

Influenza Week 1 2023 (2nd-8th January 2023)



Summary - *Data should be interpreted with caution, as reporting levels are affected by the holiday period.*

Influenza activity was at very high levels in Ireland during week 1 2023. Influenza A viruses are predominating this season, with wide circulation of both influenza A(H1)pdm09 and A(H3). Respiratory syncytial virus (RSV) continued to circulate in week 1 2023. It is recommended that antivirals are 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 was 101.6/100,000 during week 1 2023. This is an increase from the updated rate of 88.7/100,000 during week 52 2022. ILI consultation rates have been above the Irish baseline threshold (18.1/100,000 population) for nine consecutive weeks. Sentinel GP ILI age specific consultation rates increased in all age groups during week 1 2023.
- **National Virus Reference Laboratory (NVRL):** During week 1 2023, of 135 sentinel GP ARI specimens tested and reported by the NVRL, 43 (31.9%) were positive for influenza: 19 A(H3), 21 A(H1)pdm09 and three influenza B. There were five specimens (3.7%) positive for RSV and seven specimens (5.2%) positive for SARS-CoV-2.
- Of 409 non-sentinel respiratory specimens tested and reported by the NVRL during week 1 2023, 88 (21.5%) were positive for influenza: 41 A(H1)pdm09, 37 A(H3), seven A (not subtyped) and three influenza B. RSV positivity decreased to 4% (16/399) during week 52 2022 and to 5.1% (21/409) during week 1 2023.
- **Influenza notifications:** 3,049 laboratory confirmed influenza cases were notified during week 1 2023 – 178 A(H1)pdm09, 198 A(H3), 2,567 influenza A (not subtyped), 99 influenza B, four influenza A & B coinfections and three influenza (type not reported). This is an increase compared to 2,261 cases reported during week 52 2022. Age specific rates were highest in those aged 65 years and older.
- **RSV notifications:** 445 RSV cases were notified during week 1 2023, an increase compared to 286 RSV cases notified during week 52 2022. Age specific rates for hospitalised cases were highest in those aged <1 year, however have declined in this age group in recent weeks.
- **Hospitalisations:** During week 1 2023, 693 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 693 hospitalised cases: 20 influenza A(H1)pdm09, 13 A(H3), 631 influenza A (not subtyped), 26 influenza B, one influenza coinfection and two influenza (type not reported) were reported. Influenza hospitalised cases during week 1 increased, compared to 595 in week 52 2022.
- **Critical care admissions:** 24 laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 1 2023. During week 40 2022 to week 1 2023, 97 laboratory confirmed influenza cases – 11 A(H1)pdm09, seven influenza A(H3), 76 influenza A (not subtyped) and three influenza B have been admitted to critical care and notified to HPSC. Of 82 laboratory confirmed influenza ICU cases with known influenza vaccination status, 52 (63%) were reported as NOT having received the 2022/2023 influenza vaccine.
- **Mortality:** One death in a notified influenza case was reported to HPSC during week 1 2023. During weeks 40 2022 to week 1 2023, 24 deaths in notified influenza cases were reported to HPSC – five influenza A(H3), two influenza A(H1)pdm09 and 17 influenza A (not subtyped).
- **Outbreaks:** 10 laboratory confirmed influenza outbreaks (two nursing home, five hospital, two community hospital/long-stay unit and one residential institution) and one RSV outbreak (one nursing home) were notified during week 1 2023.
- **International:** In Europe during week 52 2022, 22 countries reported widespread influenza activity indicating high influenza virus circulation across the European Region. Both influenza A(H3) and A(H1)pdm09 viruses are circulating in Europe, with predominance varying by setting and country. Lower levels of detection of influenza B viruses were reported.

1. GP sentinel surveillance system - Clinical Data

- Data should be interpreted with caution, as reporting levels were affected by the Christmas/New Year holiday period.
- During week 1 2023, 292 sentinel GP influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 101.6 per 100,000 population, compared to 88.7/100,00 during week 52 (Figure 1).
- Sentinel GP ILI consultation rates were approaching high intensity levels during week 1 2023.
- The sentinel GP ILI consultation rates have been above the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) for nine consecutive weeks (weeks 45 2022 to week 1 2023).
- Age specific rates were above baseline thresholds in all age groups during week 1 2023 (Figure 2, Table 1).
- The Irish sentinel baseline ILI threshold for the 2022/2023 influenza season is 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), 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.

