

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 41 2012 (8th – 14th October 2012)



Summary

- **All indicators of influenza activity in Ireland were at low levels during week 41 2012:**
 - The sentinel GP influenza-like illness (ILI) consultation rate was 4.4 per 100,000 population in week 41 2012, a slight decrease from the updated rate of 6.8 per 100,000 reported during week 40 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
- No influenza positive specimens were reported from the NVRL from sentinel or non-sentinel sources for week 41 2012 or for the 2012/2013 season to date.
- There were two respiratory syncytial virus (RSV), one parainfluenza virus type 3 (PIV-3) and one human metapneumovirus (hMPV) positive specimens reported from the NVRL from non-sentinel sources during week 41 2012.
- During week 41 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 41 2012.
- There is no evidence of significant influenza activity in Europe at present.

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 41 2012, 51 of 60 (85.0%) sentinel general practices provided data, with eight practices (15.7%) reporting 10 influenza-like illness (ILI) cases. This corresponds to an ILI consultation rate of 4.4 per 100,000 population, a slight decrease compared to the updated rate of 6.8 per 100,000 reported during week 40 2012. The ILI consultation rate for week 41 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.

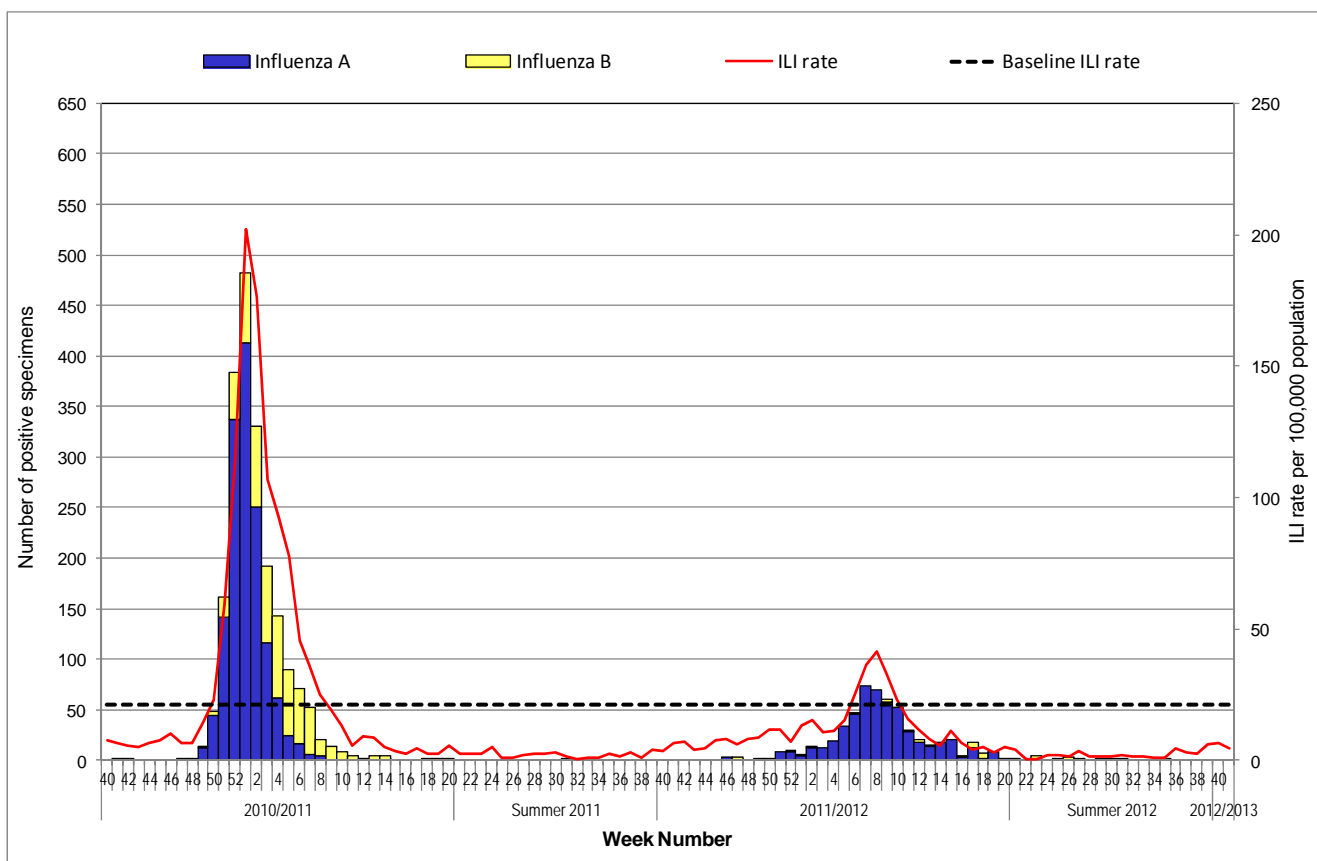


Figure 1. ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold rate, and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season.

Source: Clinical ILI data from ICGP and virological data from the NVRL[†]

ILI age specific rates were low in all age groups during week 41 2012 (figure 2 2012). No ILI cases were reported in the 0-4 and 5-14 year age groups during week 41 2012. Nine ILI cases were reported in the 15-64 year age group (6.0 per 100,000) and one case was reported in those aged 65 years or older (3.8 per 100,000) during week 41 2012.

