

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 8 2021 (22th – 28th February 2021)



 **Intensive Care Society of Ireland**

Summary

There was no evidence of influenza viruses circulating in the community in Ireland during week 8 2021 (week ending 28/02/2021) or during week 40 2020 to week 7 2021. Rhinovirus and enterovirus positive detections continue to be reported throughout the 2020/2021 season. One RSV hospitalised paediatric case was notified during week 8 2021. 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 16.6/100,000 population in week 8 2021, compared to an updated rate 11.5/100,000 population in week 7 2021.
 - The sentinel GP ILI consultation rate has been below the Irish baseline threshold (18.1/100,000 population) for three continuous weeks.
 - The sentinel GP ILI consultation rates increased in the 15-64 and ≥65 year age groups and decreased in those aged <15-years during week 8 2021.
 - 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:** 433 (5.0% of total calls; N=8687) self-reported cough calls were reported by a network of GP Out-of-Hours (OOHs) services during week 8 2021, the number of self-reported cough calls remains stable compared to 450 (4.9% of total calls; N=9,167) in week 7 2021.
- **National Virus Reference Laboratory (NVRL):**
 - Of 1,412 sentinel GP ILI specimens and 2,365 non-sentinel respiratory specimens tested for influenza and RSV this season to date, no positive influenza or RSV detections were reported by the NVRL.
 - Rhinovirus/enterovirus positive detections continue throughout the 2020/2021 season. Sporadic detections of adenovirus, human metapneumovirus and bocavirus were also reported this season.
- **Influenza notifications:** No confirmed influenza cases were notified during the 2020/2021 season to date.
- **RSV notifications:** One paediatric hospitalised RSV case was notified during week 8 2021, bringing the season total to three cases.
- **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 28/02/2021, 1,242,346 influenza vaccinations were provided by GPs and Pharmacists.
- **International:** In the European Region (latest available data up to 21/02/2021), 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 8 2021 (week ending 28/02/2021), 46 influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 16.6/100,000 population, compared to the updated rate of 11.5/100,000 during week 7 2021 (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 below the Irish baseline threshold level (18.1/100,000 population) for three consecutive weeks (weeks 6-8 2021) and was previously above the baseline threshold for the 11 consecutive weeks (weeks 48 2020 – 5 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 consultation rates increased in the ≥65 year age group to 29.6/100,000, from an updated rate of 7.4/100,000 in week 7 2021. The 15-64 year age group also increased to 18.7/100,000, from 15.0/100,000. The age specific ILI rate in those aged <15 years remained low and decreased to 1.7/100,000 in week 8 2021, from 3.4/100,000 in week 7 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

