

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



16 January 2008 (Week 03)

*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: 07/01/08 - 13/01/08 (Week 02/08)

ONS and MOSA: 31/12/07-06/01/08 (Week 01/07)

Summary

Please note that clinical and virological data for week 02/08 may be affected by the seasonal holidays.

During week 02/08, influenza activity increased in Scotland and Northern Ireland while remaining stable in England and Wales. Activity remains above baseline levels in England and has increased above baseline levels in Scotland (triggering the use of antivirals for the treatment and prevention of influenza). Activity in Wales is below the baseline threshold while Northern Ireland has no set thresholds at present. Of the samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) during this week, 34 tested positive for influenza A(H1), one for A(H3), four for B and one for respiratory syncytial virus (RSV). Elsewhere in Europe there is currently increased influenza activity in Ireland, Italy, Luxembourg, Slovenia, Spain and Switzerland; in France and Portugal levels of influenza activity are around the baseline threshold; all other countries report low levels of influenza activity.

The Ministry of Health of Indonesia has announced two new confirmed cases of H5N1 infection, one of which has died. This brings the total number of confirmed cases in Indonesia to 118 cases, of which 95 have been fatal. According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 350 of which 217 (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** increased from 30.2 per 100,000 persons in week 01/08 to 32.0 per 100,000 in week 02/08. Both rates are above the baseline activity threshold of 30 per 100 000 and activity is now in the normal seasonal level (Figure 1). The use of antivirals is now appropriate for the treatment or prevention of influenza.

Rates of influenza-like illness have increased most notably in the Central and Southern regions, at 42.5 and 30.3 per 100,000 respectively, and in the 25-44 and 45-64 year age groups (Figure 2).

Rates for acute bronchitis decreased from 202.8 per 100,000 in week 01/08 to 167.7 per 100,000 in week 02/08. The episode incidence rate was highest in the 65 years and over age group at 403.8 per 100,000.

