Influenza Surveillance in Ireland – Weekly Report

Influenza Week 15 2022 (11th – 17th April 2022)

Summary

Most indicators of influenza activity show signs of continued declining activity in Ireland during week 15 2022, with community and hospitalised influenza cases decreasing. Influenza A(H3) viruses are the predominant influenza viruses circulating in Ireland. It is recommended that antivirals be used for the treatment and prophylaxis of influenza in clinical at-risk groups and in those with severe influenza disease.

- Influenza-like illness (ILI): The sentinel GP influenza-like illness (ILI) consultation rate decreased to 6.9/100,000 population during week 15 2022, compared to the updated rate of 12.5/100,000 during week 14 2022. Sentinel GP ILI consultation rates during week 15 2022 were below the Irish baseline threshold (18.1/100,000 population). The ILI rate has been below baseline for two consecutive weeks. Sentinel GP ILI consultations are currently reflecting the co-circulation of influenza, SARS-CoV-2 and other respiratory viruses.
- Sentinel GP ILI consultation rates were below age specific thresholds for all age groups during week 15 2022.
- GP Out of Hours: The proportion of self-reported 'flu' calls to GP Out-of-Hours services remained below baseline levels, at 0.5% (87/16,395) during week 15 2022, compared to 0.6% (86/13,925) during week 14 2022. The proportion of cough calls increased to 40.3% (6603/16,395) during week 15 2022, compared to 38.5% (5365/13,925) during week 14 2022.
- National Virus Reference Laboratory (NVRL): The influenza positivity rate reported by the NVRL for sentinel GP ILI and non-sentinel respiratory specimens tested was 6.3% (7/112) during week 15 2022 and 8.0% (16/199) during week 14 2022, a lag time with testing and reporting is noted. Of the 23 influenza positive detections reported from the NVRL during weeks 14 and 15 2022, 22 were A(H3) and one A(H1)pdm09. For the 2021/2022 season (weeks 40 2021–15 2022), of 1,605 sentinel GP ILI specimens and 5,554 non-sentinel respiratory specimens tested, 329 (4.6%) were positive for influenza: 318 A(H3), 4 A(H1)pdm09, 5 A (not subtyped) and 2 B.
- Two RSV positive samples were detected from sentinel GP ILI or non-sentinel sources in weeks 14 and 15 2022. Rhinovirus/enterovirus, human metapneumovirus and other respiratory viruses continue to circulate.
- Influenza and RSV notifications: 65 laboratory confirmed influenza cases - 2 A(H3) and 61 A (not subtyped) 1 influenza type unknown and 1 influenza B were notified during week 15 2022. During weeks 40 2021-15 2022, 1,852 laboratory confirmed influenza cases were notified: 1,842 influenza A (326 A(H3), 5 A(H1)pdm09 and 1,511 A not subtyped), 7 influenza B and 3 with influenza type not reported. Four RSV cases were notified during week 15.
- Hospitalisations: 20 laboratory confirmed influenza A (not subtyped) hospitalised cases, were notified during week 15 2022. During weeks 40 2021 – 15 2022, 424 laboratory confirmed influenza hospitalised cases were notified: 103 A(H3), 1 A(H1)pdm09 , 318 influenza A (not subtyped) and two influenza B cases.
- Critical care admissions: Two laboratory confirmed influenza cases admitted to critical care units were reported to HPSC during week 15 2022. For the 2021/2022 season, 13 laboratory confirmed influenza A cases were admitted to critical care units: 7 A (H3) and 6 A (not subtyped).
- Mortality: No deaths in notified influenza cases were reported to HPSC during week 15 2022. No excess all-cause mortality was reported during week 14 2022; data reported with one-week time lag.
- Outbreaks: No influenza outbreaks were notified to HPSC during week 15 2022.
- International: 10 of the 38 countries in the European Region reported widespread influenza activity during week 14 2022. Both type A and B viruses were detected with A(H3) viruses being dominant across all monitoring systems.

1. GP sentinel surveillance system - Clinical Data

- During week 15 2022, 19 influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 6.9/100,000 population, a decrease compared to the updated rate of 8.3/100,00 during week 14 2022 (Figure 1). The sentinel GP ILI consultation rate is below the Irish sentinel GP ILI baseline threshold (18.1/100,000 population).
- Sentinel GP age specific ILI consultation rates were below age specific baseline levels for those aged <15 years (3.4/100,000), those aged 15-64 years (8.3/100,000) and those aged ≥65 years (5.4/100,000). Sentinel GP ILI consultation rates decreased in all age groups during week 15 2022 compared to week 14 2022, Figure 2 & Table 1.
- The Irish sentinel baseline ILI threshold for the 2021/2022 influenza season is 18.1/100,000 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), medium (57.5/100,000) and high (86.5/100,000) intensity ILI thresholds are shown in Figure 1. Age specific MEM threshold levels are shown in Table 1.

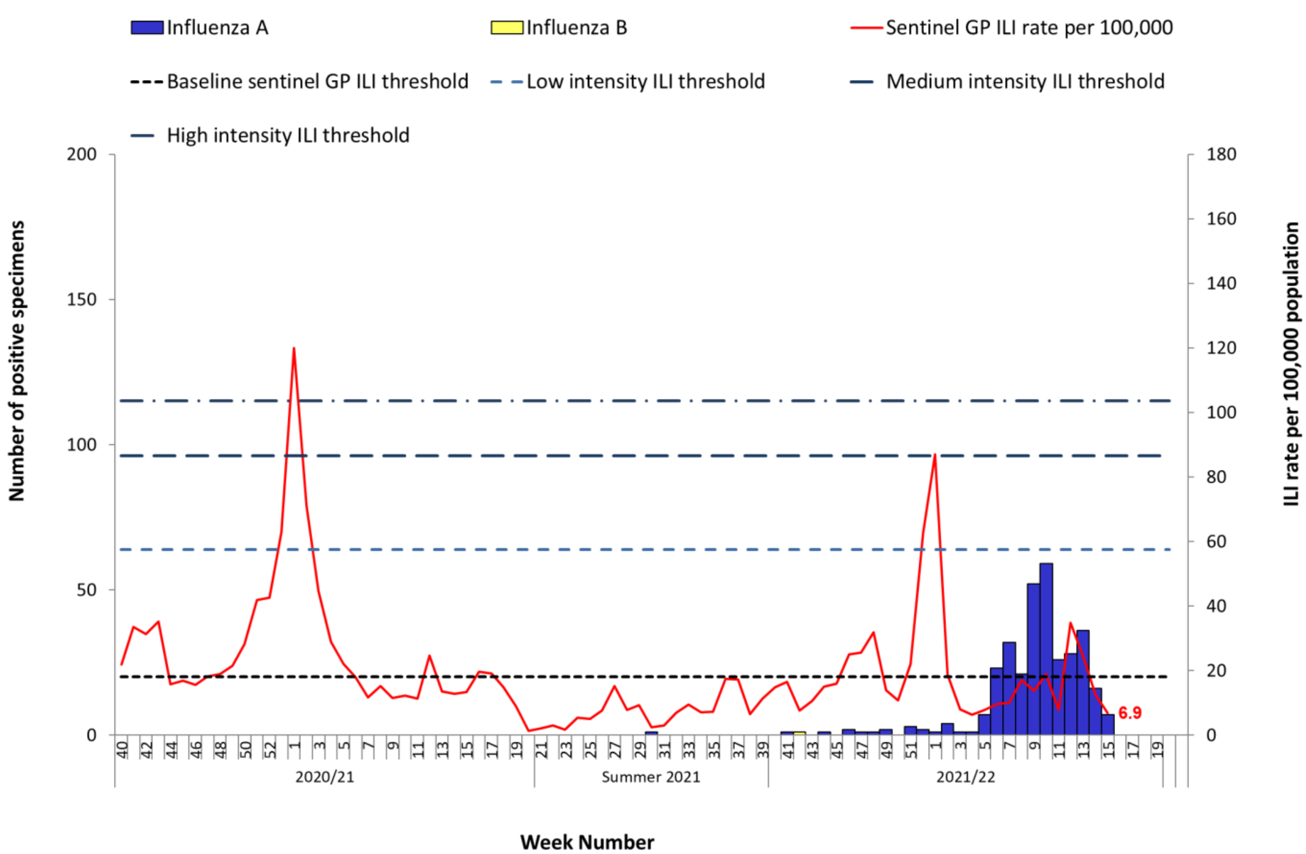

Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. The current week sentinel GP ILI consultation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