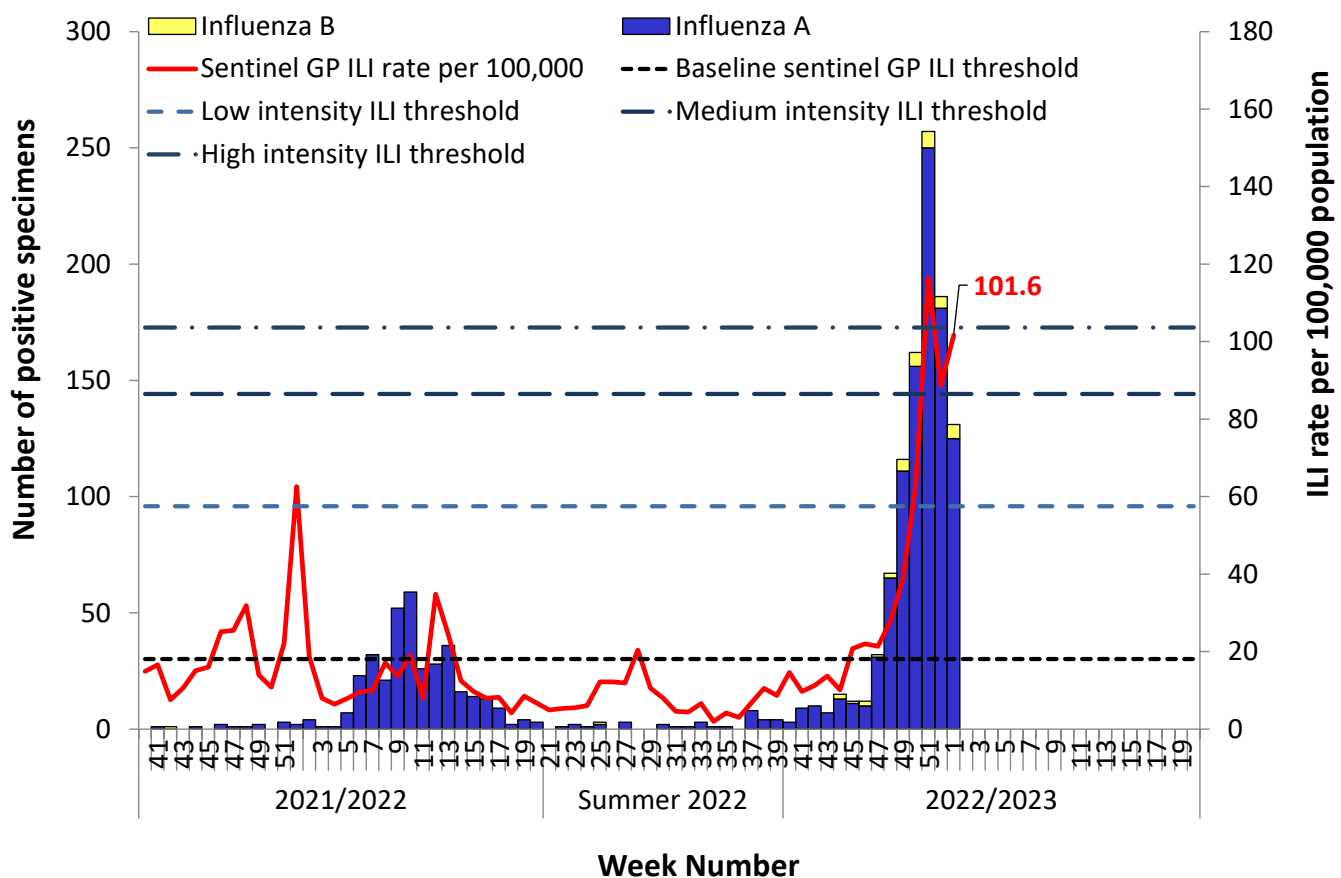


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL*

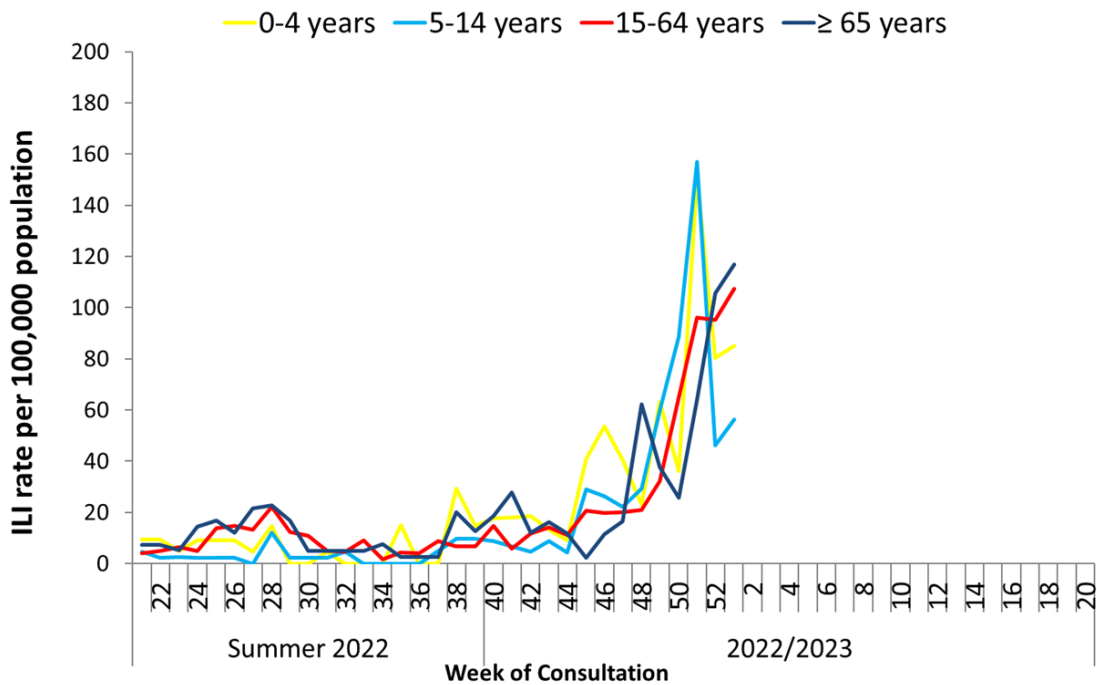


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2022 and the 2022/2023 influenza season to date. *Source: ICGP.*

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 40 2022-1 2023), colour coded by sentinel GP ILI age specific Moving Epidemic Method (MEM) threshold levels. *Source: ICGP.*

MEM 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
All Ages	14.6	9.7	11.3	13.7	10.1	20.8	22.0	21.4	27.9	38.9	63.2	116.4	88.7	101.6
<15 yrs	11.7	10.3	9.1	10.3	6.0	32.8	35.2	28.2	27.3	60.9	71.4	154.9	57.5	65.8
15-64 yrs	14.7	5.7	11.8	14.2	11.1	20.7	19.9	20.1	21.1	32.1	64.9	96.1	95.3	107.3
≥65 yrs	18.5	27.9	12.0	16.2	11.8	2.4	11.6	16.4	62.3	37.5	25.8	64.1	105.5	116.9
Reporting practices (N=61)	60	59	58	60	58	58	60	59	58	59	58	57	57	55

2. Influenza and Other Respiratory Virus Detections - NVRL

The data reported in this section for the 2022/2023 influenza season refers to sentinel GP ILI/ARI 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 3a). 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. As of 9th November 2022, the acute respiratory (ARI) case definition is being used by sentinel GPs for surveillance purposes and to identify cases for respiratory virus swabbing. Case definitions are available in Section 12. Sentinel GPs re-commenced in-surgery swabbing of ARI patients on November 16th 2022.

- A lag time with testing and reporting is noted for the most recent surveillance week. Data should be interpreted with caution, as reporting levels are affected by the Christmas/New Year holiday period.
- During week 1 2023, of 135 sentinel GP ARI specimens tested and reported by the NVRL, 43 (31.9%) were positive for influenza: 19 A(H3), 21 A(H1)pdm09 and three influenza B. There were five specimens (3.7%) positive for RSV and seven specimens (5.2%) positive for SARS-CoV-2.
- During week 52 2022, of 132 sentinel GP ARI specimens tested and reported by the NVRL, 70 (53%) were positive for influenza: 28 A(H3), 36 A(H1)pdm09, three A (not subtyped) and three influenza B. There was one specimen (0.8%) positive for RSV and five specimens (3.8%) positive for SARS-CoV-2.
- Of 409 non-sentinel respiratory specimens tested and reported by the NVRL during week 1 2023, 88 (21.5%) were positive for influenza: 41 A(H1)pdm09, 37 A(H3), seven A (not subtyped) and three influenza B.
- During week 52 2022, of 399 non-sentinel respiratory specimens tested, 116 (29.1%) were positive for influenza: 54 A(H1)pdm09, 46 A(H3), 14 A (not subtyped) and two influenza B.
- RSV positivity (non-sentinel respiratory specimens) decreased in recent weeks, at 4% (16/399) during week 52 2022 and 5.1% (21/409) during week 1 2023.
- Rhinovirus/enterovirus positive detections from non-sentinel respiratory specimens were detected at a positivity rate of 6.1% (25/409) during week 1 2023, a decrease from 9.8% (39/399) during week 52 2022 (Figure 3b).
- Other respiratory viruses (ORVs) are being detected at lower levels (Figure 3a and 3b).
- Of 1,022 sentinel GP ARI specimens and non-sentinel respiratory specimens positive for influenza and reported by the NVRL during the 2022/2023 season, 185 (18.1%) were coinfecting with other respiratory viruses.

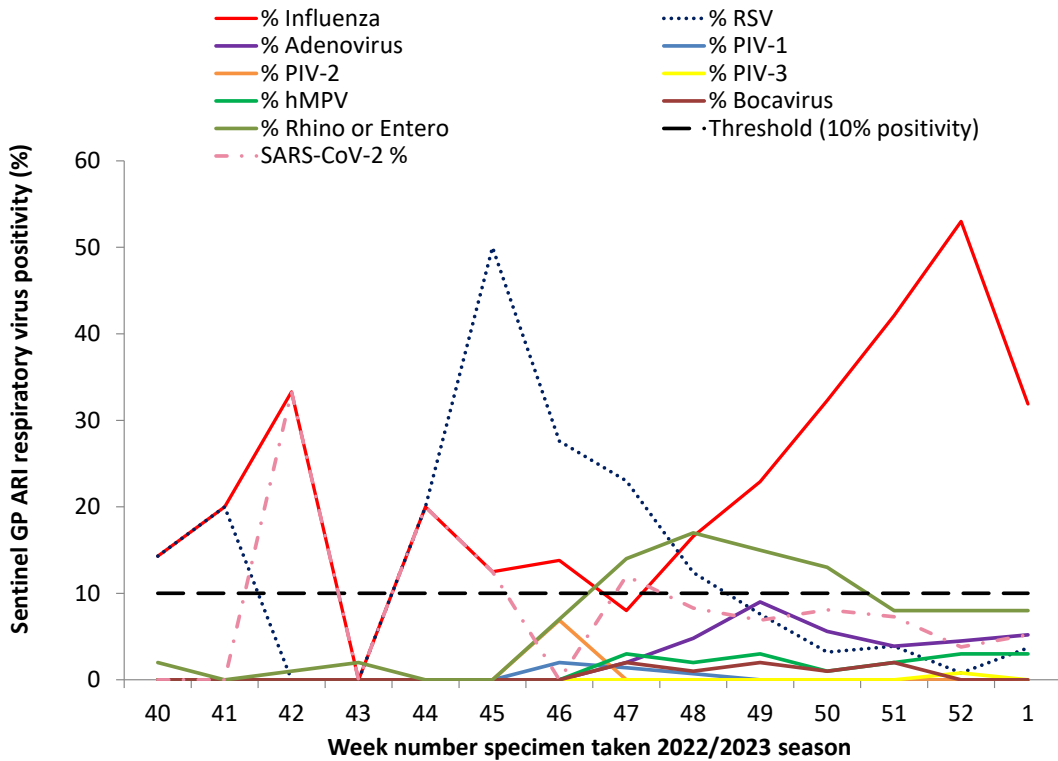


Figure 3a: Percentage positive results for **sentinel GP ARI** specimens tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-1 2023. *Source: NVRL*

