

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 42 2020 (12th – 18th October 2020)



 **Intensive Care Society of Ireland**

Summary

There was no evidence of influenza viruses circulating in the community in Ireland during week 42 2020 (week ending 18/10/2020) or during weeks 40-42 2020. Limited influenza testing at this time should be considered when interpreting these data. One confirmed respiratory syncytial virus (RSV) hospitalised case was notified during week 42 2020. Rhinovirus and enterovirus detections continue to be detected in October 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 32.1 per 100,000 population in week 42 2020, remaining stable compared to the updated rate of 35.8 per 100,000 during week 41 2020.
 - Sentinel GP ILI consultation rates have been above the Irish baseline threshold (18.1/100,000 population) for eight consecutive weeks, reflecting COVID-19, rather than influenza activity.
 - Sentinel GP ILI age specific consultation rates were highest in the 15-64-year age group during week 42, with increased rates in the 5-14 and ≥65-year age groups, compared to the previous week.
- **GP Out of Hours:** The proportion of self-reported cough calls to GP Out-of-Hours services remained very high in all age groups during week 42 2020, although decreased slightly compared to the previous week, with the highest proportions in the 5-14-year age group.
- **National Virus Reference Laboratory (NVRL):**
 - Of 332 non-sentinel specimens tested by the NVRL between weeks 40-42 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 continue to be detected in October 2020. Sporadic detections of adenovirus, human metapneumovirus and bocavirus were reported during weeks 40-42 2020, with some rhinovirus/enterovirus coinfections.
- **Influenza notifications:** No confirmed influenza cases were notified during weeks 40-42 2020.
- **RSV notifications:** One confirmed RSV hospitalised paediatric case was notified during week 42 2020.
- **Hospitalisations and Critical care admissions:** No confirmed influenza hospitalised or critical care cases were notified to HPSC during weeks 40-42 2020.
- **Mortality:** There were no reports of deaths occurring in notified influenza cases during weeks 40-42 2020. There have been no excess 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 40-42 2020.
- **International:** In the European region, influenza activity remained below inter-seasonal levels. Of 107 specimens from sentinel primary health care settings tested for influenza viruses in week 41 2020, all were negative for influenza. Of 4673 non-sentinel specimens tested for influenza viruses, 11 (0.2%) tested positive for influenza: 4 A (unsubtyped), 3 A(H3), 2 A(H1)pdm09 and 2 B. There were no hospitalised laboratory-confirmed influenza cases for week 41 2020.

1. GP sentinel surveillance system - Clinical Data

- During week 42 2020, 82 influenza-like illness (ILI) cases were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 32.1 per 100,000 population, remaining stable compared to the updated rate of 35.8 per 100,000 reported during week 41 2020 (Figure 1). On the 09/03/2020, GP ILI consultations changed from face-to-face consultations to phone consultations.
- The sentinel GP ILI consultation rate has been above the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) for eight consecutive weeks, reflecting circulation of SARS-CoV-2 in the community, rather than influenza viruses.
- Sentinel GP ILI age specific consultation rates were highest in the 15-64 (35.3/100,000) and 5-14 (30.4/100,000) year age groups, followed by the 0-4 (28.2/100,000) and ≥ 65 (20.5/100,000) year age groups during week 42 2020 (Figure 2). Age specific ILI consultation rates in the 5-14 and ≥ 65 -year age groups increased during week 42 2020, compared to the previous week.
- HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) have 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 in 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.

