

HPA Weekly National Influenza Report

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



18 February 2009 (Week 08)

*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: 02/02/09 - 15/02/09 (Weeks 06 & 07, 2009)

Data from ONS, MOSA and non-UK sources: 26/01/09 - 08/02/09 (Weeks 05 & 06, 2009)

Summary

Influenza activity is low across the UK.

In weeks 06 and 07/09 GP consultation rates decreased and remained below baseline levels in England, Wales and Scotland. In Northern Ireland the consultation rate has decreased but thresholds have not yet been set. The proportion of cold/flu to NHS direct in England and Wales remains below baseline levels, the proportion of fever calls in 5-14 year olds has increased slightly, but remains below the baseline threshold.

In week 07/09, 12 specimens tested positive for influenza virus (three A (H1), four A (H3) and five B) at the Centre for Infections' Respiratory Virus Unit (RVU). Other NHS and HPA laboratories in England and Wales reported 12 influenza A, and 10 influenza B positive specimens in week 07/09. Six Scottish and three Northern Irish influenza-positive specimens were reported in weeks 06 and 07/09. No outbreaks have been reported in the last two weeks. 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 606 influenza viruses since week 40/08 by RVU have shown that the majority of circulating strains are well-matched to the current influenza vaccine.

Influenza activity continued to intensify across central Europe, with most countries reporting medium to high intensity. Influenza activity is generally declining in western Europe and is low to medium in eastern Europe.

The WHO has announced the recommendations for the 2009/10 northern hemisphere influenza vaccine.

Antiviral drug susceptibility testing

Since week 40/08 all of the 193 influenza A (H3) isolates that have been tested for drug sensitivity have been found to be sensitive to oseltamivir and zanamivir, but resistant to amantadine. Sixty-two influenza A (H1) specimens have been tested for anti-viral drug resistance, 61 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Eighteen 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

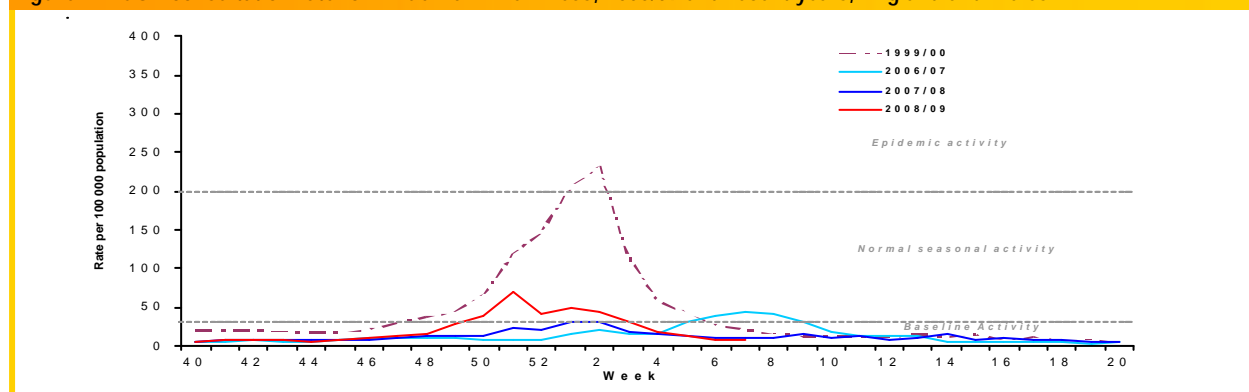
<http://www.rcgp.org.uk/bru/index.asp>

The overall influenza-like illness incidence rate** changed very little from 7.4 per 100,000 in week 06/09 to 7.8 per 100,000 in week 07/09. This rate remains below the baseline threshold of 30 per 100,000. In the same time period the rate in the north decreased from 10 per 100,000 to 5.7 per 100,000, in the central region it increased from 5.2 per 100,000 to 9.1 per 100,000 and

in the south the rate decreased from 8.2 per 100,000 to 7.7 per 100,000. The rates have decreased in most age groups with the highest still in the 15-44 year (11.6 per 100,000 in week 07/09) group (Figure 2).