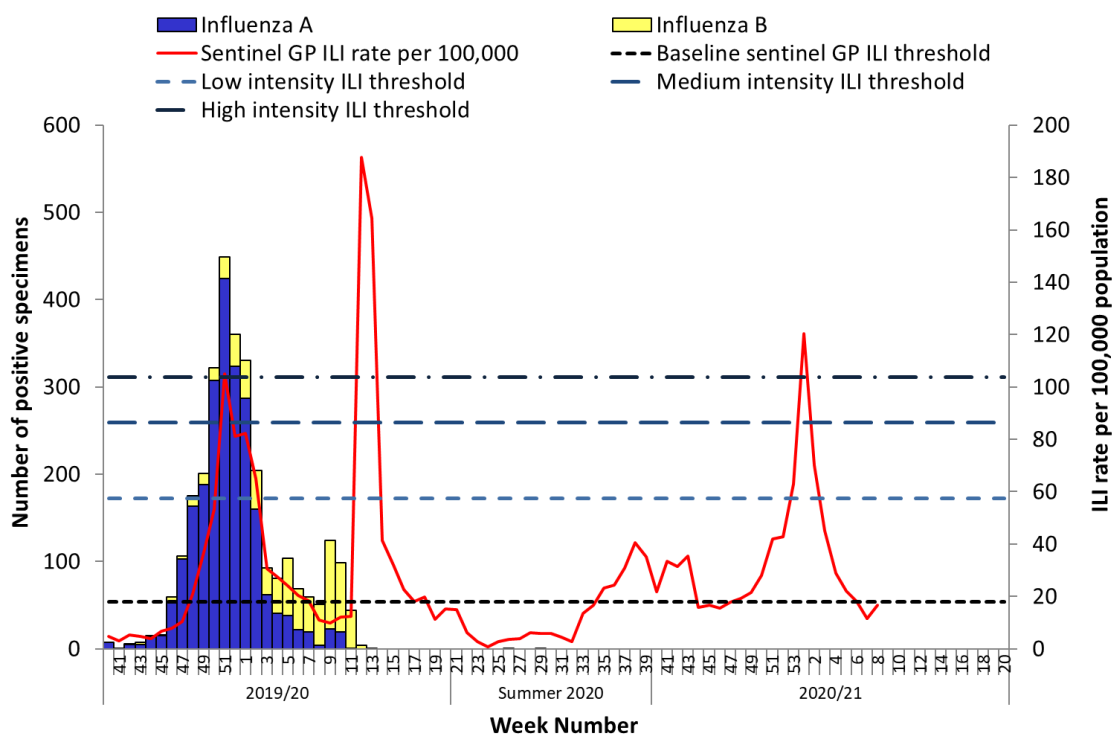


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by week and season. *Source: ICGP and NVRL*

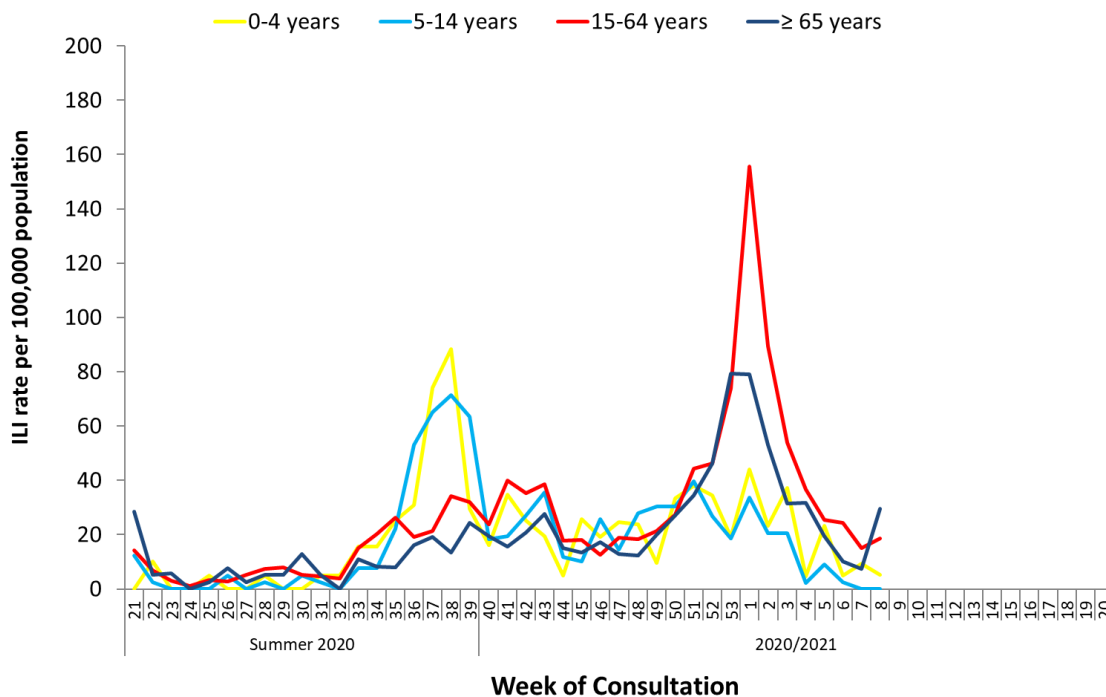


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week of phone consultation during the summer of 2020 and the 2020/2021 influenza season to date. *Source: ICGP.*

