

# Influenza Surveillance in Ireland – Weekly Report

## Influenza Week 9 2011 (28<sup>th</sup> February – 6<sup>th</sup> March 2011)



### Summary

- Influenza activity continued to decrease in Ireland during week 9 2011.
  - The sentinel GP influenza-like illness (ILI) consultation rate was 18.9 per 100,000 population in week 9 2011, a decrease from the updated rate of 23.7 per 100,000 reported during week 8 2011.
    - ILI rates have decreased in all age groups
    - ILI rates are just above baseline levels.
  - The proportion of influenza-related calls to GP Out-of-Hours services continued to decrease in week 9 2011, coinciding with the decrease in sentinel GP ILI consultation rates.
  - The proportion of influenza positive specimens detected by the NVRL decreased slightly in week 9 2011 to 9.2%, compared to 10.1% in the previous week.
  - All influenza types decreased in week 9 2011, with influenza B remaining the predominant circulating influenza type.
  - The weekly number of hospitalised cases of influenza increased slightly but remained at low levels, with 18 cases reported in week 9 2011, compared to 13 in the previous week.
  - To date (March 9<sup>th</sup> 2011) this season, 934 confirmed influenza cases have been hospitalised, 122 cases have been admitted to ICU and 25 deaths have been reported to HPSC.
  - No new outbreaks of influenza/ILI have been reported since week 5 2011. As of March 9<sup>th</sup> 2011, 14 influenza/ILI outbreaks have been reported to HPSC this season.
  - The proportion of respiratory syncytial virus (RSV) positive detections is slightly above average for the time of year.

### Surveillance Systems

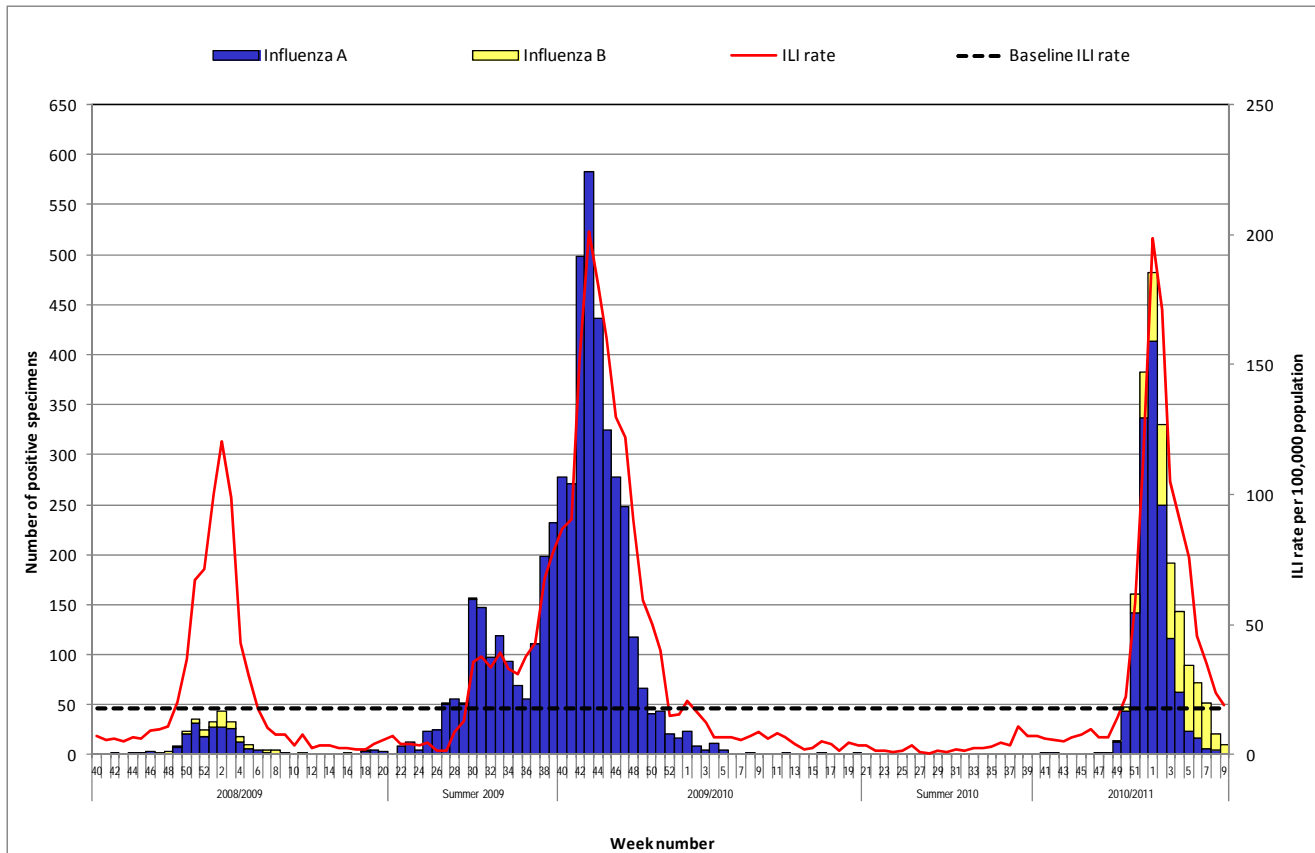
In order to monitor influenza activity in Ireland a number of surveillance systems are currently in place:

1. Irish College of General Practitioners (ICGP) GP sentinel surveillance system
2. Virological data from the National Virus Reference Laboratory (NVRL)
3. GP Out-of-Hours surveillance system
4. Influenza notifications reported on the Computerised Infectious Disease Reporting system (CIDR)
5. Enhanced surveillance of all hospitalised confirmed influenza cases aged 0-14 years
6. Intensive Care Society of Ireland (ICSI) enhanced surveillance of all critical care patients with confirmed influenza
7. Outbreak reporting on CIDR
8. Network of sentinel schools reporting absenteeism and sentinel hospitals reporting admission data

## 1. GP sentinel surveillance system

### Clinical Data

During week 9 2011, 53 of 60 (88.3%) sentinel general practices provided data, with 21 practices (39.6%) reporting 46 influenza-like illness (ILI) cases. This corresponds to an ILI consultation rate of 18.9 per 100,000 population, a decrease compared to the updated rate of 23.7 per 100,000 reported during week 8 2011. The ILI rate for week 9 2011 is just above the Irish baseline threshold (17.8 per 100,000 population). Thirty-two (60.4%) sentinel practices reported no ILI cases during week 9 2011. Figure 1 shows the ILI consultation rates, the baseline threshold rate and the number of positive specimens detected by the NVRL.



