

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 47 2015 (16th – 22nd November 2015)



Summary

All indicators of influenza activity in Ireland were at low levels during week 47 2015 (week ending November 22, 2015), with sporadic influenza detections reported. Respiratory syncytial virus (RSV) activity increased significantly during week 47 2015, as expected at this time of year.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 7.8 per 100,000 population in week 47 2015, remaining low, with a slight increase compared to the updated rate of 4.5 per 100,000 reported during week 46 2015.
 - ILI rates remain below the Irish baseline ILI threshold (18 per 100,000 population)
 - ILI rates remain at low levels in all age groups
- **GP Out of Hours:** The proportion of influenza-related calls to GP Out-of-Hours services was at low levels during week 47 2015.
- **National Virus Reference Laboratory (NVRL):**
- Influenza positivity remained low during week 47 2015, with four (1.5%) influenza positive specimens reported from the NVRL from sentinel and non-sentinel sources: 1 A(H3) and 3 B.
- Respiratory syncytial virus (RSV) positivity increased significantly during week 47 2015, and was at moderate to high levels, as expected at this time of year.
- The overall proportion of non-sentinel specimens positive for respiratory viruses increased significantly during week 47 2015, compared to the previous week. Positive detections of parainfluenza viruses, adenovirus and human metapneumovirus have been reported for the 2015/2016 season to date.
- **Respiratory admissions:** Respiratory admissions reported from a network of sentinel hospitals during week 47 2015 were at moderate levels and remained stable compared to the previous week.
- **Hospitalisations:** Eleven confirmed influenza hospitalised cases were notified to HPSC for the 2015/2016 season to date: two associated with influenza A(H3), one with A(H1)pdm09, four with influenza A (not subtyped) and four with influenza B.
- **Critical care admissions:** Three confirmed influenza A cases were admitted to critical care units and reported to HPSC for the 2015/2016 season to date.
- **Mortality:** There were no reports of any influenza-associated deaths for the 2015/2016 season to date.
- **Outbreaks:** One acute respiratory outbreak in a nursing home in HSE-S was reported to HPSC during the week ending November 22, 2015.
- **International:** In the European Region, influenza activity remained at low levels, with sporadic influenza detections reported.

1. GP sentinel surveillance system - Clinical Data

- During week 47 2015, 19 influenza-like illness (ILI) cases were reported from sentinel GPs, corresponding to an ILI consultation rate of 7.8 per 100,000 population, remaining low, and slightly increased compared to the updated rate of 4.5 per 100,000 reported during week 46 2015. The ILI rate for week 47 2015 was below the Irish baseline ILI threshold (figure 1).
- HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) has revised the Irish baseline ILI threshold for the 2015/2016 influenza season to 18 per 100,000 population; this threshold indicates the likelihood that influenza is circulating in the community. The Moving Epidemic Method (MEM) has been adopted by ECDC to calculate thresholds for GP ILI consultations in a standardised approach across Europe.¹
- The baseline ILI threshold, medium (57/100,000 population) and high (114/100,000 population) intensity ILI thresholds are shown in figure 1.
- ILI age specific rates were low in all age groups during week 47 2015 (figure 2).