| 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 |
| All Ages | 21.9 | 33.5 | 31.4 | 35.3 | 15.7 | 16.8 | 15.6 | 17.7 | 19.2 | 21.6 | 28.1 | 41.9 | 42.7 | 63.0 | 120.4 | 70.2 | 45.0 | 28.9 | 22.1 | 18.0 | 11.5 | 16.6 |
| <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 | 37.1 | 21.4 | 26.0 | 3.1 | 13.8 | 3.2 | 3.1 | 1.7 |
| 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 | 89.4 | 53.9 | 36.6 | 25.3 | 24.4 | 15.0 | 18.7 |
| ≥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 | 78.9 | 53.1 | 31.4 | 31.8 | 19.4 | 10.2 | 7.4 | 29.6 |
| Number of reporting practices (N=60) | 51 | 55 | 55 | 56 | 57 | 54 | 58 | 57 | 58 | 58 | 58 | 58 | 58 | 58 | 56 | 58 | 58 | 55 | 57 | 54 | 56 | 53 |

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 40 2020 – week 8 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 figure 3). 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 1412 sentinel GP ILI specimens and 2365 non-sentinel respiratory specimens tested for influenza and RSV this season to date, no positive influenza or RSV detections were reported by the NVRL (Table 2).
- 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 8 2021, Rhinovirus/enterovirus detections were at 3.8% (2/53), a decrease compared to 7.6% (5/66) during week 7 2021. Sporadic detections of adenovirus, hMPV, and bocavirus were reported during the 2020/2021 season to date.

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 week 8 2021 and the 2020/2021 season to date. *Source: NVRL*

| Week | Specimen type | Total tested | Influenza | | RSV | |
|-----------|--------------------------|--------------|-----------------|------------|-----------------|------------|
| | | | Number positive | % positive | Number positive | % positive |
| 8 2021 | Sentinel GP ILI referral | 40 | 0 | 0.0 | 0 | 0.0 |
| | Non-sentinel | 53 | 0 | 0.0 | 0 | 0.0 |
| | Total | 93 | 0 | 0.0 | 0 | 0.0 |
| 2020/2021 | Sentinel GP ILI referral | 1412 | 0 | 0.0 | 0 | 0.0 |
| | Non-sentinel | 2365 | 0 | 0.0 | 0 | 0.0 |
| | Total | 3777 | 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 week 8 2021 and the 2020/2021 season to date. *Source: NVRL*

| Week | Total tested | Adenovirus | % Adenovirus | Rhino/enteroviruses | % Rhino/enterovirus | Bocavirus | % Bocavirus | hMPV | % hMPV |
|-----------|--------------|------------|--------------|---------------------|---------------------|-----------|-------------|------|--------|
| 8 2021 | 53 | 0 | 0.0 | 2 | 3.8 | 1 | 1.9 | 0 | 0.0 |
| 2020/2021 | 2365 | 100 | 4.2 | 493 | 20.8 | 9 | 0.4 | 13 | 0.5 |

* 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.