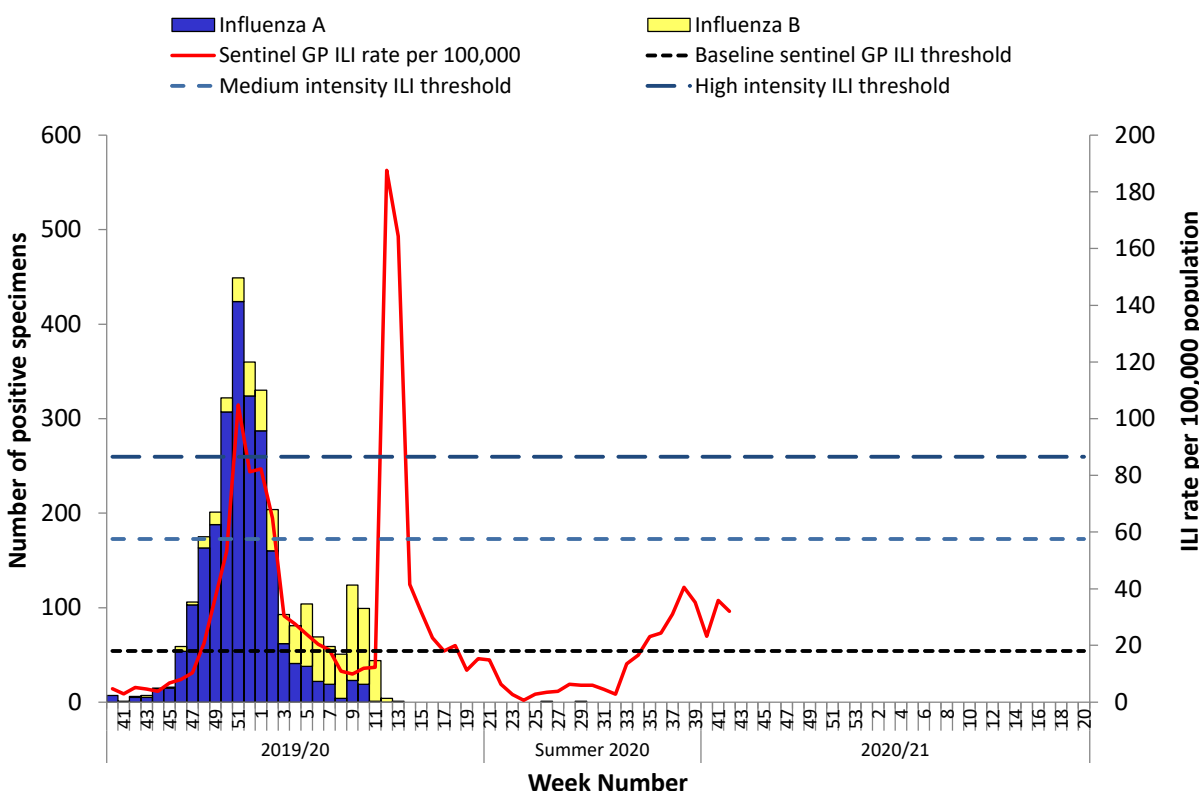


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL**

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

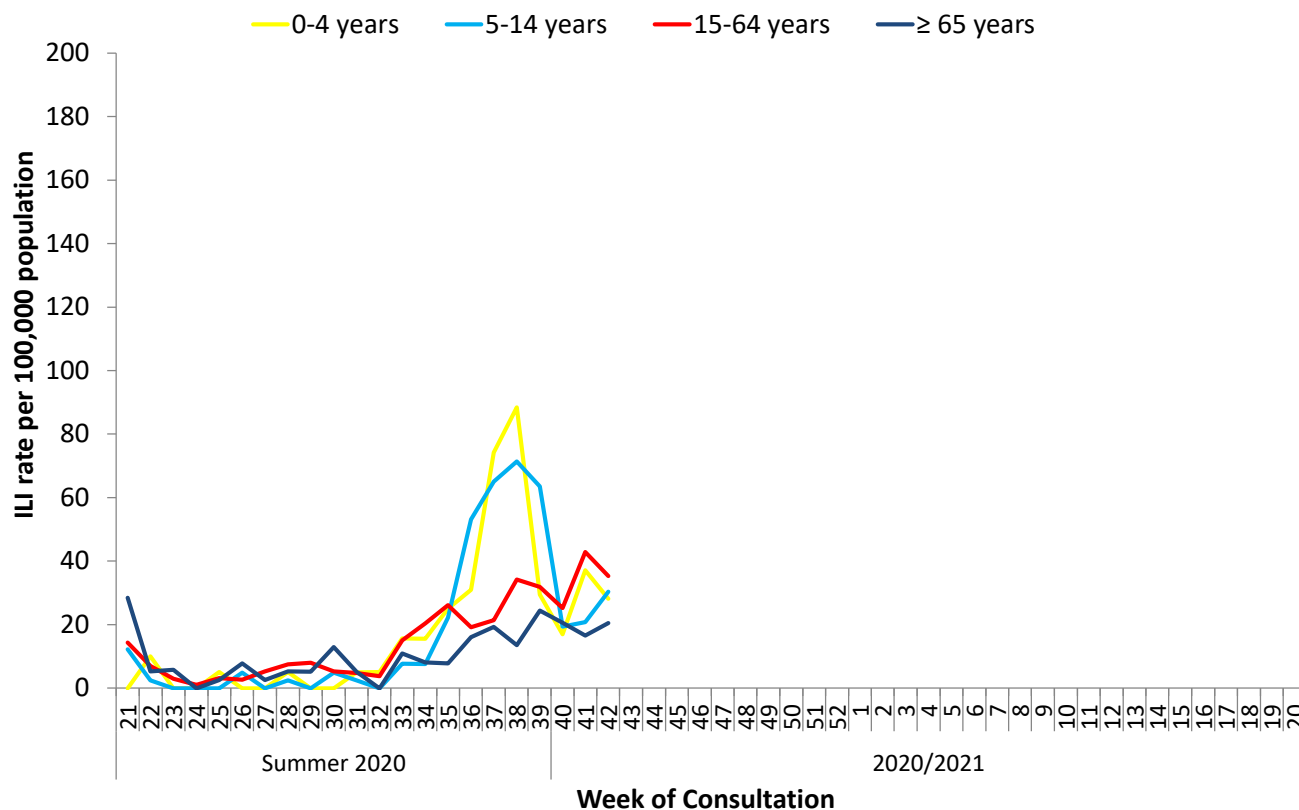


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week of phone consultation during the summer of 2020 and the 2020/2021 influenza season to date. *Source: ICGP.*

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									
	33	34	35	36	37	38	39	40	41	42
All Ages	13.5	16.6	23.1	24.4	31.0	40.5	35.2	23.2	35.8	32.1
<15 yrs	10.3	10.2	23.1	45.9	68.0	77.0	52.3	18.6	26.2	29.7
15-64 yrs	15.0	20.4	26.1	19.2	21.4	34.3	31.9	25.2	42.8	35.3
≥65 yrs	10.9	8.1	7.8	16.1	19.3	13.5	24.5	20.5	16.5	20.5
Number of reporting practices (N=58)	57	56	57	56	54	55	51	51	55	53

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 33-42 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 refers 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 332 non-sentinel specimens tested by the NVRL during weeks 40-42 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), with 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 continue to be detected in October 2020 (Figure 3). Sporadic detections of adenovirus, human metapneumovirus and bocavirus were reported during weeks 40-42 2020 (Table 3). Rhinovirus/enterovirus, adenovirus and hMPV coinfections were reported during weeks 40-42 2020.

Table 2: Number of sentinel and non-sentinel[†] respiratory specimens tested by the NVRL and positive influenza and RSV results, for week 42 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
42 2020	Sentinel GP	Testing to resume following integration into COVID-19 referral pathways				
	Non-sentinel	62	0	0.0	0	0.0
	Total	62	0	0.0	0	0.0
2020/2021	Sentinel GP					
	Non-sentinel	332	0	0.0	0	0.0
	Total	332	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 42 2020 and the 2020/21 season to date. *Source: NVRL*

Week	Total tested	Adenovirus	% Adenovirus	Rhino/enterovirus	% Rhino/enterovirus	Bocavirus	% Bocavirus	hMPV	% hMPV
42 2020	62	4	6.5	12	19.4	1	1.6	0	0.0
2020/2021	332	12	3.6	87	26.2	2	0.6	1	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.

