

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 45 2020 (2nd November – 8th November 2020)



 **Intensive Care Society of Ireland**

Summary

There was no evidence of influenza viruses circulating in the community in Ireland during week 45 2020 (week ending 11/11/2020) or during weeks 40-44 2020. Limited influenza testing at this time should be considered when interpreting these data. Rhinovirus and enterovirus detections continue to be detected during September to November 2020. COVID-19 epidemiology reports are published on www.hpsc.ie.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 18.4 per 100,000 population in week 45 2020, compared to the updated rate of 16.8 per 100,000 during week 44 2020.
 - Sentinel GP ILI consultation rate at 18.4 per 100,000 is marginally above the Irish baseline threshold (18.1/100,000 population).
 - The ILI rate was above baseline from week 34 (week ending 23/08/2020) to week 43 (week ending 25/10/2020) reflecting SARS-CoV-2, rather than influenza activity.
 - Sentinel GP ILI age specific consultation rates increased in the 0-4 years age group during week 45, the ILI rate in the remaining age groups remained stable (figure 2)
- **GP Out of Hours:** The proportion of self-reported cough calls to GP Out-of-Hours services remained high in all age groups during week 45 2020.
- **National Virus Reference Laboratory (NVRL):**
 - Of 698 non-sentinel specimens tested by the NVRL between weeks 40-45 2020, no confirmed influenza or RSV positive detections were reported.
 - Virological surveillance with the Irish sentinel GP network will resume in the coming weeks.
 - Rhinovirus/enterovirus positive detections increased in September and continued to be detected in to November 2020. Sporadic detections of adenovirus, human metapneumovirus and bocavirus were reported during weeks 40-45 2020, with some rhinovirus/enterovirus co-infections.
- **Influenza notifications:** No confirmed influenza cases were notified during weeks 40-45 2020.
- **RSV notifications:** One confirmed RSV hospitalised paediatric case was notified during week 42, no confirmed RSV cases were notified during week 45 2020.
- **Hospitalisations and Critical care admissions:** No confirmed influenza hospitalised or critical care cases were notified to HPSC during weeks 40-45 2020.
- **Mortality:** There were no reports of deaths occurring in notified influenza cases during weeks 40-45 2020. There have been no excess all-cause deaths reported in Ireland since May 2020.
- **Outbreaks:** No influenza, RSV or acute respiratory infection (ARI - excluding COVID-19) outbreaks were reported to HPSC during weeks 40-45 2020.
- **International:** In the European region, influenza activity remained at inter-seasonal levels. Influenza viruses were detected in small numbers in specimens from persons with respiratory illness presenting to primary medical care. Both influenza A and type B viruses were detected in sentinel and non-sentinel source specimens. There were no hospitalised laboratory-confirmed influenza cases notified for week 44 2020.

1. GP sentinel surveillance system - Clinical Data

- During week 45 2020, 46 influenza-like illness (ILI) cases were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 18.4 per 100,000 population, compared to the updated rate of 16.8 per 100,000 reported during week 44 2020 (Figure 1). On the 09/03/2020, GP ILI consultations changed from face-to-face consultations to phone consultations.
- The sentinel GP ILI rate was slightly above the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) during week 45. The GP ILI consultation rate was above baseline for nine continuous weeks (week 35-week 43) reflecting circulation of SARS-CoV-2 in the community, rather than influenza viruses. It was below baseline in week 44
- Sentinel GP ILI age specific consultation rates were highest in the 0-4 years (28.7/100,000) and the 15-64 years (19.5/100,000) age groups, followed by the ≥65 (14.9/100,000) year and the 5-14 (11.3/100,000) year age groups during week 45 2020 (Figure 2).
- HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) has reviewed the Irish sentinel baseline ILI threshold for the 2020/2021 influenza season, which will remain at 18.1 per 100,000 population. ILI rates above this baseline threshold combined with sentinel GP influenza positivity >10% indicates the likelihood that influenza is circulating in the community. The Moving Epidemic Method (MEM) is used to calculate thresholds for GP ILI consultations using a standardised approach across Europe. The baseline ILI threshold (18.1/100,000 population), medium (57.5/100,000 population) and high (86.5/100,000 population) intensity ILI thresholds are shown in figure 1. Age specific MEM threshold levels are shown in Table 1.