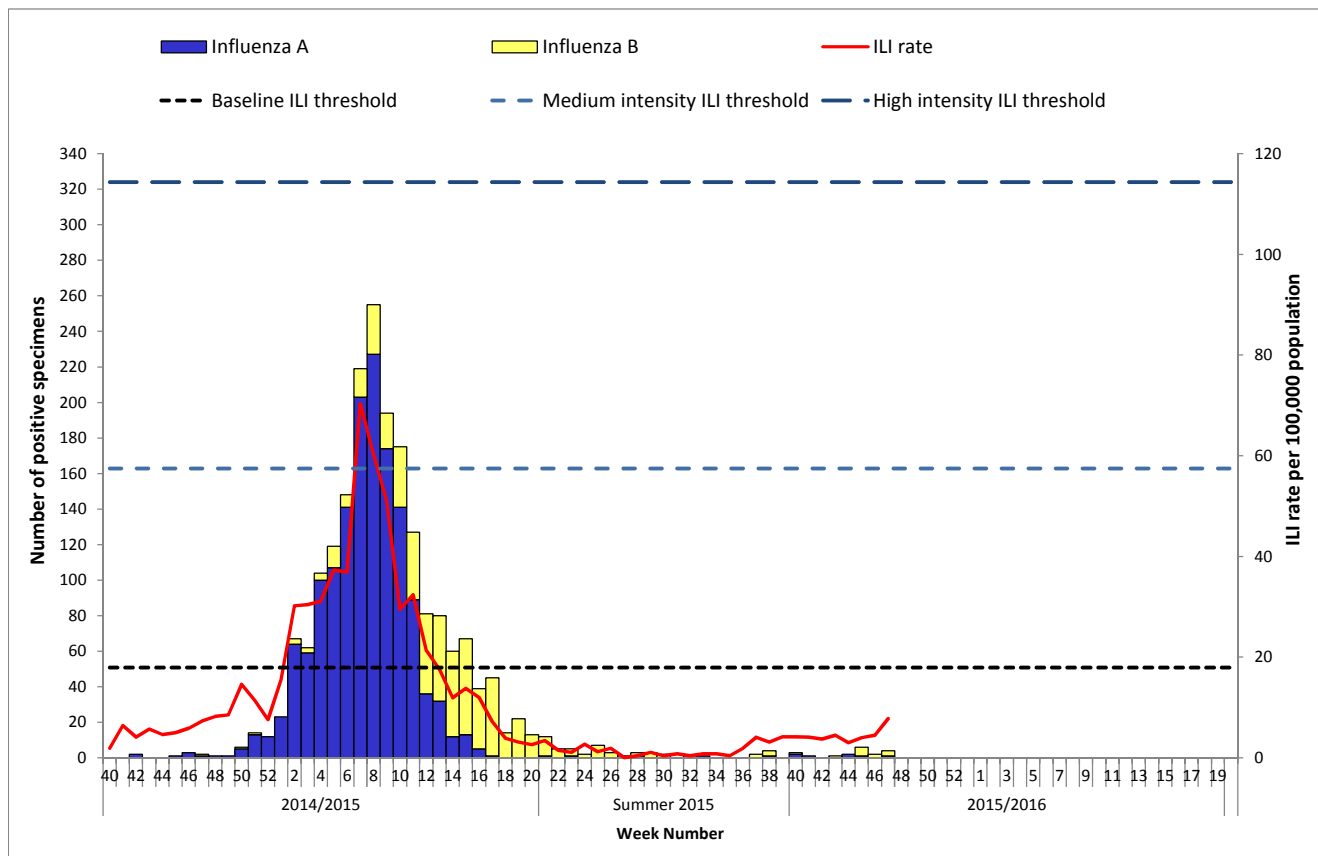


Figure 1. ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds¹ and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season.
Source: ICGP and NVRL

¹ For further information on the Moving Epidemic Method (MEM) to calculate ILI thresholds:
<http://www.ncbi.nlm.nih.gov/pubmed/22897919>

