

# Influenza Surveillance in Ireland – Weekly Report

Influenza Week 40 2012 (1<sup>st</sup> – 7<sup>th</sup> October 2012)



## Summary

- This is the first influenza surveillance report of the 2012/2013 influenza season.
- **All indicators of influenza activity in Ireland were at low levels during week 40 2012:**
  - The sentinel GP influenza-like illness (ILI) consultation rate was 7.3 per 100,000 population in week 40 2012, unchanged from the updated rate of 6.6 per 100,000 reported during week 39 2012.
    - ◆ ILI rates remain below the Irish baseline threshold (25.9 per 100,000 population)
    - ◆ ILI rates remain at low levels in all age groups
- The proportion of influenza-related calls to GP Out-of-Hours services were at low levels for week 40 2012.
- No influenza positive specimens were reported from the NVRL from sentinel or non-sentinel sources for week 40 2012.
- There were two respiratory syncytial virus positive specimens from the NVRL from non-sentinel sources during week 40 2012. No positive specimens of adenovirus, parainfluenza viruses and human metapneumovirus were reported by the NVRL during week 40 2012.
- During week 40 2012, no confirmed influenza cases were hospitalised or admitted to ICU. There were no reports of any influenza-associated deaths occurring during this period.
- No outbreaks of influenza/ILI were reported during week 40 2012.
- In Europe, low influenza activity was reported throughout the summer period. There is no evidence as yet that influenza transmission for the 2012/2013 season has started in Europe.

## Surveillance Systems

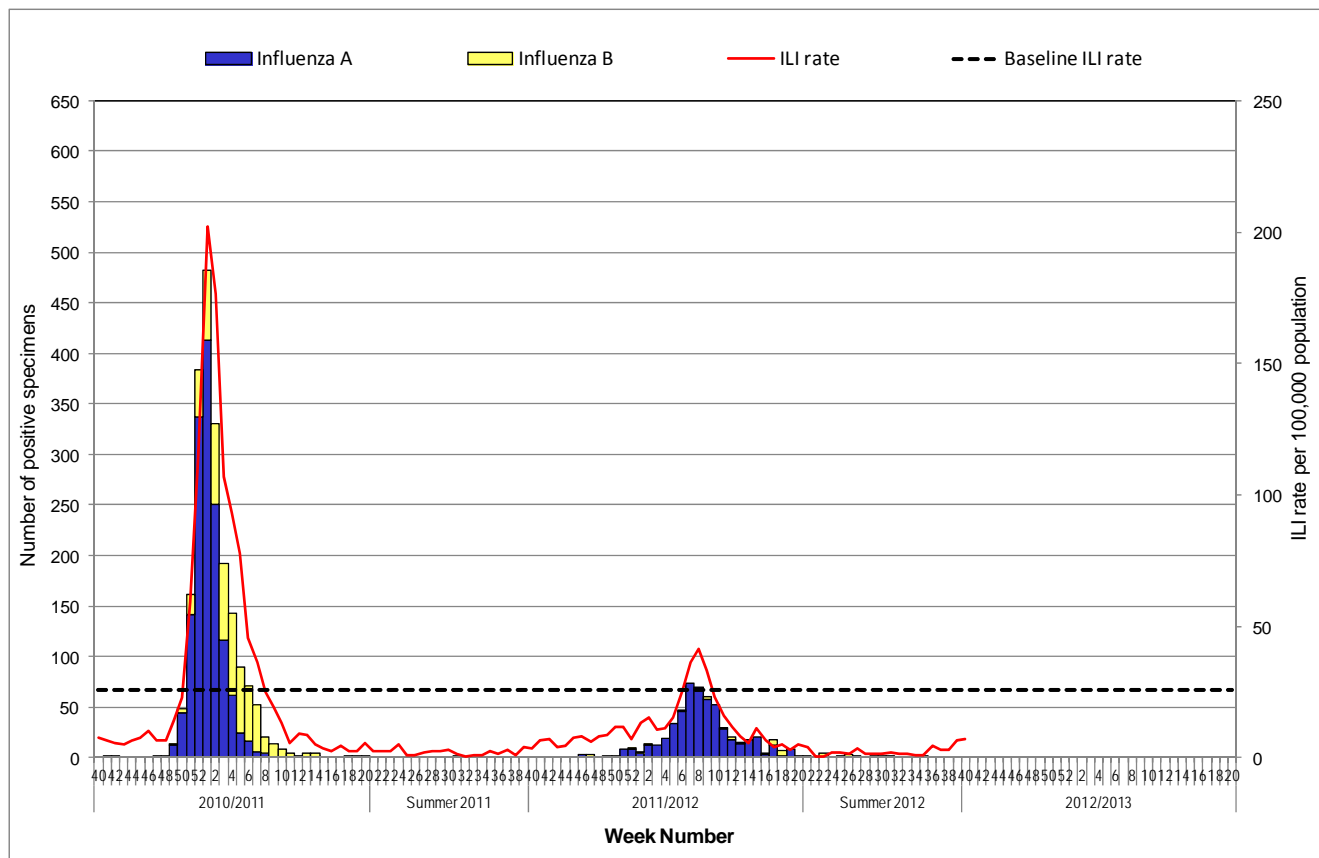
In order to monitor influenza activity in Ireland a number of surveillance systems are currently in place:

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 and enhanced surveillance of all severe acute respiratory infections (SARI) in two pilot ICU sites.
7. Outbreak reporting on CIDR
8. Network of sentinel hospitals reporting admission data

# 1. GP sentinel surveillance system

## Clinical Data

During week 40 2012, 51 of 60 (85.0%) sentinel general practices provided data, with 10 practices (19.6%) reporting 17 influenza-like illness (ILI) cases. This corresponds to an ILI consultation rate of 7.3 per 100,000 population, remaining unchanged compared to the updated rate of 6.6 per 100,000 reported during week 39 2012. The ILI rate for week 40 2012 is below the Irish baseline threshold (25.9 per 100,000 population). 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\**

ILI age specific rates were low in all age groups during week 40 2012 (figure 2 2012). One ILI case was reported in the 0-4 year age group (5.6 per 100,000), one case in the 5-14 year age group (3.2 per 100,000), 14 ILI cases in the 15-64 year age group (9.0 per 100,000) and one case was reported in those aged 65 years or older (3.7 per 100,000) during week 40 2012.

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

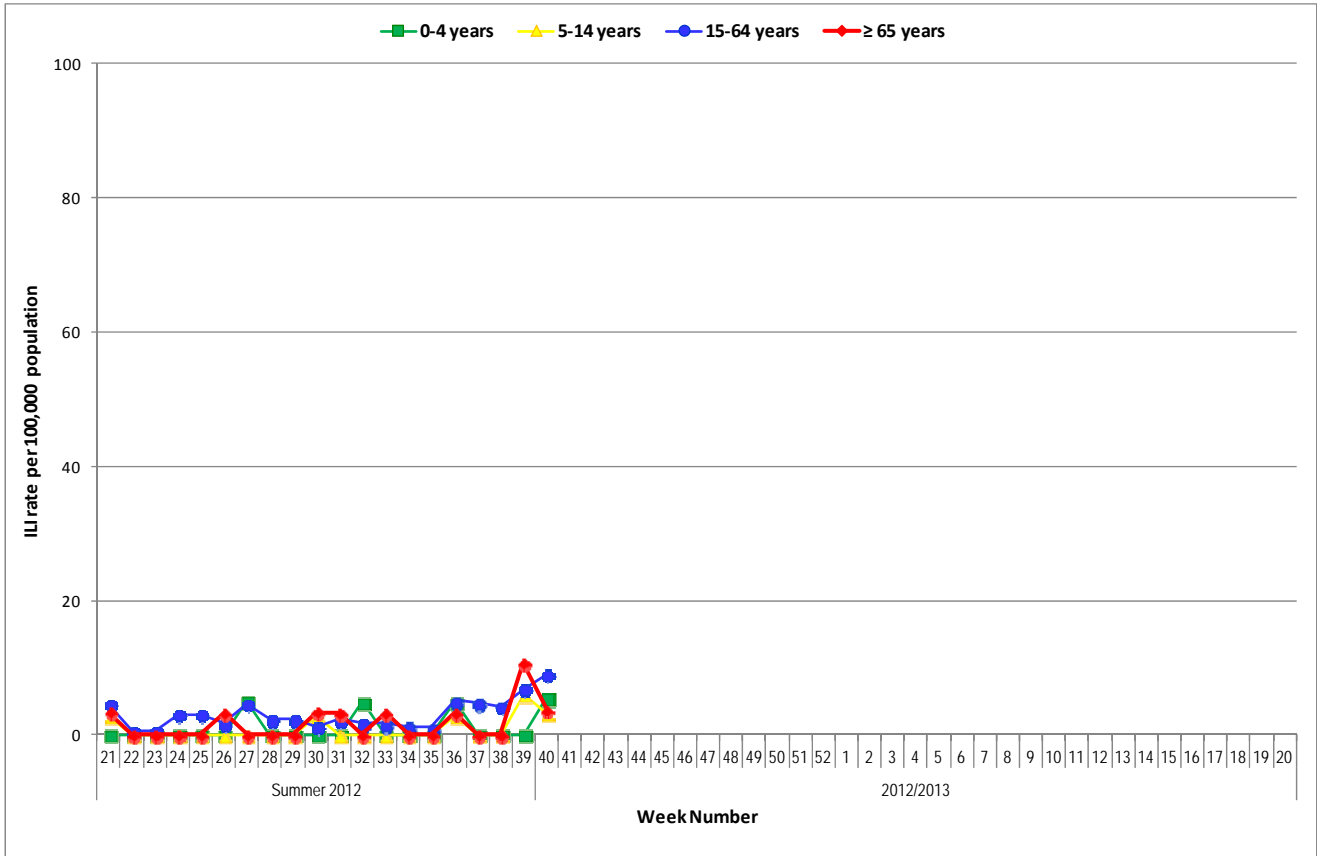


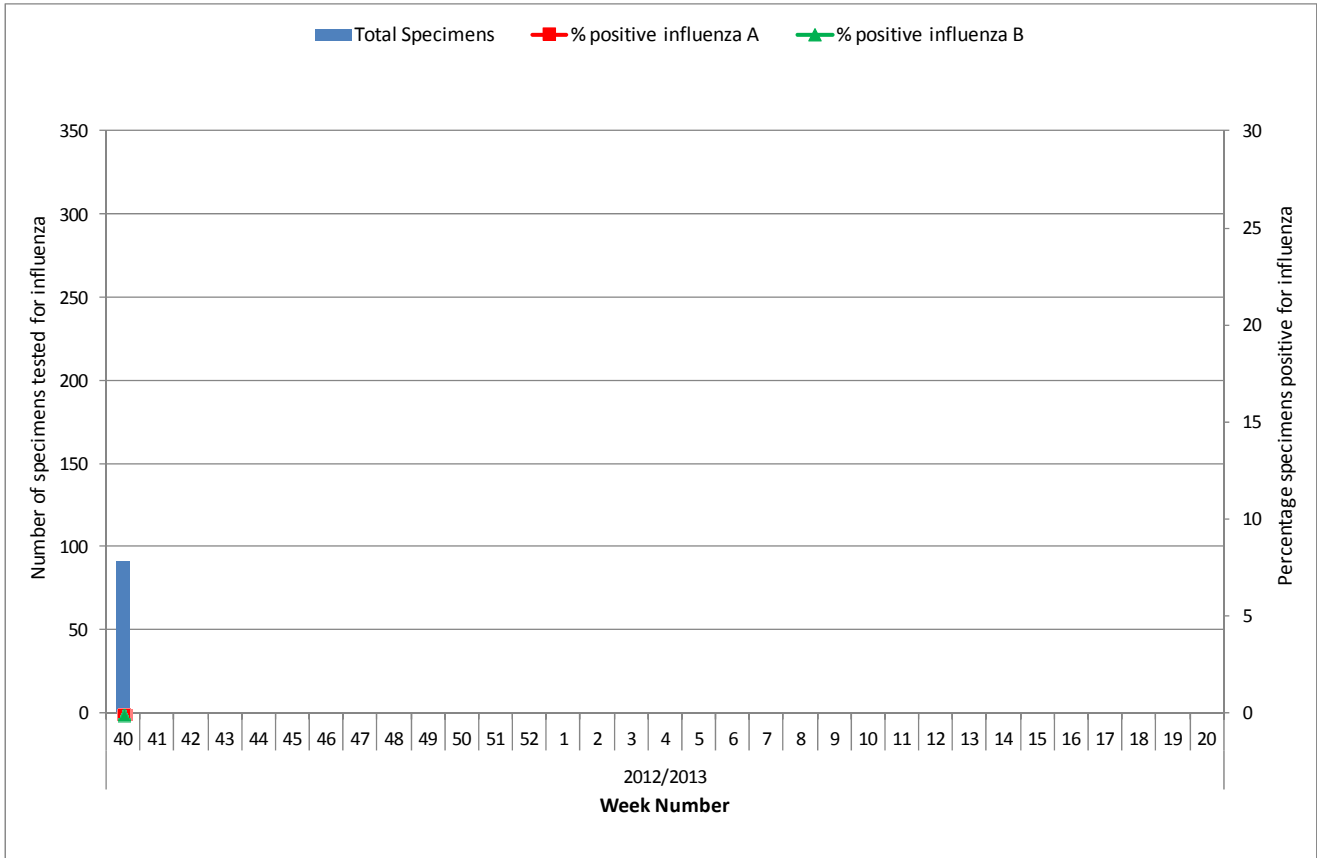
Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2012 and the 2012/2013 influenza season to date *Source: ICGP ILI clinical data*

