

# Influenza Surveillance in Ireland - Weekly Update

## Influenza Week 43 2009 (19<sup>th</sup> to 25<sup>th</sup> October 2009)



### Summary

- There is now clear evidence of continuing widespread influenza activity in Ireland, and activity increased markedly during week 43:
  - ♦ The sentinel GP influenza-like illness (ILI) consultation rate was 210.9 per 100,000 population in week 43, the highest ILI rate reported since sentinel influenza surveillance began in 2000 and a sharp increase compared to the updated rate of 154.8 per 100,000 reported during week 42.\*
  - ♦ The sentinel GP age-specific ILI consultation rates increased sharply in the 5-14 and 0-4 year age groups
  - ♦ The number of laboratory confirmed cases of pandemic (H1N1) 2009 almost doubled in week 43, from 296 to 540 cases
  - ♦ The number of hospitalised cases of confirmed pandemic (H1N1) 2009 increased by more than 50% during week 43, from 62 to 96 cases in week 42
  - ♦ The number of hospitalised cases of confirmed pandemic (H1N1) 2009 admitted to ICU in week 43 was 12, compared to two in week 42
  - ♦ Six sentinel schools reported increased absenteeism during week 43
  - ♦ One of ten sentinel hospitals (HSE-MW) reported an increase in the proportion of respiratory admissions during week 43
  - ♦ The proportion of flu-related calls to GP Out-of-Hours services increased markedly during week 43
  - ♦ The number of pandemic (H1N1) 2009 and ILI outbreaks remained stable during week 43. The majority of these were in educational settings.
  - ♦ Pandemic (H1N1) 2009 is the main influenza virus circulating; in week 43, 100% of specimens positive for influenza were pandemic (H1N1) 2009 (including 11 probable pandemic (H1N1) 2009 awaiting confirmation)
  - ♦ The proportion of sentinel specimens testing positive for pandemic (H1N1) 2009 was 54.9% during week 43, a decrease from 59.8% in week 42\*
- Based on the surveillance of laboratory confirmed cases of pandemic (H1N1) 2009, as of 24<sup>th</sup> October:
  - ♦ 2,727 confirmed cases have been notified in Ireland
  - ♦ Children and young adults remain the most affected groups; 82.3% of cases are less than 35 years of age
  - ♦ Clinical illness continues to be mild in the majority of cases
- Ten deaths in confirmed cases of pandemic (H1N1) 2009 have been reported to date (28<sup>th</sup> October)

\*Since the last report, extra information on the number of ILI consultations and positive influenza specimens occurring in week 42 was provided by sentinel GPs and the NVRL and the rate for the week was adjusted accordingly

## 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)

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

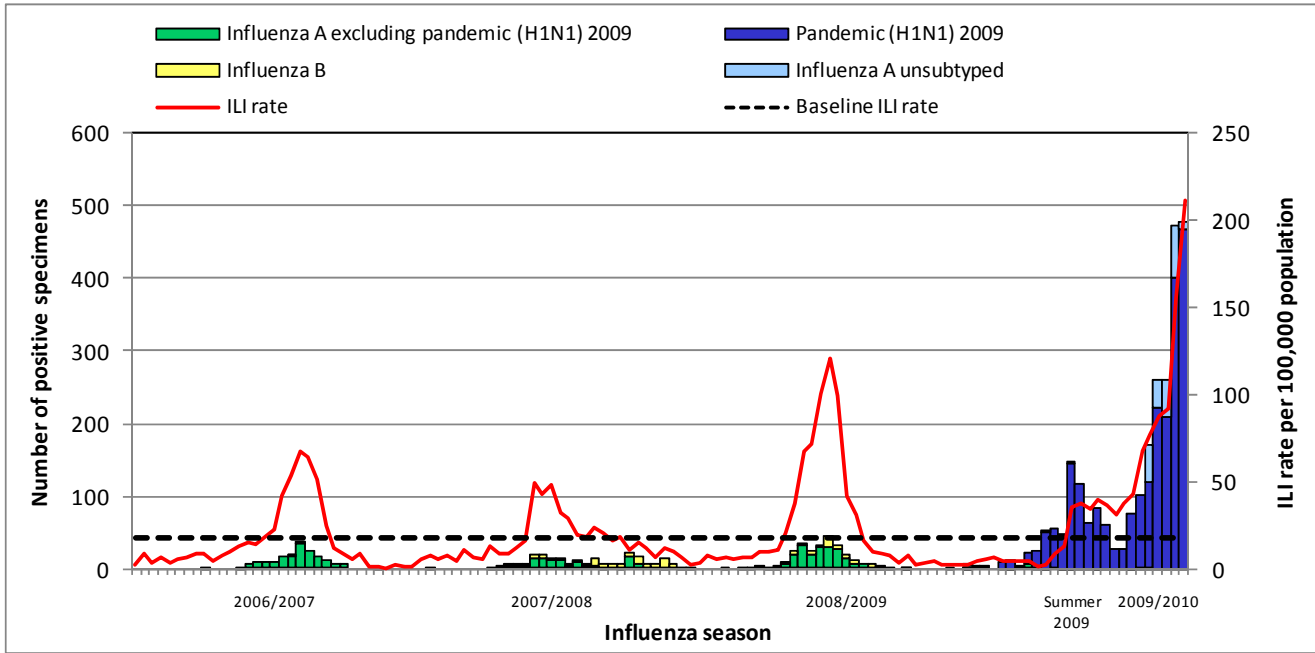
### 1. GP sentinel surveillance system

#### Clinical Data

During week 43 2009, 54 of 61 (88.5%) ICGP sentinel general practices provided data, with 52 practices (85.2%) reporting 451 influenza-like illness (ILI) cases and nine practices reporting no ILI cases. This corresponds to an ILI consultation rate of 210.9 per 100,000 population, which is a sharp increase compared to the updated rate of 154.8 per 100,000 population reported during week 42 2009.<sup>†</sup> This rate is the highest ILI rate observed since sentinel influenza surveillance commenced in Ireland in 2000. 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). Since week 39 2009, CUH and UCHG have reported influenza positive non-sentinel specimens and these are included in figure 1. Influenza A untyped isolates (probable pandemic (H1N1) 2009) are specimens that are awaiting laboratory confirmation as pandemic (H1N1) 2009.

