

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 44 2015 (26th October – 1st November 2015)



Summary

All indicators of influenza activity in Ireland were at low levels during week 44 2015 (week ending November 1, 2015). RSV and other seasonal respiratory virus positivity has increased over the last two weeks; in conjunction with increasing respiratory admissions reported from a network of sentinel hospitals.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 3.7 per 100,000 population in week 44 2015, remaining low, and stable compared to the updated rate of 4.4 per 100,000 reported during week 43 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 44 2015.
- **National Virus Reference Laboratory (NVRL):**
 - One influenza A(H3) positive non-sentinel specimen was detected by the NVRL for week 44 2015.
 - Respiratory syncytial virus (RSV) positivity increased further during week 44 2015, as expected at this time of year.
 - The overall proportion of non-sentinel specimens positive for respiratory viruses increased during week 44 2015. 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 increased during weeks 43 and 44 2015, as expected at this time of year.
- **Hospitalisations:** Five confirmed influenza hospitalised cases were notified to HPSC for the 2015/2016 season to date (up to week ending November 1, 2015): one associated with influenza A(H3), two with influenza A (not subtyped) and two with influenza B.
- **Critical care admissions:** One confirmed influenza A case was admitted to a critical care unit 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:** No acute respiratory outbreaks were reported to HPSC for the 2015/2016 season to date.
- **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 44 2015, eight influenza-like illness (ILI) cases were reported from sentinel GPs, corresponding to an ILI consultation rate of 3.7 per 100,000 population, remaining low, and stable compared to the updated rate of 4.4 per 100,000 reported during week 43 2015. The ILI rate for week 44 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 44 2015 (figure 2).