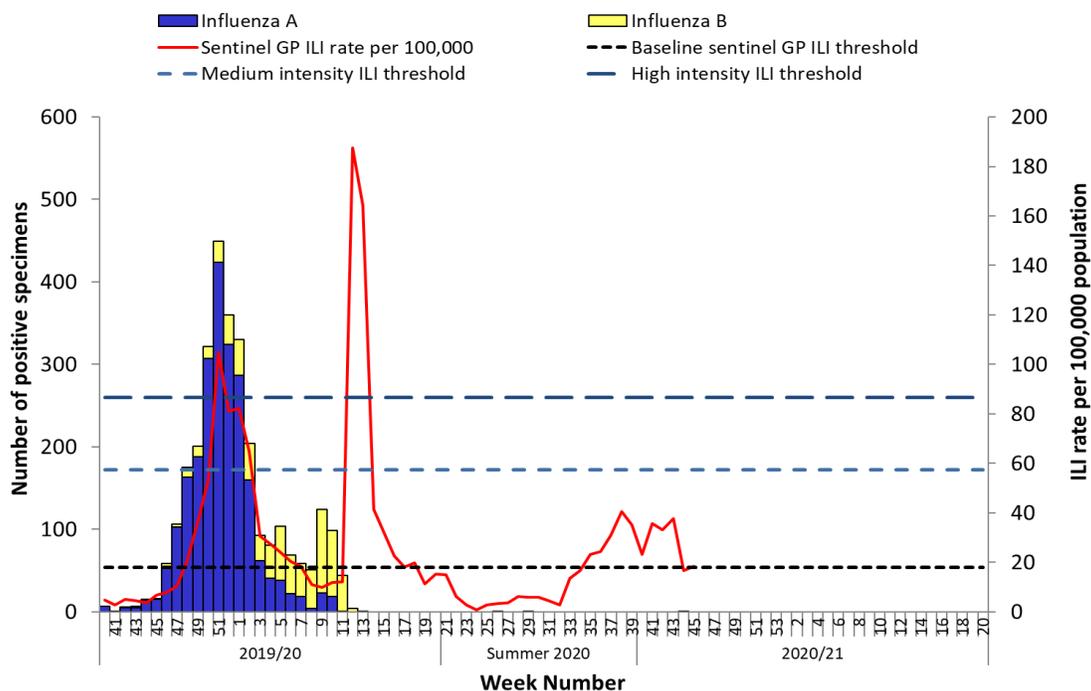


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL **

* Influenza testing has been minimal since March 2020 due to the COVID pandemic and caution is advised interpreting laboratory influenza detections from March-October 2020