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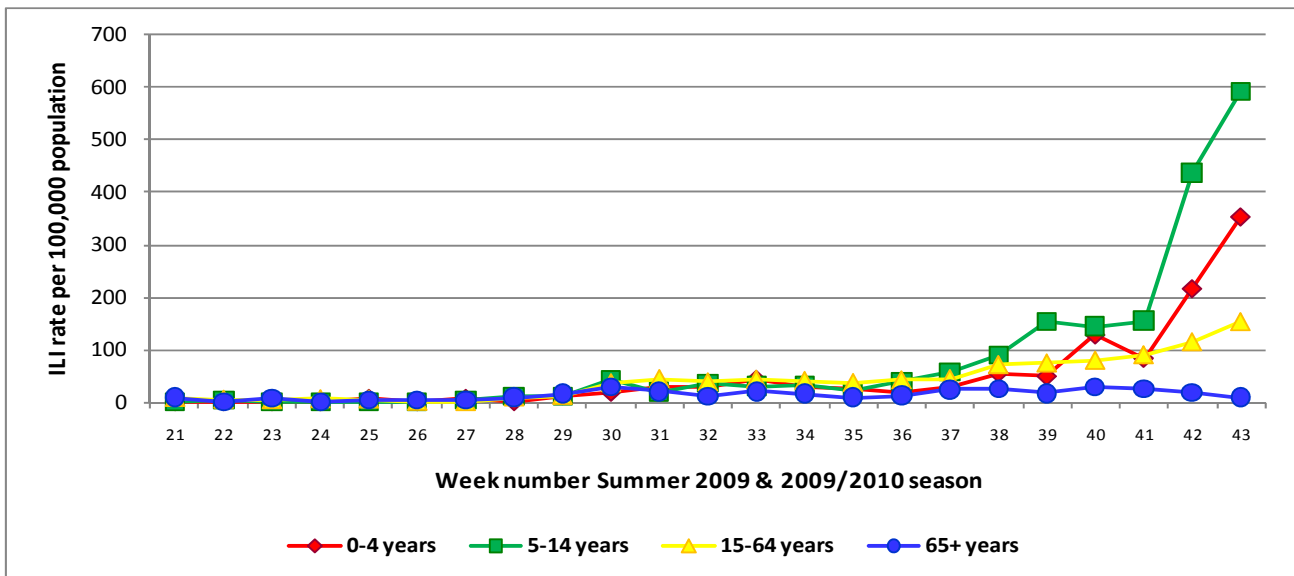
<sup>†</sup> Since the last report, extra information on the number of ILI consultations occurring in week 42 was provided by sentinel GPs and the rate for the week was adjusted accordingly



**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<sup>‡</sup>**

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

During week 43 2009, sentinel GPs reported 54 ILI cases in the 0-4 year age group (354.2 per 100,000 population), 168 cases in the 5-14 year age group (592.6 per 100,000 population), 227 cases in the 15-64 year age group (154.8 per 100,000 population) and two cases in those aged 65 years and older (8.5 per 100,000 population) (figure 2).



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

Source: ICGP ILI clinical data

<sup>‡</sup> Please note that virological data up to week 38 2009 refers to NVRL data only. Virological data from week 39 2009 onwards refers to data from NVRL, CUH and UCHG. Virological data from CUH includes 196 influenza A unsubtype detections which are awaiting confirmation as pandemic (H1N1) 2009.

### 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 43 2009, localised influenza activity (due to increases in ILI in local areas or two or more outbreaks within a HSE area and laboratory confirmed cases of influenza) was reported by HSE-M and -NW, regional activity (based on increases in ILI in one or more counties of a HSE area and laboratory confirmed cases of influenza) was reported by HSE-MW, -SE, -S and -W, while widespread activity (based on increases in ILI in two or more counties of a HSE area comprising >50% of a HSE area's population and laboratory confirmed cases of influenza) was reported by HSE-E and -NE (figure 3).

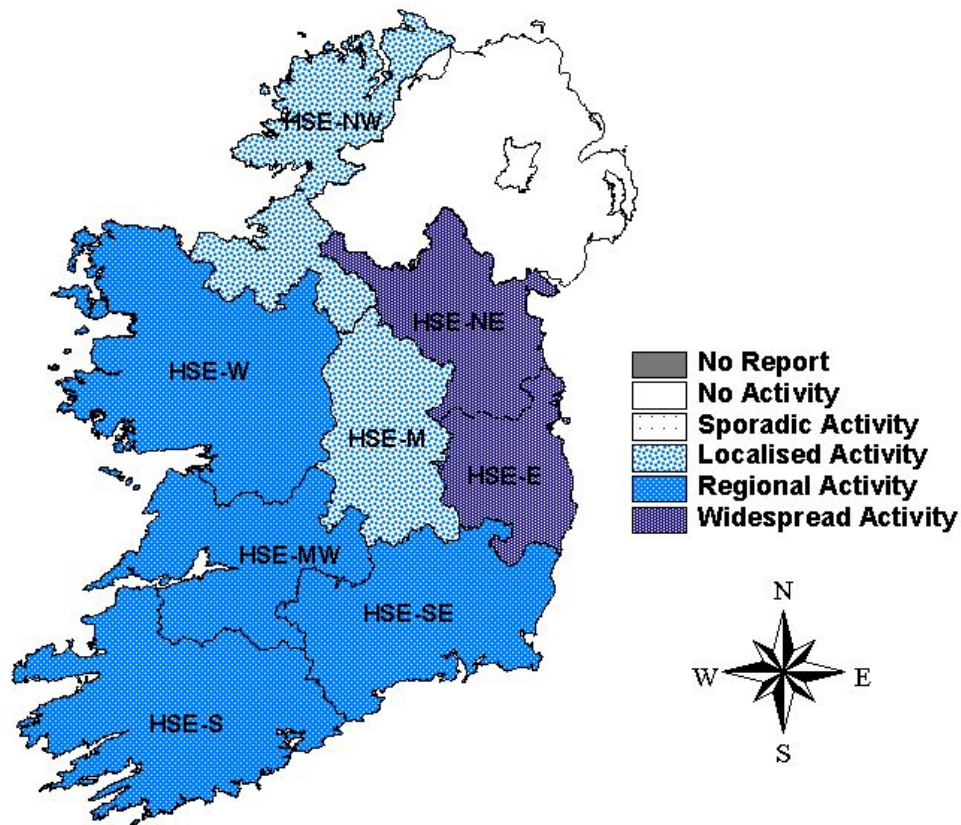


Figure 3: Map of provisional influenza activity by HSE area during influenza week 43 2009

### Sentinel hospitals and schools

The Departments of Public Health have established at least one sentinel hospital in each HSE area, 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. During influenza week 43 2009, sentinel school and hospital data were received from five HSE areas. An increase in the proportion of respiratory admissions was reported from one sentinel hospital in HSE-MW. Increases in absenteeism were reported by six sentinel primary schools in four HSE areas (HSE-M, -MW, -NW and -SE) during week 43 2009.