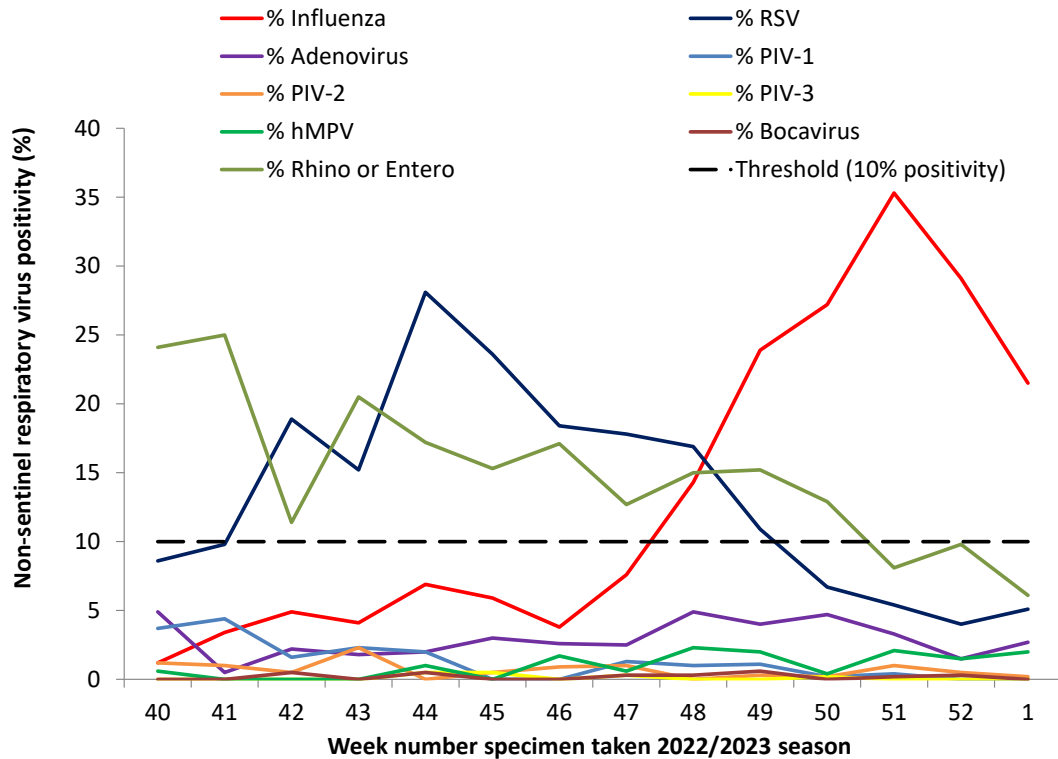


Figure 3b: Percentage positive results for **non-sentinel respiratory** specimens tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-1 2023. *Source: NVRL*

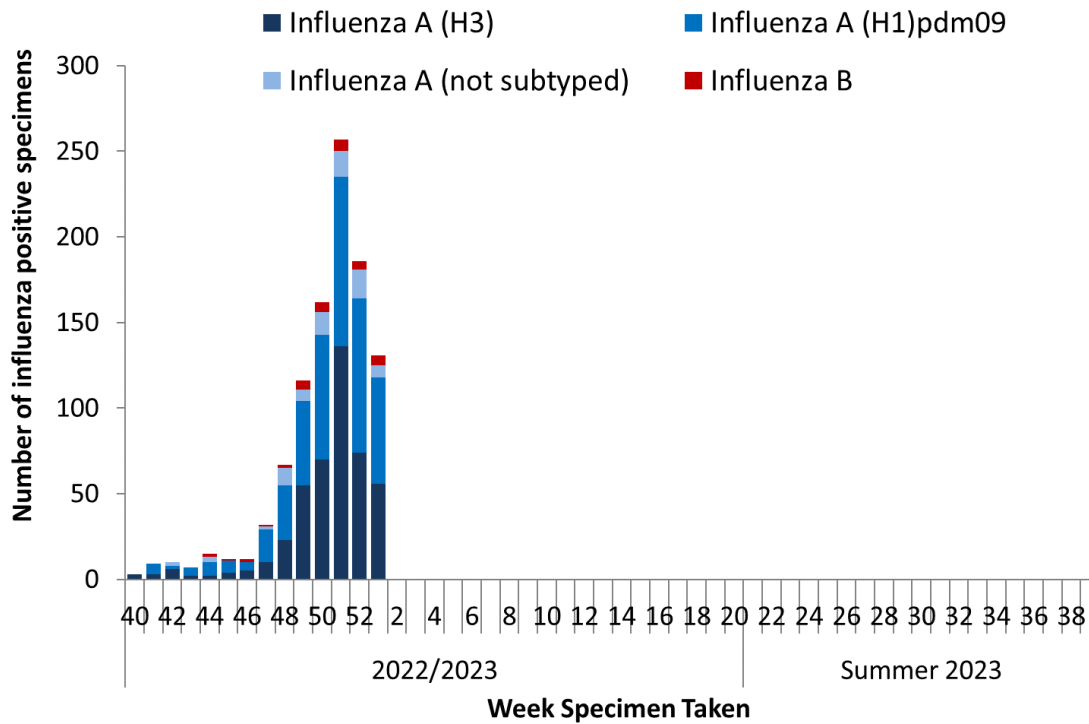


Figure 4: Number of positive influenza specimens (from sentinel GP ARI and non-sentinel respiratory sources) tested by the NVRL by influenza type/subtype and by week specimen was taken for the 2022/2023 influenza season. *Source: NVRL*

Table 2: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for weeks 52 2022 and 1 2023 and the 2022/2023 season (weeks 40 2022-1 2023). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number influenza	% Influenza positive	Influenza A				Influenza B			
					A(H1)pdm09	A(H3)	A (not subtyped)	Total	B	B Victoria	B Yamagata	Total
1 2023	Sentinel GP ARI	135	43	31.9	21	19	0	40	3	0	0	3
	Non-sentinel respiratory	409	88	21.5	41	37	7	85	3	0	0	3
	Total	544	131	24.1	62	56	7	125	6	0	0	6
52 2022	Sentinel GP ARI	132	70	53.0	36	28	3	67	3	0	0	3
	Non-sentinel respiratory	399	116	29.1	54	46	14	114	2	0	0	2
	Total	531	186	35.0	90	74	17	181	5	0	0	5
2022/2023	Sentinel GP ARI	1024	303	29.6	145	128	12	285	18	0	0	18
	Non-sentinel respiratory	4103	719	17.5	312	321	64	697	19	2	1	22
	Total	5127	1022	19.9	457	449	76	982	37	2	1	40

Table 3: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive RSV results, for weeks 52 2022 and 1 2023 and the 2022/2023 season (weeks 40 2022-1 2023). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number RSV positive	% RSV positive	RSV A	RSV B	RSV (unspecified)
Week 1 2023	Sentinel GP ARI	135	5	3.7	0	5	0
	Non-sentinel	409	21	5.1	2	19	0
	Total	544	26	4.8	2	24	0
Week 52 2022	Sentinel GP ARI	132	1	0.8	0	1	0
	Non-sentinel	399	16	4.0	1	15	0
	Total	531	17	3.2	1	16	0
2022/2023	Sentinel GP ILI/ARI	1024	85	8.3	2	83	0
	Non-sentinel	4103	484	11.8	58	426	0
	Total	5127	569	11.1	60	509	0

Table 4: Number of non-sentinel respiratory specimens tested by the NVRL for respiratory viruses and positive results, for weeks 52 2022 and 1 2023 and 2022/2023 season (weeks 40 2022-1 2023). *Source: NVRL*

Virus	Week 1 2023 (N=409)		Week 52 2022 (N=399)		2022/2023 (N=4103)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	88	21.5	116	29.1	719	17.5
Respiratory Syncytial Virus (RSV)	21	5.1	16	4.0	484	11.8
Rhino/enterovirus	25	6.1	39	9.8	555	13.5
Adenovirus	11	2.7	6	1.5	124	3.0
Bocavirus	0	0.0	1	0.3	8	0.2
Human metapneumovirus (hMPV)	8	2.0	6	1.5	50	1.2
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	40	1.0
Parainfluenza virus type 2 (PIV-2)	1	0.2	2	0.5	25	0.6
Parainfluenza virus type 3 (PIV-3)	0	0.0	0	0.0	4	0.1
Parainfluenza virus type 4 (PIV-4)	1	0.2	1	0.3	20	0.5

Table 5: Number of sentinel GP ILI/ARI specimens tested by the NVRL for respiratory viruses and positive results, for weeks 52 2022 and 1 2023 and 2022/2023 season (weeks 40 2022-1 2023). *Source: NVRL*

Virus	Week 1 2023 (N=135)		Week 52 2022 (N=132)		2022/2023 (N=1024)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	43	31.9	70	53.0	303	29.6
Respiratory Syncytial Virus (RSV)	5	3.7	1	0.8	85	8.3
Rhino/enterovirus	8	5.9	8	6.1	95	9.3
Adenovirus	7	5.2	6	4.5	49	4.8
Bocavirus	0	0.0	0	0.0	8	0.8
Human metapneumovirus (hMPV)	3	2.2	3	2.3	17	1.7
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	5	0.5
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	2	0.2
Parainfluenza virus type 3 (PIV-3)	0	0.0	1	0.8	1	0.1
Parainfluenza virus type 4 (PIV-4)	0	0.0	0	0.0	3	0.3
SARS-CoV-2	7	5.2	5	3.8	72	7.0

3. 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.

