

Influenza Surveillance in Ireland - Weekly Update

Influenza Week 3 2010 (18th to 24th January 2010)



Summary

- Influenza activity in Ireland decreased during week 3:
 - ♦ The sentinel GP influenza-like illness (ILI) consultation rate was 12.2 per 100,000 population during week 3, a decrease compared to the updated rate of 16.6 per 100,000 reported during week 2*. This rate is below the Irish baseline threshold of 17.8 per 100,000 population.
 - ♦ The highest sentinel GP age-specific ILI consultation rate occurred in the 65 years and older age group (24.6 per 100,000 population) during week 3
 - ♦ The number of laboratory confirmed cases of pandemic (H1N1) 2009 (n=10) remained stable.
 - ♦ The number of hospitalised cases of confirmed pandemic (H1N1) 2009 (n=2) continued to decrease.
 - ♦ No hospitalised cases of confirmed pandemic (H1N1) 2009 were admitted to ICU.
 - ♦ The proportion of flu-related calls to GP Out-of-Hours services decreased slightly.
 - ♦ 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 23rd January:
 - ♦ 4,574 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 (27th 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 2 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 3 2010, 54 of 60 (90.0%) ICGP sentinel general practices provided data, with 19 practices (31.7%) reporting 27 influenza-like illness (ILI) cases and 41 practices reporting no ILI cases. This corresponds to an ILI consultation rate of 12.2 per 100,000 population, which is a decrease compared to the updated rate of 16.6 per 100,000 population reported during week 2 2010 and is below 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.

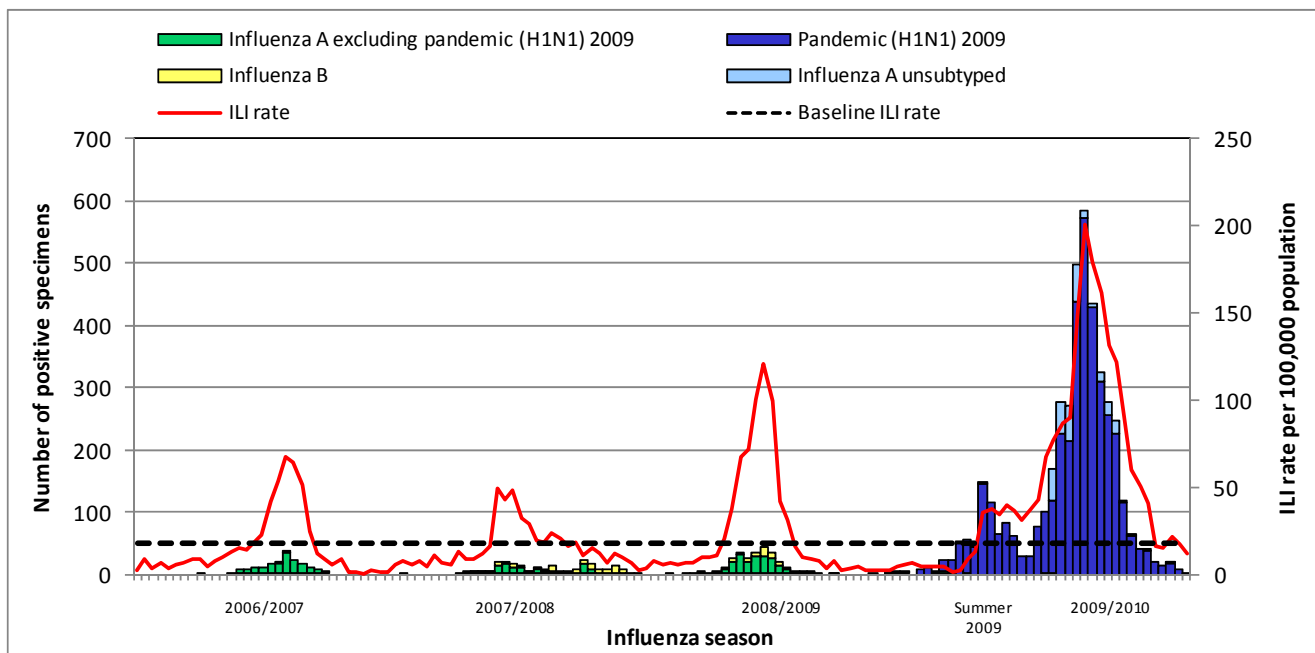


Figure 1: ILI GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza specimens, by influenza week and season[‡]