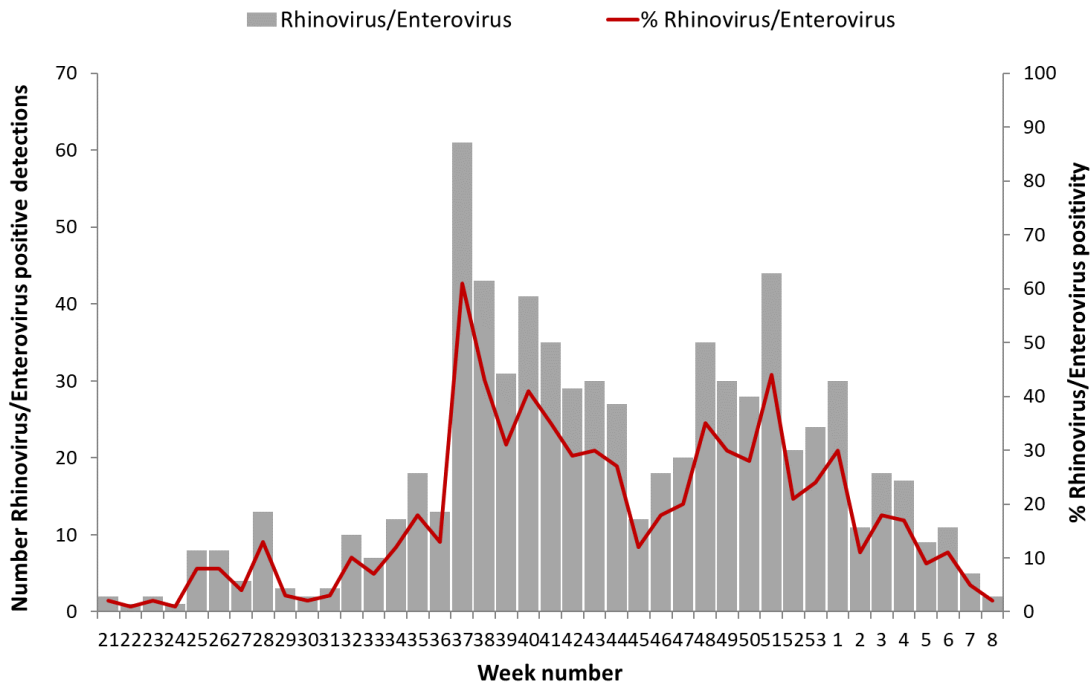


Figure 3: Number and percentage of non-sentinel Rhinovirus/Enterovirus positive specimens detected by the NVRL during the 2020/2021 season. *Source: NVRL.*

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 between weeks 40 2020 and 8 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 for week 8 2021 at 0.7% (52/7958), remaining stable compared to 0.5% (41/8369) during week 7 2021 (Figure 4).
- 433 (5.0% of total calls; N=8687) self-reported cough calls were reported by a network of GP OOHs services during week 8 2021 (figures 5 & 6), this compares to 450 (4.9% of total calls; N=9167) in week 7 2021. Five GP OOHs services reported data during week 8 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.

