

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 15 & 16 2021 (12th April– 25th April 2021)



 **Intensive Care Society of Ireland**

Summary

There was no evidence of influenza viruses circulating in the community in Ireland during weeks 15 and 16 2021 (weeks ending 18/04/2021 and 25/04/2021) or during weeks 40 2020 to 14 2021. Sporadic cases of rhinovirus/enterovirus and respiratory syncytial virus (RSV) were reported in recent weeks. COVID-19 epidemiology reports are published on www.hpsc.ie.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate increased to 20.4/100,000 population in week 16 2021, compared to 13.3/100,000 in week 15 2021, an increase from 12.9/100,000 population in week 14 2021.
 - The sentinel GP ILI consultation rates for week 16 2021 are above the Irish baseline threshold (18.1/100,000 population) for the first time since week 12 2021.
 - The sentinel GP ILI age specific consultation rates increased in the <15 and in the 15-64 year age groups and remained stable in those aged ≥65 years in week 16 2021, compared to the previous week.
 - Sentinel GP ILI consultations for the 2020/2021 season to date are reflecting SARS-CoV-2 activity, rather than influenza activity.
- **GP Out of Hours:** 969 (8.7% of total calls; N=11084) and 1291 (11.1% of total calls; N=11634) self-reported cough calls were reported by a network of GP Out-of-Hours (OOHs) services during weeks 15 and 16 2021 respectively, rising above the baseline in week 16 2021 for the first time since week 5 2021. There was a slight increase compared to 1109 (8.3% of total calls; N=13343) in week 14 2021.
- **National Virus Reference Laboratory (NVRL):**
 - Of 1,726 sentinel GP ILI specimens and 2,997 non-sentinel respiratory specimens tested for influenza and RSV this season to date, no positive influenza detections were reported. Four RSV detections were reported in weeks 12 and 13 2021.
 - Rhinovirus/enterovirus positive detections continue to be reported throughout the 2020/2021 season. Sporadic detections of adenovirus, Parainfluenza viruses, human metapneumovirus and bocavirus were also reported this season. A small number of coinfections were detected during weeks 15 & 16 2021.
- **Influenza notifications:** No confirmed influenza cases were notified during the 2020/2021 season to date.
- **RSV notifications:** Eight RSV cases have been notified during the 2020/2021 season to date.
- **Hospitalisations and Critical care admissions:** No confirmed influenza hospitalised or critical care cases were notified to HPSC during the 2020/2021 season to date.
- **Mortality:** There were no reports of deaths occurring in notified influenza cases during the 2020/2021 season to date.
- **Outbreaks:** No influenza, RSV or acute respiratory infection (ARI - excluding COVID-19) outbreaks were notified to HPSC during the 2020/2021 season to date.
- **Influenza Vaccinations:** From the 01/09/2020 to 25/04/2021, 1,247,986 influenza vaccinations were provided by GPs and Pharmacists.
- **International:** In the European Region (latest available data up to 18/04/2021), influenza activity remained at inter-seasonal levels with only sporadic detections of influenza A and B reported.

1. GP sentinel surveillance system - Clinical Data

- During week 16 2021, 54 influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 20.4/100,000 population, an increased rate compared to the updated rate of 13.3/100,000 reported during week 15 2021 (Figure 1). On the 09/03/2020, GP ILI consultations changed from face-to-face to phone consultations.
- The sentinel GP ILI consultation rate was above the Irish baseline threshold level (18.1/100,000 population) in week 16 2021, for the first time since week 12 2021.
- Sentinel GP ILI consultations are currently reflecting circulation of SARS-CoV-2 in the community, rather than influenza virus circulation.
- The sentinel GP ILI age specific consultation rates increased in the <15-year age group (28.5/100,000 in week 16 2021, from rate of 19.4/100,000 in week 15 2021). Age specific ILI consultation rates also increased in those aged 15-64 years at 18.4/100,000 in week 16 2021 and 10.5/100,000 in week 15 2021. Age specific ILI consultation rates in those aged ≥65 years remained stable at 16.9/100,000 in week 16 2021 from 17.9/100,000 in 15 2021. (Figure 2 & Table 1).
- HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) has reviewed the Irish sentinel GP 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), low (57.5/100,000 population) medium (86.5/100,000 population) and high (103.6/100,000 population) intensity ILI thresholds are shown in Figure 1. Age-specific MEM threshold levels are shown in Table 1.