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

During week 3 2010, sentinel GPs reported one ILI case in the 0-4 year age group (6.4 per 100,000 population), one case in the 5-14 year age group (3.4 per 100,000 population), 19 cases in the 15-64 year age group (12.6 per 100,000 population) and six cases were reported in those aged 65 years and older (24.6 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 2 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.

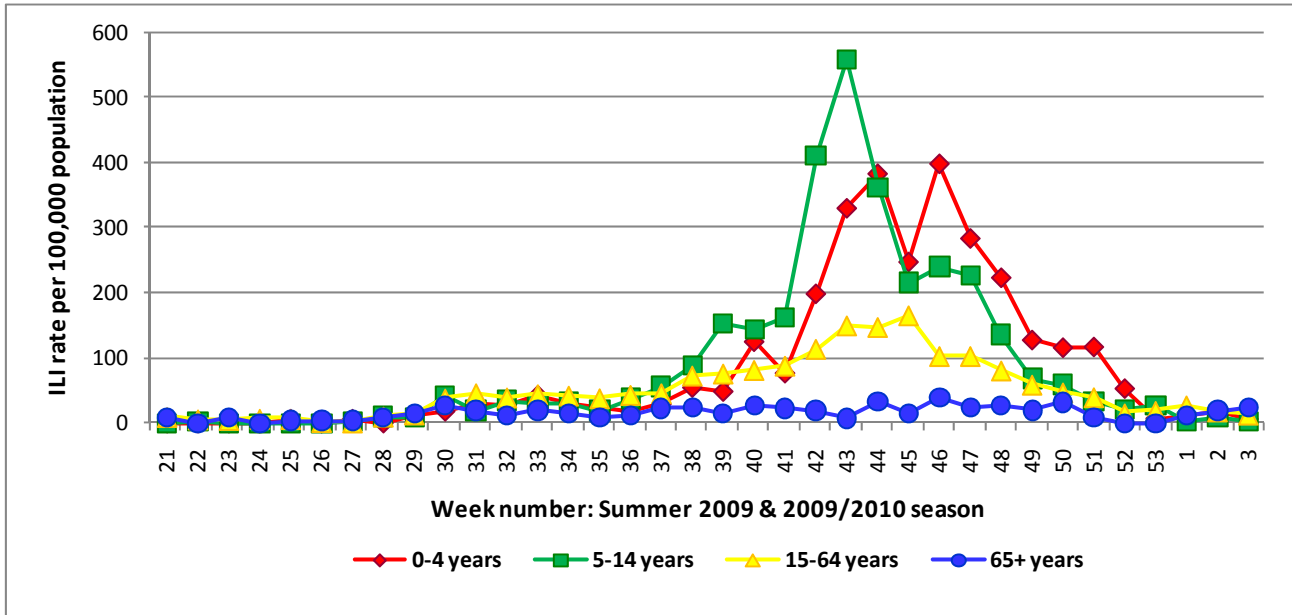


Figure 2: Age specific sentinel GP consultation rate for ILI per 100,000 population by week during the Summer 2009 and 2009/2010 influenza season

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 3 2010, sporadic activity (due to isolated cases of ILI and/or isolated laboratory confirmed cases of influenza) was reported by all eight HSE areas (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 school and hospital data were received from six HSE areas during week 3. One sentinel hospital in HSE-W reported a small increase in the proportion of respiratory admissions. No increases in absenteeism were reported by sentinel schools during week 3.