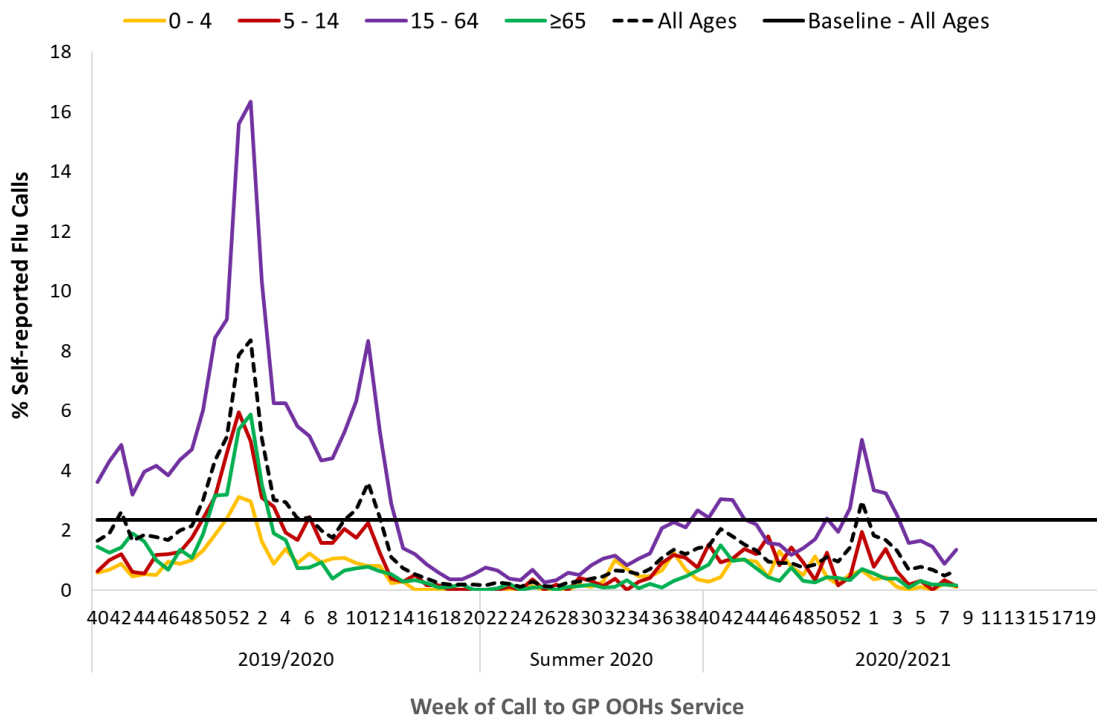


Figure 4: Percentage of self-reported Influenza/ILI calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % Influenza/ILI calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services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

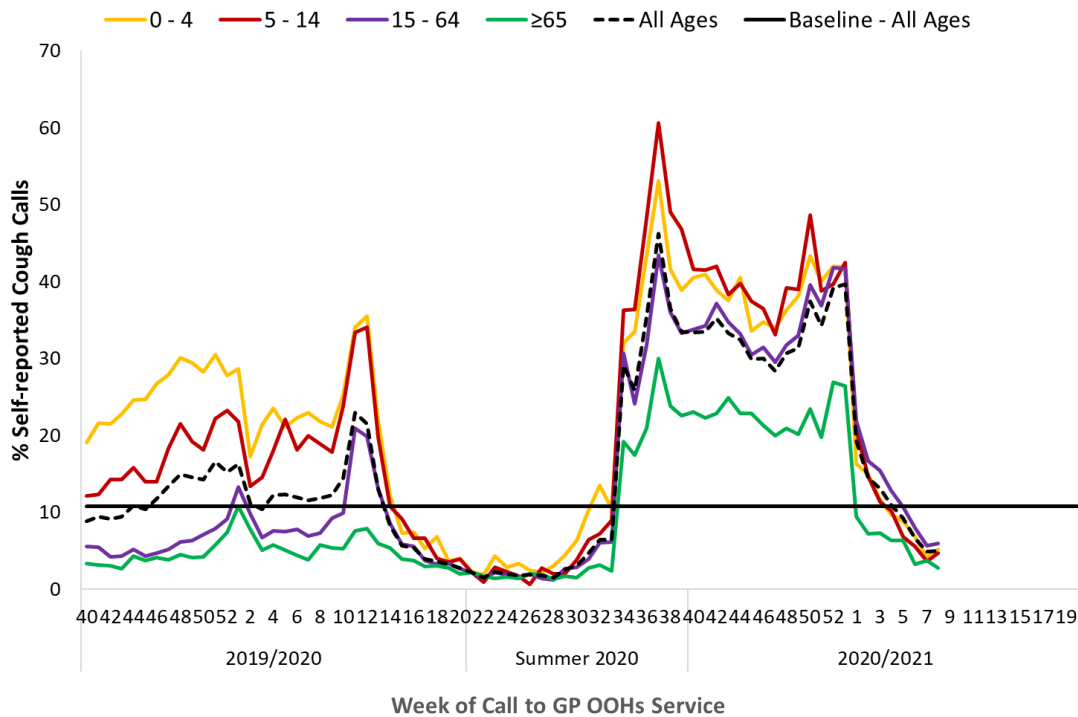


Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to Out-of-Hours GP Co-ops by week and season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland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

