Influenza Week 6 2023 (06th -12th February 2023)

Summary

Overall influenza activity continued to decrease in Ireland during week 6 2023 compared to previous weeks. However, influenza is still considered to be circulating in the community although at low levels. Influenza B viruses are currently the predominant circulating strain. It is still 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 15.3/100,000 during week 6 2023. This is a decrease from the updated rate of 20.7/100,000 during week 5 2023. ILI consultation rates have been below the Irish baseline threshold (18.1/100,000 population) for the first time since week 44 (November 2022). Sentinel GP ILI age specific consultation rates decreased in all age groups during week 6 2023.
- **National Virus Reference Laboratory (NVRL):** During week 6 2023, of 61 sentinel GP ARI specimens tested and reported by the NVRL, 11 (18%) were positive for influenza: one A(H3), one A(H1)pdm09 and nine influenza B. There was one specimen (1.6%) positive for RSV and four specimens (6.6%) positive for SARS-CoV-2.
- Of 183 non-sentinel respiratory specimens tested and reported by the NVRL during week 6 2023, 12 (6.6%) were positive for influenza: four A(H3) and eight influenza B. RSV positivity (non-sentinel respiratory specimens) is at low levels in recent weeks, at 2.7% (5/183) during week 6 2023 and 2.6% (5/195) during week 5 2023.
- Of 1,817 sentinel GP ARI specimens and non-sentinel respiratory specimens positive for influenza and reported by the NVRL during the 2022/2023 season, 452 (24.9%) were coinfected with other respiratory viruses.
- **Influenza notifications:** 229 laboratory confirmed influenza cases were notified during week 6 2023 – six A(H1)pdm09, 10 A(H3), 102 influenza A (not subtyped), 109 influenza B and two influenza A & B coinfections. This is a decrease compared to 359 cases reported during week 5 2023. Age specific rates were highest in those aged 0-4 years.
- **RSV notifications:** 59 RSV cases were notified during week 6 2023, a decrease compared to 85 RSV cases notified during week 5 2023. Age specific rates for hospitalised cases were highest in those aged <1 year.
- **Hospitalisations:** During week 6 2023, 55 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 55 hospitalised cases: 32 influenza A (not subtyped) and 23 influenza B were reported. Influenza hospitalised cases during week 6 2023 decreased to 55 compared to 90 in week 5 2023.
- **Critical care admissions:** Three laboratory confirmed influenza cases (one influenza A not subtyped and two influenza B) were admitted to critical care units and notified to HPSC during week 6 2023. During weeks 40 2022-6 2023, 161 laboratory confirmed influenza cases – 29 A(H1)pdm09, 30 influenza A(H3), 94 influenza A (not subtyped) and eight 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 2022-6 2023, of 139 laboratory confirmed influenza ICU cases with known influenza vaccination status, 96 (69%) were reported as NOT having received the 2022/2023 influenza vaccine.
- **Mortality:** No deaths were reported to HPSC during week 6 2023. During weeks 40 2022- 6 2023, 140 deaths in notified influenza cases were reported to HPSC – 24 influenza A(H3), 16 influenza A(H1)pdm09, 98 influenza A (not subtyped), one influenza B and one influenza A and B coinfection. Overall, excess mortality was reported in weeks 51-52 2022, pneumonia and influenza excess mortality was reported between week 51 2022 to week 2 2023.
- **Outbreaks:** One laboratory confirmed influenza outbreak in a nursing home and two RSV outbreaks (one in a nursing home and one in a residential institution) were notified during week 6 2023.
- **International:** In Europe during week 5 2023, 23 countries reported widespread influenza activity indicating high influenza virus circulation across the European Region. Both influenza type A and type B viruses were detected with A(H1)pdm09 viruses being dominant across all monitoring systems.

1. GP sentinel surveillance system - Clinical Data

- During week 6 2023, 44 sentinel GP influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 15.3 per 100,000 population, compared to 20.7 per 100,000 population during week 5 (Figure 1).
- Sentinel GP ILI consultation rates were below the baseline threshold during week 6 2023.
- The sentinel GP ILI consultation rates have been below the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) for the first time since week 44 2022.
- Age specific rates decreased across all age groups during week 6 2023 with all of the age groups below the baseline threshold (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.