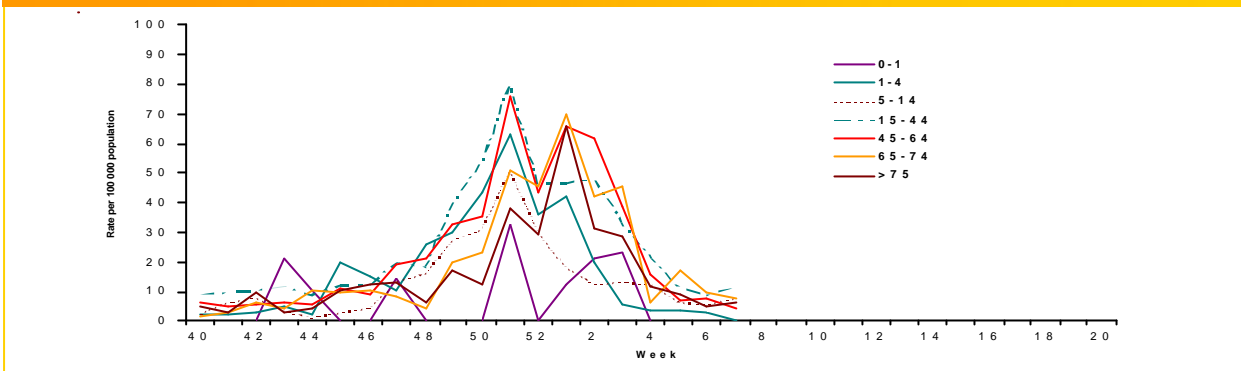
The overall rate for acute bronchitis remained constant at 89.4 per 100,000 in week 07/09. The highest rate was in the under one year group at 285.6 per 100,000 though this was decreased from 324.4 per 100,000 in week 06/05. The rate increased slightly in the over 75 years group from 230.8 to 246.6 per 100,000 in week 07/09.

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 decreased slightly from 2.8 per 100,000 in week 06/09 to 1.4 per 100,000 in week 07/09. 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 30.5 per 100,000 in week 06/09 (updated rate) to 21.5 per 100,000 in week 07/09 (Figure 3). The highest rate was in the <1 year group at 90.4 per 100,000. No threshold has been set for Northern Ireland.

Scotland

Health Protection Scotland

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

GP consultation rates for influenza decreased from 25 per 100,000 in week 06/09 to 17 per 100,000 in week 07/09 (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 06 and 07/09, around 3200 practices reported from across the UK covering a population of around 22 million. The rate of influenza-like illness decreased from 7.2 per 100,000 in week 06/09 to 6.9 per 100,000 in week 07/09. The rates have decreased in all the age groups with the highest rates in the 15-44 year age group (9.0 per 100,000 in week 07/09). The rates were highest in London.

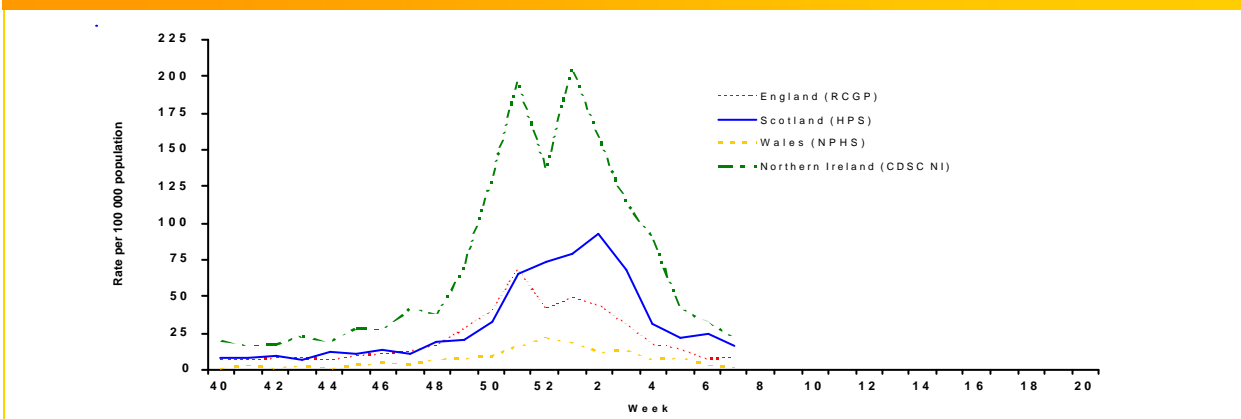
NHS Direct total call activity

England and Wales

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

The proportion of cold/flu calls decreased from 0.5 % in week 06/09 to 0.4% in week 07/09, which is below the threshold of 1.2%. The proportion of fever calls in 5-14 year olds increased from 5.8% in week 06/09 to 7.3% in week 07/09, 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)