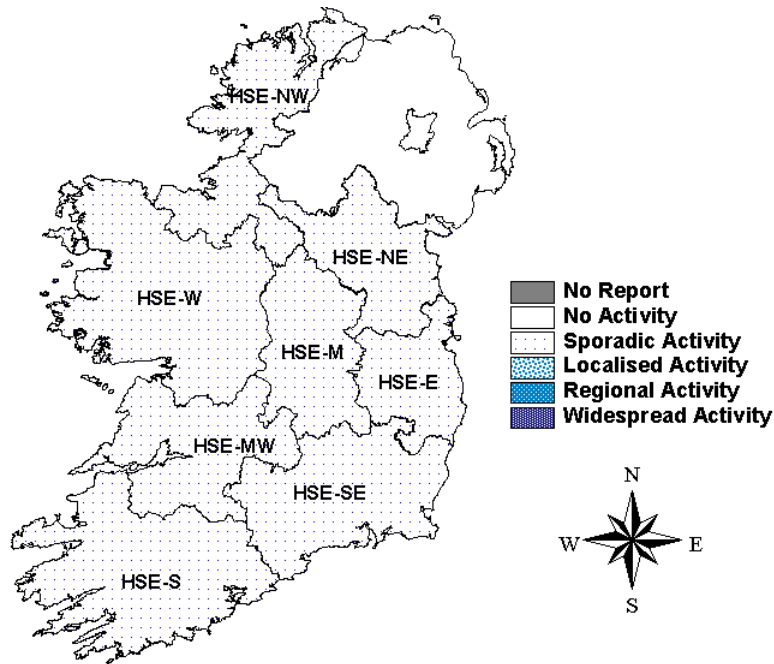


Figure 3: Map of provisional influenza activity by HSE area during influenza week 3 2010

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 1.9% during week 3, a slight decrease compared to the proportion (2.4%) reported during week 2 (figure 4).

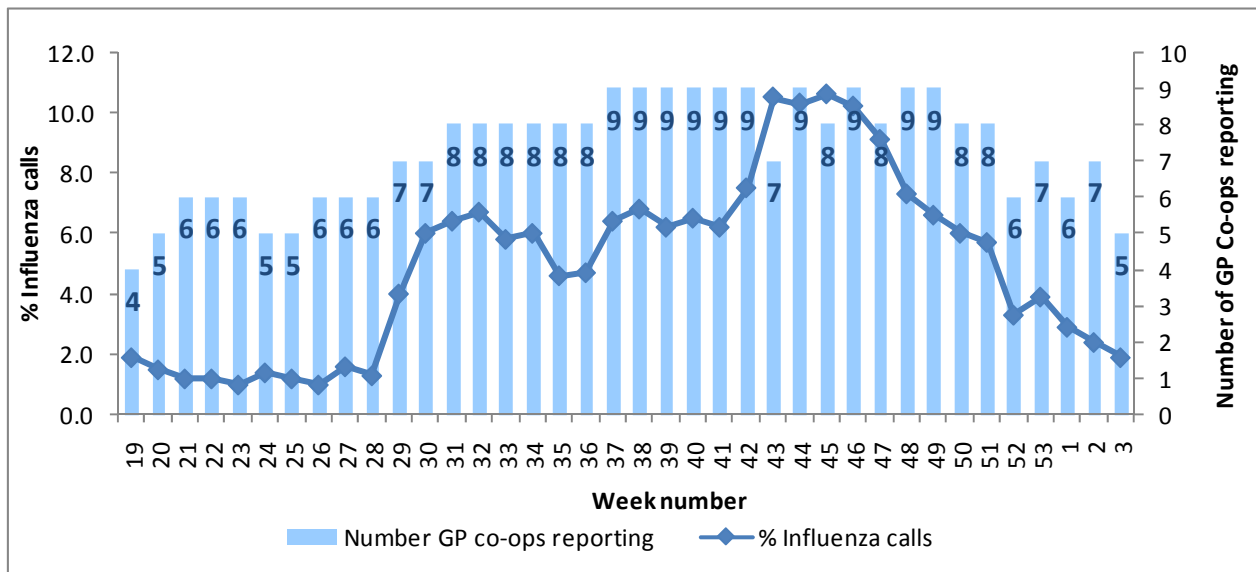


Figure 4: Flu-related calls as a proportion of total calls to Out-of-Hours GP Co-ops by week[§] Source: HSE-NE.

