

Influenza Surveillance in Ireland - Weekly Update

Influenza Week 1 2010 (4th to 10th January 2010)



Summary

- Overall, influenza activity in Ireland remained stable during week 1:
 - ♦ The sentinel GP influenza-like illness (ILI) consultation rate was 21.0 per 100,000 population during week 1, an increase compared to the updated rate of 15.3 per 100,000 reported during week 53*. This rate is above the Irish baseline threshold.
 - ♦ The highest sentinel GP age-specific ILI consultation rate occurred in the 15-64 year age group during week 1.
 - ♦ The number of laboratory confirmed cases of pandemic (H1N1) 2009 continued to decrease.
 - ♦ The number of hospitalised cases of confirmed pandemic (H1N1) 2009 remained stable.
 - ♦ Two hospitalised cases of confirmed pandemic (H1N1) 2009 were admitted to ICU.
 - ♦ The proportion of flu-related calls to GP Out-of-Hours services continued to decrease.
 - ♦ No pandemic (H1N1) 2009, influenza or ILI outbreaks were reported.
 - ♦ Pandemic (H1N1) 2009 is the only influenza virus circulating; 100% of specimens positive for influenza were pandemic (H1N1) 2009
 - ♦ Respiratory Syncytial Virus (RSV) activity decreased.
- Based on the surveillance of laboratory confirmed cases of pandemic (H1N1) 2009, as of 9th January:
 - ♦ 4,554 confirmed cases have been notified in Ireland.
 - ♦ Children and young adults remain the most affected groups; 80.1% of cases are less than 35 years of age.
 - ♦ Clinical illness continues to be mild in the majority of cases.
- Twenty-two deaths in confirmed cases of pandemic (H1N1) 2009 have been reported to date (14th January).

Introduction

In order to monitor influenza activity in Ireland a number of surveillance systems are in place:

1. Irish College of General Practitioners (ICGP) sentinel surveillance system
2. GP Out-of-Hours system
3. Virological data from the National Virus Reference Laboratory (NVRL), Cork University Hospital (CUH) and University College Hospital, Galway (UCHG)
4. Enhanced surveillance system for pandemic (H1N1) 2009 using the Computerised Infectious Disease Reporting system (CIDR)
5. Outbreak reporting (CIDR)
6. Pandemic (H1N1) ICU enhanced surveillance system

Details of these surveillance systems are provided in Appendix A at the back of this report.

* Since the last report, extra information on the number of ILI consultations and positive influenza specimens occurring in week 53 was provided by sentinel GPs and the NVRL and the rate for the week was adjusted accordingly

1. GP sentinel surveillance system

Clinical Data

During week 1 2010, 49 of 61 (80.3%) ICGP sentinel general practices provided data, with 23 practices (37.7%) reporting 43 influenza-like illness (ILI) cases and 38 practices reporting no ILI cases. This corresponds to an ILI consultation rate of 21.0 per 100,000 population, which is an increase compared to the updated rate of 15.3 per 100,000 population reported during week 53 2009 and is above the Irish baseline threshold[†].

Figure 1 shows the ILI consultation rates, the baseline threshold rate and the number of positive specimens detected by the National Virus Reference Laboratory (NVRL), Cork University Hospital (CUH) and University College Hospital, Galway (UCHG). CUH and UCHG have reported influenza positive non-sentinel specimens since weeks 31 and 36, 2009, respectively and these are included in figure 1. Influenza A unsubtype isolates (probable pandemic (H1N1) 2009) are specimens that are awaiting laboratory confirmation as pandemic (H1N1) 2009.