## 2. Influenza and Other Respiratory Virus Detections - National Virus Reference Laboratory

The data reported in this section for the 2012/2013 influenza season refers to specimens tested by the National Virus Reference Laboratory (NVRL).

A total of 91 specimens (5 sentinel and 86 non-sentinel<sup>†</sup> specimens) were tested by the NVRL during week 40 2012. No specimens were positive for influenza virus during week 40 2012 (figure 3, tables 1 & 2).

<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.



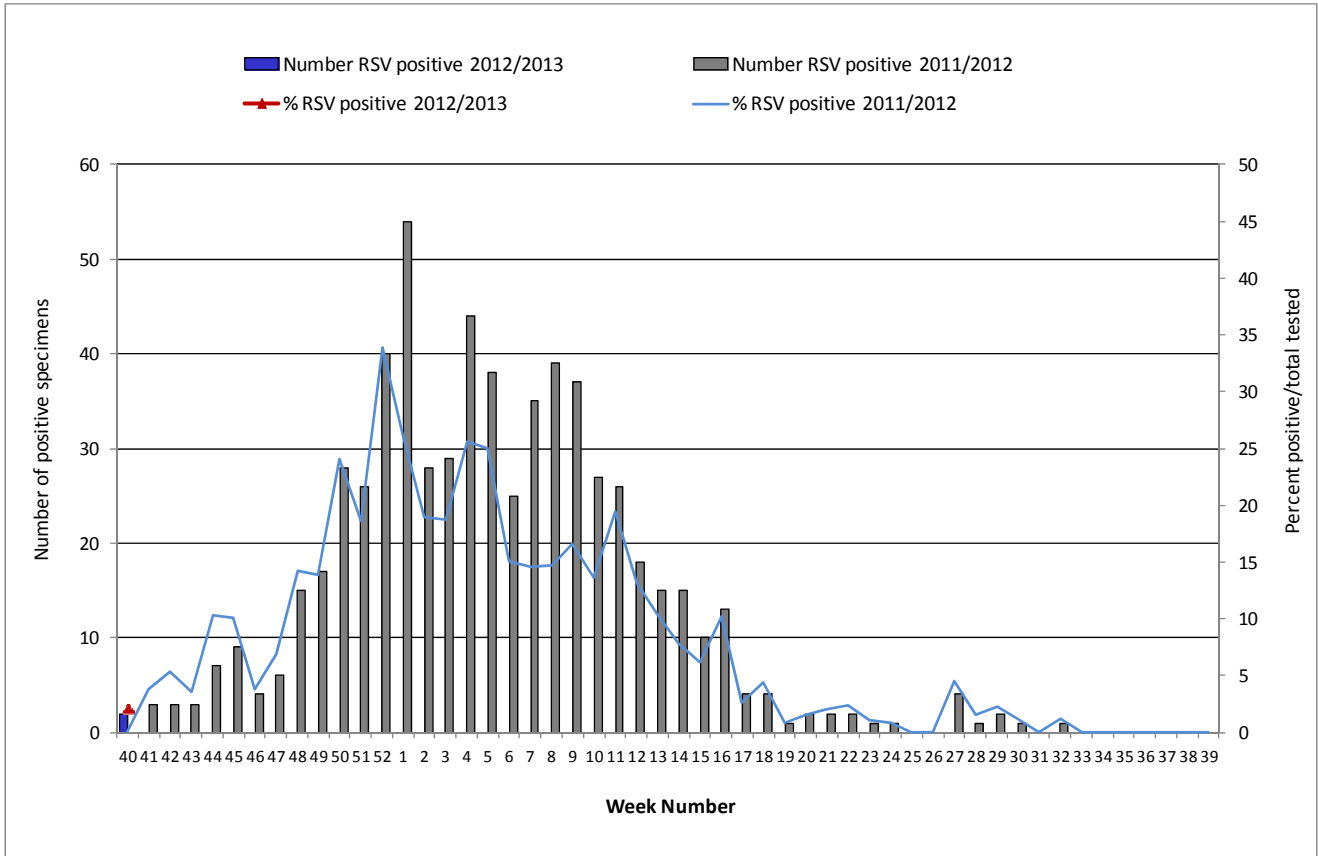
**Figure 3: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive by week for the 2012/2013 influenza season. Source: NVRL**