## 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. During week 43, there was a marked increase in the percentage of flu-related calls from 7.4% during week 42 to 10.4% during week 43. (figure 4).

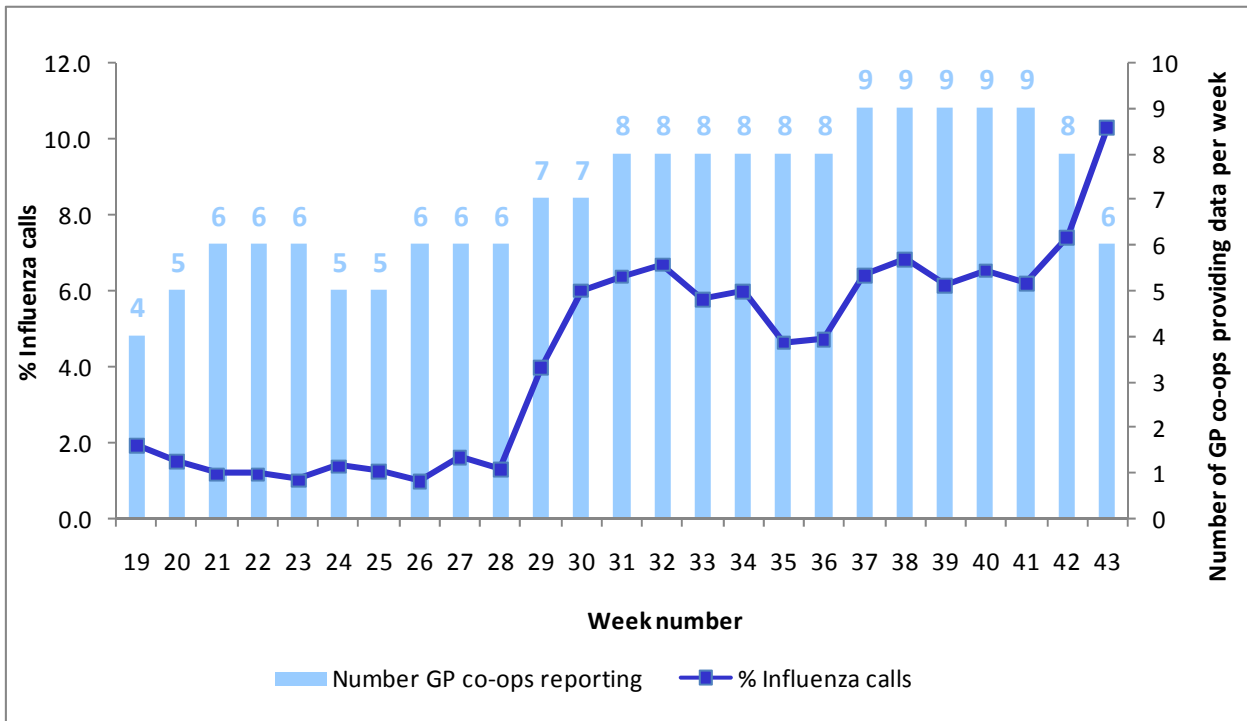


Figure 4: Flu-related calls as a proportion of total calls to Out-of-Hours GP Co-ops by week<sup>§</sup>

Source: HSE-NE.

<sup>§</sup> Week 43: data received from CARE-Doc, D-Doc, K-Doc, NoW-Doc, Shannon-Doc and 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)

One hundred and fifty-three specimens from sentinel GPs were tested by the NVRL during week 43 2009, 84 (54.9%) of which were positive for pandemic (H1N1) 2009.

The NVRL also tested 709 non-sentinel specimens taken during the same week. Of these, 267 (37.7%) were positive for pandemic (H1N1) 2009 (265 confirmed and two probable). No specimens were positive for other influenza A subtypes, influenza B, parainfluenza virus type 1, 2 or 3 or adenovirus. Nine specimens tested positive for RSV (1.3%) (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 and Summer 2010 influenza seasons, compared to the 2008/2009 and Summer 2009 influenza seasons.\*\*

UCHG tested 76 non-sentinel specimens taken during week 43 2009, 35 (46.1%) of which were positive for pandemic (H1N1) 2009 (table 2).

CUH tested 170 non-sentinel specimens taken during week 43 2009. Ninety-one (53.5%) specimens tested positive for influenza A; 82 pandemic (H1N1) 2009 and nine influenza A untyped (probable pandemic (H1N1) 2009) (table 2).

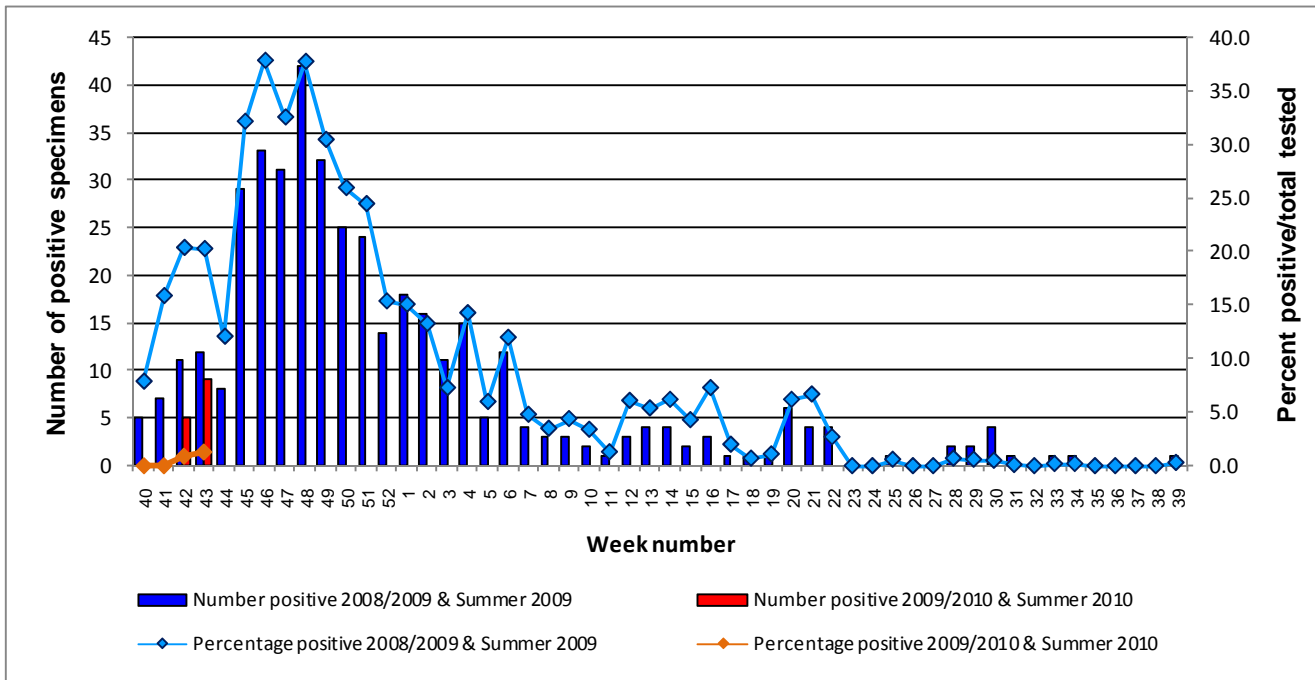
Pandemic (H1N1) 2009 is the main influenza virus circulating. During week 43, 100% of specimens positive for influenza were pandemic (H1N1) 2009 (including nine probable pandemic (H1N1) 2009). For the summer 2009 and 2009/2010 seasons to date, confirmed pandemic (H1N1) 2009 has accounted for 98.9% of influenza positive specimens (table 1).