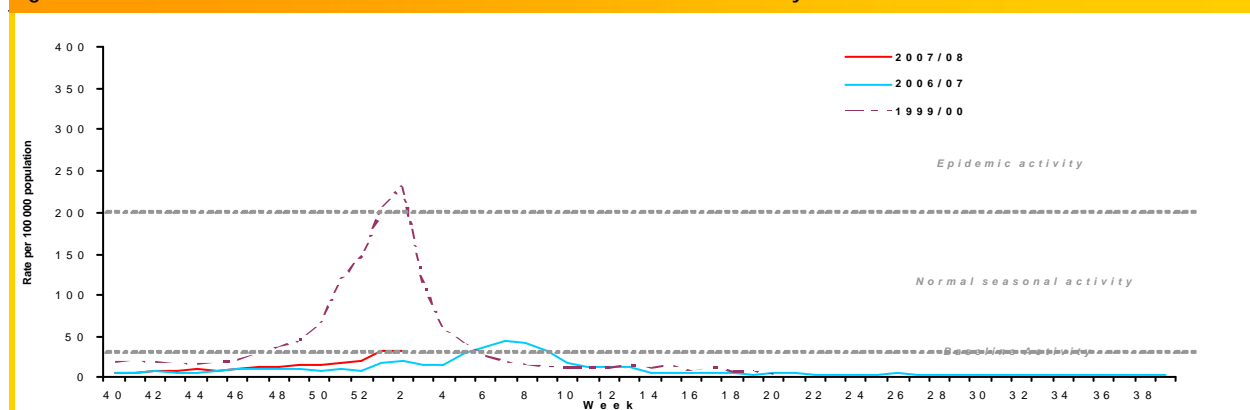
Scotland

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

Health Protection Scotland

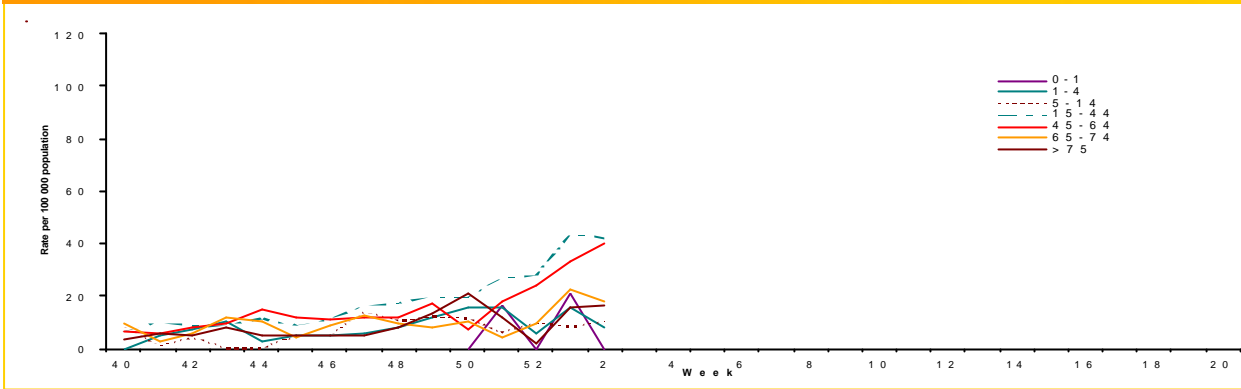
GP consultation rates for influenza-like illness increased from 41 per 100 000 in week 01/08 to 50 per 100 000 in week 02/08. Activity has now reached the Scottish baseline threshold of 50 consultations per 100 000 (Figure 3) and the use of antivirals has been triggered.

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 decreased from 8.5 per 100,000 in week 01/08 to 6.1 per 100,000 in week 02/08. Both figures are below the baseline threshold of 25 consultations per 100 000 (Figure 3).

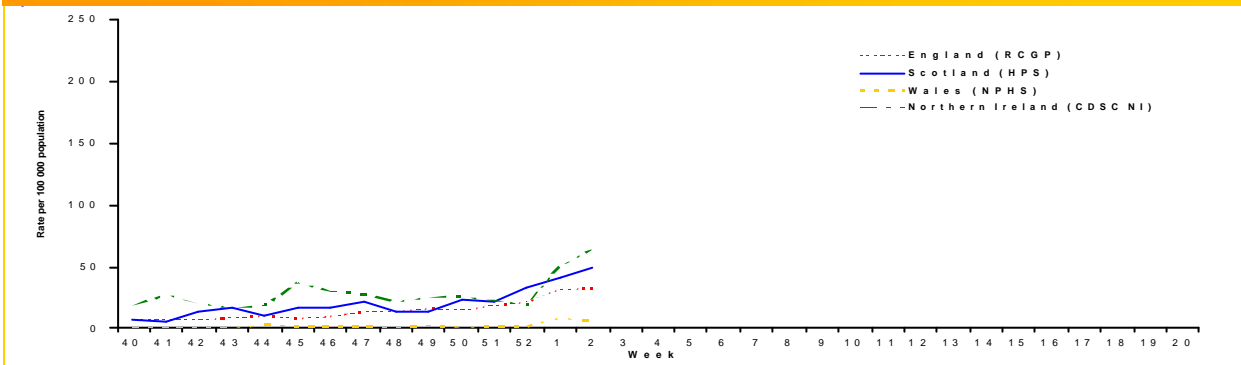
Northern Ireland

CDSC Northern Ireland

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

The combined rate for influenza and influenza-like illness increased from the updated rate of 44.7 per 100,000 in week 01/08 to 63.4 per 100,000 in week 02/08 (Figure 3). Thresholds for this scheme are not yet available.

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



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 week 02/08, approximately 3300 practices reported from England, Wales, Scotland and Northern Ireland covering a population of around 22 million. The rate of influenza-like illness decreased from 22.1 per 100 000 in week 01/08 to 19.8 per 100 000 in week 02/08. The highest rates were in London, the North East and Northern Ireland.

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. Due to a technical problem there has been no data since week 51/07. This report will be updated appropriately if data become available before the next report is published.

Medical Officers of Schools Association (MOSA)

The schools participating in the MOSA scheme were on their break in week 01/08. Reporting will recommence with the new school term.

Other reports (U.K)

Outbreak Reports:

A respiratory outbreak of unknown aetiology has been reported from a residential home in Essex. Laboratory results are awaited.

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

Please e-mail respcdsc@hpa.org.uk

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 51/07 and 10,518 in week 52/07. Deaths due to all respiratory diseases dropped from 1,593 to 1,463. We currently have no death data for week 01/08.

Laboratory indices of acute respiratory illness

RVU (Cfl) Influenza Reference Laboratory

There were 34 positives for influenza A(H1), one for A(H3), four for B and one for respiratory syncytial virus (RSV) during week 02/08 (Table 1). Since week 40/07, 205 community samples have tested positive for influenza (63% in the 15-44 age group). There have been 78 positive hospital samples (61% in the <5 years age group) during this same period.