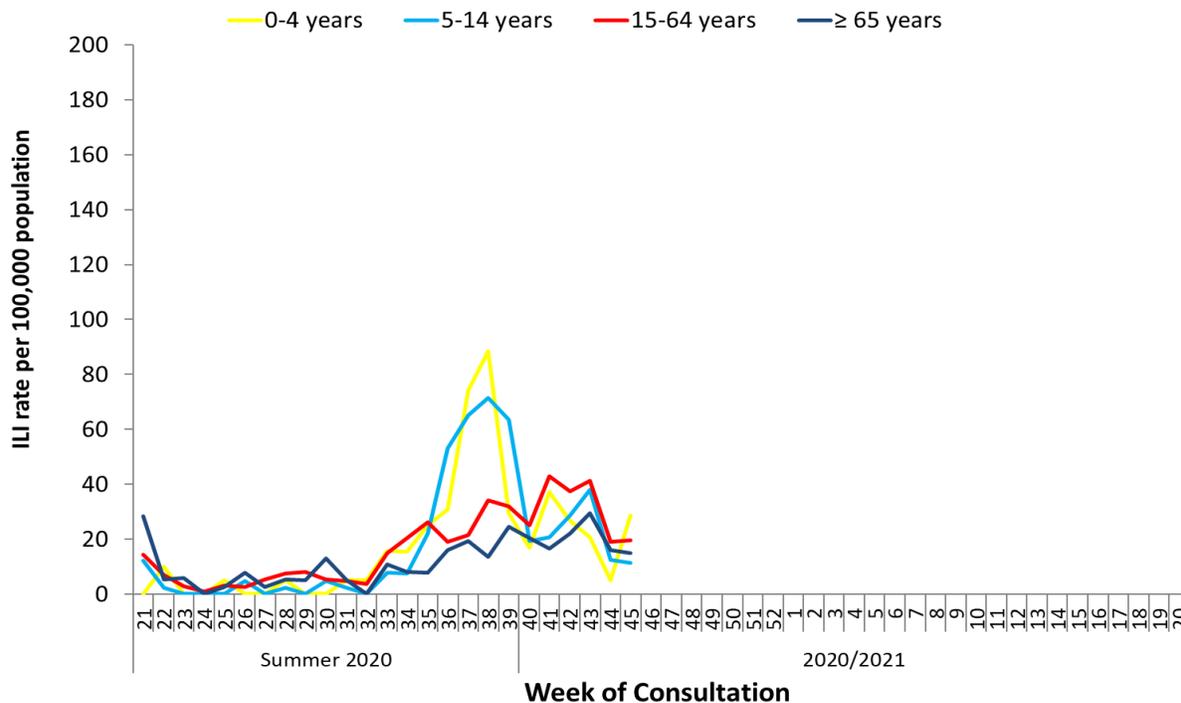


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week of phone consultation during the summer of 2020 and the 2020/2021 influenza season to date. *Source: ICGP.*

Sentinel GP ILI Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary
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Sentinel GP ILI consultation/100,000 pop.	Week of GP Phone Consultation											
	34	35	36	37	38	39	40	41	42	43	44	45
All Ages	16.6	23.1	24.4	31.0	40.5	35.2	23.2	35.8	33.3	37.8	16.8	18.4
<15 yrs	10.2	23.1	45.9	68.0	77.0	52.3	18.6	26.2	28.0	32.3	10.1	17.0
15-64 yrs	20.4	26.1	19.2	21.4	34.3	31.9	25.2	42.8	37.3	41.2	19.1	19.5
≥65 yrs	8.1	7.8	16.1	19.3	13.5	24.5	20.5	16.5	22.1	29.5	16.0	14.9
Number of reporting practices (N=58)	56	57	56	54	55	51	51	55	55	56	57	52

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 33-45/2020), colour coded by sentinel GP ILI age specific Moving Epidemic Method (MEM) threshold levels. *Source: ICGP.*

2. Influenza and Other Respiratory Virus Detections - NVRL

The data reported in this section for the 2020/2021 influenza season refer to sentinel and non-sentinel respiratory specimens routinely tested for influenza, respiratory syncytial virus (RSV), adenovirus, parainfluenza virus types 1-4 (PIV-1-4), human metapneumovirus (hMPV) and rhino/enteroviruses by the National Virus Reference Laboratory (NVRL) (tables 2 & 3).

- Of 698 non-sentinel specimens tested by the NVRL during weeks 40-45 2020, no positive influenza or RSV detections were reported (Table 2).
- The COVID-19 pandemic caused disruption to sentinel GP influenza networks across the globe. In Ireland, virological surveillance for influenza and respiratory syncytial virus (RSV), within the Irish sentinel GP network is being integrated into current testing structures for COVID-19 referrals and will resume in the coming weeks.
- Rhinovirus/enterovirus positive detections increased in September and continued to be detected in to November 2020 (Figure 3). Sporadic detections of adenovirus, human metapneumovirus and bocavirus were reported during weeks 40-45 2020 (Table 3). Rhinovirus/enterovirus, adenovirus and hMPV coinfections were reported during weeks 40-45 2020.

Table 2: Number of sentinel and non-sentinel[†] respiratory specimens tested by the NVRL and positive influenza and RSV results, for week 45 2020 and the 2020/21 season to date. *Source: NVRL*

Week	Specimen type	Total tested	Number influenza positive	% Influenza positive	Number RSV positive	% RSV positive
45 2020	Sentinel GP	Testing to resume following integration into COVID-19 referral pathways				
	Non-sentinel	52	0	0.0	0	0.0
	Total	52	0	0.0	0	0.0
2020/2021	Sentinel GP					
	Non-sentinel	698	0	0.0	0	0.0
	Total	698	0	0.0	0	0.0

Table 3: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses and positive results, for week 45 2020 and the 2020/21 season to date. *Source: NVRL*

Week	Total tested	Adenovirus	% Adenovirus	Rhino/enterovirus	% Rhino/enterovirus	Bocavirus	% Bocavirus
45 2020	52	4	7.7	5	9.6	0	0.0
2020/2021	698	26	3.7	167	23.9	2	0.3

[†] 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.