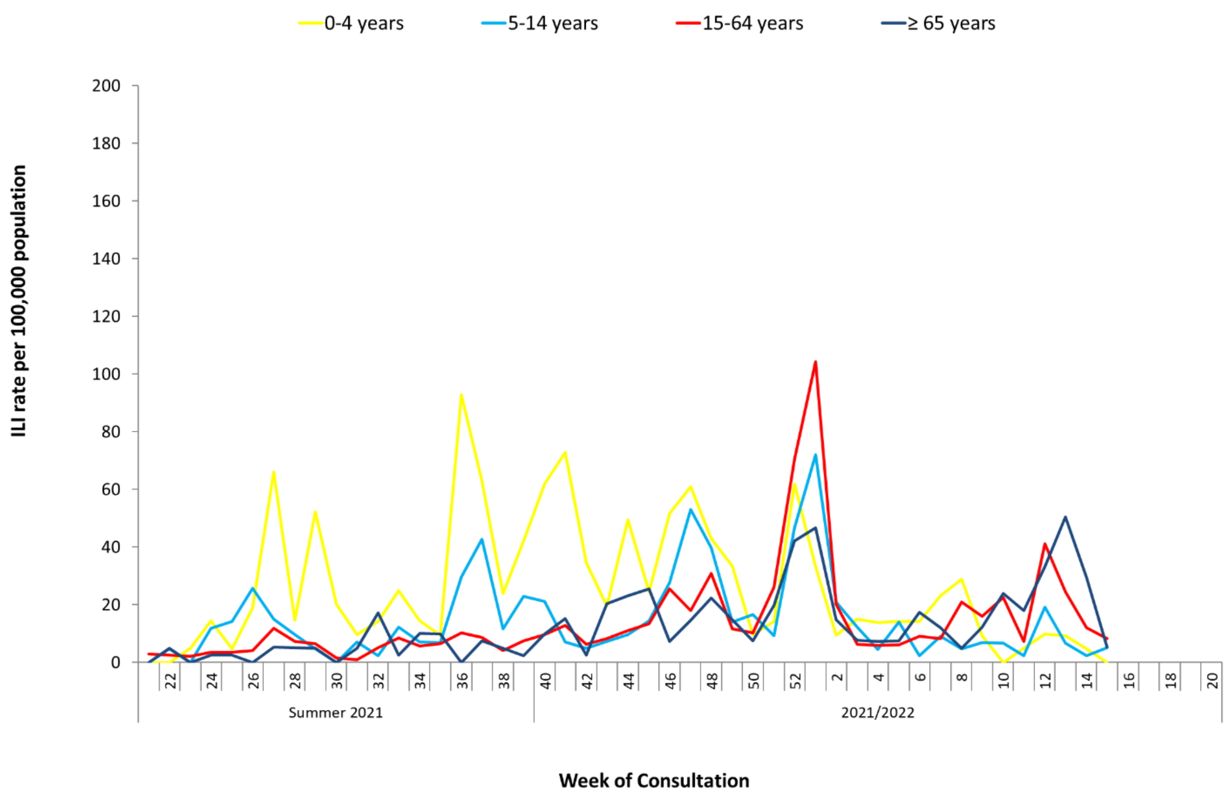

Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2021 and the 2021/2022 influenza season to date. *Source: ICGP.*

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week for the 2021/2022 season, colour coded by sentinel GP ILI age specific Moving Epidemic Method (MEM) threshold levels. *Source: ICGP.*

Sentinel GP ILI Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary

Age group (years)	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
All Ages	14.9	16.6	7.6	10.6	15.1	16.0	25.1	25.5	31.9	14.0	10.8	22.1	62.6	87.1	18.8	8.0	6.4	7.9	9.6	10.0	17.1	13.7	19.0	7.9	34.8	24.5	12.5	6.9
<15 yrs	34.6	28.8	14.6	11.3	22.8	17.7	35.5	55.6	40.8	20.5	14.4	10.9	51.7	59.3	17.2	13.2	7.6	14.1	6.3	13.7	12.7	7.7	4.6	3.3	16.2	7.6	3.1	3.4
15-64 yrs	9.6	12.9	6.3	8.4	11.0	13.5	25.4	18.0	30.9	11.7	10.3	26.2	70.4	104.3	20.1	6.4	5.9	6.1	9.1	8.4	21.0	16.0	22.6	7.4	41.2	24.6	12.1	8.3
≥65 yrs	9.9	15.2	2.6	20.4	23.1	25.4	7.3	14.6	22.3	14.9	7.6	19.7	42.1	46.8	14.8	7.8	7.2	7.4	17.4	12.0	5.0	12.2	24.0	18.0	33.2	50.5	29.5	5.4
Reporting practices (N=61)	57	56	54	55	54	55	57	57	55	54	55	56	55	56	56	55	57	55	55	57	55	56	57	55	53	57	55	48

2. Influenza and Other Respiratory Virus Detections - NVRL

The data reported in this section for the 2021/2022 influenza season refer 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. Non-sentinel respiratory specimens relate to specimens referred to the NVRL (other than sentinel GP specimens) and may include more than one specimen from each case.

During the COVID-19 pandemic, there may be a lag time receiving data for the current week from the NVRL and laboratories under the clinical governance of the NVRL, caution is advised therefore interpreting the most recent week's data. These data are continuously updated.

- During week 15 2022, 10% (3/30) sentinel GP ILI and 4.9% (4/82) non-sentinel respiratory specimens tested and reported by the NVRL were positive for influenza. The overall influenza positivity for sentinel GP ILI and non-sentinel respiratory specimens during week 15 2022 was 6.3% (7/112).
- During week 14 2022, 6.4% (3/47) sentinel GP ILI and 8.6% (13/152) non-sentinel respiratory specimens tested and reported by the NVRL were positive for influenza. The overall influenza positivity for sentinel GP ILI and non-sentinel respiratory specimens during week 14 2022 was 8.0% (16/199)
- During weeks 14 and 15 2022, 23 influenza A positive specimens were detected by the NVRL, 22 influenza A(H3) and one A(H1)pdm09.
- For the 2021/2022 season (weeks 40 2021 - 15 2022), of 1,605 sentinel GP ILI and 5,554 non-sentinel respiratory specimens tested, 329 were positive for influenza: 318 A(H3), 4 A(H1)pdm09, 5 A (not subtyped) and 2 B (one B/Victoria and one B/lineage not specified), Figures 3 & 4.
- Two RSV positive samples were detected from sentinel GP ILI and non-sentinel respiratory specimens tested and reported by the NVRL during weeks 14 and 15 2022. Table 3; Figure 5.
- Rhinovirus/enterovirus, human metapneumovirus and other respiratory virus (ORV) positive detections continue to be detected (Figure 6, Tables 4 and 5).
- The NVRL has genetically characterised and reported data on 91 positive influenza samples in Ireland to date this season. Ninety positive samples were genetically characterised as A(H3), of those 89/90 A(H3) positive samples clustered in a genetic group that is represented by the A/Bangladesh/4005/2020 virus, the predominant subgroup circulating globally. A/Bangladesh viruses are antigenically diverse to the A(H3)/Cambodia/e0826360/2020 vaccine strain which was chosen for the northern hemisphere 2021/2022 vaccine. One positive sample fell into the 3C.2a1b.1a subgroup represented by the A/Denmark/3264/2019 virus, which has been identified less frequently this season. One influenza A(H1)pdm09 virus sample was genetically characterised and belonged to the genetic subgroup, 6B.1A.5a.2, clustering in a subgroup that is represented by the 2021/2022 northern hemisphere vaccine virus strain (A/Victoria/2570/2019 (H1N1)pdm09-like virus).