In week 06/09 23 schools reported data. There were 84 new episodes of upper respiratory tract infection giving a rate of 11.4 per 1000, this is increased from the previous week's rate of 9.9 per 1000, but low compared to the peak this season in week 50/08, with 260

episodes giving a rate of 118.4 per 1000. In week 06/09 there were eight new episodes of influenza or ILI which gives a rate of 1.1 per 1000 which is similar to the previous week's rate and lower than this season's peak in week 49/08 when there were 23 new episodes giving a rate of 10.4 per 1000.

Laboratory indices of acute respiratory illness

Respiratory Virus Unit (RVU) Influenza Reference Laboratory, Cfl

In weeks 06 and 07/09 22 specimens tested positive for influenza; five A (H1), eight A (H3) and nine 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 40/08 606 viruses have been characterised: 52 A (H1) Brisbane/59/2007 (H1N1)-like, 512 A (H3) A/Brisbane/10/2007 (H3N2)-like, five B/Florida/4/2006-like (vaccine strains), and 37 B/Malaysia/2506/2004-like.

Since week 40/08, all 193 A (H3) isolates that have been tested have been found to be resistant to amantadine, but sensitive to oseltamivir and zanamivir. Sixty-two influenza A (H1) specimens have been tested for anti-viral resistance since week 40/08, 61 of these were resistant to oseltamivir and all were sensitive to zanamivir and amantadine. Eighteen influenza B specimens have been tested so far and were sensitive to oseltamivir and zanamivir.

Five of 34 (15%) specimens from the RCGP surveillance scheme were positive for influenza in weeks 06 and 07/09 (figure 4), this is a slight increase from 14% positive in week 05/09.

Please note that these data are provisional.

HPA Virological Surveillance of Influenza (England)

Three of seven samples submitted in weeks 06 and 07/09 from this parallel GP sentinel scheme were positive for influenza B. Between weeks 40/08 and 07/09, 865 specimens have been submitted and 297 (34%) have been positive for influenza; 274 influenza A and 23 influenza B.

Other NHS and HPA laboratories (England and Wales)

The number of specimens positive for influenza A has decreased from 19 in week 06/09 to 12 in week 07/09 but the number of influenza B positives has increased from ten to 21 (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 type (subtype)	A (H1)	A (H3)	B	RSV*
Week 06/09	2	4	4	1
Week 07/09	3	4	5	0
Cumulative to date (week 40/08 – 07/09)				
NE England	2	29	8	0
NW England	9	150	5	1
Yorkshire/Humber	12	168	12	9
East Midlands	8	135	1	2
West Midlands	2	96	3	6
East of England	2	218	10	11
London	8	288	19	7
SE England	3	186	14	12
SW England	33	119	3	2
Northern Ireland	0	7	0	0
Scotland	4	22	0	0
Wales	4	7	0	0
Cumulative Total	87	1425	75	50