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

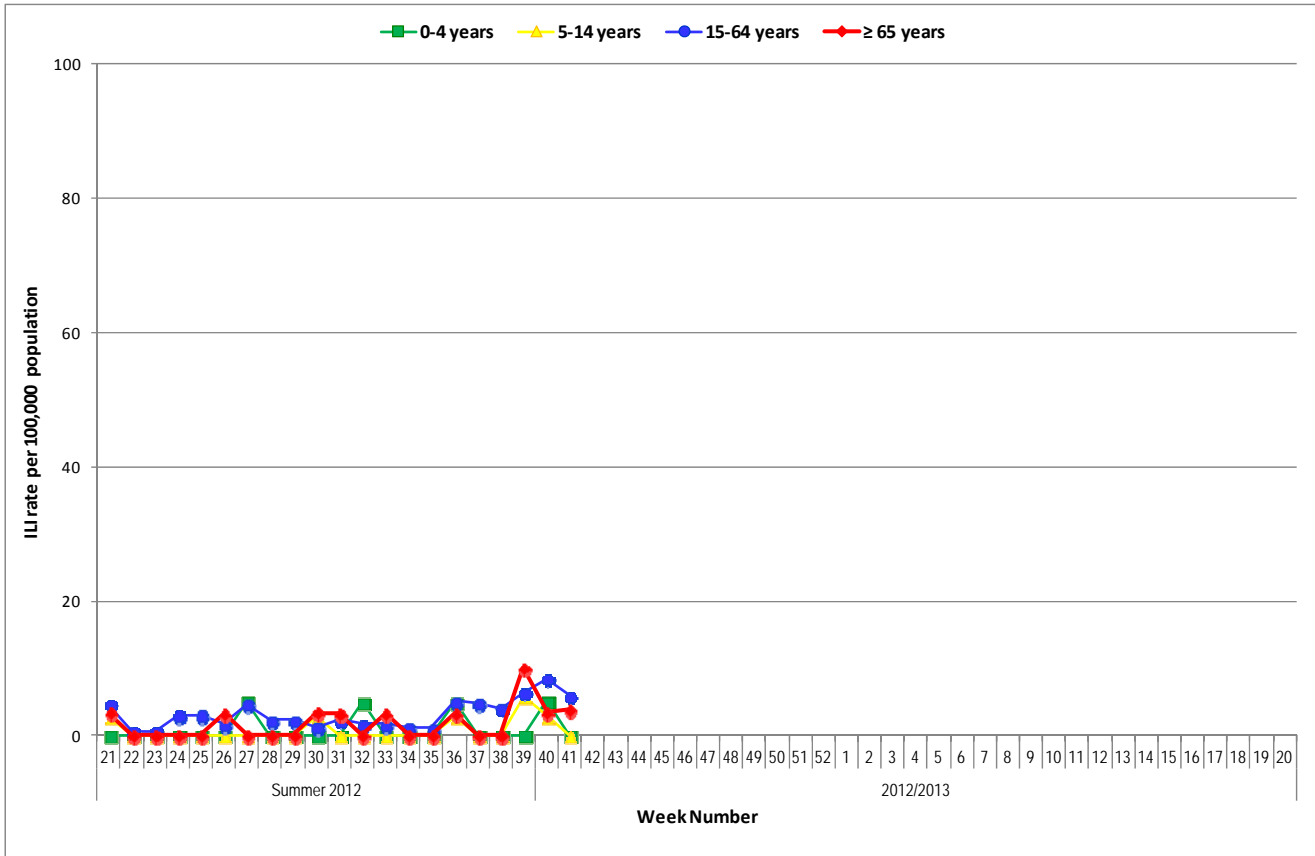


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2012 and the 2012/2013 influenza season to date *Source: ICGP ILI clinical data*

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). 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 104 specimens (7 sentinel and 97 non-sentinel[‡] specimens) were tested by the NVRL during week 41 2012. No specimens tested were positive for influenza virus during week 41 2012 (figure 3, tables 1 & 2).

[‡] 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.

