

# Influenza Surveillance in Ireland – Weekly Report

Influenza Week 1 2014 (30<sup>th</sup> December 2013 – 5<sup>th</sup> January 2014)



*Data for week 52 2013 & week 1 2014 should be interpreted with caution, as reporting levels are affected during the Christmas/New Year Holiday period.*

## Summary

- Several indicators of influenza activity in Ireland increased during week 1 2014; however overall activity remained at low levels. Respiratory syncytial virus (RSV) activity is currently at high levels.
- The sentinel GP influenza-like illness (ILI) consultation rate remained low at 11.2 per 100,000 population during week 1 2014, a slight increase compared to the updated rate of 8.4/100,000 during week 52 2013.
  - ♦ ILI rates remained below the Irish baseline threshold (21.0 per 100,000 population)
  - ♦ ILI rates remained at low levels in all age groups
- Influenza positivity increased during week 1 2014, with 24 (9.2%) influenza positive specimens reported from the National Virus Reference Laboratory (NVRL): 13 influenza A(H3), 6 influenza A(H1)pdm09 & 5 influenza A (not subtyped)
- Respiratory syncytial virus (RSV) positivity remained at high levels during week 1 2014, as expected at this time of year.
- Sporadic detections of adenovirus, parainfluenza viruses and human metapneumovirus (hMPV) have been reported from the NVRL for the 2013/2014 season to date.
- One influenza A(H3) hospitalised case was reported to HPSC during week 1 2014.
- Two confirmed influenza cases were admitted to ICU and reported to HPSC to date this season, one associated with influenza A(H3) and one with influenza A(H1)pdm09, both cases were over 65 years of age.
- There were no reports of any influenza-associated deaths occurring during this period.
- Three acute respiratory outbreaks in residential care facilities/community hospitals were reported during week 1 2014 to HPSC (via Ireland's Computerised Infectious Disease Reporting System).
- There has been no evidence of sustained influenza activity in Europe to date for the 2013/2014 season.

## 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 ICU patients with confirmed influenza and enhanced surveillance of all severe acute respiratory infections (SARI) in one adult and one paediatric ICU sites.
7. Outbreak reporting on CIDR
8. Network of sentinel hospitals reporting hospital admission data

## 1. GP sentinel surveillance system - Clinical Data

During week 1 2014, 23 influenza-like illness (ILI) cases were reported from sentinel GPs, corresponding to an ILI consultation rate of 11.2 per 100,000 population, increasing slightly compared to recent weeks however remaining low. The updated rate for week 52 2013 was 8.4 per 100,000 population. To date this season, ILI rates have remained below the Irish baseline threshold (21/100,000 population). ILI age specific rates were low in all age groups during week 1 2014 (figures 1 & 2).