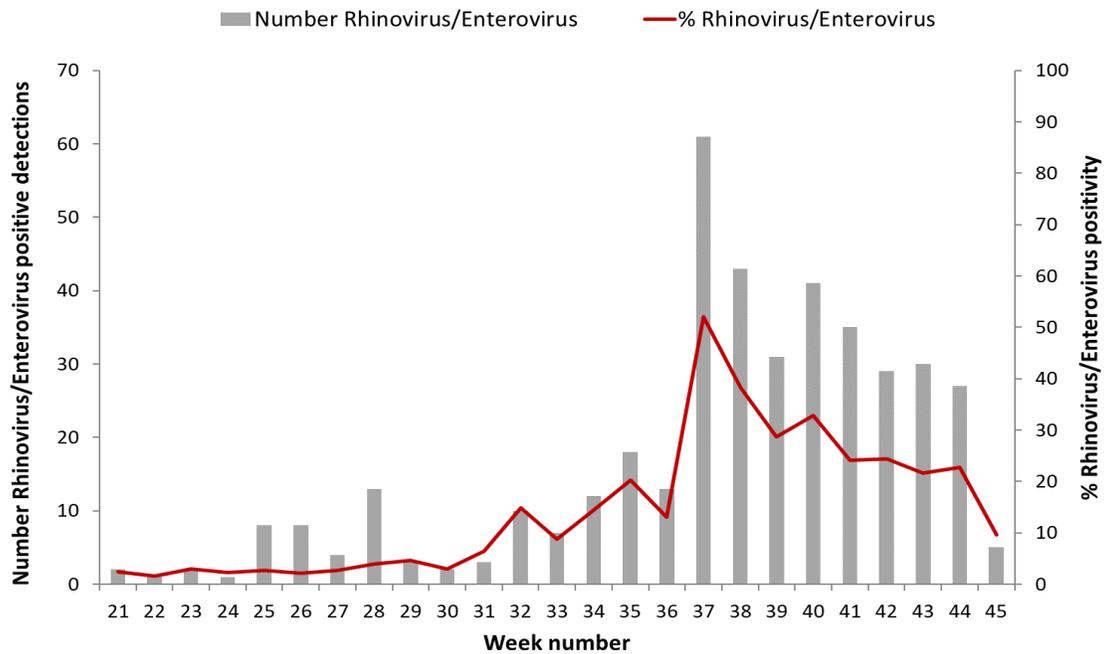


Figure 3: Number and percentage of non-sentinel Rhinovirus/Enterovirus positive specimens detected by the NVRL during the 2020/2021 season. *Source: NVRL.*

3. Regional Influenza Activity by HSE-Area

Regional influenza activity levels will be based on laboratory confirmed influenza cases and/or outbreaks.

No confirmed influenza cases or outbreaks were notified in Ireland during weeks 40-45 2020. Geographic spread of influenza viruses is based on laboratory confirmed influenza case/outbreak data. **No influenza activity was reported for all HSE-Areas during this period.**

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 self-reported as flu/influenza or cough are extracted for analysis. This information may act as an early indicator of circulation of influenza, SARS-CoV-2 or other respiratory viruses. Data are self-reported by callers and are not based on coded diagnoses.

The proportion of influenza/ILI self-reported calls to GP Out-of-Hours services was below baseline levels during week 45 2020 at 1% (77/8031), a decrease compared to 1.3% (160/12,078) during week 44 2020. Increases in the proportion of influenza/ILI self-reported calls to GP Out-of-Hours services occurred throughout September; this increase is usually observed each September when schools return from the summer break (Figure 4).

During week 45 2020, the proportion of self-reported cough calls to GP Out-of-Hours remained stable in all age groups, at 32.9 % (2644/8031), this compares to the previous nine weeks, where self-reported cough calls were on average above 33% (Figure 5). Data are continuously updated as more retrospective GP OOHs data are reported.

