

# Influenza Surveillance in Ireland – Weekly Report

Influenza Week 43 2012 (22<sup>nd</sup> – 28<sup>th</sup> October 2012)



## Summary

- **All indicators of influenza activity in Ireland were at low levels during week 43 2012:**
  - The sentinel GP influenza-like illness (ILI) consultation rate was 8.5 per 100,000 population in week 43 2012, remaining unchanged from the updated rate of 8.0 per 100,000 reported during week 42 2012.
    - ◆ ILI rates remain below the Irish baseline threshold (21.0 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 remained at low levels during week 43 2012.
- No influenza positive specimens were reported from the NVRL from sentinel or non-sentinel sources for week 43 2012. To date this season, only one confirmed influenza specimen was reported from the NVRL, an influenza B specimen from sentinel GP sources.
- There were three respiratory syncytial virus (RSV), one human metapneumovirus and one adenovirus positive specimens reported from the NVRL from sentinel and non-sentinel sources during week 43 2012.
- During week 43 2012, no confirmed influenza cases were hospitalised or admitted to ICU. There were no reports of any influenza-associated deaths occurring during this period.
- One acute respiratory disease outbreak was reported from HSE-S during week 43 2012.
- Many countries of the Northern Hemisphere temperate region are reporting increasing sporadic detections of influenza viruses but numbers are still low and none have crossed their seasonal threshold.

## Surveillance Systems

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

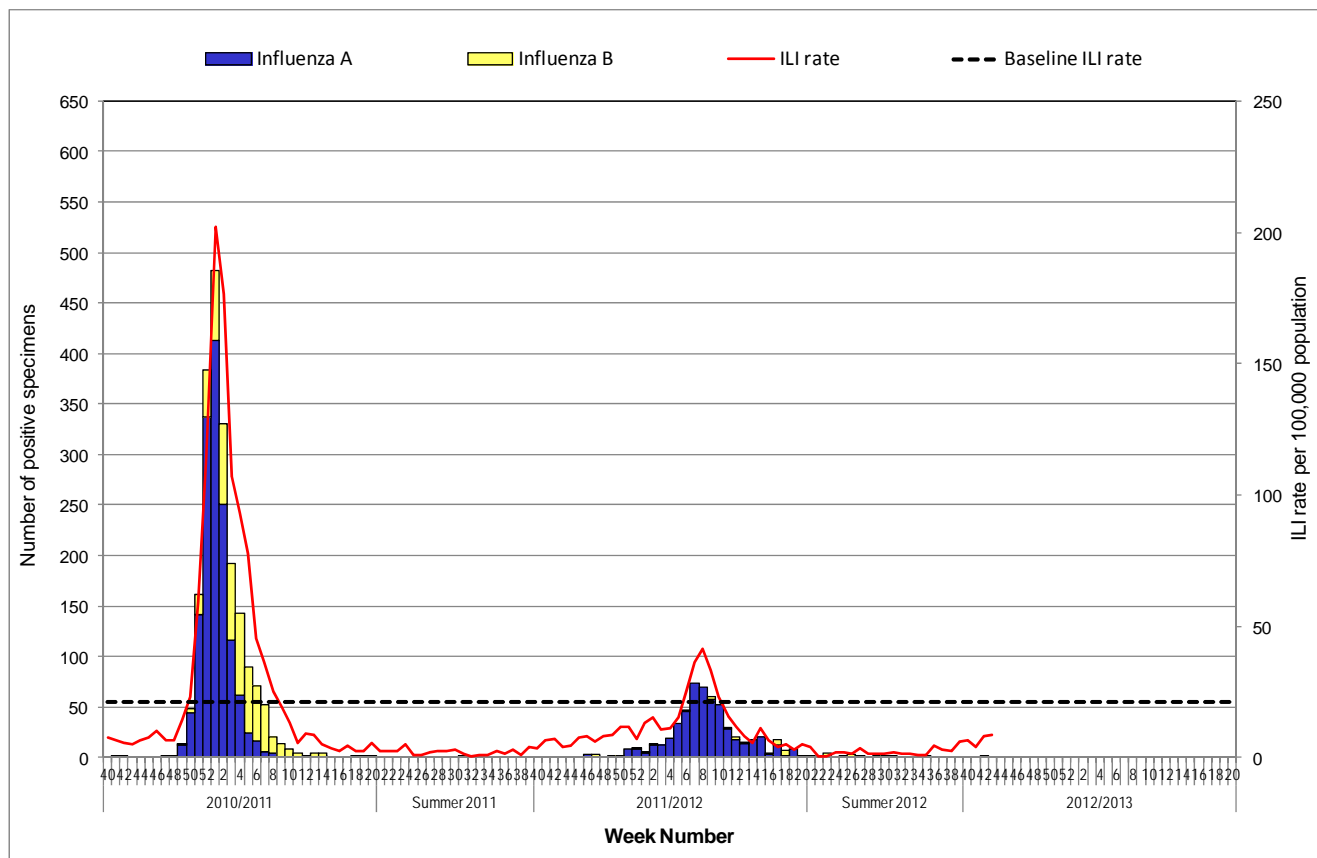
1. Irish College of General Practitioners (ICGP) GP sentinel surveillance system
2. Virological data from the National Virus Reference Laboratory (NVRL)
3. GP Out-of-Hours surveillance system
4. Influenza notifications reported on the Computerised Infectious Disease Reporting system (CIDR)
5. Enhanced 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

\* HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) have revised the Irish baseline threshold for the 2012/2013 influenza season to 21.0 per 100,000 population.

## 1. GP sentinel surveillance system

### Clinical Data

During week 43 2012, 15 influenza-like illness (ILI) cases were reported from sentinel GPs, corresponding to an ILI consultation rate of 8.5 per 100,000 population, remaining unchanged compared to the updated rate of 8.0 per 100,000 reported during week 42 2012. Forty-two of 60 (70.0%) sentinel general practices provided data during week 43 2012, with 11 practices (26.2%) reporting 15 ILI cases. Returns from sentinel GPs during week 43 2012, were lower than usual reporting levels due to the October bank holiday. The ILI consultation rate for week 43 2012 remained below the Irish baseline threshold (21.0 per 100,000 population). HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) have revised the Irish baseline threshold for the 2012/2013 influenza season to 21.0 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<sup>†</sup>

ILI age specific rates were low in all age groups during week 43 2012 (figure 2 2012). No ILI cases were reported in the 0-4 year age group during week 43 2012. Two ILI cases were reported in the 5-14 year age group (8.4 per 100,000), 12 ILI cases in the 15-64 year age group (10.3 per 100,000) and one ILI case was reported in those aged 65 years or older (4.9 per 100,000) during week 43 2012.