[§] Week 3: data received from D-Doc, MI-Doc, NE-Doc, Shan-Doc, South-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)

Eleven specimens from sentinel GPs were tested by the NVRL during week 3 2010, one (9.1%) of which was positive for pandemic (H1N1) 2009.

The NVRL also tested 136 non-sentinel specimens taken during week 3, 2 (1.5%) of which were positive for pandemic (H1N1) 2009, 13 specimens (9.6%) were positive for RSV and two specimens were positive for adenovirus (1.5%). No specimens were positive for other influenza A subtypes, influenza B or parainfluenza virus (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 five non-sentinel specimens taken during week 3 2010, none of which were positive for influenza (table 2).

CUH tested 15 non-sentinel specimens taken during week 3 2010, one (6.7%) of which was positive for pandemic (H1N1) 2009 (table 2).

Pandemic (H1N1) 2009 is the only influenza virus circulating. During week 3, 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 3, the percentage of sentinel and non-sentinel specimens testing positive for pandemic (H1N1) 2009 was 2.4%, a decrease compared to 4.1% of specimens testing positive during week 2. 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

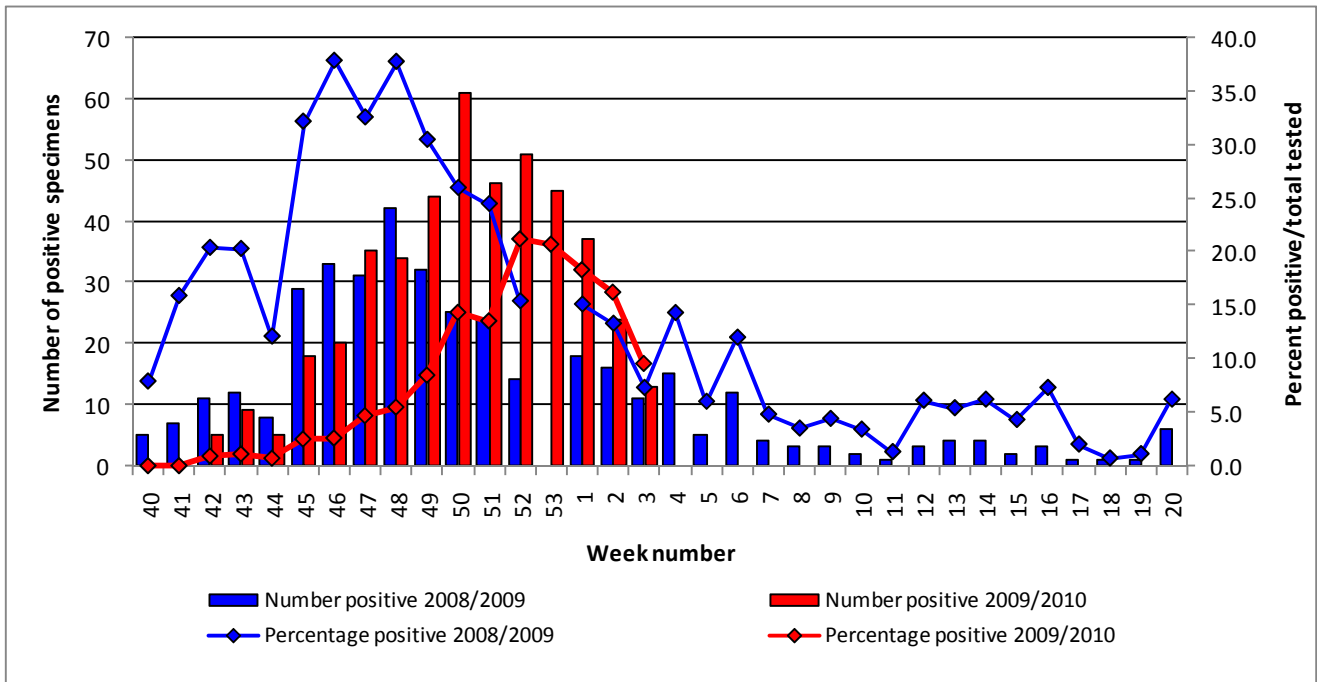


Figure 5: NVRL non-sentinel RSV activity for influenza season 2009/2010 compared to influenza season 2008/2009^{††}
 Source: NVRL

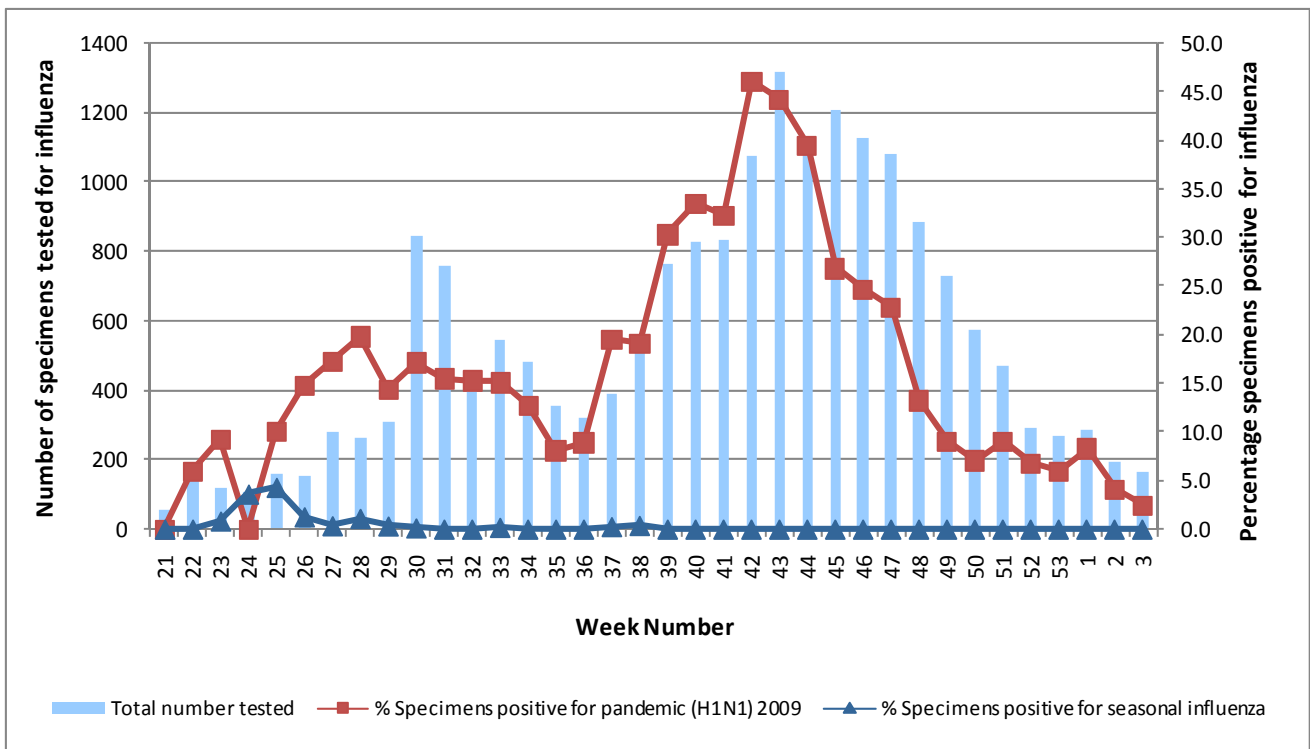


Figure 6: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive^{††}
 Source: NVRL, CUH & UCHG