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 02/08	34	1	4	1
Cumulative to date (week 40/07 – 02/08)				
Northern England	34	1	7	9
Central England	66	2	6	8
Southern England	156	5	5	4
Wales	0	0	0	0
Scotland	0	0	0	0
Northern Ireland	0	0	0	0
Cumulative Total	256	8	19	21

* RSV detection is by PCR only

Virological data from Northern Ireland

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

Of the 92 non sentinel specimens tested , there was one influenza A and 39 RSV detections.

Other NHS and HPA laboratories (England and Wales)

During week 02/08, 34 samples were positive for influenza A and three for influenza B (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 02/08	34	4	325
Cumulative to Date (week 40/07 - 02/08)			
Northern England	27	9	904
Central England	72	6	1136
Southern England	29	5	811
Wales	1	1	131
Cumulative Total	129	21	2982

*Detections of RSV by isolation are not included.

Virological data from Scotland:

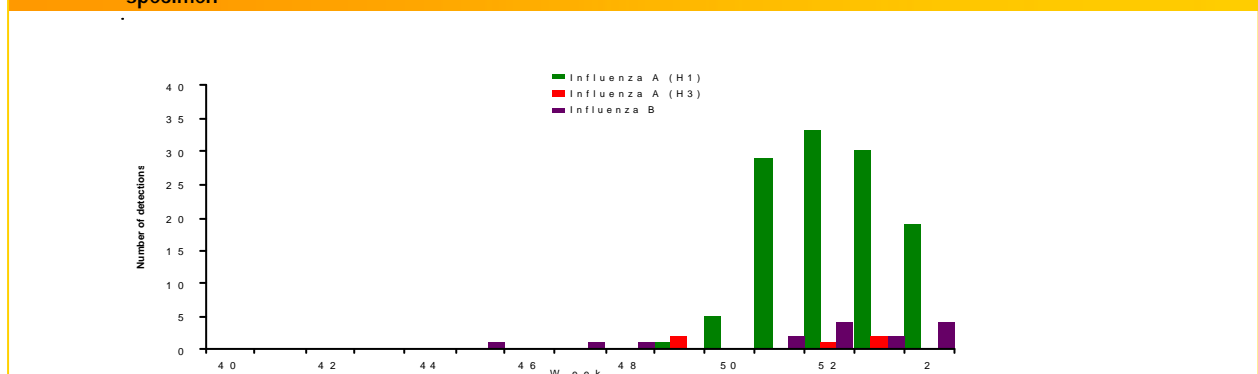
(<http://www.show.scol.nhs.uk/sciehl/>)

Influenza A(H1) is the dominant virus in circulation at present, however, there is evidence that influenza B is co-circulating. Of the five sentinel samples collected during week 02/08, two were positive for influenza A and one was positive influenza B.

Of the routine samples submitted from NHS sources during week 02/08, 42 were positive for influenza A and one was positive for influenza B.

RSV detections increased from 62 in week 01/08 to 274 in week 02/08. This is almost certainly, in part, due to the reporting delay over the holiday period.

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



Avian Influenza (H5N1)

The Ministry of Health of Indonesia announced two new cases of human infection of H5N1 avian influenza:

A 16-year-old female from West Java Province developed symptoms on 30 December 2007, was hospitalized on 4 January 2008 and is currently in hospital. Investigations found a history of deaths in chickens in the case's neighborhood in the two weeks preceding her onset of symptoms.

A 32-year-old female from Tangerang District, Banten Province developed symptoms on 3 January 2008, was hospitalized on 9 January 2008 and died on 10 January. Investigations indicate the case had a history of close contact with birds and poultry in the week prior to her onset of symptoms.

Of the 118 cases confirmed to date in Indonesia, 95 have been fatal.

According to the World Health Organization (WHO), the total number of confirmed human infections worldwide with H5N1, since December 2003, is 350 of which 217 (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

There is currently increased influenza activity in England, Ireland, Italy, Luxembourg, Slovenia, Spain and Switzerland. In France and Portugal levels of influenza activity are around the baseline threshold. All other countries reported low levels of influenza activity.

The total number of respiratory specimens collected by sentinel physicians in week 01/08 was 643, of which 143 (22%) were influenza virus positive; 44 (31%) type A not subtyped, 79 (55%) type A subtype H1 [of which 23 were A(H1N1)], one (1%) type A subtype H3 and 19 (13%) type B. In addition, 187 influenza virus detections were reported from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals), of which 130 (70%) were type A not subtyped, 28 (15%) type A subtype H1 [of which 14 were A(H1N1)] and 29 (15%) type B.