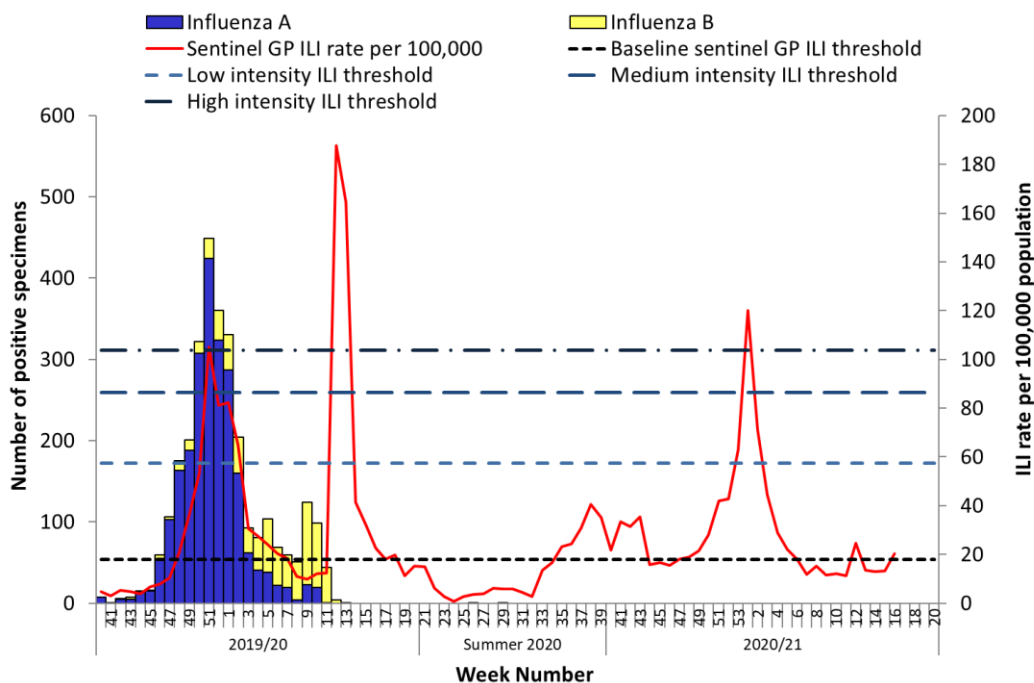


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by week and season. *Source: ICGP and NVRL*

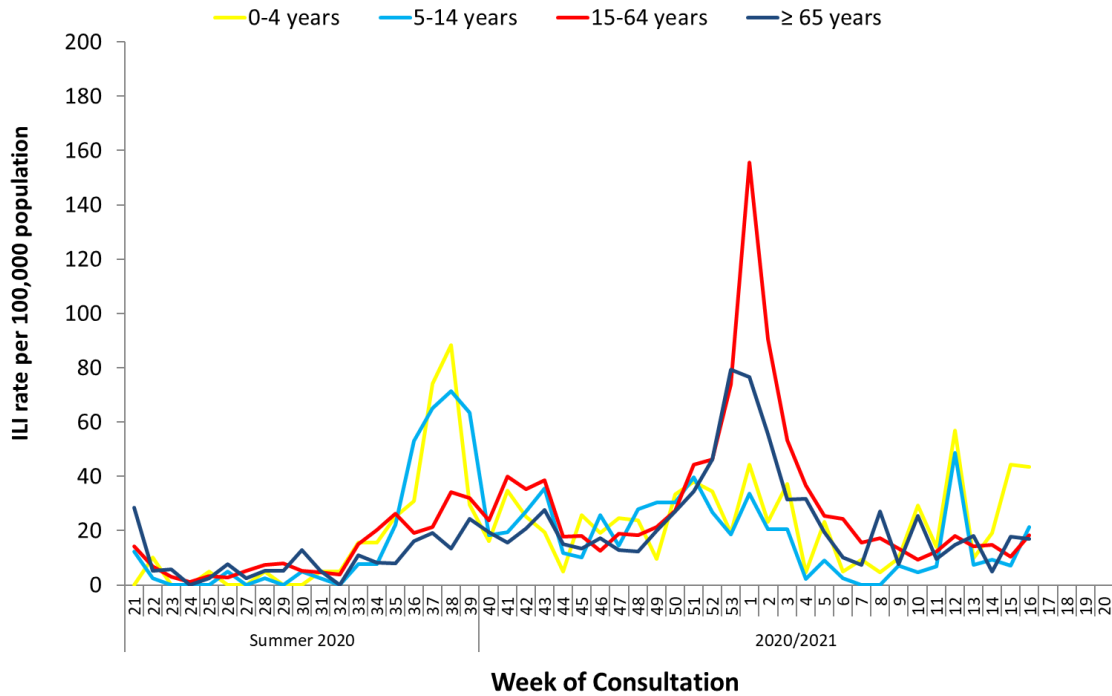


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week of phone consultation during the summer of 2020 and the 2020/2021 influenza season to date. *Source: ICGP.*