^{††} 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 3 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
3 2010	Sentinel	11	1	9.1	1	0	0	0	0	0	100.0
	Non-sentinel	156	3	1.9	3	0	0	0	0	0	100.0
	Total	167	4	2.4	4	0	0	0	0	0	100.0
Summer 2009 & 2009/2010 season to date	Sentinel	2152	772	35.9	769	0	3	0	0	0	99.6
	Non-sentinel	18302	3891	21.3	3569	297	0	0	22	3	99.4
	Total	20454	4663	22.8	4338	297	3	0	22	3	99.4

Table 2: Number of non-sentinel respiratory specimens tested and positive results by laboratory, influenza week 3 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
3 2010	NVRL	136	2	1.5	2	0	100.0	0	0
	CUH	15	1	6.7	1	0	100.0	0	0
	UCHG	5	0	0.0	0	0	0.0	0	0
	Total	156	3	1.9	3	0	100.0	0	0
Summer 2009 & 2009/2010 season to date	NVRL	14160	2583	18.2	2554	5	99.1	21	3
	CUH	2910	825	28.4	533	292	100.0	0	0
	UCHG	1232	483	39.2	482	0	99.8	1	0
	Total	18302	3891	21.3	3569	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 3 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
3 2010	136	13	9.6	2	1.5	0	0.0	0	0.0	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	8067	446	5.5	5	0.1	6	0.1	3	0.0	1	0.0

§§ 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 23rd January 2010, a total of 4,574 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.

