

Influenza Week 4 2023 (23rd-29th January 2023)



Summary

Influenza activity continued to decrease in Ireland during week 4 2023 compared to previous weeks. Influenza A viruses are predominating this season, with circulation of both influenza A(H1)pdm09 and A(H3). Respiratory syncytial virus (RSV) activity continued to decrease in week 4 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 29.5/100,000 during week 4 2023. This is a decrease from the updated rate of 32.4/100,000 during week 3 2023. ILI consultation rates have been above the Irish baseline threshold (18.1/100,000 population) for twelve consecutive weeks. Sentinel GP ILI age specific consultation rates decreased in all age groups (<15, 15 – 64, 65+) during week 4 2023.
- **National Virus Reference Laboratory (NVRL):** During week 4 2023, of 112 sentinel GP ARI specimens tested and reported by the NVRL, 23 (20.5%) were positive for influenza: eight A(H3), three A(H1)pdm09, two influenza A (not subtyped) and 10 influenza B. Four specimens (3.6%) were positive for RSV and six (5.4%) were positive for SARS-CoV-2.
- Of 205 non-sentinel respiratory specimens tested and reported by the NVRL during week 4 2023, 15 (7.3%) were positive for influenza: three A(H1)pdm09, six A(H3), and six influenza B. RSV positivity was at low levels in recent weeks, at 4.4% (11/252) during week 3 2023 and 3.4% (7/205) during week 4 2023.
- Of 1,720 sentinel GP ARI specimens and non-sentinel respiratory specimens positive for influenza and reported by the NVRL during the 2022/2023 season, 440 (25.7%) were coinfecting with other respiratory viruses.
- **Influenza notifications:** 387 laboratory confirmed influenza cases were notified during week 4 2023 – 27 A(H1)pdm09, 28 A(H3), 239 influenza A (not subtyped), 89 influenza B and four influenza A & B coinfections. This is a decrease compared to 625 cases reported during week 3 2023. Age specific rates were highest in those aged 65 years and older, however have declined in recent weeks.
- **RSV notifications:** 112 RSV cases were notified during week 4 2023, a decrease compared to 142 RSV cases notified during week 3 2023. Age specific rates for hospitalised cases were highest in those aged <1 year.
- **Hospitalisations:** During week 4 2023, 109 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 109 hospitalised cases: three influenza A(H1)pdm09, four A(H3), 80 influenza A (not subtyped) and 22 influenza B were reported. Influenza hospitalised cases during week 4 2023 decreased to 109 compared to 171 in week 3 2023.
- **Critical care admissions:** Six laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 4 2023. During weeks 40 2022-4 2023, 151 laboratory confirmed influenza cases – 24 A(H1)pdm09, 24 influenza A(H3), 98 influenza A (not subtyped) and five 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 weeks 40 2022-4 2023, of 132 laboratory confirmed influenza ICU cases with known influenza vaccination status, 90 (68%) were reported as NOT having received the 2022/2023 influenza vaccine.
- **Mortality:** No deaths in notified influenza cases were reported to HPSC during week 4 2023. During 40 2022- 4 2023, 104 deaths in notified influenza cases were reported to HPSC – 14 influenza A(H3), 10 influenza A(H1)pdm09, 79 influenza A (not subtyped) and one influenza B. Low level pneumonia and influenza excess mortality was reported between weeks 51 2022 and 1 2023.
- **Outbreaks:** Three laboratory confirmed influenza outbreaks (one nursing home, one hospital and one other setting) and one ARI outbreak nursing home) were notified during week 4 2023.
- **International:** In Europe during week 3 2023, 28 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

- During week 4 2023, 90 sentinel GP influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 29.5 per 100,000 population, compared to 32.4 per 100,000 population during week 3 (Figure 1).
- Sentinel GP ILI consultation rates were above the baseline during week 4 2023.
- The sentinel GP ILI consultation rates have been above the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) for twelve consecutive weeks (weeks 45 2022 to week 4 2023).
- Age specific rates were above baseline thresholds in all age groups during week 4 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.

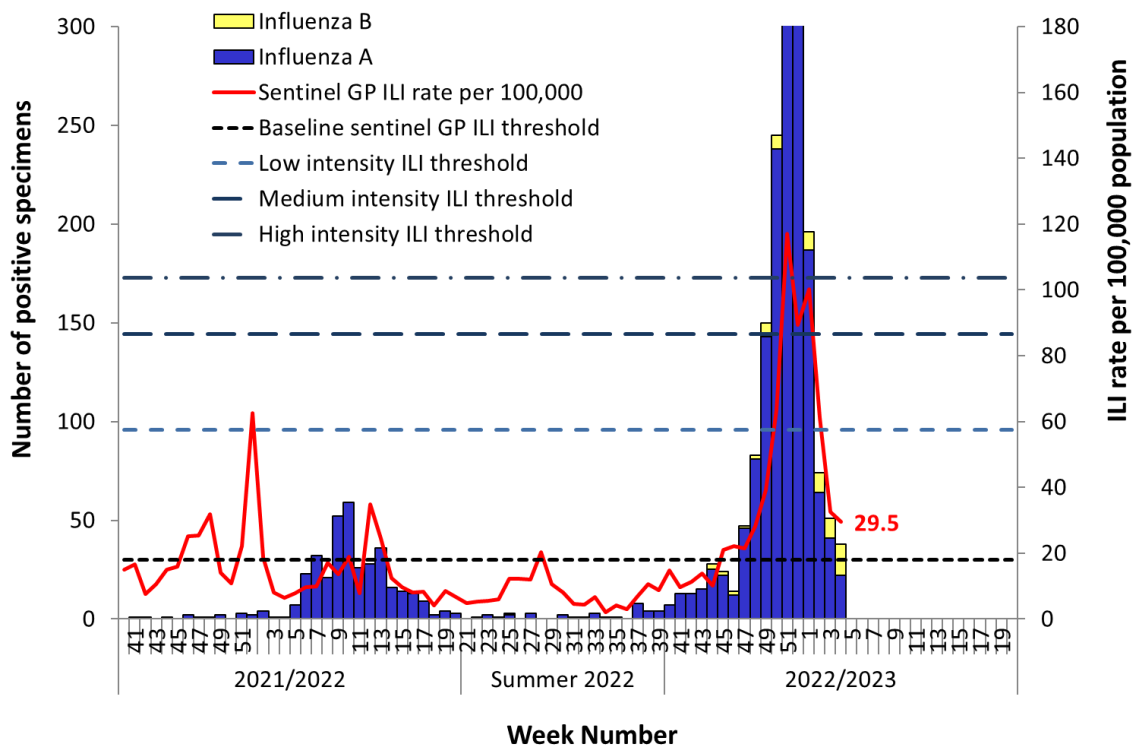


Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL*

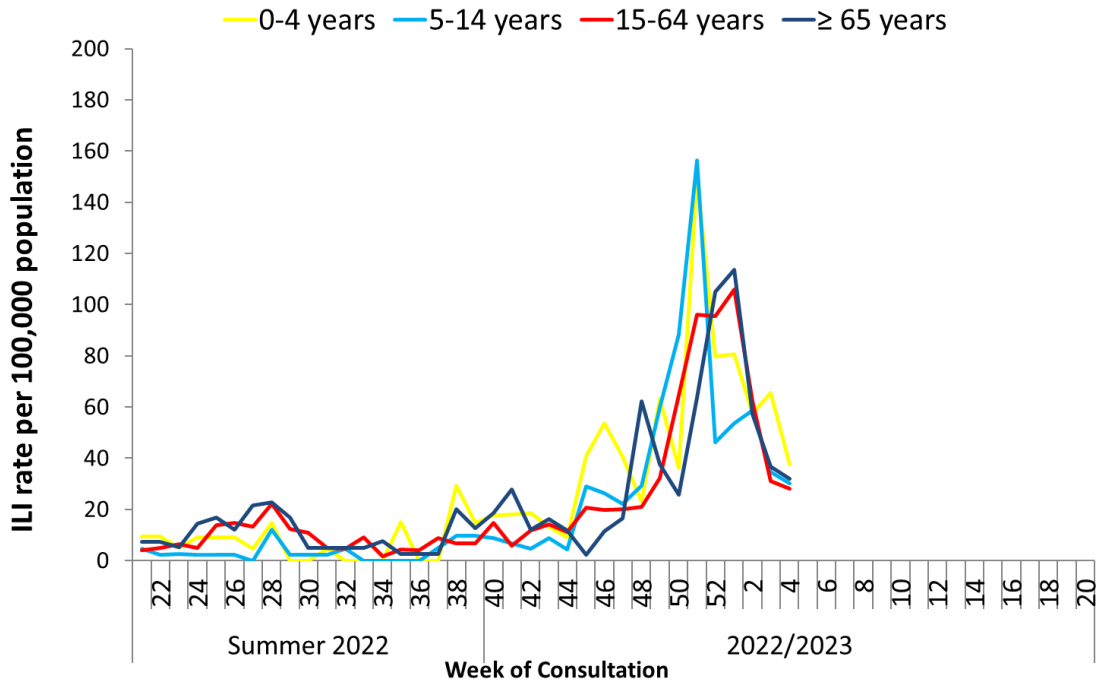


Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2022 and the 2022/2023 influenza season to date. *Source: ICGP.*