Sentinel GP ILI Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary
----------------------------------	----------------	-----	----------	------	---------------

Sentinel GP ILI consultation/100,000 pop.	Week of Consultation																													
	40	41	42	43	44	45	46	47	48	49	50	51	52	53	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
All Ages	21.9	33.5	31.4	35.3	15.7	16.8	15.6	18.1	18.9	21.6	28.1	41.9	42.7	63.0	120.0	71.2	44.6	28.9	22.1	18.0	11.8	15.2	11.5	12.2	11.4	24.7	13.5	12.9	13.3	20.4
<15 yrs	17.6	24.5	26.4	30.2	9.5	15.2	23.5	17.7	26.6	23.6	31.3	39.0	29.3	18.8	37.2	21.4	26.0	3.1	13.8	3.2	3.1	1.6	8.0	12.8	9.2	51.5	8.2	12.5	19.4	28.5
15-64 yrs	23.8	40.1	35.2	38.6	17.9	18.0	12.7	18.8	18.2	21.3	27.3	44.3	46.2	73.9	155.7	90.4	53.4	36.6	25.3	24.4	15.5	17.2	13.5	9.3	12.4	18.1	14.2	14.7	10.5	18.4
≥65 yrs	19.4	15.5	20.9	27.6	15.0	13.4	17.3	12.7	12.4	19.9	27.2	34.5	46.2	79.2	76.6	55.6	31.4	31.8	19.4	10.2	7.4	27.2	7.6	25.3	9.7	14.8	18.0	4.9	17.9	16.9
Number of reporting practices (N=60)	51	55	55	56	57	54	58	57	58	58	58	58	58	58	55	58	58	55	57	54	56	56	55	55	57	56	53	56	55	53

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (week 40 2020 – week 16 2021), 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 GP 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 and figures 3 and 4). The COVID-19 pandemic caused disruption to sentinel GP influenza networks across the globe. In Ireland, virological surveillance and testing for influenza and RSV within the Irish sentinel GP network recommenced on swabs taken from the 18th November 2020.

- Of 1726 sentinel GP ILI specimens and 2997 non-sentinel respiratory specimens tested for influenza and RSV this season to date, no positive influenza detections were reported and four positive RSV detections were reported by the NVRL (in weeks 12 and 13 2021) (Table 2 and figure 4).
- The number of sentinel GP ILI and non-sentinel respiratory specimens tested each week are continuously updated, as more data are reported.
- Rhinovirus/enterovirus positive detections increased in September 2020 and have continued to be detected throughout the 2020/2021 season. During week 16 2021, rhinovirus/enterovirus detections decreased to 15.9% (11/69), compared to 33.7% (28/83) in week 15 2021 (figure 3). Sporadic detections of adenovirus, parainfluenza virus, hMPV, and bocavirus were reported during the 2020/2021 season to date.
- A small number of co-infections with Rhinovirus/Enterovirus and other respiratory viruses were detected in recent weeks.

Table 2: Number of sentinel GP ILI referrals and non-sentinel* respiratory specimens tested by the NVRL for influenza and RSV and positive results, for weeks 15 and 16 2021 and the 2020/2021 season to date. *Source: NVRL*

Week	Specimen type	Total tested	Influenza		RSV	
			Number positive	% positive	Number positive	% positive
15 2021	Sentinel GP ILI referral	32	0	0.0	0	0.0
	Non-sentinel	83	0	0.0	0	0.0
16 2021	Sentinel GP ILI referral	39	0	0.0	0	0.0
	Non-sentinel	69	0	0.0	0	0.0
	Total	223	0	0.0	0	0.0
2020/2021	Sentinel GP ILI referral	1726	0	0.0	0	0.0
	Non-sentinel	2997	0	0.0	0	0.0
	Total	4723	0	0.0	0	0.0

Table 3: Number of non-sentinel respiratory specimens tested by the NVRL for other respiratory viruses (excluding SARS-CoV-2) and positive results, for weeks 15 and 16 2021 and the 2020/2021 season to date. *Source: NVRL*

Week	Total tested	Adenovirus	% Adenovirus	Rhino/enterovirus	% Rhino/enterovirus	Bocavirus	% Bocavirus	hMPV	% hMPV	PIV-4	% PIV-4
15 2021	83	2	2.4	28	33.7	2	2.4	0	0	0	0
16 2021	69	0	0	11	15.9	1	1.4	0	0	0	0
2020/2021	2997	111	3.7	631	21	15	0.5	13	0.4	2	0.1

* 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.