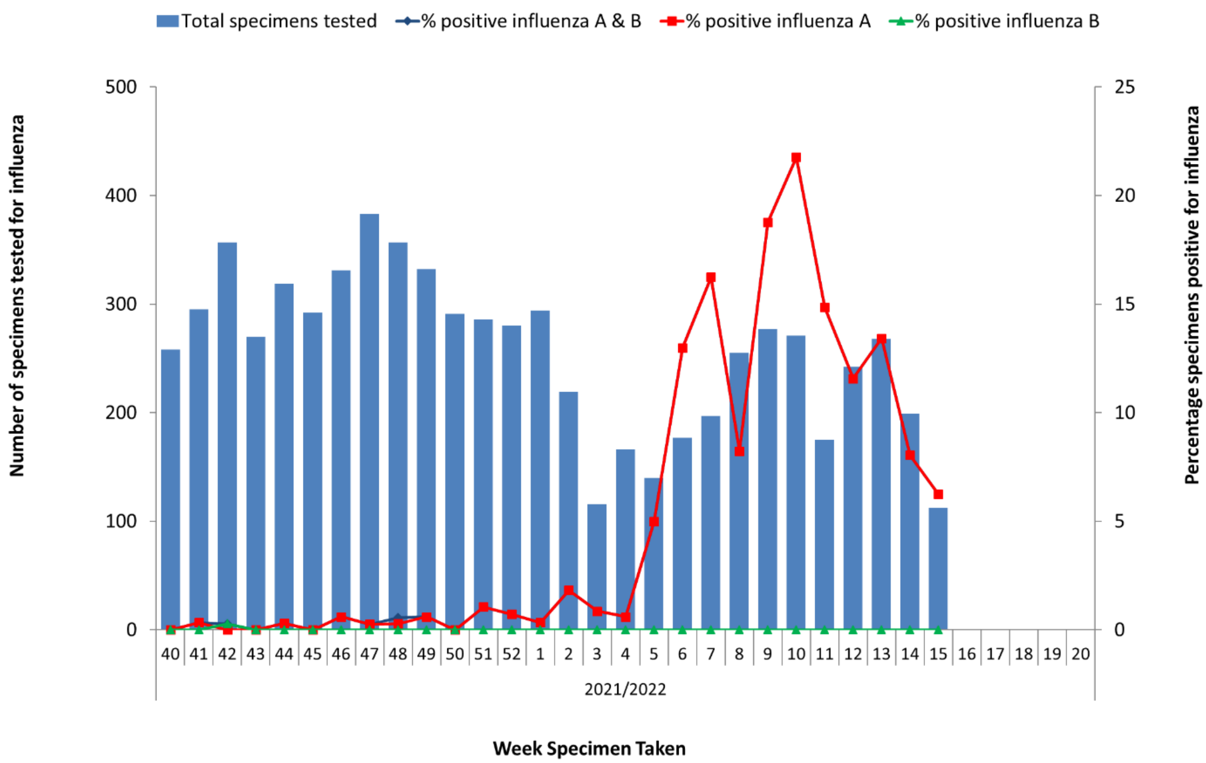

Figure 3: Number of specimens (from sentinel GP ILI and non-sentinel respiratory sources) tested by the NVRL for influenza and percentage influenza positive by week for the 2021/2022 influenza season. *Source: NVRL.*

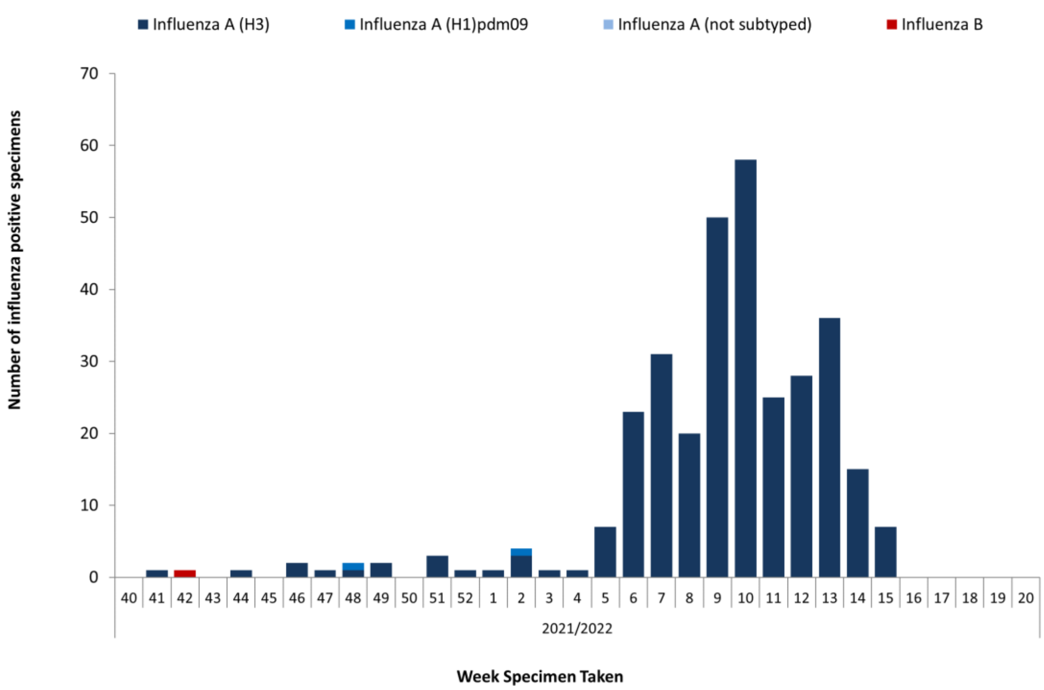

Figure 4: Number of positive influenza specimens (from sentinel GP ILI and non-sentinel respiratory sources) tested by the NVRL by influenza type/subtype and by week for the 2021/2022 influenza season. *Source: NVRL.*

Table 2: Number of sentinel GP ILI and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for week 14 and week 15 2022 and the 2021/2022 season (weeks 40 2021- 15 2022). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number influenza positive	% Influenza positive	Influenza A				Influenza B			
					A(H1)pdm09	A(H3)	A (not subtyped)	Total influenza A	B (unspecified)	B Victoria lineage	B Yamagata lineage	Total influenza B
15 2022	Sentinel GP ILI referral	30	3	10.0	0	3	0	3	0	0	0	0
	Non-sentinel	82	4	4.9	0	4	0	4	0	0	0	0
	Total	**112**	**7**	**6.3**	**0**	**7**	**0**	**7**	**0**	**0**	**0**	**0**
14 2022	Sentinel GP ILI referral	47	3	6.4	0	3	0	3	0	0	0	0
	Non-sentinel	152	13	8.6	1	12	0	13	0	0	0	0
	Total	**199**	**16**	**8.0**	**1**	**15**	**0**	**16**	**0**	**0**	**0**	**0**
2021/2022	Sentinel GP ILI referral	1605	64	4.0	1	63	0	64	0	0	0	0
	Non-sentinel	5554	265	4.8	3	255	5	263	1	1	0	2
	Total	**7159**	**329**	**4.6**	**4**	**318**	**5**	**327**	**1**	**1**	**0**	**2**

Table 3: Number of sentinel GP ILI and non-sentinel respiratory specimens tested by the NVRL and positive RSV results, for week 14 and week 15 2022 and the 2021/2022 season (weeks 40 2021-15 2022). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number RSV positive	% RSV positive	RSV A	RSV B	RSV (unspecified)
Week 15 2022	Sentinel GP ILI	30	0	0.0	0	0	0
	Non-sentinel	82	1	1.2	0	1	0
	Total	**112**	**1**	**0.9**	**0**	**1**	**0**
Week 14 2022	Sentinel GP ILI	47	0	0.0	0	0	0
	Non-sentinel	152	1	0.7	0	1	0
	Total	**199**	**1**	**0.5**	**0**	**1**	**0**
2021/2022	Sentinel GP ILI	1605	80	5.0	43	37	0
	Non-sentinel	5554	705	12.7	395	309	1
	Total	**7159**	**785**	**11.0**	**438**	**346**	**1**

Table 4: Number of **sentinel GP influenza-like illness (ILI)** specimens tested by the NVRL for influenza, SARS-CoV-2 and other respiratory viruses (ORVs) and positive results, for weeks 14-15 2022 and the 2021/2022 season (weeks 40 2021-15 2022). *Source: NVRL*