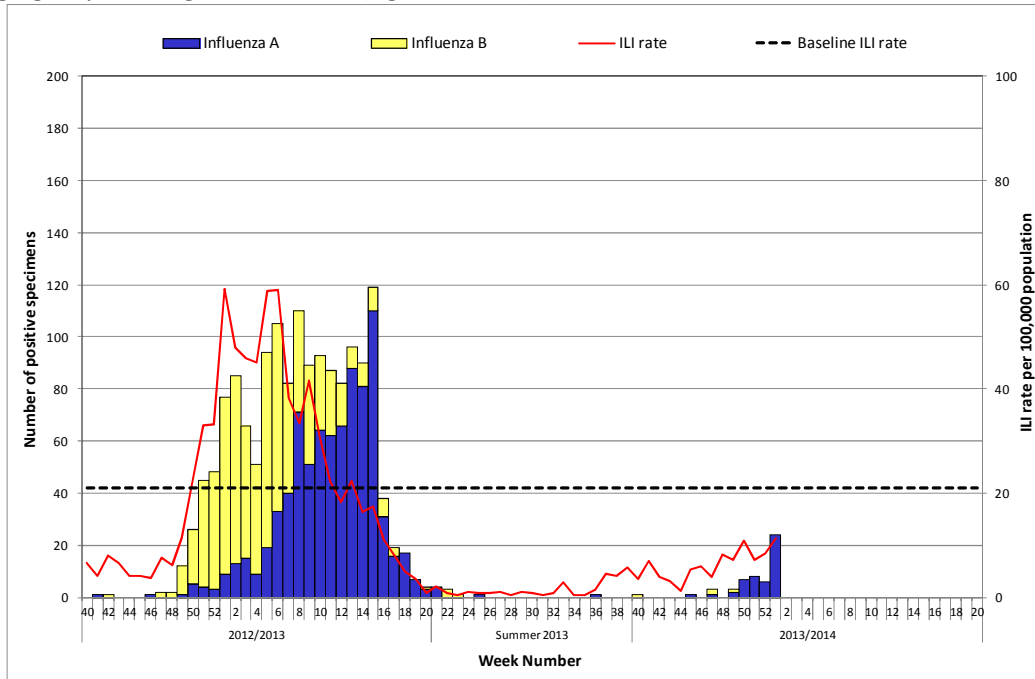


Figure 1. ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL*

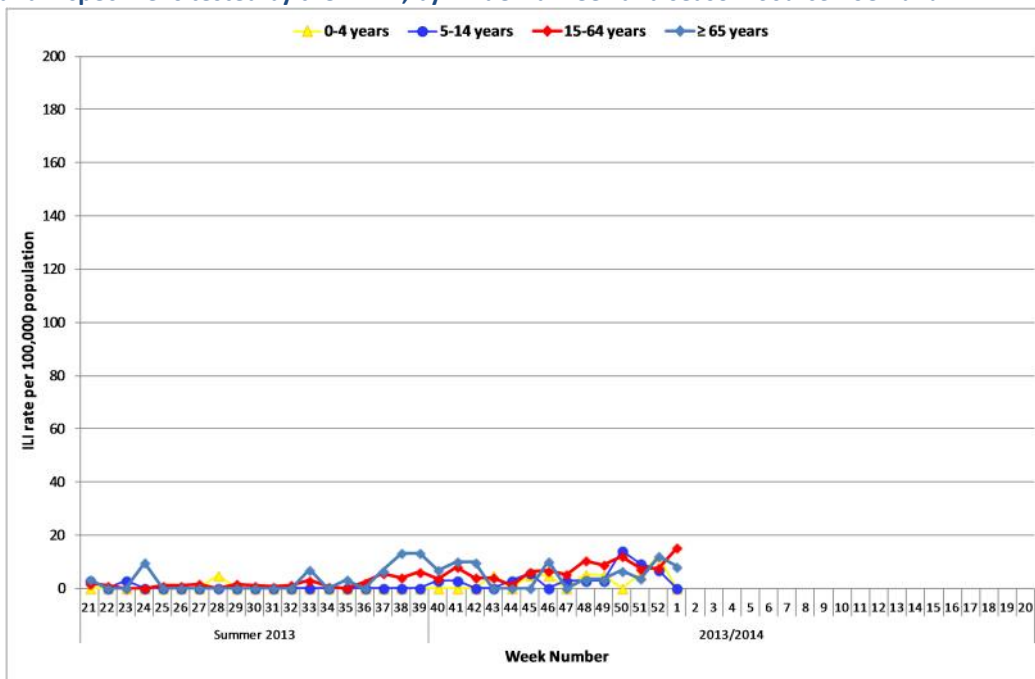


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2013 and the 2013/2014 influenza season to date. *Source: ICGP*

## 2. Influenza and Other Respiratory Viruses – National Virus Reference Laboratory

The data reported in this section for the 2013/2014 influenza season refer to sentinel and non-sentinel specimens tested for influenza, respiratory syncytial virus (RSV), adenovirus, parainfluenza viruses types 1, 2 & 3 (PIV-1, -2, & -3) and human metapneumovirus (hMPV) by the National Virus Reference Laboratory (NVRL) (figure 3, tables 1 & 2).