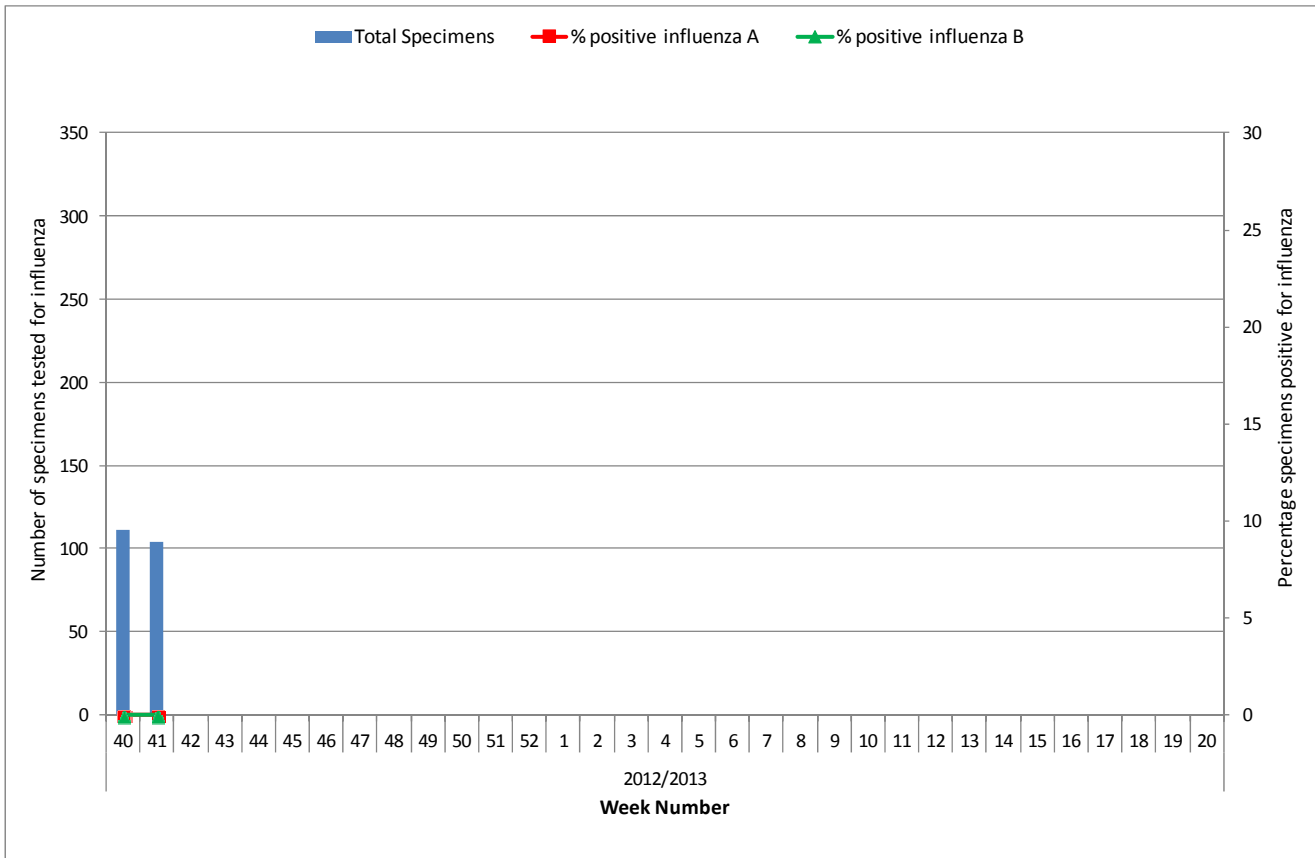


Figure 3: Number of sentinel and non-sentinel specimens tested for influenza and percentage influenza positive by week for the 2012/2013 influenza season. Source: NVRL

Respiratory Syncytial Virus (RSV)

Two (2.1%) positive respiratory syncytial virus (RSV) detections from non-sentinel sources were reported from the NVRL[§] during week 41 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 1st January 2012. During week 41 2012, two 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](#).

[§] 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.