### Respiratory Syncytial Virus (RSV)

Two (2.3%) positive respiratory syncytial virus (RSV) detections from non-sentinel sources were reported from the NVRL<sup>‡</sup> during week 40 2012 (figure 4).

RSV was made notifiable in Ireland on 1<sup>st</sup> January 2012. During week 40 2012, six laboratory notifications of RSV were reported on Ireland’s Computerised Infectious Disease Reporting System (CIDR). Laboratory notifications of RSV are reported in more detail in the [Weekly Infectious Disease Report for Ireland](#).

<sup>‡</sup> It should be noted that these data only include specimens referred to the NVRL for RSV testing. Not all hospitals refer respiratory specimens for RSV testing to the NVRL.



**Figure 4: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2012/2013 season, compared to the 2011/2012 season. Source: NVRL**

**Other Respiratory Viruses**

No positive detections of adenovirus, parainfluenza viruses (PIV) or human metapneumovirus (hMPV) were reported from the NVRL for week 40 2012 (table 2). There were sporadic reports of adenovirus, RSV, PIV-1, PIV-3 and hMPV during the summer of 2012. The predominant respiratory virus detected during the summer period was PIV-3.

**Table 1: Number of sentinel and non-sentinel<sup>§</sup> respiratory specimens tested by the NVRL and positive influenza results, for week 40 2012**

Source: NVRL

Week number	Specimen type	Total specimens tested	Number influenza positive	% Influenza positive	Influenza A					Influenza B
					Total influenza A	A (H1) 2009	A (H3)	A (H1)	A (unsubtyped)	
40 2012	Sentinel	5	0	0.0	0	0	0	0	0	0
	Non-sentinel	86	0	0.0	0	0	0	0	0	0
	<b>Total</b>	<b>91</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 40 2012** Source: NVRL

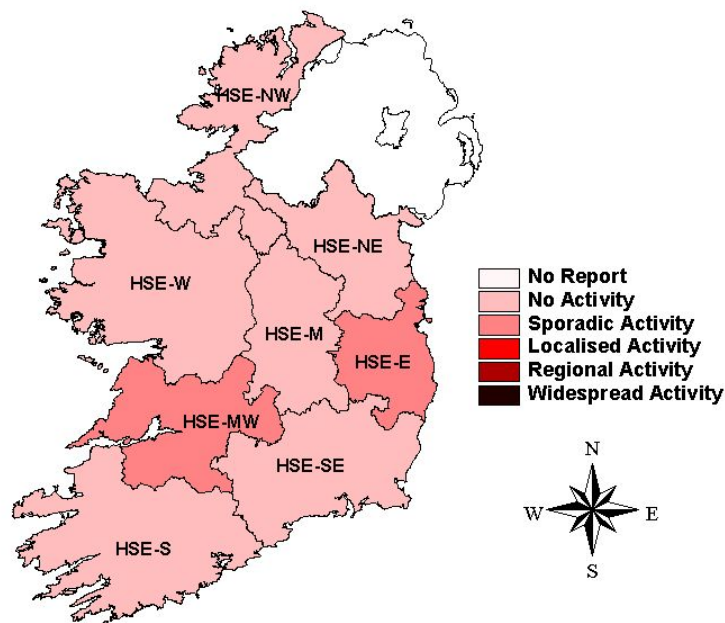
Week number	Total specimens tested	RSV	% RSV Positive	Adenovirus	% Adenovirus positive	Parainfluenza virus type 1	% Parainfluenza virus type 1	Parainfluenza virus type 2	% Parainfluenza virus type 2	Parainfluenza virus type 3	% Parainfluenza virus type 3
40 2012	86	2	2.3	0	0.0	0	0.0	0	0.0	0	0.0

<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.

Sporadic activity (based on ILI cases) was reported from HSE-E and -MW during week 40 2012. No influenza activity was reported from HSE-M, -NE, -NW, -SE, -S and -W during week 40 2012 (figure 5).