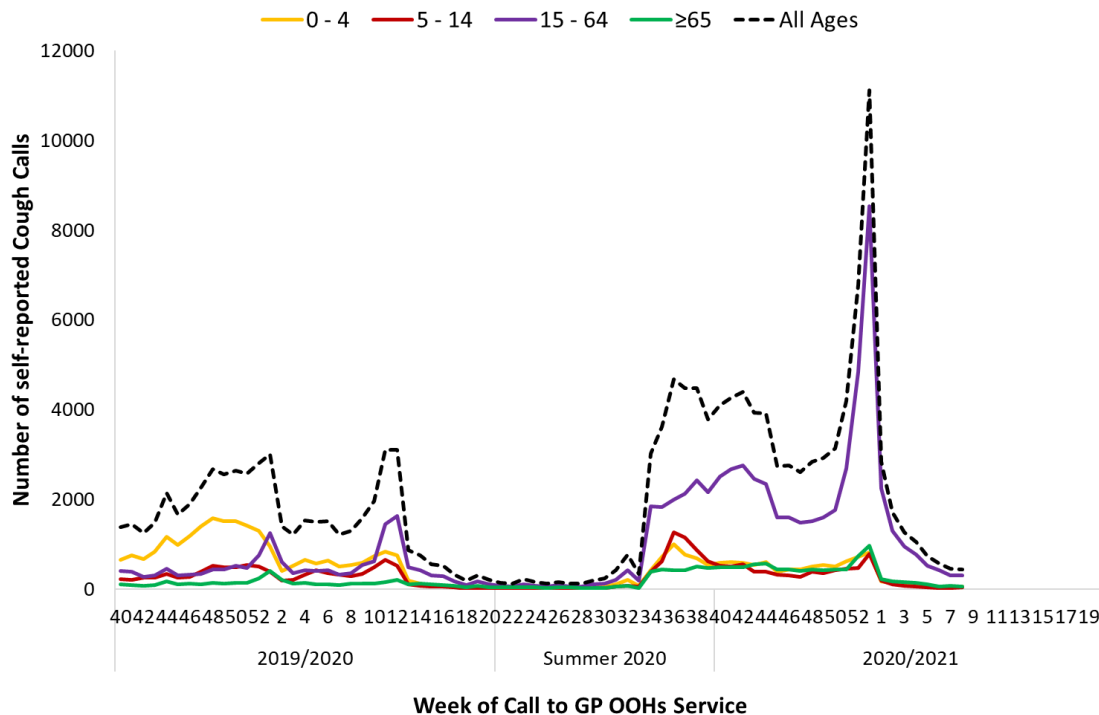


Figure 6: Number of self-reported COUGH calls for all ages and by age group to Out-of-Hours GP Co-ops by week and season.
 Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

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 during week 40 2020 to 8 2021. One hospitalised paediatric RSV case was notified during week 8 2021, bringing the season total to three RSV cases one during week 42 2020, one during week 3 2021 and one during week 8 2021).

6. Influenza Hospitalisations

No confirmed influenza hospitalised cases were notified to HPSC during weeks 40 2020 to 8 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 during weeks 40 2020 to 8 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 8 2021, with a median of 193 respiratory admission per week reported during this period. The number of reported respiratory admissions was 101 in week 8 2021. The COVID-19 pandemic has caused disruption to reporting from the sentinel hospital network, with five of the eight hospital reporting in week 8 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.