- Influenza positivity increased during week 1 2014, with 24 (9.2%) influenza positive specimens reported from the National Virus Reference Laboratory (NVRL): 13 influenza A(H3), 6 influenza A(H1)pdm09 & 5 influenza A (not subtyped)
  - One influenza A(H3) and two influenza A (not subtyped) positive specimens were reported from sentinel GP sources. Twelve influenza A(H3), six A(H1)pdm09 and three influenza A (not subtyped) positive specimens were reported from non-sentinel sources.
- Respiratory syncytial virus (RSV) positivity remained at high levels during week 1 2014, as expected at this time of year. Seventy-eight (30.7%) RSV positive specimens were reported from the NVRL for week 1 2014 (figure 3).
- Sporadic detections of adenovirus, parainfluenza viruses and human metapneumovirus (hMPV) have been reported from the NVRL for the 2013/2014 season to date.

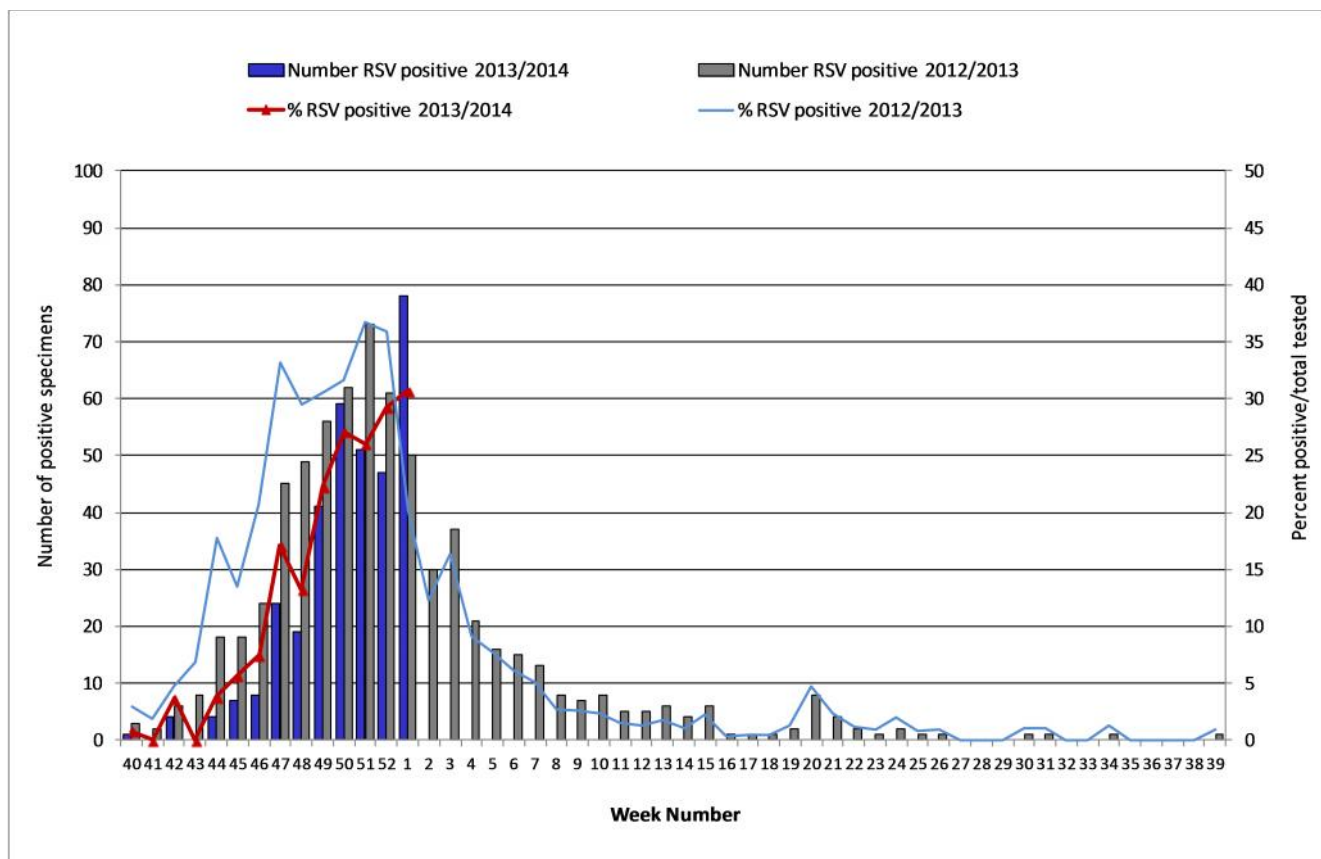


Figure 3: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2013/2014 season, compared to the 2012/2013 season. Source: NVRL.

