

HPA Weekly National Influenza Report

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



15 April 2009 (Week 16)

*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), NHS Direct (England and Wales) and Q Surveillance (England, Northern Ireland, Scotland and Wales).

Covered in this report:

Data, except that from ONS, MOSA and non-UK sources: 30/03/09 - 12/04/09 (Weeks 14 & 15, 2009)

Data from ONS, MOSA and non-UK sources: 23/03/09 - 05/04/09 (Weeks 13 & 14, 2009)

Summary

Influenza activity is low across the UK. In weeks 14 and 15/09 GP consultation rates decreased and remained below baseline levels in England and Wales. In Scotland the rate increased slightly but remains below baseline levels. In Northern Ireland the consultation rate remains at low levels, but thresholds have not yet been set. The proportions of cold/flu and fever calls to NHS direct in England and Wales remain low.

In week 15/09, three specimens tested positive for influenza virus (one A (H3) and two B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported seven influenza B positive specimens in week 15/09. There were no influenza-positive specimens reported from Scotland or Northern Ireland in week 15/09. One respiratory disease outbreak was reported in week 15/09 in north west England. The proportion of people over 65 years who have received this season's influenza vaccine was 74.1% in week 05/09, and 47.2% in those aged under 65 years in risk groups. Characterisation of 678 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched to the current influenza vaccine.

Most countries in Europe reported decreasing or baseline influenza activity in week 14/09 and total influenza virus detections have been declining since week 04/2009.

This is the final weekly report of this season, a full season summary will be published as soon as possible.

Antiviral drug susceptibility testing

Since week 40/08 all of the 237 influenza A (H3) isolates tested for drug sensitivity have been found to be sensitive to oseltamivir and zanamivir, but resistant to amantadine. Eighty-six influenza A (H1) specimens have been tested for anti-viral drug resistance, 85 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Fifty-five influenza B specimens have been tested and all were sensitive to oseltamivir and zanamivir.

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

England and Wales

Royal College of General Practitioners

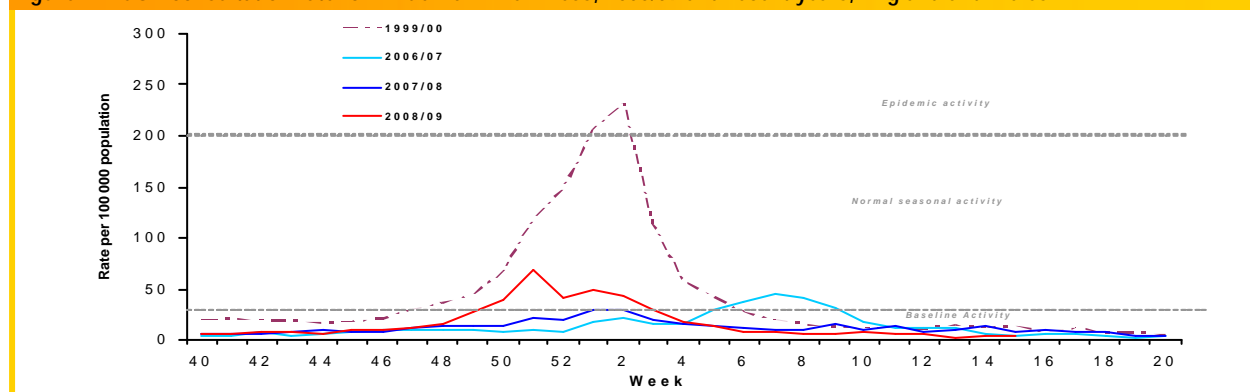
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** decreased from 4.5 per 100,000 in week 14/09 to 3.9 per 100,000 in week 15/09. This rate remains well below the baseline threshold of 30 per 100,000. In the same time period the rate in the north decreased from 2.7 per 100,000 to 1.5 per 100,000, in the central region it decreased from 4.2 per 100,000 to 1.9 per 100,000 and

in the south the rate increased slightly from 5.4 per 100,000 in week 14/09 to 6.3 per 100,000 in week 15/09. The highest rate was in the 1-4 year (8.5 per 100,000 in week 15/09) group (Figure 2).