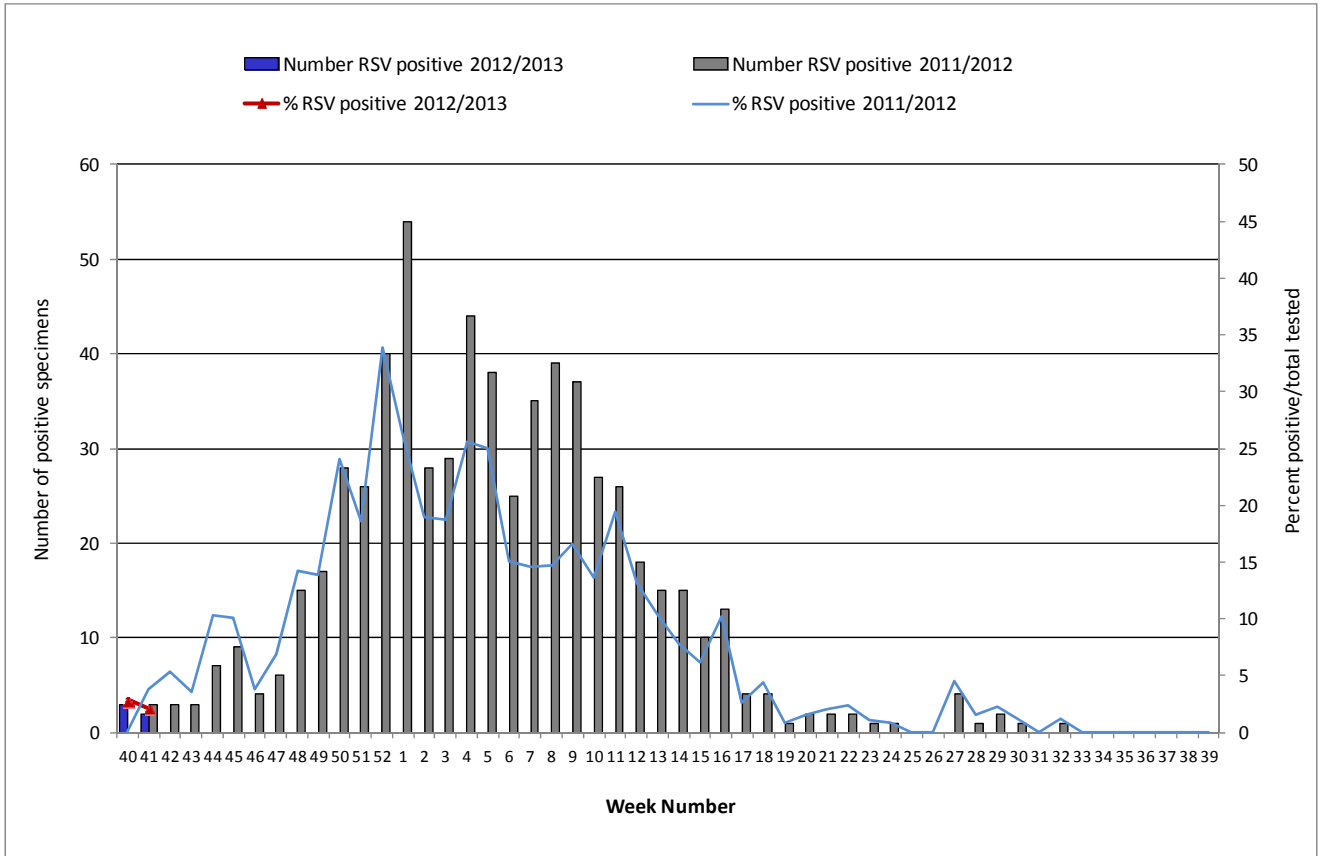


Figure 4: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2012/2013 season, compared to the 2011/2012 season. Source: NVRL

Other Respiratory Viruses

No positive detections of adenovirus, parainfluenza viruses or hMPV were reported from the NVRL from sentinel GP sources for week 41 2012 or the 2012/2013 season to date. One PIV-3 and one hMPV positive detections were reported from the NVRL for week 41 2012 from non-sentinel sources (table 2).

Table 1: Number of sentinel and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for week 41 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 | |
| 41 2012 | Sentinel | 7 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Non-sentinel | 97 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 104 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012/2013 | Sentinel | 16 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Non-sentinel | 199 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 215 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 2: Number of sentinel and non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 41 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 |
