

HPA Weekly National Influenza Report

Summary of UK* surveillance of influenza and other seasonal respiratory illness.
Prepared by the Influenza / Respiratory Virus Team, HPA Centre for Infections



12 December 2007 (Week 50)

*Incorporating data from the Royal College of General Practitioners (England), The National Public Health Service for Wales (NPHS), Health Protection Scotland (HPS), CDSC (Northern Ireland), the Office for National Statistics (England and Wales) and NHS Direct (HPA West Midlands).

Covered in this report:

Data with the exception of ONS and MOSA: 26/11/07- 09/12/07 (Weeks 48/07 & 49/07)

ONS and MOSA: 19/11/07-02/11/07 (Week 47/07 & 48/07)

Summary

During weeks 48/07 and 49/07, clinical influenza activity remained low in the UK, increasing in England and Northern Ireland and remaining stable in Wales and Scotland. Countries with baseline activity thresholds are below this level. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU), twenty six tested positive for influenza A(H1N1), three for influenza A(H3N2), two for influenza B and three for respiratory syncytial virus (RSV) during these weeks. In Europe, levels of influenza activity remain low and at levels normally seen outside the seasonal influenza peak period.

On the 9 December 2007 the Ministry of Health in China reported a new case of human infection with the H5N1 avian influenza virus in Jiangsu Province. The case had been confirmed by the national laboratory on 6 December. The 52-year old male is the father of the 24-year old man who died from H5N1 infection on 2 December 2007. He is one of the close contacts placed under medical observation by national authorities. He developed symptoms on 3 December and was sent immediately to hospital for treatment. Of the 27 cases confirmed to date in China, 17 have been fatal.

According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 337 of which 207 (61%) have died.

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

England

Royal College of General Practitioners

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

The influenza-like illness episode incidence rates** increased from 13.1 per 100 000 persons in week 48/07 to 16.2 per 100 000 in week 49/07. The rates are well below the baseline activity threshold of 30 per 100 000 (Figure 1).

Activity was at baseline levels in all regions and highest in southern England at 20.1 per 100 000. Activity was also at baseline levels in all age groups and highest in the 15-44 years age group at 19.7 per 100 000 (Figure 2).

Rates for acute bronchitis decreased from 147.6 per 100,000 in week 48/07 to 131.5 per 100,000 in week 49/07. The episode incidence rate was highest in the 0-4 years age group at 365.4 per 100,000 in week 49/07.