Virus	Week 15 2021 (N=30)		Week 14 2021 (N=47)		2021/2022 (N=1605)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	3	10.0	3	6.4	64	4.0
Respiratory Synctial Virus (RSV)	0	0.0	0	0.0	80	5.0
Rhino/enterovirus	6	20.0	5	10.6	176	11.0
Adenovirus	0	0.0	1	2.1	3	0.2
Bocavirus	0	0.0	0	0.0	32	2.0
Human metapneumovirus (hMPV)	2	6.7	4	8.5	46	2.9
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	0	0.0
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	2	0.1
Parainfluenza virus type 3 (PIV-3)	0	0.0	2	4.3	17	1.1
Parainfluenza virus type 4 (PIV-4)	0	0.0	0	0.0	20	1.2
SARS-CoV-2	1	3.3	14	29.8	410	25.5

Table 5: Number of **non-sentinel respiratory specimens** tested by the NVRL for other respiratory viruses (ORVs) and positive results, for week 14 and week 15 2022 and the 2021/2022 season (weeks 40 2021-15 2022). *Source: NVRL*

Virus	Week 15 2021 (N=82)		Week 14 2021 (N=152)		2021/2022 (N=5554)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	4	4.9	13	8.6	265	4.8
Respiratory Synctial Virus (RSV)	1	1.2	1	0.7	705	12.7
Rhino/enterovirus	17	20.7	33	21.7	1105	19.9
Adenovirus	2	2.4	6	3.9	93	1.7
Bocavirus	0	0.0	1	0.7	143	2.6
Human metapneumovirus (hMPV)	8	9.8	6	3.9	190	3.4
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	0	0.0
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	1	0.0
Parainfluenza virus type 3 (PIV-3)	0	0.0	1	0.7	103	1.9
Parainfluenza virus type 4 (PIV-4)	0	0.0	2	1.3	69	1.2

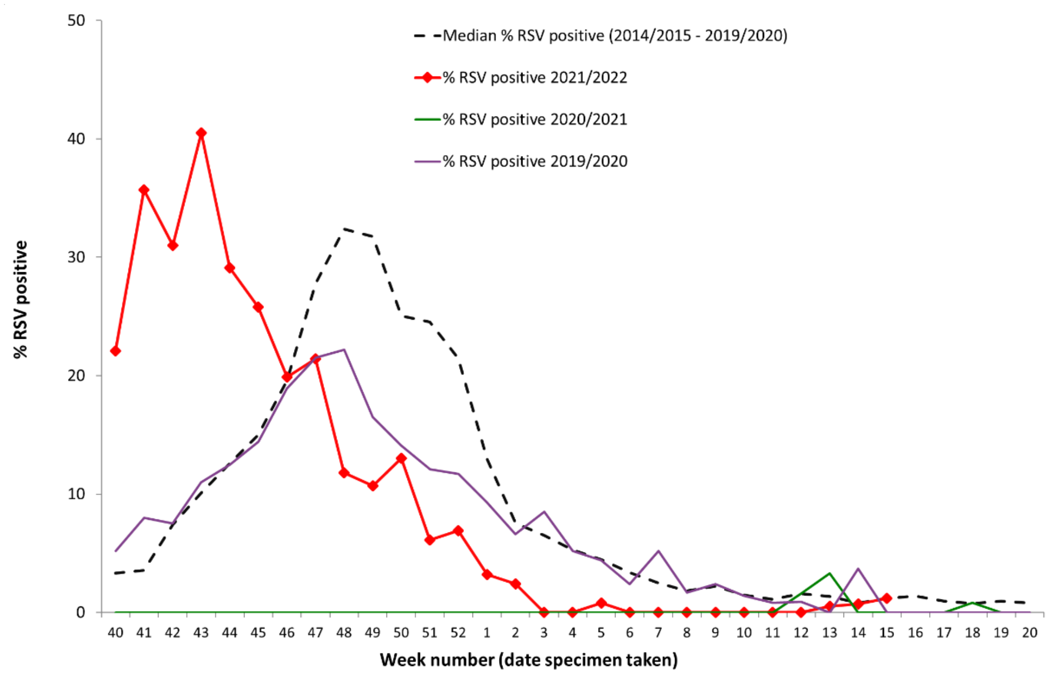

Figure 5: NVRL non-sentinel RSV positivity by week specimen was taken for 2021/2022, 2020/2021 and 2019/2020 seasons compared to median % RSV positivity (2014/2015-2019/2020). *Source: NVRL.*

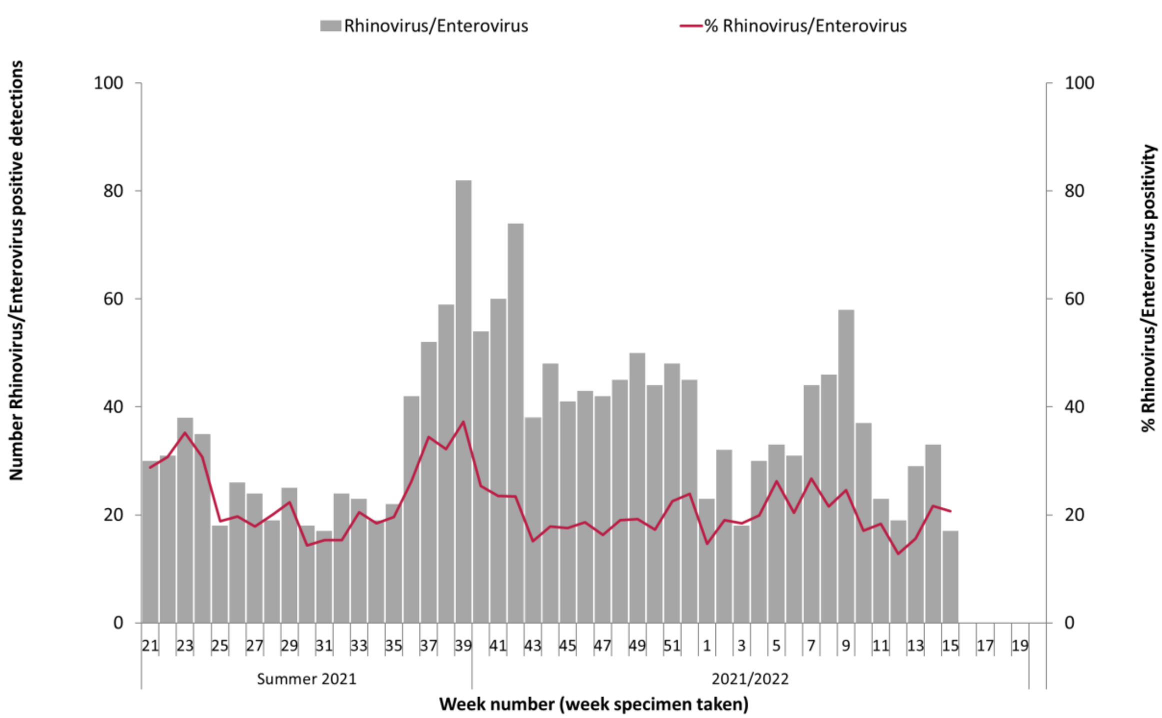

Figure 6: Number (and percentage) of non-sentinel rhinovirus/enterovirus positive detections by week specimen was taken for summer 2021 and 2021/2022 season. *Source: NVRL.*

3. Regional Influenza Activity by HSE-Area

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

Widespread influenza activity was observed in Ireland during week 14 2022, with laboratory confirmed influenza cases notified in all HSE areas: HSE-East (n=31), HSE-South (n=5), HSE=West (n=5), HSE-Midwest (n=10), HSE-Midlands (n=1), HSE-Northeast (n=4), HSE-Southeast (n=1) and HSE-Northwest (n=8).

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 (GP OOHs) 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.

