

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



04 January 2008 (Week 01)

*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: 17/12/07 - 30/12/07 (Week 51/07 and 52/07)

ONS and MOSA: 10/12/07-23/12/07 (Week 50/07 and 51/07)

Summary

Please note that clinical and virological data for week 52/07 may be affected by the seasonal holidays.

During weeks 51/07 and 52/07, influenza activity increased in Scotland, decreased slightly in England and Northern Ireland and remained stable in Wales. Countries with baseline activity thresholds are below this level. The national proportion of NHS Direct fever calls (5-14yrs) for England and Wales increased above set baseline levels in week 51/07 indicating a rise in influenza and influenza-like illness in the community. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during these weeks, 48 tested positive for influenza A(H1N1), one for A(H3N2), three for B and two for respiratory syncytial virus (RSV). Levels of influenza activity remain low in most countries across Europe and at levels normally seen outside the seasonal influenza peak period.

The first case of human infection with H5N1 avian influenza in Pakistan has been confirmed. At the request of the Pakistan Government, a WHO team travelled to Pakistan to participate with national authorities in the ongoing investigations of several suspected cases of human H5N1 infections. In addition, the Ministry of Health in Vietnam has confirmed a new case of human infection of H5N1 avian influenza and the Ministry of Health and Population, Egypt has announced two new cases. According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 346 of which 213 (62%) 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** decreased slightly from 22.1 per 100,000 persons in week 51/07 to 20.9 per 100,000 in week 52/07. The rates are below the baseline activity threshold of 30 per 100 000 (Figure 1).

Activity was highest in central England at 25.8 per 100 000 compared to 12.7 and 20.3 per 100,000 in the north and south respectively. Activity was highest in the 15-44 years and 45-64 years age groups at 28.0 and 27.5 per 100 000 respectively (Figure 2).

Rates for acute bronchitis decreased from 165.9 per 100,000 in week 51/07 to 149.6 per 100,000 in week 52/07. The episode incidence rate was highest in the 65 years and over age group at 281.3 per 100,000.