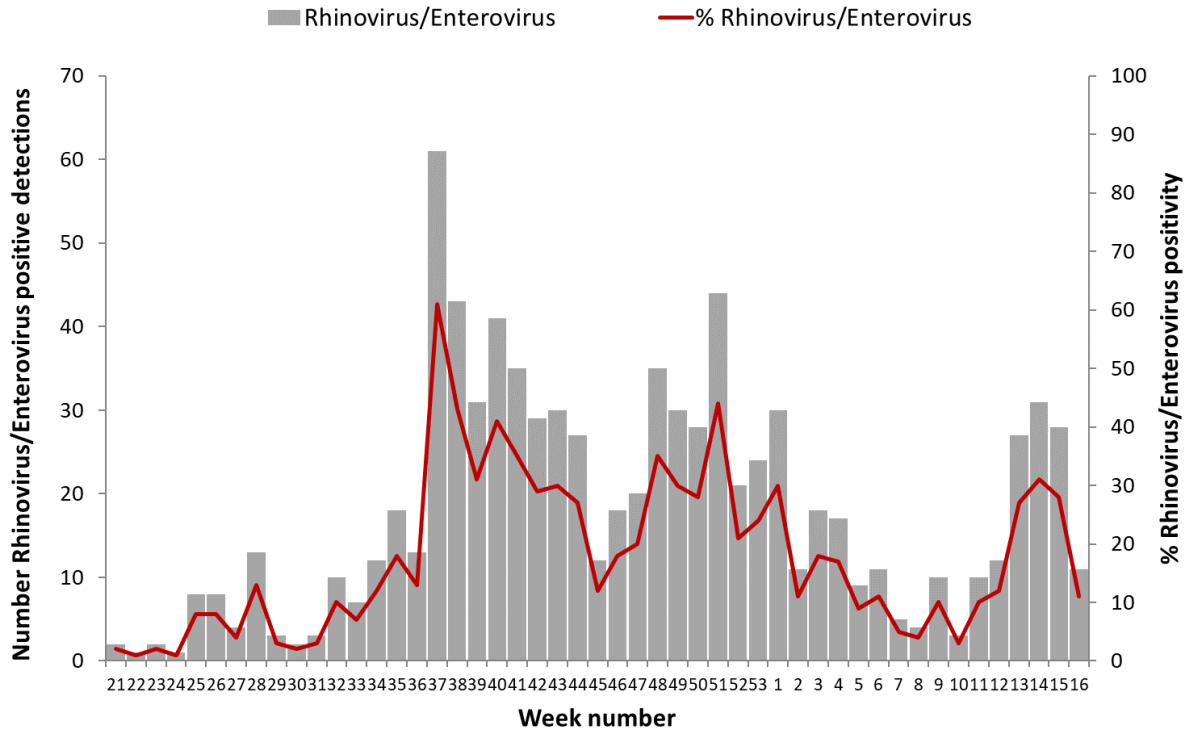


Figure 3: Number and percentage of non-sentinel Rhinovirus/Enterovirus positive specimens detected by the NVRL during the 2020/2021 season. *Source: NVRL.*