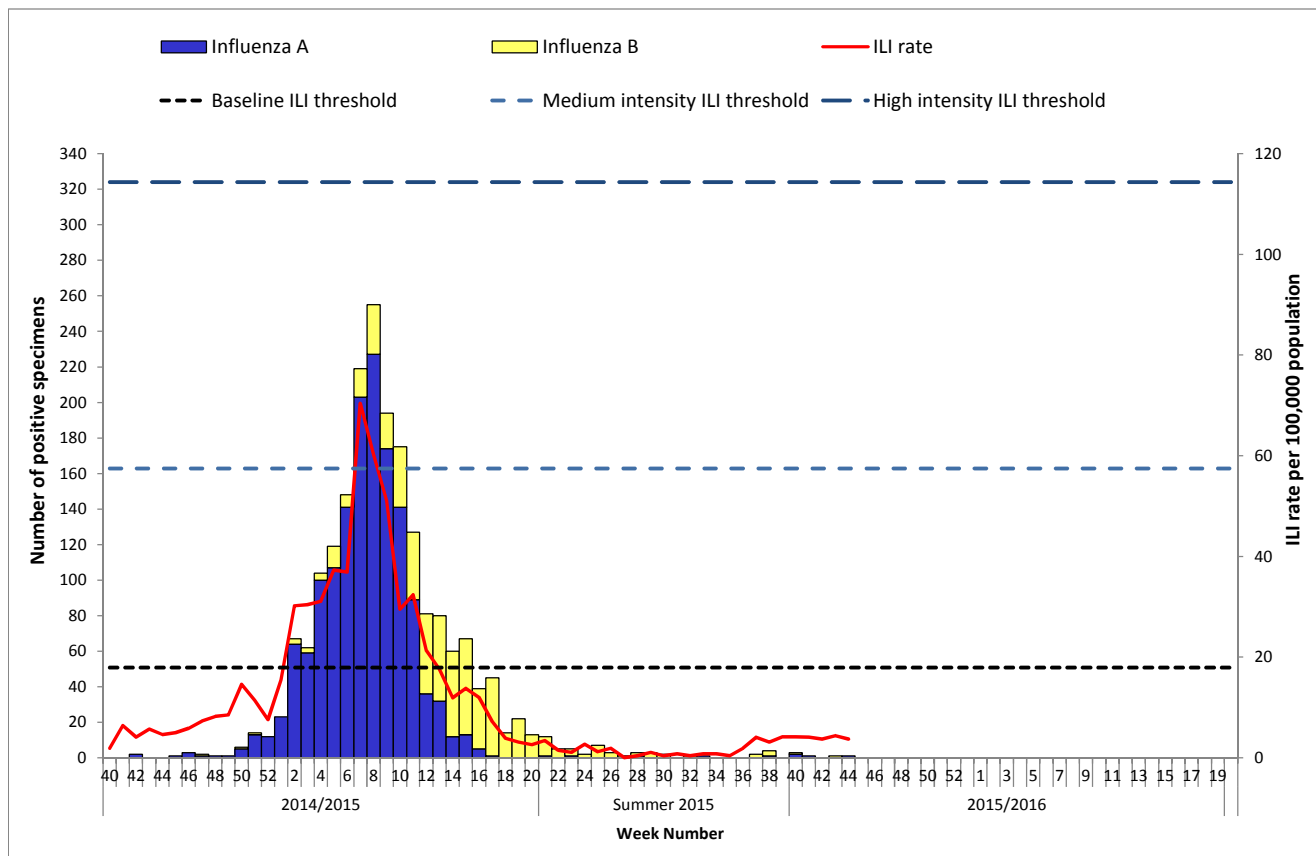


Figure 1. ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds¹ and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season.
Source: ICGP and NVRL

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

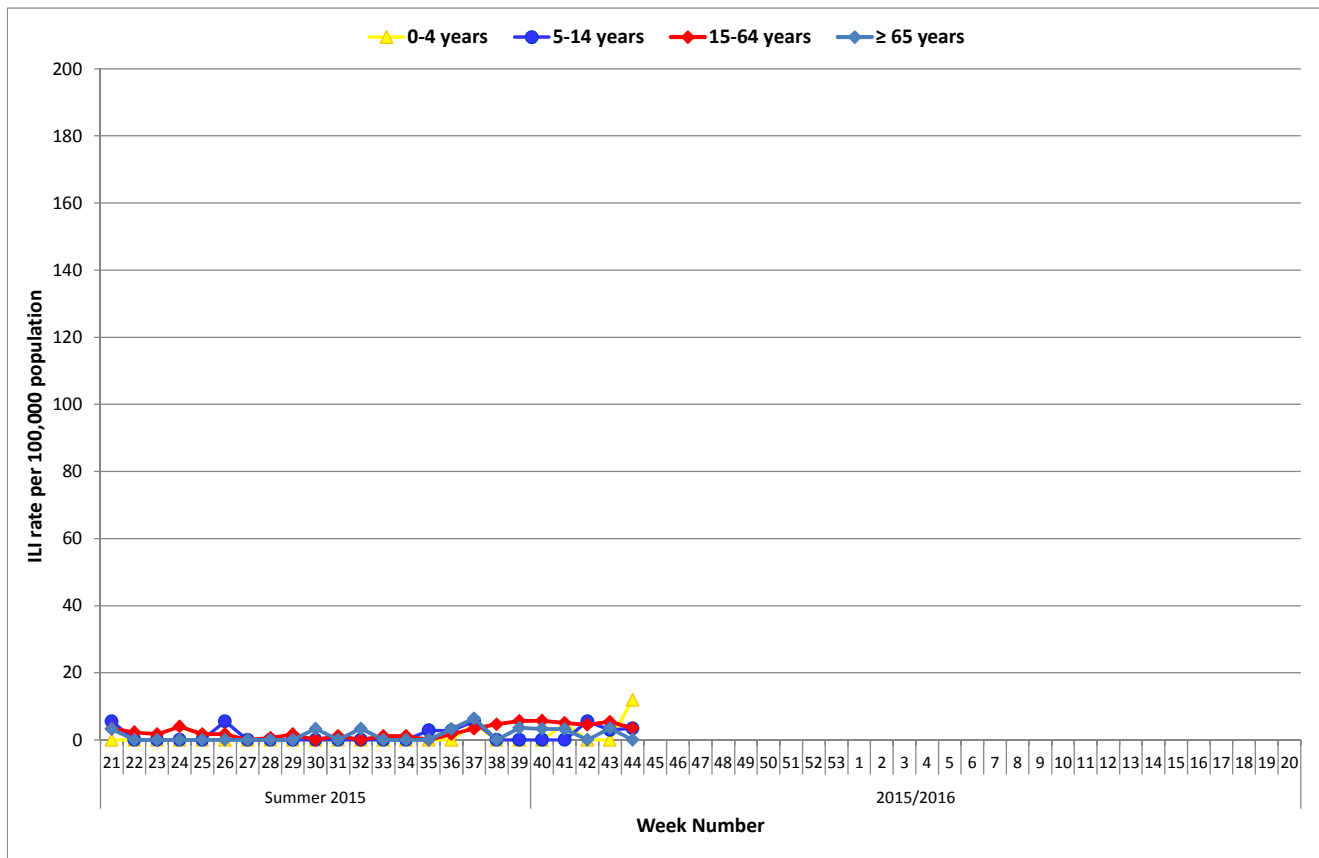


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2015 and the 2015/2016 influenza season to date. Source: ICGP.