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

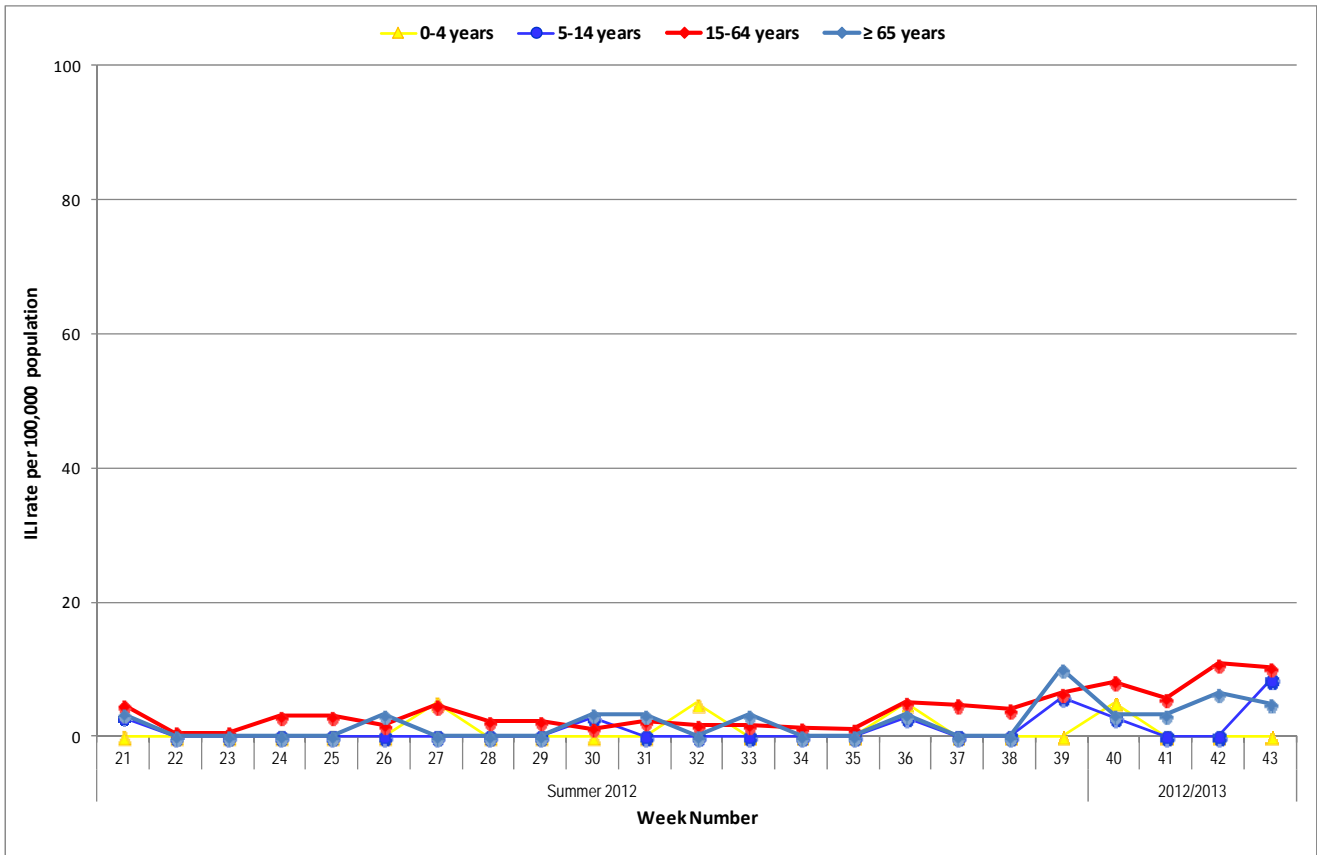


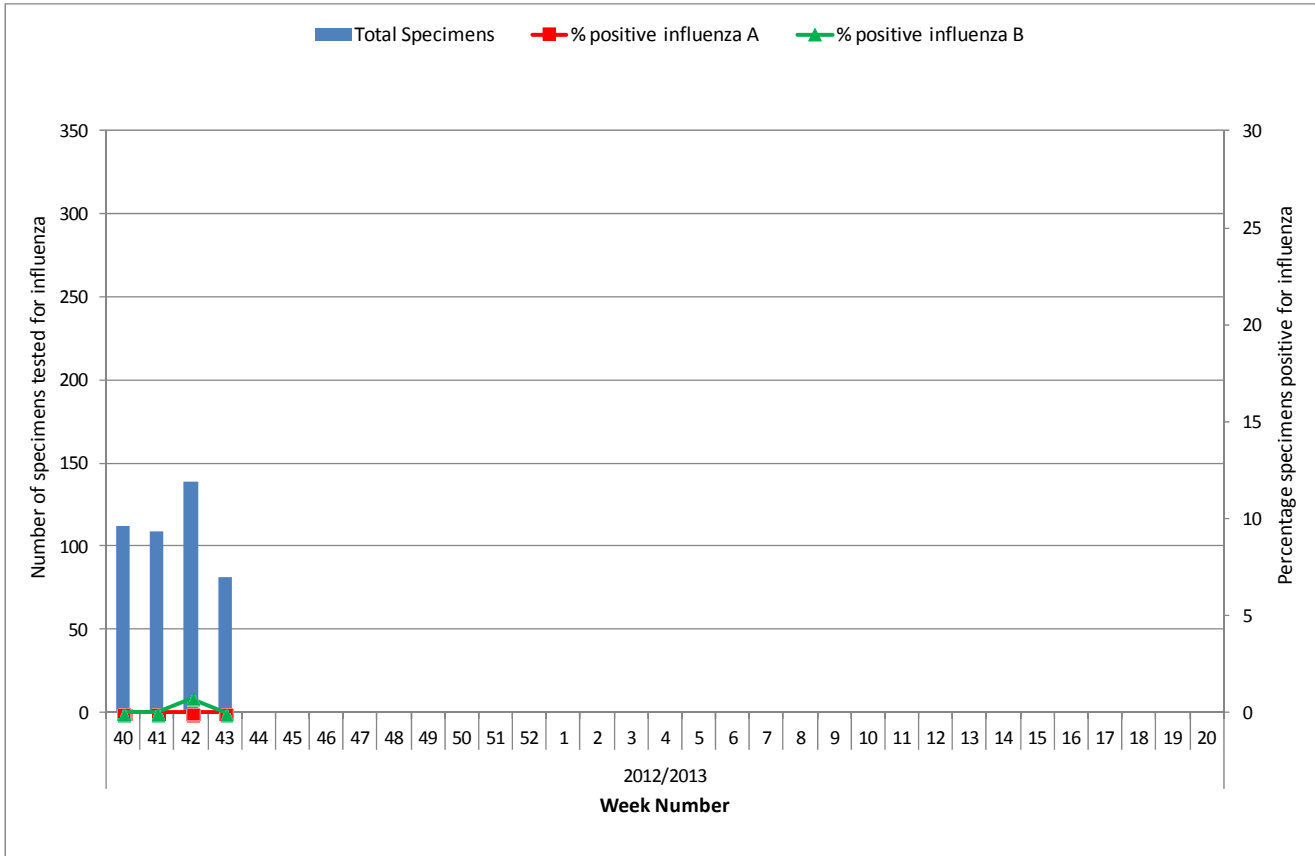
Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2012 and the 2012/2013 influenza season to date *Source: ICGP ILI clinical data*