**Table 1: Number of sentinel and non-sentinel\* respiratory specimens tested by the NVRL and positive influenza results, for week 1 2014 and the 2013/2014 influenza season to date. Source: NVRL**

Week	Specimen type	Total tested	Number influenza positive	% Influenza positive	Influenza A				Influenza B
					A (H1)pdm09	A (H3)	A (not subtyped)	Total influenza A	
<b>1 2014</b>	Sentinel	7	3	42.9	0	1	2	3	0
	Non-sentinel	254	21	8.3	6	12	3	21	0
	<b>Total</b>	<b>261</b>	<b>24</b>	<b>9.2</b>	<b>6</b>	<b>13</b>	<b>5</b>	<b>24</b>	<b>0</b>
<b>2013/2014</b>	Sentinel	131	16	12.2	2	7	4	13	3
	Non-sentinel	2092	37	1.8	12	19	5	36	1
	<b>Total</b>	<b>2223</b>	<b>53</b>	<b>2.4</b>	<b>14</b>	<b>26</b>	<b>9</b>	<b>49</b>	<b>4</b>

**Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 1 2014 and the 2013/2014 influenza 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
<b>1 2014</b>	Sentinel	7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	254	78	30.7	1	0.4	1	0.4	1	0.4	0	0.0	8	3.1
	<b>Total</b>	<b>261</b>	<b>78</b>	<b>29.9</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>	<b>1</b>	<b>0.4</b>	<b>0</b>	<b>0.0</b>	<b>8</b>	<b>3.1</b>
<b>2013/2014</b>	Sentinel	131	3	2.3	2	1.5	2	1.5	3	2.3	1	0.8	3	2.3
	Non-sentinel	2092	343	16.4	24	1.1	42	2.0	18	0.9	5	0.2	35	1.7
	<b>Total</b>	<b>2223</b>	<b>346</b>	<b>15.6</b>	<b>26</b>	<b>1.2</b>	<b>44</b>	<b>2.0</b>	<b>21</b>	<b>0.9</b>	<b>6</b>	<b>0.3</b>	<b>38</b>	<b>1.7</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 based on sentinel GP ILI consultation rates, laboratory data and outbreaks.

Localised influenza activity was reported in HSE-E during week 1 2014. Sporadic influenza activity (based on ILI cases and/or confirmed influenza cases) was reported from HSE-M, -MW, -NE, -NW and -S during week 1 2014. HSE-SE and -W reported no influenza activity during week 1 2014 (figure 4).