**Figure 1. ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season.**

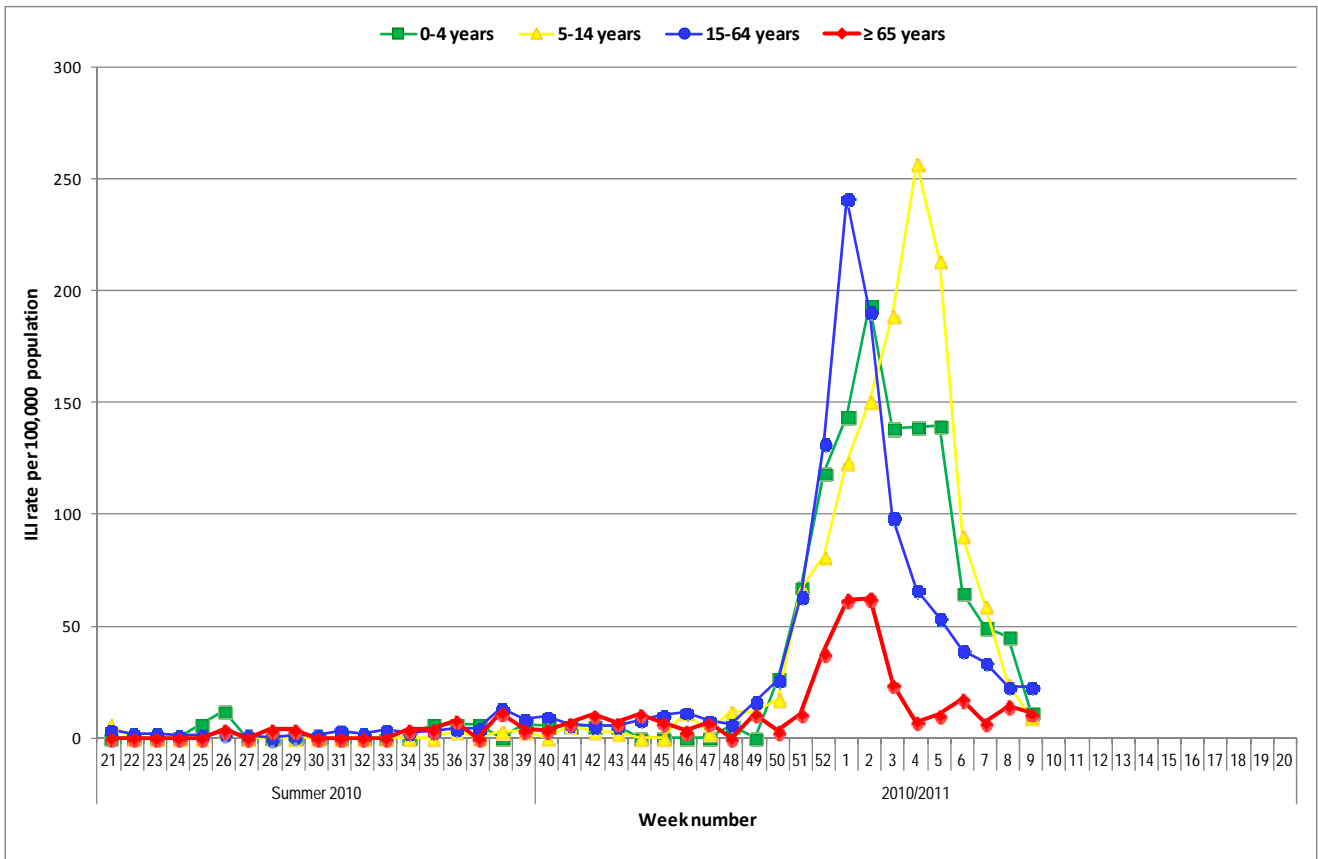
Source: Clinical ILI data from ICGP and virological data from the NVRL<sup>1,2</sup>

ILI age specific rates decreased in all age groups in week 9 2011. ILI age specific rates were highest in the 15-64 year age group during week 9 2011. Two ILI cases were reported in the 0-4 year age group (11.5 per 100,000), 3 cases were reported in the 5-14 year age group (9.3 per 100,000), 38 in the 15-64 year age group (22.7 per 100,000) and 3 ILI cases in those aged 65 years or older (11.1 per 100,000) during week 9 2011. Age specific ILI rates in the 0-4 and 5-14 year age groups to date this season remain at a significantly lower level

<sup>1</sup> Please note that in addition to the NVRL, Cork University Hospital (CUH) and Galway University Hospital(s) (GUH) also tested for influenza A (H1N1 2009) during the pandemic period.

<sup>2</sup> Sentinel GP consultations and virological data are updated on an ongoing basis, ILI rates and virological data are adjusted accordingly.

than those reported during the pandemic period in 2009/2010. During the pandemic period, ILI rates in 0-4 year olds peaked at 387.3 per 100,000 population and at 772.0 per 100,000 population in 5-14 year olds.



**Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2010 and the 2010/2011 influenza season to date**  
 Source: ICGP ILI clinical data

## 2. Virological Data from the National Virus Reference Laboratory (NVRL)<sup>‡</sup>

The data reported in this section for the 2010/2011 influenza season refers to specimens tested by the National Virus Reference Laboratory (NVRL). A total of 109 specimens (10 sentinel and 99 non-sentinel<sup>§</sup> specimens) were tested by the NVRL during week 9 2011. Ten (9.2%) specimens were positive for influenza: 1 (10.0%) influenza A (H1N1 2009) and 9 (90.0%) influenza B. Influenza B is the predominant circulating influenza type in Ireland, accounting for 90.0% of all positive influenza specimens detected by the NVRL in week 9 2011.

Of the 10 GP sentinel specimens taken during week 9 2011, 2 (20.0%) were positive for influenza: both of which were influenza B. There were no positive influenza A sentinel specimens during week 9 2011. Of the 99 non-sentinel specimens taken during week 9 2011, 8 (8.1%) were positive for influenza: 1 (12.5%) influenza A (H1N1 2009) and 7 (87.5%) influenza B.

To date this season, 6991 sentinel and non-sentinel specimens have been tested by the NVRL, 2001 (28.6%) specimens tested positive for influenza: 1365 influenza A (H1N1 2009), 38 influenza A (H3), 30 influenza A (unsubtyped) and 568 influenza B. Of the 2001 positive influenza specimens, 1433 (71.6%) were influenza A and 568 (28.4%) were influenza B (figures 3 & 4). To date this season, six influenza B cases were co-infected with influenza A: 5 with influenza A (H1N1 2009) and one with influenza A (unsubtyped).

The NVRL has tested eight non-sentinel specimens from six confirmed influenza A (H1N1 2009) cases for antiviral resistance. All six patients were hospitalised and admitted to intensive care. One (12.5%) of the eight specimens tested was resistant to oseltamivir, carrying the H275Y mutation.

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<sup>‡</sup> It should be noted that virological data refer to weekly data received from the NVRL on Tuesday of each week.

<sup>§</sup> 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.