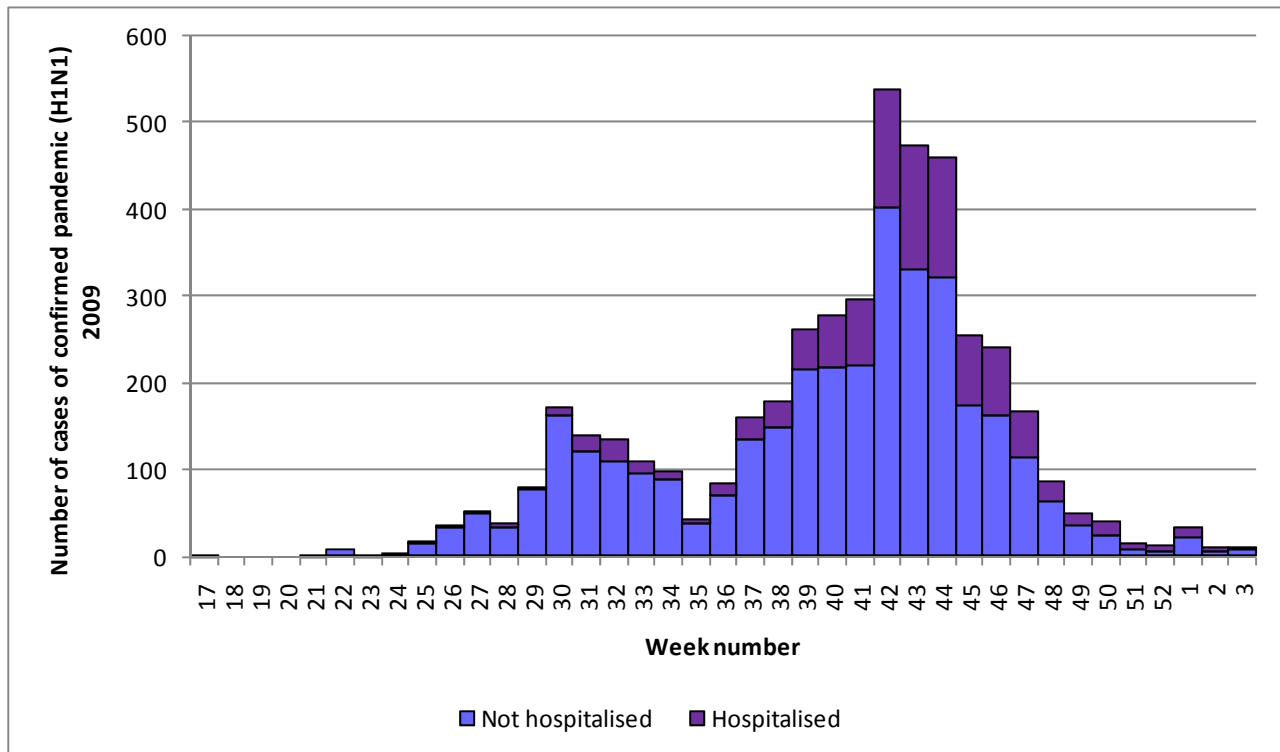


Figure 7: Number of confirmed cases of pandemic (H1N1) 2009 by week of notification and hospitalisation status⁺⁺⁺

Source: CIDR

Age and Sex

Of the 4,574 confirmed cases reported to 23rd January, 2,439 were female (53.3%), 2,110 were male (46.1%) and sex was not reported for 25 cases (0.5%). The median age of cases was 17.5 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 3, the age specific notification rate remained stable in all age groups.

Severity of illness

To date (27th January) 22 laboratory confirmed cases have died. No deaths were reported during week 3 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 4,574 confirmed cases, 1,056 (23.1%) were admitted to hospital. Of these, 95 (9.0%) were admitted to ICU. Two laboratory confirmed cases were hospitalised during week 3, which is a decrease compared to five cases hospitalised during week 2. No cases were admitted to ICU during week 3, a decrease compared to three cases admitted to ICU in week 2. The highest age-specific rates for hospitalised patients are seen in the 0-4 year age group. Of the 1,056 confirmed cases hospitalised, 454 (43.0%) had pre-existing clinical conditions.

5. Outbreak surveillance (CIDR)

No new outbreaks of pandemic (H1N1) 2009, influenza or ILI were reported during week 3 2010. As of 23rd 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 4

Table 4: Reported number of confirmed pandemic (H1N1) 2009 deaths by WHO region

Source: WHO 22nd January 2010

WHO Region	Cumulative total as of 22 nd January 2010
	Deaths
Africa (AFRO)	131
Americas (AMRO)	At least 7094
Eastern Mediterranean (EMRO)	941
Europe (EURO)	At least 3099
South-East Asia (SEARO)	1366
Western Pacific (WPRO)	1511
Total	At least 14,142

United Kingdom

During week 2 (ending 17th January 2010), the weekly influenza/influenza-like illness (ILI) consultation rate decreased in all schemes across the UK. The cumulative number of deaths reported to be due to pandemic (H1N1) 2009 is 388. 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. As of 20th January, a total of 2,546 laboratory confirmed cases of Pandemic (H1N1) 2009 have been hospitalised in England, 1,525 in Scotland, 446 in Wales and 577 in Northern Ireland. Thirty-six of 4,949 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 2 (11th to 17th January), 23 out of 29 countries reported epidemiological data. Bulgaria, Malta, Poland and Romania reported medium intensity while all remaining countries reported low intensity. In most of the countries, ILI/ARI activity peaks were observed between weeks 46 and 49. In Iceland and Ireland, peaks were observed at an earlier stage (week 43). Greece reported widespread activity while Austria, Bulgaria and Romania reported regional spread and the remaining countries reported local or sporadic 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 34 (2.7%) of the 1,260 viruses tested and reported to EISN to date. Resistance to zanamivir was not detected in any of the 1,254 strains tested.

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

USA

During week 2 (10th to 16th January), influenza activity decreased slightly. The proportion of outpatient visits for influenza-like illness (ILI) was 1.8%, which is below the national baseline of 2.3%. One of the ten regions reported ILI rates above their region-specific baseline level. The proportion of deaths attributed to pneumonia and influenza (8.0%) in week 2 was above the epidemic threshold (7.6%). Nine influenza associated paediatric deaths were reported during week 2. Three deaths were associated with pandemic influenza A (H1N1) 2009 infection, four were associated with an influenza A virus, for which the subtype was undetermined, one was associated with an influenza A (H3) virus infection and one was associated with an influenza B virus infection. During week 2, 120 (3.7%) specimens tested by collaborating laboratories and reported to CDC/Influenza Division were positive for influenza. Of the subtyped influenza A viruses being reported to CDC, 98% were pandemic influenza A (H1N1) 2009 viruses. No states reported geographically widespread influenza activity.