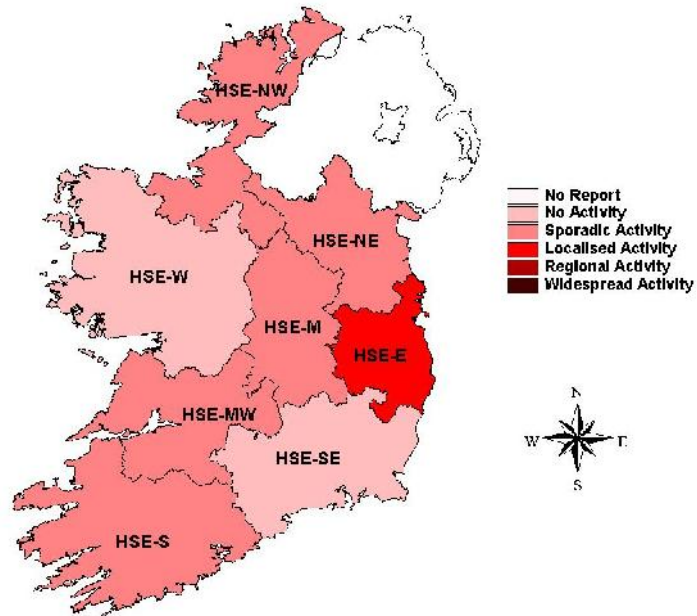


Figure 4: Map of provisional influenza activity by HSE-Area during week 1 2014

#### Sentinel hospitals

The Departments of Public Health have established at least one sentinel hospital in each HSE-Area, to report data on total, emergency and respiratory admissions on a weekly basis. Respiratory admissions data are routinely reported from eight sentinel hospitals.

Respiratory admissions reported from sentinel hospitals increased significantly during week 52 2013 to 385, compared to 342 during week 51 2013. During week 1 2014, 288 respiratory admissions were reported. It should be noted that data for week 1 2014 were incomplete; with only 6 of 8 sentinel hospitals reporting respiratory admissions (figure 5).