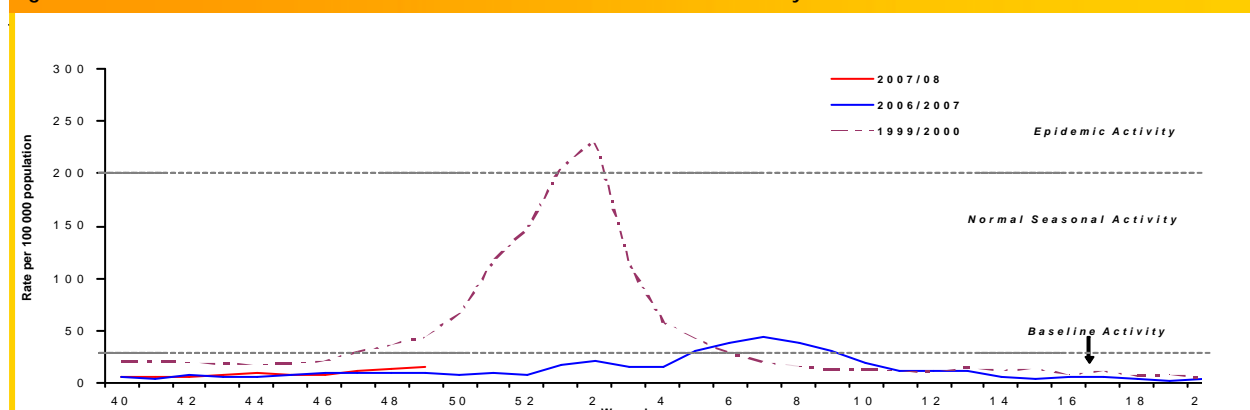
Scotland

<http://www.hps.scot.nhs.uk/>

Health Protection Scotland

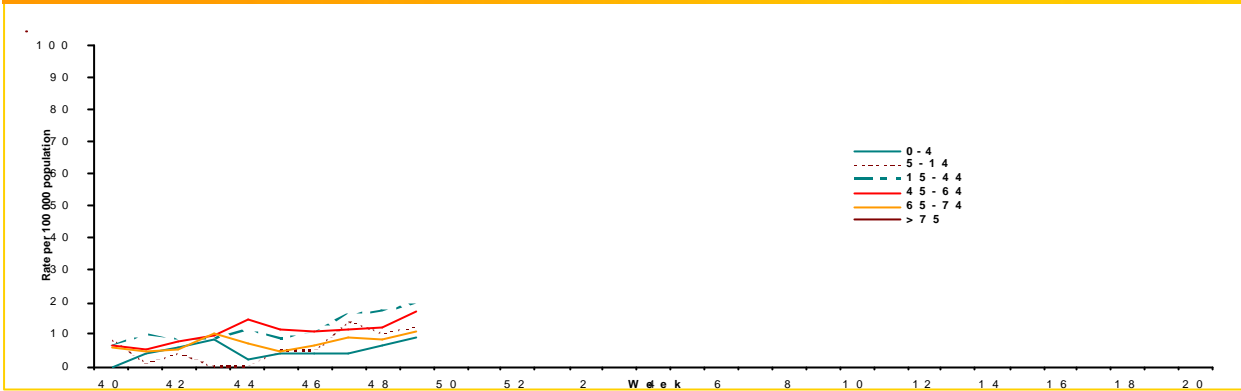
GP consultation rates for influenza-like illness remained stable at 14 per 100 000 in weeks 48/07 and 49/07. These rates are well beneath the Scottish baseline threshold of 50 consultations per 100 000 (Figure 3).

Figure 1: RCGP consultation rate for influenza – like illness, 2007/08 and recent years.



**The phrase "episode incidence rates by week of occurrence" is more accurate and better reflects the definition of first or new consultations for an episode of illness, compared to "RCGP consultation rates".

Figure 2 RCGP Episode incidence rates for influenza-like illness (ILI) by age group, 2007/08



Wales

National Public Health Service

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

GP consultation rates for influenza remained low at 1.0 per 100 000 in week 48/07 and 2.4 per 100 000 in week 49/07, well below the baseline threshold of 25 consultations per 100 000 (Figure 3).

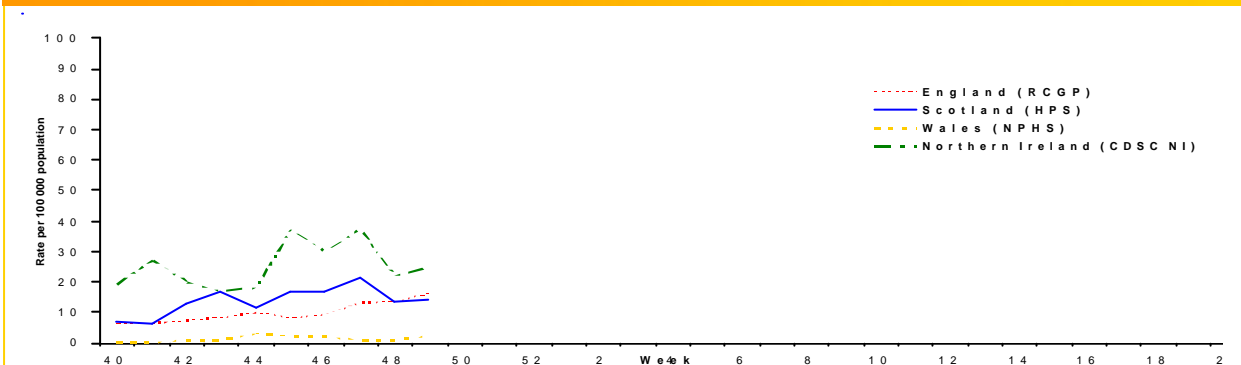
Northern Ireland

CDSC Northern Ireland

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

The combined rate for influenza and influenza-like illness increased from the updated rate of 21.6 per 100 000 in week 48/07 to 25.1 per 100 000 in week 49/07 (Figure 3). Thresholds for this scheme are not yet available.

Figure 3 GP Consultation rates for influenza in the U.K



Other clinical Indices (U.K)

Outbreak Reports:

One outbreak of suspected human influenza was reported from a primary school in Hertfordshire during week 49/07.

The Centre for Infections would welcome any documented reports of influenza outbreak investigations.

Please e-mail respcdsc@hpa.org.uk

Medical Officers of Schools Association (MOSA)

Twenty two schools participating in the MOSA scheme reported data for week 47/07 and 23 in week 48/07. The rate of influenza and influenza like illness decreased from 0.62 per 1000 pupils (four episodes) in week 47/07 to 0.14 per 1000 (1episode) in week 48/07.