## 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). The NVRL are now testing all sentinel and non-sentinel specimens for a panel of respiratory viruses: influenza A and B, respiratory syncytial virus (RSV), adenovirus, parainfluenza viruses types 1, 2, and 3 (PIV-1, -2 & -3) and human metapneumovirus.

A total of 81 specimens (4 sentinel and 77 non-sentinel<sup>‡</sup> specimens) were tested by the NVRL during week 43 2012. No specimens tested were positive for influenza virus during week 43 2012. To date this season, only one confirmed influenza specimen was reported from the NVRL, an influenza B specimen from sentinel GP sources during week 42 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)**

Three (3.9%) positive respiratory syncytial virus (RSV) detections from non-sentinel sources were reported from the NVRL<sup>§</sup> during week 43 2012 (figure 4). No RSV positive specimens have been detected from sentinel specimens for the 2012/2013 season to date.

RSV was made notifiable in Ireland on 1<sup>st</sup> January 2012. During week 43 2012, 15 laboratory notifications of RSV were reported on Ireland’s Computerised Infectious Disease Reporting System (CIDR). It should be noted that the majority (86.7%) of RSV notifications reported on CIDR during week 43 2012 were late notifications. 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.

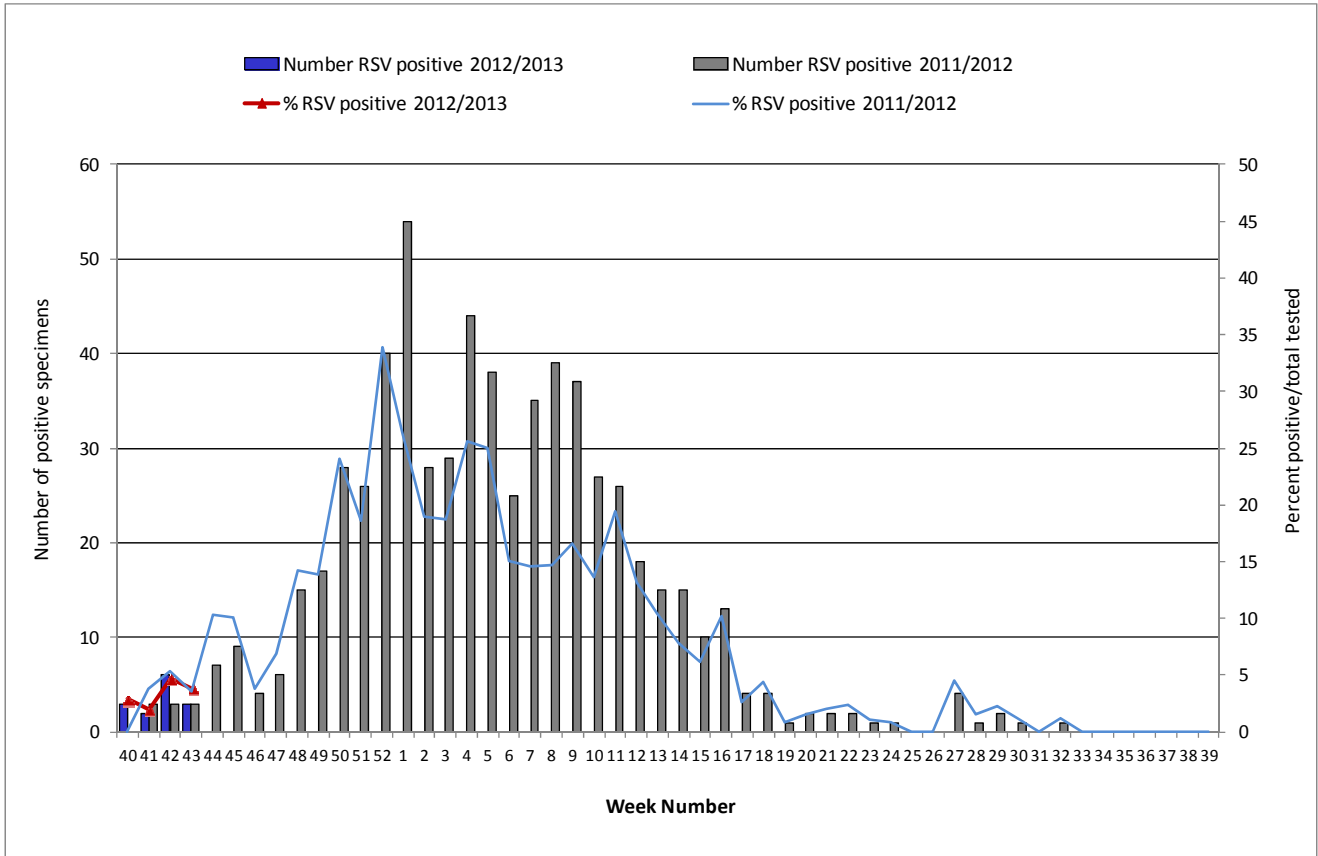


Figure 4: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2012/2013 season, compared to the 2011/2012 season. Source: NVRL

**Other Respiratory Viruses**

One (n=4; 25.0%) positive detection of adenovirus was reported from the NVRL from sentinel GP sources for week 43 2012. There were no positive detections of RSV, parainfluenza viruses or human metapneumovirus (hMPV) reported from the NVRL from sentinel GP sources for the 2012/2013 season to date.