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 40 2022-4 2023), colour coded by sentinel GP ILI age specific Moving Epidemic Method (MEM) threshold levels. *Source: ICGP.*

MEM Threshold Levels	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	2	3	4
All Ages	14.7	9.7	11.3	13.8	10.2	21.0	22.2	21.5	28.1	39.2	63.4	117.1	89.3	100.2	61.2	32.6	29.5
<15 yrs	11.7	10.3	9.1	10.3	6.0	32.8	35.2	28.2	27.3	60.9	71.1	154.3	57.2	62.5	58.4	40.6	32.6
15-64 yrs	14.7	5.7	11.8	14.2	11.1	20.7	19.9	20.1	21.1	32.1	64.6	96.2	95.4	106.0	62.2	29.6	28.0
≥65 yrs	18.5	27.9	12.0	16.2	11.8	2.4	11.6	16.4	62.3	37.5	25.7	63.8	105.0	113.5	57.3	33.2	31.8
Reporting practices (N=61)	60	59	58	60	58	58	60	59	58	59	59	58	58	59	57	59	57

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, 3b, 4). 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.
- During week 4 2023, of 112 sentinel GP ARI specimens tested and reported by the NVRL, 23 (20.5%) were positive for influenza: eight A(H3), three A(H1)pdm09, two influenza A (not subtyped) and 10 influenza B. There were four specimens (3.6%) positive for RSV and six specimens (5.4%) positive for SARS-CoV-2.
- During week 3 2023, of 139 sentinel GP ARI specimens tested and reported by the NVRL, 22 (15.8%) were positive for influenza: 10 A(H3), six A(H1)pdm09, one influenza A (not subtyped) and five influenza B. There were five specimens (3.6%) positive for RSV and seven specimens (5%) positive for SARS-CoV-2.
- Of 205 non-sentinel respiratory specimens tested and reported by the NVRL during week 4 2023, 15 (7.3%) were positive for influenza: three A(H1)pdm09, six A(H3), and six influenza B.
- During week 3 2023, of 252 non-sentinel respiratory specimens tested, 29 (11.5%) were positive for influenza: five A(H1)pdm09, 18 A(H3), one A (not subtyped) and five influenza B.
- RSV positivity (non-sentinel respiratory specimens) is at low levels in recent weeks, at 4.4% (11/252) during week 3 2023 and 3.4% (7/205) during week 4 2023.
- Rhinovirus/enterovirus positive detections from non-sentinel respiratory specimens were detected at a positivity rate of 14.6% (30/205) during week 4 2023, which is an increase compared to a positivity rate of 11.9% (30/252) during week 3 2023 (Figure 3b).
- Other respiratory viruses (ORVs) are being detected at lower levels (Figure 3a and 3b).
- Of 1,720 sentinel GP ARI specimens and non-sentinel respiratory specimens positive for influenza and reported by the NVRL during the 2022/2023 season, 440 (25.7%) were coinfecting with other respiratory viruses.

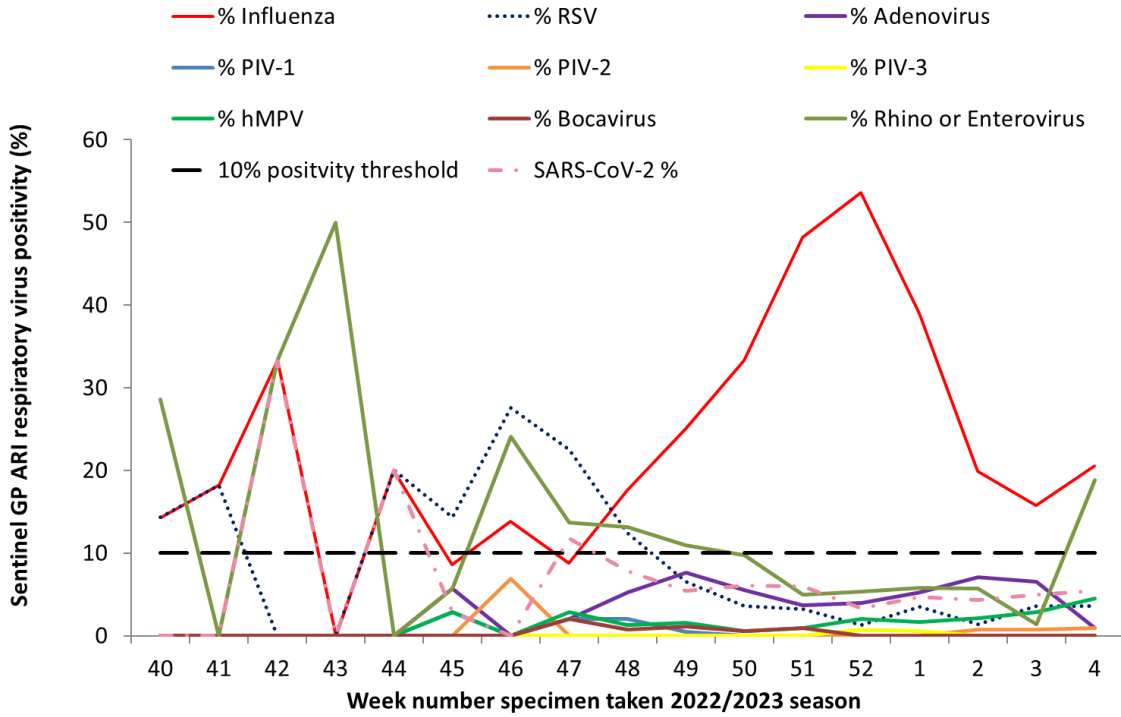


Figure 3a: Percentage positive results for **sentinel GP ARI** specimens tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-4 2023. *Source: NVRL*

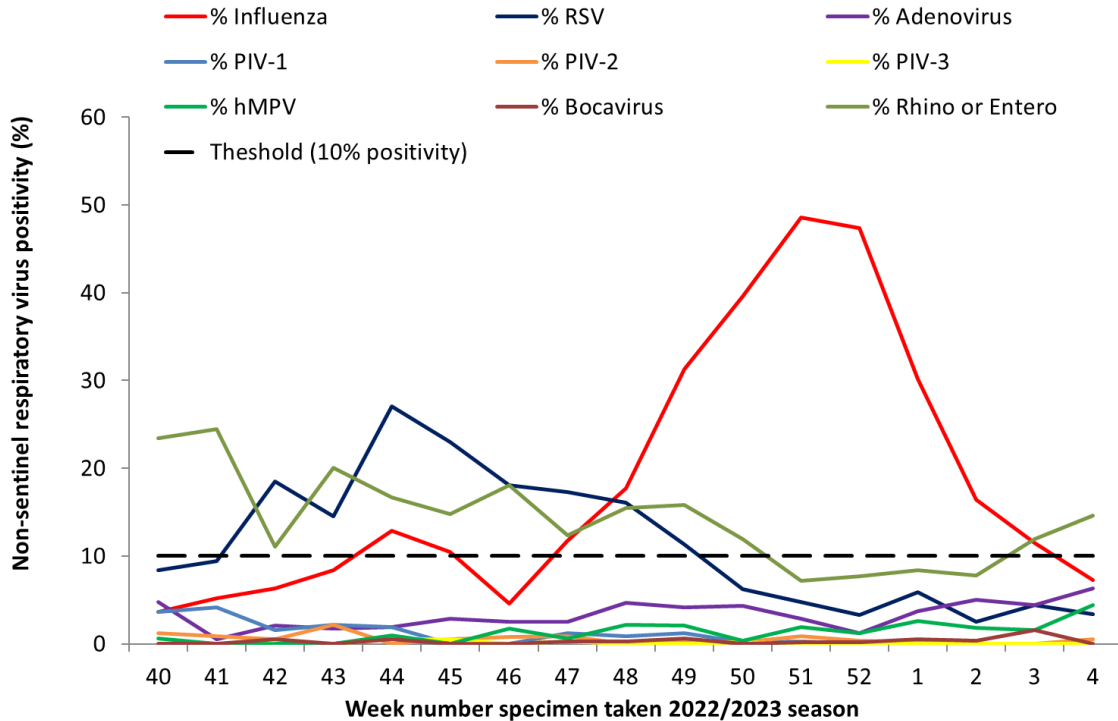


Figure 3b: Percentage positive results for **non-sentinel respiratory** specimen tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-4 2023. *Source: NVRL*