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).

- One influenza A(H3) positive specimen was detected by the NVRL from non-sentinel sources during week 44 2015.
- Seventeen (17/150; 11.3%) respiratory syncytial virus (RSV) positive non-sentinel specimens were reported during week 44 2015. RSV positivity increased further during week 44 2015, as expected at this time of year. 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. For the 2015/2016 season to date, no RSV positive sentinel specimens have been detected.
- Six parainfluenza virus (PIV) type -1, four PIV-3, one PIV-4, four human metapneumovirus (hMPV) and one adenovirus positive specimens were reported by the NVRL during week 44 2015 (table 2).
- The overall proportion (32/150; 21.3%) of non-sentinel specimens positive for respiratory viruses* increased during week 44 2015. * Respiratory viruses tested for by the NVRL are detailed above.

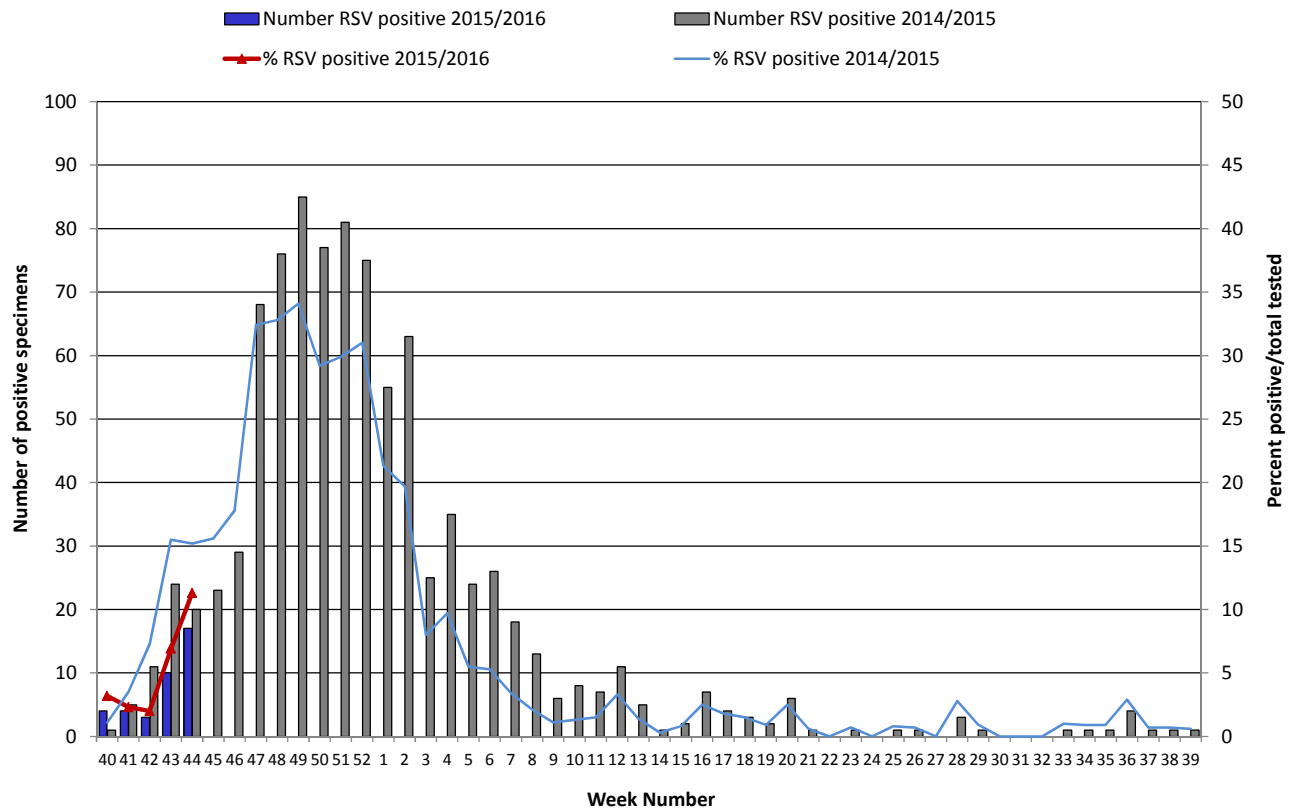


Figure 3: Number and percentage of non-sentinel RSV positive specimens detected by the NVRL by week during the 2015/2016 season, compared to the 2014/2015 season. Source: NVRL.