One (n=77; 1.3%) human metapneumovirus (hMPV) positive detection was reported from the NVRL from non-sentinel sources during week 43 2012 (table 2). There were no positive detections of adenovirus or parainfluenza viruses reported from the NVRL from non-sentinel sources for week 43 2012.

**Table 1: Number of sentinel and non-sentinel\*\* respiratory specimens tested by the NVRL and positive influenza results, for week 43 2012 and the 2012/2013 season to date. Source: NVRL**

Week	Specimen type	Total tested	Number influenza positive	% Influenza positive	Influenza A					Influenza B
					A (H1) 2009	A (H3)	A (H1)	A (unsubtyped)	Total influenza A	
43 2012	Sentinel	4	0	0.0	0	0	0	0	0	0
	Non-sentinel	77	0	0.0	0	0	0	0	0	0
	<b>Total</b>	<b>81</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>
2012/2013	Sentinel	32	1	3.1	0	0	0	0	0	1
	Non-sentinel	409	0	0.0	0	0	0	0	0	0
	<b>Total</b>	<b>441</b>	<b>1</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

**Table 2: Number of sentinel and non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 43 2012 and the 2012/2013 season to date. Source: NVRL**

Week	Specimen type	Total tested	RSV	% RSV	Adenovirus	% Adenovirus	PIV-1	% PIV-1	PIV-2	% PIV-2	PIV-3	% PIV-3	hMPV	% hMPV
43 2012	Sentinel	4	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	77	3	3.9	0	0.0	0	0.0	0	0.0	0	0.0	1	1.3
	<b>Total</b>	<b>81</b>	<b>3</b>	<b>3.7</b>	<b>1</b>	<b>1.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>1.2</b>
2012/2013	Sentinel	32	0	0.0	1	3.1	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	409	14	3.4	2	0.5	0	0.0	1	0.2	3	0.7	2	0.5
	<b>Total</b>	<b>441</b>	<b>14</b>	<b>3.2</b>	<b>3</b>	<b>0.7</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.2</b>	<b>3</b>	<b>0.7</b>	<b>2</b>	<b>0.5</b>

\*\* 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 influenza activity (based on ILI cases) was reported from HSE-E, -MW, -S and -SE during week 43 2012. No influenza activity was reported from HSE-M, -NE, -NW, and -W during week 43 2012 (figure 5).