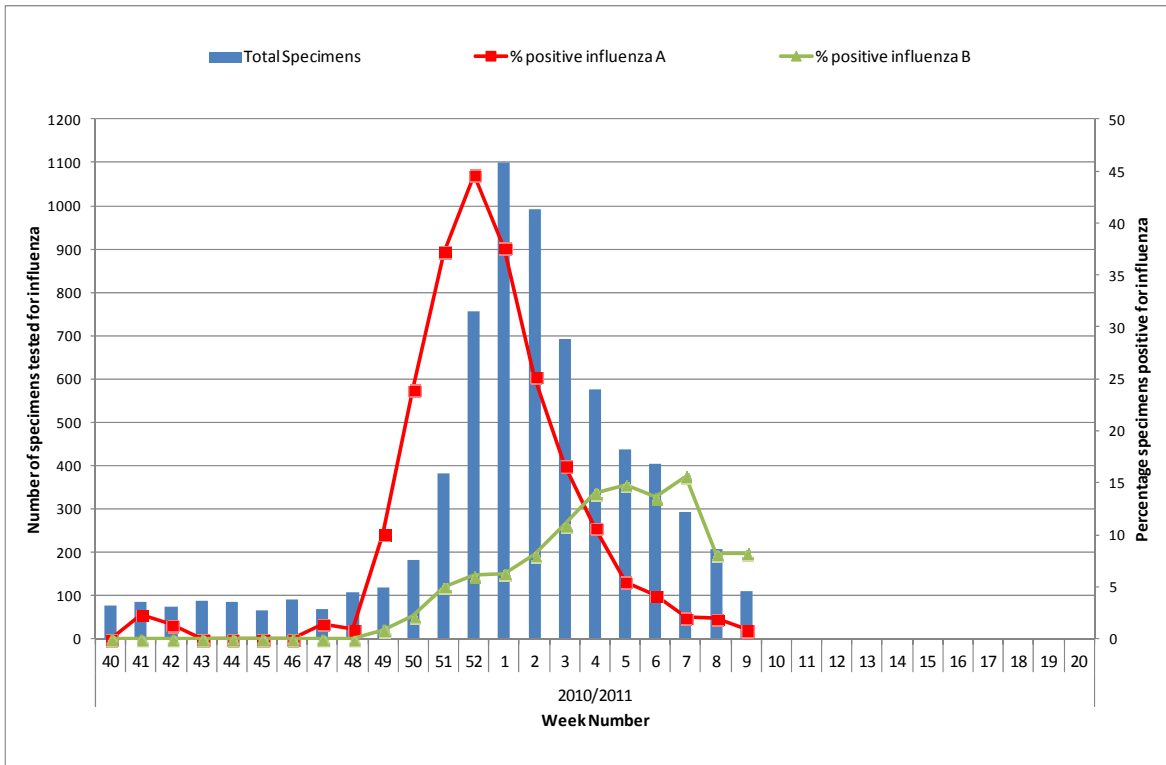


Figure 3: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive by week for the 2010/2011 influenza season. Source: NVRL

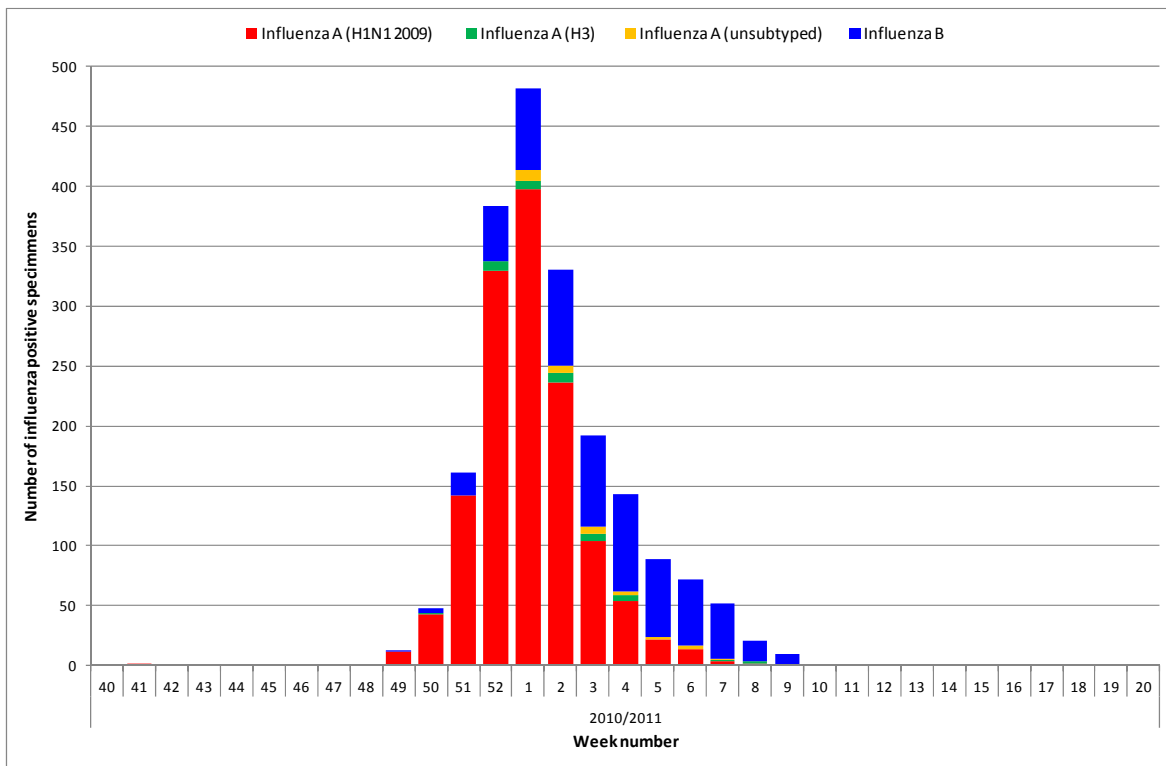


Figure 4: Number of sentinel and non-sentinel specimens positive for influenza by type/subtype and week for the 2010/2011 influenza season. Source: NVRL

Of the 99 non-sentinel specimens tested during week 9 2011, 20.2% (n=20) were positive for RSV. RSV positive specimens remain at higher levels than for the same period during the 2009/2010 season (Tables 1 & 2). It should be noted that RSV data only include specimens referred to the NVRL for RSV testing. Not all hospitals refer respiratory specimens for RSV testing to the NVRL. Figure 5 shows the number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2010/2011 and 2009/2010 seasons.\*\*

There was one positive detection of parainfluenza virus (PIV) type 3 during week 9 2011. No positive adenovirus, PIV-1 or -2 specimens were detected in week 9 2011. To date this season, there have been sporadic detections of adenovirus and PIV types -1, -2 and -3.