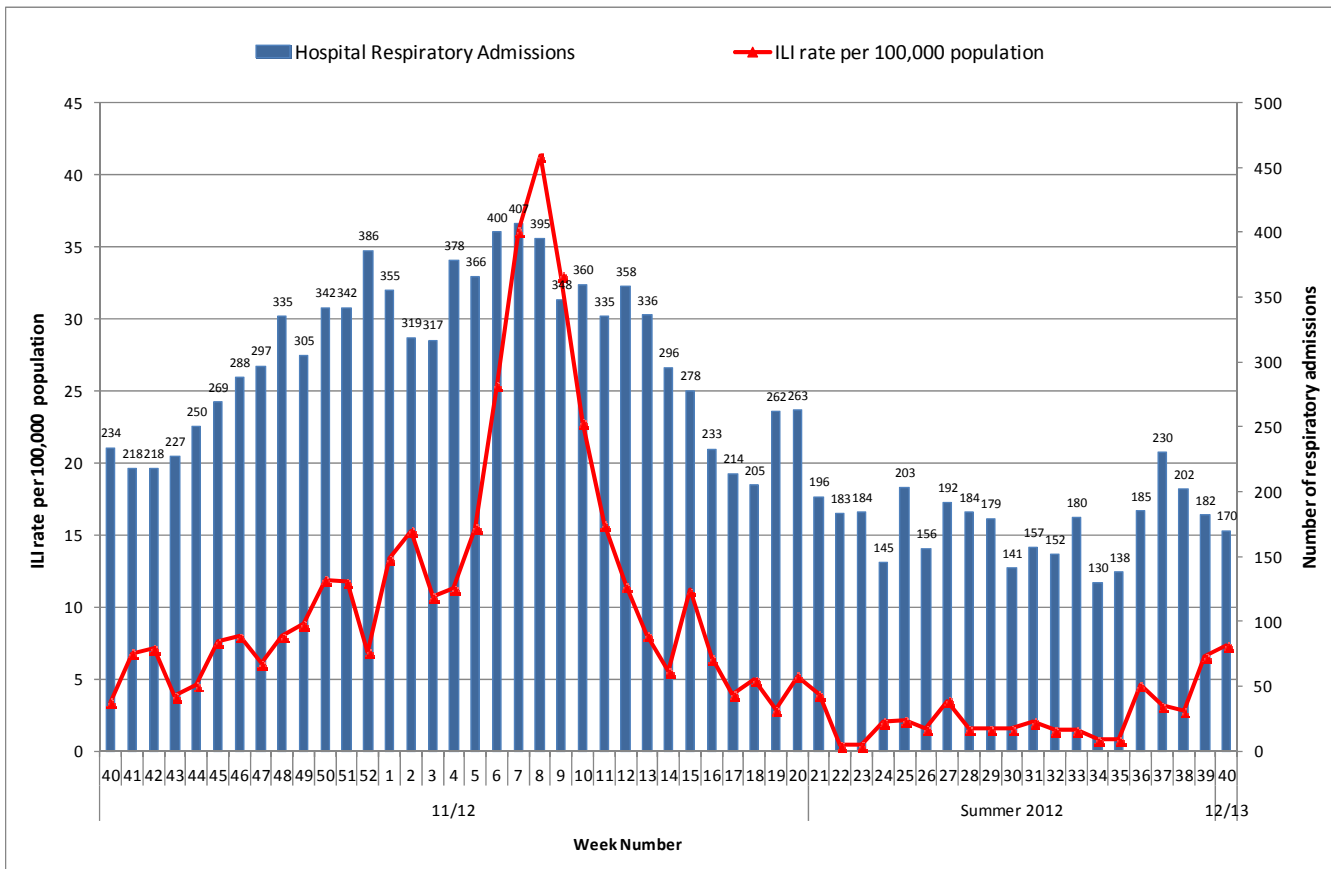


**Figure 5: Map of provisional influenza activity by HSE-Area during influenza week 40 2012**

#### Sentinel hospitals

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. Hospital admissions data act as a crude indicator for influenza activity.

Overall, respiratory admissions reported from sentinel hospitals decreased slightly during week 40 2012, compared to the previous week. Respiratory admissions data reported from sentinel hospitals were incomplete for week 40 2012 (figure 6).



**Figure 6: Number of respiratory admissions reported from sentinel hospitals and national sentinel GP ILI consultation rate per 100,000 population by week for the 2011/2012 season, summer 2012 and the 2012/2013 season to date.**  
 Source: Departments of Public Health - Sentinel Hospitals & ICGP.