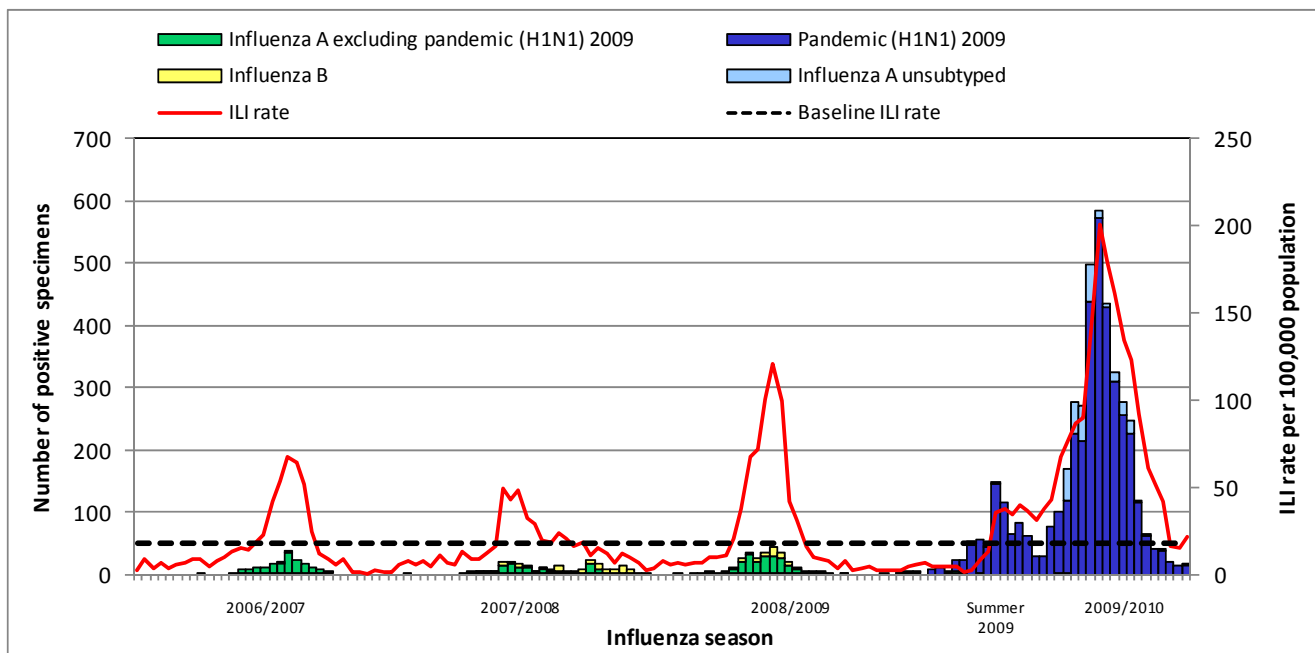


Figure 1: ILI GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza specimens, by influenza week and season[‡]

Source: NVRL, CUH and UCHG laboratory data and ICGP clinical ILI data

During week 1 2010, sentinel GPs reported two ILI cases in the 0-4 year age group (13.7 per 100,000 population), one case in the 5-14 year age group (3.7 per 100,000 population), 38 cases in the 15-64 year age group (27.1 per 100,000 population) and two cases were reported in those aged 65 years and older (8.8 per 100,000 population) (figure 2).

[†] Since the last report, extra information on the number of ILI consultations and positive influenza specimens occurring in week 53 was provided by sentinel GPs and the NVRL and the rate for the week was adjusted accordingly

[‡] Please note that virological data for NVRL is for all seasons, for CUH is from week 31 2009 and for UCHG is from week 36 2009.

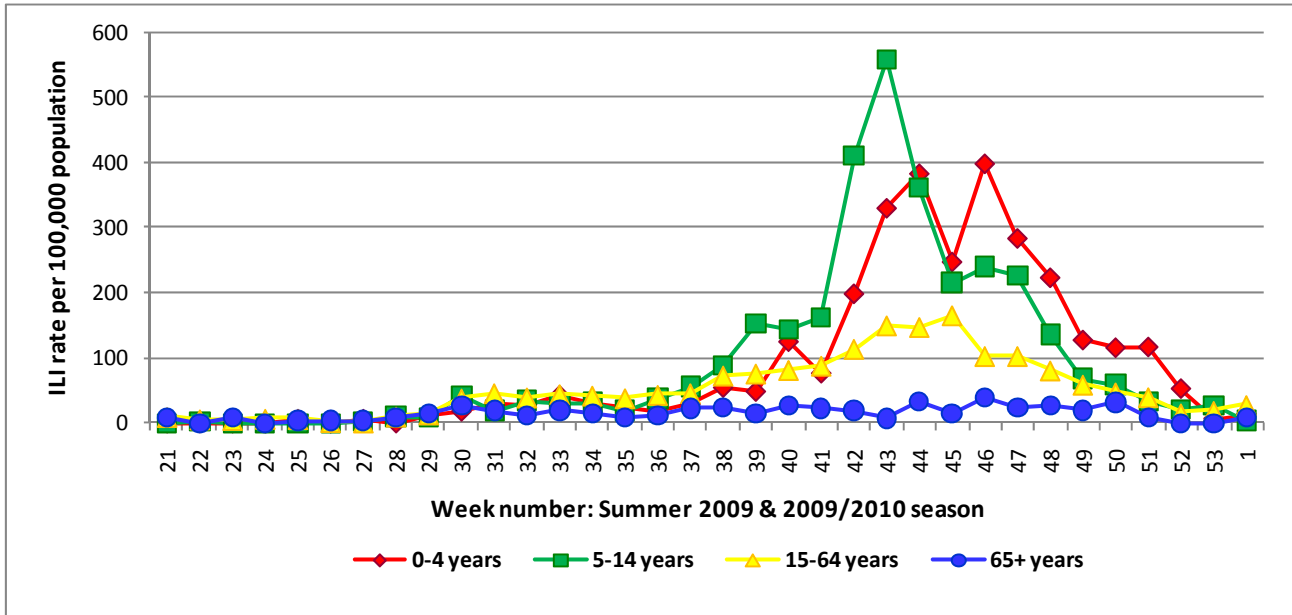


Figure 2: Age specific sentinel GP consultation rate for ILI per 100,000 population by week during the Summer 2009 and 2009/2010 influenza season

Source: ICGP ILI clinical data

Regional Influenza Activity by HSE-Area

Influenza activity is reported on a weekly basis from the Departments of Public Health in each HSE area. Influenza activity is based on sentinel GP ILI consultation rates, laboratory confirmed influenza cases and ILI/influenza outbreaks. During week 1 2010, no activity was reported by HSE-M while sporadic activity (due to isolated cases of ILI and/or isolated laboratory confirmed cases of influenza) was reported by HSE-E, -MW, -NE, -NW, -S, -SE and -W (figure 3).

Sentinel hospitals and schools

The Departments of Public Health have established at least one sentinel hospital in each HSE area (n=8), to report data on total hospital admissions, total emergency admissions and total respiratory admissions by age group on a weekly basis. Sentinel primary and secondary schools were also established in each area, in close proximity to the sentinel GPs, to report absenteeism data on a weekly basis. Sentinel hospital data were received from five HSE areas during week 1. One sentinel hospital in HSE-NW reported a small increase in the proportion of respiratory admissions during week 1. Sentinel schools were closed due to adverse weather conditions during week 1.