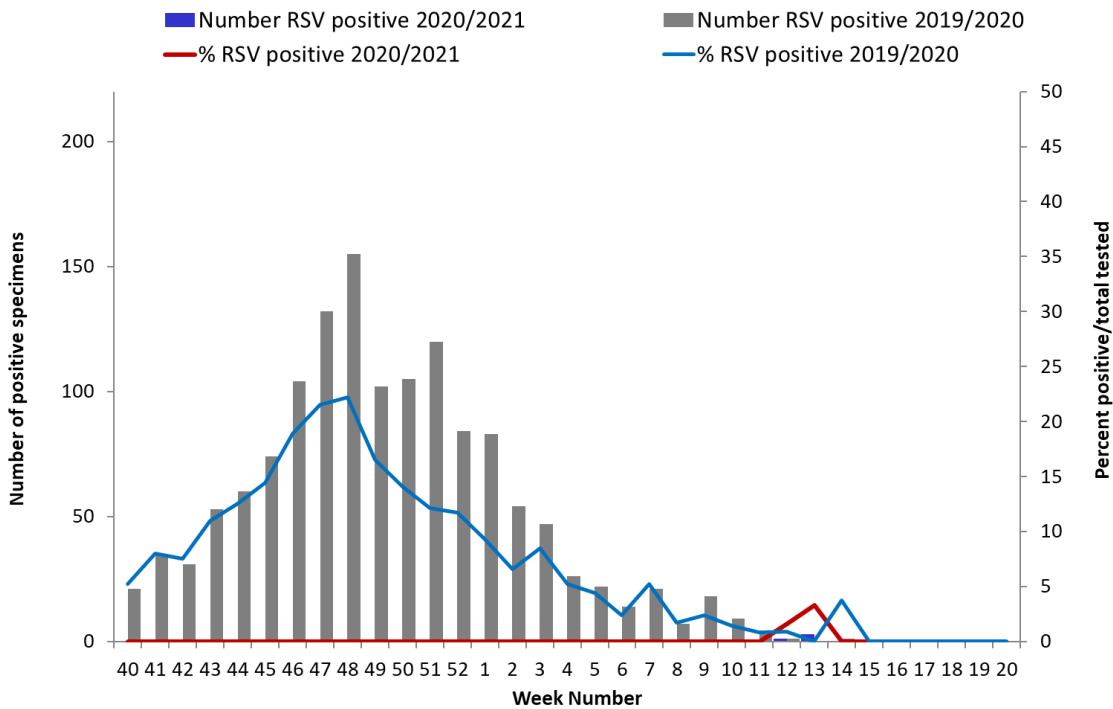


Figure 4: Number and percentage of non-sentinel Respiratory Syncytial Virus positive specimens detected by the NVRL during the 2020/2021 season, compared to 2019/2020. Please note; week 53 2020 was not included in this figure, for ease of visual display, as there was no week 53 in 2019. *Source: NVRL.*

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 between week 40 2020 and week 16 2021. Geographic spread of influenza viruses are based on laboratory confirmed influenza case/outbreak data. **No confirmed influenza activity was reported for any HSE-Area during this period.**

4. GP Out-Of-Hours services surveillance

The Department of Public Health in the HSE-NE collates national data on calls to nine of thirteen GP Out-of-Hours (OOHs) services in Ireland. Records with clinical symptoms of self-reported flu/influenza or cough are validated to specifically extract influenza related calls and cough calls from free text patients reported symptoms 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 self-reported 'flu' calls to GP OOHs services remained below baseline levels for weeks 15 and 16 2021, at 0.4% (47/12531) and 0.6% (62/11077) respectively, the rates decreased slightly compared to 0.7% (90/12530) during week 14 2021 (Figure 5).
- 969 (8.7% of total calls; N=11084) self-reported cough calls were reported by a network of five GP OOHs services during week 15 and 1291 (11.1% of total calls; N=11634) in week 16 2021 (figures 6 & 7), a slight increase compared to 1109 (8.3 % of total calls; N=13343) in week 14 2021. In week 16 2021, the self-reported cough calls were above the baseline threshold for the first time since week 5 2021. Baseline threshold levels for self-reported cough and 'flu' calls are 10.75% and 2.34%, respectively.
- GP OOHs data are continuously updated as more retrospective data are reported.

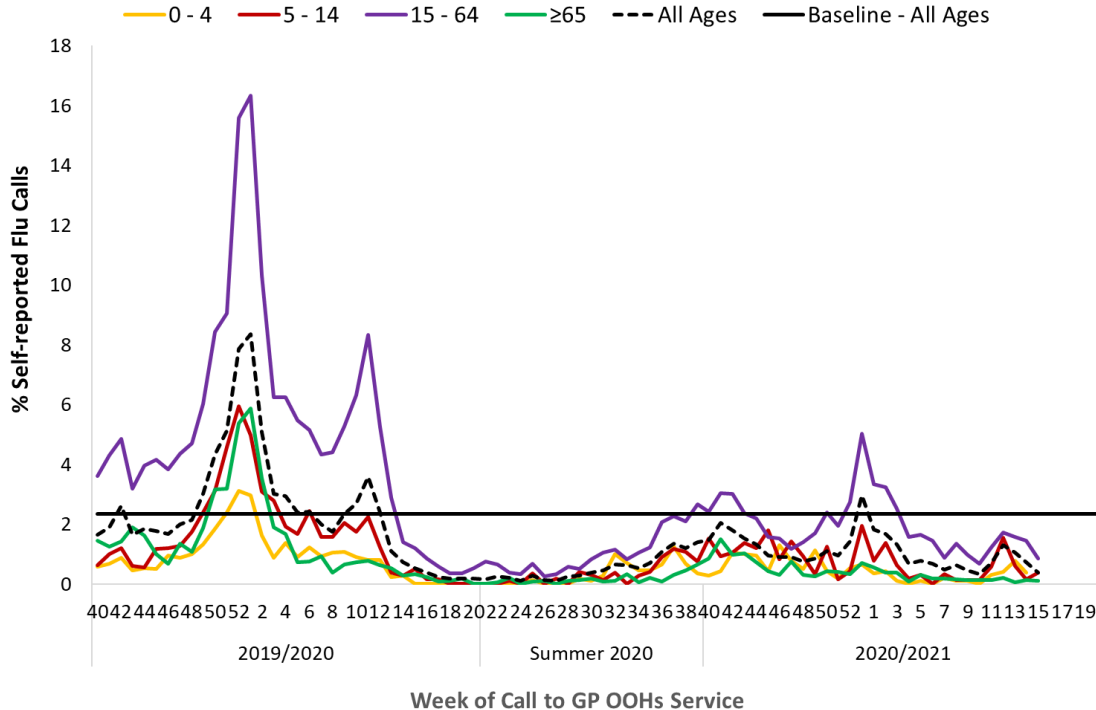


Figure 5: Percentage of self-reported Influenza/ILI calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % Influenza/ILI calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