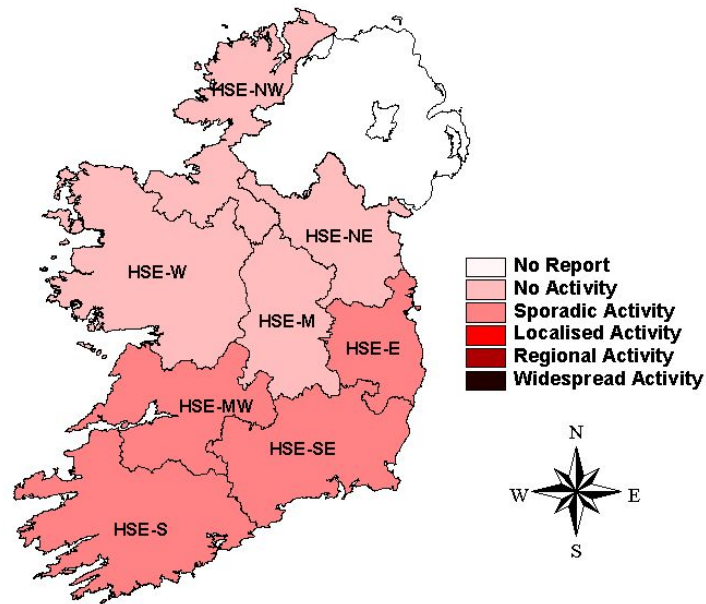
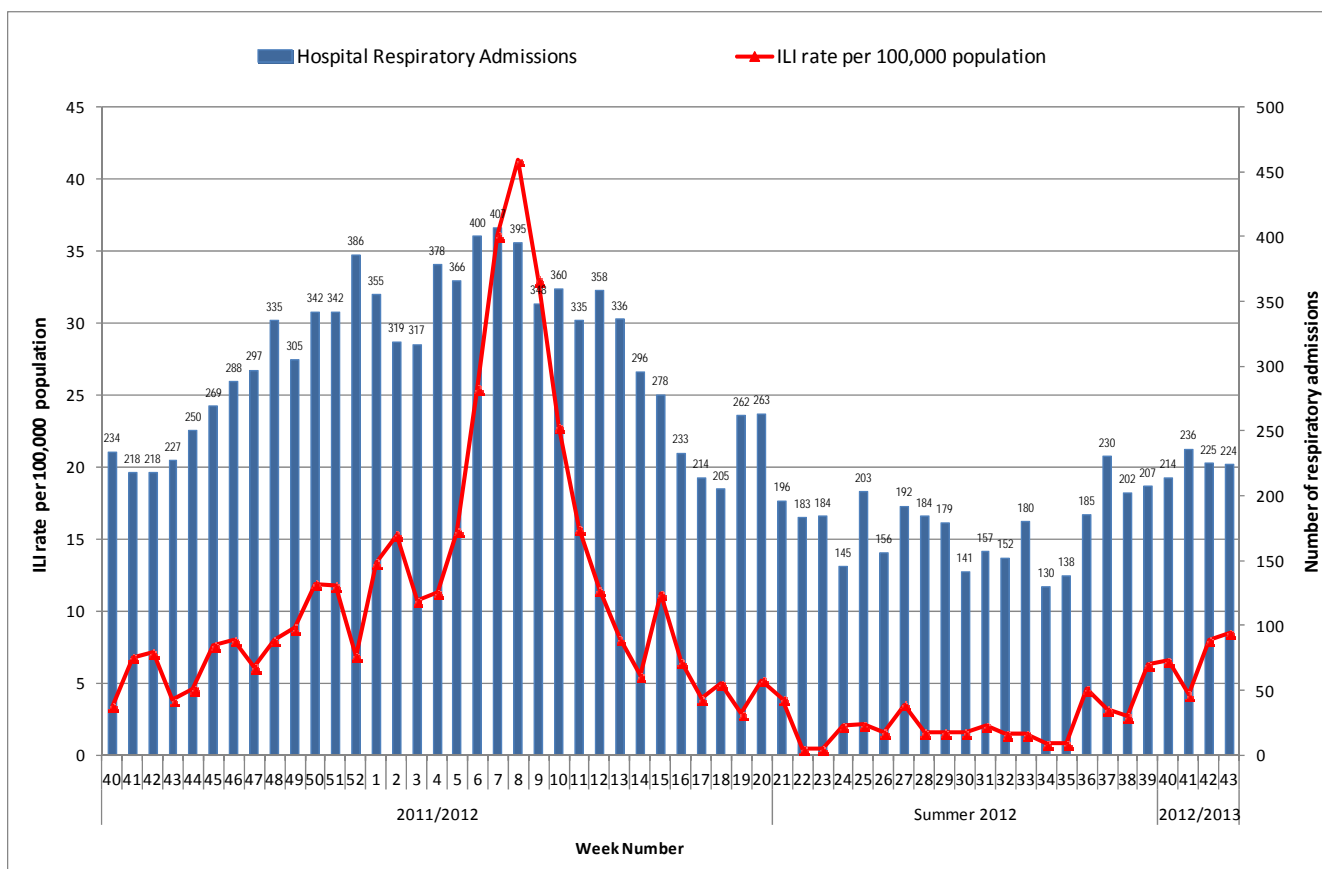


Figure 5: Map of provisional influenza activity by HSE-Area during influenza week 43 2012

## 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, the total number of respiratory admissions reported from sentinel hospitals remained at low levels (n=224) and within expected levels for this time of year. Respiratory admissions data reported from sentinel hospitals were incomplete for week 43 2012 (figure 6).