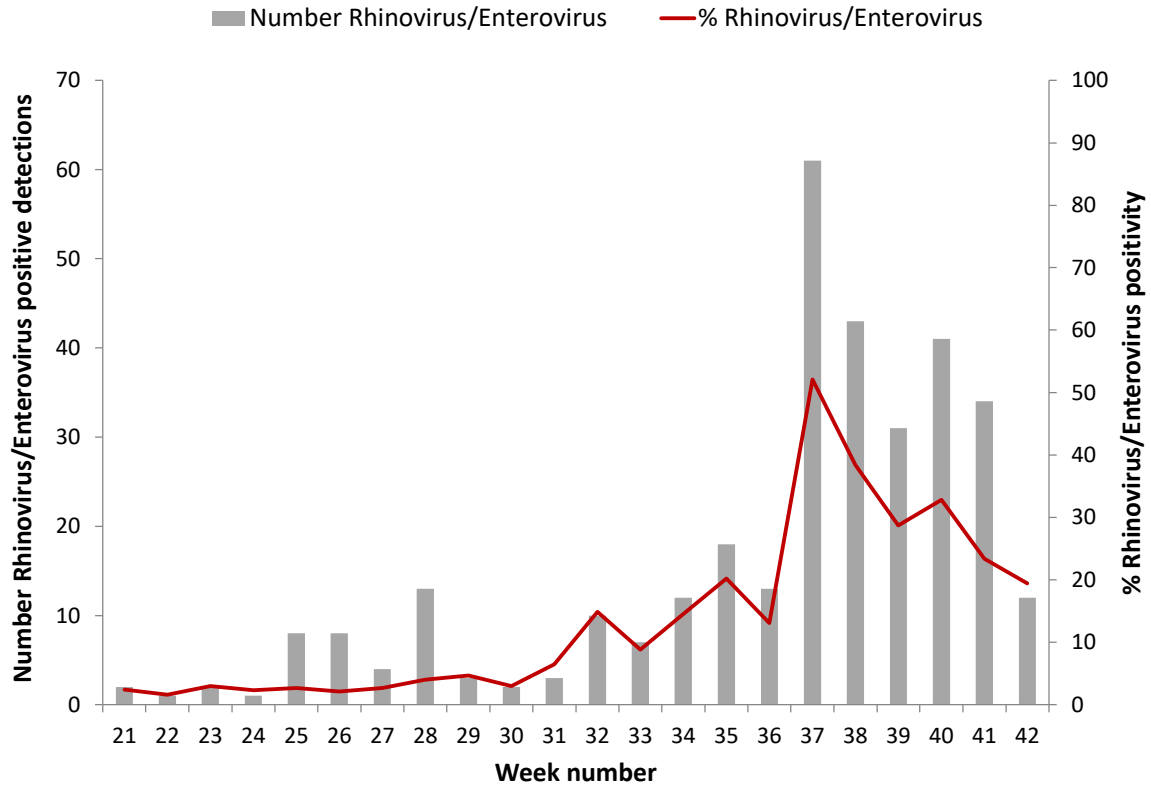


Figure 3: Number and percentage of non-sentinel Rhinovirus/Enterovirus positive specimens detected by the NVRL during the 2020/2021 season. *Source: NVRL.*

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 40-42 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 were below baseline levels during week 42 2020 at 1.8% (223/12452), remaining stable compared to 2.0% (230/11256) during week 41 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 42 2020, the proportion of self-reported cough calls to GP Out-of-Hours services remained very high in all age groups, at 35.3% (4390/12452) overall and has been above 33% for the last seven weeks (Figure 5). Data are continuously updated as more retrospective GP OOHs data are reported.