During week 43, the percentage of sentinel and non-sentinel specimens testing positive for pandemic (H1N1) 2009 was 43.2%, an increase compared to 39.1% positive during week 42. 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 seasons.

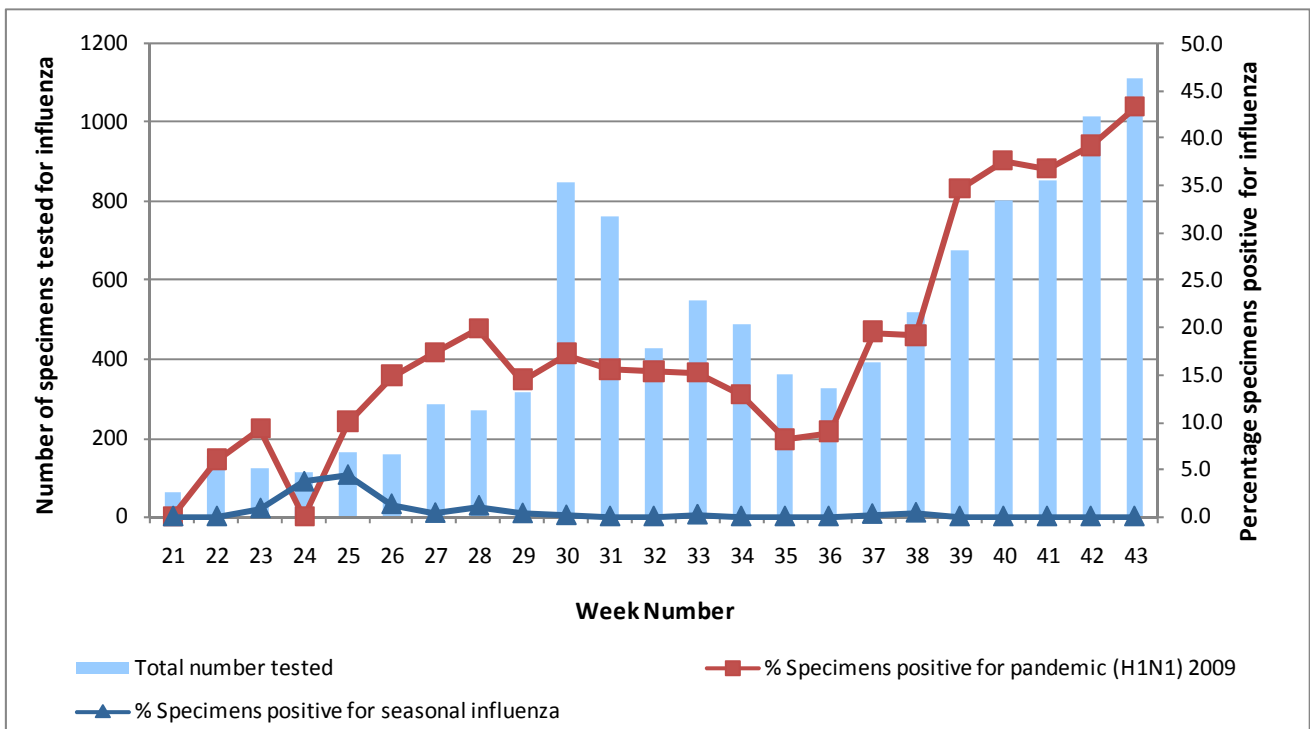
The NVRL has performed neuraminidase sequencing on 23 non-sentinel pandemic (H1N1) 2009 isolates. Oseltamivir susceptibility results are available for 23 isolates, of which all were susceptible to oseltamivir. Zanamivir susceptibility results are available for 17 isolates, of which all were susceptible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

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\*\* 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: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2009/2010 and Summer 2010 influenza seasons, compared to the 2008/2009 and Summer 2009 influenza seasons**



**Figure 6: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive<sup>††</sup>**

Source: NVRL, CUH & UCHG

<sup>††</sup> Please note that virological data up to week 38 2009 refers to NVRL data only. Virological data from week 39 2009 onwards refers to data from NVRL, CUH and UCHG. Virological data from CUH includes 196 influenza A untyped detections which are awaiting confirmation as pandemic (H1N1) 2009.

**Table 1: Number of sentinel and non-sentinel respiratory specimens tested and positive results, influenza week 43 2009 and Summer 2009 & 2009/2010 seasons 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
<b>43 2009</b>	Sentinel	153	84	54.9	84	0	0	0	0	0	100.0
	Non-sentinel	955	393	41.2	382	11	0	0	0	0	100.0
	<b>Total</b>	<b>1108</b>	<b>477</b>	<b>43.1</b>	<b>466</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100.0</b>
<b>Summer 2009 &amp; 2009/2010 seasons to date</b>	Sentinel	1283	443	34.5	440	0	3	0	0	0	99.3
	Non-sentinel	9523	2200	23.1	1975	199	0	0	23	3	98.8
	<b>Total</b>	<b>10806</b>	<b>2643</b>	<b>24.5</b>	<b>2415</b>	<b>199</b>	<b>3</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>98.9</b>