## 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 was at low levels (at 1.8%) during week 40 2012. Six GP Out-of-Hours services reported during week 40 2012 (figure 7).

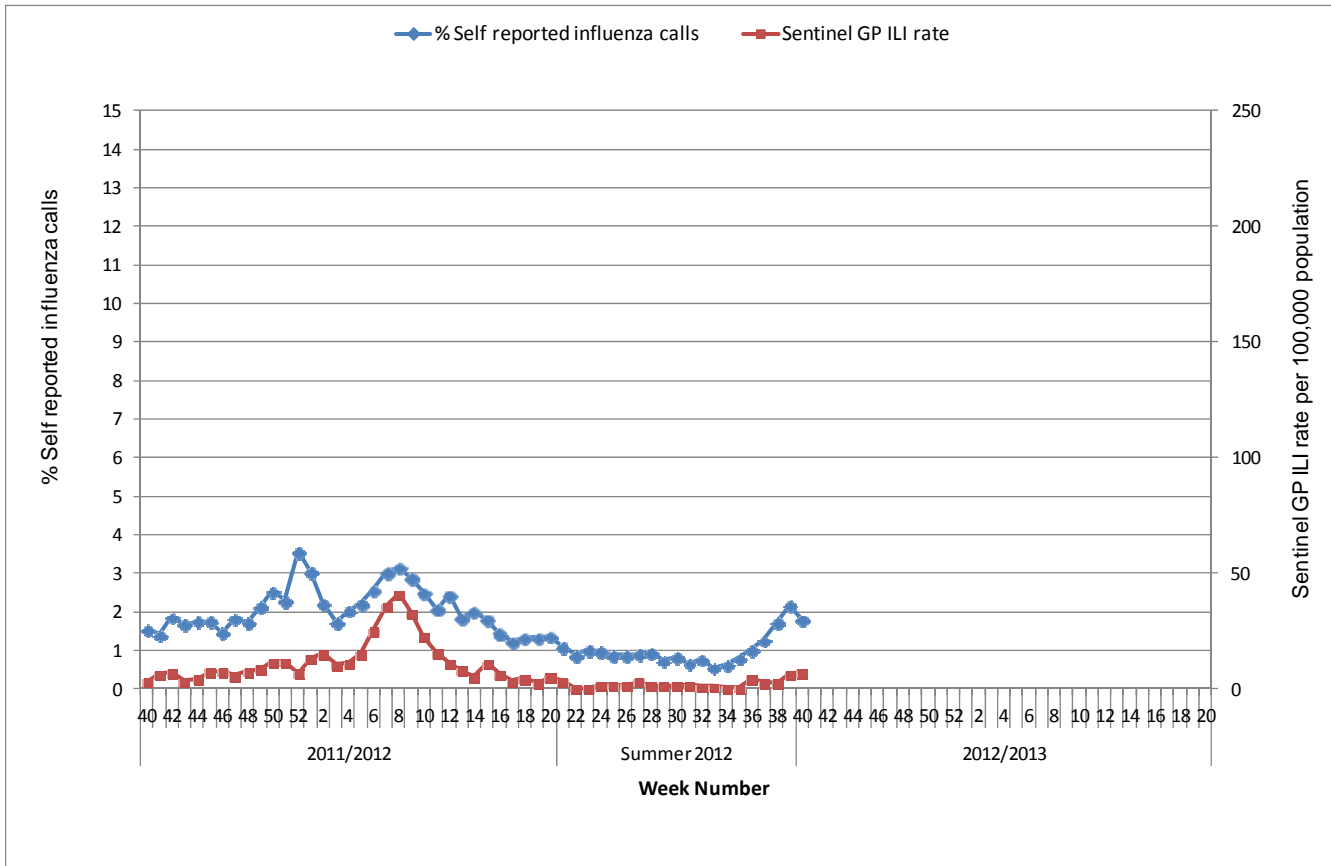


Figure 7: Self reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and national sentinel GP ILI consultation rate per 100,000 population by week for the 2011/2012 and 2012/2013 seasons

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

## 5. Influenza notifications and hospitalisation status

Laboratory confirmed influenza cases notified on Ireland's Computerised Infectious Disease Reporting System (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.

No laboratory confirmed influenza cases were notified during week 40 2012.