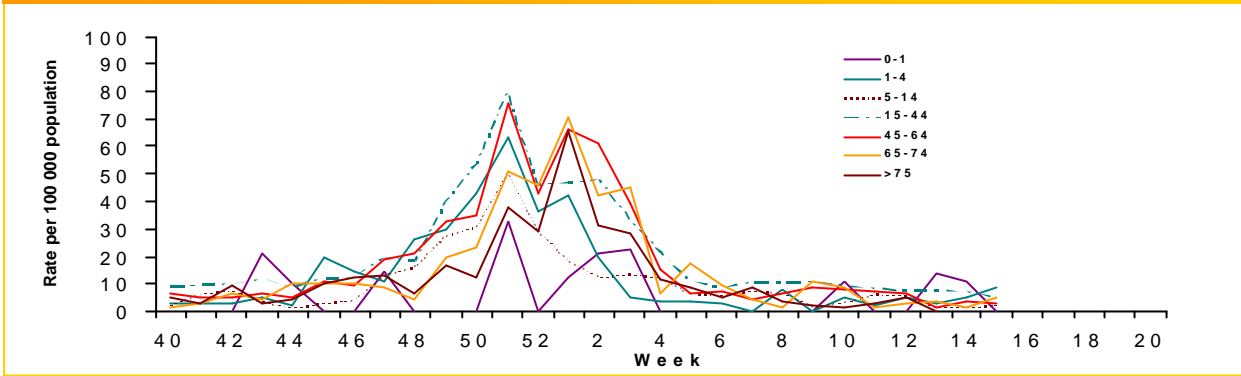
The overall rate for acute bronchitis decreased from 86.4 per 100,000 in week 14/09 to 66 per 100,000 in week 15/09. In week 15/09 the highest rate was in the under one year group at 269.3 per 100,000 which was similar to 267.4 per 100,000 in week 14/09. In the over 75s it decreased from 252.2 to 199.8 per 100,000.

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.



Wales

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

GP consultation rates for influenza were stable at 0.7 per 100,000 in week 14/09 and 0.4 per 100,000 in week 15/09. 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 decreased from 15.9 per 100,000 in week 14/09 (updated rate) to 12.8 per 100,000 in week 15/09 (Figure 3). No threshold has been set for Northern Ireland.

Scotland

Health Protection Scotland
<http://www.hps.scot.nhs.uk/>

GP consultation rates for influenza increased slightly from 6 per 100,000 in week 14/09 to 8 per 100,000 in week 13/09 (Figure 3). This remains below the Scottish baseline threshold of 50 consultations per 100,000.

QSurveillance

HPA and Nottingham University Division of Primary Care.
<http://www.qresearch.org>

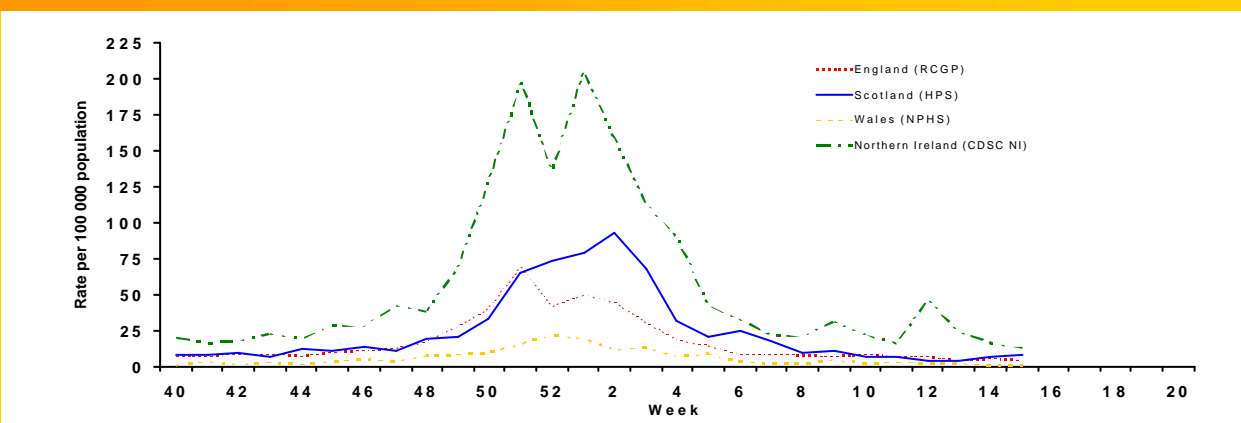
This primary care surveillance system uses QSurveillance, a database of general practice derived data. During weeks 14 and 15/09, around 3200 practices reported from across the UK covering a population of around 22 million. The rate of influenza-like illness decreased from 4.7 per 100,000 in week 14 to 3.3 per 100,000 in week 13/09. The rates are low in all age groups with the highest rates in the <1 year age group (4.6 per 100,000 in week 15/09). The rates were highest in London, Northern Ireland and the West Midlands.