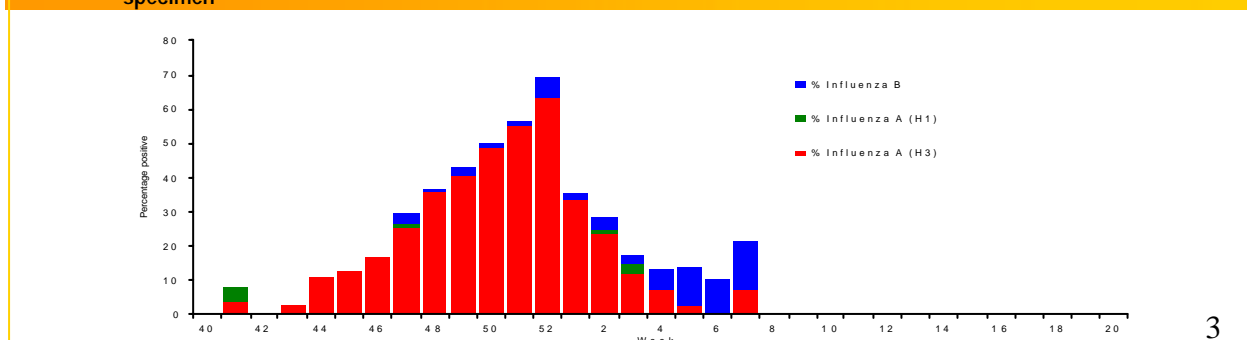
* RSV detection is by PCR only

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

	Influenza A	Influenza B	RSV*
Week 06/09	19	10	85
Week 07/09	12	21	102
Cumulative to Date (week 40/08 - 07/09)			
Northern England	292	32	1474
Central England	391	13	834
Southern England	438	34	2122
Wales	54	1	301
Cumulative Total	1175	80	4743

*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 06/09 one of six sentinel specimens was positive for influenza B, no sentinel samples were tested in week 07/09. Of the 96 non-sentinel samples tested in the two weeks, two were positive for influenza (one A and one B) and 18 for RSV.

Virological data from Wales

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

In week 06/09 one sentinel sample was tested but was not positive for influenza. To date this season 16 of 90 (18%) sentinel samples and 69 non-sentinel samples have been positive for influenza.

Virological data from Scotland

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

During week 06/09, six of 37 sentinel samples were positive for influenza (one A (H3) and five B). One sentinel sample was positive for RSV and six were positive for other viruses. Thirty-six routine samples from hospital and community sources were also tested in week 06/09; 18 (46%) were positive for influenza; seven A (one A(H1) and five A (H3)) and 11 B; one influenza B-positive specimen was also positive for RSV and 18 further were positive for RSV alone.

Data for week 07/09 are not yet available.

Other Reports (UK)

Mortality Data

Office for National Statistics

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

In week 06/09 an estimated 10,374 deaths were registered. In week 05/09, an estimated 1892 (16.7%) of 11,305 registered deaths were due to respiratory illness, this is a decrease from 18.8% (2288/12,192) 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 was observed in week 06/09. Figure 5 shows the estimated weekly all-cause registered deaths.

* Provisional data, above threshold

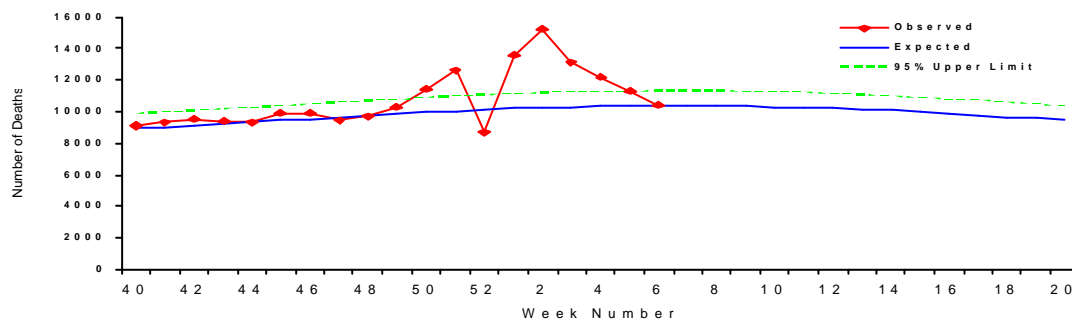
Outbreak Reports:

No new respiratory disease outbreaks have been reported in the last two weeks. So far this season, 65 outbreaks have been reported, the majority, 39 (60%), from care homes, 17 (26%) have been from schools and the remainder from army barracks (three), hospitals (five) or other locations (one). In 54 of the outbreaks, samples were taken and of these, influenza A was detected in at least one sample from 43 (80%) outbreaks. The outbreaks were reported from most regions with the greatest number from the east of England (17 outbreaks, 26%) and the south east (13 outbreaks, 20%).