**Table 2: Number of non-sentinel respiratory specimens tested and positive results by laboratory, influenza week 43 2009 and Summer 2009 & 2009/2010 seasons 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
<b>43 2009</b>	NVRL	709	267	37.7	265	2	100.0	0	0
	CUH	170	91	53.5	82	9	100.0	0	0
	UCHG	76	35	46.1	35	0	100.0	0	0
	<b>Total</b>	<b>955</b>	<b>393</b>	<b>41.2</b>	<b>382</b>	<b>11</b>	<b>100.0</b>	<b>0</b>	<b>0</b>
<b>Summer 2009 &amp; 2009/2010 season to date</b>	NVRL	8249	1641	19.9	1613	3	98.3	22	3
	CUH	805	327	40.6	131	196	100.0	0	0
	UCHG	469	232	49.5	231	0	99.6	1	0
	<b>Total</b>	<b>9523</b>	<b>2200</b>	<b>23.1</b>	<b>1975</b>	<b>199</b>	<b>98.8</b>	<b>23</b>	<b>3</b>

**Table 3: Number of non-sentinel specimens tested by the NVRL for other respiratory pathogens and positive results, influenza week 43 2009 and Summer 2009 & 2009/2010 seasons 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
<b>43 2009</b>	709	9	1.3	0	0.0	0	0.0	0	0.0	0	0.0
<b>Summer 2009</b>	6093	21	0.3	4	0.1	4	0.1	0	0.0	6	0.1
<b>2009/2010 season to date</b>	2156	14	0.6	0	0.0	2	0.1	0	0.0	0	0.0

\*\* Please note that virological data up to week 38 2009 refers to NVRL data only. Virological data from week 39 2009 onwards refers to data from NVRL, CUH & UCHG. Virological data from CUH includes 196 influenza A unsubtyped detections which are awaiting confirmation as pandemic (H1N1) 2009.



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

As of 24<sup>th</sup> October 2009, a total of 2,727 confirmed cases of pandemic (H1N1) 2009 infection were reported. Figure 7 shows the number of confirmed pandemic (H1N1) 2009 cases by week of notification.

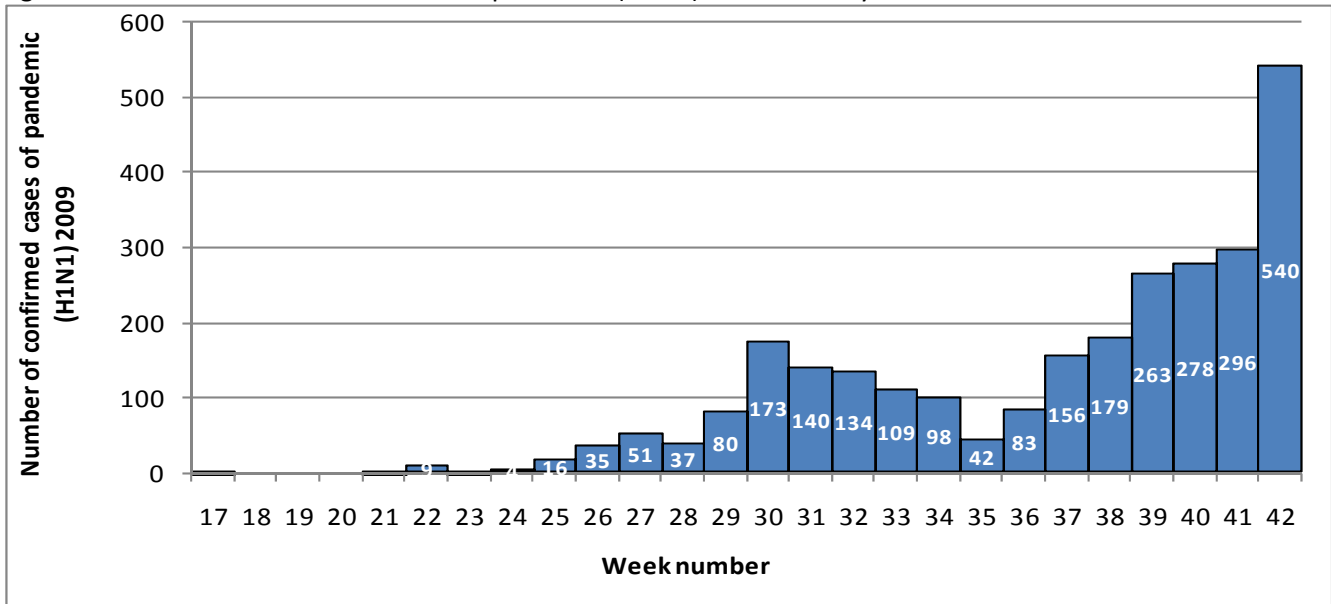


Figure 7: Number of confirmed cases of pandemic (H1N1) 2009 by week of notification<sup>55</sup>