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

Canada

During week 2 (ending January 16th 2010), all influenza indicators were continuing to be either at baseline level or considerably under the expected level for this time of the year. The ILI consultation rate increased slightly compared to the previous week, but was significantly below the expected range for this time of the year and only 0.6% of specimens tested were positive for influenza. A similar number of hospitalized cases (29 vs. 18), ICU admissions (1 vs. 7) and deaths (4 vs. 2) were reported during week 2, compared to the previous week. From August 30th to January 16th 2010, a total of 7,057 hospitalised cases including 1,142 cases admitted to ICU (16.2%), as well as 344 (4.9%) deaths have been reported.

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

New Zealand

During week 2 (11th to 17th January), there has been a slight decrease in consultations for influenza-like illness through sentinel surveillance (16.9 per 100,000 patient population). No influenza viruses were reported in week 2, either from sentinel or non-sentinel surveillance.

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

Australia

During week 2 (9th to 15th January), ILI rates at a national level were low and consistent with levels usually seen at this time of the year. As of 15th January 2010, there were 37,569 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 22nd January 2010

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

- **Central and Eastern Europe:** In Europe, pandemic (H1N1) 2009 influenza virus transmission remains geographically widespread across parts of western, central and southeastern Europe, however, overall influenza activity continued to decline or remained low in most countries. The areas of most intense transmission currently include Poland, Austria, Estonia, Romania, Hungary and Moldova; however, in all but Romania, ILI activity has declined significantly since peaking in November. The overall rate of specimens testing positive for influenza fell to 20% in Europe after reaching a peak of 45% during early November 2009. Pandemic H1N1 2009 virus continues to be the predominant circulating influenza virus in the European region with only sporadic detections of seasonal influenza viruses.
- **Southern Asia:** In South Asia, active transmission of pandemic influenza virus persists in the northern and western parts of the subcontinent, however overall activity has recently peaked. In India, influenza activity has been largely confined to the northern and western states; activity in the northern states peaked during mid December 2009 and in the western states during early January 2010. In Nepal, active transmission of virus persists and the trend in respiratory disease activity remains unchanged since the previous week after reporting continuous increases in activity since late October 2009.
- **East Asia:** In East Asia, pandemic influenza activity remains widespread but continues to decline in most places. Mongolia reported a very high intensity of respiratory diseases during early January 2010; rates of ILI have been elevated above expected seasonal levels since late October 2009 but are well below a significant peak of activity observed during November 2009. In Japan, overall influenza activity continued to decline since peaking at the end of November 2009, however regional increases in activity were observed during late December on the southern island of Okinawa. In China, Hong Kong SAR and Chinese Taipei pandemic influenza activity remains widespread but continues to decline or remain stable. Pandemic (H1N1) 2009 virus continues to be the predominant circulating virus in the region but seasonal H3N2 viruses continue to circulate in very small numbers in northern China.
- **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 remained low in most places. In temperate regions of the southern hemisphere, sporadic cases of pandemic influenza continued to be reported without evidence of sustained community transmission.
- **North Africa and Western Asia:** In North Africa, limited data suggest that transmission of pandemic (H1N1) 2009 influenza virus remains geographically widespread and active throughout the region, but has most likely peaked recently in most places. During early January 2010 only the Libyan Arab Jamahiriya reported an increasing trend in respiratory disease activity. Egypt is now reporting a declining trend after increases in respiratory disease activity throughout December 2009, suggesting a recent peak in activity during early January 2010. In West Asia, limited data suggests pandemic influenza virus transmission remains geographically widespread however overall activity has been declining in most places during December and January.

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 sentinel general practices covering 5.6% 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>