

Influenza Weekly Surveillance Report



A REPORT BY THE HEALTH PROTECTION SURVEILLANCE CENTRE IN COLLABORATION WITH THE IRISH COLLEGE OF GENERAL PRACTITIONERS, THE NATIONAL VIRUS REFERENCE LABORATORY & THE DEPARTMENTS OF PUBLIC HEALTH

Week 42 2008 (13th - 19th October 2008)

Summary

During week 42 2008, influenza activity was at low levels in Ireland, with 13 influenza-like illness (ILI) cases reported by sentinel GPs. Two sentinel specimens tested by the NVRL were positive for influenza virus during week 42.

Background

This is the ninth season of influenza surveillance using computerised sentinel general practices in Ireland. The Health Protection Surveillance Centre (HPSC) is working in collaboration with the Irish College of General Practitioners (ICGP), the National Virus Reference Laboratory (NVRL) and the Departments of Public Health on this sentinel surveillance project. Fifty-four sentinel general practices have been recruited to report on the number of patients with ILI on a weekly basis. ILI is defined as the sudden onset of symptoms with a temperature of 38°C or more, with two or more of the following: headache, sore throat, dry cough and myalgia. Sentinel GPs send a combined nasal and throat swab,

to the NVRL, on at least one patient per week where a clinical diagnosis of ILI is made during the influenza season. This report includes data on ILI cases reported by sentinel GPs, influenza test results from the NVRL, influenza notifications, registered deaths attributed to influenza, and regional influenza activity reported by the Departments of Public Health.

Results

Clinical Data

Thirteen ILI cases were reported from sentinel GPs during week 42 2008, corresponding to an ILI consultation rate of 7.3 per 100,000 population, an increase from the updated rate of 5.7 per 100,000 population during week 41 2008 (figure 1). This ILI rate is below the baseline threshold and within expected levels for the start of the influenza season. The mean ILI rate for week 42 for the last nine seasons (2000/2001-2008/2009) is 9.5 per 100,000 population.

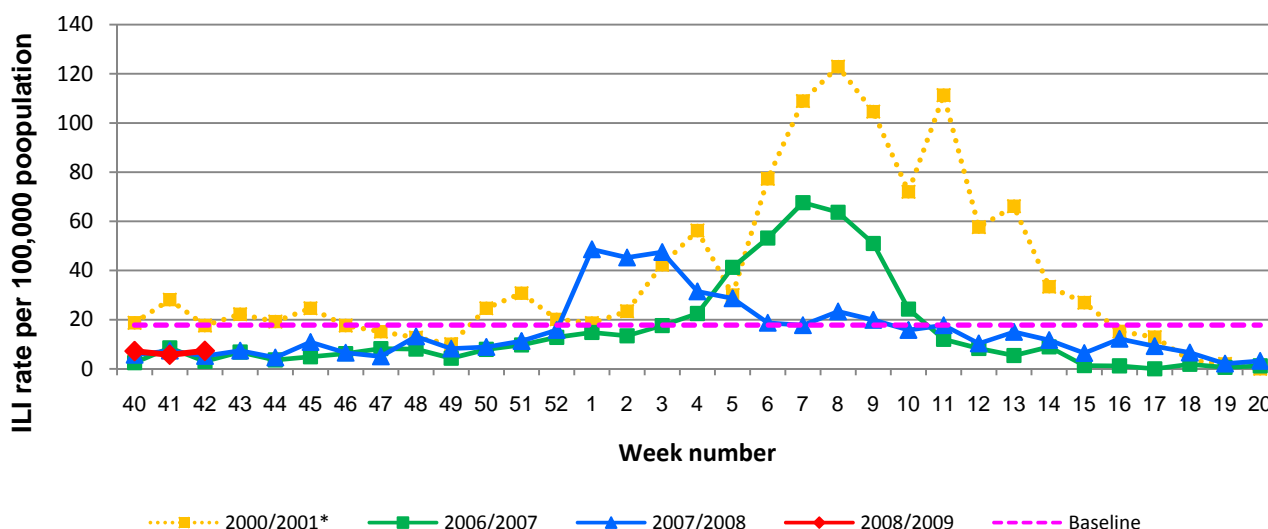


Figure 1: Influenza baseline activity threshold and GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2006/2007, 2007/2008 and 2008/2009 influenza seasons