NHS Direct total call activity

England and Wales
<http://www.nhsdirect.nhs.uk/>

The proportion of cold/flu calls was 0.3% in week 14 and 0.4% in week 15/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year-olds was stable at 6.3% in week 14/09 and 6.0% in week 15/09, it remains below the threshold of 9%.

Figure 3 GP Consultation rates for influenza/influenza-like illness in the U.K



Medical Officers of Schools Association (MOSA)/HPA surveillance of illness in boarding schools

The peak rate of upper respiratory tract infection (URTI) was in week 50/08 at 118.4 per 1000 (260 episodes) and for influenza-like illness (ILI) it was in week 49/08 at 10.4 per 1000 (23 episodes).

There are no results from the MOSA scheme for weeks 13 or 14/09 due to school holidays.

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

In weeks 14 and 15/09 four specimens tested positive for influenza; one A (H3) and three B. Since week 40/08 the majority of influenza A (H1) isolates have come from the south west of England, but influenza A (H3) has been more common in all regions (table 1).

Since week 40/08 678 viruses have been characterised: 58 A (H1) Brisbane/59/2007 (H1N1)-like, 525 A (H3) A/ Brisbane/10/2007 (H3N2)-like, six B/Florida/4/2006-like (vaccine strains), and 89 B/Malaysia/2506/2004-like.

Since week 40/08, all 237 A (H3) isolates tested have been found to be resistant to amantadine, but sensitive to oseltamivir and zanamivir. Eighty-six influenza A (H1) specimens have been tested; 85 were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Fifty-five influenza B specimens have been tested; all were sensitive to oseltamivir and zanamivir.

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)	A (H1)	A (H3)	B	RSV*
Week 14/09	0	0	1	0
Week 15/09	0	1	2	0
Cumulative to date (week 40/08 – 15/09)				
NE England	3	30	13	0
NW England	10	181	28	1
Yorkshire/Humber	13	192	15	10
East Midlands	8	168	6	3
West Midlands	4	107	5	7
East of England	2	248	24	12
London	10	329	49	9
SE England	3	201	22	12
SW England	38	141	12	2
Northern Ireland	0	10	0	0
Scotland	7	26	2	0
Wales	6	10	0	0
Unknown Region	1	0	1	0
Cumulative Total	105	1643	177	56

* RSV detection is by PCR only

Five specimens were submitted through the RCGP scheme in weeks 14 and 15/09 of which one was positive for influenza A (H3) (figure 4).

HPA Virological Surveillance of Influenza (England)

This parallel GP sentinel scheme was terminated for the 2008/09 season in week 12/09. Between weeks 40/08 and 12/09, 985 specimens were submitted and 323 (33%) were positive for influenza; 280 influenza A and 43 influenza B.

Other NHS and HPA laboratories (England and Wales)

There were no specimens positive for influenza A in weeks 14 and 15/09. The number of influenza B positive specimens was eight in week 14/09 and seven in week 15/09. The number of RSV reports decreased from 29 to 14 in the same time period (Table 2).