Of the total virus detections since week 40/07 (N=1475), 82% were influenza A of which about 95% were of the H1 subtype.

Ireland

Health Protection Surveillance Centre (HPSC)

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

During week 02/08, 81 ILI cases were reported from sentinel GPs, corresponding to an ILI GP consultation rate of 46 per 100,000 population (a decrease from the updated rate of 52.8 per 100,000 in week 01/08). Fifteen sentinel specimens were tested during week 02/08, three were positive for influenza A and two were positive for influenza B. Seventy-eight non-sentinel specimens were also tested, of which four were positive for influenza A and 20 were positive for RSV. To date this season, 1243 sentinel and non-sentinel specimens have been tested, 37 were positive for influenza A (36 A unsubtyped and one A H3) and 10 were positive for influenza B.

Canada

Public Health Agency of Canada

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

During week 01/08, influenza activity levels in Canada remained fairly low overall; however all influenza indicators increased from the previous week. In week 01/08, seven influenza surveillance regions (in ON, SK, AB and NT) reported localized influenza activity, while the rest reported either no activity (n=29) or sporadic activity (n=20). In week 01/08, 10.4% (271/2601) of the specimens tested were positive for influenza. Although both influenza A and B detections increased this week compared to the previous week, the percent positive for influenza A detections increased at a much higher rate. Of the influenza detections to date, 79% were influenza A and 21% were influenza B. This week, the ILI consultation rate rose slightly to 32 ILI consultations per 1,000 patient visits, which is within the expected range for this week. Note however that the sentinel response rate was low at 42%. Four new influenza outbreaks were reported in week 01 from AB, NT and ON: three were in long term care facilities and one was in another type of facility.

The National Microbiology Laboratory (NML) has characterized 118 influenza viruses for the 2007-2008 influenza season: 80 A(H1N1), nine A(H3N2) and 29 B viruses. All influenza A(H1N1) viruses were antigenically similar to A/Solomon Islands/3/2006. Of the 9 influenza A(H3N2) viruses characterized, five were antigenically similar to A/Wisconsin/67/2005 and four were antigenically similar to A/Brisbane/10/2007. One of the 5 A/Wisconsin-like viruses had reduced titer to A/Wisconsin/67/2005 reference antiserum. Of the 29 influenza B isolates characterized, three were antigenically similar to B/Malaysia/2506/2004 and 26 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 01/08, 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 below national baseline levels, and the proportion of outpatient visits for acute respiratory illness (ARI) was above national baseline levels. The East North Central, New England, and West South Central regions reported ILI equal to or above their region-specific baselines, and the East North Central, Mid-Atlantic, Pacific, and West South Central regions reported ARI equal to or above their region-specific baselines. One state reported widespread influenza activity; 10 states reported regional influenza activity; 12 states and the District of Columbia reported local influenza activity; 26 states and Puerto Rico reported sporadic influenza activity; and one state reported no influenza activity.

During week 01/08, WHO and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories reported 3,066 specimens tested for influenza viruses, 221 (7.2%) of which were positive, including 29 influenza A (H1) viruses, 12 influenza A (H3) viruses, 133 influenza A viruses that were not subtyped, and 47 influenza B viruses. The District of Columbia and 40 states from all nine surveillance regions have reported laboratory-confirmed influenza this season.

CDC has antigenically characterized 114 influenza viruses [67 influenza A (H1), 19 influenza A (H3), and 28 influenza B viruses] collected by U.S. laboratories since 30 September 2007.

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:

Piers Mook, Joy Field and Carol Joseph
Respiratory Diseases Department
HPA Centre for Infections, 61 Colindale Avenue
London NW9 5EQ, United Kingdom
Tel: (0)20 8327 7768; Fax: (0)20 8200 7868
E-mail: respcdsc@hpa.org.uk

Maria Zambon, Joanna Ellis, Alison Bermingham
and Praveen Sebastianpillai
Respiratory Virus Unit, Virus Reference Department
HPA Centre for Infections, 61 Colindale Avenue
London NW9 5HT, United Kingdom
Tel: (0)20 8327 6239; Fax: (0)20 8205 8195
E-mail: ernvl@hpa.org.uk

If you wish to be included on our email notification list please send your address to: respcdsc@hpa.org.uk