*Highest recorded levels of ILI activity since initiation of sentinel surveillance

Results (continued)

Forty-one of 54 (75.9%) sentinel general practices reported during week 42 2008, with six reporting ILI cases. Two ILI cases were reported in the 5-14 year age group (8.4 per 100,000 population), 10 ILI cases were reported in the 15-64 year age group (8.2 per 100,000 population) and one case was reported in those aged 65 years or older (5.1 per 100,000 population), as shown in figure 2. No ILI cases were reported in the 0-4 year age group.

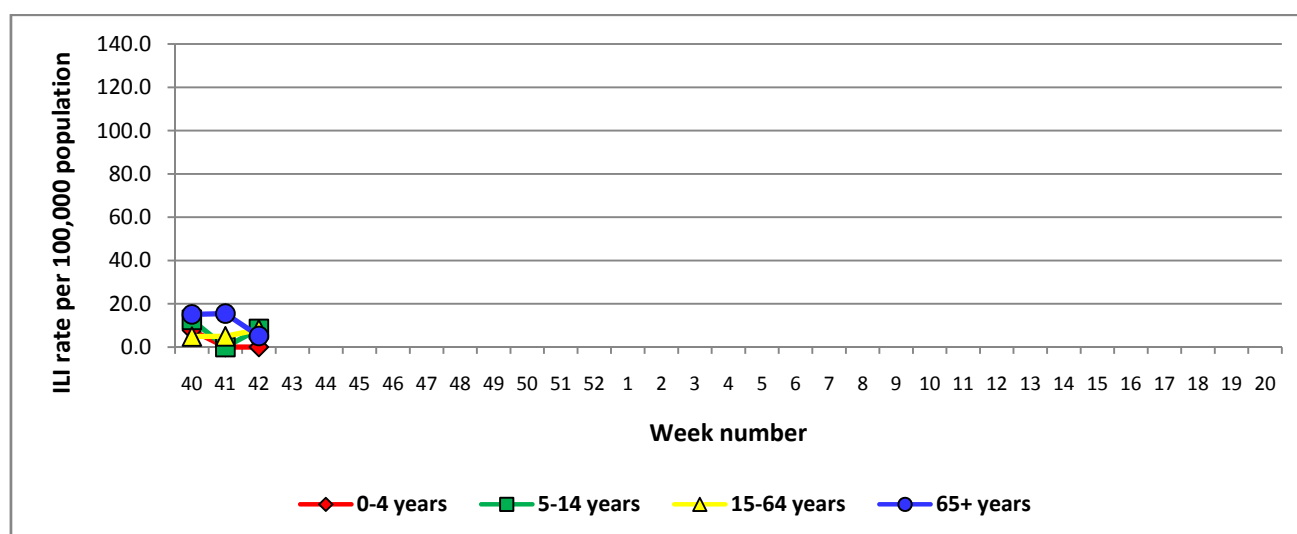


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2008/2009 influenza season
*Please note the denominator used in the age specific consultation rate is from the 2006 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

Virological Data from the NVRL

The NVRL tested three specimens taken by sentinel GPs during week 42 2008, two of which were positive for influenza A. The NVRL also tested 49 non-sentinel specimens taken during week 42 2008, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and 11 were positive for respiratory syncytial virus (RSV) (table 1).

Influenza positive specimens by HSE-Area and age group (in years), for week 42 2008 and the 2008/2009 season to date are shown in tables 2 and 3, respectively. Figure 3 compares the ILI consultation rates by season and the number of positive influenza specimens tested by the NVRL. Figure 4 compares the number and percentage of non-sentinel RSV positive specimens detected during the 2007/2008 and 2008/2009 influenza seasons. The RSV percentage positive for week 42 2008 (22.4%) is higher than the mean percentage positive value (16.4%) for week 42 for the last nine seasons (2000/2001 -2008/2009).