QFLU

Health Protection Agency and Nottingham University Division of Primary Care.

This primary care surveillance system uses QFLU, a database of general practice derived data. In weeks 48/07 and 49/07, approximately 3000 practices reported from England, Wales, Scotland and Northern Ireland.

covering a population of around 21 million. The rate of influenza-like illness increased slightly from 11.5 per 100 000 in week 48/07 to 12.6 per 100 000 in week 49/07. The highest rates were in London.

NHS Direct total call activity

England and Wales

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

The NHS Direct threshold values that will be used this winter are: cold/flu calls (all ages) - 1.2% of total calls; fever calls (5-14yrs) - 9% of total calls.

The national proportion of fever calls for 5-14 yrs remained stable at 7.9% in weeks 48/07 and 49/07 and the national proportion of cold-flu calls (all ages) remained stable at 0.6% in week 48/07 and 0.7% in week 49/07. Both are below the threshold values.

Mortality Data

Office for National Statistics

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

The number of deaths registered in England and Wales increased from 10,030 in week 47/07 to 10,118 in week 48/07. Deaths caused by underlying respiratory diseases decreased from 1,250 in week 47/07 to 1,012 in week 48/07.

Laboratory indices of acute respiratory illness

RVU (Cfl) Influenza Reference Laboratory

Twenty six samples tested positive for influenza A(H1), three for influenza A(H3), two for influenza B and three for respiratory syncytial virus (RSV) during weeks 48/07 and 49/07 (Table 1). Since week 40/07, 37 community samples have tested positive for influenza (59% in the 15-44 age group). There have been eleven positive hospital samples (36% from the 5-14 years age group and 36% from the <5 years age group).

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 48/07	9	0	2	3
Week 49/07	17	3	0	0
Cumulative to date (week 40/07 – 49/07)				
Northern England	2	0	2	5
Central England	11	1	1	4
Southern England	27	2	2	2
Wales	0	0	0	0
Scotland	0	0	0	0
Northern Ireland	0	0	0	0
Cumulative Total	40	3	5	11

* RSV detection is by PCR only

Virological data from Northern Ireland

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

Of the 84 samples tested during week 49/07, none were positive for influenza and 34 were positive for RSV (all were from non-sentinell sources).

Other NHS and HPA laboratories (England and Wales)

During weeks 48/07 and 49/07, 14 samples were positive for influenza A and four for influenza B. RSV was detected in 840 specimens during these weeks (Table 2). Compared to recent years, the number of RSV detections for this period are raised.

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 48/07	8	2	407
Week 49/07	6	2	433
Cumulative to Date (week 40/07 - 49/07)			
Northern England	12	7	516
Central England	8	2	552
Southern England	4	1	409
Wales	0	0	50
Cumulative Total	24	10	1527

*Detections of RSV by isolation are not included.

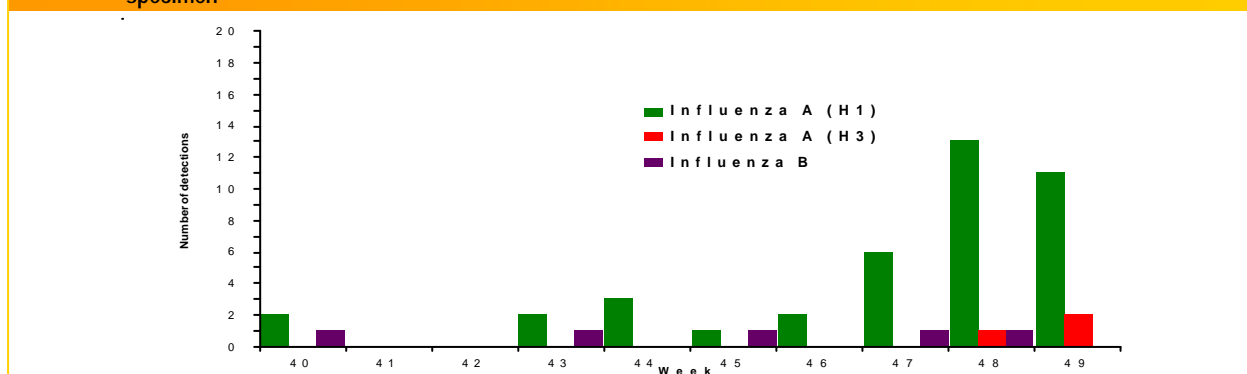
Virological data from Scotland:

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

Of the 29 samples submitted from sentinell sources during week 47/07, two were positive for RSV, seven for rhino virus, one for parainfluenza and one for human metapneumovirus.