- Data should be interpreted with caution, as reporting levels are affected by the Christmas/New Year holiday period.
- 7,804 (43% of total calls; N=18,141) self-reported cough calls were reported by a network of GP OOHs services during week 1 2023, which was above baseline levels (10.7%) (Figure 5).
- 615 (3.4% of total calls; N=18,141) self-reported 'flu' calls were reported by a network of GP OOHs services during week 1 2023, which is above baseline levels. The baseline threshold level for self-reported 'flu' calls is 2.3% (Figure 7).
- Five GP OOH services provided data for week 1 2023.

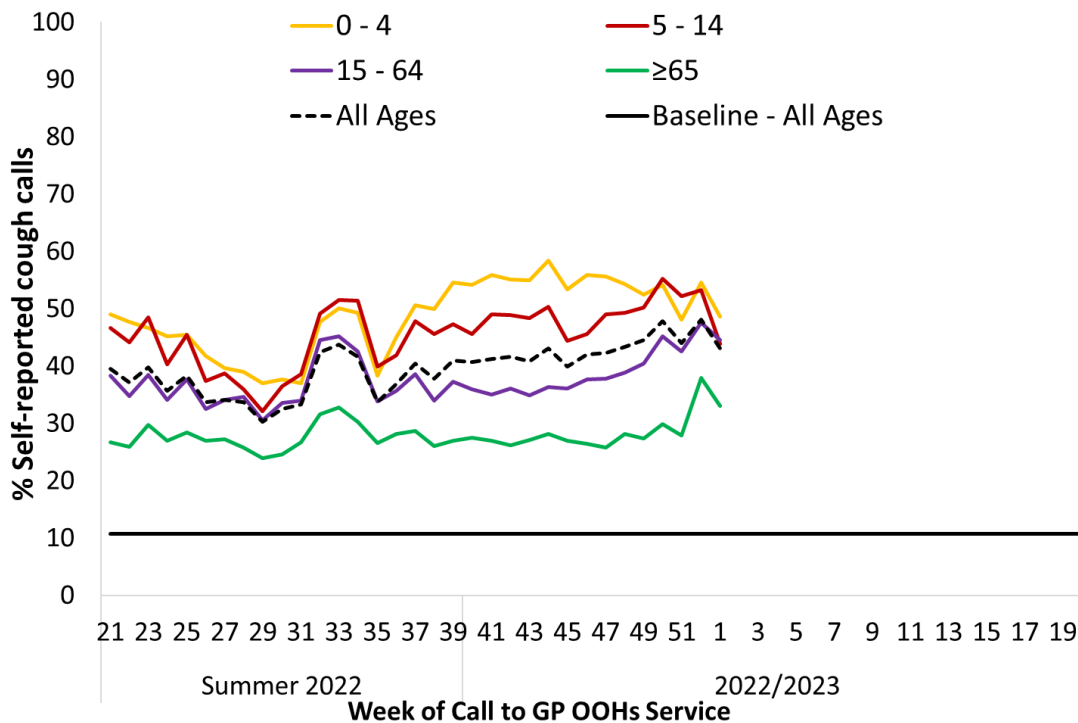


Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, summer 2022 and the 2022/2023 season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE & ICGP).*

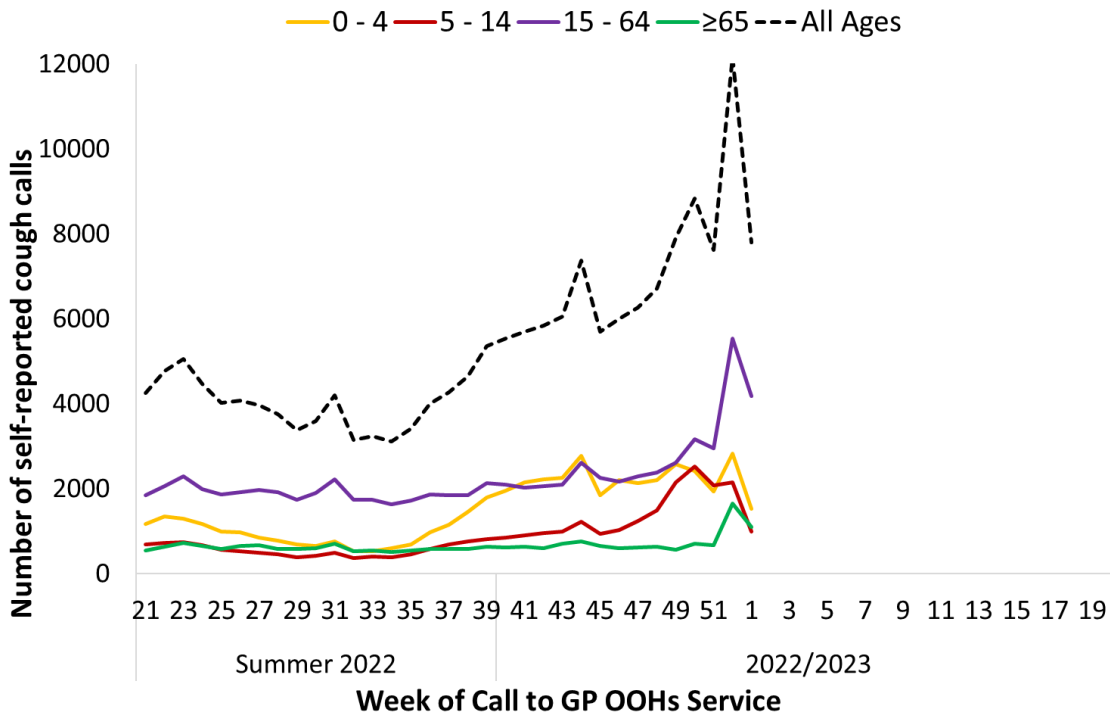


Figure 6: Number of self-reported COUGH calls for all ages and by age group to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE & ICGP).*

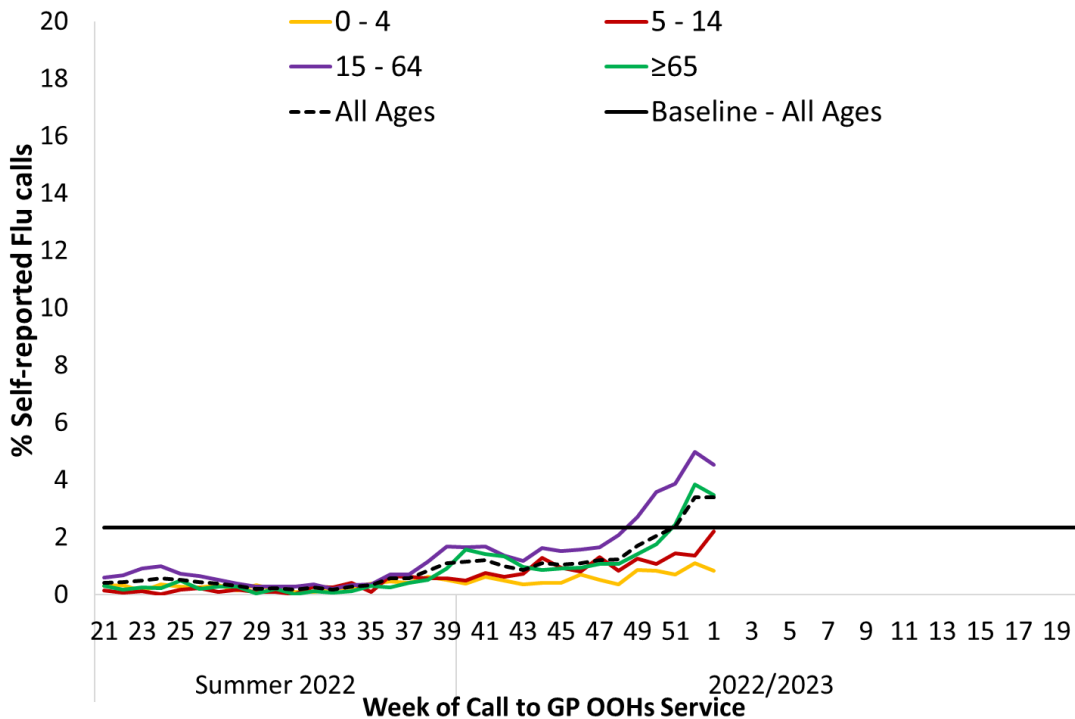


Figure 7: Percentage of self-reported FLU calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. The % flu calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE& ICGP)*

4. Influenza & RSV notifications

Influenza and RSV case 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](#).