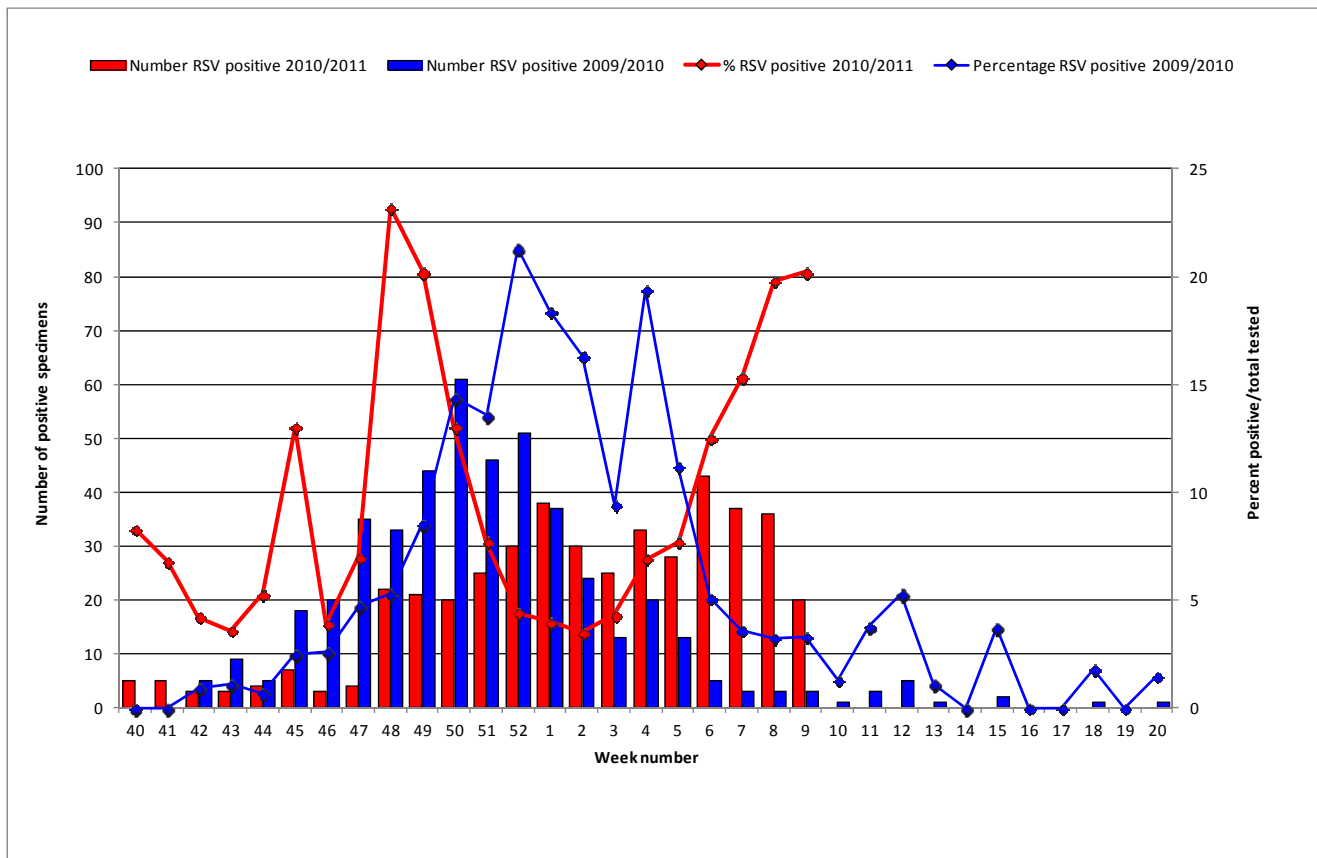


Figure 5: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2010/2011 season, compared to the 2009/2010 season. Source: NVRL

\*\* 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.

**Table 1: Number of sentinel and non-sentinel<sup>††</sup> respiratory specimens tested by the NVRL and positive influenza results, for week 9 2011 and the season to date**  
*Source: NVRL*

Week number	Specimen type	Total specimens tested	Number influenza positive	% Influenza positive	Influenza A					Influenza B
					Total influenza A	A (H1N1 2009)	A (H3)	A (H1)	A (unsubtyped)	
<b>9 2011</b>	Sentinel	10	2	20.0	0	0	0	0	0	2
	Non-sentinel	99	8	8.1	1	1	0	0	0	7
	<b>Total</b>	<b>109</b>	<b>10</b>	<b>9.2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>
<b>2010/2011 season</b>	Sentinel	987	500	50.7	278	267	8	0	3	222
	Non-sentinel	6004	1501	25.0	1155	1098	30	0	27	346
	<b>Total</b>	<b>6991</b>	<b>2001</b>	<b>28.6</b>	<b>1433</b>	<b>1365</b>	<b>38</b>	<b>0</b>	<b>30</b>	<b>568</b>

**Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 9 2011 and the season to date** *Source: NVRL*

Week number	Total specimens tested	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>9 2011</b>	99	20	20.2	0	0.0	0	0.0	0	0.0	1	1.0
<b>2010/2011 season</b>	6004	442	7.4	14	0.2	6	0.1	2	0.03	7	0.1

<sup>††</sup> 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.

### 3. Regional Influenza Activity by HSE-Area

Influenza activity is reported on a weekly basis for each HSE area. Influenza activity is based on sentinel GP ILI consultation rates, laboratory confirmed influenza cases and ILI/influenza outbreaks.

During week 9 2011, localised influenza activity was reported from HSE-E and -MW, all other HSE Areas (HSE-M, -NE –NW, -S –SE and –W) reported sporadic influenza activity (figure 6).

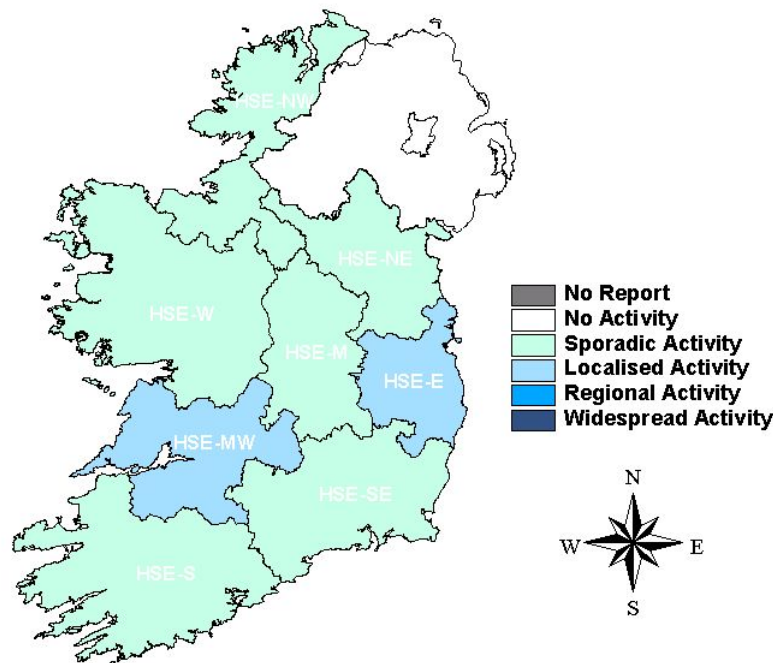


Figure 6: Map of provisional influenza activity by HSE-Area during influenza week 9 2011

#### 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 HSE-Area, in close proximity to the sentinel GPs, to report absenteeism data on a weekly basis. Hospital admissions and school absenteeism data act as a crude indicator for influenza activity.