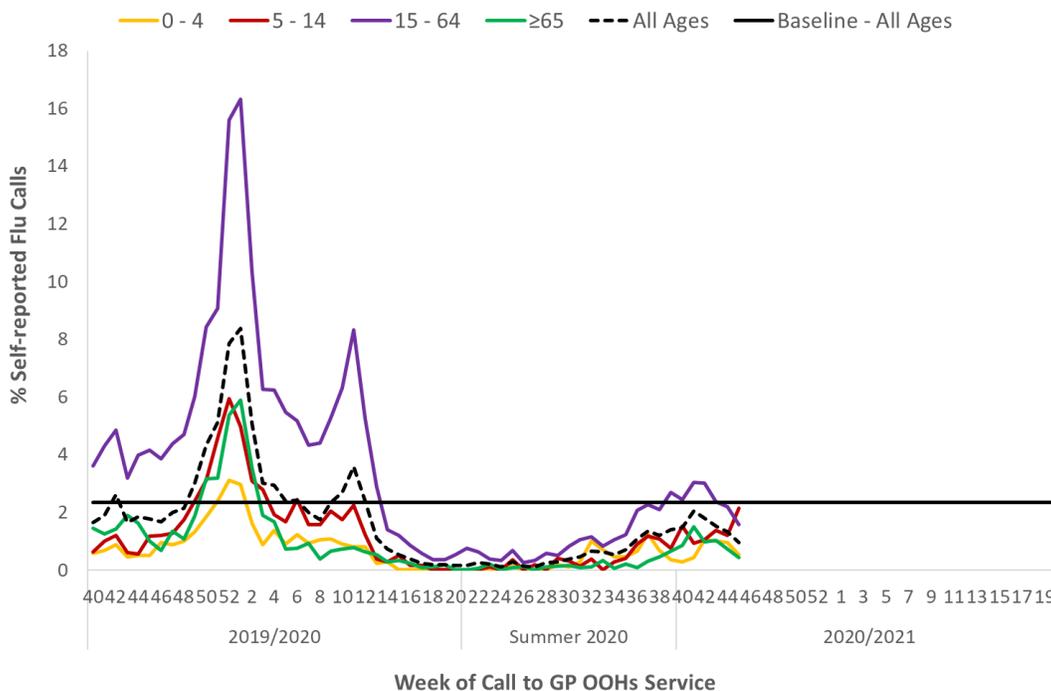


Figure 4: Percentage of self-reported Influenza/ILI calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % Influenza/ILI calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