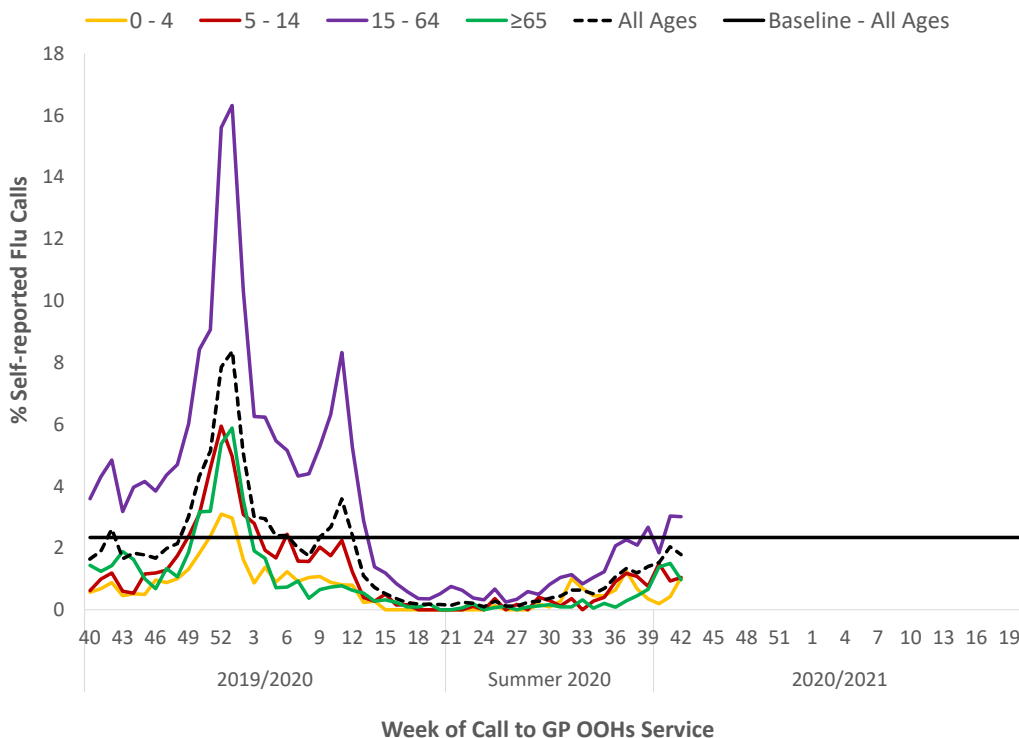


Figure 4: Percentage of self-reported Influenza/ILI calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % Influenza/ILI calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services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

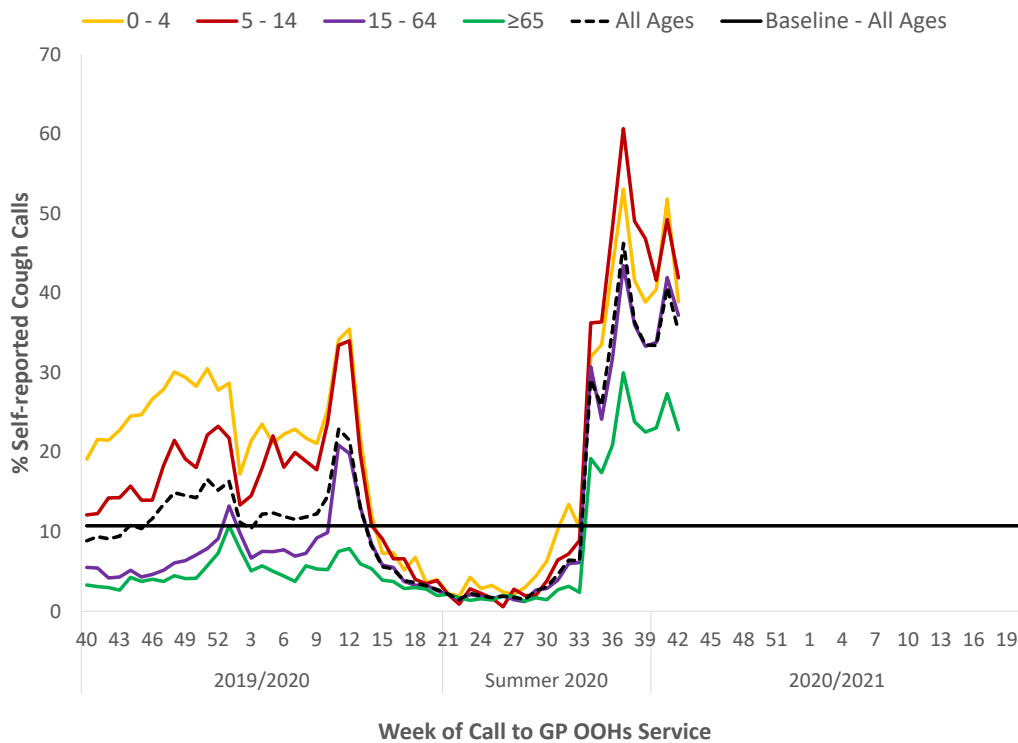


Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (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 40-42 2020. One confirmed RSV hospitalised paediatric case was notified during week 42 2020.

6. Influenza Hospitalisations

No confirmed influenza hospitalised cases were notified to HPSC during weeks 40-42 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 40-42 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 40-42 2020, compared to the summer period. The COVID-19 pandemic has caused disruption to reporting from the sentinel hospital network, with only five of nine hospitals reporting in recent weeks. During week 42 2020, 192 respiratory admissions were reported from five sentinel hospitals, an increase from 160 respiratory admissions (reported from four sentinel hospitals) during week 41 2020 (Figure 6).

