

# Influenza Surveillance in Ireland – Weekly Report

## Influenza Week 42 2010 (18<sup>th</sup> – 24<sup>th</sup> October 2010)



### Summary

- All indicators of influenza activity in Ireland are at low levels:
  - ◆ The sentinel GP ILI consultation rate was 7.0 per 100,000 population in week 42 2010, a slight increase from the updated rate of 6.1 per 100,000 reported during week 41 2010.
    - ILI rates remain well below the Irish baseline threshold (17.8 per 100,000 population)
    - ILI rates remain at low levels in all age groups
  - ◆ The first influenza positive case of the 2010/2011 influenza season was reported by the National Virus Reference Laboratory (NVRL) during week 41 2010, a H1N1 (2009) case.
  - ◆ Respiratory syncytial virus (RSV) positive detections are at low levels, compared to the same period in previous seasons.
  - ◆ The proportion of influenza-related calls to GP Out-of-Hours services remains at low levels.

### Surveillance Systems

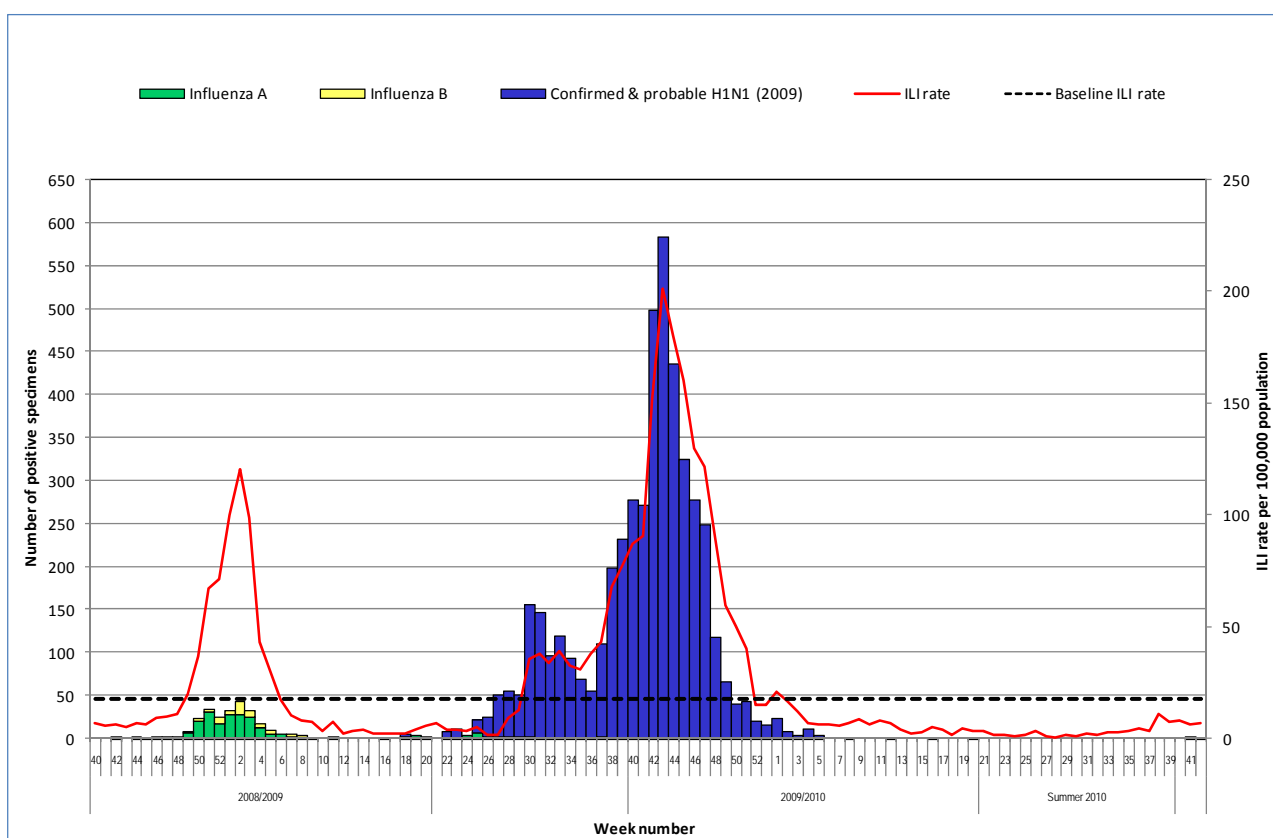
In order to monitor influenza activity in Ireland a number of surveillance systems are currently in place:

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. Outbreak reporting on CIDR
7. Network of sentinel schools reporting absenteeism and sentinel hospitals reporting admission data

## 1. GP sentinel surveillance system

### Clinical Data

During week 42 2010, 38 of 60 (63.3%) sentinel general practices provided data, with 12 practices (20.0%) reporting 13 influenza-like illness (ILI) cases. This corresponds to an ILI consultation rate of 7.0 per 100,000 population, a slight increase from the updated rate of 6.1 per 100,000 reported during week 41 2010. Forty-eight (80.0%) practices reported no ILI cases during week 42 2010. It should be noted that due to the bank holiday weekend, clinical returns from sentinel GPs during week 42 2010 were lower than are normally observed. Figure 1 shows the ILI consultation rates, the baseline threshold rate (17.8 per 100,000 population) and the number of positive specimens detected by the NVRL.



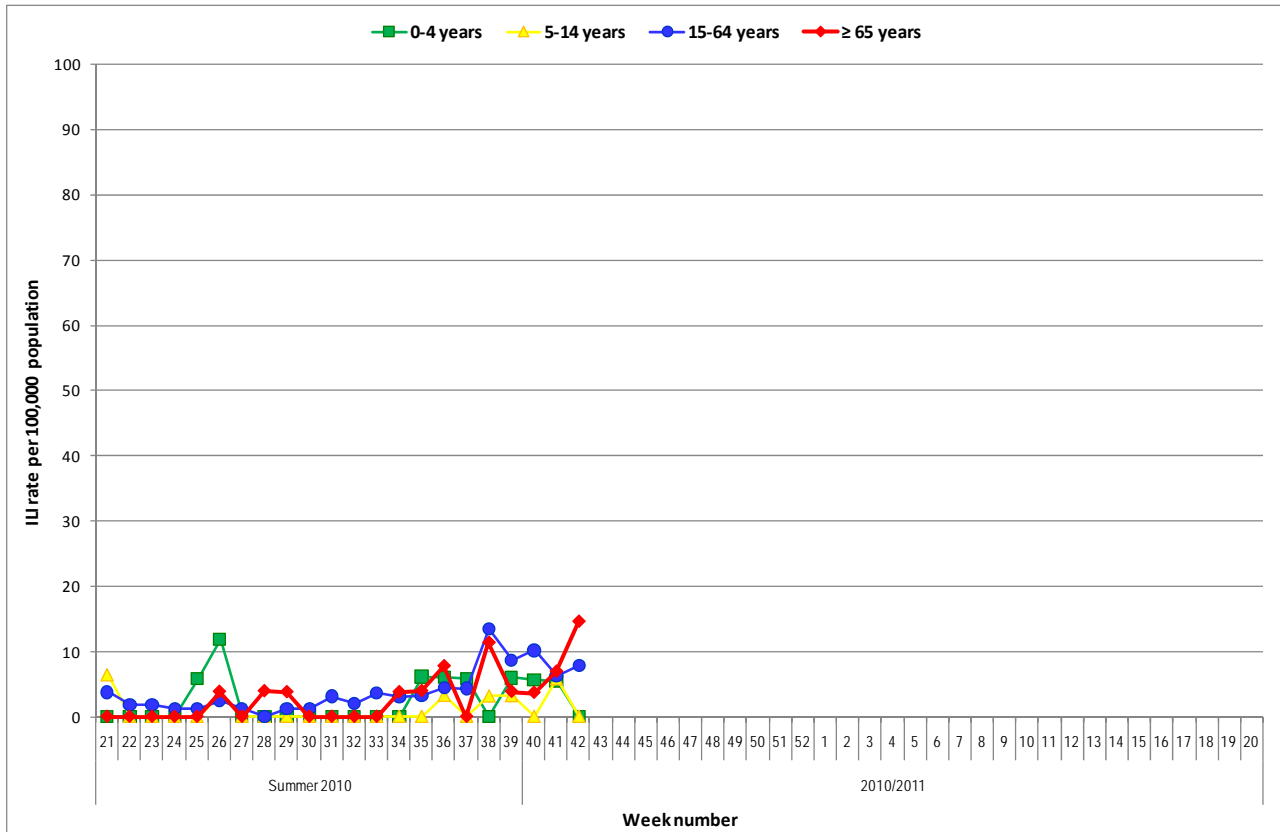
**Figure 1. ILI GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza specimens, by influenza week and season**