- 6,603 (40.3% of total calls; N=16,395) self-reported cough calls were reported by a network of GP OOHs services during week 15 2022, which is above baseline levels (10.7%) and an increase compared to the updated rate of 38.5% (n= 5365/13,925) during week 14 2022 (Figures 7 & 8).
- 87 (0.5% of total calls; N=16,395) self-reported 'flu' calls were reported by a network of GP OOHs services during week 15 2022, a slight decrease compared to 86 (0.6% of total calls; N=13,925) self-reported 'flu' calls during week 14 2022. The baseline threshold level for self-reported 'flu' calls is 2.3%. (Figure 9).
- Five GP OOH services provided data for week 15 2022.

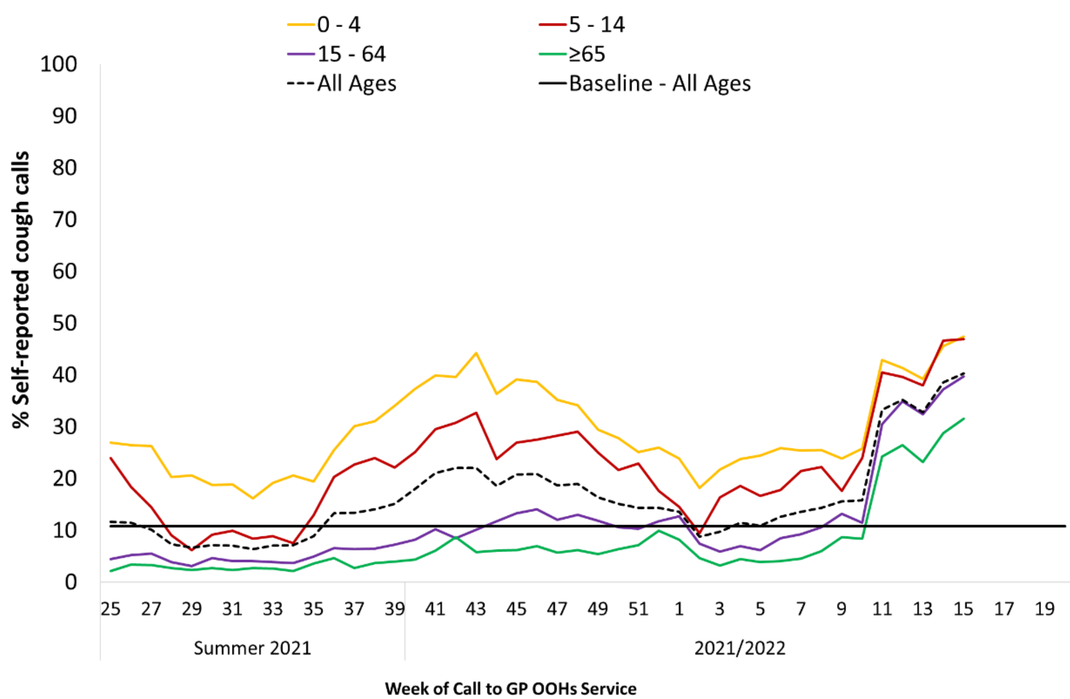

Figure 7: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, 2021-2022. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

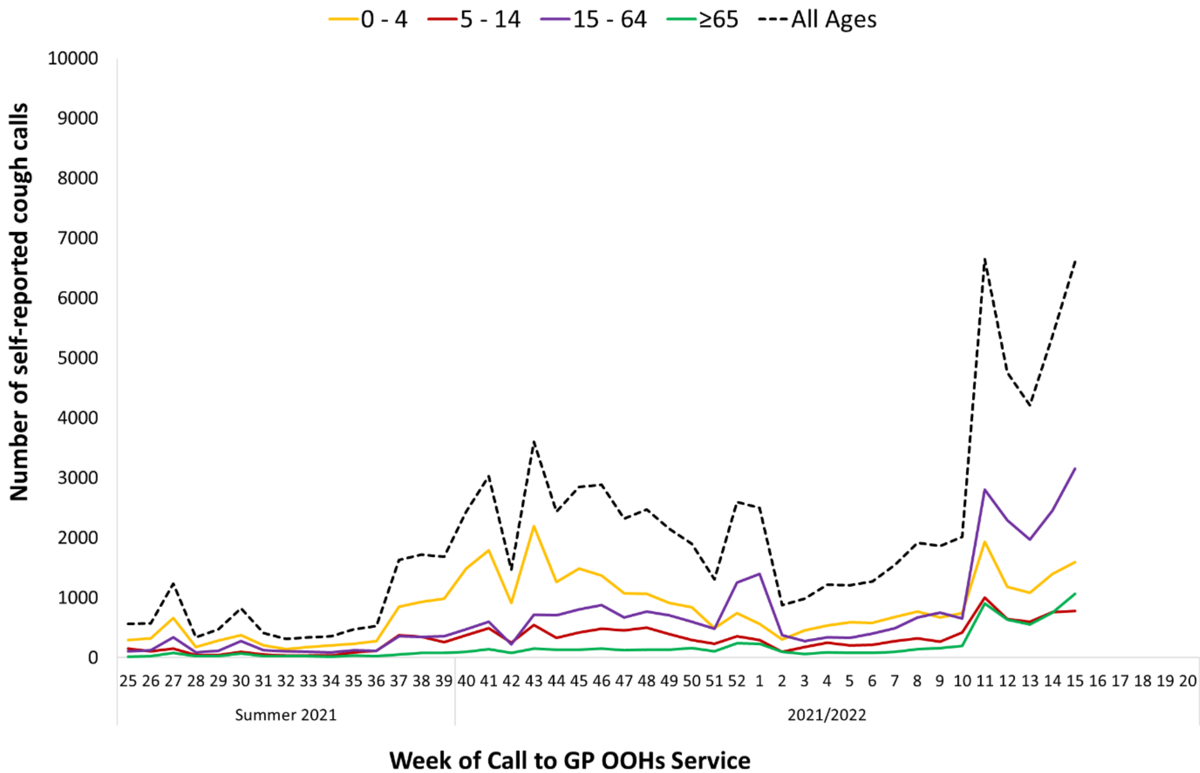

Figure 8: Number of self-reported COUGH calls for all ages and by age group to GP Out-of-Hours services by week of call, 2021-2022. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.*

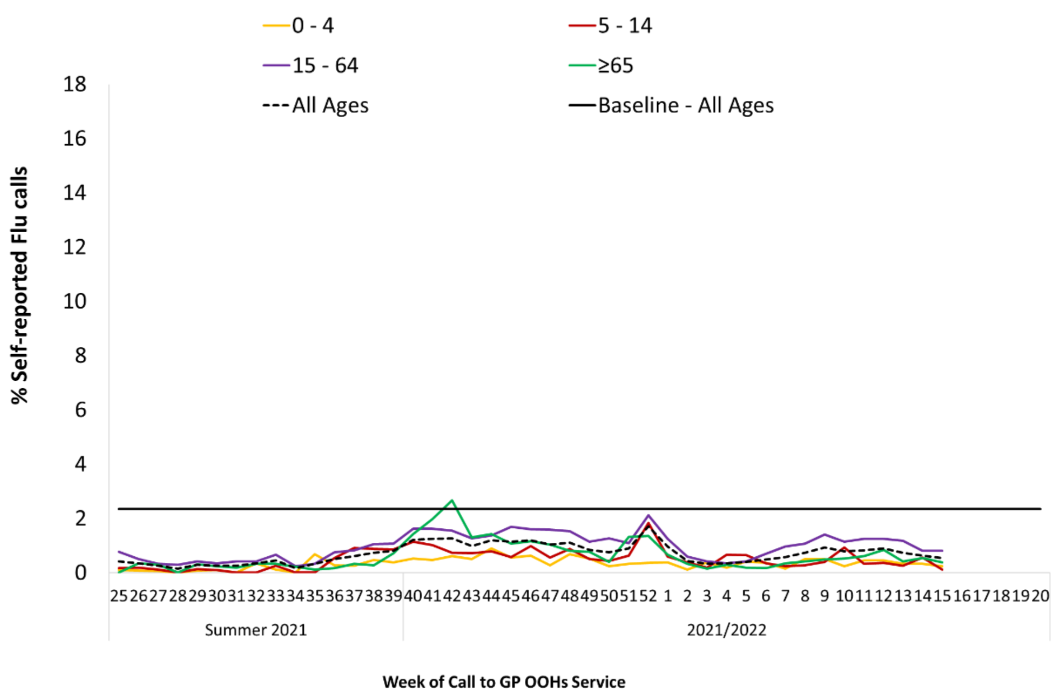

Figure 9: Percentage of self-reported FLU calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, 2021-2022. The % flu calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (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]().