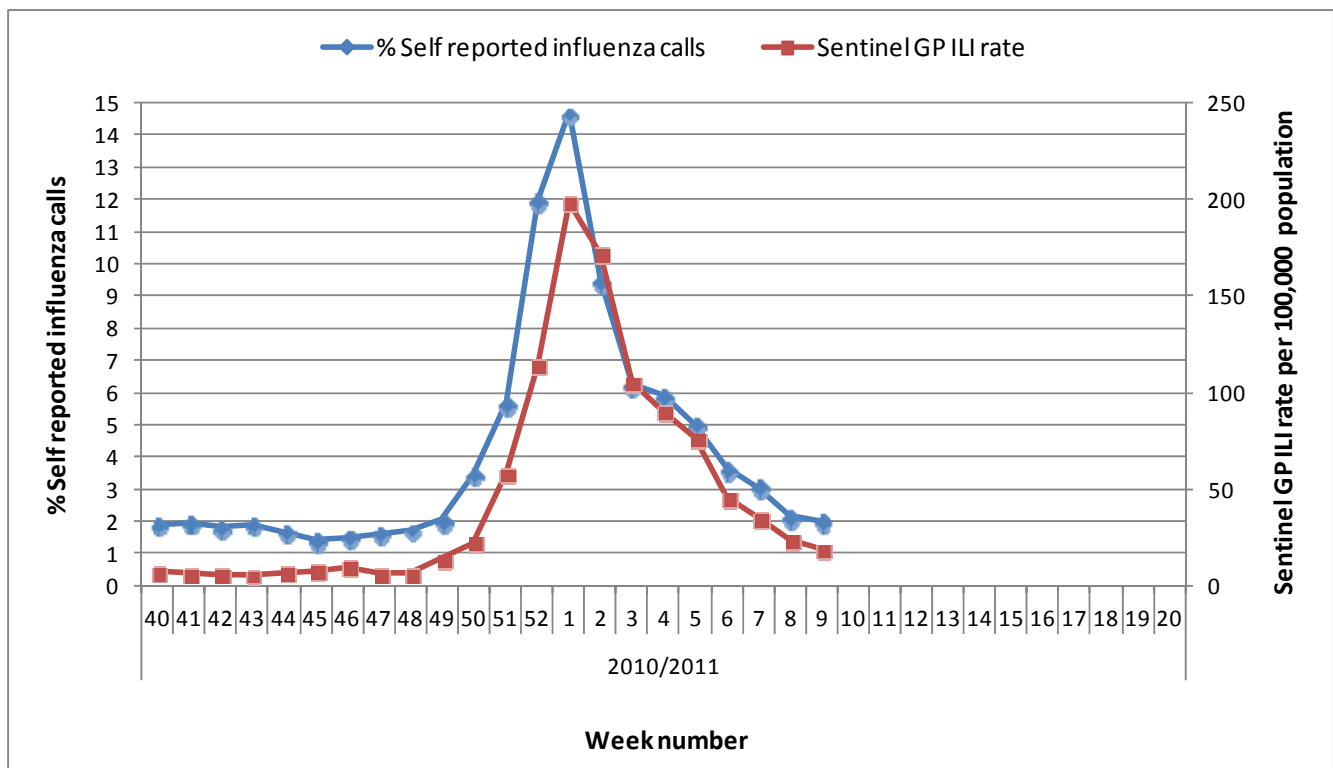
During week 9 2011, there were no significant increases in respiratory admissions reported from sentinel hospitals. The proportion of respiratory admissions from reporting sentinel hospitals in HSE-E, -S, -SE and -W peaked during weeks 51 and 52 2010. One sentinel primary school in HSE-NW reported a slight increase in absenteeism during week 9 2011, associated with reports of gastroenteritis.



#### 4. GP Out-Of-Hours services surveillance

The Department of Public Health in 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 proportion of influenza-related calls to GP Out-of-Hours services decreased to 2.0% during week 9 2011, compared to 2.2% in week 8 2011. Six GP Out-of-Hours services reported during week 8 2011 (figure 7).