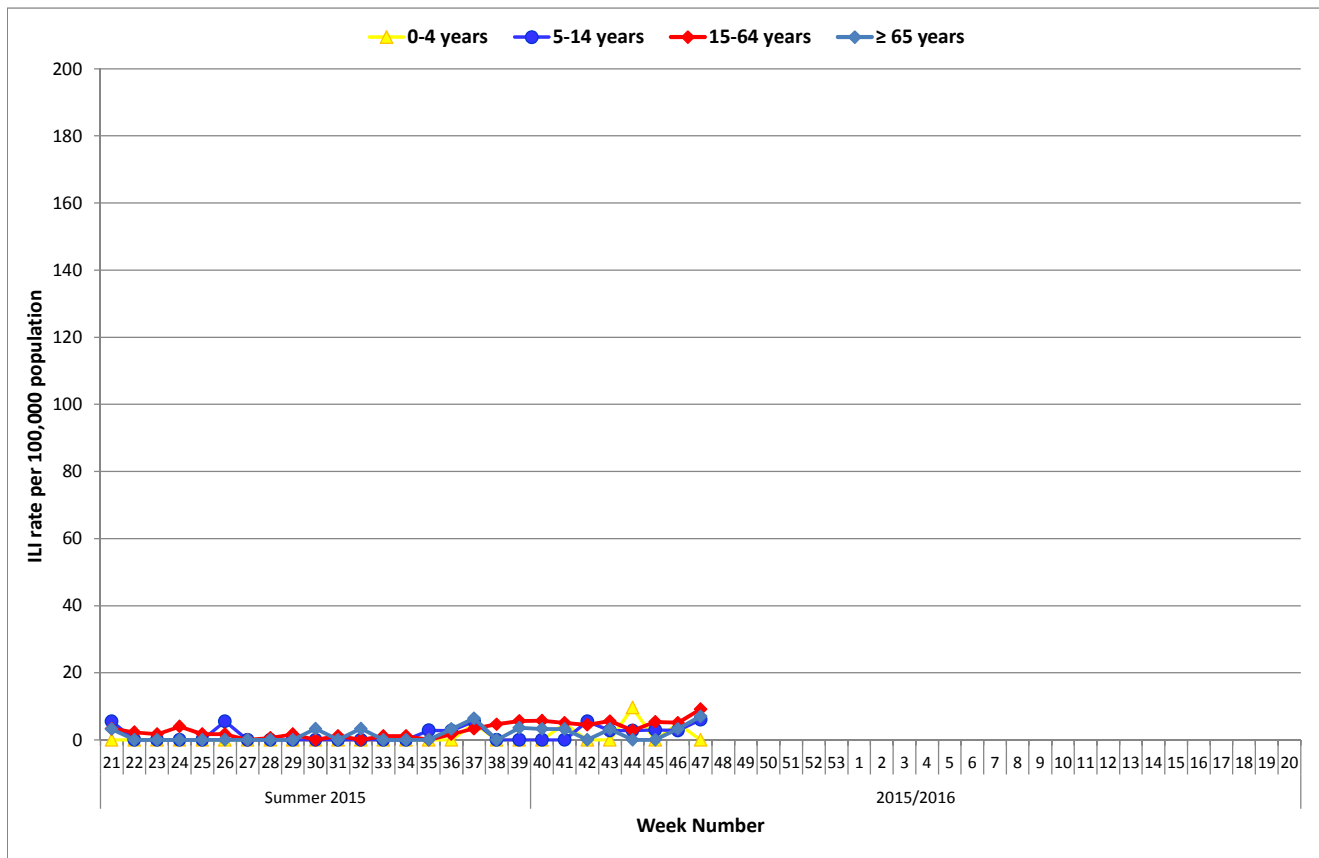


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2015 and the 2015/2016 influenza season to date. Source: ICGP.

2. Influenza and Other Respiratory Virus Detections - NVRL

The data reported in this section for the 2015/2016 influenza season refers to sentinel and non-sentinel respiratory specimens routinely tested for influenza, respiratory syncytial virus (RSV), adenovirus, parainfluenza viruses types 1, 2, 3 & 4 (PIV-1, -2, -3 & -4) and human metapneumovirus (hMPV) by the National Virus Reference Laboratory (NVRL) (figure 3, tables 1 & 2).

- Influenza positivity remained low during week 47 2015, with four (1.5%) influenza positive specimens reported from the NVRL: 1 A(H3) and 3 B.
 - 3 of 8 (37.5%) sentinel specimens were influenza positive: 1 A(H3) and 2 B.
 - 1 of 253 (0.4%) non-sentinel specimens were influenza positive: 1 B.
- Sixty-seven (67/261; 25.7%) respiratory syncytial virus (RSV) positive sentinel and non-sentinel specimens were reported during week 47 2015, a significant increase from 16.1% during week 46 2015. Figure 3 shows the number and percentage of non-sentinel RSV positive specimens detected by the NVRL during the 2015/2016 season, compared to the 2014/2015 season.
- Ten parainfluenza virus (PIV) type -1, four PIV-2, five human metapneumovirus (hMPV) and two adenovirus positive specimens were reported by the NVRL during week 47 2015 (table 2).
- The overall proportion (87/253; 34.4%) of non-sentinel specimens positive for seasonal respiratory viruses*, increased significantly during week 47 2015, compared to the previous week (25.2%).

* Seasonal respiratory viruses tested by the NVRL are detailed above.