- Sixty-five laboratory confirmed influenza cases - 2 A(H3) 61 A (not subtyped), 1 influenza B and 1 influenza type unknown - were notified to HPSC during week 15 2022 (Figure 10). The median age of confirmed cases notified during week 15 2022 was 37 years (interquartile range 21-66 years). Laboratory confirmed influenza cases were notified from HSE-East (n=31), HSE-South (n=5), HSE=West (n=5), HSE-Midwest (n=10), HSE-Midlands (n=1), HSE-Northeast (n=4), HSE-Southeast (n=1) and HSE-Northwest (n=8).
- 1,852 laboratory confirmed influenza cases were notified during the 2021/2022 season (weeks 40 2021 – 15 2022): 1,842 influenza A (326 A(H3), 5 A(H1)pdm09 and 1,511 A not subtyped), 7 influenza B and 3 with influenza type not reported. The median age of notified cases for the 2021/2022 season to date is 31 years (interquartile range 21-64 years).
- During week 15 2022, four RSV cases were notified; two of these cases were reported as hospital inpatients (Figures 11 & 12). It should be noted that patient type is not always reported/updated for RSV notified cases; an RSV patient may be admitted to hospital and patient type not updated on CIDR.

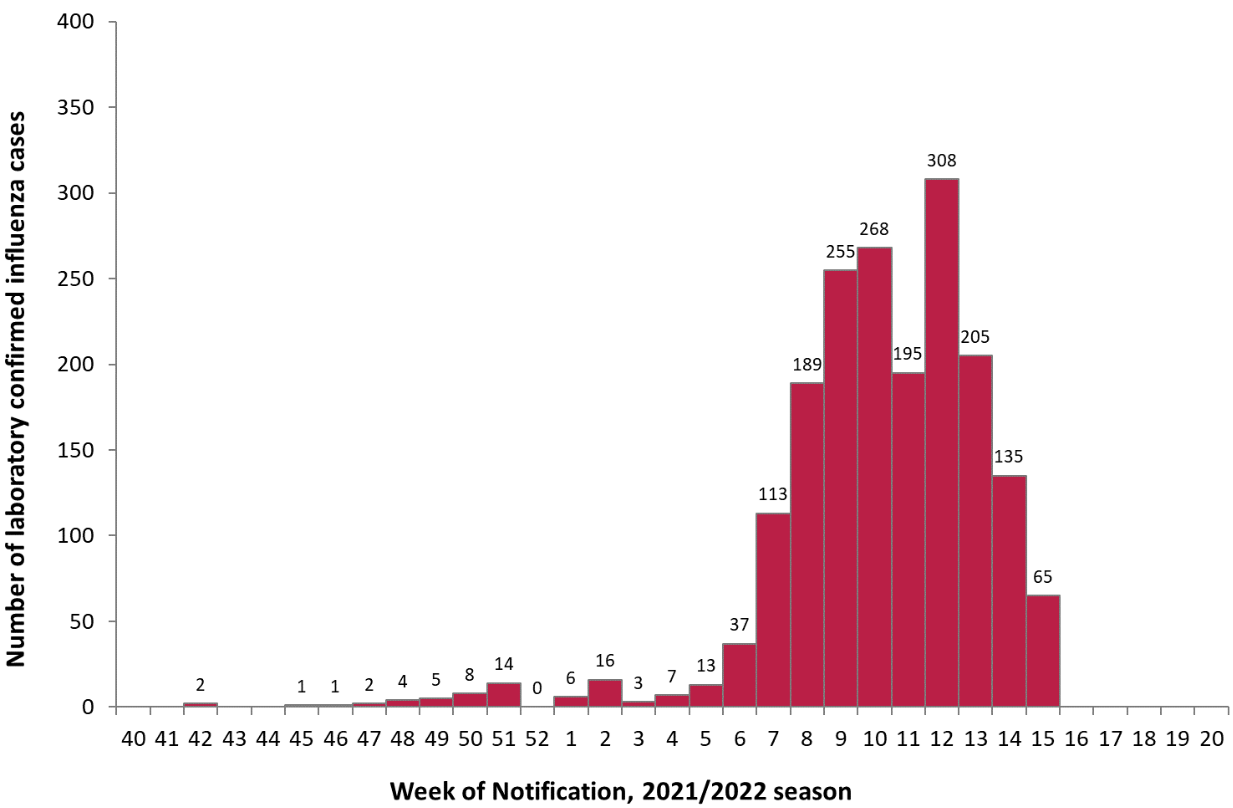

Figure 10: Number of laboratory confirmed influenza cases notified by week of notification, 2021/2022. *Source: Ireland's Computerised Infectious Disease Reporting System*

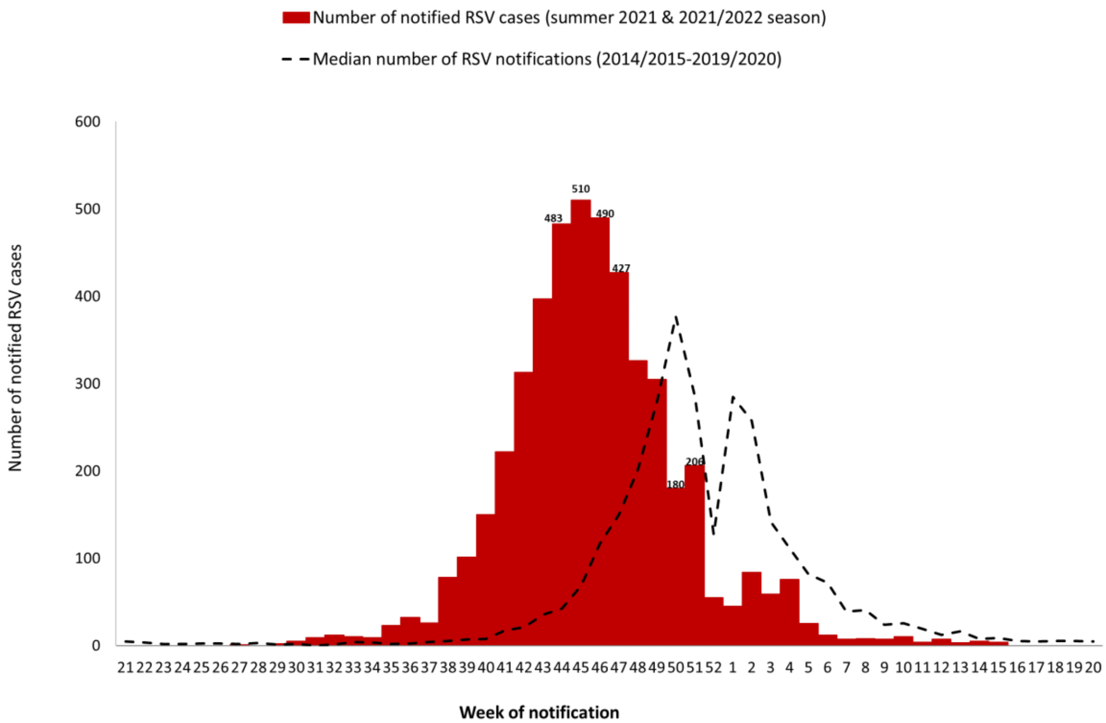

Figure 11: Number of RSV cases notified by week of notification, summer 2021 and 2021/2022, and median number of RSV notifications by week (2014/2015-2019/2020). *Source: Ireland's Computerised Infectious Disease Reporting System.*