|-----------|---------------|--------------|----------|------------|------------|--------------|----------|------------|----------|------------|----------|------------|----------|------------|
| 41 2012 | Sentinel | 7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | Non-sentinel | 97 | 2 | 2.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.0 | 1 | 1.0 |
| | Total | 104 | 2 | 1.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.0 | 1 | 1.0 |
| 2012/2013 | Sentinel | 16 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | Non-sentinel | 199 | 5 | 2.5 | 1 | 0.5 | 0 | 0.0 | 0 | 0.0 | 1 | 0.5 | 1 | 0.5 |
| | Total | 215 | 5 | 2.3 | 1 | 0.5 | 0 | 0.0 | 0 | 0.0 | 1 | 0.5 | 1 | 0.5 |

** 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, and -S during week 41 2012. No influenza activity was reported from HSE-M, -NE, -NW, -SE, and -W during week 41 2012 (figure 5).

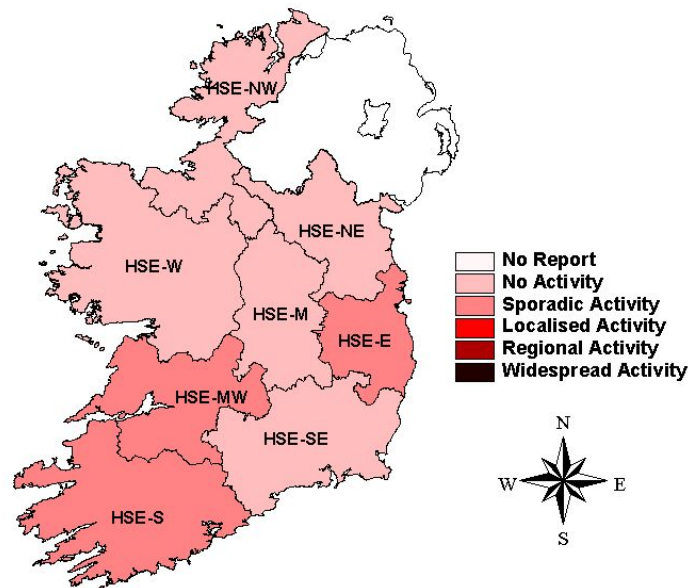


Figure 5: Map of provisional influenza activity by HSE-Area during influenza week 41 2012

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 increased slightly to 190 during week 41 2012, compared to the previous week. Respiratory admissions data reported from sentinel hospitals were incomplete for week 41 2012 (figure 6).