## 6. Critical care surveillance

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. A study on severe acute respiratory infections (SARI) in critical care at two pilot ICU sites which commenced during the 2011/2012 season will continue during the 2012/2013 season. HPSC process and report on this information on behalf of the regional Directors of Public Health/Medical Officers of Health.

No confirmed influenza cases or severe acute respiratory infections (SARI) were admitted to critical care and reported to HPSC during week 40 2012.

## 7. Mortality surveillance

There were no reports of any influenza-associated deaths occurring during week 40 2012. Influenza-associated deaths include all deaths where influenza is reported as the primary/main cause of death by the physician or if influenza is listed anywhere on the death certificate as the cause of death.

HPSC receives daily mortality data from the General Register Office (GRO) on all deaths from all causes registered in Ireland. These data have been used to monitor excess all-cause and influenza and pneumonia deaths as part of the influenza surveillance system and the European Mortality Monitoring Project. During week 40 2012, no excess all-cause mortality was reported in Ireland after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm. These data are provisional due to the time delay in deaths' registration in Ireland. <http://www.euromomo.eu/>

## 8. Outbreak surveillance

No influenza/ILI outbreaks were reported to HPSC during week 40 2012.

## 9. International summary

### United Kingdom

All indicators of influenza activity in the UK remained low during week 39 2012. GP ILI consultation rates remained low in all schemes in the UK. The weekly national proportion of NHS Direct calls for cold/influenza remained low (0.7% in week 39 2012). The weekly national proportion of calls for fever in the 5-14 year group remained low (3.7% in week 39 2012). No new acute respiratory outbreaks were reported in week 39 2012. Three (0.8%) of the 353 respiratory specimens reported to the English Respiratory Data Mart system during week 39 2012 were positive for influenza (1 A unsubtype and 2 B) compared to 1.2% in week 38 2012.

### Europe

During the summer 2012 period (weeks 21 to 39), influenza viruses circulated sporadically: 16 influenza viruses (3 A (H3), 1 A (H1)pdm09 and 12 B) were detected from sentinel sources in Europe. During week 39 2012, low influenza activity was reported by all reporting countries. No influenza virus was detected in sentinel samples from 17 countries reporting virological data during week 39 2012. As in previous weeks, no hospitalised severe influenza cases were reported. There is no evidence as yet that influenza transmission has started in Europe.

### US

In the US, during week 39 2012, 1.1% of outpatient visits were due to ILI, which is below the national baseline of 2.4%. From July 12<sup>th</sup> - October 4<sup>th</sup> 2012, a total of 306 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in the US. Sixteen H3N2v-associated hospitalisations and one H3N2v-associated death have been reported. The vast majority of cases have occurred after prolonged swine exposure, though instances of likely human-to-human transmission have been identified. At this time no ongoing human-to-

human transmission has been identified. Additional information from the CDC on influenza in swine, variant influenza infection in humans and strategies to interact safely with livestock can be found [here](#).

### **Worldwide (WHO)**

The WHO Global Influenza Programme monitors influenza activity worldwide and publishes an update every two weeks. The most recent update of 28<sup>th</sup> September 2012, reported that seasonal influenza transmission has not started in the northern temperate zone. Most countries in this zone have started or are yet to begin seasonal reporting. In the tropical areas most countries are reporting low or decreasing trends of influenza detections. The exceptions are Nicaragua in the Americas and India and Thailand in Asia. Influenza activity decreased in most of the temperate countries of the southern hemisphere. Australia, Chile, New Zealand, Paraguay and South Africa continued to report declines in influenza indicators. Argentina has reported some late influenza activity.

### **2012/2013 seasonal influenza vaccine recommendations – WHO**

The WHO vaccine strain selection committee recommended that vaccines for use in the 2012/2013 influenza season (northern hemisphere winter) contain the following:

- an A/California/7/2009 (H1N1)pdm09-like virus;
- an A/Victoria/361/2011 (H3N2)-like virus;
- a B/Wisconsin/1/2010-like virus.

## **Further information on influenza in Ireland and internationally**

Ireland	<a href="http://www.hpsc.ie">www.hpsc.ie</a>
Northern Ireland	<a href="http://www.fluawareni.info/">http://www.fluawareni.info/</a>
Europe – ECDC	<a href="http://ecdc.europa.eu/">http://ecdc.europa.eu/</a>

### **Acknowledgements**

**This report was prepared by Lisa Domegan and Joan O’Donnell, HPSC. HPSC wishes to thank the sentinel GPs, the ICGP, NVRL, Departments of Public Health, ICSI and HSE-NE for providing data for this report.**