Source: Clinical ILI data from ICGP and virological data from the NVRL<sup>\*\*†</sup>

\* Please note that in addition to the NVRL, Cork University Hospital (CUH) and Galway University Hospital(s) (GUH) also tested for H1N1 (2009) during the pandemic period.

† Sentinel GP consultations and virological data are updated on an ongoing basis, ILI rates and virological data are adjusted accordingly.

ILI rates remained at low levels in all age groups, with slight increases observed in those aged 15-64 years and 65 years and over during week 42 2010. Sentinel GPs reported 10 ILI cases in the 15-64 year age group (7.8 per 100,000 population) and three ILI cases in the ≥ 65 years age group (14.6 per 100,000 population). No ILI cases were reported in 0-4 and 5-14 year age groups (figure 2).



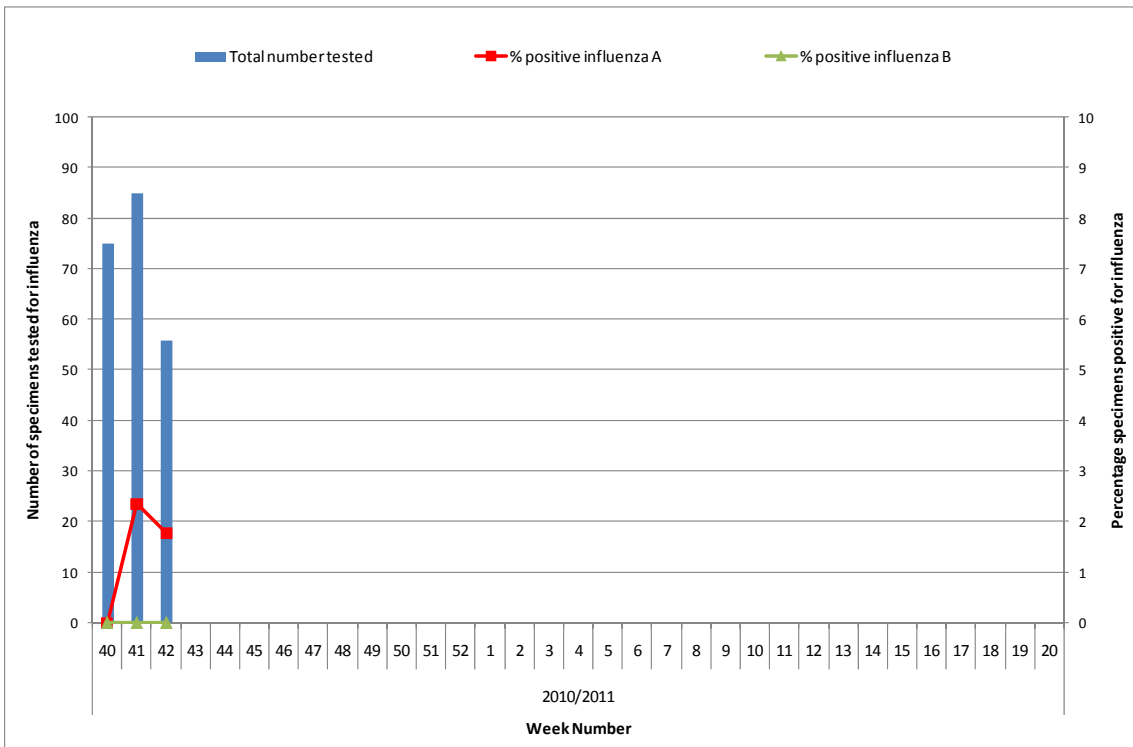
**Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the Summer of 2010 and the 2010/2011 influenza season to date**  
 Source: ICGP ILI clinical data