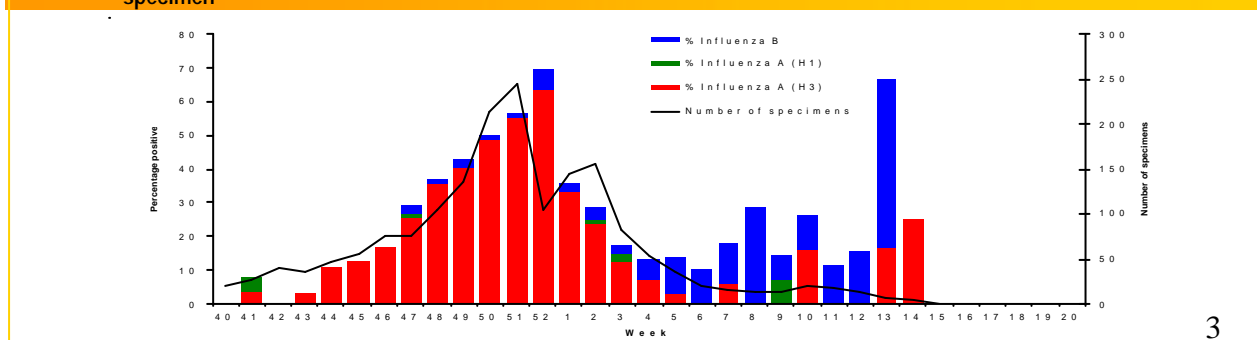
Please note that these data are provisional.

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

	Influenza A	Influenza B	RSV*
Week 14/09	0	8	29
Week 15/09	0	7	14
Cumulative to Date (week 40/08 - 15/09)			
Northern England	298	69	1591
Central England	396	37	885
Southern England	446	66	2289
Wales	61	6	353
Cumulative Total	1201	178	5118

*Detections of RSV by isolation are not included.

Figure 4 : Proportion of RCGP specimens positive for influenza detected (PCR and Isolation) by RVU,Cfl, by week of specimen



Virological data from Northern Ireland

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

In weeks 14 and 15/09 no specimens were positive for influenza but four non-sentinel samples were positive for RSV.

Virological data from Wales

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

To date this season 17 (15 A and two B) of 93 (18%) sentinel samples and 84 (79 A and five B) non-sentinel samples have been positive for influenza.

Virological data from Scotland

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

During weeks 14 and 15/09, six of 55 sentinel samples were positive for influenza B and nine were positive for other respiratory viruses. Eight routine samples from hospital and community sources were also tested in week 14/09; all were positive for influenza B.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 14/09 an estimated 9556 deaths were registered. In week 13/09, an estimated 1266 (13.5%) of 9360 registered deaths were due to respiratory illness, this is similar to 13.1% (1211/9212) in the previous week. In the seven week period from week 50/08 to week 05/09, HPA estimates that there have been approximately 9200* all-cause excess deaths compared to the expected number at this time of year. It should be noted that this excess mortality is due to all causes and cannot be specifically attributed to influenza. No excess has been observed since week 05/09. Figure 5 shows the estimated weekly all-cause registered deaths.

* Provisional data, above threshold

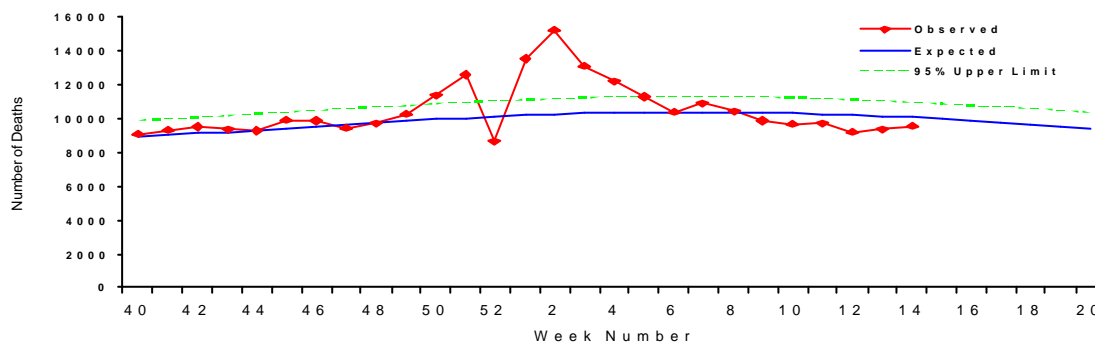
Outbreak Reports:

In week 15/09, one outbreak of respiratory disease in a care home in the north west of England was reported to CfI. It is still under investigation.