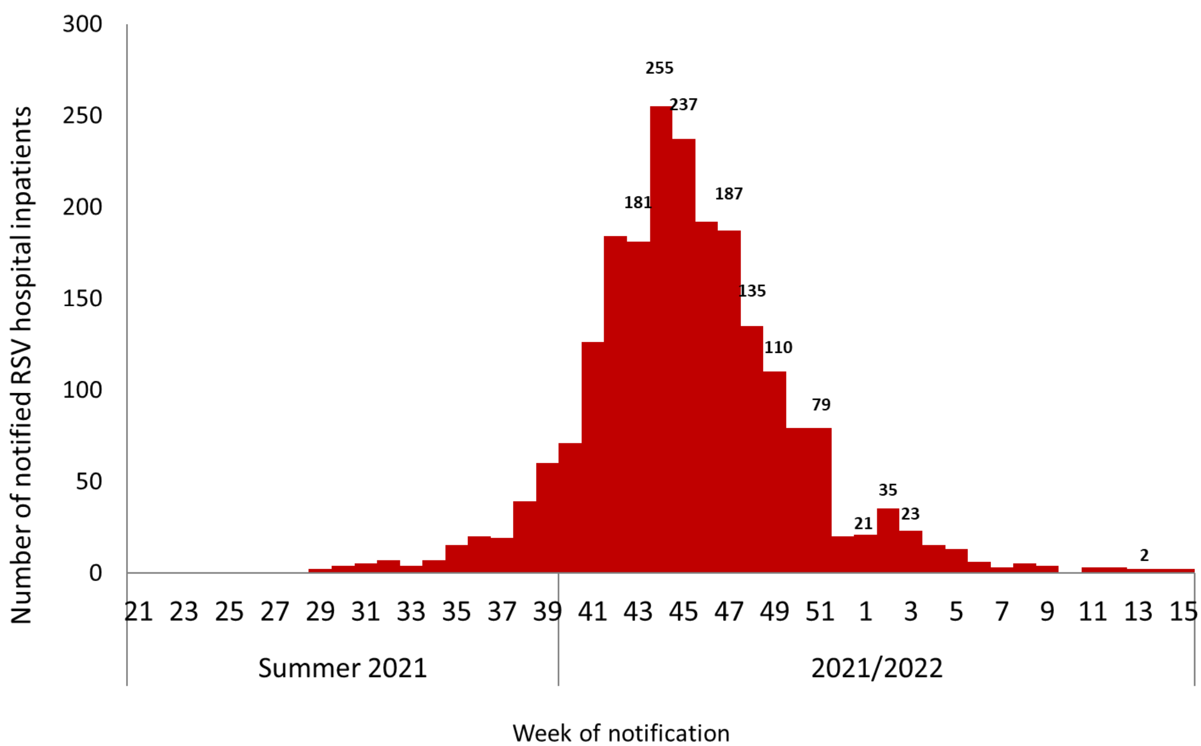

Figure 12: Number of notified RSV cases reported as hospital inpatients, by week of notification, summer 2021 and 2021/2022. *Source: Ireland's Computerised Infectious Disease Reporting System.*

6. Influenza Hospitalisations

- During week 15 2022, 20 laboratory confirmed influenza A notified cases were reported as hospital inpatients – all were influenza A (not subtyped). Of these 20 hospital inpatients, the median age is 33 years (interquartile range 16-68 years), 8 cases were aged ≥65 years of age. During week 15 2022, confirmed influenza hospitalised cases have been notified from HSE-East (n=4), -Southeast (n=1), -Midlands (n=1), -Northwest (n=5), -West (n=2), -Northeast (n=1), -Midwest (n=5) and HSE-South (n=1).
- During weeks 40 2021 - 15 2022, 424 laboratory confirmed influenza cases reported as hospital inpatients were notified: 103 A(H3), 318 influenza A (not subtyped), one A(H1)pdm09, two influenza B cases.

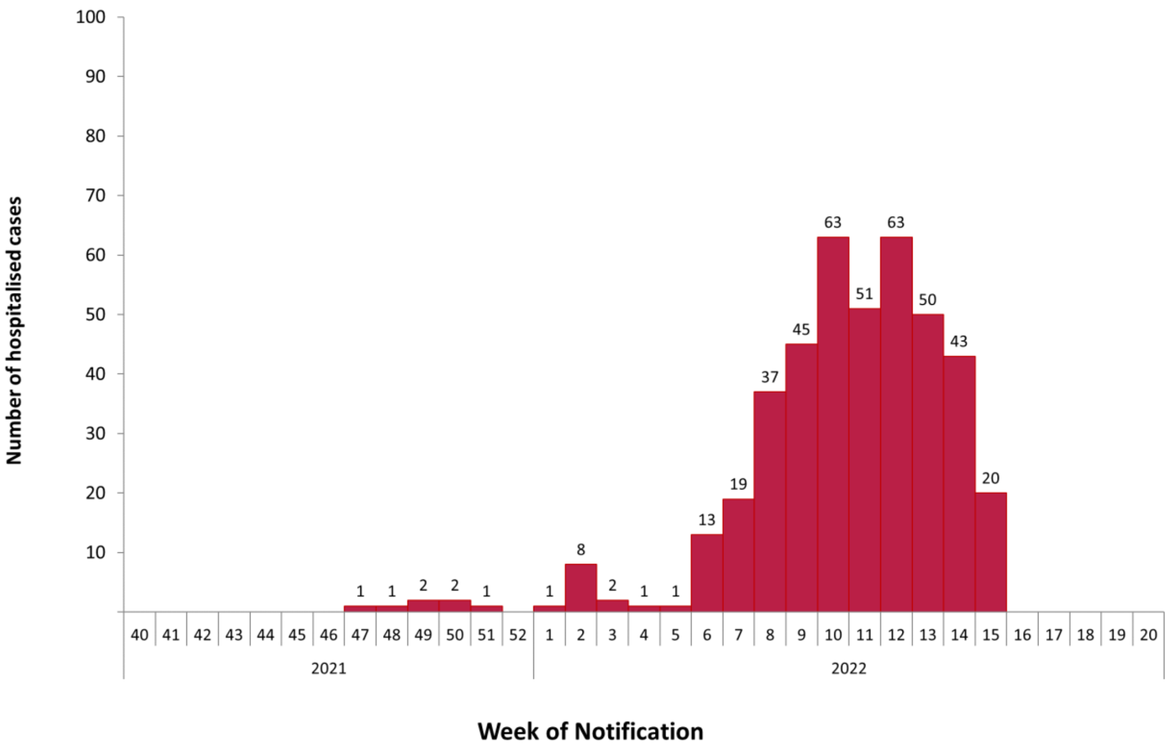

Figure 13: Number of notified laboratory confirmed influenza cases reported as hospital inpatients, by week of notification 2021/2022. *Source: Ireland's Computerised Infectious Disease Reporting System*