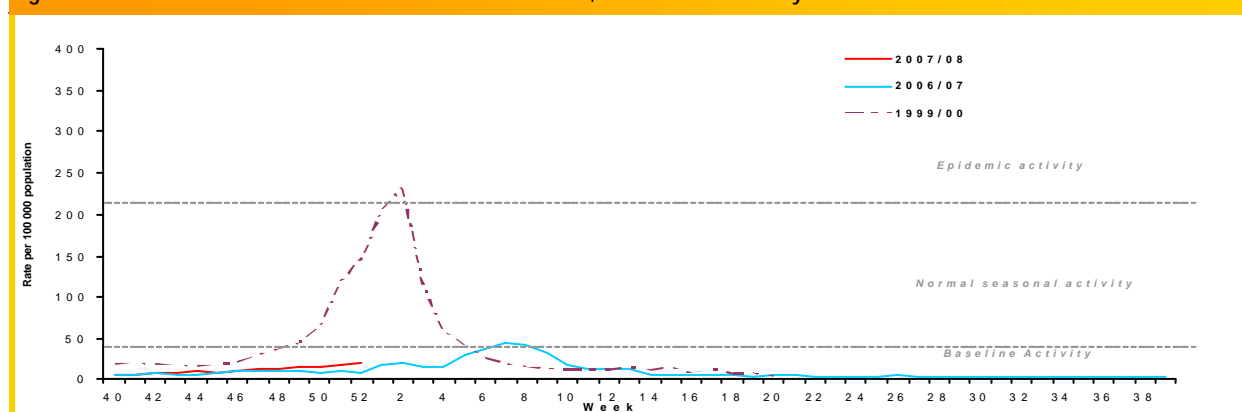
Scotland

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

Health Protection Scotland

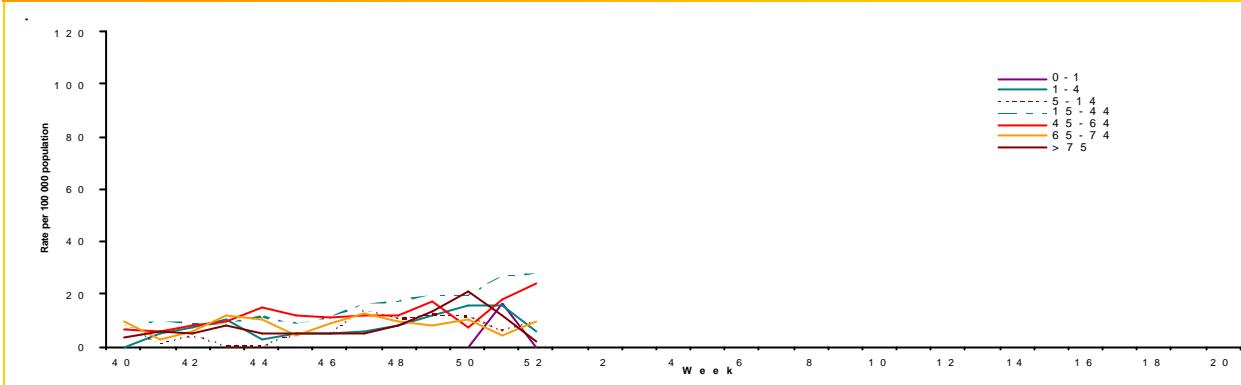
GP consultation rates for influenza-like illness increased from 22 per 100 000 in week 50/07 to 34 per 100 000 in week 51/07. These rates are beneath the Scottish baseline threshold of 50 consultations per 100 000 (Figure 3).

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 1.9 per 100,000 in week 51/07 and 2.0 per 100,000 in week 52/07, well below the baseline threshold of 25 consultations per 100 000 (Figure 3).

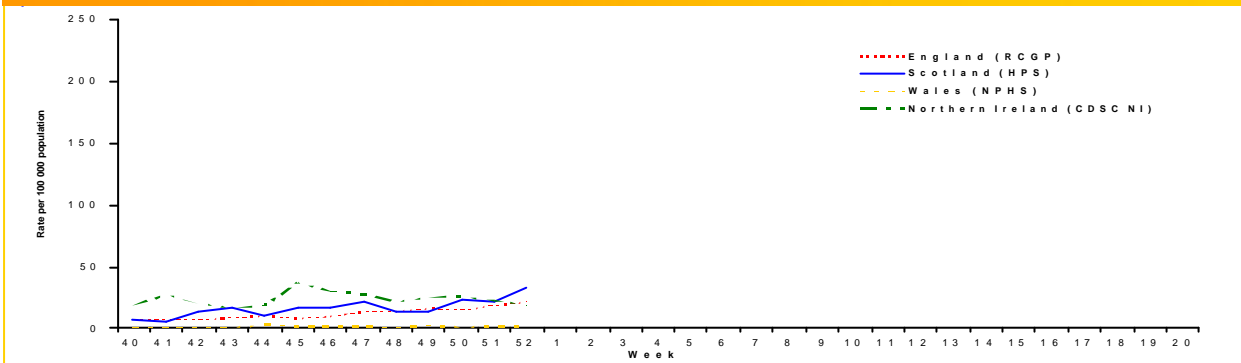
Northern Ireland

CDSC Northern Ireland

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

The combined rate for influenza and influenza-like illness decreased from the updated rate of 22.4 per 100,000 in week 51/07 to 18.7 per 100,000 in week 52/07 (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:

No outbreaks of human influenza were reported during weeks 51/07 or 52/07.

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)

The schools participating in the MOSA scheme are currently on holidays. Reporting will recommence in once they have returned.

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 49/07 and 50/07, approximately 3200 practices reported from England, Wales, Scotland and Northern Ireland covering a population of around 22 million. The rate of influenza-like illness decreased slightly from 15.2 per

100 000 in week 51/07 to 14.4 per 100 000 in week 52/07. 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 increased from 6.5% in week 50/07 to 9.9% in week 51/07 and the national proportion of cold-flu calls (all ages) increased slightly from 0.8% in week 50/07 to 1.0% in week 51/07. The national proportion of fever calls (5-14yrs) is above baseline level indicating a rise in activity in the community. No data is currently available for week 52/07.

Mortality Data

Office for National Statistics

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

The number of deaths registered in England and Wales remained stable at 10,554 in week 49/07 and 10,518 in week 50/07. Deaths caused by underlying respiratory diseases decreased from 1,443 in week 49/07 to 1,338 in week 50/07. Data for week 51/07 is currently unavailable.