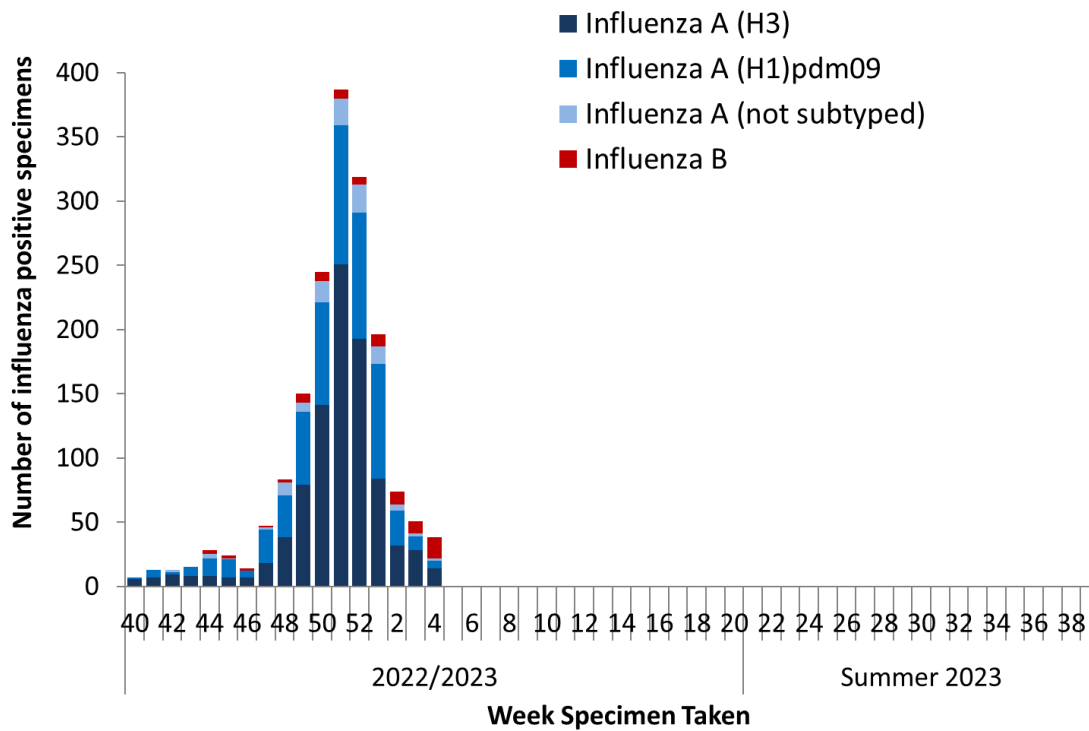


Figure 4: Number of positive influenza specimens (from sentinel GP ARI and non-sentinel respiratory sources) tested by the NVRL by influenza type/subtype and by week specimen was taken for the 2022/2023 influenza season. *Source: NVRL*

Table 2: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for weeks 3 and 4 2023 and the 2022/2023 season (weeks 40 2022-4 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
Week 4 2023	Sentinel GP ARI	112	23	20.5	3	8	2	13	10	0	0	10
	Non-sentinel respiratory	205	15	7.3	3	6	0	9	6	0	0	6
	Total	317	38	12.0	6	14	2	22	16	0	0	16
Week 3 2023	Sentinel GP ARI	139	22	15.8	6	10	1	17	5	0	0	5
	Non-sentinel respiratory	252	29	11.5	5	18	1	24	5	0	0	5
	Total	391	51	13.0	11	28	2	41	10	0	0	10
2022/2023	Sentinel GP ARI	1631	475	29.1	199	209	22	430	45	0	0	45
	Non-sentinel respiratory	5137	1245	24.2	385	721	86	1192	37	15	1	53
	Total	6768	1720	25.4	584	930	108	1622	82	15	1	98

Table 3: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive RSV results, for weeks 3 and 4 2023 and the 2022/2023 season (weeks 40 2022-4 2023). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number RSV positive	% RSV positive	RSV A	RSV B	RSV (unspecified)
Week 4 2023	Sentinel GP ARI	112	4	3.6	0	4	0
	Non-sentinel	205	7	3.4	0	7	0
	Total	317	11	3.5	0	11	0
Week 3 2023	Sentinel GP ARI	139	5	3.6	0	5	0
	Non-sentinel	252	11	4.4	0	11	0
	Total	391	16	4.1	0	16	0
2022/2023	Sentinel GP ILI/ARI	1631	103	6.3	2	101	0
	Non-sentinel	5137	514	10.0	59	455	0
	Total	6768	617	9.1	61	556	0

Table 4: Number of sentinel GP ILI/ARI specimens tested by the NVRL for respiratory viruses and positive results, for weeks 4 2023 and 3 2023 and 2022/2023 season (weeks 40 2022-4 2023). *Source: NVRL*

Virus	Week 4 2023 (N=112)		Week 3 2023 (N=139)		2022/2023 (N=1631)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	23	20.5	22	15.8	475	29.1
Respiratory Syncytial Virus (RSV)	4	3.6	5	3.6	103	6.3
Rhino/enterovirus	21	18.8	2	1.4	144	8.8
Adenovirus	1	0.9	9	6.5	78	4.8
Bocavirus	0	0.0	0	0.0	8	0.5
Human metapneumovirus (hMPV)	5	4.5	4	2.9	30	1.8
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	7	0.4
Parainfluenza virus type 2 (PIV-2)	1	0.9	1	0.7	5	0.3
Parainfluenza virus type 3 (PIV-3)	0	0.0	0	0.0	2	0.1
Parainfluenza virus type 4 (PIV-4)	0	0.0	0	0.0	4	0.2
SARS-CoV-2	6	5.4	7	5.0	92	5.6

Table 5: Number of non-sentinel respiratory specimens tested by the NVRL for respiratory viruses and positive results, for weeks 4 and 3 2023 and 2022/2023 season (weeks 40 2022-4 2023). *Source: NVRL*

Virus	Week 4 2023 (N=205)		Week 3 2023 (N=252)		2022/2023 (N=5137)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	15	7.3	29	11.5	1245	24.2
Respiratory Syncytial Virus (RSV)	7	3.4	11	4.4	514	10.0
Rhino/enterovirus	30	14.6	30	11.9	658	12.8
Adenovirus	13	6.3	11	4.4	167	3.3
Bocavirus	0	0.0	4	1.6	15	0.3
Human metapneumovirus (hMPV)	9	4.4	4	1.6	71	1.4
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	40	0.8
Parainfluenza virus type 2 (PIV-2)	1	0.5	0	0.0	26	0.5
Parainfluenza virus type 3 (PIV-3)	0	0.0	0	0.0	4	0.1
Parainfluenza virus type 4 (PIV-4)	0	0.0	0	0.0	21	0.4

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.

- 5,126 (40.6% of total calls; N=12,617) self-reported cough calls were reported by a network of GP OOHs services during week 4 2023, which was above baseline levels (10.7%) (Figure 5).
- 135 (1.1% of total calls; N=12,617) self-reported 'flu' calls were reported by a network of GP OOHs services during week 4 2023, which is below baseline levels. The baseline threshold level for self-reported 'flu' calls is 2.3% (Figure 7).
- Five GP OOH services provided data for week 4 2023.