- Data should be interpreted with caution, as reporting levels are affected by the Christmas holiday period.
- 3,049 laboratory confirmed influenza cases were notified during week 1 2023 – 178 A(H1)pdm09, 198 A(H3), 2,567 influenza A (not subtyped), 99 influenza B, four influenza A & B coinfections and three influenza (type not reported). This is an increase compared to 2,261 cases reported during week 52 2022.
- During the 2022/2023 season to date (weeks 40 2022 - 1 2023), 10,909 laboratory confirmed influenza cases have been notified to HPSC - 673 A(H1)pdm09, 534 A(H3), 9,350 influenza A (not subtyped), 323 influenza B, 17 influenza A and B coinfections, six influenza A(H1)pdm09 & A(H3) coinfections and six influenza (type not reported).
- Laboratory confirmed influenza notified cases by HSE Area, are outlined in Table 6.
- Age specific rates in notified laboratory confirmed influenza cases were highest in those aged ≥65 years (Figure 9).
- 445 RSV cases were notified during week 1 2023, an increase compared to 286 RSV cases notified during week 52 2022 (Figure 10).
- During week 1 2023, age specific rates in notified laboratory confirmed RSV cases were highest in those aged less than one year, although have decreased in this age group in recent weeks (Figure 11).

Table 6: Summary of confirmed influenza notifications by HSE Area during the 2022/2023 season (weeks 40 2022-1 2023) and week 1 2023 *Source: CIDR*

HSE area	Influenza confirmed cases week 1 2023	Influenza confirmed cases- season to date
HSE-East	1061	3462
HSE-Midlands	238	1092
HSE-Mid-West	303	1126
HSE-North-East	242	1184
HSE-North-West	221	957
HSE-South-East	357	921
HSE-South	347	1143
HSE-West	280	1024
Total	3049	10909

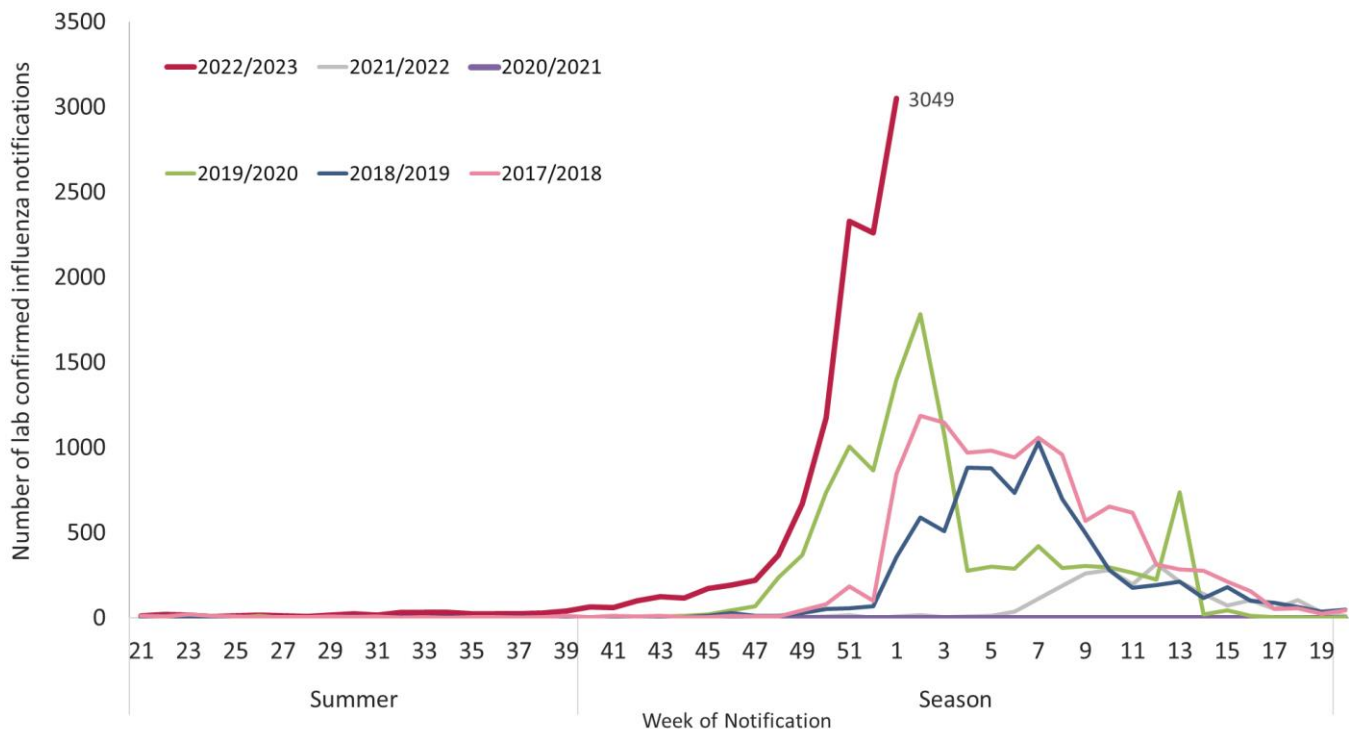


Figure 8: Laboratory confirmed **influenza** notifications to HPSC by week and season of notification, 2017/2018 to 2022/2023 influenza seasons. *Source: Ireland's Computerised Infectious Disease Reporting System.*

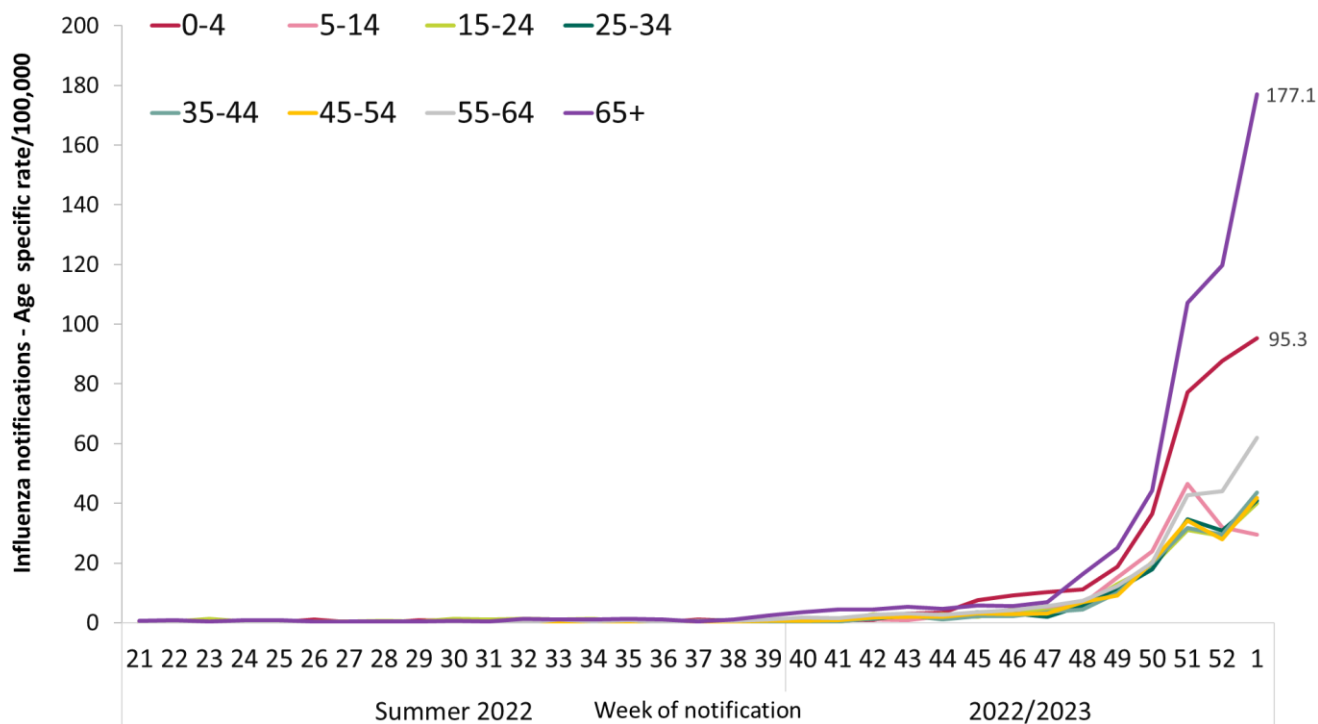


Figure 9: Age specific rates per 100,000 population for laboratory confirmed **influenza** notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