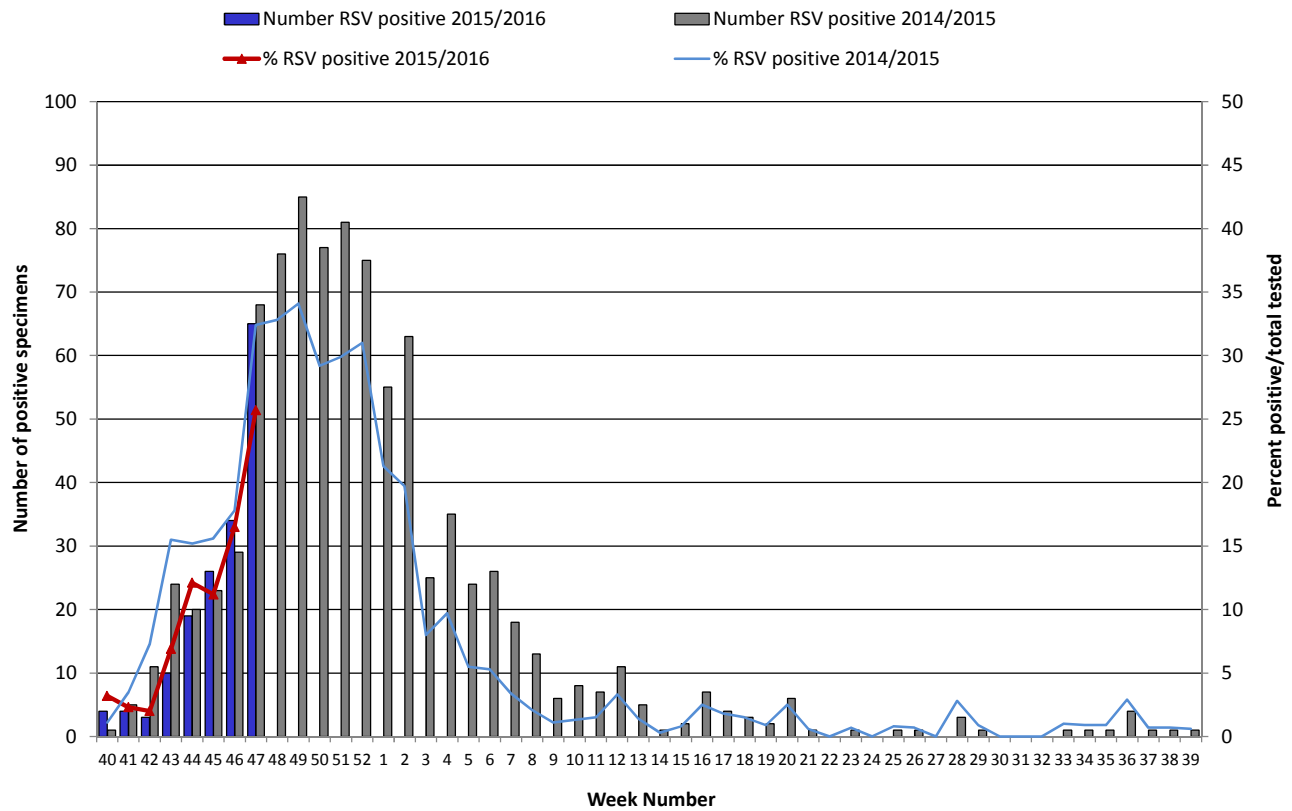


Figure 3: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL by week during the 2015/2016 season, compared to the 2014/2015 season. Source: NVRL.

Table 1: Number of sentinel and non-sentinel[†] respiratory specimens tested by the NVRL and positive influenza results, for week 47 2015 and the 2015/2016 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	
47 2015	Sentinel	8	3	37.5	0	1	0	1	2
	Non-sentinel	253	1	0.4	0	0	0	0	1
	Total	261	4	1.5	0	1	0	1	3
2015/2016	Sentinel	61	5	8.2	1	1	0	2	3
	Non-sentinel	1444	14	1.0	1	3	1	5	9
	Total	1505	19	1.3	2	4	1	7	12

Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 47 2015 and the 2015/2016 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	PIV-4	% PIV-4	hMPV	% hMPV
47 2015	Sentinel	8	2	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	253	65	25.7	2	0.8	10	4.0	4	1.6	0	0.0	0	0.0	5	2.0
	Total	261	67	25.7	2	0.8	10	3.8	4	1.5	0	0.0	0	0.0	5	1.9
2015/2016	Sentinel	61	3	4.9	0	0.0	3	4.9	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	1444	165	11.4	13	0.9	49	3.4	9	0.6	16	1.1	0	0.0	21	1.5
	Total	1505	168	11.2	13	0.9	52	3.5	9	0.6	16	1.1	0	0.0	21	1.4

[†] 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.