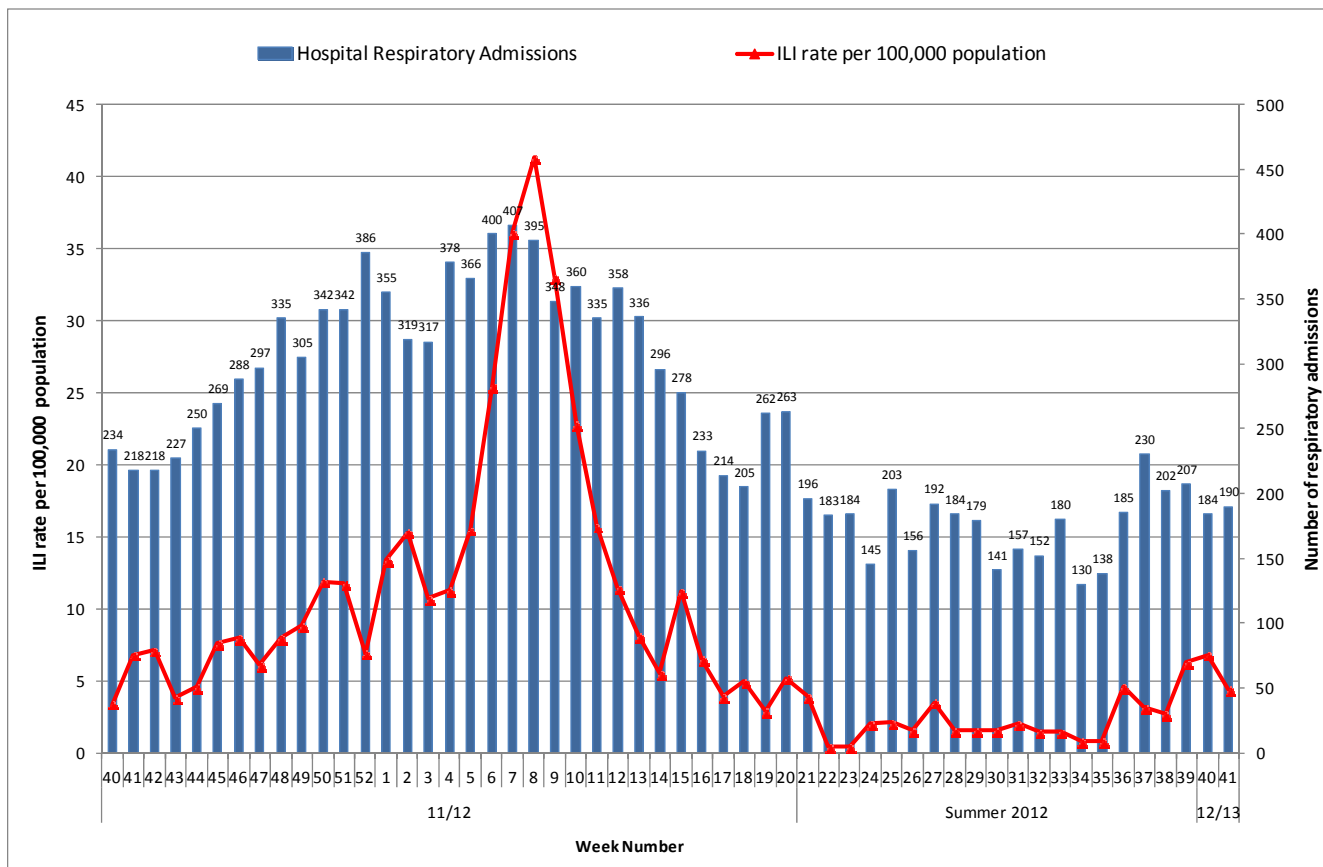


Figure 6: Number of respiratory admissions reported from sentinel hospitals and national sentinel GP ILI consultation rate per 100,000 population by week for the 2011/2012 season, summer 2012 and the 2012/2013 season to date.
 Source: Departments of Public Health - Sentinel Hospitals & ICGP.

