

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 40 2021 (4th - 10th October 2021)



 **Intensive Care Society of Ireland**

Summary – First influenza surveillance report of 2021/2022 season

There was no evidence of influenza virus circulation in Ireland during week 40 2021 (week ending 10/10/2021). Globally influenza virus detections have increased in recent weeks, albeit at low levels. Circulation of influenza viruses across Europe is anticipated in the coming weeks/months. **WHO is advising countries to remain vigilant for the likelihood of influenza circulation and to be prepared for co-circulation of SARS-CoV-2 and influenza this winter.** Respiratory syncytial virus (RSV) activity in Ireland is at higher levels than usually observed at this time of year. COVID-19 epidemiology reports are published on www.hpsc.ie.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 16.1/100,000 population during week 40 2021, an increase compared to the updated rate of 11.4/100,000 during week 39 2021. Sentinel GP ILI consultations are currently reflecting circulation of SARS-CoV-2 and other respiratory viruses (ORVs) in the community, rather than influenza viruses.
- Sentinel GP ILI consultation rates were below the Irish baseline threshold (18.1/100,000 population).
- Sentinel GP ILI age specific rates were above baseline in the 0-14-year age group (38.2/100,000) and below baseline levels in the 15-64 (10.1/100,000) and ≥65 (11.0/100,000) year age groups.

National Virus Reference Laboratory (NVRL):

- Of 41 sentinel GP and 147 non-sentinel specimens tested and reported by the NVRL during week 40 2021, all were negative for influenza.
- During the summer period (weeks 21-39 2021), one influenza A positive detection was reported during week 26 2021.
- Respiratory syncytial virus (RSV) positivity (non-sentinel sources) is elevated for this time of year, at 12.9% (19/147) during week 40 2021.
- Rhinovirus/enterovirus positive detections (non-sentinel sources) increased in September/October 2021, with positivity at 32.7% (48/147) during week 40 2021. Parainfluenza 3 viruses and other respiratory viruses (ORVs) are being detected at lower levels.
- **Influenza notifications:** No confirmed influenza cases were notified during week 40 2021. During the summer 2021 period, one confirmed influenza A imported travel related case was notified in July 2021.
- **RSV notifications:** 150 RSV cases were notified during week 40 2021, an increase compared to 101 cases notified during week 39 2021. During weeks 39 and 40 2021, 96% of notified RSV cases were in the 0-4-year age group.
- **Hospitalisations and Critical care admissions:** No confirmed influenza hospitalised or critical care cases were notified to HPSC during week 40 2021 or during the summer 2021 period.
- **Mortality:** There were no reports of deaths occurring in notified influenza cases during week 40 2021 or the summer 2021 period.
- **Outbreaks:** No influenza, RSV or acute respiratory infection (ARI-SARS-CoV-2 negative) outbreaks were notified to HPSC during week 40 2021.
- **International:** Globally, influenza detections have increased in recent weeks, albeit at levels lower than expected for this time of the year. In Europe, influenza activity is at low levels, with both influenza A and B detections reported, predominantly influenza A(H3N2).

1. GP sentinel surveillance system - Clinical Data

- During week 40 2021, 44 influenza-like illness (ILI) cases were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 16.1 per 100,000 population, an increase compared to the updated rate of 11.4 per 100,000 reported during week 39 2021 (Figure 1). Sentinel GP respiratory consultations are currently via phone consultations.
- With no laboratory confirmed influenza cases detected/notified in Ireland, sentinel GP ILI consultations are currently reflecting circulation of SARS-CoV-2 and other respiratory viruses (ORVs) in the community, rather than influenza viruses.
- The sentinel GP ILI consultation rate during week 40 2021 was below the Irish sentinel GP ILI baseline threshold (18.1/100,000 population).
- Sentinel GP ILI age specific consultation rates were above baseline in the 0-14-year age group (38.2/100,000) and below baseline levels in the 15-64 (10.1/100,000) and ≥65 (11.0/100,000) year age groups during week 40 2021 (Figure 2, Table 1).
- HPSC has reviewed the Irish sentinel baseline ILI threshold for the 2021/2022 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% indicate 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.