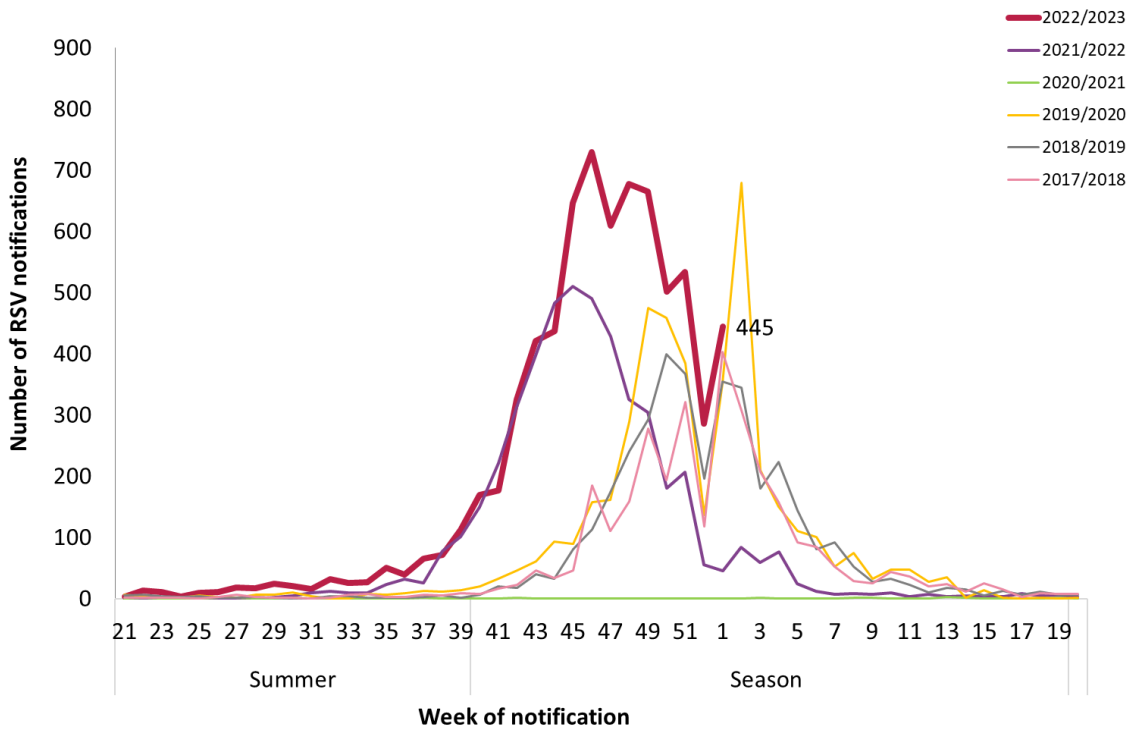


Figure 10: Number of laboratory confirmed **RSV** notifications to HPSC by week of notification, 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

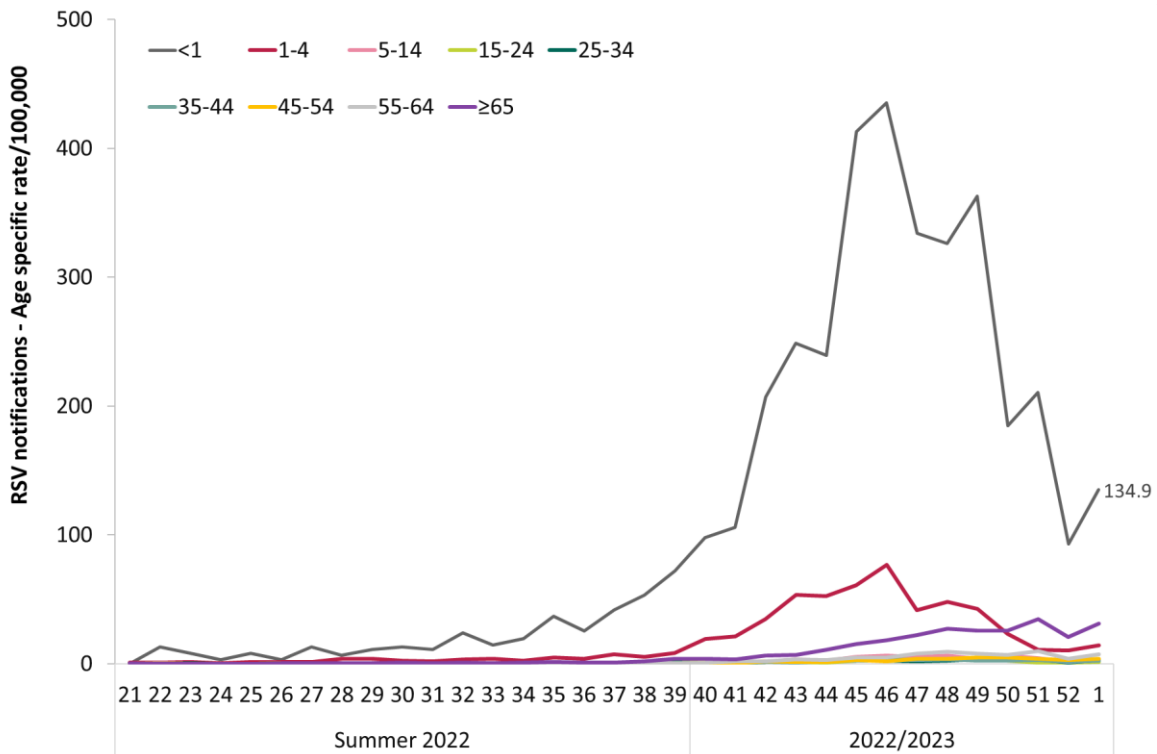


Figure 11: Age specific rates per 100,000 population for laboratory confirmed **RSV** notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

5. Hospitalisations

- During week 1 2023, 693 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 693 hospitalised cases: 20 influenza A(H1)pdm09, 13 A(H3), 631 influenza A (not subtyped), 26 influenza B, one influenza coinfection and two influenza (type not reported) were reported (Figure 11). Influenza hospitalised cases during week 1 2023 increased to 693 compared to 606 in week 52 2022.
- During the 2022/2023 season to date (weeks 40 2022 to week 1 2023), 2,959 laboratory confirmed influenza cases have been notified as hospital inpatients: 108 influenza A(H1)pdm09, 40 A(H3), 2,716 influenza A (not subtyped), 88 influenza B, four influenza coinfections and three influenza (type not reported).
- During week 1 2023, age specific rates in notified laboratory confirmed hospitalised influenza cases were highest in those aged ≥ 65 years (Figure 13).
- The number and age specific rate per 100,000 population of laboratory confirmed notified influenza hospitalised and critical care cases for the 2022/2023 season are detailed in Table 9.
- During week 1 2023, 111 RSV cases were reported as hospital inpatients (Figure 14).
- During week 1 2023, age specific rates in notified laboratory confirmed hospitalised RSV cases were highest in those aged less than one year, although have decreased in this age group in recent weeks (Figure 15).
- Patient type of laboratory confirmed influenza and RSV notifications by week for the 2022/2023 season are reported in Tables 7 and 8.

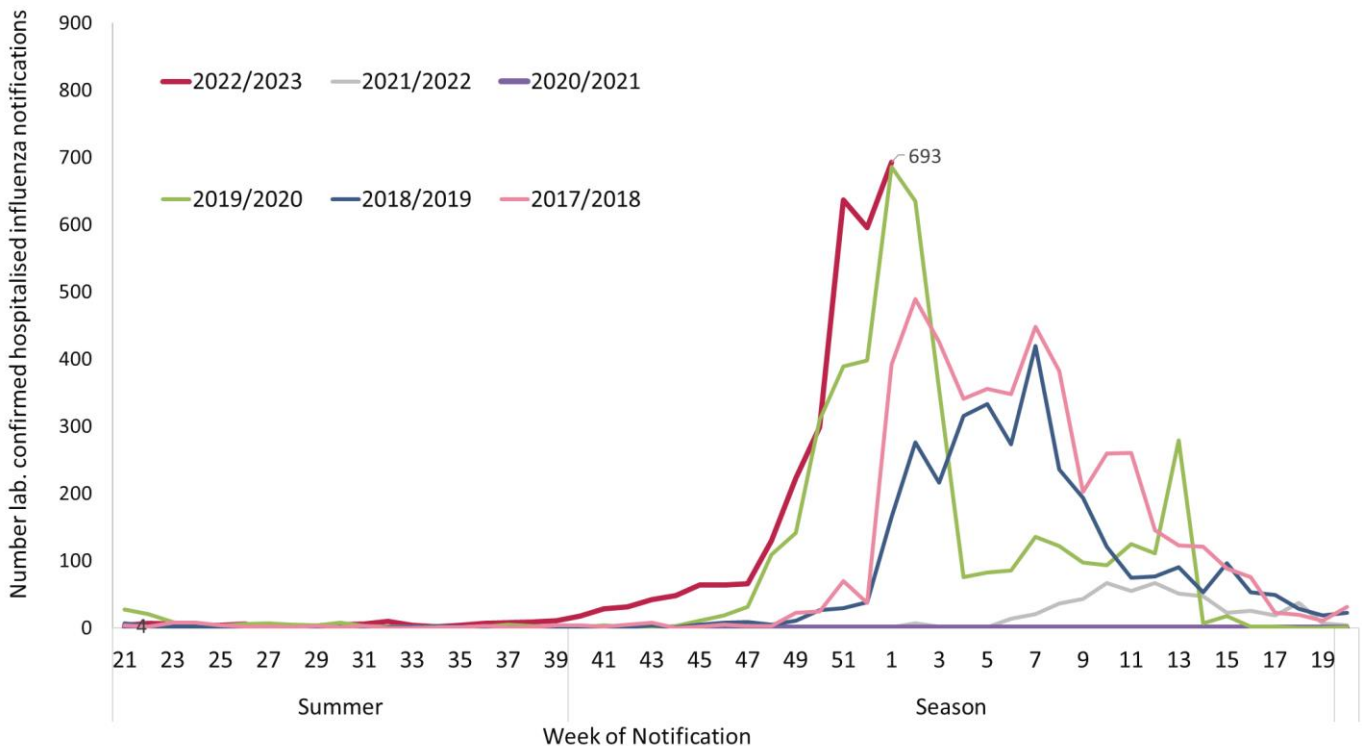


Figure 12: Number of notified laboratory confirmed **influenza** cases reported as hospital inpatients, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System*