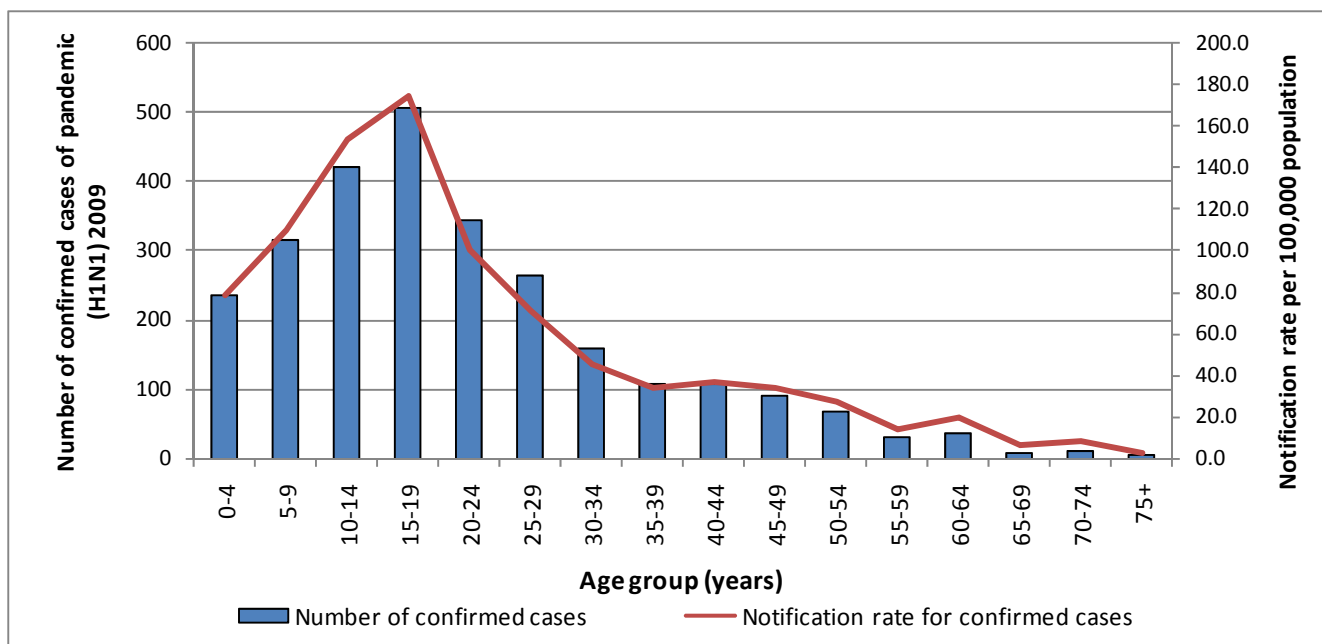
Source: CIDR

#### Age and Sex

Of the 2,727 confirmed cases reported to 24<sup>th</sup> October, 1,433 were female (52.5%), 1,269 were male (46.5%) and sex was not reported for 25 cases (0.9%). The median age of cases was 18 years (range: 0-82 years) and 82.3% were less than 35 years of age. The highest age specific rate was observed in the 15-19 year age group. Figure 8 shows the number of cases and notification rates per 100,000 population by age group.

<sup>55</sup>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 is one week behind the international influenza week number. Therefore weeks 17-42 above is equivalent to weeks 18-43 on the influenza system.



**Figure 8: Cumulative number of confirmed cases of pandemic (H1N1) 2009 and notification rate per 100,000 population by age group (years)**

Source: CIDR

### HSE area

All HSE areas have reported confirmed cases. The numbers and rates by HSE area are shown in table 4. The highest rate for week 42 was in HSE-W (20.3 per 100,000 population).

**Table 4: Number and rate per 100,000 population for confirmed cases of pandemic (H1N1) 2009 by HSE area**

Source: CIDR

HSE Area	Week 42 <sup>***</sup> : 18 <sup>th</sup> to 24 <sup>th</sup> October 2009		Week 17 - Week 42 2009	
	Number of confirmed cases	Rate per 100,000 population	Number of confirmed cases	Rate per 100,000 population
HSE-E	184	12.3	824	54.9
HSE-M	31	12.3	85	33.8
HSE-MW	30	8.3	172	47.6
HSE-NE	32	8.1	225	57.1
HSE-NW	26	11.0	144	60.7
HSE-SE	47	10.2	154	33.4
HSE-S	108	17.4	545	87.7
HSE-W	84	20.3	580	140.0
<b>Total</b>	<b>542</b>	<b>12.8</b>	<b>2729</b>	<b>64.4</b>

<sup>\*\*\*</sup> Week number in table 4 is based on infectious disease notification week number, which is one week behind the international influenza week number. Therefore week 42 above is equivalent to week 43 on the influenza system

### Severity of illness

Clinical illness continues to be mild in the majority of cases. Of the 2,727 confirmed cases, outcome was reported for 854 (31.3%) cases. Of the 854 confirmed cases where outcome was reported, 801 have recovered or are recovering (93.8%), 45 are still ill (5.3%). To date (28<sup>th</sup> October) ten laboratory confirmed cases have died. Table 5 shows the number of deaths in confirmed cases of pandemic (H1N1) 2009.

**Table 5: Number of deaths due to pandemic (H1N1) 2009**

Week number	Number of deaths due to pandemic (H1N1) 2009
32	1
33	1
37	1
40	1
41	1
43	4
44 (to 28 <sup>th</sup> October)	1
<b>Total</b>	<b>10</b>

Reported complications have been mostly respiratory in nature; 78 cases developed pneumonia and 26 developed acute respiratory distress syndrome (ARDS) (17 of these also had pneumonia). Other reported complications included chest infections, acute renal failure and multi-organ failure.

### Hospitalised cases

Of the 2,727 confirmed cases, 438 (16.1%) were admitted to hospital. Of these, 38 (8.7%) were admitted to ICU. Figure 9 shows the number of hospitalised cases of confirmed pandemic (H1N1) 2009 by week number while Table 6 shows the number of hospitalised cases by age group (years) and sex. There was an increase in the numbers of laboratory confirmed cases who were hospitalised and in ICU in week 42. Two hundred and fifty-one (42.7%) of the hospitalised cases had pre-existing clinical conditions including chronic heart disease, chronic liver disease, chronic renal disease, chronic respiratory disease, chronic neurological disease, asthma, haemoglobinopathy, immunosuppression, diabetes mellitus, severe obesity (BMI  $\geq 40$ ) and pregnancy.