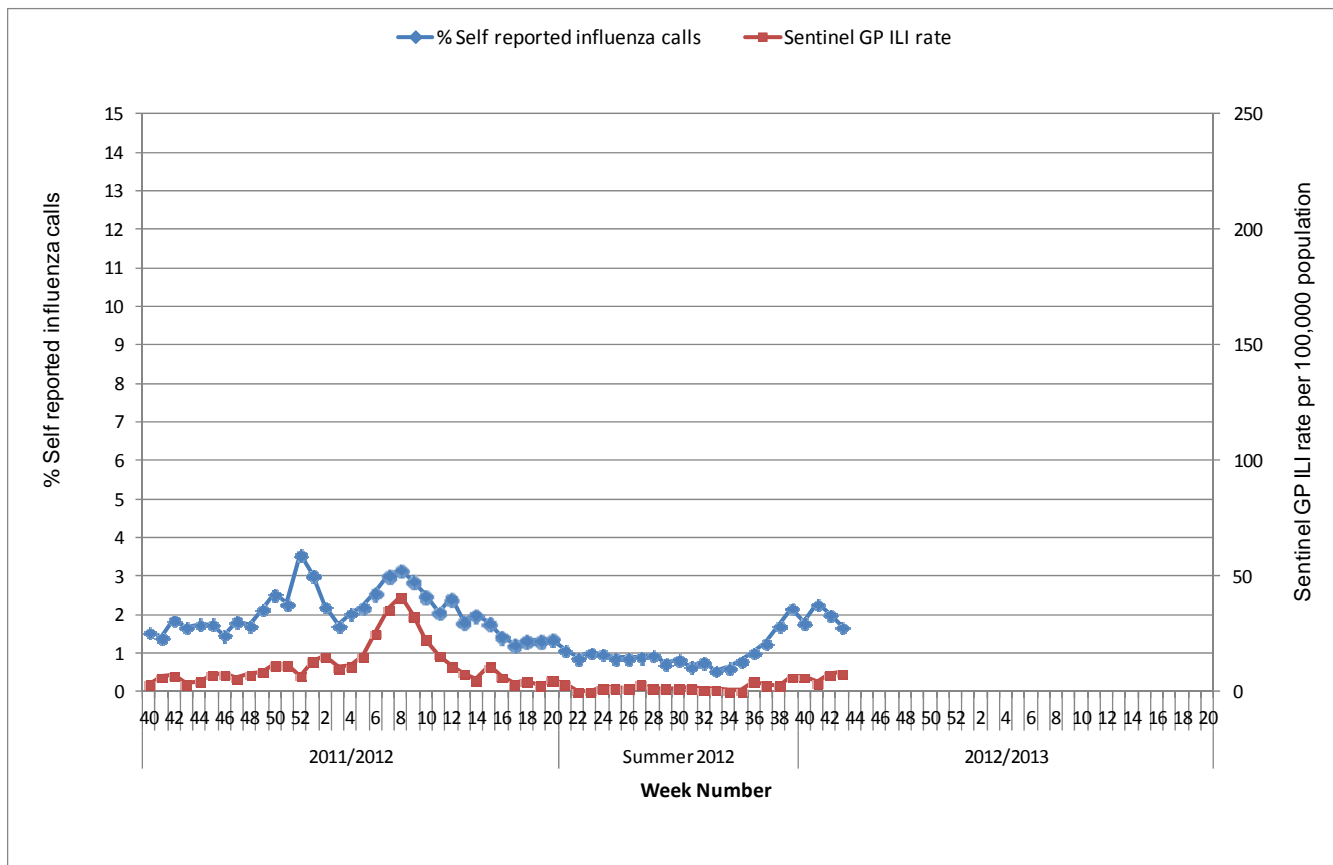
**Figure 6: Number of respiratory admissions reported from sentinel hospitals and national sentinel GP ILI consultation rate per 100,000 population by week for the 2011/2012 season, summer 2012 and the 2012/2013 season to date.**  
 Source: Departments of Public Health - Sentinel Hospitals & ICGP.



## 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 during week 43 2012 remained at low levels (at 1.7%). Five GP Out-of-Hours services reported during week 43 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 43 2012. No confirmed influenza cases were hospitalised and reported to HPSC during week 43 2012 or for the 2012/2013 influenza season to date.