Table 1: Number of sentinel and non-sentinel* respiratory specimens and positive results for week 42 2008

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
42 2008	Sentinel	3	2	66.7	2	0	NA
	Non-Sentinel	49	0	0	0	0	11
	Total	52	2	3.8	2	0	11
40-42 2008	Sentinel	10	2	20.0	2	0	NA
	Non-Sentinel	156	0	0.0	0	0	23
	Total	166	2	1.2	2	0	23

Table 2: Total number of sentinel and non-sentinel* influenza A and B positive specimens by HSE area for week 42 2008 and the 2008/2009 season to date

	Week 42 2008			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
HSE-ER	0	0	0	0	0	0
HSE-M	1	0	1	1	0	1
HSE-MW	0	0	0	0	0	0
HSE-NE	1	0	1	1	0	1
HSE-NW	0	0	0	0	0	0
HSE-SE	0	0	0	0	0	0
HSE-S	0	0	0	0	0	0
HSE-W	0	0	0	0	0	0
Total	2	0	2	2	0	2

* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

Table 3: Total number of sentinel and non-sentinel* influenza A and B positive specimens by age group (in years) for week 42 2008 and the 2008/2009 season to date

	Week 42 2008			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
0-4 years	0	0	0	0	0	0
5-14 years	1	0	1	1	0	1
15-64 years	1	0	1	1	0	1
65 years and older	0	0	0	0	0	0
Age group unknown	0	0	0	0	0	0
Total	2	0	2	2	0	2

*Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

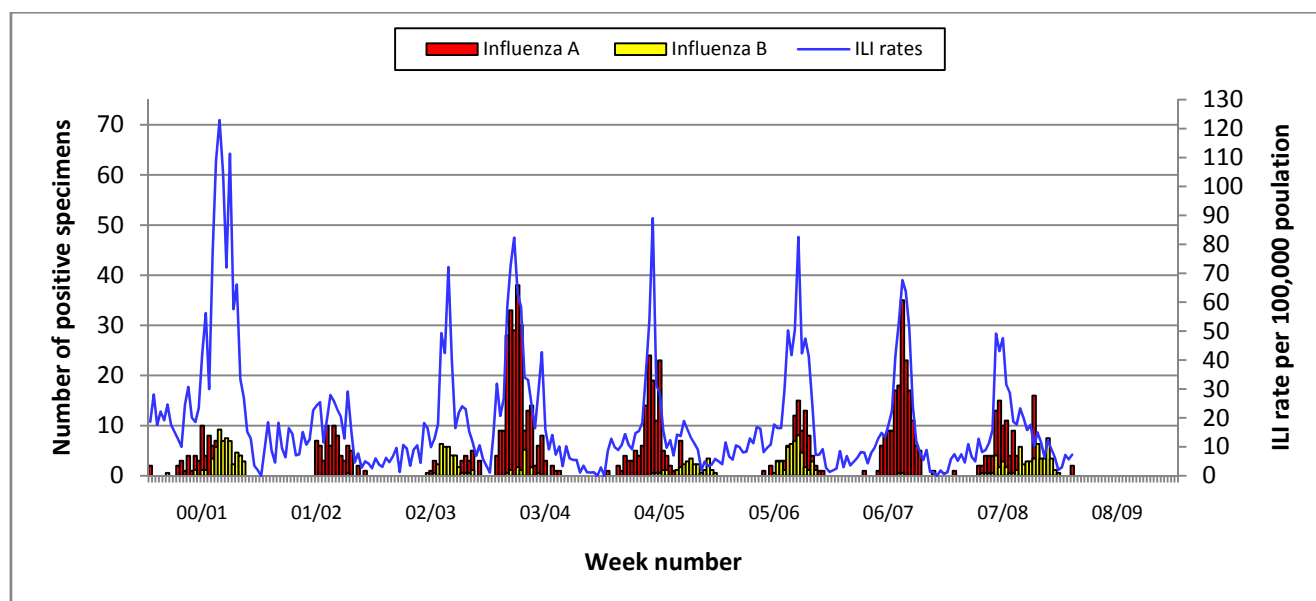


Figure 3: GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2008/2009

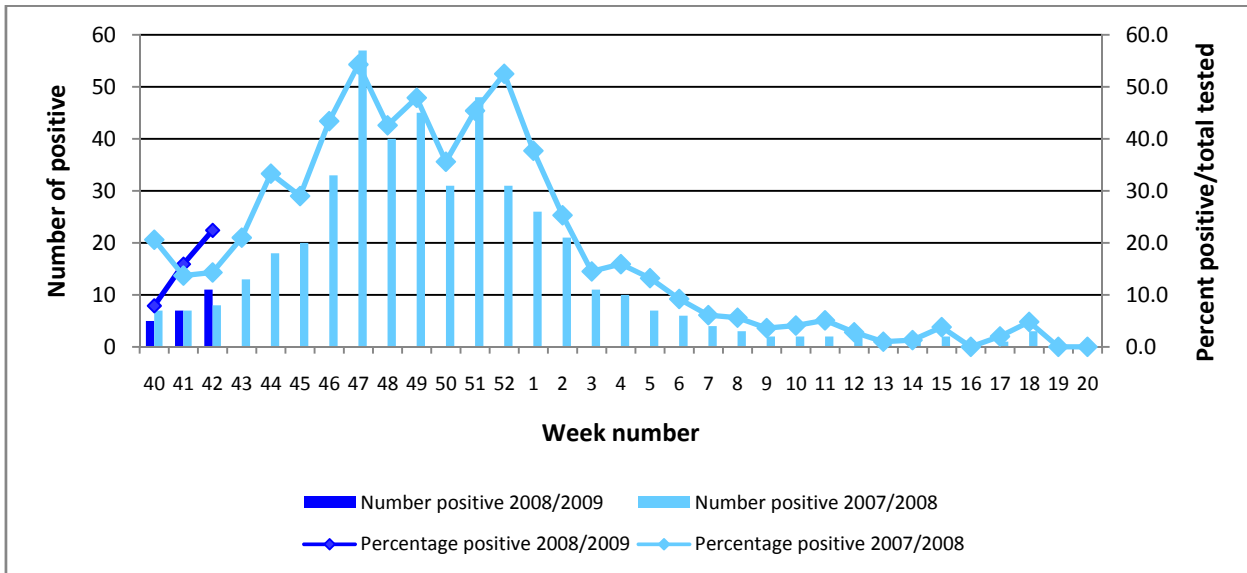


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2007/2008 and 2008/2009 influenza seasons

Weekly Influenza Notifications

No influenza cases were notified to HPSC during week 42 2008. It should be noted that 87 influenza (type unspecified) cases notified to HPSC during the 2008 summer season (weeks 21-39 2008) were possible cases (i.e. clinical cases with no laboratory confirmation). These were late GP notifications from HSE-E for 2007. Influenza cases notified to HPSC during the summer of 2008 and during the 2008/2009 influenza season are shown in figure 5 and compared to GP ILI consultation rates.