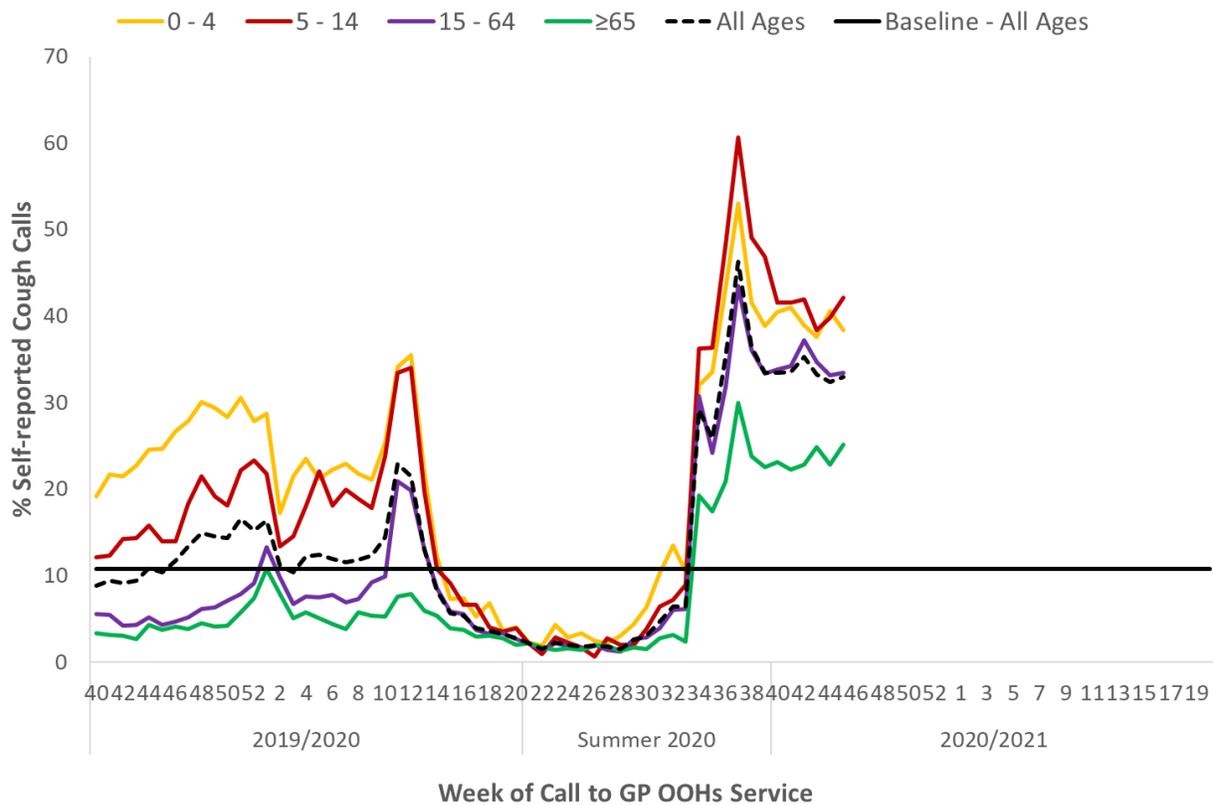


Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (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](#). No confirmed influenza notifications were reported during weeks 40-45 2020. One confirmed RSV hospitalised paediatric case was notified during week 42 2020 and no confirmed RSV cases were notified during week 45 2020

6. Influenza Hospitalisations

No confirmed influenza hospitalised cases were notified to HPSC during weeks 40-45 2020.

7. Critical Care Surveillance

The Intensive Care Society of Ireland (ICSI) and the HSE Critical Care Programme are continuing with the enhanced surveillance system set up during the 2009 pandemic, on all critical care patients with confirmed influenza. HPSC processes and reports on this information on behalf of the regional Directors of Public Health/Medical Officers of Health.

No confirmed influenza cases were admitted to critical care and reported to HPSC during weeks 40-45 2020.

8. Sentinel Hospital Network – Respiratory Admissions

The Departments of Public Health have established a network of nine sentinel hospitals located around the country, to report data on total, emergency and respiratory admissions on a weekly basis.

Respiratory admissions reported from the sentinel hospital network increased during weeks 40-45 2020, compared to the summer period. The COVID-19 pandemic has caused disruption to reporting from the sentinel hospital network, with only five of the nine hospitals reporting in recent weeks. During week 45 2020, 169 respiratory admissions were reported from five sentinel hospitals, compared to 235 respiratory admissions (reported from five sentinel hospitals) during week 44 2020 (Figure 6). Of the nine sentinel hospitals, the same 5 hospitals consistently reported data for weeks 40-45.

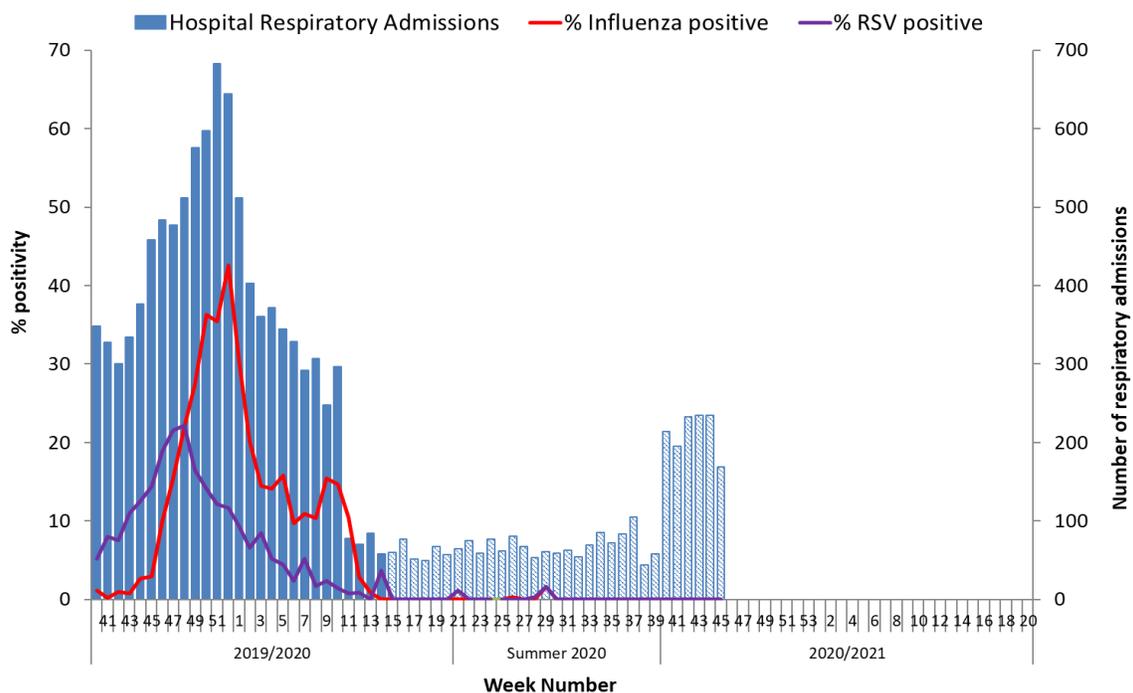


Figure 6: Number of respiratory admissions reported from the sentinel hospital network and % positivity for influenza and RSV (reported by the NVRL) by week and season. *Source: Departments of Public Health - Sentinel Hospital Network & NVRL. Weeks with missing sentinel hospital data are represented by the hatched bar.*