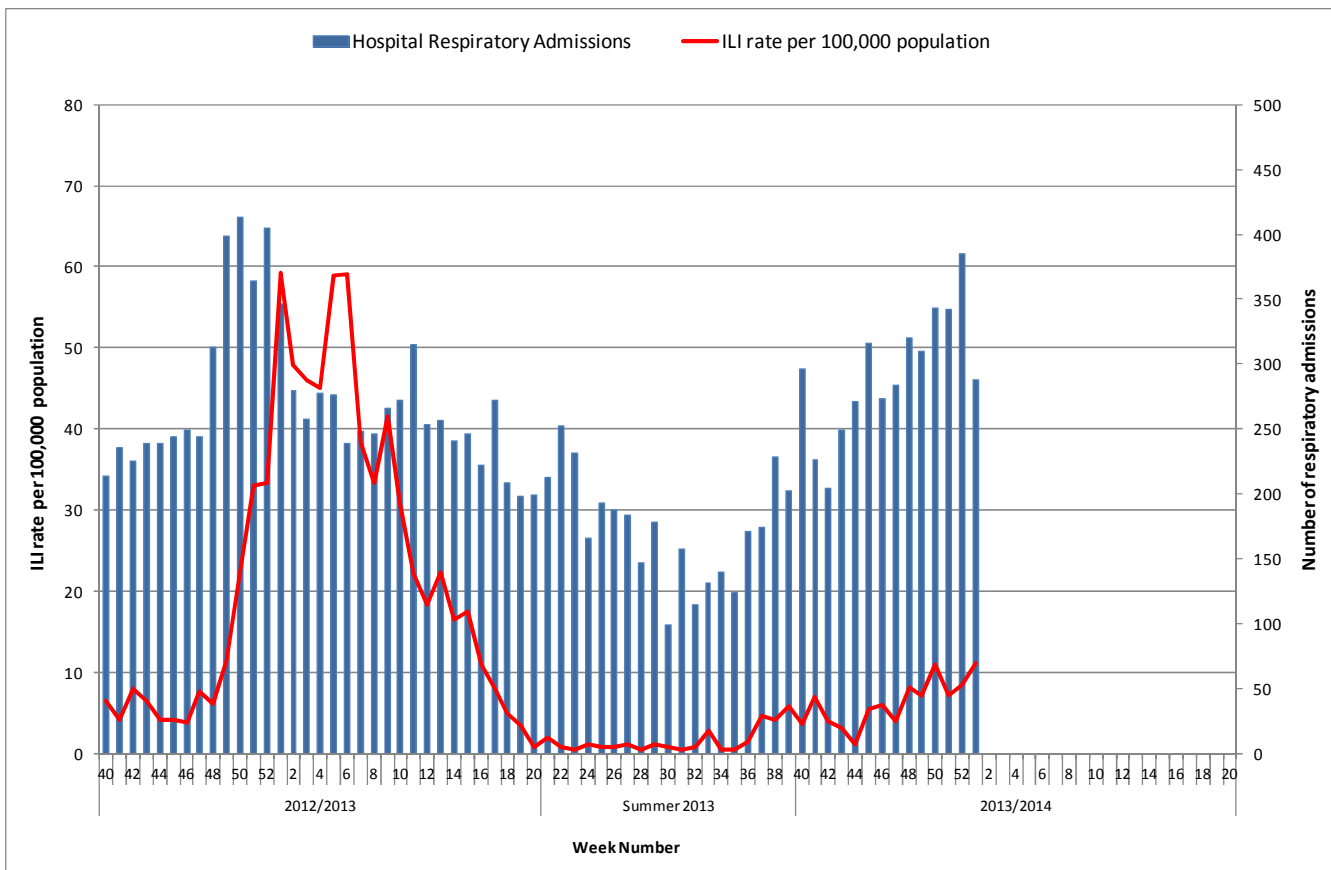


Figure 5: Number of respiratory admissions reported from sentinel hospitals and ILI sentinel GP consultation rate per 100,000 population by week and season. Source: Departments of Public Health - Sentinel Hospitals & ICGP.

#### 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. 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 remained low, however have increased during week 1 2014 for the fourth consecutive week, to 2.9% (figure 6).