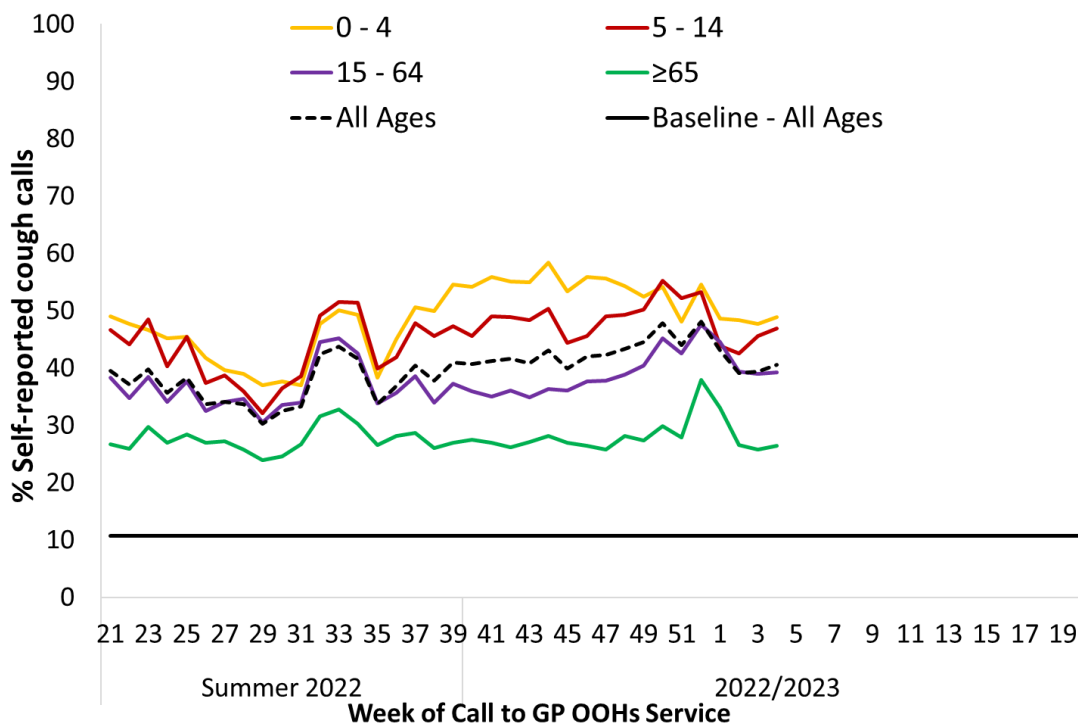


Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, summer 2022 and the 2022/2023 season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: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

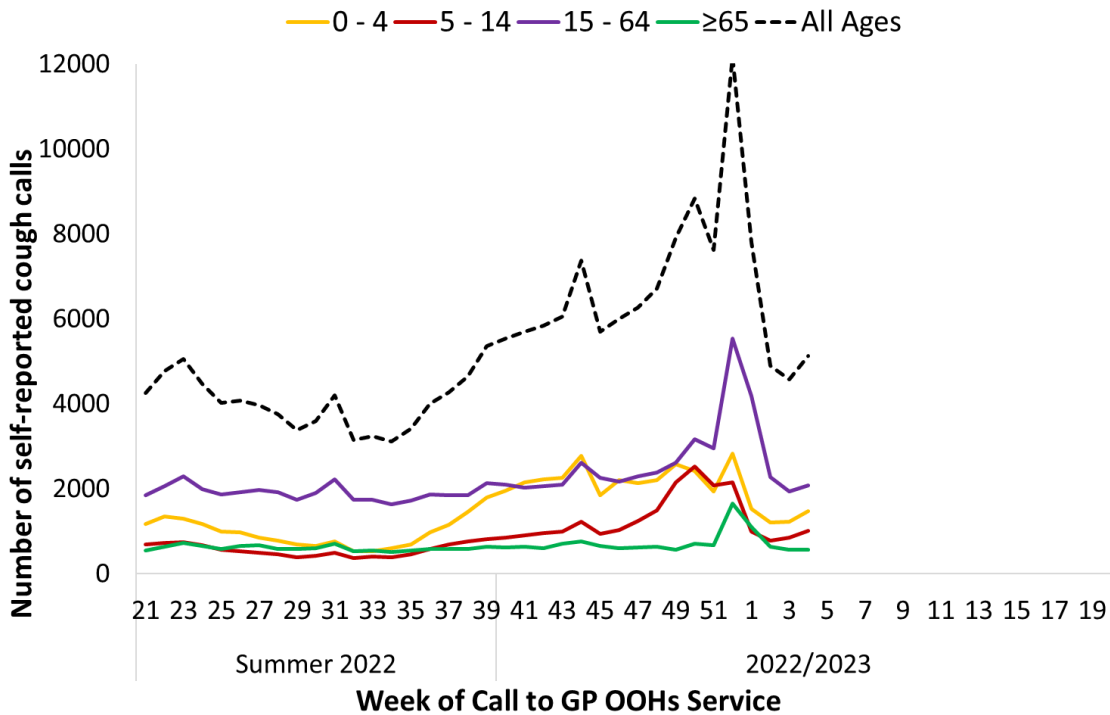


Figure 6: Number of self-reported COUGH calls for all ages and by age group to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE & ICGP).*

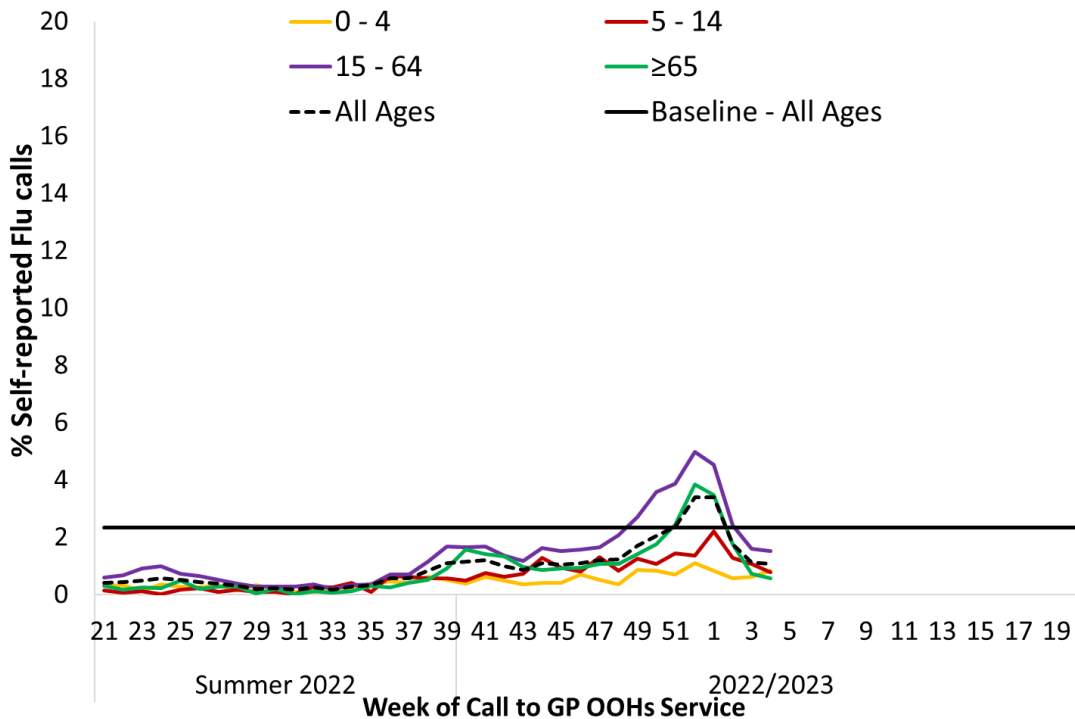


Figure 7: Percentage of self-reported FLU calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. The % flu calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours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

- 387 laboratory confirmed influenza cases were notified during week 4 2023 – 27 A(H1)pdm09, 28 A(H3), 239 influenza A (not subtyped), 89 influenza B and four influenza A & B coinfection. This is a decrease compared to 625 cases reported during week 3 2023.
- During the 2022/2023 season to date (weeks 40 2022 - 4 2023), 13,454 laboratory confirmed influenza cases have been notified to HPSC – 1,039 A(H1)pdm09, 813 A(H3), 10,939 influenza A (not subtyped), 605 influenza B, 36 influenza A and B coinfections, 16 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, although this has decreased in recent weeks (Figure 9).
- 112 RSV cases were notified during week 4 2023, a decrease compared to 142 RSV cases notified during week 3 2023 (Figure 10).
- During week 4 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 2022-4 2023) and week 4 2023 *Source: CIDR*

HSE area	Influenza confirmed cases week 4 2023	Influenza confirmed cases- season to date
HSE-East	125	4409
HSE-Midlands	23	1425
HSE-Mid-West	31	1346
HSE-North-East	24	1315
HSE-North-West	37	1275
HSE-South-East	52	1258
HSE-South	55	1239
HSE-West	40	1187
Total	387	13454