Laboratory indices of acute respiratory illness

RVU (Cfl) Influenza Reference Laboratory

There were 48 positives for influenza A(H1), one for A(H3), three for B and two for respiratory syncytial virus (RSV) during weeks 51/07 and 52/07 (Table 1). Since week 40/07, 106 community samples have tested positive for influenza (60% in the 15-44 age group). There have been 40 positive hospital samples (58% in 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 51/07	24	0	1	2
Week 52/07	24	1	2	0
Cumulative to date (week 40/07 – 49/07)				
Northern England	11	0	2	6
Central England	34	2	3	8
Southern England	89	2	3	3
Wales	0	0	0	0
Scotland	0	0	0	0
Northern Ireland	0	0	0	0
Cumulative Total	134	4	8	17

* RSV detection is by PCR only

Virological data from Northern Ireland

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

Of the 43 samples tested during week 50/07, none were positive for influenza and 25 were positive for RSV (all were hospitalised infants).

Other NHS and HPA laboratories (England and Wales)

During week 51/07 and 52/07, 12 samples were positive for influenza A and none for influenza B. Compared to recent years, the number of RSV detections for this period are raised (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 51/07	9	0	333
Week 52/07	3	0	171
Cumulative to Date (week 40/07 - 52/07)			
Northern England	19	7	768
Central England	24	3	925
Southern England	8	3	601
Wales	0	0	92
Cumulative Total	51	13	2368

*Detections of RSV by isolation are not included.

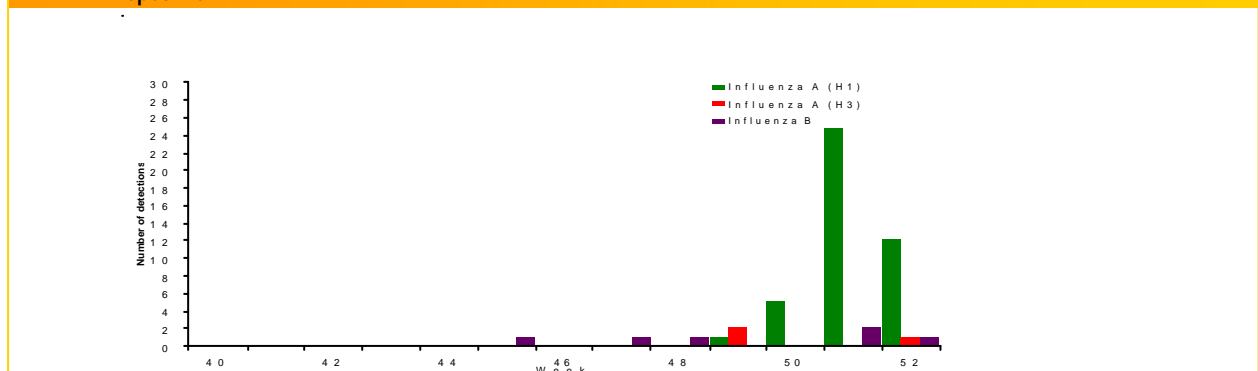
Virological data from Scotland:

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

Of the 19 samples collected by sentinel GPs during week 51/07, two were positive for influenza A, one for influenza B, one for human metapneumovirus and one for rhinovirus.

Of the routine hospital and community sources during week 51/07, three isolates were positive for influenza A and two for influenza B. There were also 211 positive detections for RSV, 24 para influenza detections and 16 human metapneumovirus detections.

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



Avian Influenza (H5N1)

On the 27 December the first case of human infection with H5N1 avian influenza was confirmed in Pakistan. Laboratory tests conducted by the WHO H5 Reference Laboratory in Cairo, Egypt and WHO Collaborating Center for Reference and Research on Influenza, in London, United Kingdom confirmed the presence of avian influenza virus strain A(H5N1) in samples collected from one case in an affected family. The H5N1 positive case was a 25 year old male from the Peshawar area who developed febrile respiratory illness on 21 November, was hospitalized on 23 November, and died on 28 November. Additional laboratory analysis, including gene sequencing, is ongoing. At the request of the Pakistan Government, a WHO team travelled to Pakistan to participate with national authorities in the ongoing investigations of several suspected cases of human H5N1 infections.

On the 28 December the Ministry of Health in Vietnam confirmed a new case of human infection of H5N1 avian influenza. The case is a 4 year old male from Son La Province who developed symptoms on 7 December, was hospitalized on 11 December and died on 16 December.