Table 1: Number of sentinel and non-sentinel[†] respiratory specimens tested by the NVRL and positive influenza results, for week 44 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	
44 2015	Sentinel	5	0	0.0	0	0	0	0	0
	Non-sentinel	150	1	0.7	0	1	0	1	0
	Total	155	1	0.6	0	1	0	1	0
2015/2016	Sentinel	30	1	3.3	1	0	0	1	0
	Non-sentinel	745	5	0.7	0	2	1	3	2
	Total	775	6	0.8	1	2	1	4	2

Table 2: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 44 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
44 2015	Sentinel	5	0	0.0	0	0.0	1	20.0	0	0.0	0	0.0	1	20.0	0	0.0
	Non-sentinel	150	17	11.3	1	0.7	5	3.3	0	0.0	4	2.7	0	0.0	4	2.7
	Total	155	17	11.0	1	0.6	6	3.9	0	0.0	4	2.6	1	0.6	4	2.6
2015/2016	Sentinel	30	0	0.0	0	0.0	2	6.7	0	0.0	0	0.0	0	0.0	0	0.0
	Non-sentinel	745	38	5.1	5	0.7	22	3.0	3	0.4	9	1.2	0	0.0	9	1.2
	Total	775	38	4.9	5	0.6	24	3.1	3	0.4	9	1.2	0	0.0	9	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.

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 ILI cases) was reported in HSE-E and -MW and no influenza activity was reported in all other HSE-Areas during week 44 2015 (figure 4).

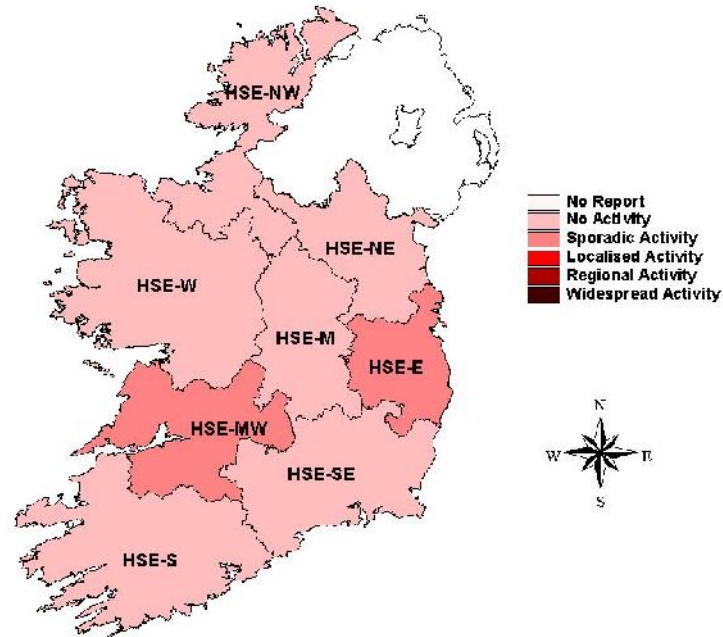


Figure 4: Map of provisional influenza activity by HSE-Area during influenza week 44 2015

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.

Respiratory admissions reported from a network of sentinel hospitals increased during weeks 43 and 44 2015 to 268 and 267, respectively, compared to 228 during week 42 2015 (figure 5). It should be noted that for the 2015/2016 season, respiratory admissions data are currently only available for seven sentinel hospitals, compared to eight reporting sentinel hospitals during the 2014/2015 season.