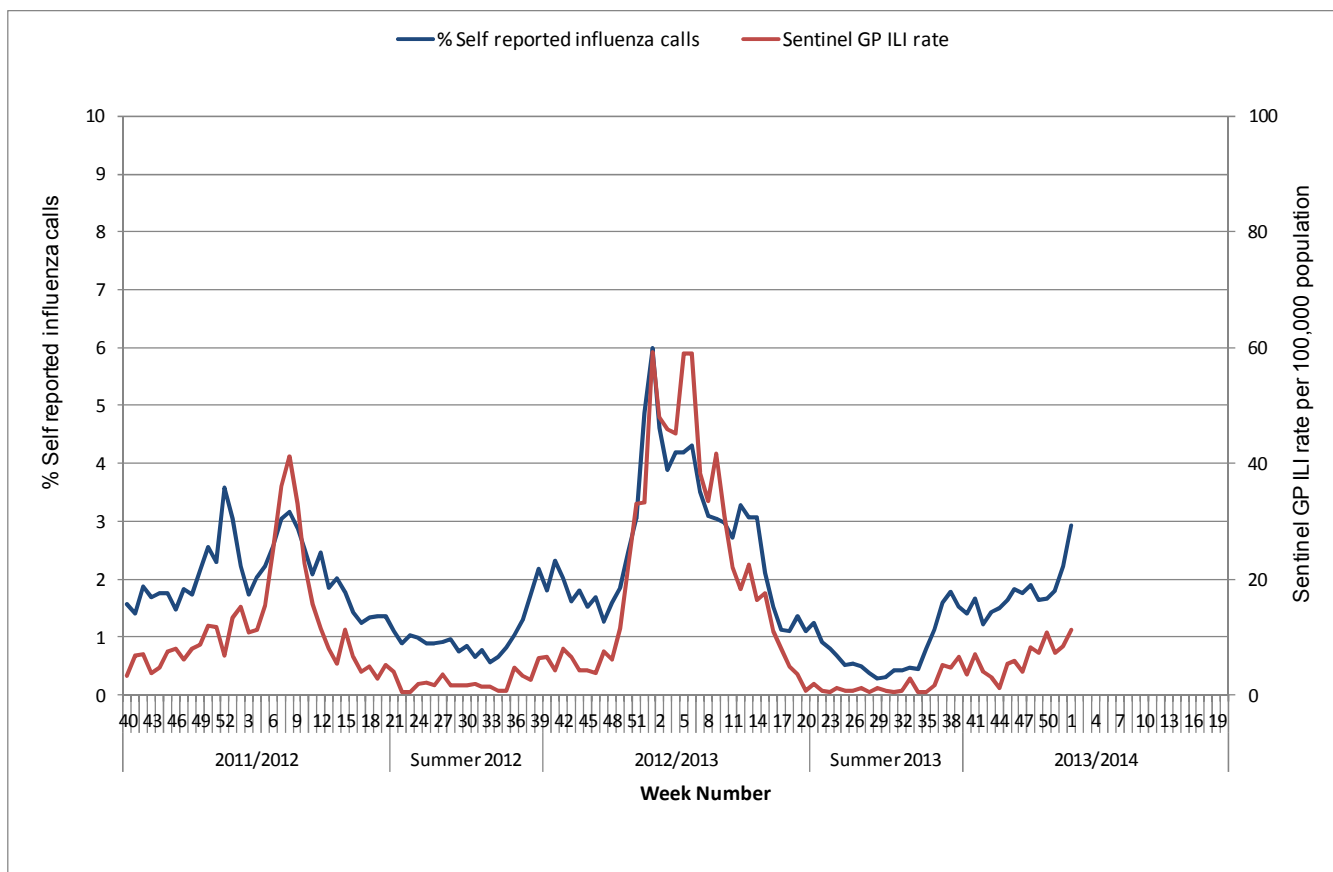


Figure 6: Self-reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and sentinel GP ILI consultation rate per 100,000 population by week and season. Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

## 5. Influenza & RSV notifications

Influenza and RSV cases notifications are reported on Ireland's Computerised Infectious Disease Reporting System (CIDR), including all positive influenza/RSV specimens reported from all laboratories testing for influenza/RSV and reporting to CIDR.

Influenza and RSV notifications are reported in the [Weekly Infectious Disease Report for Ireland](#).

## 6. Influenza Hospitalisations

One confirmed influenza A(H3) hospitalised case was reported to HPSC during week 1 2014.

## 7. 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 ICU sites, one adult and one paediatric, will also continue during the 2013/2014 season. HPSC process and report on this information on behalf of the regional Directors of Public Health/Medical Officers of Health.

- Two confirmed influenza cases were admitted to ICU and reported to HPSC to date this season, one associated with influenza A(H3) and one with influenza A(H1)pdm09, both cases were over 65 years of age.

## 8. Mortality Surveillance

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. These data are provisional due to the time delay in deaths' registration in Ireland. <http://www.euromomo.eu/>

- There were no reports of any influenza-associated deaths occurring during week 1 2014.
- No excess all-cause mortality was reported in Ireland after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm during week 1 2014.

## 9. Outbreak Surveillance

Three acute respiratory outbreaks in residential care facilities/community hospitals were reported to HPSC (via Ireland's Computerised Infectious Disease Reporting System) during week 1 2014: one outbreak associated with influenza A(H3) in HSE-E and two acute respiratory outbreaks (associated with unidentified pathogens) in HSE-S.

## 10. International Summary

Since the start of the 2013/2014 influenza season, there has been no evidence of sustained influenza activity in Europe. Due to low levels of reporting during the Christmas/New Year holidays, a comprehensive report on influenza activity in Europe cannot be provided at this time. See [WHO](#) and [ECDC](#) influenza surveillance reports for further information.

- Further information is available on the following websites:
  - Northern Ireland <http://www.fluawareni.info/>
  - Public Health England <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>
  - Europe – ECDC <http://ecdc.europa.eu/>
  - United States CDC <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>
  - Public Health Agency of Canada <http://www.phac-aspc.gc.ca/fluwatch/12-13/index-eng.php>
- For up to date information on human infection with avian influenza A(H7N9) virus in China including the current case numbers and the WHO assessment of the situation please see [here](#).
- Information on Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV), including the latest ECDC rapid risk assessment is available on the [ECDC website](#). Further information and guidance documents are also available on the [HPSC](#) and [WHO](#) websites.
- Flusurvey.ie, Ireland's first online influenza surveillance survey has been launched for 2013/2014. For further information and to register, please see the [website](#).

### [WHO recommendations on the composition of influenza virus vaccines](#)

The WHO vaccine strain selection committee recommended that vaccines for use in the 2013/2014 influenza season (northern hemisphere winter) contain the following: an A/California/7/2009 (H1N1)pdm09-like virus; an A(H3N2) virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011; a B/Massachusetts/2/2012-like virus.

Further information on influenza is available at [www.hpsc.ie](http://www.hpsc.ie)

#### Acknowledgements

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