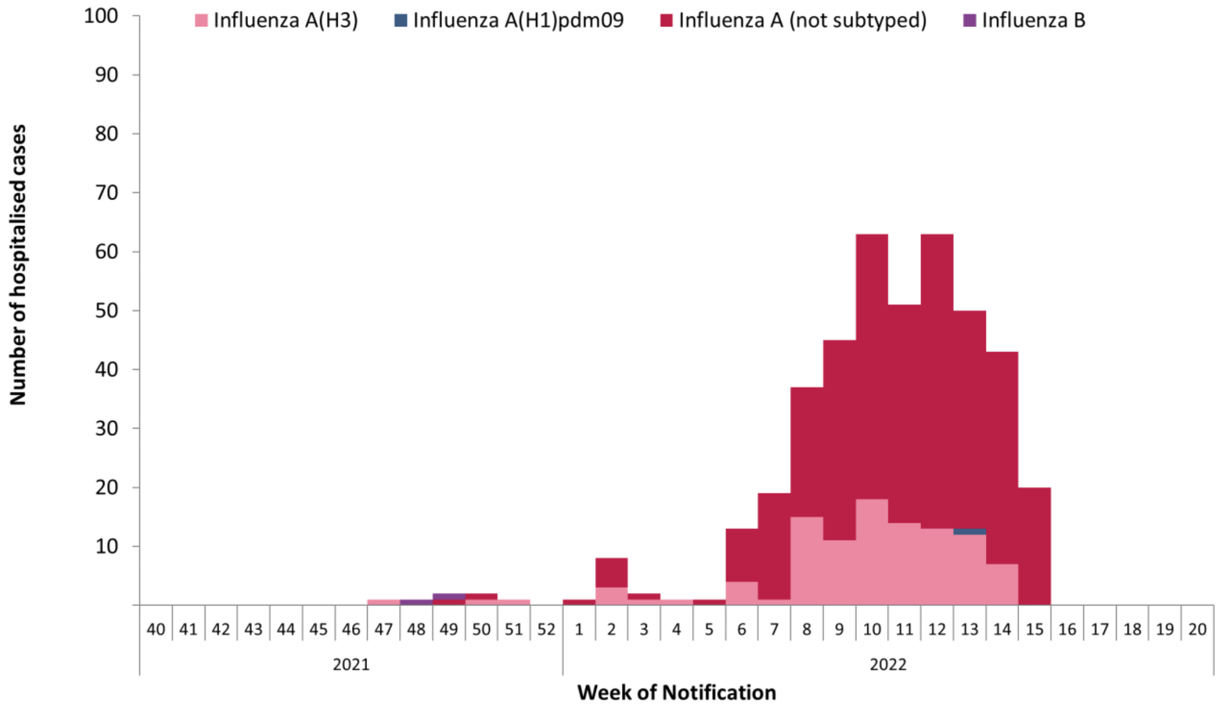

Figure 14: Number of notified laboratory confirmed influenza cases, reported as hospital inpatients, by influenza type/subtype and week of notification, 2021/2022 season *Source: Ireland's Computerised Infectious Disease Reporting System*

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.

- During week 15 2022, two laboratory confirmed influenza A cases admitted to critical care were reported to HPSC.
- During the 2021/2022 influenza season to date (week 40 2021 - week 15 2022), 13 laboratory confirmed influenza A - 7 A(H3) and 6 A (not subtyped) - cases were admitted to critical care units and reported to HPSC (Table 6).

Table 6: Number (and age specific rate per 100,000 population) of laboratory confirmed notified influenza hospitalised and critical care cases, weeks 40 2021-15 2022. *Source: Ireland's Computerised infectious Disease Reporting System*.

	Hospitalised		Admitted to ICU	
Age (years)	**Number**	**Age specific rate per 100,000 pop.**	**Number**	**Age specific rate per 100,000 pop.**
<1	6	9.6	0	0.0
1-4	41	15.2	1	0.4
5-14	21	3.1	0	0.0
15-24	60	10.4	1	0.2
25-34	35	5.3	2	0.3
35-44	24	3.6	2	0.3
45-54	12	1.9	1	0.2
55-64	33	6.5	3	0.6
≥65	192	30.1	3	0.5
Unknown	0	–	0	–
Total	**424**	**8.9**	13	**0.3**

8. Severe Acute Respiratory Infection (SARI) surveillance

Severe Acute Respiratory Infection (SARI) surveillance was implemented in one tertiary care adult hospital; St. Vincent's University Hospital, Dublin (SVUH) on the 5th of July 2021. SARI cases are identified from new admissions (aged ≥15 years) through the SVUH Emergency Department. The current SARI ECDC case definition used is defined as a hospitalised person (hospitalised for at least 24 hours) with acute respiratory infection, with at least one of the following symptoms: cough, fever, shortness of breath OR sudden onset of anosmia, ageusia or dysgeusia with onset of symptoms within 14 days prior to hospital admission. SARI patients are tested for SARS-CoV-2, influenza and RSV.

- During week 15, 2022, ten SARI cases were admitted to the SARI hospital site, corresponding to an incidence rate per emergency hospitalisation of 37.6/1,000; a decrease on 78.7/1,000 in week 14, 2022.
- The SARI incidence rate per hospital catchment population was 3.3/100,000 population during week 15, a decrease on 6.9/100,00 in week 14, 2022.
- SARI SARS-CoV-2 positivity was 60% (6/10 tested) during week 15 2022, compared to 30% (6/20) during week 14 2022
- Two SARI cases tested positive for influenza A, during week 15 2022, corresponding to influenza positivity of 33% (2/6 tested), all SARI cases tested in week 14 2022 were negative for influenza (15/21 tested)
- No SARI cases tested positive for RSV during weeks 14 and 15 2022.

9. Mortality Surveillance

Influenza 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/

- No deaths in notified influenza cases were reported to HPSC during week 15 2022. During the 2021/2022 season (weeks 40 2021- 15 2022), nine deaths in notified influenza cases were reported to HPSC: 5 A(H3) and 4 A (not subtyped).
- No excess all-cause mortality was reported during week 14 2022, after correcting data for reporting delays with the standardised EuroMOMO algorithm. Due to delays in death registrations in Ireland, excess mortality data included in this report are reported with a one-week lag time.

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/surveillance/

- No influenza outbreaks were notified to HPSC during week 15 2022. One ARI (SARS-CoV-2 negative) outbreak in the HSE-Northeast at a nursing home was reported to HPSC during week 15.
- During the 2021/2022 influenza season, 20 laboratory confirmed influenza outbreaks were notified: nine hospital outbreaks, six nursing home outbreaks, two family outbreaks, two at other healthcare settings and one outbreak associated with a social gathering.
- For the 2021/2022 season to date (weeks 40 2021- 15 2022), 20 influenza outbreaks, five RSV and 15 ARI (SARS-CoV-2 negative) outbreaks were notified to HPSC. Of the 15 ARI outbreaks, two were associated with rhinovirus/enterovirus, five with seasonal coronavirus (OC43), one with human metapneumovirus and seven with no pathogen identified.

11. Influenza Vaccinations

From 01/09/2021 up to the week ending 17/04/2022, seasonal influenza vaccination uptake for those aged 2-17 years was 16.4% (n=177,603/1,081,232) and 74.7% (n=555,019/743,087) for those aged ≥65 years. Data were provided by GPs, Pharmacists and PCRS staff.

12. International Summary

In the European region, during week 14 2022 (week ending 03/04/2022), widespread influenza activity was reported in 10 of 38 countries. The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus has remained at similar levels, around 27%, for the last five weeks. Countries, mostly in the western-central part of the Region, reported seasonal influenza activity above 30% positivity in sentinel primary care: Netherlands (78%), Poland (59%), Denmark (56%), Slovenia (48%), France (50%), Belgium (31%), Hungary (34%), Luxembourg (57%). Both influenza type A and type B viruses were detected, with A(H3) viruses being dominant across all monitoring systems. A(H3) viruses were most frequently detected in patients hospitalised with confirmed influenza virus infection. https://flunewseurope.org/

The latest available WHO influenza report was published on 18 April 2022, based on data up to 3rd April 2022. Globally, influenza activity remained low, but activity has increased since February 2022 after an initial decrease in January 2022. In the temperate zones of the northern hemisphere, influenza activity increased or remained stable, except in East Asia where detections decreased. Detections were mainly influenza A(H3N2) viruses and B/Victoria lineage viruses. In North America, influenza activity continued to increase in recent weeks but remained lower than pre COVID-19 pandemic levels at this time of the year and was predominantly due to influenza A viruses, with A(H3N2) predominant among the subtyped viruses. In Europe, overall influenza activity has stabilised with influenza A(H3N2) predominant. Respiratory syncytial virus (RSV) activity remained low in the United States of America (USA) and Canada. In Central Asia, a single influenza B detection was reported in Kyrgyzstan. In East Asia, influenza activity with mainly influenza B/Victoria lineage detections appeared to decrease in China. ILI rate and pneumonia hospitalizations remained elevated in Mongolia. Elsewhere, influenza illness indicators and activity remained low. In Northern Africa, increasing detections of influenza A(H3N2) were reported in Tunisia. In Western Asia, influenza activity was low across reporting countries, with the exception of Georgia where increased detections of influenza A(H3N2) were reported. In the Caribbean and Central American countries, low influenza activity was reported with influenza A(H3N2) predominant. In tropical South America, low influenza activity was reported with influenza A(H3N2) predominant.
https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update

- 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

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;
a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus
https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations

The WHO vaccine strain selection committee recommend that quadrivalent egg-based vaccines for use in the **2022/2023** northern hemisphere influenza season contain the following:
an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
an A/Darwin/9/2021 (H3N2)-like virus;
a B/Austria/1359417/2021 (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

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