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.

Data for week 41 2012 were not available at the time of publication (figure 7).

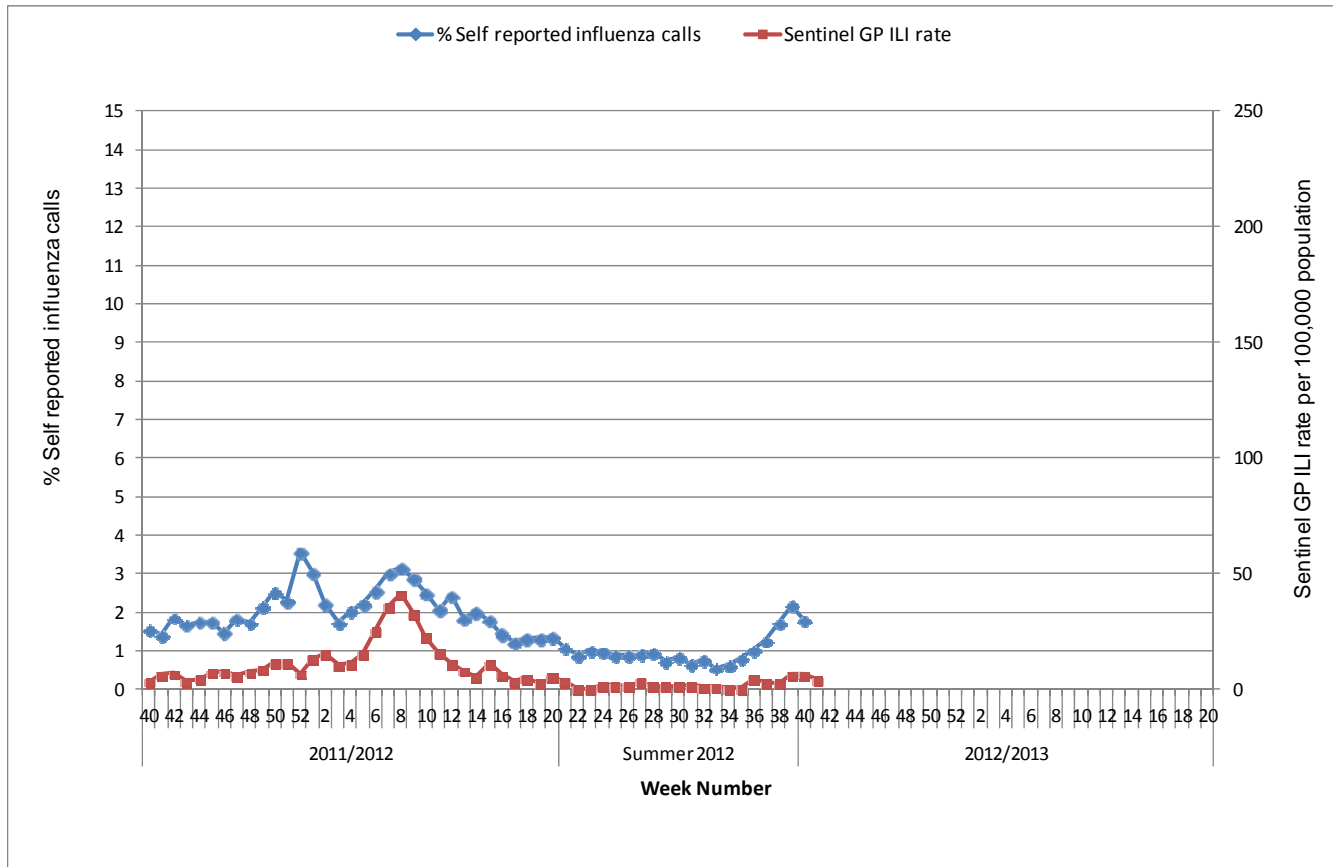


Figure 7: Self reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and national sentinel GP ILI consultation rate per 100,000 population by week for the 2011/2012 and 2012/2013 seasons

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 41 2012 or during 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 41 2012 or the 2012/2013 season to date.