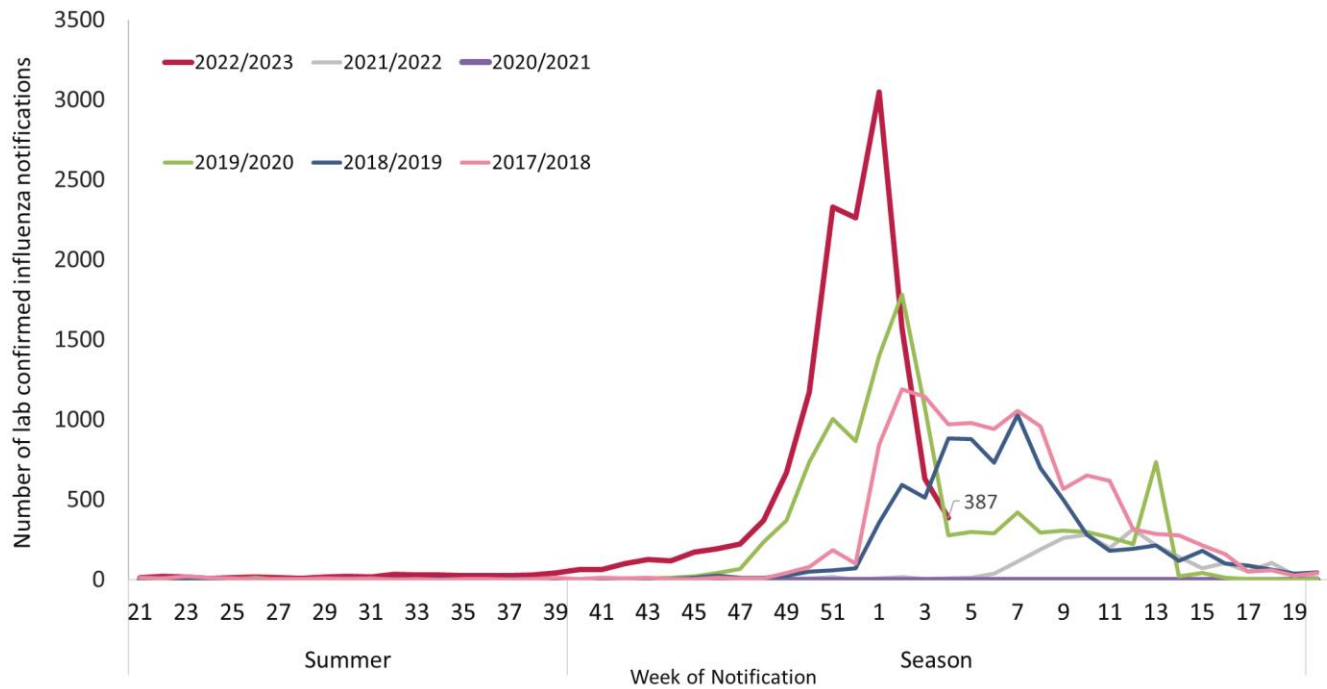


Figure 8: Laboratory confirmed **influenza** notifications to HPSC by week and season of notification, 2017/2018 to 2022/2023 influenza seasons. *Source: Ireland's Computerised Infectious Disease Reporting System.*

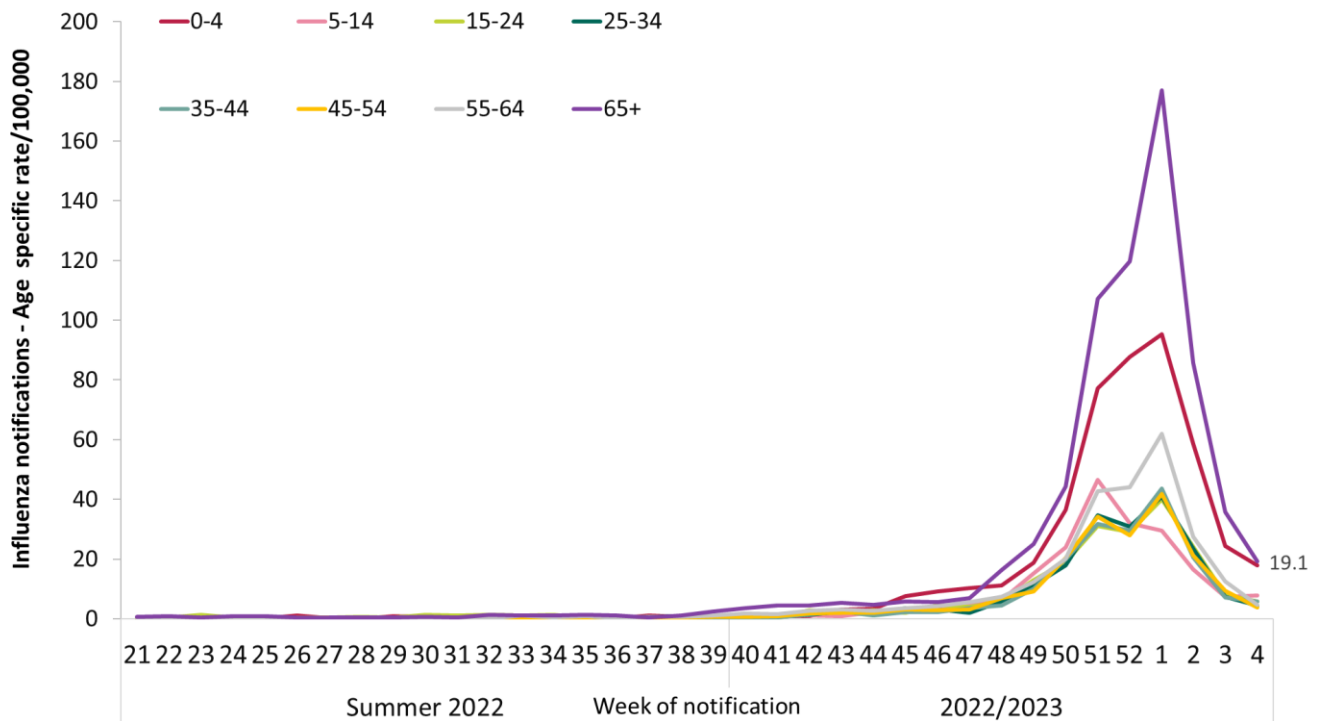


Figure 9: Age specific rates per 100,000 population for laboratory confirmed **influenza** notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

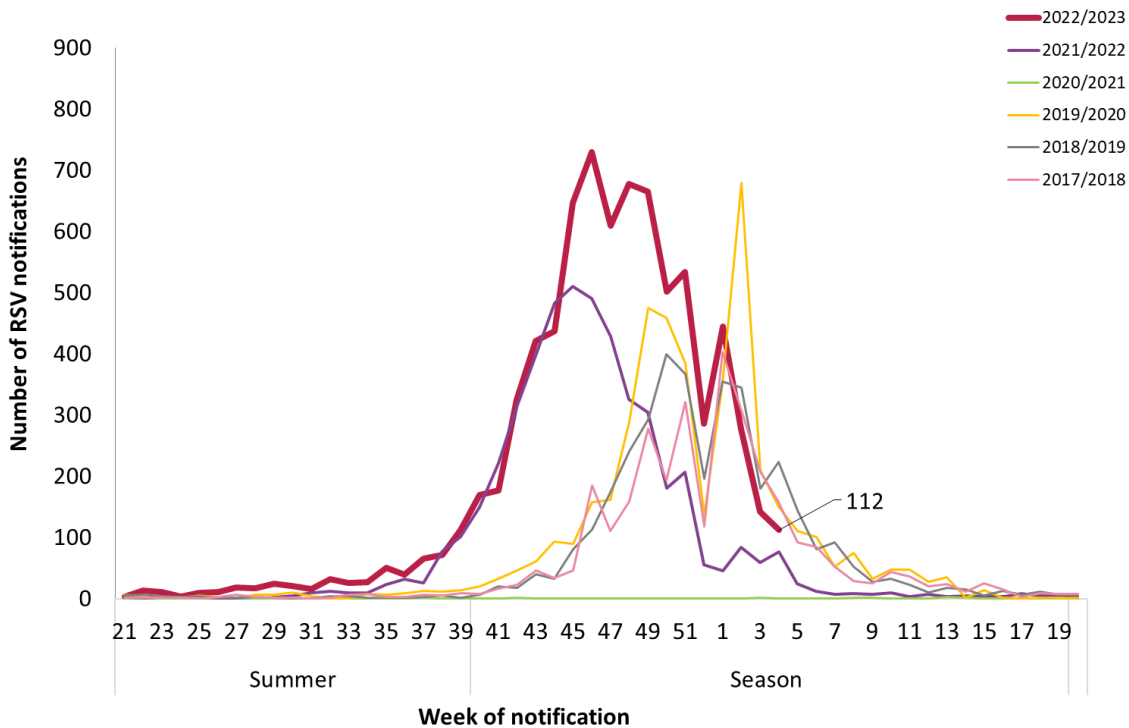


Figure 10: Number of laboratory confirmed **RSV** notifications to HPSC by week of notification, 2017/2018 to 2022/2023 season. *Source: Ireland’s Computerised Infectious Disease Reporting System.*