9. 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 deaths occurring in notified influenza cases occurring during weeks 40-45 2020.
- During week 45 2020, no excess all-cause mortality was reported in Ireland after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm. There have been no excess all-cause deaths reported in Ireland since May 2020.

10. Outbreak Surveillance

COVID-19 outbreaks are not included in this report; surveillance data on COVID-19 outbreaks are detailed on the HPSC website. <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/casesinireland/>

No influenza, RSV or acute respiratory infection (ARI - excluding COVID-19) outbreaks were notified to HPSC during weeks 40-45 2020.

11. International Summary

Since the start of the COVID-19 pandemic, influenza activity globally has remained at low levels. The World Health Organization (WHO) has advised that current influenza surveillance data should be interpreted with caution as the ongoing COVID-19 pandemic has influenced health seeking behaviours, surveillance and reporting in sentinel sites, as well as testing priorities and capacities in Member States. The various hygiene and physical distancing measures implemented by Member States to reduce SARS-CoV-2 virus transmission have likely played a role in reducing influenza virus transmission.

As of 9th November 2020, WHO reported that despite continued or even increased testing for influenza in some countries, influenza activity remained at lower levels than expected for this time of the year. In the temperate zones of the southern hemisphere, no influenza detections were reported across countries. In the temperate zone of the northern hemisphere, influenza activity remained below inter-seasonal levels, though influenza detections were reported in some countries. In Southern Asia, influenza activity of predominately influenza A(H3N2) was reported in Bangladesh and India in recent weeks. In South East Asia, increased influenza detections were reported in Cambodia and Lao People's Democratic Republic. Worldwide, of the very low numbers of detections reported, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

In the European region, influenza activity remained at inter-seasonal levels. Influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to primary medical care. Both influenza A and type B viruses were detected in sentinel and non-sentinel source specimens. There were no hospitalised laboratory-confirmed influenza cases for week 44 2020. See [ECDC](#) and [WHO](#) influenza surveillance reports for further information.

- Further information on influenza is available on the following websites:
 - Northern Ireland <https://www.publichealth.hscni.net/publications/influenza-weekly-surveillance-bulletin-northern-ireland-202021>
 - Europe – ECDC <http://ecdc.europa.eu/>
 - Public Health England <https://www.gov.uk/government/collections/weekly-national-flu-reports>
 - 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>
- Influenza case definition in Ireland <https://www.hpsc.ie/a-z/respiratory/influenza/casedefinitions/>
- COVID-19 case definition in Ireland <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/casedefinitions/>
- Avian influenza overview May – August 2020 <https://www.ecdc.europa.eu/en/publications-data/avian-influenza-overview-may-august-2020>
- Avian influenza: EU on alert for new outbreaks <https://www.ecdc.europa.eu/en/news-events/avian-influenza-eu-alert-new-outbreaks>
- Information on COVID-19 in Ireland is available on the HPSC website <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/>
- The WHO categorised COVID-19 as a pandemic on 11 March 2020. For more information about the situation in the WHO European Region visit:

- WHO website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- ECDC website: <https://www.ecdc.europa.eu/en/novel-coronavirus-china>

12. WHO recommendations on the composition of influenza virus vaccines

The WHO vaccine strain selection committee recommend that quadrivalent egg-based vaccines for use in the 2020/2021 northern hemisphere influenza season contain the following:

- an A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus;
- an A/Hong Kong/2671/2019 (H3N2)-like virus;
- a B/Washington/02/2019 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

https://www.who.int/influenza/vaccines/virus/recommendations/2020-21_north/en/

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

Acknowledgements

This report was prepared by Maeve McEnery, Eva Kelly, Marth Neary and Joan O'Donnell, HPSC. HPSC wishes to thank the sentinel GPs, the ICGP, NVRL, Departments of Public Health, ICSI and HSE-NE for providing data for this report.