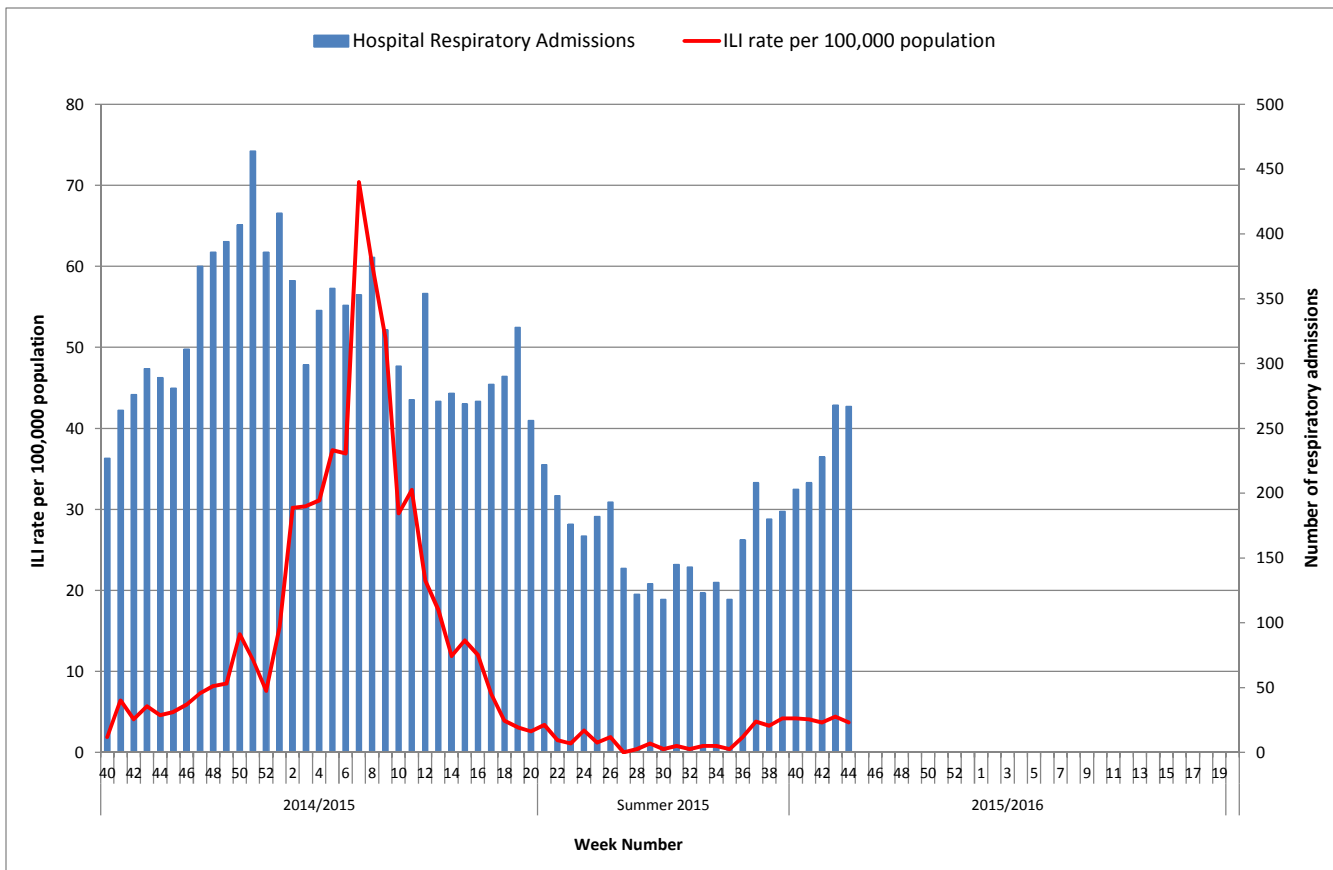


Figure 5: Number of respiratory admissions reported from sentinel hospitals and ILI sentinel GP consultation rate per 100,000 population by week and season. Source: Departments of Public Health - Sentinel Hospitals & ICGP.

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 stable and at low levels during week 44 2015 at 2.1% (figure 6).