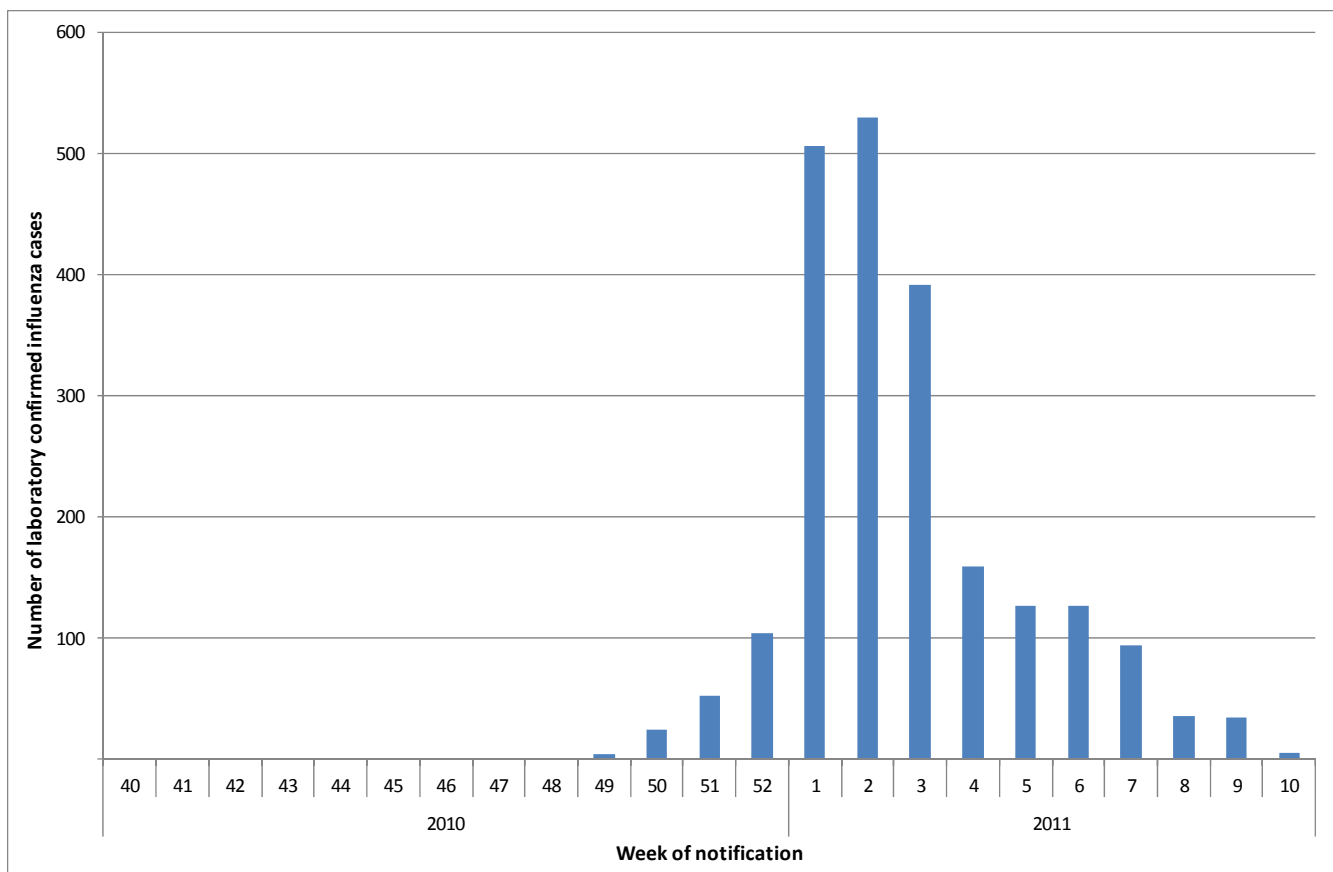


**Figure 7: Self reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and national sentinel GP ILI consultation rate per 100,000 population by week for the 2010/2011 season**

Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

#### 5. Influenza notifications (CIDR)

As of 9<sup>th</sup> March 2011 (09:00), 2194 confirmed influenza cases were notified on CIDR for the 2010/2011 influenza season. Laboratory confirmed influenza cases notified on CIDR include all positive influenza specimens reported from all laboratories testing for influenza and reporting to CIDR. Currently, the NVRL is the only laboratory subtyping positive influenza A specimens for *all* influenza A subtypes. Of the 2194 confirmed influenza cases, 1321 (60.2%) were confirmed influenza A (H1N1 2009), 22 (1.0%) were influenza A (H3), 202 (9.2%) were influenza A (unsubtyped), 649 (29.6%) were influenza B cases. It should be noted that data for week 10 2011 are incomplete and only include notified cases as of Wednesday 9<sup>th</sup> March 2011 (09:00).



**Figure 8: Number of laboratory confirmed influenza cases by week of notification on CIDR for the 2010/2011 influenza season.** \*It should be noted that data for week 10 2011 are incomplete and only include notified cases as of 9<sup>th</sup> March 2011 (09:00). Source: CIDR 09/03/2011 09:00

Nine hundred and thirty-four (42.6%) of the 2194 confirmed influenza cases notified this influenza season were hospitalised (i.e. these cases were recorded on CIDR as hospital inpatients) (figure 9). Of the 934 hospitalised cases, 598 (64.0%) were influenza A (H1N1 2009) cases, 7 (0.7%) were influenza A (H3) cases, 109 (11.7%) were influenza A (unsubtyped) and 220 (23.6%) were influenza B cases. The weekly number of hospitalised cases of influenza increased slightly in week 9 2011 to 18, compared to 13 in the previous week. All 18 of the influenza cases admitted to hospital during week 9 2011 were positive for influenza B.

The highest cumulative age specific rate for influenza confirmed hospitalised cases for the 2010/2011 influenza season to date is currently in the 0-4 year age group (60.5 per 100,000 population) (table 3). It should be noted that age was unknown for one hospitalised case.

To date this season, 80 (3.6%) of the 2194 laboratory confirmed influenza cases were reported as pregnant. Fifty-one (63.8%) of these cases were reported as hospitalised: 43 influenza A (H1N1 2009), 2 influenza A (unsubtyped) cases and 6 influenza B cases.\*\*

\*\* It should be noted that information on pregnancy is not completed for all cases.

Age (years)	Hospitalised		Admitted to ICU	
	Number	Age specific rate per 100,000 population	Number	Age specific rate per 100,000 population
0-4	183	60.5	12	4.0
5-14	90	16.0	2	0.4
15-24	101	16.0	3	0.5
25-34	172	23.8	21	2.9
35-44	101	16.2	18	2.9
45-54	88	16.9	23	4.4
55-64	100	24.6	25	6.1
65+	98	20.9	18	3.8

**Table 3: Age specific rate per 100,000 population by age group (years) for all influenza confirmed hospitalised cases and cases admitted to ICU for the 2010/2011 influenza season to date.** *Source: CIDR and ICU enhanced surveillance system 09/03/2011 09:00*

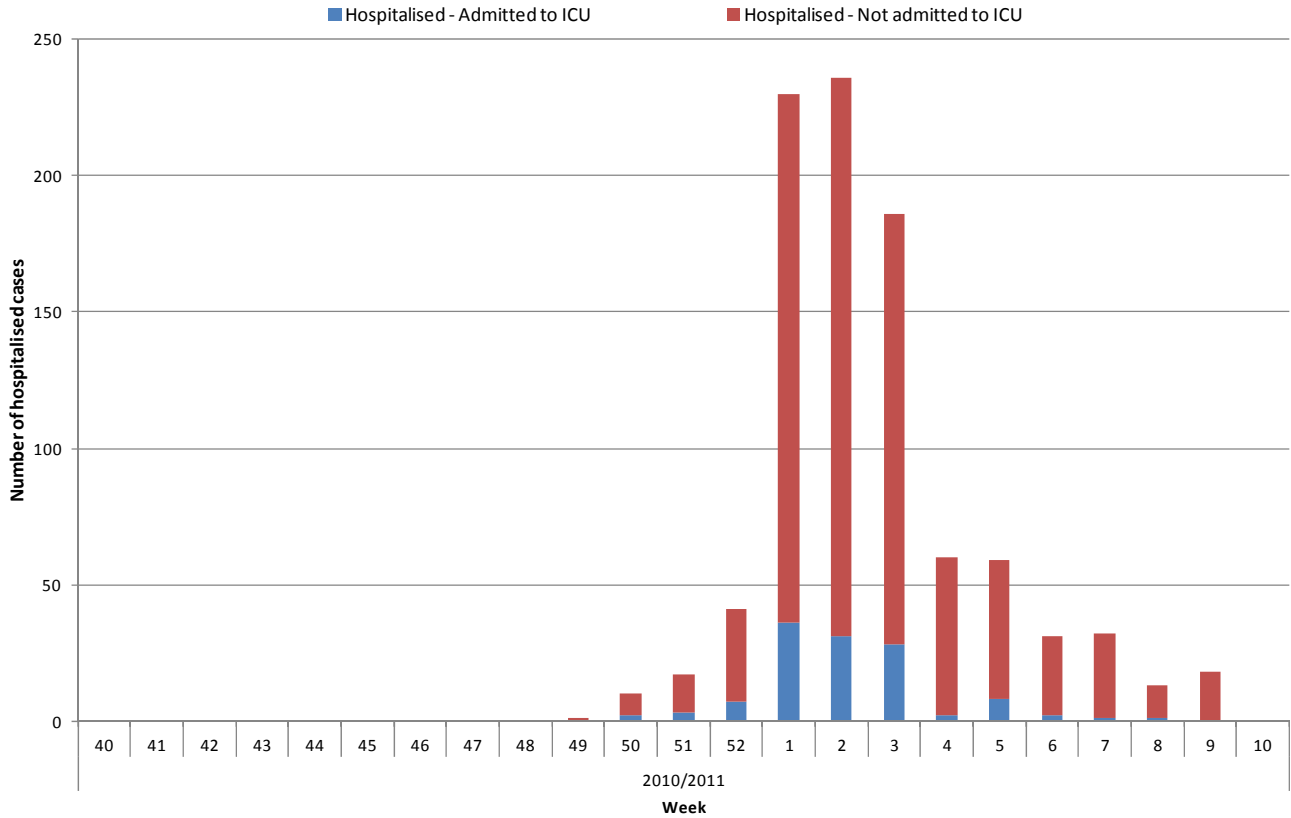
## 6. Intensive Care Society of Ireland (ICSI) enhanced surveillance of all critical care patients with confirmed influenza