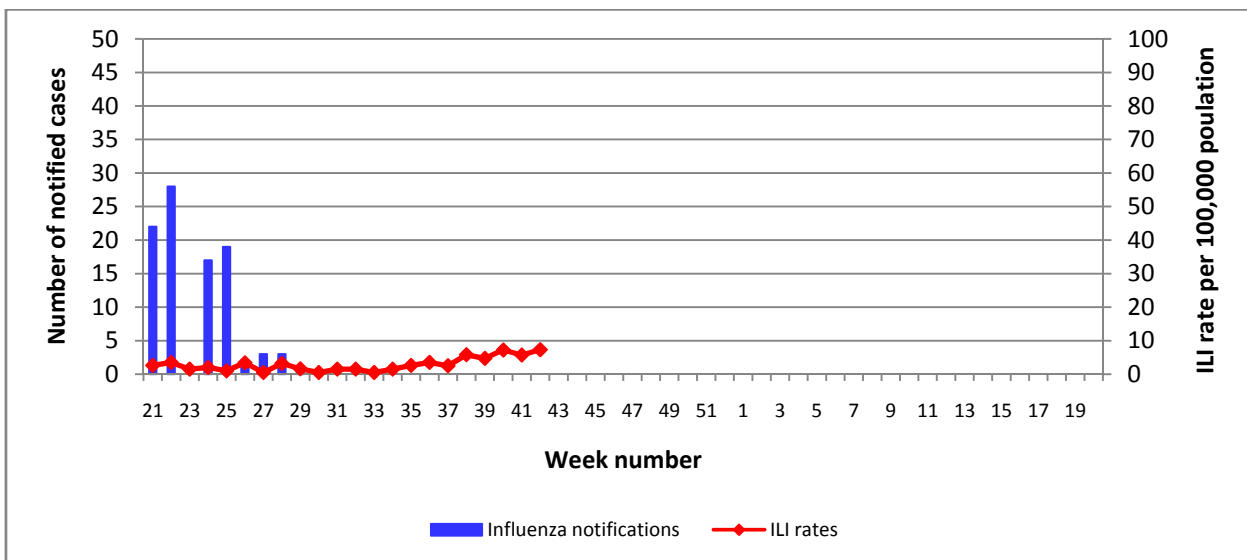


Figure 5: Number of notifications* of influenza by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2008 and the 2008/2009 influenza season

*Notification data are provisional and were extracted from [CIDR](#) on the 22/10/2008 at 15.50

Baseline thresholds

A baseline threshold of 17.8 cases per 100,000 population will be used alongside expert opinion to assess influenza activity during the 2008/2009 influenza season in Ireland. This baseline was derived from the EISS method using a mathematical algorithm to identify the influenza activity period of the previous eight seasons.

Mortality Data

One death attributed to influenza was registered with the General Register Office (GRO) during the summer of 2008. This death was an adult over 65 years of age who died in March 2008. Influenza was the secondary cause of death in this case. No influenza associated deaths registered with the GRO were reported to HPSC during week 42 2008.

Outbreak Reports

No ILI/influenza outbreaks were reported to HPSC during the summer of 2008 or during week 42 2008.

Regional Influenza Activity by HSE-Area

Influenza activity is reported on a weekly basis from the Departments of Public Health. Influenza activity is based on sentinel GP ILI consultation rates, laboratory confirmed influenza cases and ILI/influenza outbreaks. Each Department of Public Health has established one sentinel hospital in each HSE-Area, to report total hospital admissions, accident and emergency admissions and respiratory admissions data on a weekly basis. Sentinel primary and secondary schools were also established in each HSE-Area in close proximity to the sentinel GPs, reporting absenteeism data on a weekly basis. During week 41 2008, no increases in absenteeism were reported from sentinel schools and no increases in respiratory admissions were reported by sentinel hospitals. During week 41 2008 sporadic influenza activity (based on isolated cases of ILI) was reported in five HSE-areas: HSE-ER, -MW, -NE, -SA and -SE (figure 6).