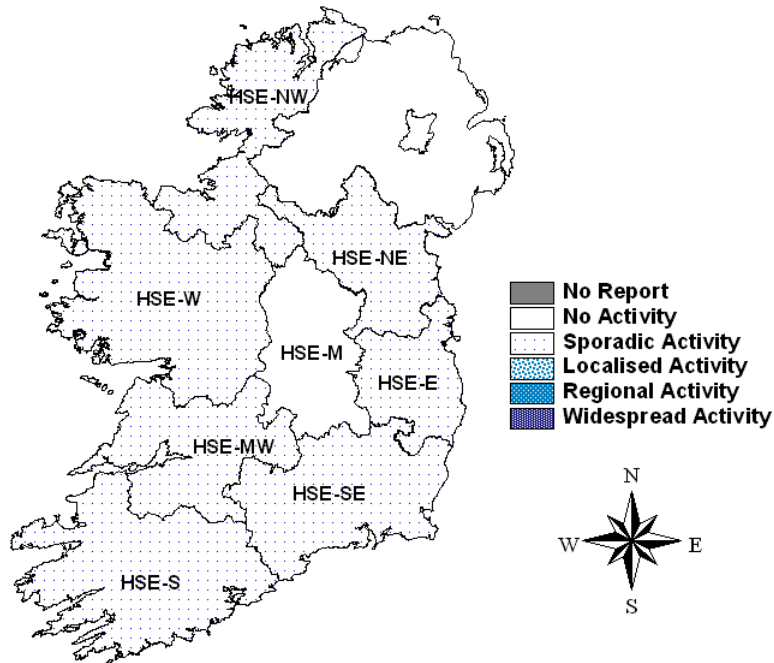


Figure 3: Map of provisional influenza activity by HSE area during influenza week 1 2010

2. GP Out-Of-Hours services surveillance

The Department of Public Health in the HSE-NE is collating national data on calls to nine of thirteen GP Out-of-Hours services in Ireland. Clinical details from all calls are recorded. Records with clinical symptoms reported as flu or influenza are extracted for analysis. This information may act as an early indicator of increased ILI activity. However, data are self-reported by callers and are not based on coded influenza diagnoses. The percentage of flu-related calls was 3.4% during week 1, a slight decrease compared to the proportion (3.9%) reported during week 53 (figure 4).

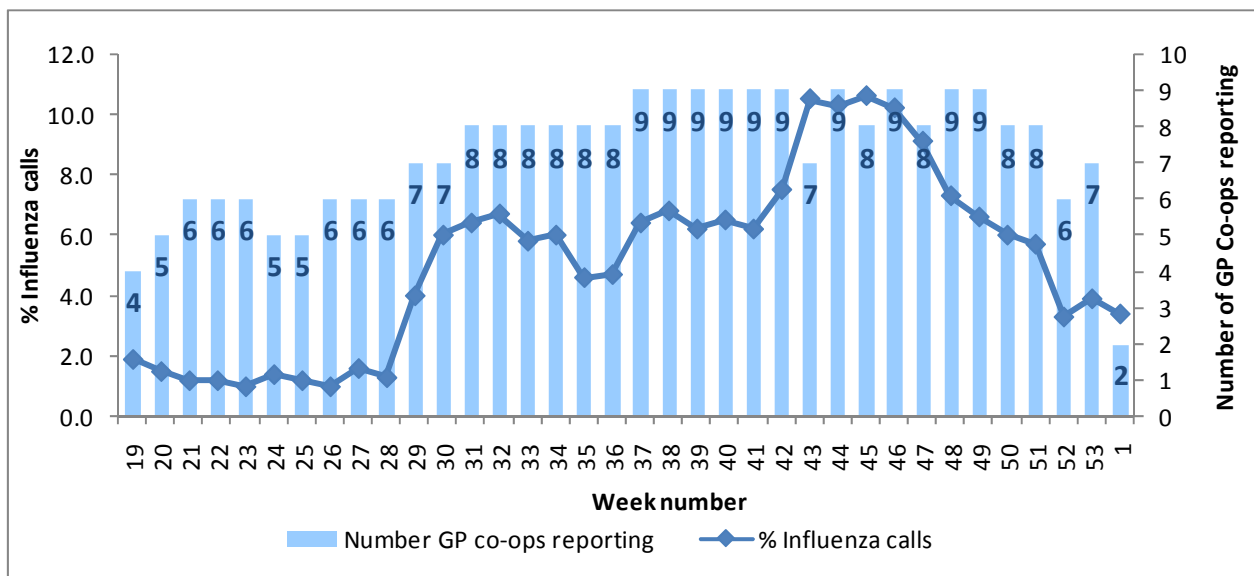


Figure 4: Flu-related calls as a proportion of total calls to Out-of-Hours GP Co-ops by week[§]
 Source: HSE-NE.

[§] Week 1: data received from CARE-Doc and NE-Doc. Not all services provided data for all weeks.

3. Virological Data from the National Virus Reference Laboratory (NVRL), Cork University Hospital (CUH) and University College Hospital, Galway (UCHG)

Nine specimens from sentinel GPs were tested by the NVRL during week 1 2010, two (22.2%) of which were positive for pandemic (H1N1) 2009.