Sporadic influenza activity (based on confirmed influenza cases and/or ILI cases) was reported in HSE-E, -M, -MW, -NE, -S and -W and no influenza activity was reported in HSE-NW and -SE during week 47 2015 (figure 4).

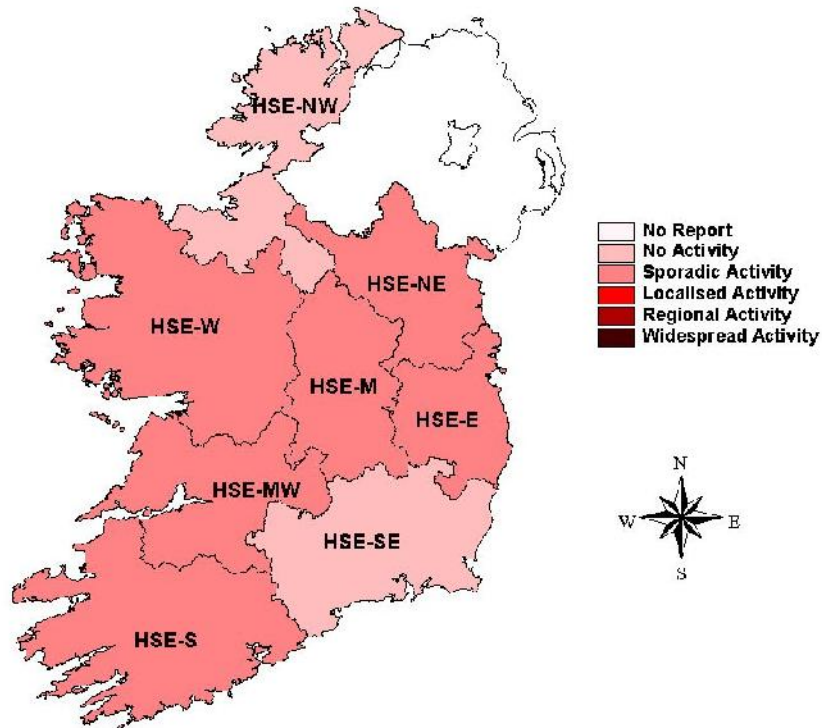


Figure 4: Map of provisional influenza activity by HSE-Area during influenza week 47 2015

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. For the 2015/2016 influenza season, eight sentinel hospitals are regularly reporting respiratory admissions data.

Respiratory admissions reported from a network of sentinel hospitals remained stable during week 47 2015 at 328, compared to 351 during week 46 2015. Data were reported from seven of eight sentinel hospitals during week 47 2015 (figure 5).