## 2. Virological Data from the National Virus Reference Laboratory (NVRL)

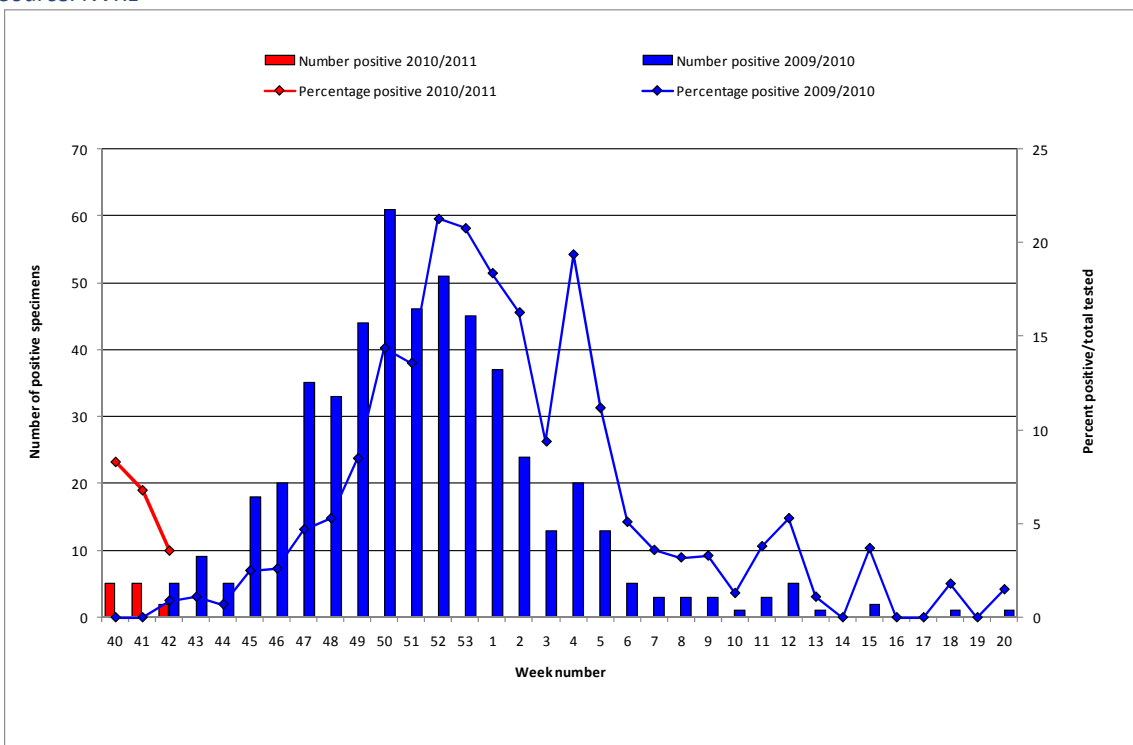
A total of 56 specimens (1 sentinel and 55 non-sentinel) were tested by the NVRL during week 42 2010. All sentinel specimens tested to date this season were negative for influenza. One non-sentinel specimen tested during week 42 2010 was positive for influenza A (unsubtyped). To date this season, three non-sentinel specimens have tested positive for influenza: two A (unsubtyped) and one H1N1 (2009). All three specimens were from the same patient, a hospitalised case in the 0-4 year age group.

Of the 55 non-sentinel specimens tested during week 42 2010, two (3.6%) were positive for RSV (Tables 1 & 2 and figure 3). Figure 4 shows the number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2010/2011 and 2009/2010 seasons.<sup>‡</sup>

<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**  
 Source: NVRL<sup>§</sup>



**Figure 4: 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

<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.