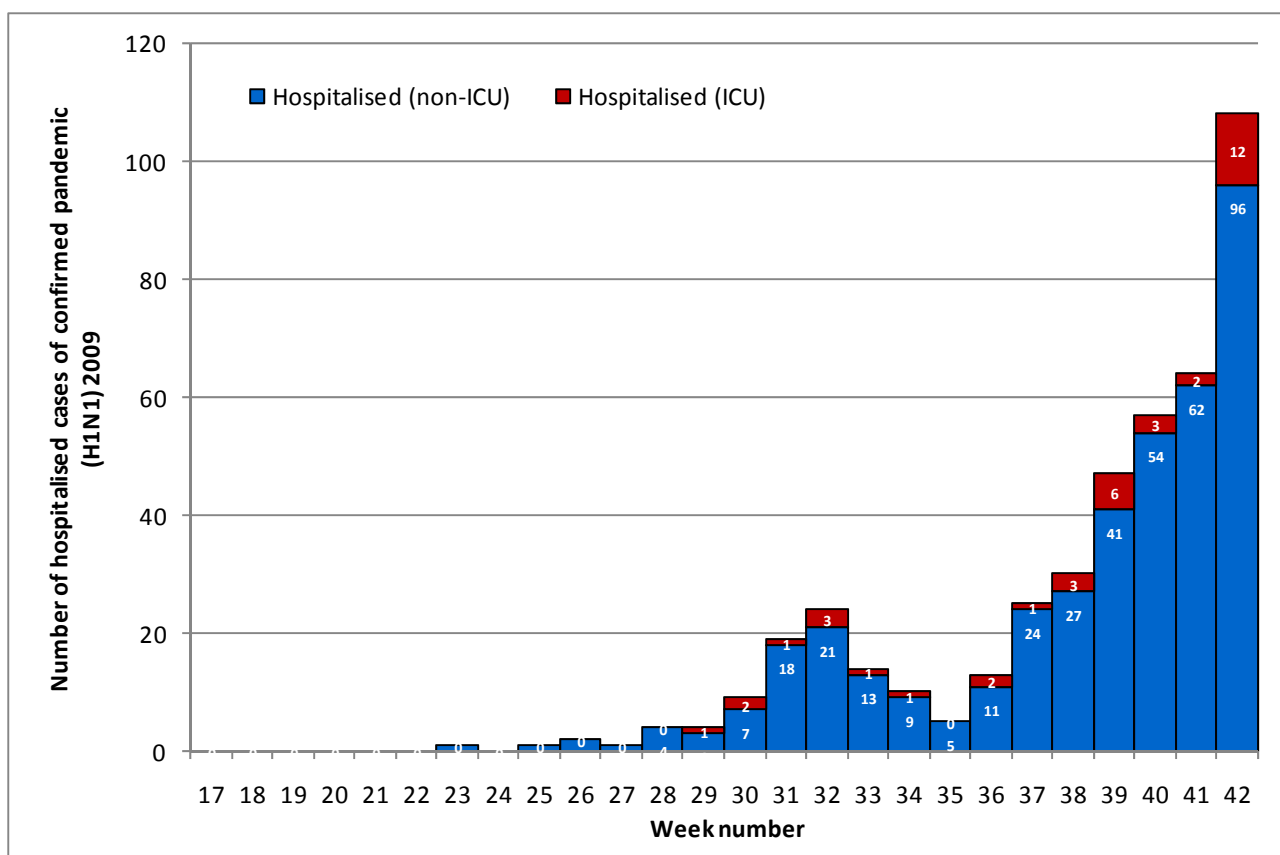


Figure 9: Number of hospitalised cases of confirmed pandemic (H1N1) 2009 by week number<sup>+++</sup>

Source: CIDR

Table 6: Cumulative number of hospitalised cases of confirmed pandemic (H1N1) 2009 by age group (years) and sex (Wk 17 – 42)

Source: CIDR

Age group (years)	Female	Male	Total
0-4	36	44	80
5-9	22	28	50
10-14	16	25	41
15-19	28	26	54
20-24	34	15	49
25-29	26	13	39
30-34	13	10	23
35-39	9	6	15
40-44	13	11	24
45-49	11	4	15
50-54	7	6	13
55-59	5	6	11
60-64	6	8	14
65-69	3	2	5
70-74	0	2	2
75+	3	0	3
<b>Total</b>	<b>232</b>	<b>206</b>	<b>438</b>

<sup>+++</sup> Week number in Figure 9 is based on infectious disease notification week number, which is one week behind the international influenza week number. Therefore week 42 above is equivalent to week 43 on the influenza system

## 1. Outbreak surveillance (CIDR)

As of 28<sup>th</sup> October 2009 at 18.15 hours, 93 general outbreaks of pandemic (H1N1) 2009 and ILI have been reported in Ireland since week 23 2009. These outbreaks involved 2,199 people in total, of which 178 (8.0%) were laboratory confirmed cases of pandemic (H1N1) 2009. The number ill per outbreak has ranged between two and 150 people.

The majority of these outbreaks (70) occurred in educational settings. Seven outbreaks occurred in residential institutions, three in crèches, two were travel related, two were related to social gatherings, two were in a workplace, and one each were in a community hospital/long-stay unit, a hotel and an intellectual disability unit (figure 10). Table 7 summarises the pandemic (H1N1) 2009 and ILI outbreaks to date by location, while table 8 summarises the pandemic (H1N1) 2009 and ILI outbreaks by HSE area. Table 9 shows the number of outbreak associated pandemic (H1N1) 2009 and ILI cases by age group (years).

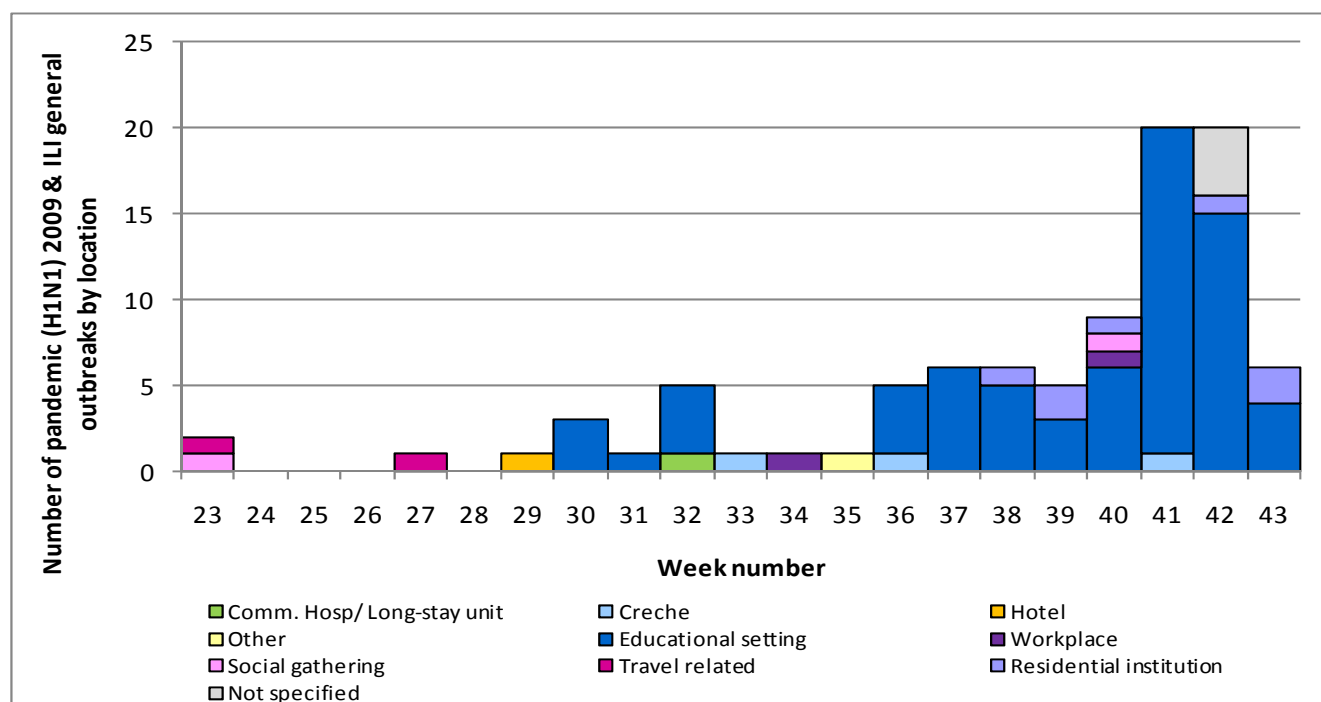


Figure 10: Number of pandemic (H1N1) 2009 and ILI general outbreaks by location and week number<sup>†††</sup>