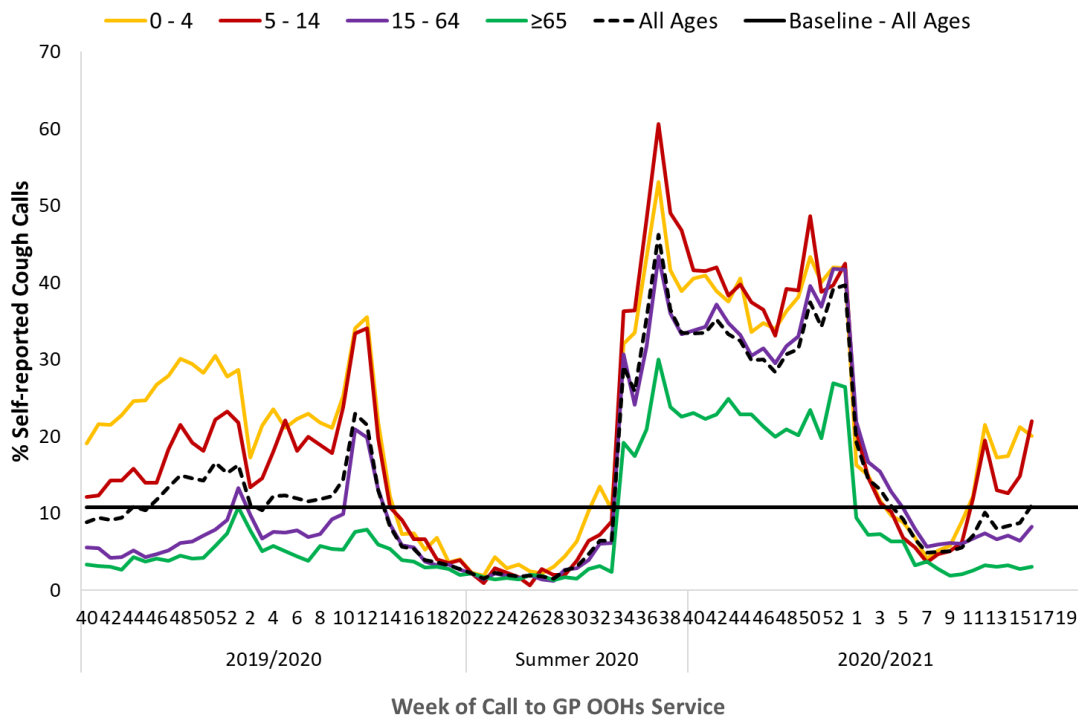


Figure 6: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

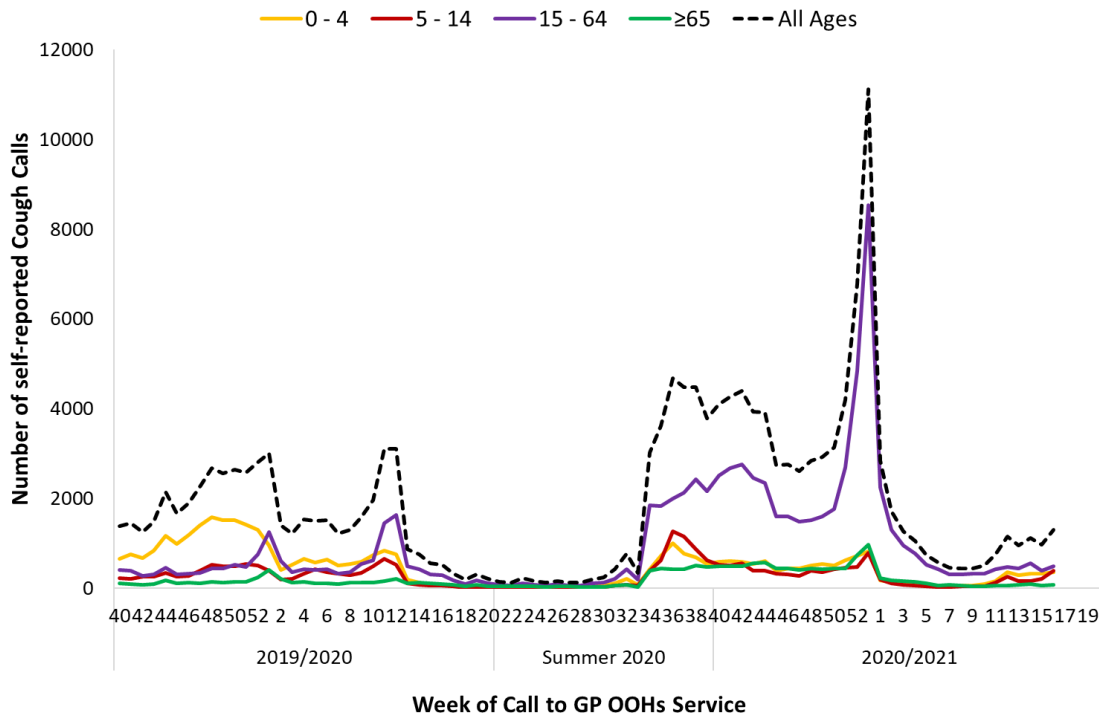


Figure 7: Number of self-reported COUGH calls for all ages and by age group to Out-of-Hours GP Co-ops by week and season. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

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](#).

- No confirmed influenza notifications were reported from week 40 2020 to week 16 2021.
- No RSV cases were notified during weeks 15 and 16 2021. For the 2020-2021 season to date there has been a total of eight RSV cases notified to HPSC (one in week 42 2020 and the other 7 cases were notified between weeks 3 and 14 2021).

6. Influenza Hospitalisations

No confirmed influenza hospitalised cases were notified to HPSC during week 40 2020 to week 16 2021.

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 units and reported to HPSC from week 40 2020 to week 16 2021.

8. Sentinel Hospital Network – Respiratory Admissions

The Departments of Public Health have established a network of eight 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 have remained relatively stable during weeks 40 2020 to 16 2021. Additional retrospective data were submitted during week 16 2021 which increased the median number of respiratory admissions reported per week during this period to 395. The number of reported respiratory admissions was 303 in week 15 2021 and 300 in week 16 2021. The COVID-19 pandemic has caused disruption to reporting from the sentinel hospital network, with three of the eight hospitals reporting in week 15 2021 and two of the eight hospitals reporting in week 16 2021. Due to priority COVID-19 surveillance work and current capacity issues, sentinel hospital respiratory admissions data are underreported and should be interpreted with caution.