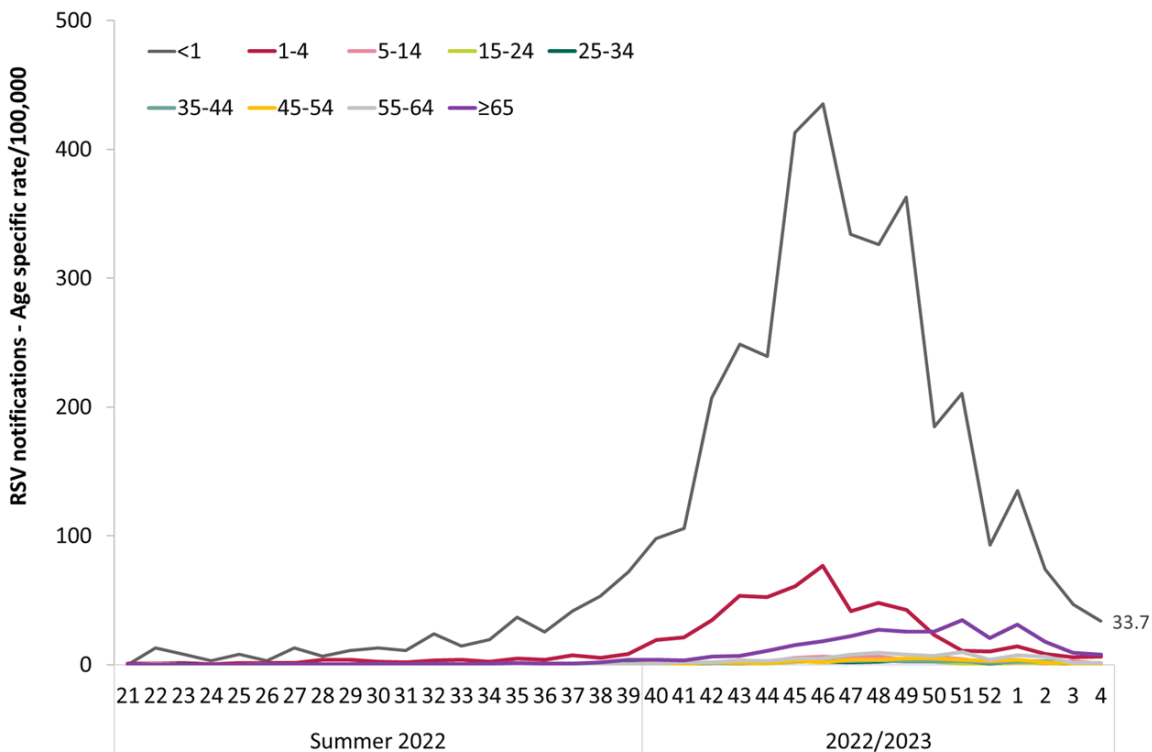


Figure 11: Age specific rates per 100,000 population for laboratory confirmed **RSV** notifications to HPSC by week of notification. *Source: Ireland’s Computerised Infectious Disease Reporting System.*

5. Hospitalisations

- During week 4 2023, 109 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 109 hospitalised cases: three influenza A(H1)pdm09, four A(H3), 80 influenza A (not subtyped) and 22 influenza B were reported (Figure 12). Influenza hospitalised cases during week 3 2023 decreased to 109 compared to 171 in week 3 2023.
- During the 2022/2023 season to date (weeks 40 2022 to week 4 2023), 3,883 laboratory confirmed influenza cases have been notified as hospital inpatients: 248 influenza A(H1)pdm09, 117 A(H3), 3,356 influenza A (not subtyped), 150 influenza B, nine influenza coinfections and three influenza (type not reported).
- During week 4 2023, age specific rates in notified laboratory confirmed hospitalised influenza cases were highest in those aged ≥ 65 years, although this rate has decreased in recent weeks (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 4 2023, 35 RSV cases were reported as hospital inpatients (Figure 14).
- During week 4 2023, age specific rates in notified laboratory confirmed hospitalised RSV cases were highest in those aged less than one year.(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.

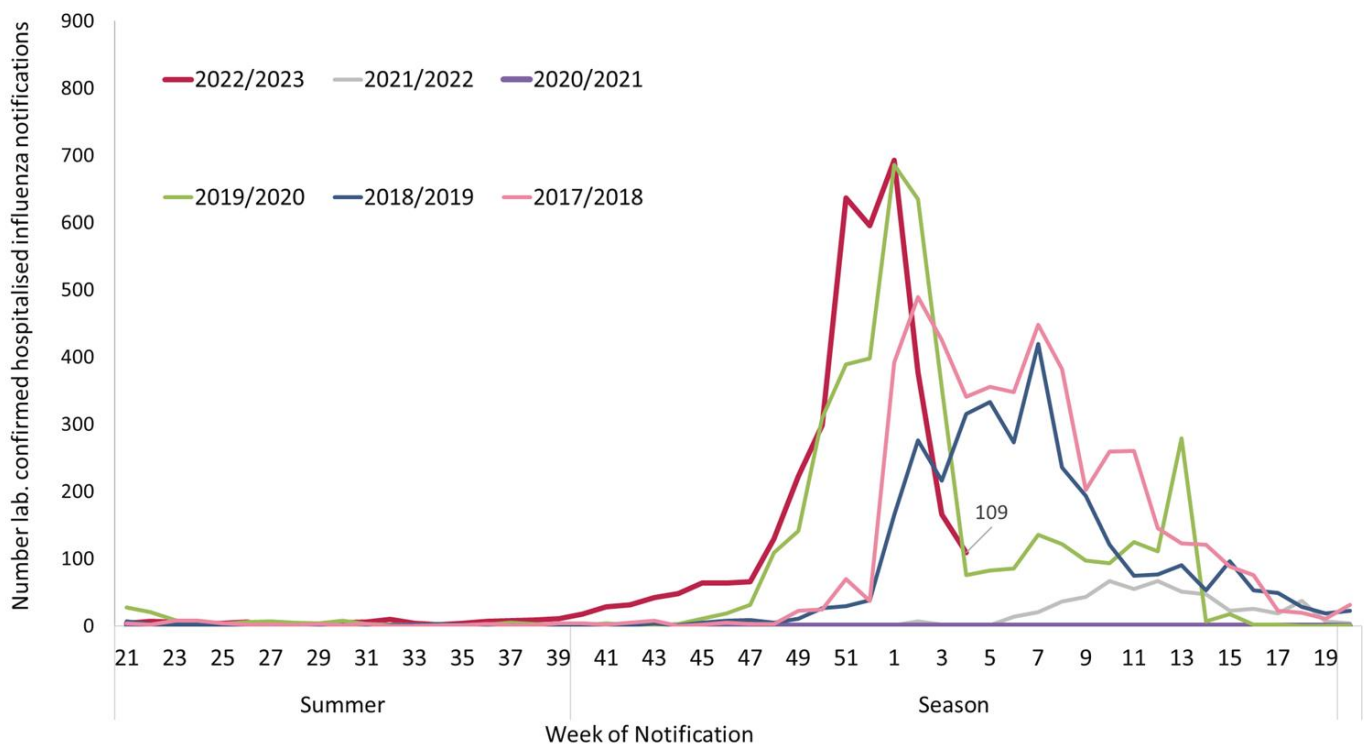


Figure 12: Number of notified laboratory confirmed **influenza** cases reported as hospital inpatients, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System*