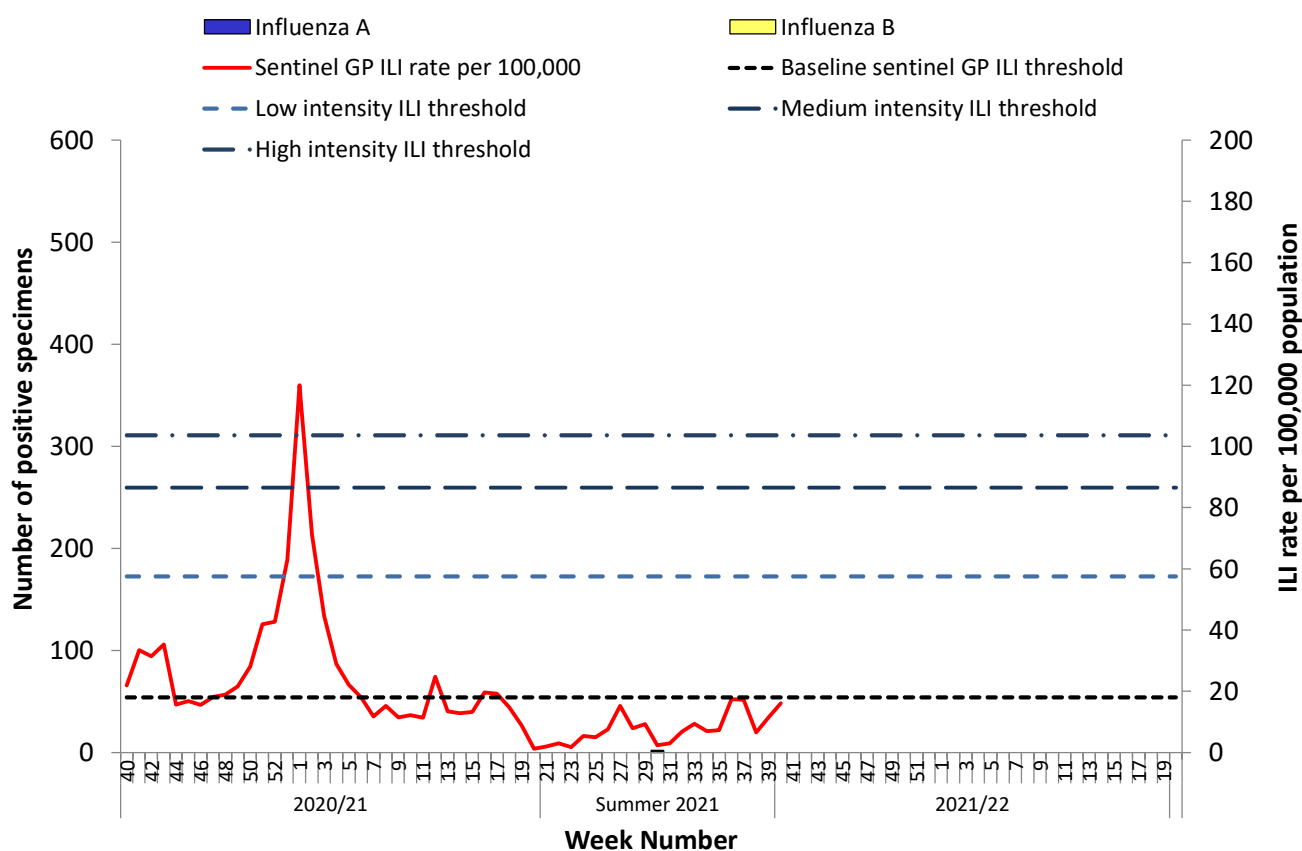


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL*

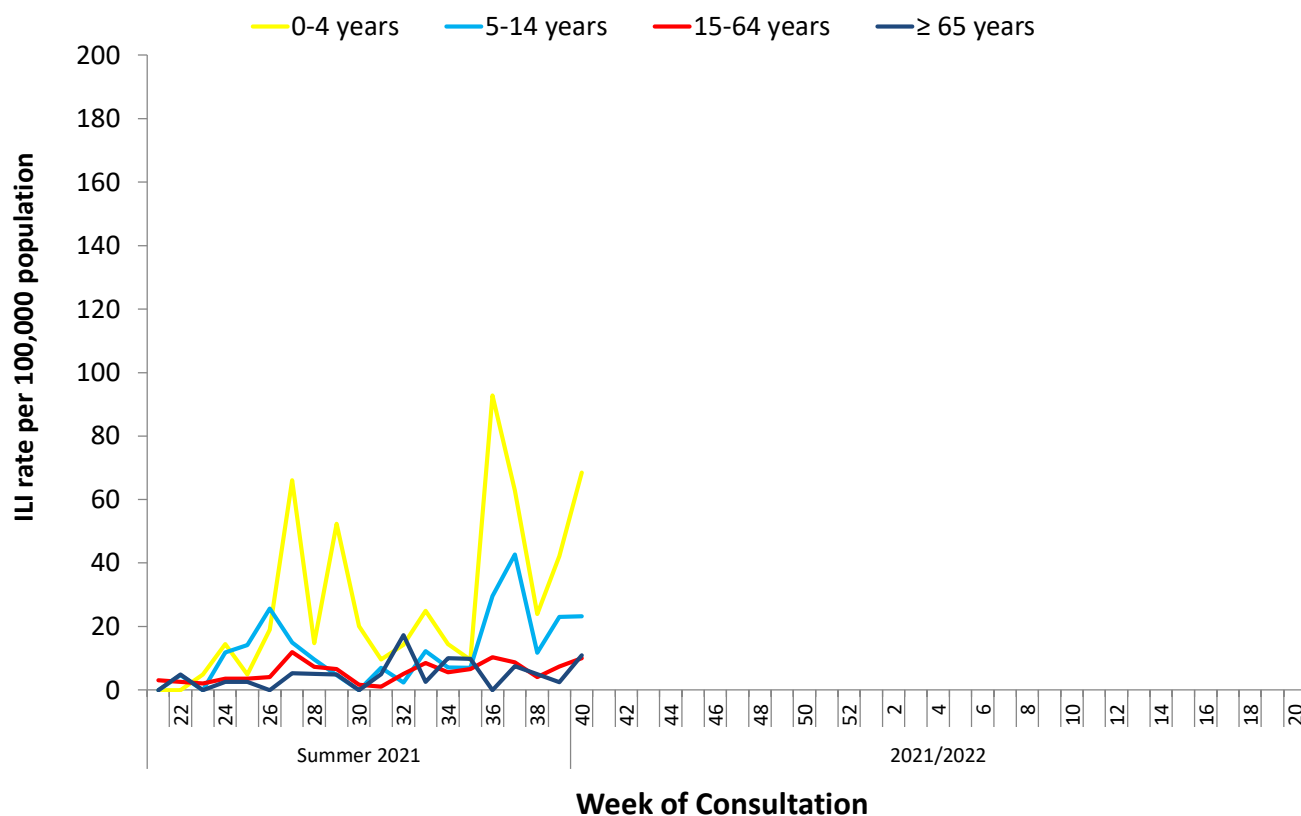


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2021 and the 2021/2022 influenza season to date. *Source: ICGP.*

Sentinel GP ILI Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary
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Age group (years)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
All Ages	2.0	3.0	1.7	5.4	5.0	7.6	15.2	7.9	9.3	2.4	3.0	6.9	9.4	7.0	7.3	17.4	17.2	6.6	11.4	16.1
<15 yrs	0.0	3.1	1.6	12.7	11.1	23.5	31.8	11.3	20.3	6.6	7.9	6.3	16.4	9.5	7.8	50.4	49.3	15.7	29.3	38.2
15-64 yrs	3.0	2.5	2.1	3.6	3.6	4.0	11.9	7.3	6.6	1.6	1.0	5.1	8.5	5.6	6.6	10.4	8.7	4.1	7.5	10.1
≥65 yrs	0.0	4.9	0.0	2.5	2.5	0.0	5.3	5.1	4.9	0.0	5.0	17.3	2.6	10.0	9.9	0.0	7.5	5.0	2.4	11.0
Reporting practices (N=60)	56	56	55	55	55	56	55	55	56	51	55	56	52	56	55	58	56	56	57	51