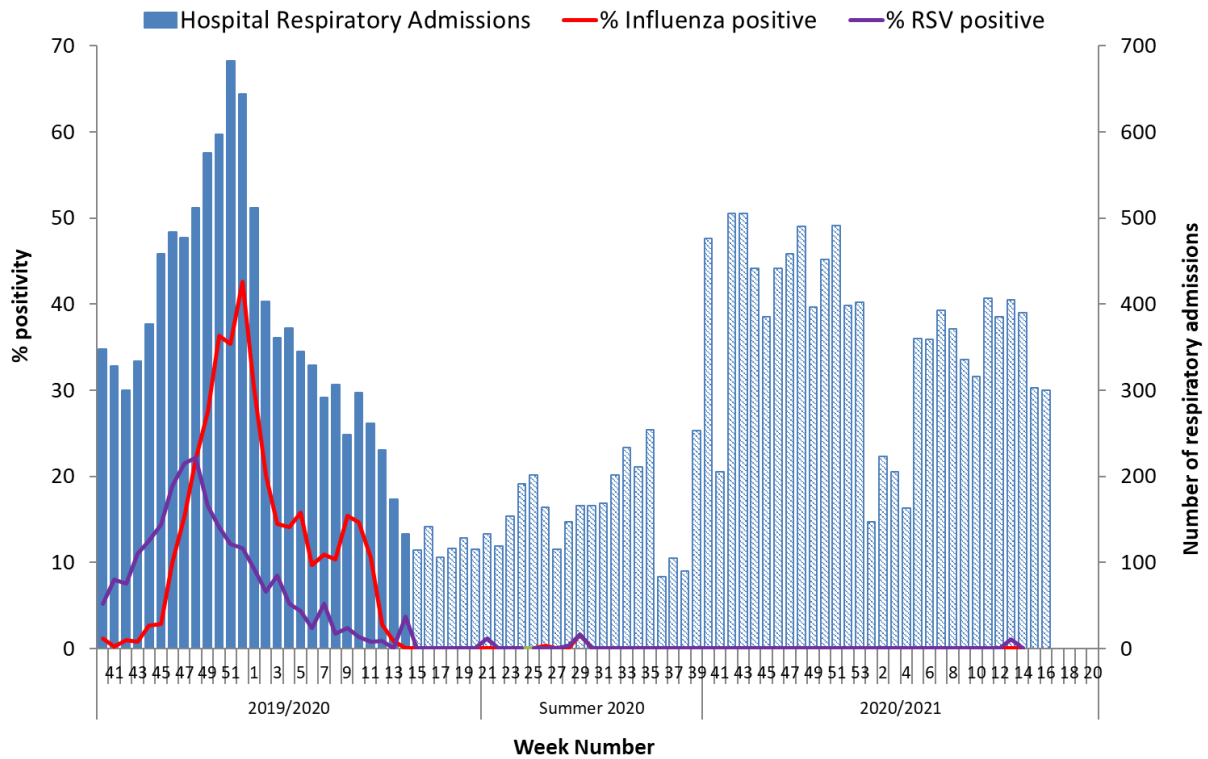


Figure 8: Number of respiratory admissions reported from the sentinel hospital network and % positivity for influenza and RSV (non-sentinel specimens reported by the NVRL) by week and season. *Source: Departments of Public Health - Sentinel Hospital Network & NVRL. Weeks with missing sentinel hospital 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 in notified influenza cases during week 40 2020 – week 16 2021.
- The latest data on excess all-cause deaths in Ireland available for the week ending 25th April 2021 (week 16 2021) have shown that there were excess all-cause deaths observed during weeks 1-6 2021 after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm.
- During weeks 1-8 2021, excess pneumonia deaths were observed using the standardised EuroMOMO algorithm.
- These excess deaths are likely reflecting the impact of the COVID-19 pandemic. Due to delays in death registrations with the GRO, excess mortality data included in this report will be reported with one-week lag time.

10. Outbreak Surveillance

- No influenza, RSV or acute respiratory infection (ARI - excluding COVID-19) outbreaks were notified to HPSC during the 2020/2021 season to date.
- 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/>

11. Influenza Vaccinations

From 01/09/2020 up to the week ending 25/04/2021, the total number of influenza vaccinations provided by GPs and Pharmacists was 1,247,986.

12. 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 26th April 2021, based on data up to 11th April 2021, WHO reported that globally, 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 zone of the northern hemisphere, influenza activity remained below baseline, though sporadic detections of influenza A and B viruses continued to be reported in some countries. In the temperate zone of the southern hemisphere, influenza activity was reported at inter-seasonal level. In the Caribbean and Central American countries, sporadic detections of influenza A and B were reported in Mexico. In tropical South America, no influenza but respiratory syncytial virus (RSV) detections were reported in some countries. In tropical Africa, influenza detections were reported in some countries in Western, Middle and Eastern Africa. In Southern Asia, influenza activity continued to be reported at low levels in India and Nepal. In South East Asia, influenza A(H3N2) detections continued to be reported in Lao People's Democratic Republic (PDR) and Viet Nam. Worldwide, influenza B detections