## 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 43 2012 or the 2012/2013 season to date.

## 7. Mortality surveillance

There were no reports of any influenza-associated deaths occurring during week 43 2012 or the 2012/2013 season to date. 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 (Euro MoMo). During week 43 2012 and the 2012/2013 season to date, 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

One acute respiratory outbreak (pathogen unknown) was reported in a community hospital/long stay unit from HSE-S during week 43 2012.

## 9. International summary

### United Kingdom

GP consultation rates and indicators of influenza activity remained low during week 42 2012 in the UK. The weekly primary care ILI consultation rate was low in England (7.2 per 100,000), Scotland (6.3 per 100,000), Northern Ireland (11.9 per 100,000) and Wales (7.1 per 100,000). The weekly proportion of NHS Direct calls for colds/influenza and fever (in 5-14 year olds) were below the early warning thresholds for influenza in week 42. No new acute respiratory disease outbreaks were reported during week 42 2012. Five (1.0%) of the 503 respiratory specimens reported to Data Mart (England) tested positive for influenza in week 42 (4 A subtype not known and 1 B). The proportion of samples positive remained stable for RSV, rhinovirus, parainfluenza, adenovirus and hMPV. Two influenza positive detections were recorded through the two English GP-based sentinel schemes in week 42 (one A (H3) and one B). One new admission to ICU/HDU with confirmed influenza (one B) was reported across the UK in week 42. No excess all-cause mortality was reported by age group or region in week 42 across the UK as calculated with the EuroMOMO algorithm.

### Europe

During the third week of the influenza surveillance season, influenza transmission in Europe remained at low levels. During week 42 2012, all 25 reporting countries experienced low intensity of clinical influenza activity. In week 42 2012, 20 countries tested 281 sentinel specimens, of which three (1.1%) from three countries (France, Ireland and Spain) were positive for influenza virus: all positive specimens were type B viruses. In week 42 2012, 31 non-sentinel source specimens, were positive for influenza virus: 25 were type A and six were type B. Of nine subtyped influenza A viruses, four were A(H1N1)pdm09 and five were A(H3) viruses. In Spain, the first severe hospitalised laboratory-confirmed influenza case [an A(H3) case] since week 40 2012 was reported.

### United States of America

During week 42 2012, influenza activity remained low in the United States. The proportion of outpatient ILI visits was 1.2%, which is below the national baseline of 2.2%. Of 2,891 specimens tested during week 42 2012, 178 (6.2%) were positive for influenza: 2 A (H1N1)pdm09, 69 A (H3), 33 A (unsubtyped) and 74 B. The

proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. No influenza-associated paediatric deaths were reported.

### Canada

Influenza activity in Canada remained low during week 42 2012, and was similar to the previous week. The ILI consultation rate increased in week 42 to 18.0 per 1,000 patient visits, but is within the expected level for this time of year. In week 42, a total of 17 laboratory detections of influenza were reported, all of which were for influenza A viruses [8 A(H3), 1 A(H1N1)pdm09, 8 A(un-subtyped)]. Two influenza outbreaks in long-term care facilities were reported in week 42. One influenza A-associated hospitalisation (in a person aged 65 years or older) was reported in week 42 2012.

### Worldwide (WHO)

The WHO Global Influenza Programme monitors influenza activity worldwide and publishes an update every two weeks. The most recent update of 26<sup>th</sup> October 2012, reported that many countries of the Northern Hemisphere temperate region reported increasing sporadic detections of influenza viruses but numbers were still low and remained below seasonal influenza thresholds. A few countries in tropical areas have experienced active influenza transmission in recent weeks. Most notable are Nicaragua and Costa Rica in the Americas, where influenza B has been the most commonly detected virus in recent weeks, and Sri Lanka, Nepal, and Thailand in Asia, where influenza A(H1N1)pdm09 has been slightly more common than influenza B. In Sub-Saharan Africa, countries of West (Senegal and Cote d'Ivoire) and Central Africa (Cameroon) have reported increasing detections of influenza virus, primarily A(H3N2). Influenza activity in most areas of temperate countries of the Southern Hemisphere is now at inter-seasonal levels.

## **Human Avian and Swine Influenza Updates**

### Human Avian Influenza

No new cases of human avian influenza A (H5N1) infection have been reported by the WHO since August 10<sup>th</sup> 2012.

### Human Swine Influenza

No new cases of human swine influenza/variant influenza A virus infections were reported in recent weeks in the US. For latest surveillance data see here: <http://www.cdc.gov/flu/swineflu/variant.htm>

## **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**

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