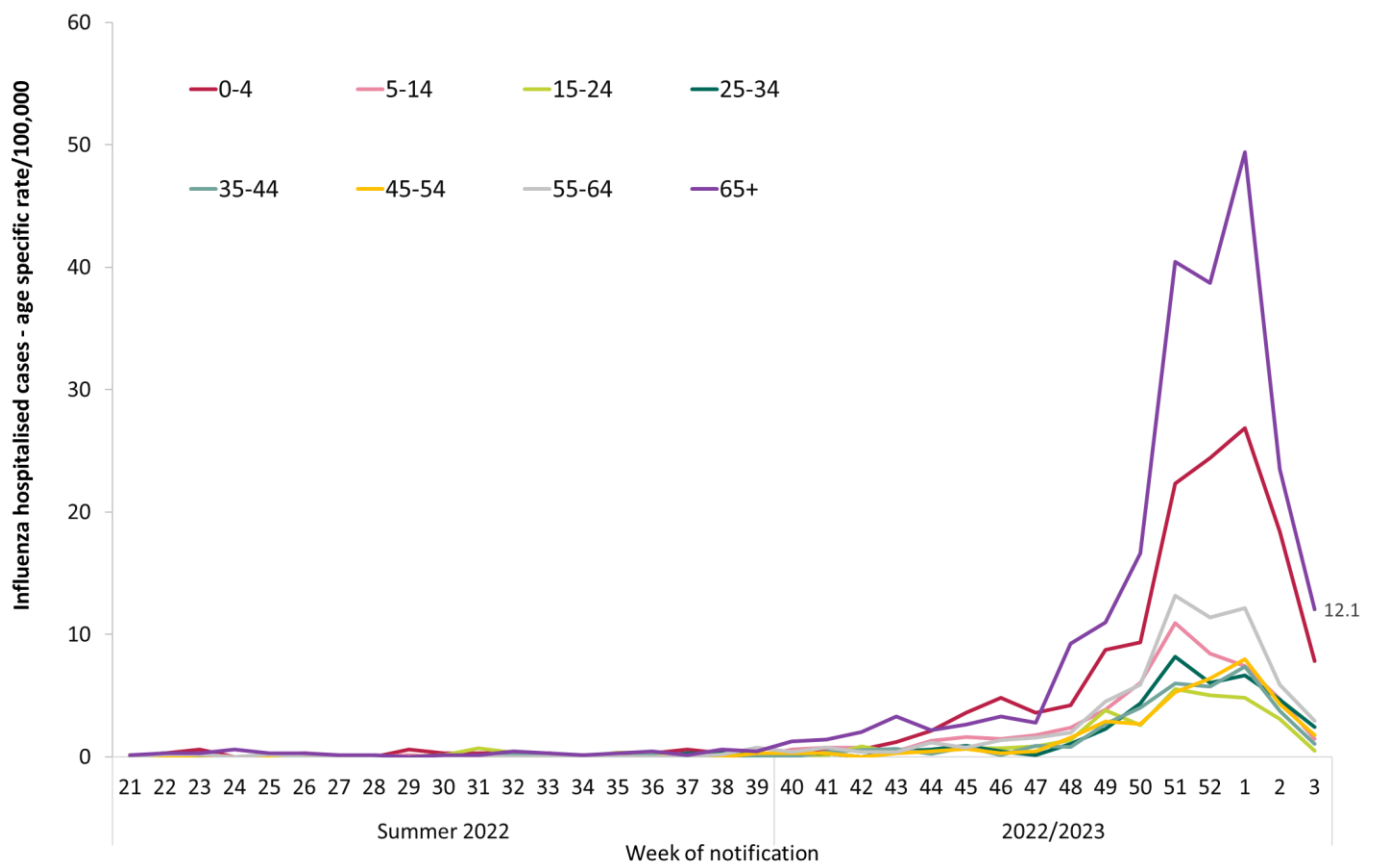


Figure 13: Age specific rates per 100,000 population for laboratory confirmed **influenza** cases reported as hospital inpatients by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

Table 7: Number of notified influenza cases reported by patient type and week of notification and 2022/2023 season (weeks 40 2022-4 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	8	6	124
Week 44	2	38	48	6	16	2	5	117
Week 45	3	66	64	7	12	12	8	172
Week 46	5	81	64	11	15	12	5	193
Week 47	3	92	66	18	19	7	16	221
Week 48	18	122	132	8	31	19	40	370
Week 49	17	262	228	31	57	18	62	675
Week 50	44	445	303	22	106	46	206	1172
Week 51	100	806	686	29	226	134	347	2328
Week 52	49	1008	715	16	162	144	141	2235
Week 1	120	1342	790	47	199	197	353	3048
Week 2	42	599	388	27	146	167	195	1564
Week 3	31	239	171	8	50	23	103	625
Week 4	18	145	109	5	27	25	58	387
Total	447	5356	3883	246	1114	826	1564	13436

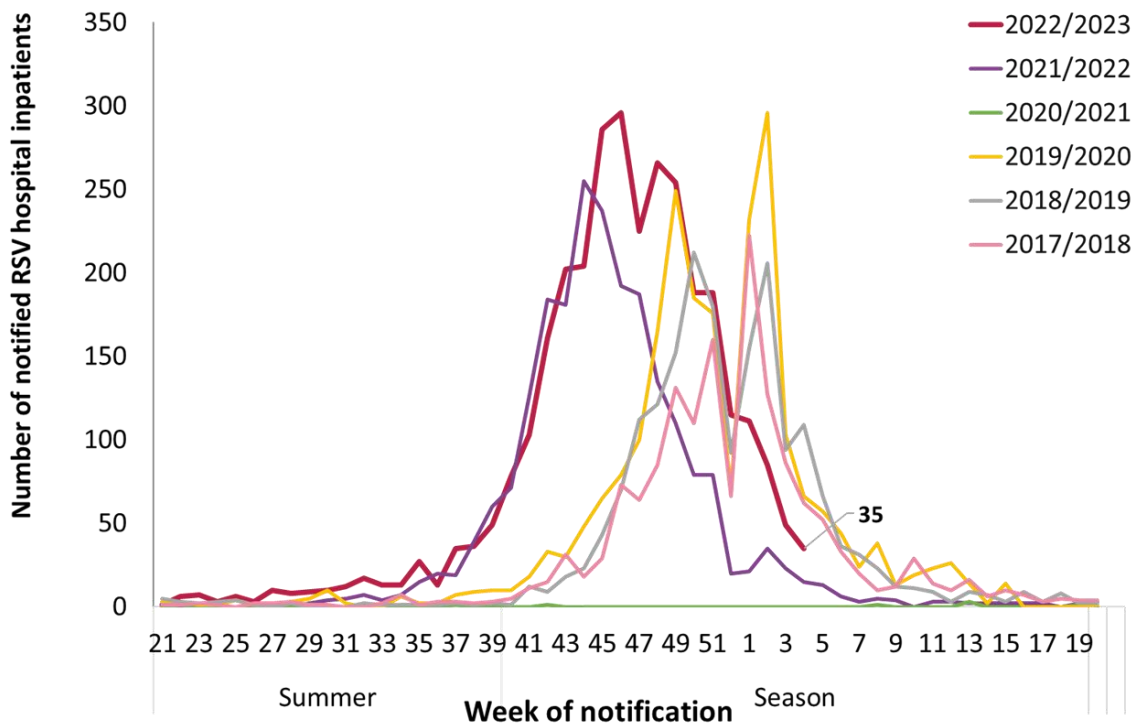


Figure 14: Number of notified RSV cases reported as hospital inpatients, by week of notification and season, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