The NVRL also tested 177 non-sentinel specimens taken during week 1, 11 (6.2%) of which were positive for pandemic (H1N1) 2009, 33 specimens (18.6%) were positive for RSV and one specimen each was positive for parainfluenza virus type 1 (0.6%) and parainfluenza virus type 2 (0.6%). No specimens were positive for other influenza A subtypes, influenza B or adenovirus (table 1 and table 3). Figure 5 shows the number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2009/2010 influenza season compared to the 2008/2009 influenza season. **

UCHG tested 16 non-sentinel specimens taken during week 1 2010, two (12.5%) of which were positive for pandemic (H1N1) 2009 (table 2).

CUH tested 37 non-sentinel specimens taken during week 1 2010, four (10.8%) of which were positive for pandemic (H1N1) 2009 (table 2).

Pandemic (H1N1) 2009 is the only influenza virus circulating. During week 1, 100% of specimens positive for influenza were pandemic (H1N1) 2009. For summer 2009 and 2009/2010 influenza seasons to date, confirmed pandemic (H1N1) 2009 has accounted for 99.4% of influenza positive specimens (table 1).

During week 1, the percentage of sentinel and non-sentinel specimens testing positive for pandemic (H1N1) 2009 was 7.9%, an increase compared to 6.0% of specimens testing positive during week 53. Figure 6 shows the number of sentinel specimens tested by the NVRL for influenza and non-sentinel specimens tested by the NVRL, CUH and UCHG for influenza and the percentage of specimens testing positive for influenza by week number for the Summer 2009 and 2009/2010 influenza season.

To date, the NVRL has performed neuraminidase sequencing on 23 non-sentinel pandemic (H1N1) 2009 isolates. Oseltamivir susceptibility results are available for 23 isolates, of which all were susceptible to oseltamivir. Zanamivir susceptibility results are available for 17 isolates, of which all were susceptible to zanamivir.

** Please note that non-sentinel specimens relate to specimens referred to the NVRL (other than sentinel specimens) and may include more than one specimen from each case

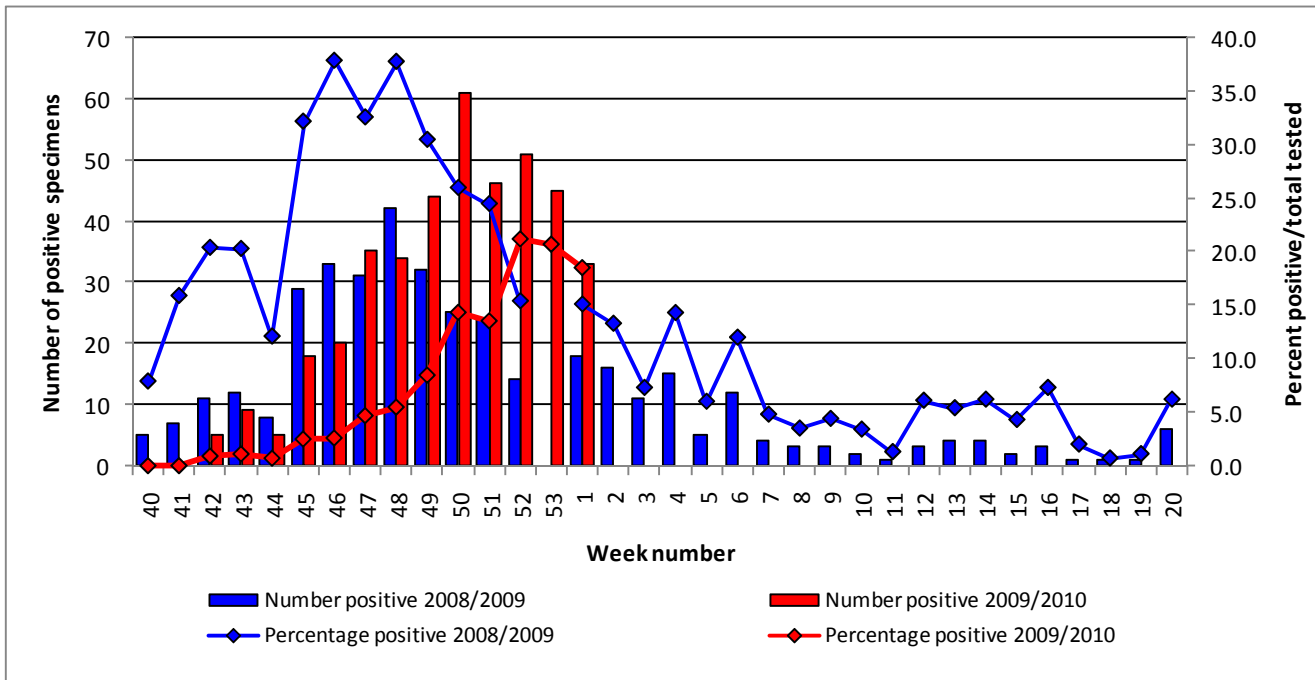


Figure 5: NVRL non-sentinel RSV activity for influenza season 2009/2010 compared to influenza season 2008/2009^{††}
 Source: NVRL