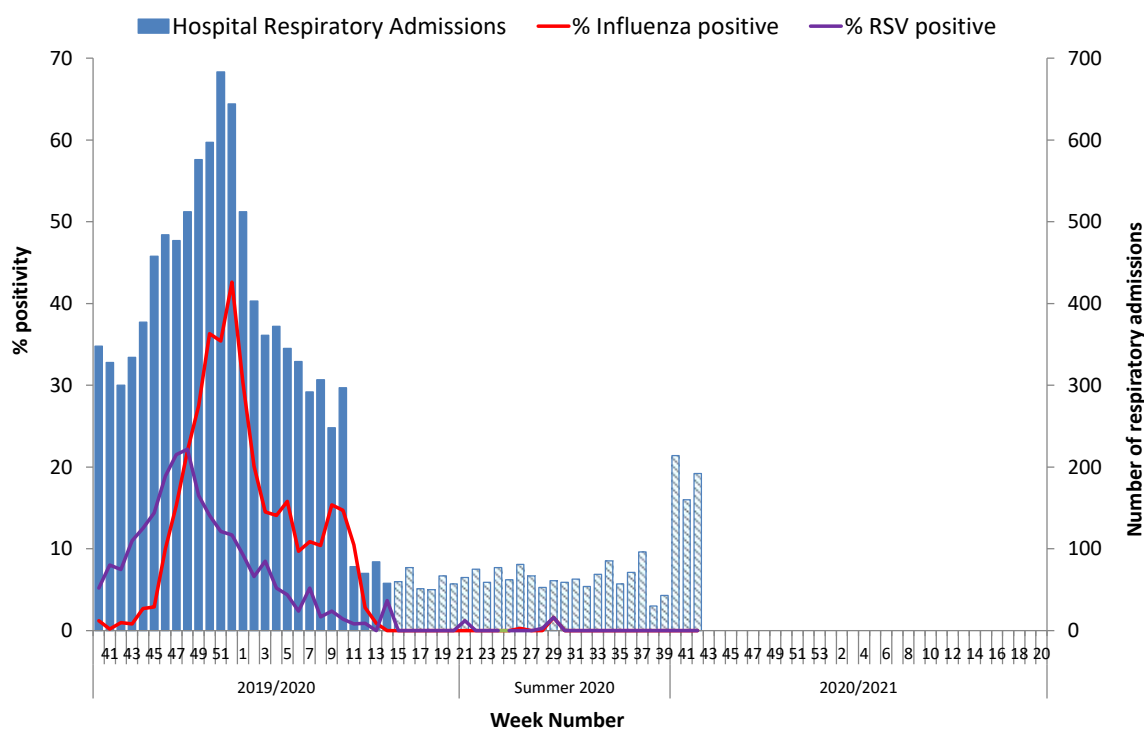


Figure 6: Number of respiratory admissions reported from the sentinel hospital network and % positivity for influenza and RSV (reported by the NVRL) by week and season. *Source: Departments of Public Health - Sentinel Hospital Network & NVRL. Weeks with missing sentinel hospital data are represented 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 40-42 2020.
- During week 42 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 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 40-42 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) have 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 12 October 2020, WHO reported that globally, influenza activity remained at lower levels than expected for this time of the year, though increased detections were reported in some countries. In the temperate zones of the southern hemisphere, the influenza season remained low or below baseline. Despite continued or even increased testing for influenza in some countries in the southern hemisphere, very few influenza detections were reported. In the temperate zone of the northern hemisphere, influenza activity remained below inter-seasonal levels. In South East Asia, increased influenza detections were reported in Cambodia and Lao People's Democratic Republic.

In the European region, of 107 specimens from sentinel primary health care settings tested for influenza viruses in week 41 2020, all were negative for influenza. Of 4673 non-sentinel specimens tested for influenza viruses, 11 (0.2%) tested positive for influenza ((4 A unsubtype, 3 A(H3), 2 A(H1)pdm09 and 2 type B viruses-not ascribed to a lineage). There were no hospitalised laboratory-confirmed influenza cases for week 41 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

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