The Intensive Care Society of Ireland (ICSI) are continuing with the enhanced surveillance system, set up during the 2009 pandemic, on all critical care patients with confirmed influenza, and notify any cases to HPSC, who process and report on this information on behalf of the regional Director of Public Health/Medical Officer of Health.

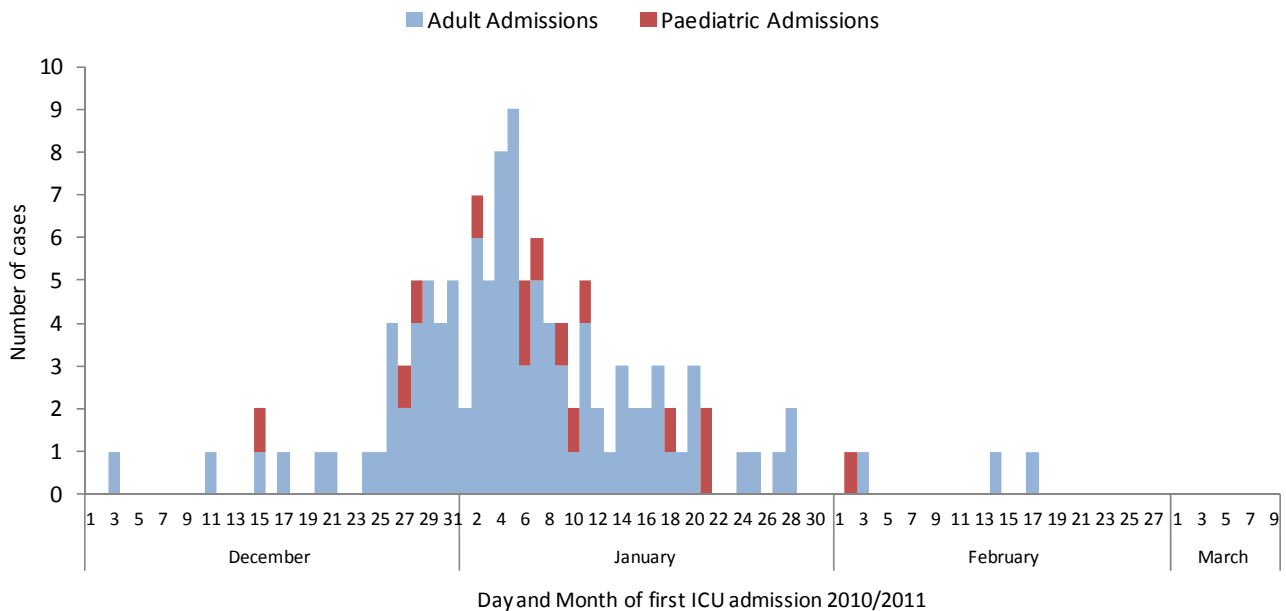
As of 9<sup>th</sup> March 2011 (09:00), HPSC has been notified of 122 hospitalised patients admitted to critical care units with confirmed influenza, 108 of whom are adults and 14 are paediatric cases. Twelve (9.8%) of the 122 cases are currently in ICU<sup>§§</sup>. Ninety of the 122 (73.7%) cases have underlying medical conditions, 81 adults and nine paediatric cases. The underlying medical conditions include: chronic respiratory disease, chronic heart disease, immunosuppression, pregnancy, metabolic disorders and morbid obesity.

The age specific rates for all cases admitted to ICU are detailed in table 3 above. The number of confirmed influenza hospitalised cases by ICU status and by week of notification on CIDR for the 2010/2011 influenza season is detailed in figures 9. The number of adult and paediatric ICU admissions for confirmed influenza cases by date of first admission to ICU is detailed in figure 10.

<sup>§§</sup> This information is based on the enhanced surveillance data.



**Figure 9: Number of confirmed influenza hospitalised cases by ICU status by week of notification on CIDR for the 2010/2011 influenza season.** It should be noted that data for week 10 2011 are incomplete and only include notified cases as of 9<sup>th</sup> March 2011 (09:00). Source: CIDR and ICU enhanced surveillance system 09/03/2011 09:00



**Figure 10: Number of confirmed influenza hospitalised adult and paediatric cases admitted to ICU, by date of first admission to ICU, for December 2010 - March 2011 to date (n=122).** Source: ICU enhanced surveillance system 09/03/2011 09:00

## 7. Mortality surveillance

HPSC has been informed of 25 influenza associated deaths to date this season (as of 09/03/2011), 20 influenza A (H1N1 2009), one co-infection of influenza A (H1N1) and influenza B, one influenza A (unsubtyped) and three influenza B. One death was in a patient in the 0-4 year age group, 18 patients were in the 15-64 year age group and six patients were aged 65 years and older. Twenty-two deaths occurred in patients with underlying medical conditions. One death occurred in week 52 2010, two in week 1 2011, five in week 2 2011, eight in week 3 2011, four in week 4 2011, four in week 5 2011 and one in week 6 2011. Table 4 outlines the influenza associated deaths by HSE-Area for the 2010/2011 influenza season to date.

**Table 4: Influenza associated deaths in laboratory confirmed influenza cases by HSE-Area for the 2010/2011 influenza season to date.** *Source: Deaths reported to HPSC as of 09/03/2011 09:00*

HSE Area	Influenza Deaths
HSE-E	13
HSE-M	2
HSE-MW	0
HSE-NE	2
HSE-NW	3
HSE-SE	2
HSE-S	2
HSE-W	1
<b>Total</b>	<b>25</b>

## 8. Outbreak surveillance

No new outbreaks of influenza/ILI have been reported since week 5 2011. To date this season, (as of 9<sup>th</sup> March 2011 09:00), 14 general outbreaks of ILI/influenza/influenza A (H1N1 2009) were reported to CIDR: eight ILI outbreaks, five influenza A (H1N1 2009) outbreaks and one outbreak associated with both influenza A (H1N1 2009) and influenza B. One outbreak was reported in week 49 2010, two in week 50 2010, four in week 51 2010, three in week 2 2011, three in week 4 2011 and one in week 5 2011. Five outbreaks were reported from HSE-E, seven from HSE-S and two from HSE-W. Two outbreaks were in healthcare settings (one of which was a maternity hospital), seven in schools, one in a community setting, one in a residential institution, one in a prison, one travel related outbreak and one outbreak reported as 'Other' setting.