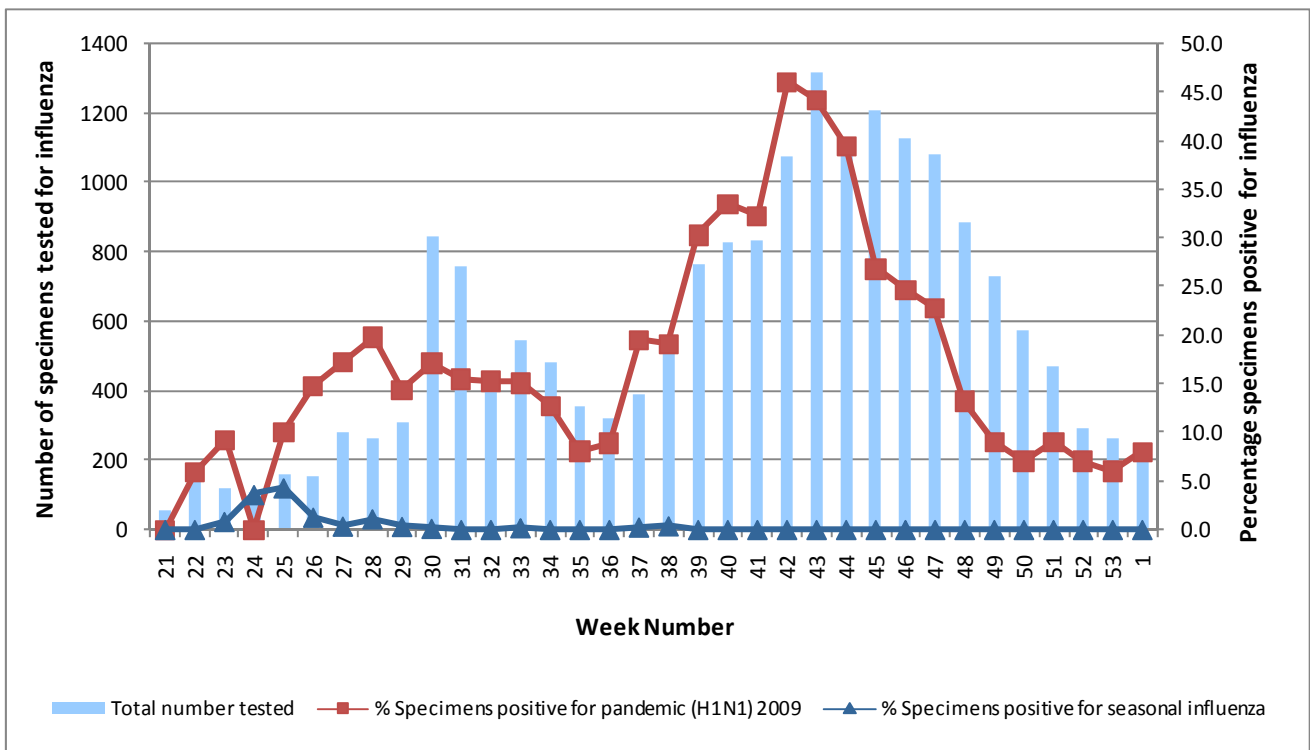


Figure 6: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive^{††}
 Source: NVRL, CUH & UCHG

^{††} Please note there was no week 53 in 2008.

^{††} Virological data for NVRL is from week 21 2009, for CUH is from week 31 2009 and for UCHG is from week 36 2009.

Table 1: Number of sentinel and non-sentinel respiratory specimens tested and positive results, influenza week 1 2010 and Summer 2009 & 2009/2010 season to date^{§§}

Source: NVRL, CUH and UCHG

Week number	Specimen type	Total Specimens tested	Number Influenza Positive	% Influenza Positive	Confirmed Pandemic (H1N1) 2009	Probable Pandemic (H1N1) 2009	Influenza A(H3)	Influenza A(H1)	Influenza A (unsubtyped)	Influenza B	% Pandemic (H1N1) 2009
1 2010	Sentinel	9	2	22.2	2	0	0	0	0	0	100.0
	Non-sentinel	230	17	7.4	16	1	0	0	0	0	100.0
	Total	239	19	7.9	18	1	0	0	0	0	100.0
Summer 2009 & 2009/2010 season to date	Sentinel	2120	767	36.2	764	0	3	0	0	0	99.6
	Non-sentinel	17918	3881	21.7	3559	297	0	0	22	3	99.4
	Total	20038	4648	23.2	4323	297	3	0	22	3	99.4

Table 2: Number of non-sentinel respiratory specimens tested and positive results by laboratory, influenza week 1 2010 and Summer 2009 & 2009/2010 season to date^{}**

Source: NVRL, CUH and UCHG

Week number	Laboratory	Total specimens tested	Number influenza positive	% Influenza positive	Confirmed Pandemic (H1N1) 2009	Probable Pandemic (H1N1) 2009	% Pandemic (H1N1) 2009	Influenza A (unsubtyped)	Influenza B
1 2010	NVRL	177	11	6.2	11	0	100.0	0	0
	CUH	37	4	10.8	3	1	100.0	0	0
	UCHG	16	2	12.5	2	0	100.0	0	0
	Total	230	17	7.4	16	1	100.0	0	0
Summer 2009 & 2009/2010 season to date	NVRL	13853	2577	18.6	2548	5	99.1	21	3
	CUH	2847	821	28.8	529	292	100.0	0	0
	UCHG	1218	483	39.7	482	0	99.8	1	0
	Total	17918	3881	21.7	3559	297	99.4	22	3

Table 3: Number of non-sentinel specimens tested by the NVRL for other respiratory pathogens and positive results, influenza week 1 2010 and Summer 2009 & 2009/2010 season to date

Source: NVRL

Week number	Total specimens	RSV	% RSV Positive	Adenovirus	% Adenovirus positive	Parainfluenza virus type 1	% Parainfluenza virus type 1	Parainfluenza virus type 2	% Parainfluenza virus type 2	Parainfluenza virus type 3	% Parainfluenza virus type 3
1 2010	177	33	18.6	0	0.0	1	0.6	1	0.6	0	0.0
Summer 2009	6093	21	0.3	4	0.1	4	0.1	0	0.0	6	0.1
2009/2010 season to date	7760	406	5.2	3	0.03	6	0.1	2	0.02	1	0.01

§§ Please note that virological data for NVRL is from week 21 2009, for CUH is from week 31 2009 and for UCHG is from week 36 2009.