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 21-40 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 2021/2022 influenza season refers to sentinel GP ILI 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, Figure 3). In Ireland, virological surveillance for influenza, RSV and other respiratory viruses (ORVs) undertaken by the Irish sentinel GP network is integrated into current testing structures for COVID-19 primary care referrals.

- Of 41 sentinel GP ILI and 147 non-sentinel respiratory specimens tested and reported by the NVRL during week 40 2021, all were negative for influenza.
- During the summer period (weeks 21-39 2021), one influenza A positive detection was reported during week 26 2021.
- Respiratory syncytial virus (RSV) positivity (non-sentinel sources) is elevated for this time of year, at 12.9% (19/147) during week 40 2021 (Figure 3).
- Rhinovirus/enterovirus positive detections (non-sentinel sources) increased in September/October 2021, with positivity at 32.7% (48/147) during week 40 2021. Parainfluenza 3 viruses and other respiratory viruses (ORVs) are being detected at lower levels (Table 3).

Table 2: Number of sentinel GP ILI and non-sentinel* respiratory specimens tested by the NVRL and positive influenza results, for week 40 2021. *Source: NVRL*

Week	Specimen type	Total tested	Influenza		RSV	
			Number positive	% positive	Number positive	% positive
40 2021	Sentinel GP ILI referral	41	0	0.0	4	9.8
	Non-sentinel	147	0	0.0	19	12.9
	Total	188	0	0.0	23	12.2

Table 3: Number of non-sentinel specimens tested by the NVRL for other respiratory viruses (ORVs) and positive results, for week 40 2021 (N=147). *Source: NVRL*

Virus	Week 40 2021 (N=147)	
	Total positive	% positive
Rhino/enterovirus	48	32.7
Adenovirus	0	0.0
Bocavirus	3	2.0
Human metapneumovirus (hMPV)	0	0.0
Parainfluenza virus type 1 (PIV-1)	0	0.0
Parainfluenza virus type 2 (PIV-2)	0	0.0
Parainfluenza virus type 3 (PIV-3)	12	8.2
Parainfluenza virus type 4 (PIV-4)	1	0.7

* 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.