**Table 1: Number of sentinel and non-sentinel\*\* respiratory specimens tested and positive influenza results, for week 42 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	H1N1 (2009)	A (H3)	A (H1)	A (unsubtyped)	
42 2010	Sentinel	1	0	0.0	0	0	0	0	0	0
	Non-sentinel	55	1	1.8	1	0	0	0	1	0
	<b>Total</b>	<b>56</b>	<b>1</b>	<b>1.8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
2010/2011 season	Sentinel	27	0	0.0	0	0	0	0	0	0
	Non-sentinel	189	3	1.6	3	1	0	0	2	0
	<b>Total</b>	<b>216</b>	<b>3</b>	<b>1.4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>

**Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 42 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
42 2010	55	2	3.6	0	0.0	0	0.0	0	0.0	0	0.0
2010/2011 season	189	12	6.3	0	0.0	2	1.1	0	0.0	0	0.0

\*\* 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

Regional 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 42 2010, sporadic influenza activity (based on sporadic ILI cases and/or positive influenza detections) was reported from four HSE-Areas (HSE-E, -MW, -S and -W). All other areas reported no influenza activity during week 42 2010 (figure 5).

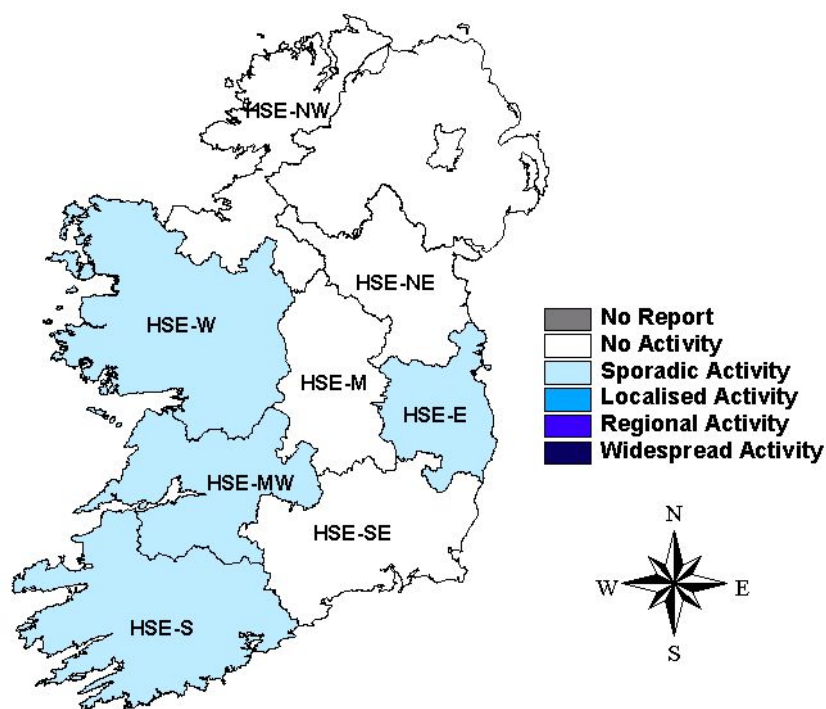


Figure 5: Map of provisional influenza activity by HSE-Area during influenza week 42 2010