## 9. International summary

### United Kingdom

Influenza activity continued to decline in the UK during week 8 2011. GP ILI consultation rates were below baseline levels in England, Wales, Scotland and Northern Ireland. All influenza types were reducing. The influenza A (H1N1 2009) virus strain is virologically and epidemiologically similar to that seen during the pandemic. The virus strains circulating are overall well matched to the current influenza vaccine. In week 8 2011, the weekly ILI consultation rate decreased in England (9.1 per 100,000) and Scotland (33.1 per 100,000), remained stable in Wales (5.7 per 100,000) and slightly increased in Northern Ireland (30.8 per 100,000). The weekly national proportions of NHS Direct calls for cold/flu and fever decreased, with cold/flu now at the threshold level and fever remaining below baseline levels. No acute respiratory disease outbreaks were reported in the UK in week 8 2011. The proportion of respiratory specimens reported to Data Mart (England) as positive for influenza decreased to 2.7% (23 of 840). The proportion of positive samples slightly decreased for RSV, increased for rhinovirus and parainfluenza and remained stable for human metapneumovirus and

adenovirus. Since week 36, 539 deaths in the UK confirmed to be associated with influenza infection have been reported. Following the excess all-cause mortality observed over the Christmas period, excess mortality remains below the upper limit of expected levels for this time of year. <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>

## Europe

Most European countries reported regional or widespread influenza activity, with medium ILI/acute respiratory infection (ARI) consultation rates and widespread activity during week 8 2011. Decreasing ILI/ARI trends were reported by the majority of countries. The proportion of influenza virus-positive sentinel specimens has gradually decreased to 36% in week 8 2011, after peaking in week 52 2010 at 56%. In week 8 2011, 58% of influenza virus detections were type A and 42% were type B. Influenza B was reported as dominant in a number of countries. Of the 1139 subtyped influenza A viruses, 99% were A (H1N1 2009). Numbers of influenza infections with severe outcome have decreased in Western Europe and remained high in Greece. Since week 40 2010, 2454 influenza viruses from sentinel and non-sentinel specimens have been characterised antigenically: 1242 (50.6%) as A/California/7/2009 (H1N1)-like; 97 (3.9%) as A/Perth/16/2009 (H3N2)-like; 1037 (42.3%) as B/Brisbane/60/2008-like (Victoria lineage); and 78 (3.2%) as B/Florida/4/2006-like (Yamagata lineage). Germany, Ireland, Italy, Norway, Spain, and the UK have reported antiviral resistance data to ECDC. To date this season, 32 (4.0%) of 849 influenza A (H1 2009) viruses tested for susceptibility to neuraminidase inhibitors were resistant to oseltamivir, but remained sensitive to zanamivir. All the resistant viruses carried the H275Y substitution. Eight of 28 resistant viruses, from patients for which exposure to antivirals was known, were from patients that had not been treated with oseltamivir.

[http://ecdc.europa.eu/en/healthtopics/influenza/epidemiological\\_data/Pages/Weekly\\_Influenza\\_Surveillance\\_Overview.aspx](http://ecdc.europa.eu/en/healthtopics/influenza/epidemiological_data/Pages/Weekly_Influenza_Surveillance_Overview.aspx)

## USA

During week 8 2011, influenza activity in the United States remained elevated. The proportion of ILI outpatient visits was 4.0%, which is above the national baseline of 2.5%. Of the 7,543 specimens tested, 2,106 (27.9%) were positive for influenza: 360 A (H1N1 2009), 693 A (H3), 505 A (unsubtyped) and 548 B. The proportion of deaths attributed to pneumonia and influenza was at the epidemic threshold. Fourteen influenza-associated paediatric deaths were reported bringing the season total to 55. Four of these deaths were associated with influenza B, four with influenza A (H1N1 2009), two with influenza A (H3) virus, and four were associated with an influenza A virus for which the subtype was not determined. <http://www.cdc.gov/flu/weekly/>

## Canada

In week 8 2011, regions in Quebec and British Columbia reported increases in influenza activity, while other regions across Canada reported decreased activity. Many ILI school outbreaks continue to be reported. The proportion of positive influenza detections overall continued to decline in week 8 2011, although the ILI consultation rate increased slightly compared to the previous week. Since the beginning of the season, 86.1% of subtyped positive influenza A specimens have been influenza A (H3N2). In week 8, influenza A (H1N1 2009) detections decreased to 7% of positive influenza detections, while the proportion of influenza B detections increased to 12%. <http://www.phac-aspc.gc.ca/fluwatch/index-eng.php>

## Worldwide (WHO)

The WHO Global Influenza Programme monitors influenza activity worldwide and publishes an update every two weeks. As of February 25<sup>th</sup> 2011, transmission in tropical zones of the world was sporadic (the Americas) or low (tropical Asia). Countries in the southern temperate zone reported little influenza activity; however Australia continued to report transmission of influenza A at low levels. The majority of the viruses characterised from North America and Europe are closely related to the vaccine viruses for the current seasonal vaccines, though small numbers of influenza type B of the Yamagata lineage are reported in both regions. <http://www.who.int/csr/disease/influenza/en/>

## Avian influenza

As of 7<sup>th</sup> March 2011, 528 confirmed human cases of avian influenza A (H5N1) and 311 (58.9%) deaths have been reported to WHO from 15 countries since 2003. The latest confirmed cases and deaths were reported from Indonesia and Egypt during February and March 2011. Investigations into the source of infection indicate that all cases in Indonesia and Egypt had exposure to poultry (suspected of avian influenza infection).

[http://www.who.int/csr/disease/avian\\_influenza/en/index.html](http://www.who.int/csr/disease/avian_influenza/en/index.html)

## 8. Northern hemisphere influenza vaccine for the 2011/2012 season:

Following a WHO Consultation, it is recommended that vaccines for use in the 2011/2012 influenza season (northern hemisphere) contain the following viruses:

- an A/California/7/2009 (H1N1)-like virus;
- an A/Perth/16/2009 (H3N2)-like virus;
- a B/Brisbane/60/2008-like virus.

The recommended 2011/2012 influenza vaccine remains unchanged from the 2010/2011 influenza vaccine.

[http://www.who.int/csr/disease/influenza/recommendations\\_2011\\_12north/en/index.html](http://www.who.int/csr/disease/influenza/recommendations_2011_12north/en/index.html)

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

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

### Acknowledgements

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