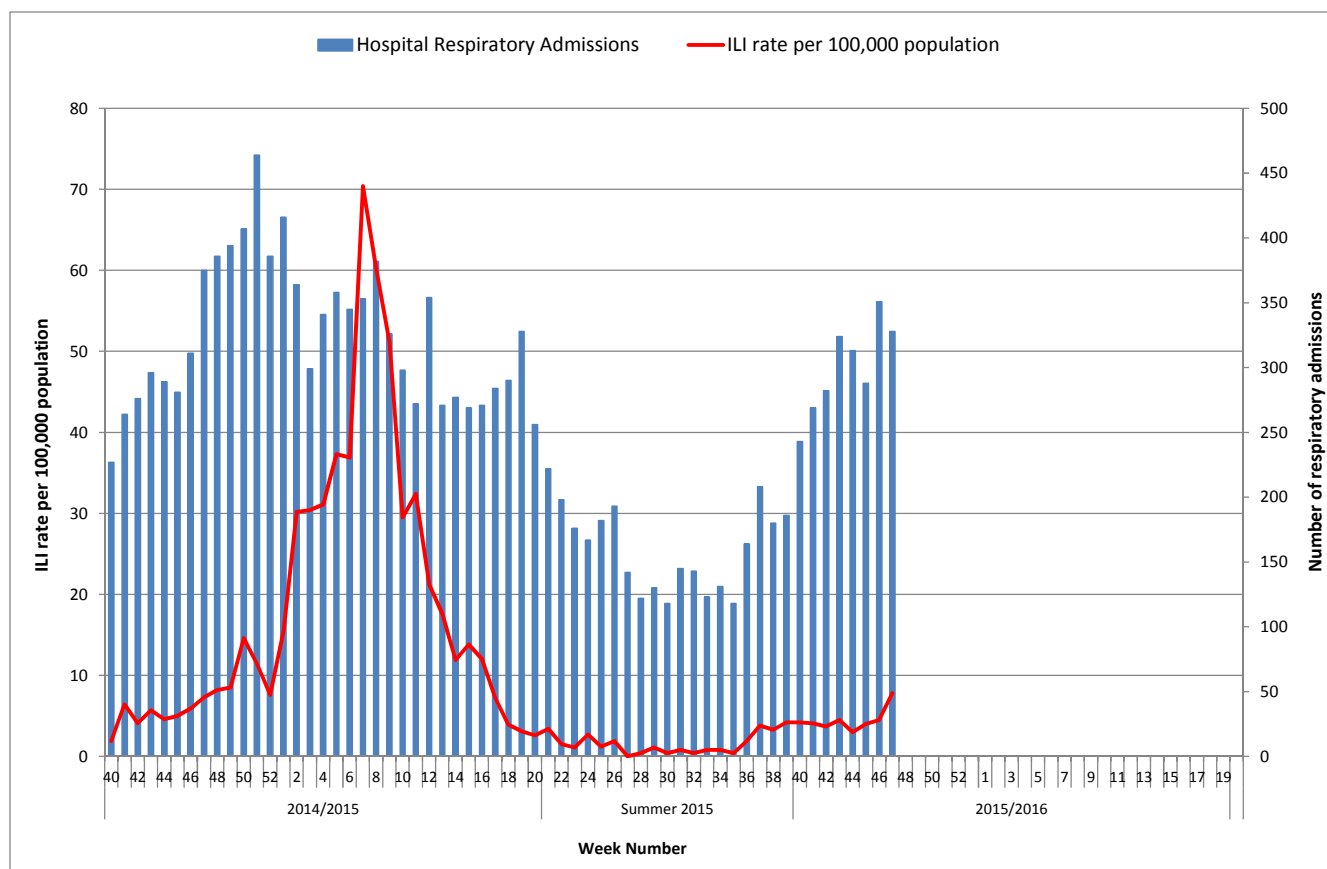


Figure 5: Number of respiratory admissions reported from sentinel hospitals and ILI sentinel GP consultation rate per 100,000 population by week and season. Source: Departments of Public Health - Sentinel Hospitals & ICGP.

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 at low levels during week 47 2015, at 1.5%, a slight decrease compared to 1.9% during week 46 2015 (figure 6).