accounted for the majority of the very low numbers of detections reported. The WHO GISRS laboratories tested more than 310,129 specimens from 29th March-11th April 2021. A total of 588 specimens were positive for influenza viruses, of which 102 (17.3%) were typed as influenza A and 486 (82.7%) as influenza B. Of the sub-typed influenza A viruses, 9 (16.1%) were influenza A(H1N1)pdm09 and 47 (83.9%) were influenza A(H3N2). Of the characterised B viruses, 1 (0.2%) belonged to the B-Yamagata lineage and 437 (99.8%) to the B-Victoria lineage.

In the European region, influenza activity remained at inter-seasonal levels during week 15 2021. During this period, 1,271 primary care sentinel source specimens were tested for influenza viruses and four were positive for influenza A virus. Since the start of the season, of 35,347 primary care sentinel specimens that have been tested for influenza viruses, 41 were positive (28 type A and 13 type B viruses). During week 15 2021, 21 of 31,600 specimens from non-sentinel sources (such as hospitals, schools, primary care facilities not involved in sentinel surveillance, or nursing homes and other institutions) tested positive for an influenza virus: 14 were type A and 7 were type B. Since the beginning of the season, 791 of 682,485 non-sentinel specimens tested positive for influenza viruses; 396 (50.1%) were type A and 395 (49.9%) type B. Of 68 subtyped A viruses, 28 (41.2%) were A(H1)pdm09 and 40 (58.8%) were A(H3). Of 395 type B viruses, only 14 were ascribed to a lineage: 11 B/Victoria and 3 B/Yamagata.

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>
Public Health England <https://www.gov.uk/government/collections/weekly-national-flu-reports>
- 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/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 December 2020 – February 2021 <https://www.ecdc.europa.eu/en/publications-data/avian-influenza-overview-december-2020-february-2021>
- 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>

13. 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 2021/2022 northern hemisphere influenza season contain the following:

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
- an A/Cambodia/e0826360/2020 (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/2021-22_north/en/

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

Acknowledgements

This report was prepared by, Martha Neary, Eva Kelly, Adele McKenna, Maeve McEnery, Lisa Domegan, 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.