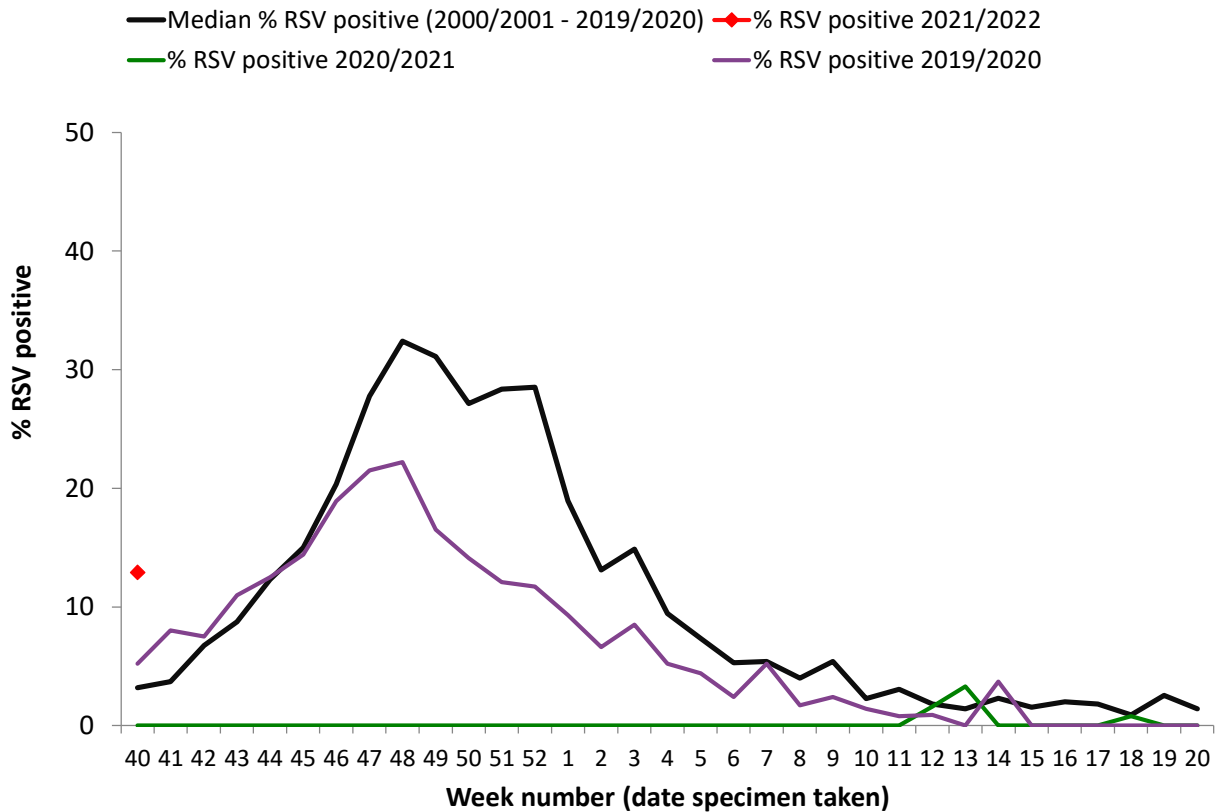


Figure 3: NVRL non-sentinel RSV positivity by week specimen was taken for 2021/2022 (week 40 2021 in red), 2020/2021 and 2019/2020 seasons compared to median % RSV positivity (2000/2001-2019/2020). *Source: NVRL.*

3. Regional Influenza Activity by HSE-Area

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

As no confirmed influenza viruses have been detected in Ireland during week 40 2021, **no confirmed influenza activity was reported for any HSE-Area.**

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/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.

Reporting of GP Out-Of Hours surveillance data will resume for the week 41 2021 surveillance report.

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 cases were notified during week 40 2021. During the summer 2021 period (weeks 21-39 2021), one confirmed influenza A imported travel related case was notified in July 2021.
- RSV notifications increased throughout August, September and October 2021 and are at higher levels than usually observed for this time of year.
- 150 RSV cases were notified during week 40 2021, an increase compared to 101 cases notified during week 39 2021 (Figure 4). During weeks 39 and 40 2021, 96% of notified RSV cases were in the 0-4-year age group.