Source: CIDR

<sup>†††</sup> Week number in Figure 10 is based on infectious disease notification week number, which is one week behind the international influenza week number. Therefore week 43 above is equivalent to week 44 on the influenza system and only represents data from Sunday 25<sup>th</sup> October to Wednesday 28<sup>th</sup> October @ 18.15 hours

**Table 7: Summary of pandemic (H1N1) 2009 and ILI general outbreaks by location, to date<sup>§§§</sup>**

Source: CIDR

Location	Number of outbreaks	Total number ill	Total number laboratory investigated
Comm. Hosp/ Long-stay unit	1	5	2
Creche	3	31	5
Hotel	1	3	1
Not specified	4	45	3
Other	1	3	3
<b>Educational setting</b>	<b>70</b>	<b>2013</b>	<b>126</b>
Residential institution	7	81	25
Social gathering	2	4	3
Travel related	2	9	8
Workplace	2	5	2
<b>Total</b>	<b>93</b>	<b>2199</b>	<b>178</b>

**Table 8: Summary of pandemic (H1N1) 2009 and ILI general outbreaks by HSE area, to date<sup>§§§</sup>**

Source: CIDR

HSE Area	Number of outbreaks	Total number ill	Total number laboratory confirmed
HSE-E	21	443	35
HSE-M	0	0	0
HSE-MW	7	32	21
HSE-NE	15	528	31
HSE-NW	9	359	25
HSE-SE	9	143	10
HSE-S	21	272	27
HSE-W	11	422	29
<b>Total</b>	<b>93</b>	<b>2199</b>	<b>178</b>

**Table 9: Number of general outbreak associated pandemic (H1N1) and ILI cases of by age group (years), to date<sup>§§§</sup>**

Source: CIDR

Number of cases	0-1	2-4	5-9	10-19	20-49	50-64	65+	Age unknown	Total
	8	28	243	912	79	4	0	<b>925</b>	<b>2199</b>

<sup>§§§</sup> Data taken from CIDR at 28/10/2009 @ 18.15 hours

## International summary

The total numbers of confirmed cases and deaths reported worldwide by the World Health Organization (WHO) region are shown in table 10. The numbers shown are likely to be an underestimate of the numbers of cases as many countries are now moving to selective testing policies.

**Table 10: Reported number of confirmed pandemic (H1N1) 2009 cases and deaths by WHO region**

Source: WHO 18<sup>th</sup> October 2009

WHO Region	Cumulative total as of 18 <sup>th</sup> October 2009	
	Cases <sup>****</sup>	Deaths
Africa (AFRO)	13297	75
Americas (AMRO)	160129	3539
Eastern Mediterranean (EMRO)	14739	96
Europe (EURO)	Over 63000	At least 261
South-East Asia (SEARO)	41513	573
Western Pacific (WPRO)	122267	455
<b>Total</b>	<b>Over 399232</b>	<b>At least 4735</b>

### United Kingdom

During week 42 pandemic influenza activity continued to increase across the UK with the main burden of disease remaining in school-aged children and young adults. Although most cases continue to be mild, 119 people have died to date. The highest hospitalisation rates have consistently been in the under 5-year age group, and have increased in all age groups recently. Three of 1,733 (0.2%) pandemic viruses tested have been confirmed to carry a mutation which confers resistance to the antiviral drug oseltamivir. Two of these have been shown phenotypically resistant to the drug but retain sensitivity to zanamivir and the third is undergoing further testing.

[http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1243928258754](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1243928258754)

### Europe

During week 42 2009, Iceland reported very high intensity of flu activity and Ireland and the UK (Northern Ireland) reported high intensity. Belgium, Bulgaria, the Netherlands, Spain, Sweden and the UK (England) reported medium intensity. Twelve countries reported an increasing trend of influenza activity as compared to week 41 2009.

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

### USA

During week 42 (11<sup>th</sup> to 17<sup>th</sup> October 2009), influenza activity increased in the United States. During week 42, 4,855 (37.5%) specimens tested by U.S. WHO and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division were positive for influenza. Of all subtyped influenza A viruses being reported to CDC, 100% were pandemic (H1N1) 2009 viruses.

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

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\*\*\*\* Given that countries are no longer required to test and report individual cases, the number of cases reported significantly understates the actual number of cases.

## Canada

During week 42 (11<sup>th</sup> to 17<sup>th</sup> October 2009), the national ILI consultation rate was 48 consultations per 1,000 visits, an increase compared to the previous week's rate (43 per 1,000 visits). The overall influenza activity has increased for a fifth consecutive week. During week 42, the intensity of Pandemic (H1N1) 2009 in the population was moderate with 64 hospitalisations and three deaths reported. The national hospitalisation rate was 4.8 per 100,000 population with the highest rates in children under 15 years of age (11.2 per 100,000). In comparison, the national mortality rate was 0.25 per 100,000 population, with those 45 years and older having the highest mortality rate (0.36 per 100,000).

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

## New Zealand

In recent weeks ILI rates have been decreasing in New Zealand, but in week 42 (12<sup>th</sup> to 18<sup>th</sup> October, 2009) there has been a slight increase when an ILI rate of 40.5 per 100,000 patient population was reported. To date, the highest ILI consultation rates have been reported among children and teenagers aged 0 to 19 years. During week 42, a total of 16 swabs were received by the virology laboratories from which one (6.3%) influenza virus was identified as pandemic (H1N1) 2009.

[http://www.surv.esr.cri.nz/virology/influenza\\_weekly\\_update.php](http://www.surv.esr.cri.nz/virology/influenza_weekly_update.php)

## Australia

As of 26<sup>th</sup> October 2009 there were 37,039 confirmed cases of pandemic (H1N1) 2009 and 186 (0.5%) deaths associated with pandemic (H1N1) 2009. The total number of hospitalisations in Australia since pandemic (H1N1) 2009 was identified is 4,904 (13.2 %).

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

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

## Other countries

### As of 17<sup>th</sup> October 2009

- **Northern Asia:** Rates of respiratory illness are increasing, but are not yet at levels normally seen in an influenza season (baseline levels are not defined in many countries of the area). Of note, the proportion of cases in Asia that are related to seasonal influenza A(H3N2) continue to decline globally as the proportion related to pandemic H1N1 2009 virus increases. Currently, only East Asia is reporting any significant numbers of influenza A(H3N2) isolates.
- **Tropical zones:** Rates of illness are generally declining, with a few exceptions. Cuba, Colombia, and El Salvador are reporting increases in the tropical region of the Americas. In tropical Asia, of the countries that are reporting this week, all report decreases in respiratory disease activity.
- **Temperate zones of the Southern Hemisphere:** Reporting no significant pandemic related activity.

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

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

Ireland

[www.hpsc.ie](http://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/>



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## 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.