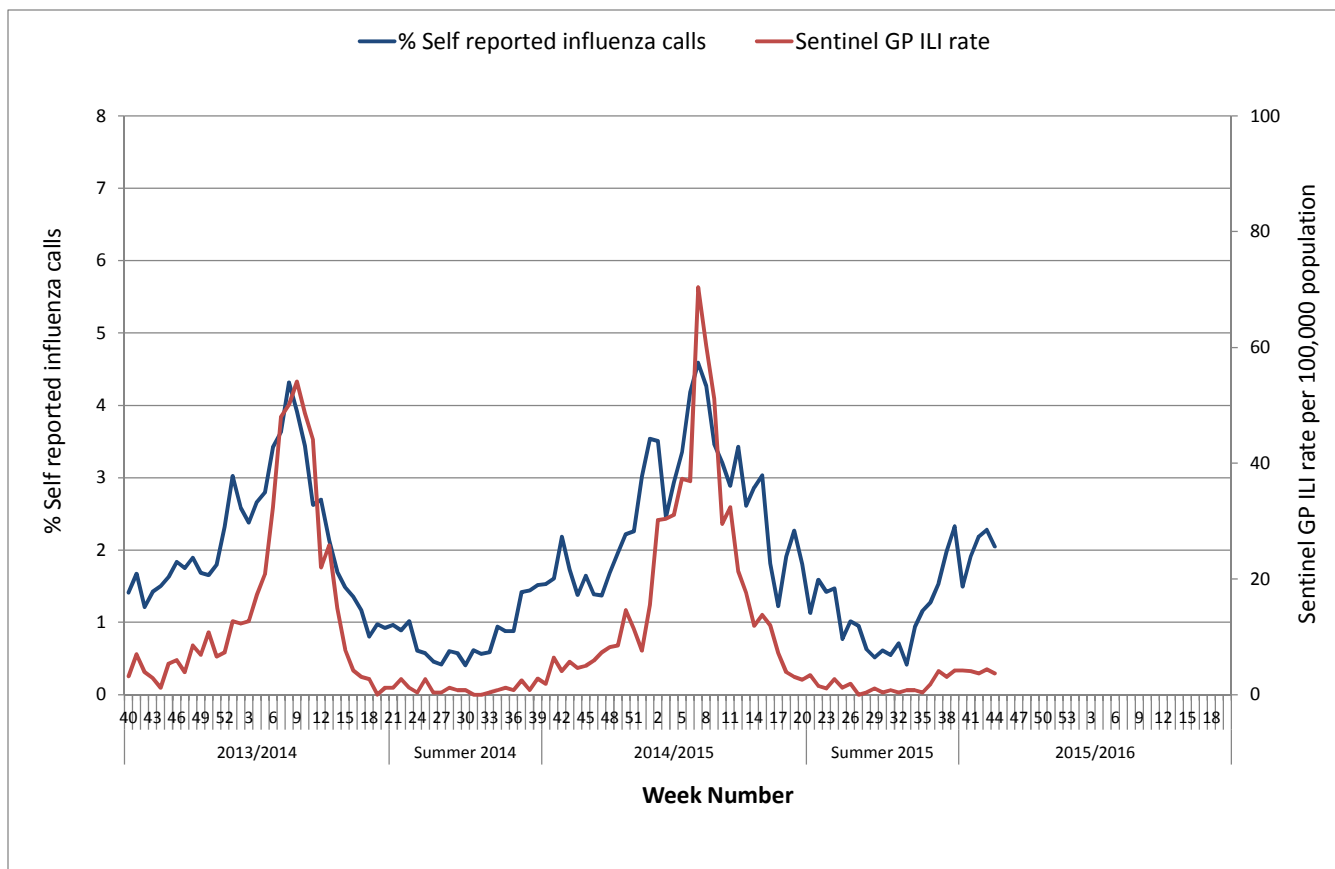


Figure 6: Self-reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and sentinel GP ILI consultation rate per 100,000 population by week and season. Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

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](#). The recent increase in RSV positivity reported by the NVRL has also been reflected in increasing RSV notifications.

6. Influenza Hospitalisations

Five confirmed influenza hospitalised cases were notified to HPSC for the 2015/2016 season to date: one associated with influenza A(H3), two with influenza A (not subtyped) and two with influenza B.

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.

One confirmed influenza A case was admitted to critical care 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

No acute respiratory outbreaks were reported to HPSC for the 2015/2016 season to date.

10. International Summary

As is usual for this time of year, influenza activity in the European Region continued at low levels, with few influenza viruses detected (<1% of sentinel specimens). As of October 19th 2015, globally, influenza activity decreased or remained low in both hemispheres, with only a few countries reporting elevated respiratory illness levels. Increased RSV activity was reported in the USA. In Australia and New Zealand, influenza activity continued to decrease after peaks in mid-August, with influenza B predominating in recent weeks. 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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