4. Laboratory confirmed cases of pandemic (H1N1) 2009 (CIDR)

During the current pandemic phase of mitigation, testing for influenza is focused on hospitalised cases, cases with severe clinical illness and in other situations such as clusters of ILI in institutions or unusual clusters of serious illness.

As of 9th January 2010, a total of 4,554 confirmed cases of pandemic (H1N1) 2009 infection were reported.^{***}

Figure 7 shows the number of confirmed pandemic (H1N1) 2009 cases by week of notification and hospitalisation status.

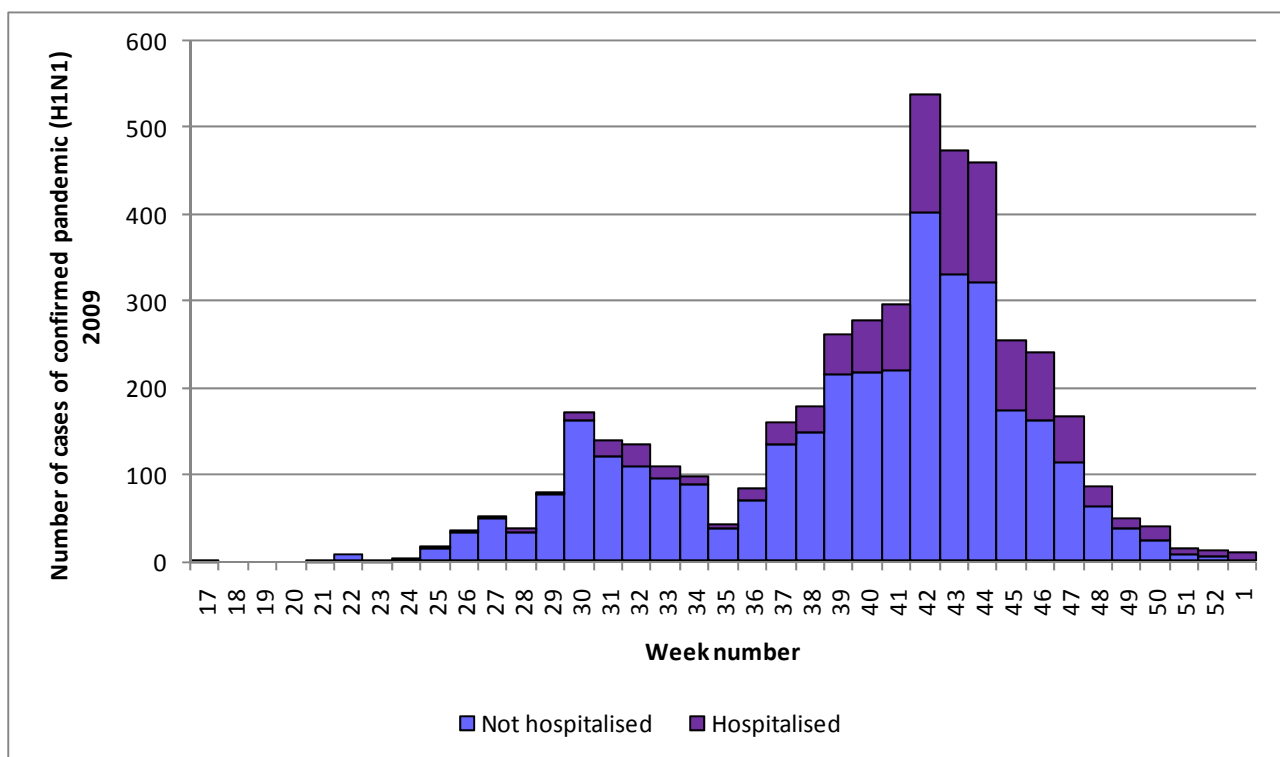


Figure 7: Number of confirmed cases of pandemic (H1N1) 2009 by week of notification and hospitalisation status⁺⁺⁺

Source: CIDR

Age and Sex

Of the 4,554 confirmed cases reported to 9th January, 2,428 were female (53.3%), 2,099 were male (46.1%) and sex was not reported for 27 cases (0.6%). The median age of cases was 17 years (range: 0-84 years) and 80.1% were less than 35 years of age. The highest age specific rates are in the 0-4 year age group since week 40 but have decreased in recent weeks. During week 1, the age specific notification rate remained stable in all age groups.

Severity of illness

To date (14th January) 22 laboratory confirmed cases have died. No deaths were reported during week 1 2010.

^{***} As WHO has advised Member States to reduce laboratory testing of suspect cases and to move to clinical diagnosis of influenza-like illness, the number of laboratory confirmed cases of pandemic (H1N1) 2009 reported here understates the actual number of cases in the population.

⁺⁺⁺ Week number on figure 7 is based on infectious disease notification week number, which was one week behind the international influenza week number during 2009. Therefore weeks 17-52 above is equivalent to weeks 18-53 on the influenza system. Epidemiological and influenza week numbering systems are the same for 2010.