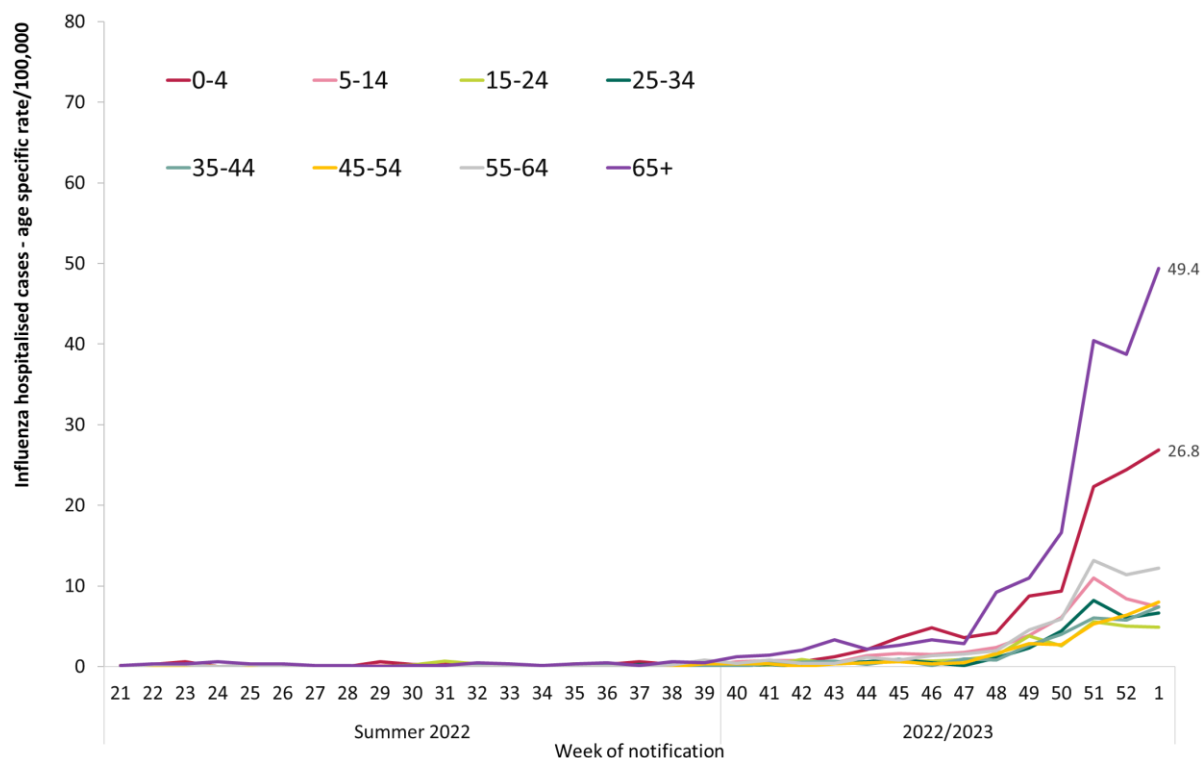


Figure 13: Age specific rates per 100,000 population for laboratory confirmed **influenza** cases reported as hospital inpatients by week of notification. *Source: Ireland’s Computerised Infectious Disease Reporting System.*

Table 7: Number of notified **influenza** cases reported by patient type and week of notification and 2022/2023 season (weeks 40 2022-1 2023). *Source: Ireland’s Computerised infectious Disease Reporting System*

	Patient Type							Total
	GP Patient	ED patient	Hospital Inpatient	Hospital Day Patient	Hospital Outpatient	Other	Unknown	
Week 40	2	11	18	3	9	7	12	62
Week 41	4	20	28	1	3	2	2	60
Week 42	0	45	31	1	16	3	5	101
Week 43	7	35	42	6	20	10	4	124
Week 44	2	38	48	6	16	3	4	117
Week 45	2	66	64	7	12	13	8	172
Week 46	5	81	64	11	15	12	5	193
Week 47	3	92	66	18	19	9	14	221
Week 48	18	123	131	8	31	25	34	370
Week 49	17	263	227	31	58	20	59	675
Week 50	44	449	300	22	106	144	109	1174
Week 51	100	815	641	29	227	292	226	2330
Week 52	45	1021	606	15	161	284	129	2261
Week 1	113	1373	693	49	199	284	338	3049
Total	362	4432	2959	207	892	1108	949	10909

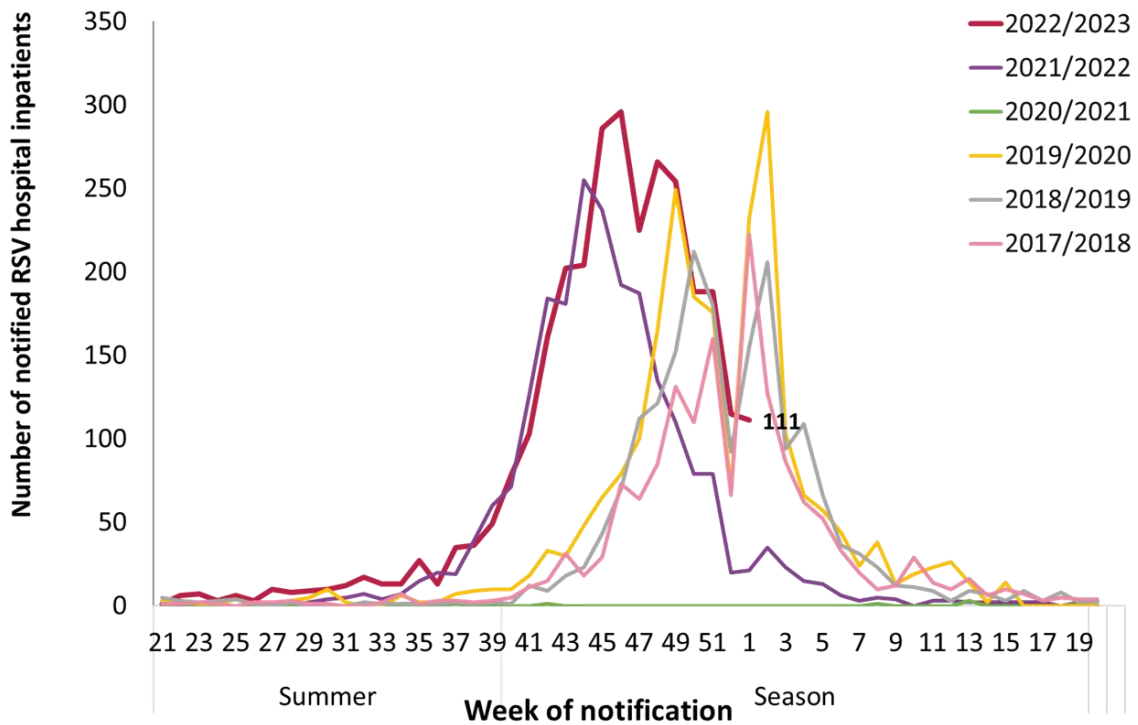


Figure 14: Number of notified RSV cases reported as hospital inpatients, by week of notification and season, for the 2017/2018 to 2022/2023 season. Source: Ireland’s Computerised Infectious Disease Reporting System.