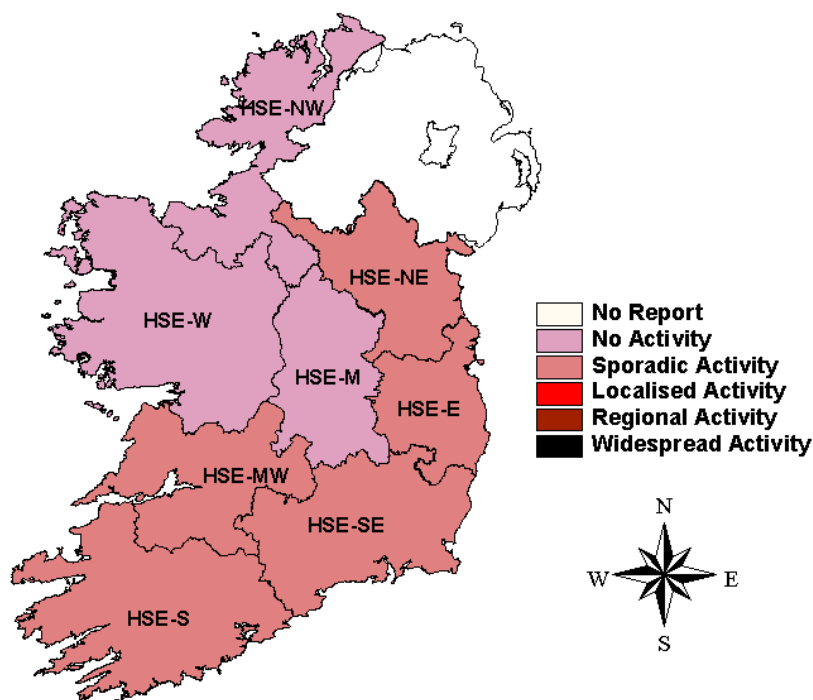


Figure 6: Map of influenza activity by HSE-Health Area during week 41 2008

Influenza Activity in Northern Ireland

During week 42 2008, two cases of clinical influenza and 24 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 17.3 per 100,000 population, which remains stable compared to the updated rate of 17.6 per 100,000 for week 41 2008. One sentinel specimen and 33 non-sentinel specimens were tested for influenza during week 42 2008 and none were positive for influenza. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Influenza activity remained stable at low levels across all the countries of the UK during week 42 2008. Some clinical indicators of influenza have slightly increased in England and Scotland during week 42 2008 compared with week 41 2008, but remain below baseline activity thresholds. Reports of influenza A and B from NHS and HPA laboratories are also at low levels. During 42 2008, one influenza A(H3) tested positive from samples referred to the Centre for Infections' Respiratory Virus Unit (RVU). The first oseltamivir resistant influenza A(H1N1) has also been identified for the 2008/2009 influenza season through the HPA sentinel GP virological surveillance scheme. The virus contains the H274Y mutation but remains sensitive to zanamivir and amantadine, and is antigenically similar to the H1N1 reference strain A/Brisbane/59/2007, which is included in this season's influenza vaccine.

http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0708/weekly_summary.htm

Influenza Activity in Europe

Influenza surveillance data for Europe can be accessed at the following link:

<http://www.eiss.org/index.cgi>

Influenza Activity in Canada

Influenza surveillance data for Canada can be accessed at the following link:

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

Influenza Activity in the United States

Influenza surveillance data for the United States can be accessed at the following link:

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

Influenza Activity Worldwide

Global Influenza surveillance data can be accessed at the following link:

<http://gamapserver.who.int/GlobalAtlas/home.asp>

Avian Influenza

As of the 23rd of October 2008, 387 confirmed human cases and 245 (63.3%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Bangladesh, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao Peoples Democratic Republic, Myanmar, Nigeria, Pakistan, Thailand, Turkey and Viet Nam.

Further information on avian influenza is available on the following websites:

WHO http://www.who.int/csr/disease/avian_influenza/en/

HPSC <http://www.ndsc.ie/hpsc/A-Z/Respiratory/AvianInfluenza/>

ECDC <http://www.ecdc.eu.int/>

Northern Hemisphere Influenza Vaccine for the 2008/2009 Season

The members of the WHO Collaborating Centres on Influenza have recommended that influenza vaccines for the 2008/2009 influenza season in the Northern Hemisphere contain the following strains:

- an A/Brisbane/59/2007 (H1N1)-like virus;
- an A/Brisbane/10/2007 (H3N2)-like virus;*
- a B/Florida/4/2006-like virus.#

* A/Brisbane/10/2007 is a current southern hemisphere vaccine virus.

B/Florida/4/2006 and B/Brisbane/3/2007 (a B/Florida/4/2006-like virus) are current southern hemisphere vaccine viruses. http://www.who.int/csr/disease/influenza/recommendations2008_9north/en/index.html

Further information on influenza can be found on the [HPSC website](#)

Acknowledgements

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This report was produced by Sarah Jackson and Dr. Joan O'Donnell, HPSC