Hospitalised cases

Of the 4,554 confirmed cases, 1,048 (23.0%) were admitted to hospital. Of these, 90 (8.6%) were admitted to ICU. Two laboratory confirmed cases were hospitalised and admitted to ICU during week 1, which remains stable compared to one case admitted to ICU in week 53. The highest age-specific rates for hospitalised patients are seen in the 0-4 year age group. Of the 1,048 confirmed cases hospitalised, 447 (42.7%) had pre-existing clinical conditions.

5. Outbreak surveillance (CIDR)

No new outbreaks of pandemic (H1N1) 2009, influenza or ILI were reported during week 1 2010. As of 9th January 2010, 109 general outbreaks of pandemic (H1N1) 2009 and ILI have been reported in Ireland since week 23 2009. These outbreaks involved 2,399 people in total, of which 200 (8.3%) were laboratory confirmed cases of pandemic (H1N1) 2009. The number ill per outbreak has ranged between two and 150 people.

International summary

The total numbers of confirmed deaths reported worldwide by the World Health Organization (WHO) region are shown in table 5

Table 5: Reported number of confirmed pandemic (H1N1) 2009 deaths by WHO region

Source: WHO 8th January 2010

WHO Region	Cumulative total as of 8 th January 2010
	Deaths
Africa (AFRO)	131
Americas (AMRO)	At least 6880
Eastern Mediterranean (EMRO)	708
Europe (EURO)	At least 2554
South-East Asia (SEARO)	1165
Western Pacific (WPRO)	1361
Total	At least 12,799

United Kingdom

During week 53 (ending 03 January 2010), the weekly influenza/influenza-like illness (ILI) consultation rate decreased in England and remained below baseline levels. In Wales and Northern Ireland, the ILI consultation rate increased slightly but remained below baseline levels. In Scotland, the ILI rate decreased to just slightly above the baseline level. The cumulative number of deaths reported to be due to pandemic (H1N1) 2009 is 355. There were 584 new patients hospitalised in England with suspected pandemic influenza in the week from 31st December to 6th January. The hospitalisation rates have decreased in most age groups. The main influenza virus circulating in the UK continues to be the pandemic (H1N1) 2009 strain, with few influenza H1 (non-pandemic), H3 and B viruses detected. Thirty-three of 4,640 pandemic viruses tested have been confirmed to carry a mutation which confers resistance to the antiviral drug oseltamivir; three are phenotypically resistant to the drug but retain sensitivity to zanamivir.

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1243928258754

Europe

During week 53 (28th December to 3rd January), 19 out of 29 countries reported epidemiological data. Estonia, France, Ireland, Romania and the UK (Scotland) reported medium intensity while all remaining countries reported low intensity. Of the 19 countries reporting in week 53, all but Cyprus, Portugal, Romania and the UK (Northern Ireland and Wales) have observed decreasing ILI/ARI rates for at least the last two weeks, with 11 countries and the UK (England and Scotland) reaching levels below those reported in week 40. France, Slovenia

and part of the UK (Wales) reported widespread activity. Austria, Germany, the Netherlands, Norway, Romania, and the UK (Scotland) reported regional activity, while the remaining countries reported local or sporadic activity. All countries reported a decreasing trend or stable activity.

While the proportion of influenza-positive sentinel samples continued to decline, the 2009 pandemic influenza A (H1N1) virus still accounted for 99% of all subtyped viruses in sentinel patients and in severe acute respiratory infection (SARI) patients. Oseltamivir resistance was detected in 33 (3%) of the 1257 viruses tested and reported to EISN to date. Resistance to zanamivir was not detected in any of the 1251 strains tested.

<http://ecdc.europa.eu/en/publications/Pages/Publications.aspx>

USA

During week 53 (27th December to January 2nd), influenza activity decreased slightly. The proportion of outpatient visits for influenza-like illness (ILI) was 2.4% which is just above the national baseline of 2.3%. Six of the ten regions reported ILI rates below region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza (7.4%) in week 53 was below the epidemic threshold (7.5%). Four influenza associated paediatric deaths were reported during week 53, all four of which were pandemic influenza A (H1N1) 2009. During week 53, 161 (3.9%) specimens tested by collaborating laboratories and reported to CDC/Influenza Division were positive for influenza. All subtyped influenza A viruses being reported to CDC were pandemic influenza A (H1N1) 2009 viruses. One state reported geographically widespread influenza activity.

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

Canada

During weeks 52 and 53 (ending January 2nd 2010), the overall influenza remained low. The ILI consultation rate remained below or within the expected range for this time of the year and only 1.6% of specimens tested were positive for influenza. Similar numbers of hospitalized cases (76 vs. 79), ICU admissions (22 vs. 21) and deaths (16 vs. 11) were reported over the two-week period compared to the previous week. From August 30 to January 2nd 2010, a total of 7016 hospitalised cases including 1,133 cases admitted to ICU (16.1%), as well as 339 (4.8%) deaths have been reported.

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

New Zealand

During week 51 (14-20th December), there has been a decrease in consultations for influenza-like illness through sentinel surveillance (7.09 per 100,000 patient population). Up to 13 December 2009, a total of 4898 influenza viruses have been reported through sentinel (624, 13%) and non-sentinel surveillance (4274, 87%). Five influenza viruses were reported in week 51: three A/California/7/2009 (H1N1)v and two pandemic (H1N1) 2009 from the non-sentinel surveillance.

http://www.surv.esr.cri.nz/virology/influenza_weekly_update.php

Australia

During week 52 and 53, (19th December to 1st January 2010), ILI rates at a national level were below the baseline level reached at the end of the 2007 and 2008 seasons. As of 1st January 2010, there were 37,553 confirmed cases of pandemic (H1N1) 2009 in Australia and 191 pandemic influenza-associated deaths.