#### Sentinel hospitals and schools

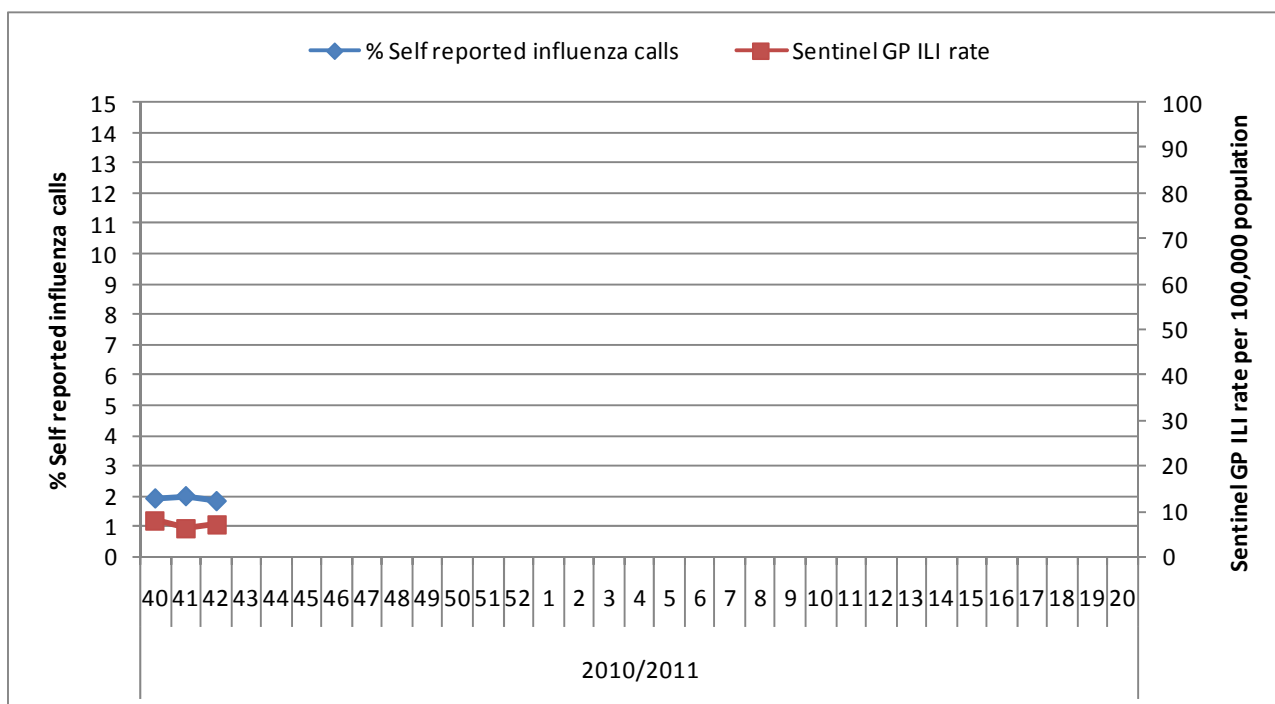
The Departments of Public Health have established at least one sentinel hospital in each HSE-Area, to report data on total hospital admissions, total emergency admissions and total respiratory admissions by age group on a weekly basis. Sentinel primary and secondary schools were also established in each 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 42 2010, the proportion of respiratory admissions from all reporting sentinel hospitals was at low levels. One sentinel primary school in HSE-M reported increased absenteeism during week 42 2010, possibly associated with school mid-term holidays.

#### 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.

During week 42 2010, the proportion of influenza-related calls to GP Out-of-Hours services remained at low levels, at 1.8%, a slight decrease from the updated data for week 41 2010 at 2.0% (figure 6). Eight GP Out-of-Hours services reported during week 42 2010.



**Figure 6: 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 and outbreak surveillance (CIDR)

As of 27<sup>th</sup> October 2010, no influenza notifications or general outbreaks of ILI/influenza/pandemic (H1N1) 2009 have been reported to CIDR during 2010/2011 influenza season to date.

## 6. International summary

### United Kingdom

During week 41 2010, influenza activity was very low across the UK. The weekly influenza/ILI consultation rate increased slightly in England (from 6.4 to 8.4 per 100,000), while it decreased in Wales (from 10 to 8.1 per 100,000), Northern Ireland (from 19.4 to 12.4 per 100,000) and Scotland (slightly from 29.7 to 28.9 per 100,000). All rates are well below baseline levels. RCGP consultation rates for acute bronchitis were stable overall and those for pneumonia have increased slightly but remain low. In England and Wales the proportion of calls for colds/flu to NHS Direct was 1.1% in week 41, which remains below the baseline. There has been one outbreak of rhinovirus in the North West of England reported in week 42 2010. Nine influenza positive specimens were reported in week 41 2010, (five H1N1 (2009), one influenza A untyped and three influenza B). The number of RSV detections is low while the proportion of specimens positive for rhinovirus is increasing. <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>