7. Mortality surveillance

There were no reports of any influenza-associated deaths occurring during week 41 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 41 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

No influenza/ILI outbreaks were reported to HPSC during week 41 2012 or the 2012/2013 season to date.

9. International summary

United Kingdom

Indicators of influenza activity in the UK were low during week 40 2012. Weekly influenza GP consultation rates remained low in England, Wales, Scotland and Northern Ireland. 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 40 2012. Four new acute respiratory disease outbreaks were reported during week 40: two in England (one associated with rhinovirus and the other with an unknown pathogen) and two in Northern Ireland (both associated with rhinovirus). Two (0.3%) of the 610 respiratory specimens reported to Data Mart (England) tested positive for influenza in week 40 (1 A (H1N1)pdm09 and 1 B). The proportion of samples positive increased for hMPV and remained stable for RSV, rhinovirus, parainfluenza and adenovirus. No influenza positive detections were recorded through the two English GP-based sentinel schemes in week 40. One new admission to ICU/HDU with confirmed influenza was reported across the UK in week 40. No excess all-cause mortality was reported in week 40 in England and Wales as calculated by the HPA with the EuroMOMO algorithm.

Europe

During the first week of the 2012/2013 influenza season, there was no evidence of significant influenza activity in Europe. Of the 25 reporting countries during week 40 2012, 24 countries experienced low intensity of clinical influenza activity, 22 countries reported no geographic spread and 19 countries reported stable or decreasing trends. No sentinel specimens tested positive for influenza during week 40 2012. From non-sentinel sources, 11 influenza A viruses and four influenza B viruses were detected. Of five subtyped influenza viruses, four (80%)

were A(H1N1)pdm09 and one (20%) was A(H3). No severe hospitalised laboratory-confirmed influenza cases were reported.

US

Influenza activity was low in the United States, during week 40 2012. The proportion of outpatient ILI visits was 1.2%, which is below the national baseline of 2.2%. Of 2,870 specimens tested and reported during week 40, 75 (2.6%) were positive for influenza: 3 A (H1N1)pdm09, 27 A (H3), 9 A (unsubtyped) and 36 B. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. No influenza-associated paediatric deaths were reported. From July 12th - October 11th 2012, a total of 306 infections with influenza A (H3N2) variant (H3N2v) viruses were reported in the US. The vast majority of variant virus infections reported during this time occurred after swine exposure. Though instances of likely limited human-to-human transmission with H3N2v have been identified, at this time no ongoing human-to-human transmission of variant influenza viruses has been identified. Additional information can be found [here](#).

Canada

Influenza activity in Canada remained low during weeks 39 and 40 2012. The ILI consultation rate increased slightly in week 40 to 18.6 per 1,000 patient visits, but remained within the expected levels for the time of year. A total of 12 laboratory detections of influenza were reported, the majority (92%) of which were for influenza A viruses [5 A (H3), 4 A (H1N1)pdm09, 2 A (unsubtyped) and 1 B] during weeks 39 and 40 2012. Two new influenza outbreaks were reported in week 40. Three influenza A-associated hospitalisations (in those aged 65 years or older) were reported over the two-week period.

Worldwide (WHO)

The WHO Global Influenza Programme monitors influenza activity worldwide and publishes an update every two weeks. The most recent update of 12th October 2012, reported that seasonal influenza transmission in all reporting countries in the temperate regions of the northern hemisphere was still minimal. In the tropical areas most countries were reporting low or decreasing trends of influenza virus detections. The exceptions were Costa Rica in the Americas and India; Nepal, Lao PDR and Thailand in Asia. In Sub-Saharan Africa, Cameroon reported an increase in influenza virus detections. The influenza season is coming to an end in the temperate countries of the southern hemisphere.

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

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| Ireland | www.hpsc.ie |
| Northern Ireland | http://www.fluawareni.info/ |
| Europe – ECDC | http://ecdc.europa.eu/ |

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