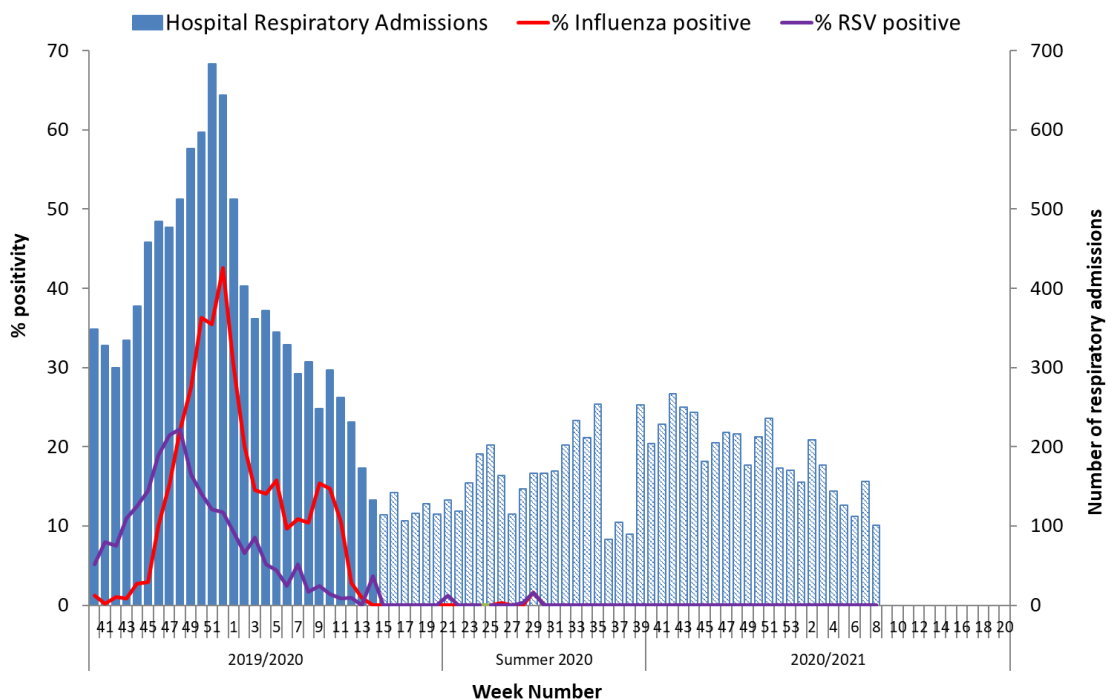


Figure 7: Number of respiratory admissions reported from the sentinel hospital network and % positivity for influenza and RSV (reported by the NVRL) by week and season. *Source: Departments of Public Health - Sentinel Hospital Network & NVRL. Weeks with missing sentinel hospital data are represented 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 in notified influenza cases during weeks 40 2020- 8 2021.
- The latest data on excess all-cause deaths in Ireland available for the week ending 28th February 2021 (week 8 2021) has shown that there were excess all-cause deaths observed during weeks 2-4 2021 after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm.
- During weeks 2-6 2021, excess pneumonia deaths were observed using the standardised EuroMOMO algorithm.
- As influenza viruses are not currently circulating, these excess deaths are likely due to COVID-19. 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 28/02/2021, the total number of influenza vaccinations provided by GPs and Pharmacists was 1,243,346.

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 1st March 2021, based on data up to 14th February, 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 influenza detections were reported. In tropical South America, sporadic influenza detections were reported in Colombia. In tropical Africa, influenza activity was reported in some reporting countries in Western, Middle and Eastern Africa in recent weeks. In Southern Asia, sporadic influenza detections were reported in India. In South East Asia, influenza A(H3N2) detections continued to be reported in most reporting countries. Worldwide, influenza B detections accounted for the majority of the very low numbers of detections reported. The WHO GISRS laboratories tested more than 237021 specimens between 1-14 February 2021. A total of 382 specimens were positive for influenza viruses, of which 137 (35.9%) were typed as influenza A and 245 (64.1%) as influenza B. Of the sub-typed influenza A viruses, 43 (52.4%) were influenza A(H1N1)pdm09 and 39 (47.6%) were influenza A(H3N2). Of the characterized B viruses, 1 (0.5%) belonged to the B-Yamagata lineage and 182 (99.5%) to the B-Victoria lineage.

In the European region, influenza activity remained at inter-seasonal levels during week 7 2021 (week ending 21st February 2021). 996 primary care sentinel source specimens were tested for influenza viruses and two were positive for influenza virus. Since the start of the season, of 23,757 primary care sentinel specimens that have been tested for influenza viruses, twenty-nine were positive: 18 A and 11 B viruses. During week 7 2021, 31 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: 16 A and 15 B. Since the beginning of the season, 665 of 393,149 non-sentinel specimens tested positive for influenza viruses; 335 (50.4%) A and 330 (49.6%) B. Of 64 subtyped A viruses, 27 (42.2%) were A(H1)pdm09 and 37 (57.8%) were A(H3). Of 330 B viruses, only 7 were ascribed to a lineage: 6 B/Victoria and 1 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 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>

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 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

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