On the 28 December the Ministry of Health and Population, Egypt has announced two new cases of human infection of H5N1 avian influenza. The first case is a 50 year old female from Domiat Governorate. She was hospitalized on 24 December and is in critical condition. The second case is a 22 year old female chicken seller from Menofia Governorate. She was hospitalized on 26 December and is presently recovering in intensive care. Both women had contact with sick and dead poultry prior to illness onset.

According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 346 of which 213 (62%) 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 most countries across Europe, at levels normally seen outside the seasonal influenza peak period. A total of 18 countries reported a low intensity of clinical influenza activity and one country - Spain - reported a medium intensity (above the national baseline) in week 51/2007.

The total number of respiratory specimens collected by sentinel physicians in week 51/2007 was 566, of which 99 (18%) were influenza virus positive; 39 type A not subtyped, 43 type A subtype H1, one type A subtype H3 and 16 type B. In addition, 31 influenza virus detections

(25 type A not subtyped, one type A subtype H1 and 5 type B) were reported from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals).

Of the total virus detections since week 40/2007 (N=735), 79% were influenza A of which about 90% were of the H1 subtype.

Ireland

Health Protection Surveillance Centre (HPSC)

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

During week 52/07, 21 cases of ILI were reported from sentinel GPs in Ireland, corresponding to an ILI consultation rate of 15.8 per 100,000 population, an increase from the rate of 8.8 during week 51/07. No sentinel specimens were tested. Forty-six non-sentinel specimens were tested, none were positive for influenza and 18 were positive for RSV.

Canada

Public Health Agency of Canada

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

During week 51/07, influenza activity levels in Canada remained fairly low; however several provinces (PEI, NS, MB, and AB) and one territory (NT) did not report activity levels this week. Only two influenza surveillance regions (in BC and SK) reported localized influenza activity, while the rest reported either no activity (n=21) or sporadic activity (n=15). In week 51/07, the proportion of positive influenza tests increased to 7.1% (132/1,849). The majority of influenza detections this week were for influenza A viruses (73%). Of the influenza detections to date, 83% were influenza A and 17% were influenza B. (Note: no laboratory data were obtained from NF, NS and QC this week). The ILI consultation rate remained similar to previous weeks at 23 ILI consultations per 1,000 patient visits, which is within the expected rate for this week. The sentinel response rate was low, at 44%. Three new long term care facility outbreaks were reported in week 51/07 (one in BC and two in SK). 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 42 influenza viruses for the 2007-2008 influenza season: 27 A(H1N1), 6 A(H3N2) and 9 B viruses. All influenza A(H1N1) viruses were antigenically similar to A/Solomon Islands/3/2006. Of the six influenza A(H3N2) viruses characterized, five were antigenically similar to A/Wisconsin/67/2005 and one was antigenically similar to A/Brisbane/10/2007. One of the five A/Wisconsin-like viruses had reduced titer to A/Wisconsin/67/2005 reference antiserum. Of the nine influenza B isolates characterized, two were antigenically similar to B/Malaysia/2506/2004 and seven were antigenically similar to B/Florida/4/2006 (belonging to the B/Yamagata lineage).

United States of America

Centers for Disease Control and Prevention

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

During week 51/07, influenza activity continued to increase 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) was equal to the national baseline. The Mountain, Pacific, and West South Central regions reported ILI above their region-specific baselines. The proportion of outpatient visits for acute respiratory illness (ARI) was below national baseline levels. Three states reported regional influenza activity; six states reported local influenza activity; 32 states reported sporadic influenza activity; eight states reported no influenza activity; and one state and the District of Columbia did not report.

During week 51/07, WHO and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories reported 2,059 specimens tested for influenza viruses, 77 (3.7%) of which were positive, including 16 influenza A (H1) viruses, four influenza A (H3) viruses, 38 influenza A viruses that were not subtyped, and 19 influenza B viruses. The District of Columbia and 39 states from all nine surveillance regions have reported laboratory-confirmed influenza this season.

Since September 30, 2007, WHO and NREVSS laboratories have tested a total of 37,275 specimens for influenza viruses and 980 (2.6%) were positive. Among the 980 influenza viruses, 873 (89.1%) were influenza A viruses and 107 (10.9%) were influenza B viruses. Two hundred fifty-five (29.2%) of the 873 influenza A viruses have been subtyped: 201 (78.8%) were influenza A (H1) viruses and 54 (21.2%) were influenza A (H3) viruses.

Other country reports can be obtained from the World Health Organisation:

<http://www.who.int/csr/disease/influenza/en/>

Acknowledgements

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