<http://www.healthemergency.gov.au/internet/healthemergency/publishing.nsf/Content/ozflucurrent.htm>

Other countries

As of 8th January 2010

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

- **Central and Eastern Europe:** In Europe, pandemic influenza transmission remains geographically widespread throughout the continent and there continues to be intense virus circulation in several countries of central, eastern, and southeastern Europe - particularly in Poland, Serbia, Ukraine and Georgia.

- **Central Asia:** In central Asia, there is evidence of declining rates of ILI/ARI since respiratory disease activity recently peaked in late November and early December in Uzbekistan and Kyrgyzstan, respectively.
- **East and Southern Asia:** In South Asia, pandemic influenza transmission remains geographically widespread and active across the subcontinent - particularly in northern India, Nepal, and in Sri Lanka - where an increasing trend in respiratory diseases activity was reported. In Southeast Asia, influenza transmission remains geographically regional to widespread; however, overall influenza activity appears to be low but variable. Localised increases in ILI were reported in parts of Thailand over the past three weeks. In Vietnam, after a period of substantial influenza transmission during September through November, activity declined significantly in December. In Laos and Cambodia, overall respiratory disease activity was reported to be decreasing during most of December.
In East Asia, influenza transmission remains widespread and active but appears to be declining overall. Influenza/ILI activity continued to decline in Japan, in northern and southern China, Chinese Taipei, and Hong Kong SAR (China). Pandemic H1N1 is clearly still the predominant circulating virus but seasonal H3N2 viruses continue to circulate in very small numbers in northern China. Slight increases in ILI rates were again reported in Mongolia.
- **Americas, the Caribbean and the Southern hemisphere:** In the Americas, both in the tropical and northern temperate zones, overall pandemic influenza activity continued to decline or remain low. In North America, peak influenza activity occurred during early, mid, and late October in Mexico, the United States, and Canada, respectively. In all three countries, as expected, a substantially greater number of cases were recorded during the fall and winter transmission period as compared to spring and summer transmission period. In Canada, after experiencing substantial influenza activity unusually early during the fall and winter period, rates of ILI have now dropped below the historical seasonal baseline. In temperate regions of the southern hemisphere, sporadic cases of pandemic influenza continued to be reported without evidence of sustained community transmission. This suggests that the level of population immunity in areas that experienced intense, high-level transmission during a winter season is high enough to prevent sustained transmission from recurring during the summer when the virus is less transmissible.
- **North Africa and Western Asia:** In North Africa and West Asia, limited data suggest that influenza transmission remains active. Although west Asia may have already experienced a peak in influenza activity, parts of North Africa continue to report increasing respiratory diseases activity, particularly in Egypt. Elevated levels of ILI activity and increased influenza virus detections were observed during November and December in Algeria and Morocco, but activity has likely peaked in the latter.

Further information on influenza in Ireland and internationally can be found on the following websites:

Ireland www.hpsc.ie
 Europe – ECDC <http://ecdc.europa.eu/>
 Europe – EISN <http://ecdc.europa.eu/en/activities/surveillance/EISN/Pages/home.aspx>
 Northern Ireland <http://www.cdscni.org.uk/>

Acknowledgements

HPSC wishes to thank the Departments of Public Health, HSE-NE, ICGP, NVRL, CUH and UCHG for providing data for this report

Appendix A

Sentinel surveillance for influenza

This is the tenth 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. Sixty-one sentinel general practices covering 5.7% of the national population 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 five patients per week where a clinical diagnosis of ILI is made during the influenza season.

Influenza test results from the NVRL are provided on both sentinel and non-sentinel specimens. Influenza test results from Cork University Hospital (CUH) and University College Hospital, Galway (UCHG) are also provided on non-sentinel specimens.

Laboratory confirmed pandemic (H1N1) 2009

Since the end of April 2009, a case-based surveillance system for pandemic (H1N1) 2009 has been in operation in Ireland following the declaration by World Health Organization (WHO) of a public health emergency of international concern due to the virus. Basic demographic data are collected on all laboratory confirmed cases and additional enhanced data are collected on all hospitalised laboratory confirmed cases. Data are collated on the Computerised Infectious Disease Reporting (CIDR) system using information available from the National Virus Reference Laboratory (NVRL), Departments of Public Health, clinicians and a number of other laboratories. Data presented in this report are based on details recorded on the CIDR system.

ICU enhanced surveillance system:

On October 5th 2009, enhanced ICU surveillance system of confirmed cases of pandemic (H1N1) 2009 commenced in Ireland. It is a collaborative project between ICU medical and nursing staff, hospital administrators, departments of public health and the Health Protection Surveillance Centre. Forty hospitals (35 public and 5 private) currently participate in the surveillance scheme.

This system relates to adult, paediatric and neonatal confirmed and probable cases of pandemic (H1N1) 2009 admitted to intensive care units (ICU). The principal aim of the surveillance system is to report on the demographic profile (age, sex,) of all cases of pandemic (H1N1) 2009 admitted to ICU with details of predisposing risk factors, medical interventions and complications and clinical outcome. This information is used in conjunction with surveillance data from a number of other sources as follows: mortality data, data on laboratory confirmed cases, virology data and data on ILI consultation rates from sentinel GP practices.

A more detailed description of this system is available at:

<http://ndsc.newsweaver.ie/newepsiinsight/rqng2ayeg0sugy02flxkl0>