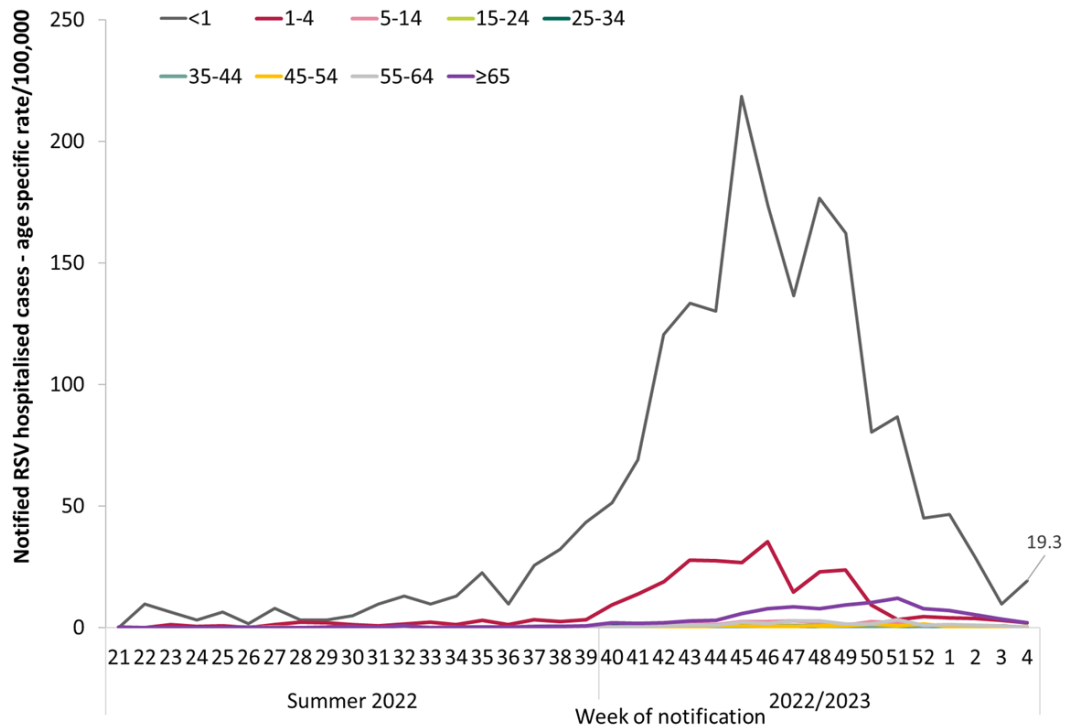


Figure 15: Age specific rates per 100,000 population for laboratory confirmed **RSV** cases reported as hospital inpatients by week of notification and season, Summer 2022 and 2022/2023. *Source: Ireland's Computerised Infectious Disease Reporting System*

Table 8: Number of notified **RSV** cases reported by patient type and week of notification (weeks 40 2022-4 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	5	6	177
Week 42	5	121	161	2	14	7	15	325
Week 43	6	148	201	9	21	19	17	421
Week 44	6	172	204	3	22	15	15	437
Week 45	8	239	286	12	37	28	36	646
Week 46	10	319	295	5	32	34	34	729
Week 47	6	273	225	8	24	36	37	609
Week 48	34	246	267	3	35	36	57	678
Week 49	19	255	254	13	17	24	83	665
Week 50	20	175	187	2	28	23	67	502
Week 51	14	171	191	5	33	30	88	532
Week 52	8	82	119	0	12	29	36	286
Week 1	26	166	125	5	21	31	71	445
Week 2	7	92	88	3	20	23	44	277
Week 3	4	44	52	2	13	5	22	142
Week 4	4	39	35	5	6	11	12	112
Total	185	2638	2871	86	359	363	651	4857

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.

- Six laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 4 2023.
- During the 2022/2023 season to date (weeks 40 2022-4 2023), 151 laboratory confirmed influenza cases – 24 A(H1)pdm09, 24 influenza A(H3), 98 influenza A (not subtyped) and five 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 2022-4 2023), of 132 laboratory confirmed influenza ICU cases with known influenza vaccination status, 90 (68%) 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 2022-4 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	111	178.3	2	3.2
1-4	378	140.4	11	4.1
5-14	387	57.3	7	1.0
15-24	198	34.3	8	1.4
25-34	276	41.9	3	0.5
35-44	292	44.3	18	2.4
45-54	248	39.6	21	3.4
55-64	364	71.5	21	4.1
≥65	1629	255.5	60	9.4
Unknown		-		-
Total	3883	81.5	151	3.2

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/>

- No deaths in notified influenza cases were reported to HPSC during week 4 2023.
- During the 2022/2023 season (weeks 40 2022- 4 2023), 104 deaths in notified influenza cases were reported to HPSC – 14 influenza A(H3), 10 influenza A(H1)pdm09, 79 influenza A (not subtyped) and one influenza B.
- . Low level pneumonia and influenza excess mortality was reported between weeks 51 2022 – 1 2023. Low level excess mortality was also reported in the 75 to 84 year age group during weeks 51-52 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/>

- Three laboratory confirmed influenza outbreaks were notified to HPSC during week 4 2023, three influenza (not subtyped). One outbreak was in a nursing home, one in a hospital and one in another setting.
- For an overview of outbreaks for the season to date (weeks 40 2022-4 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 4 2023 and the 2022/2023 season (weeks 40 2022-4 2023) *Source: CIDR*

HSE area	Influenza		Respiratory syncytial virus infection		Acute respiratory infection		COVID-19 & Influenza		Total	
	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023
HSE-East	0	54	0	12	0	0	0	0	0	66
HSE-Midlands	0	6	0	0	0	1	0	0	0	7
HSE-Mid-West	0	12	0	4	0	0	0	0	0	16
HSE-North-East	0	22	0	19	1	3	0	2	1	46
HSE-North-West	1	20	0	6	0	4	0	3	1	33
HSE-South-East	0	13	0	0	0	0	0	0	0	13
HSE-South	1	8	0	8	0	0	0	0	1	16
HSE-West	1	13	0	2	0	0	0	0	1	15
Total	3	148	0	51	1	8	0	5	4	212

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 4 2023 and the 2022/2023 season (weeks 40 2022-4 2023).

Source: CIDR

Setting	Influenza		Respiratory syncytial virus		Acute respiratory		COVID-19 & Influenza		Total	
	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023	Week 4	2022/2023
Community hospital/Long-stay unit	0	8	0	8	0	2	0	1	0	19
Nursing Home	1	52	0	18	1	4	0	2	2	76
Hospital	1	67	0	8	0	0	0	2	1	77
Residential Institution	0	10	0	3	0	2	0	0	0	15
Childcare facility	0	0	0	1	0	0	0	0	0	1
Family Outbreaks	0	7	0	12	0	0	0	0	0	19
Other settings	1	4	0	1	0	0	0	0	1	5
Total	3	148	0	51	1	8	0	5	4	212

9. International Summary

In the European region, during week 3 2023 (week ending 22/01/2023), influenza virus positivity in sentinel primary care specimens remained stable at 22% from 23% in the previous week, which is above the ECDC influenza positivity threshold of 10%. For week 3 2023, 827 (22%) of 3,777 sentinel GP specimens tested positive for an influenza virus; 80% were type A and 20% were type B. Of 488 subtyped A viruses, 37% were A(H3) and 63% were A(H1)pdm09. Of 46 type B viruses ascribed to a lineage, all were B/Victoria.

For week 3 2023, 7,438 of 64,201 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; 5,855 (79%) were type A and 1,538 (21%) were type B. Of 1,547 subtyped A viruses, 1,047 (68%) were A(H1)pdm09 and 500 (32%) were A(H3). Of 36 influenza B viruses ascribed to a lineage, all were of B/Victoria lineage. Of 38 countries and areas reporting on geographic spread of influenza viruses, none reported no activity, three reported sporadic spread, three reported local spread, four reported regional spread and 28 reported widespread influenza activity.

In Europe as of week 52/2022, 109,321 influenza detections had been reported. Of these detections, 94% were type A viruses, with A(H3N2) and A(H1N1)pdm09 showing near equal proportions, 51% and 49% respectively, and 6% type B of which 707 were ascribed to a lineage, with all being B/Victoria. This represents a 5-fold increase in detections compared to the 2021-2022 season, despite only a modest increase (5%) in the number of samples tested. Globally, the great majority of the A(H1N1)pdm09 viruses detected in the first 13 weeks of the 2022-2023 season have fallen in the HA 6B.1A.5a.2 subgroup. As a percentage of type A viruses detected in the WHO European Region there has been an increase to 49% from 4% in the same period in 2021. In Europe and across the world generally, few B/Victoria-lineage viruses have been detected during weeks 40- 52 2022.

As of 23rd January 2023, Globally, influenza activity decreased but remained somewhat elevated due to activity in the northern hemisphere. Influenza A viruses predominated with a slightly larger proportion of A(H1N1)pdm09 viruses detected among the subtyped influenza A viruses during the reporting period.

In the countries of North America, most indicators of influenza activity decreased to levels similar or below levels typically observed this time of year. Influenza A(H3N2) was the predominant virus detected. In Western Asia, influenza activity decreased overall with all seasonal influenza subtypes detected, though increased activity was reported in some countries. In East Asia, influenza activity of predominantly influenza A(H3N2) viruses remained low overall among reporting countries but with increases reported in Mongolia and the Republic of Korea. In the Caribbean and Central American countries, influenza activity of predominantly influenza A(H3N2) viruses was low overall but remained elevated in Mexico

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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