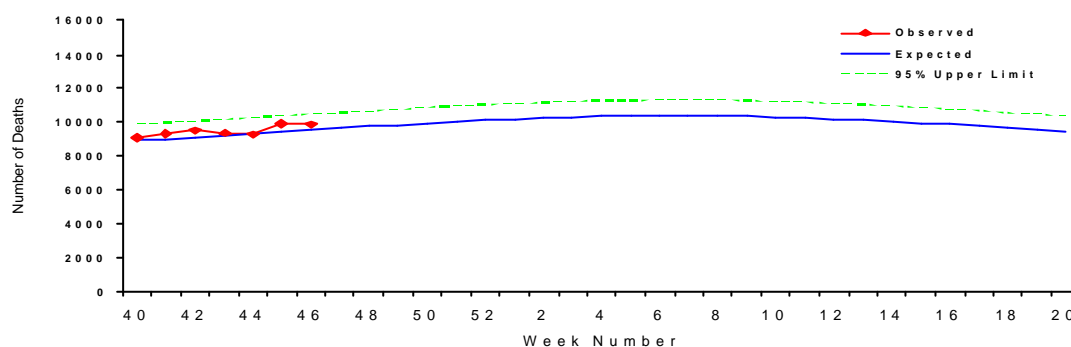
The number of deaths registered in England and Wales decreased from 9900 in week 45/08 to 9869 in week 46/08. The number of deaths due to all respiratory diseases (as underlying cause) stayed constant at 1215 (12.3%) in week 45/08 and 1207 (12.2%) in week 46/08. The weekly all cause registered deaths are shown in Figure 5. No excess deaths were detected in either week.

Outbreak Reports:

One outbreak was reported in week 47/08 from a school in Wales. One specimen tested positive for influenza A.

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 since the start of the campaign in September 2008.

The proportion vaccinated in the over 65 year age group increased from 62.5% in week 45/08 to 66% in week 46/08. In the under 65 years at risk group, the proportion vaccinated increased from 35% in week 45/08 to 37.9% in week 46/08. No data is currently available for week 47/08.

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.

There have been no new human cases since the last cases reported from Indonesia on 10 September 2008.

According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 387 of which 245 (63%) have died.

Useful link:

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 weeks 45 and 46/08, low levels of seasonal influenza activity were seen across all 26 European countries participating in the EISS. In week 46/08 sporadic activity was reported in England, Ireland, Northern Ireland, Norway, Portugal, Romania, Spain, Sweden, Switzerland and Wales and no activity in the remaining 13 countries.

Out of the total 451 respiratory specimens collected by sentinel physicians during week 46/08, 32 (7.1%) specimens tested positive for influenza, seven type A (not subtyped), 22 A(H3) and three type B. In addition, 30 non-sentinel specimens tested positive including six A (H3), 22 influenza A (not subtyped) and one type B. These positive specimens were reported from 13 countries with the Czech Republic, Hungary and Italy reporting detections for the first time in the 2008/09 season.

Since week 40/08, 41 viruses have been characterised; 39 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/>

Influenza activity in Ireland during weeks 46 and 47/08 were at low levels. In week 46/08 the ILI consultation rate was 9.3 per 100,000 and increased to 10.8 per 100,000 in week 47/08 (21 consultations).

In week 46/08 two of six sentinel specimens tested positive for influenza A (H3) and 20 of 82 non-sentinel specimens tested were positive for RSV. In week 47/08 one of eight sentinel samples was positive for influenza B, which is the first of the season in Ireland. Thirty-one of 81 non-sentinel samples were positive for RSV in week 47/08.

Canada

Public Health Agency of Canada

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

During weeks 45 and 46/08, influenza activity remained low with the majority of the influenza surveillance regions reporting no activity and eight regions reporting sporadic influenza activity in week 46/08. A slight increase in the consultation rates and number of viruses detected has been reported. Seven of 1512 (1.5%) specimens tested positive for influenza in week 45/08 and 10/1479 (0.7%) in week 46/08.

Since 1 September 2008, five influenza viruses have been characterised: one influenza A/Brisbane/59/2007(H1N1)-like, one 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 46/08, a low level of influenza activity was reported. Twenty-one states, the District of Columbia and Puerto Rico reported sporadic influenza activity and the remaining 29 states reported no activity.

In week 46/08 WHO and NREVSS laboratories reported 1772 specimens tested for influenza viruses, 16 (0.9%) of which were positive: five influenza A (H1) and eight influenza A (not subtyped). One human case of swine influenza A (H1N1) was reported in week 46/08, the person had been exposed to an ill pig.

Since week 40/08 one influenza virus has been characterised as B/Florida/04/2006-like, which is antigenically similar to one of the components recommended for the 2008-09 vaccine. Of the two influenza A (H1) viruses tested this season, one has 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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