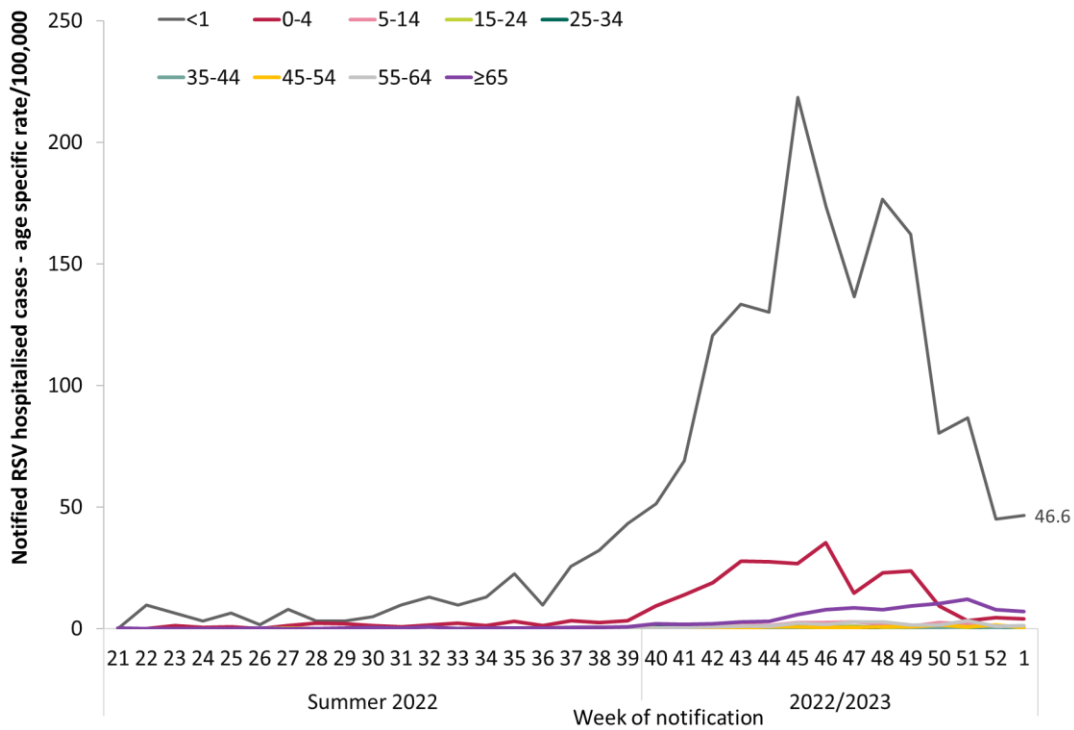


Figure 15: Age specific rates per 100,000 population for laboratory confirmed RSV cases reported as hospital inpatients by week of notification and season, Summer 2022 and 2022/2023. Source: Ireland’s Computerised Infectious Disease Reporting System

Table 8: Number of notified RSV cases reported by patient type and week of notification (weeks 40 2022-1 2023).*Source: Ireland's Computerised infectious Disease Reporting System*

	Patient Type							Total
	GP Patient	ED patient	Hospital Inpatient	Hospital Day Patient	Hospital Outpatient	Other	Unknown	
Week 40	5	51	78	6	12	7	11	170
Week 41	3	45	103	3	12	7	4	177
Week 42	5	121	161	2	14	7	15	325
Week 43	5	148	202	9	21	20	16	421
Week 44	6	172	204	3	22	15	15	437
Week 45	8	239	286	12	37	37	27	646
Week 46	10	319	296	5	32	36	32	730
Week 47	6	273	225	8	24	40	33	609
Week 48	34	246	266	3	36	49	44	678
Week 49	19	255	254	13	17	26	81	665
Week 50	20	175	187	2	28	26	64	502
Week 51	14	170	191	5	33	38	81	532
Week 52	8	84	117	0	12	41	24	286
Week 1	26	174	111	5	21	38	70	445
Total	169	2472	2681	76	321	387	517	4858

6. 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.

- 24 laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 1 2023.
- During the 2022/2023 season to date (weeks 40 2022-1 2023), 97 laboratory confirmed influenza cases – 11 A(H1)pdm09, seven influenza A(H3), 76 influenza A (not subtyped) and three influenza B have been admitted to critical care and notified to HPSC. Age specific rates for the season to date were highest in those aged 65 years and older.
- During the 2022/2023 season (weeks 40 2022-1 2023), of 82 laboratory confirmed influenza ICU cases with known influenza vaccination status, 52 (63%) were reported as NOT having received the 2022/2023 influenza vaccine.
- The number and age specific rate per 100,000 population of laboratory confirmed notified influenza hospitalised and critical care cases for the 2022/2023 season are detailed in Table 9.

Table 9: Cumulative number and age specific rate per 100,000 population of laboratory confirmed notified influenza hospitalised and critical care cases, weeks 40 2022-1 2023. *Source: Ireland's Computerised infectious Disease Reporting System.*

Age (years)	Hospitalised		Admitted to ICU	
	Number	Age specific rate per 100,000 pop.	Number	Age specific rate per 100,000 pop.
<1	83	133.3	2	3.2
1-4	291	108.1	4	1.5
5-14	326	48.3	3	0.4
15-24	161	27.9	2	0.3
25-34	209	31.7	2	0.3
35-44	229	34.7	11	1.5
45-54	189	30.2	14	2.2
55-64	285	56.0	12	2.4
≥65	1186	186.0	47	7.4
Unknown		-		-
Total	2959	62.1	97	2.0

7. 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/>

- One death in a notified influenza case was reported to HPSC during week 1 2023.
- During the 2022/2023 season (weeks 40 2022- 1 2023), 24 deaths in notified influenza cases were reported to HPSC – five influenza A(H3), two influenza A(H1)pdm09 and 17 influenza A (not subtyped).
- No excess all-cause mortality in all ages was reported during week 52 2022 or for weeks 40-52 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.

8. 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/>

- 10 laboratory confirmed influenza outbreaks were notified to HPSC during week 1 2023, one influenza A (H3) and nine influenza A (not subtyped).
- For an overview of outbreaks for the season to date (weeks 40 2022-1 2023) please see Tables 10 and 11.

Table 10: Summary of influenza, RSV, COVID-19 & influenza mixed outbreaks and ARI (influenza/RSV/SARS-CoV-2 negative) outbreaks by HSE Area during week 1 2023 and the 2022/2023 season (weeks 40 2022-1 2023) *Source: CIDR*

HSE area	Influenza		Respiratory syncytial virus infection		Acute respiratory infection		COVID-19 & Influenza		Total	
	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023
HSE-East	3	40	0	10	0	0	0	0	3	50
HSE-Midlands	0	6	0	0	0	1	0	0	0	7
HSE-Mid-West	0	9	0	3	0	0	0	0	0	12
HSE-North-East	0	20	0	19	1	3	0	2	1	44
HSE-North-West	1	16	1	6	1	4	0	2	3	28
HSE-South-East	2	8	0	0	0	0	0	0	2	8
HSE-South	1	6	0	7	0	0	0	0	1	13
HSE-West	3	8	0	1	0	0	0	0	3	9
Total	10	113	1	46	2	8	0	4	13	171

Table 11: Summary of influenza, RSV, COVID-19 & influenza mixed outbreaks and ARI (influenza/RSV/SARS-CoV-2 negative) outbreaks by outbreak setting during week 1 2023 and the 2022/2023 season (weeks 40 2022-1 2023). *Source: CIDR*

Setting	Influenza		Respiratory syncytial virus		Acute respiratory		COVID-19 & Influenza		Total	
	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023	Week 1	2022/2023
Community hospital/Long-stay unit	2	4	0	6	1	4	0	0	3	14
Nursing Home	2	40	1	16	1	2	0	2	4	60
Hospital	5	53	0	8	0	0	0	2	5	63
Residential Institution	1	8	0	3	0	2	0	0	1	13
Childcare facility	0	0	0	1	0	0	0	0	0	1
Family Outbreaks	0	6	0	12	0	0	0	0	0	18
Other settings	0	2	0	0	0	0	0	0	0	2
Total	10	113	1	46	2	8	0	4	13	171

9. International Summary

In the European region, during week 52 2022 (week ending 01/01/2023), influenza virus positivity in sentinel primary care specimens slightly decreased to 34% from 37%, which is above the ECDC influenza positivity threshold of 10%. This is most likely due to lower testing and reporting over the Christmas period. For week 52 2022, 821 (34%) of 2,384 sentinel GP specimens tested positive for an influenza virus; 92% were type A and 8% were type B. Of 418 subtyped A viruses, 67% were A(H3) and 33% were A(H1)pdm09. Of 15 type B viruses ascribed to a lineage, all were B/Victoria.

For week 52 2022, 20,884 of 84,164 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; 19,523 (94%) were type A and 1,361 (6%) were type B. Of 4,540 subtyped A viruses, 3,191 (70%) were A(H1)pdm09 and 1,349 (30%) were A(H3). Of 19 influenza B viruses ascribed to a lineage, all were of B/Victoria lineage. Of 31 countries and areas reporting on geographic spread of influenza viruses, one reported no activity, one reported sporadic spread, one reported local spread, six reported regional spread and 22 reported widespread influenza activity.

As of 11th December 2022, WHO reported, globally, influenza activity increased and where subtyped, influenza A(H3N2) viruses predominated overall. In central Asia, influenza activity increased with relatively equal proportions of influenza A(H1N1)pdm09 and influenza B viruses reported. In North America some indicators of influenza activity decreased while others were stable or continued to increase. In Northern Africa, influenza detections increased but remained low. In tropical South America, influenza activity remained low with detections of A(H3N2) predominating. Other regions remained stable or decreased in activity.

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 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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