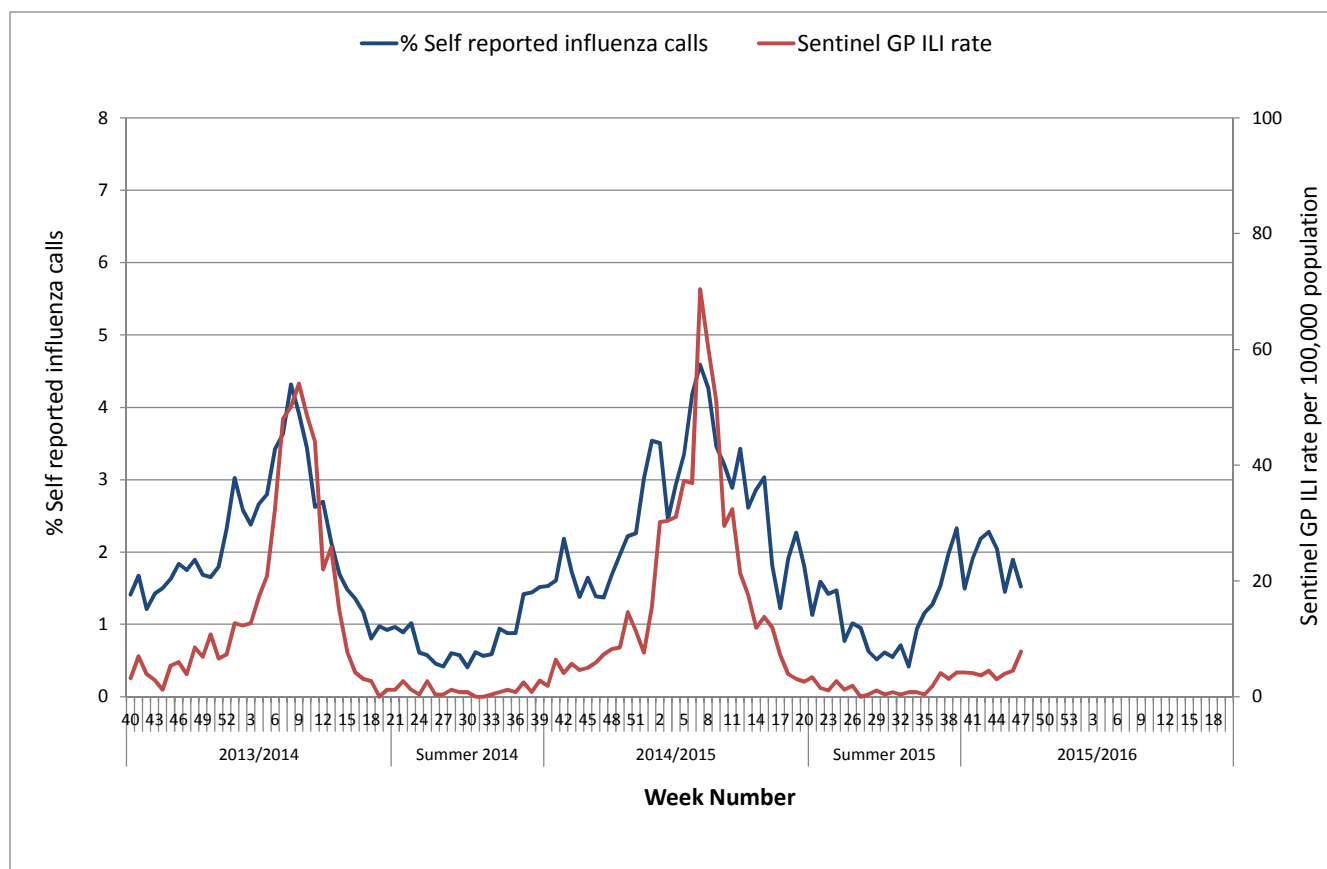


Figure 6: Self-reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and sentinel GP ILI consultation rate per 100,000 population by week and season. Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

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](#). RSV notifications increased significantly during the week ending November 22, 2015.

6. Influenza Hospitalisations

Eleven confirmed influenza hospitalised cases were notified to HPSC for the 2015/2016 season to date: two associated with influenza A(H3), one with A(H1)pdm09, four with influenza A (not subtyped) and four with influenza B. The median age of hospitalised cases for the season to date was 24 years (ranging from 0-71 years).

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. HPSC process and report on this information on behalf of the regional Directors of Public Health/Medical Officers of Health.

Three confirmed influenza cases (one associated with influenza A(H1)pdm09 and two with influenza A-not subtyped) were admitted to critical care units and reported to HPSC for the 2015/2016 season to date.

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 for the 2015/2016 season to date.
- No excess all-cause mortality was reported in Ireland for the 2015/2016 season to date, after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm.

9. Outbreak Surveillance

One acute respiratory outbreak in a nursing home in HSE-S was reported to HPSC during the week ending November 22, 2015. To date this season (up to the week ending November 22, 2015), two acute respiratory outbreaks in community hospital/nursing home settings were reported to HPSC, one outbreak was associated with parainfluenza type 1 and the other with an unidentified pathogen.

10. International Summary

As usual for this time of year, influenza activity in the European Region is low, with few influenza viruses detected. As of November 16th 2015, globally, influenza activity remained low in both hemispheres, with only a few countries reporting elevated respiratory illness levels. See [ECDC](#) and [WHO](#) influenza surveillance reports for further information.

- Further information is available on the following websites:
 - Northern Ireland <http://www.fluawareni.info/>
 - Europe – ECDC <http://ecdc.europa.eu/>
 - Public Health England <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>
 - United States CDC <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>
 - Public Health Agency of Canada <http://www.phac-aspc.gc.ca/fluwatch/index-eng.php>
- Information on Middle Eastern Respiratory Syndrome Coronavirus (MERS), 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.

11. WHO recommendations on the composition of influenza virus vaccines

The WHO vaccine strain selection committee recommended that vaccines for use in the 2015/2016 influenza season (northern hemisphere winter) contain the following: an A/California/7/2009 (H1N1)pdm09-like virus; an A/Switzerland/9715293/2013 (H3N2)-like virus; a B/Phuket/3073/2013-like virus.

<http://www.who.int/influenza/vaccines/virus/recommendations/en/>

Further information on influenza in Ireland is available at www.hpsc.ie

Acknowledgements

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