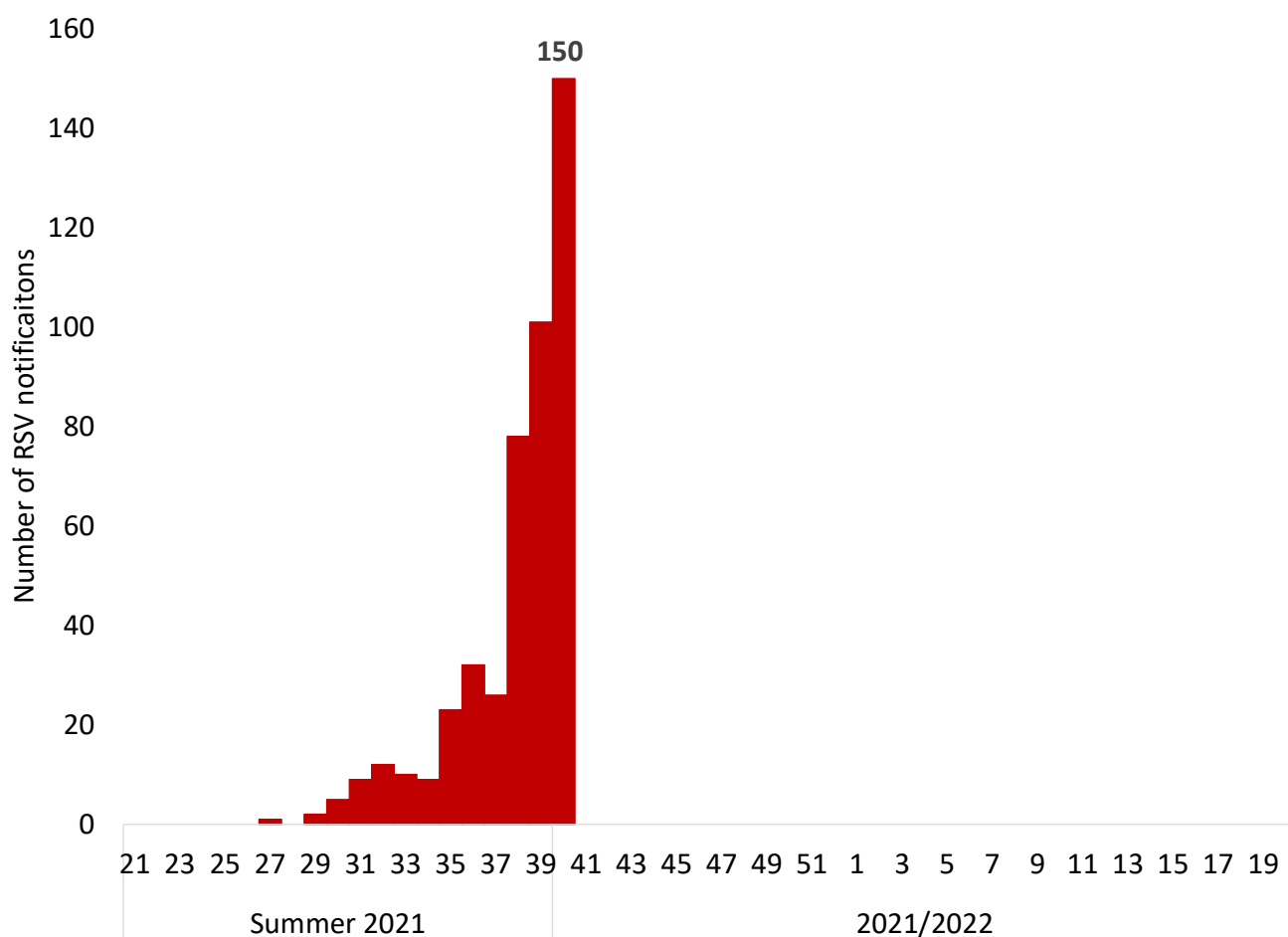


Figure 4: Number of confirmed RSV cases notified by week of notification and season. Source: Ireland's Computerised Infectious Disease Reporting System.

6. Influenza Hospitalisations

No confirmed influenza hospitalised cases were notified to HPSC during week 41 2021 or during the 2021 summer period.

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 week 40 2021 or during the summer 2021 period.

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 deaths occurring in notified influenza cases occurring during week 40 2021 or during the 2021 summer period.
- Inclusion of excess all-cause mortality data in this report will resume in the week 41 2021 report.

9. 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 week 40 2021. During the summer 2021 period, three ARI (SARS-CoV-2 negative) outbreaks in nursing homes/long-term care facilities were notified – one associated with parainfluenza virus type 3, one with seasonal coronavirus (OC43) and rhinovirus/enterovirus and one outbreak with no pathogen detected.

10. International Summary

Globally, influenza detections have increased in recent weeks, albeit at levels lower than expected for this time of the year. In Europe, influenza activity is at low levels, with both influenza A and B detections reported, predominantly influenza A(H3N2). Circulation of influenza viruses across Europe is anticipated in the coming weeks/months. WHO are advising countries to remain vigilant for the likelihood of influenza circulating and to be prepared for co-circulation of SARS-CoV-2 and influenza. See [ECDC](#) and [WHO](#) influenza surveillance reports for further information.

- Further information on influenza is available on the following websites:
 - 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>

11. 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/teams/global-influenza-programme/vaccines/who-recommendations>

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

Acknowledgements

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