### Europe

The large majority of countries continue to report low rates and unchanging trends in sentinel physician ILI and acute respiratory infection (ARI) consultations during week 41 2010. Four (1.7%) of 236 sentinel specimens tested positive for influenza virus. Ten (71.4%) of 14 influenza viruses detected in sentinel and non-sentinel specimens were type A, and three of the four type A viruses subtyped were H1N1 (2009). Rare sporadic detections of influenza virus along with sporadic detections of RSV in a number of European countries suggest that the reported ILI and ARI activity was more likely to be due to respiratory pathogens other than influenza. [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 41 2010, influenza activity remained low in the United States. The proportion of outpatient ILI visits was below the national baseline. Twenty-four states reported sporadic influenza activity and 26 states reported no activity. Ninety-two (3.6%) specimens tested were positive for influenza: 11 A H1N1 (2009), 18 A (H3), 39 A (untyped) and 24 B. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. No influenza-associated paediatric deaths were reported. <http://www.cdc.gov/flu/weekly/>

### Canada

Overall influenza activity in Canada increased slightly during week 41 2010, but remained relatively low with the majority of the influenza surveillance regions still reporting no activity. The national ILI consultation rate was 16.4 per 1,000 patients visits for week 41 2010, which was similar to the previous weeks and was still within expected levels for this time of year. The proportion of positive influenza specimens reported during week 41 2010 has increased slightly with 14 out of 1,519 (0.92%) specimens testing positive: 5 A (H3N2), 8 A (untyped) and 1 B. <http://www.phac-aspc.gc.ca/fluwatch/index-eng.php>

### Worldwide (WHO)

As of October 20<sup>th</sup> 2010, influenza activity in the temperate regions of the Southern Hemisphere has peaked and is continuing to decline. In most of the temperate regions of the Northern Hemisphere the level of activity is still low. Influenza A(H3N2) continues to be the most frequently detected influenza virus worldwide. Most of the A (H3N2) viruses have been characterised as A/Perth/16/2009-like, which is the virus strain included in the seasonal vaccines for the Northern and Southern Hemispheres.



New Zealand's influenza activity has decreased since late August and is now below the baseline for the third consecutive week. The most common influenza virus detected this season in New Zealand is H1N1 (2009). Australia has had a co-circulation of mainly H1N1 (2009) and influenza B. In the southern cone of South America, Chile continues to report high transmission of influenza but since mid September the activity has declined. The predominant virus circulating in Chile has been A (H3N2) with co-circulation of H1N1 (2009) in lower numbers. Argentina and Uruguay have both had a season with mostly influenza B, and are now reporting a decrease in number of virus detections. In South Africa, influenza activity continues to decline, after a season where the majority of the laboratory confirmed cases were influenza B, but with co-circulation of A (H3N2) and smaller numbers of H1N1 (2009).

In the tropical areas of the world most countries are reporting decreased influenza activity, but some countries in Southeast Asia, Central and South America are experiencing an increase in transmission intensity due mainly to A (H3N2). <http://www.who.int/csr/disease/influenza/update/en/index.html>

## 7. Northern hemisphere influenza vaccine for the 2010/2011 season:

For the 2010/2011 influenza season in the Northern Hemisphere, the members of the WHO Collaborating Centres on Influenza have recommended that seasonal influenza vaccines contain the following strains:

- an A/California/7/2009 (H1N1)-like virus
- an A/Perth/16/2009 (H3N2)-like virus<sup>††</sup>
- a B/Brisbane/60/2008-like virus

[http://www.who.int/csr/disease/influenza/recommendations2010\\_11north/en/index.html](http://www.who.int/csr/disease/influenza/recommendations2010_11north/en/index.html)  
[http://www.who.int/csr/disease/influenza/201002\\_Recommendation.pdf](http://www.who.int/csr/disease/influenza/201002_Recommendation.pdf)

## 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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<sup>††</sup> A/Wisconsin/15/2009 is an A/Perth/16/2009 (H3N2)-like virus and is a 2010 southern hemisphere vaccine virus.