Cfl 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 since 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%

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. Since 5 February 2009 WHO has reported three new cases of influenza A (H5N1); two in Egypt and one in Viet Nam. All three are reported to be hospitalised. According to WHO, the total number of confirmed human infections worldwide with H5N1, since December 2003, is 407 of which 254 (62%) 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

Influenza activity outside the UK

Ireland

Health Protection Surveillance Centre (HPSC)
(<http://www.hpsc.ie/>)

The Irish ILI consultation rate decreased from 15.6 (updated rate) per 100,00 in week 06/09 to 9.1 per 100,000 population in week 07/09. Both figures are below the Irish baseline threshold of 17.8 per 100,000.

In weeks 06 and 07/09 five of six sentinel samples were positive for influenza A (one A (H3)), three of 146 non-sentinel samples were positive for influenza (two A and one B) and 15 for RSV.

Europe

European Influenza Surveillance System (EISS)
(www.eiss.org)

Influenza activity continued to intensify across central Europe, with most countries reporting medium to high intensity. Influenza activity is generally declining in western Europe and is low to medium in eastern Europe (e.g. Russia and Ukraine). Influenza A(H3) continues to be the predominant circulating virus. In week 06/09, influenza activity was reported as high in Austria, Croatia, Finland, Luxembourg, Poland and Switzerland, medium in 19 countries, and low in seven. Widespread influenza activity was reported in 18 countries, regional activity in three, local activity in six and sporadic or no activity in the remaining five.

Of the 3474 respiratory specimens collected by sentinel physicians during week 06/09, 1034 (30%) tested positive for influenza, 423 type A (not subtyped), 396 A (H3), 58 A (H1) and 161 type B. In addition, 799 non-sentinel specimens tested positive including 579 influenza A (not subtyped), 170 A (H3), five A (H1), and 52 type B.

Since week 40/08, 1806 viruses have been characterised; 1724 of these seem to be a good match to the strains recommended for the 2008-09 vaccine, the remaining 82 (4.5%) were B/Malaysia/2506/2004-like.

Canada

Public Health Agency of Canada
(<http://www.phac-aspc.gc.ca/fluwatch/index.html>)

During weeks 05 and 06/09, influenza activity continued to increase with more regions reporting localized and sporadic activity. The proportion of samples positive for influenza increased to 11.7% (568/4865) in week 06/09. Twenty-three new influenza outbreaks were reported in week 06/09 (six in care homes, one in a hospital and 16 in schools), in week 05/09 18 new outbreaks were reported.

Since 1 September 2008, 290 influenza viruses have been characterised: 76 influenza A/Brisbane/59/2007(H1N1)-like, 29 A/Brisbane/10/2007 (H3N2)-like, six influenza B/Florida/4/2006-like and 179 B/Malaysia/2506/2004-like, the latter was a component of the 2007/08 vaccine. All of 120 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 05 and 06/09, influenza levels continued to increase. In week 06/09 16 states reported widespread activity, 16 states reported regional activity, the District of Columbia and 14 states reported local influenza activity and, Puerto Rico and four states reported sporadic influenza activity.

In week 06/09 the proportion of samples positive for influenza increased to 20.5% (1154/5596): 146 influenza A (H1), 14 A (H3), 741 A (not subtyped) and 253 influenza B. Since week 40/08 309 influenza viruses have been characterised; 194 A/Brisbane/59/2007 (H1N1)-like, 37 A/Brisbane/10/2007 (H3N2)-like, 23 B/Florida/04/2006-like, which are the components recommended for the 2008-09 vaccine, and 55 from the B/Victoria lineage.

Of the 240 influenza A (H1) viruses tested this season, 236 (98.3%) 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/>)

2009/10 Vaccine composition

The components recommended for the 2009/10 northern hemisphere influenza vaccine are as follows;

A/Brisbane/59/2007 (H1N1)-like virus;
A/Brisbane/10/2007 (H3N2)-like virus;
B/Brisbane/60/2008-like virus.

Further details can be found on the WHO website;
(http://www.who.int/csr/disease/influenza/recommendations2009_10north/en/index.html)

Acknowledgements

Data for this report were collated by the Influenza/Respiratory Virus Team:

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