Of the routine hospital and community sources during week 48/07, three were positive for influenza A (two of which were serologically positive) and one was serologically positive for influenza B. RSV detections have increased from 56 to 87 in weeks 47/07 and 48/07; these numbers are higher than that for the same period in 2005 and 2006.

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



Avian Influenza (H5N1)

On the 9 December 2007 the Ministry of Health in China reported a new case of human infection with the H5N1 avian influenza virus in Jiangsu Province. The case had been confirmed by the national laboratory on 6 December. The 52-year old male is the father of the 24-year old man who died from H5N1 infection on 2 December 2007. He is one of the close contacts placed under medical observation by national authorities. He developed symptoms on 3 December and was sent immediately to hospital for treatment. Of the 27 cases confirmed to date in China, 17 have been fatal.

According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 337 of which 207 (61%) 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

Levels of influenza activity remain low in Europe, at levels normally seen outside the seasonal influenza peak period. A total of 29 countries reported no or only sporadic influenza activity in week 48/07. There are currently 50-65 influenza virus detections per week in Europe, which remains a low number compared to previous seasons.

The total number of respiratory specimens collected by sentinel physicians in week 48/07 was 472, of which 31 (6.6%) were influenza virus positive; seven type A not subtyped, 11 type A subtype H1, eight type A subtype H1N1 and five type B. In addition, 21 influenza virus detections (11 type A not subtyped, one type A subtype H1 and nine type B) were reported from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals). Influenza virus detections were reported from 13 countries across Europe.

Ireland

Health Protection Surveillance Centre (HPSC)

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

During week 48/07, 22 ILI cases were reported from sentinel GPs corresponding to an ILI consultation rate of 14.3 per 100,000 population, an increase from the updated rate of 5.5 per 100,000 in week 47 2007.

Eight sentinel and 99 non-sentinel specimens were tested for influenza and all were negative; 45 (45.5%) non-sentinel specimens were positive for RSV.

Canada

Public Health Agency of Canada

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

During week 48/07, influenza activity levels remained low in Canada with the majority of influenza surveillance regions across the country reporting no activity (n=47). Twenty regions reported sporadic influenza activity and only one region (central Alberta) reported localized activity. In week 48/07, 10 (0.6%) of the 1,789 specimens tested were positive for influenza virus. Of the influenza detections to date, 77% (40/52) were influenza A and 23% (12/52) were influenza B. The ILI consultation rate increased to 16 ILI consultations per 1,000 patient visits compared to previous weeks but is still within the expected rate for this week. The sentinel response rate was low at 60%. No new outbreaks of influenza were reported this week. Since the start of the season, no new laboratory-confirmed influenza-associated paediatric hospitalizations were reported through the Immunization Monitoring Program Active (IMPACT) network.

The National Microbiology Laboratory (NML) has characterized 16 influenza viruses for the 2007-2008 influenza season: five A(H1N1), five A(H3N2) and six B viruses. All five influenza A(H1N1) viruses were antigenically similar to A/Solomon Islands/3/2006 (which is the influenza A(H1N1) component recommended for the 2007-2008 influenza vaccine). Of the five influenza A(H3N2) viruses characterized, four were antigenically similar to A/Wisconsin/67/2005 (which is the influenza A(H3N2) component recommended for the 2007-2008 influenza vaccine) and one was antigenically similar to A/Brisbane/10/2007. One of the four A/Wisconsin-like viruses had reduced titer to A/Wisconsin/67/2005 reference antiserum. Of the six influenza B isolates characterized, one was antigenically similar to B/Malaysia/2506/2004, the B component of the 2007-2008 influenza vaccine, and five were antigenically similar to B/Florida/4/2006, belonging to the B/Yamagata lineage and is the B component recommended for the 2007-2008 influenza vaccine in the Southern Hemisphere.

United States of America

Centers for Disease Control and Prevention

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

During week 48/07 (November 25-December 1, 2007), a low level of influenza activity was reported in the United States. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. The proportion of outpatient visits for influenza-like illness (ILI) and acute respiratory illness (ARI) was below national and region-specific baseline levels. Four states reported local influenza activity; 33 states and the District of Columbia reported sporadic influenza activity; and 13 states reported no influenza activity.

During week 48/07, U.S. WHO and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories reported 2,504 specimens

tested for influenza viruses, 85 (3.4%) of which were positive, including 30 influenza A (H1) viruses, two influenza A (H3) viruses, 45 influenza A viruses that were not subtyped, and eight influenza B viruses. The District of Columbia and 32 states from all nine surveillance regions have reported laboratory-confirmed influenza this season.

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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