So far this season, 71 outbreaks have been reported, the majority, 41 (57%), from care homes, 18 (30%) have been from schools and the remainder from army barracks (three), hospitals (five) or other locations (one). In 57 of the outbreaks, samples were taken and of these, influenza A was detected in at least one sample from 43 (75%) outbreaks, and influenza B from six.

CfI welcomes reports of respiratory illness outbreaks. A reporting form can be found at: http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1231490117848 or by emailing the influenza team on respcdsc@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 were taken weekly from a sample of GPs in England.

Steady increasing trends were seen from the start of the campaign in September 2008. The final weekly data were taken in week 05/09 when the proportion vaccinated in the over 65 year age group reached 74.1% and in the under 65 years at risk group, the proportion was 47.2%. The proportion of carers vaccinated by week 05/09 was 38.9%.

Vaccine uptake data by SHA and PCT is available:

http://www.immunisation.nhs.uk/Professional_Information/Key_vaccine_information/Flu

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.

On 08 April 2009 WHO reported four new cases of influenza A (H5N1) in Egypt. One has died and three are reported to be hospitalised. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 417 of which 257 (61.6%) 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

Ireland

Health Protection Surveillance Centre (HPSC)

[\(http://www.hpsc.ie/\)](http://www.hpsc.ie/)

The Irish ILI consultation rate decreased slightly from 3.8 (updated rate) per 100,000 in week 14/09 to 3.0 per 100,000 population in week 15/09. Both rates are below the Irish baseline threshold of 17.8 per 100,000.

In weeks 14 and 15/09, two sentinel samples were tested but were negative for influenza, three of 80 non-sentinel samples were positive for RSV.

Europe

European Influenza Surveillance System (EISS)

www.eiss.org

In week 14/2009, two regions in the Russian Federation continued to report high influenza activity. All other countries in Europe reported decreasing or baseline influenza activity. Total influenza virus detections have been declining since week 04/2009, indicating that influenza activity is coming to an end in Europe for the 2008-2009 season.

In week 14/09, influenza activity was reported as high in two of seven Russian regions, medium in eight countries, and low in 27. Widespread influenza activity was reported in Croatia, regional activity in three countries, local activity in six and sporadic or no activity in the remaining 25.

Of the 875 respiratory specimens collected by sentinel physicians during week 14/09, 167 (19%) tested positive for influenza, 45 type A (not subtyped), 21 A (H3), four A (H1) and 97 type B. In addition, 306 non-sentinel specimens tested positive including 57 influenza A (not subtyped), 94 A (H3), 53 A (H1), and 102 type B.

Since week 40/08, 3220 viruses have been characterised; 2455 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 765 (24%) were B/Malaysia/2506/2004-like.

Canada

Public Health Agency of Canada

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

In weeks 13 and 14/09, influenza activity decreased; one region reported widespread activity, 17 reported localized and 31 reported sporadic or no activity. The proportion of samples positive for influenza decreased to 14.5% (628/4339) in week 14/09. Twenty-four new influenza outbreaks were reported in week 14/09 (12 in care homes, 11 in schools and one in a hospital).

Since 1 September 2008, 751 influenza viruses have been characterised: 174 influenza A/Brisbane/59/2007(H1N1)-like, 138 A/Brisbane/10/2007 (H3N2)-like, seven influenza B/Florida/4/2006-like and 365 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine.

All of 335 influenza A (H1N1) isolates that have been tested have 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 weeks 13 and 14/09, influenza levels continued to decrease. In week 14/09 four states reported widespread activity, 18 states reported regional activity, 20 states reported local influenza activity, the District of Columbia and seven states reported sporadic influenza activity and one state did not report.

In week 14/09 the proportion of samples positive for influenza decreased to 12.3% (348/2829): 54 influenza A (H1), seven A (H3), 84 A (not subtyped) and 203 influenza B. Influenza A (H1) has been predominant overall this season but the proportion of influenza B is increasing regionally and nationally.

Since week 40/08, 945 influenza viruses have been characterised; 594 A/Brisbane/59/2007 (H1N1)-like, 88 A/Brisbane/10/2007 (H3N2)-like, 50 B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 213 from the B/Victoria lineage.

Of the 699 influenza A (H1) viruses tested this season, 694 (99.3%) have been found to be resistant to oseltamivir, but all are sensitive to zanamivir.

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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