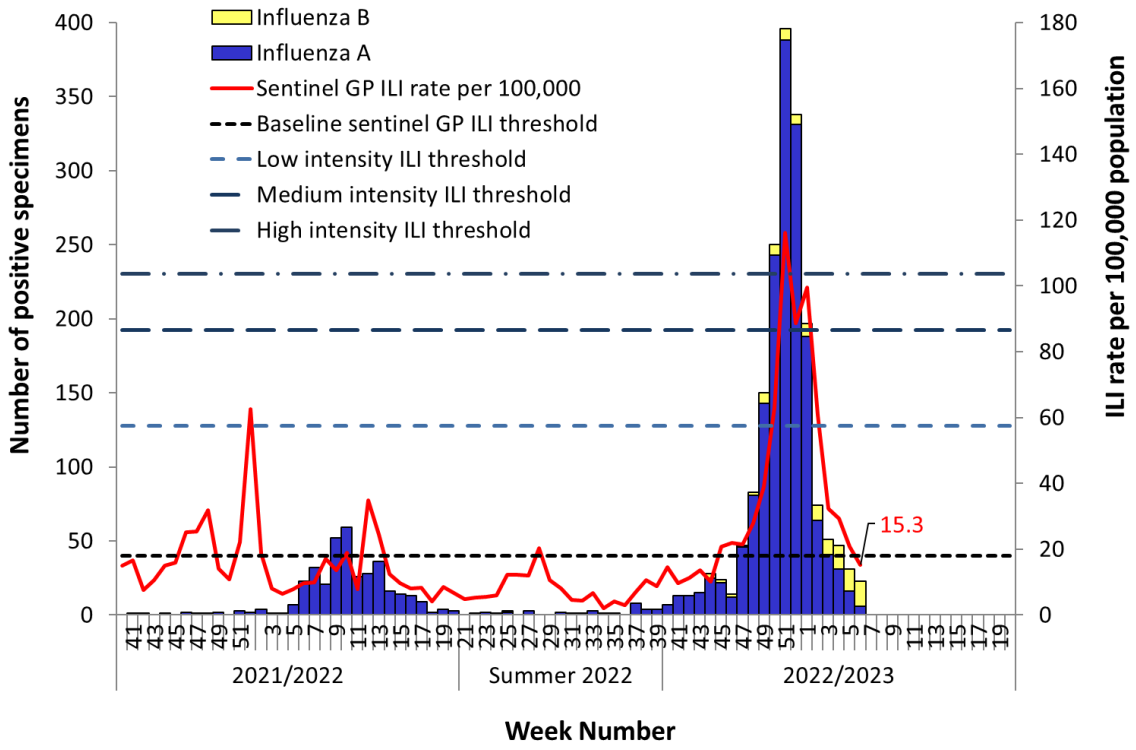

Figure 1: Sentinel GP Influenza-like illness (ILI) consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. *Source: ICGP and NVRL*

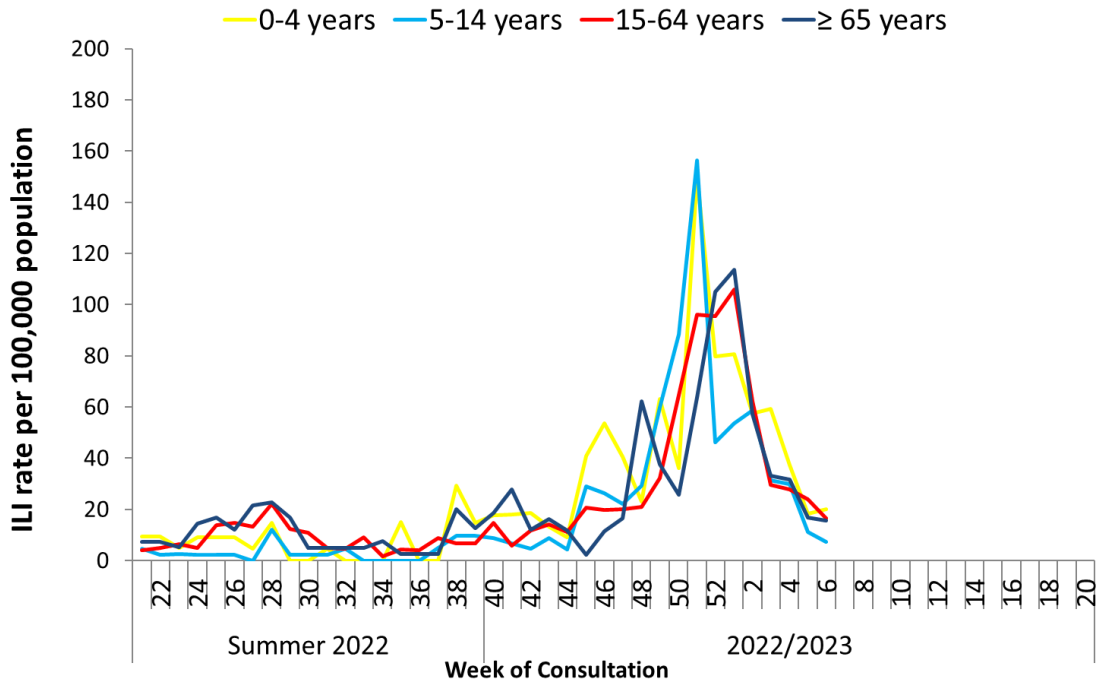

Figure 2: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2022 and the 2022/2023 influenza season to date. *Source: ICGP.*

Table 1: Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 40 2022-6 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	2	3	4	5	6
All Ages	14.6	9.7	11.3	13.7	10.1	20.8	22.0	21.4	27.9	38.9	63.0	116.2	88.6	99.4	60.7	32.4	29.3	20.7	15.3
<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	32.3	13.6	11.5
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	27.8	23.9	16.4
≥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	31.6	16.7	15.6
Reporting practices (N=61)	60	59	58	60	58	58	60	59	58	59	59	58	58	59	57	59	58	58	53

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 6 2023, of 61 sentinel GP ARI specimens tested and reported by the NVRL, 11 (18%) were positive for influenza: one A(H3), one A(H1)pdm09 and nine influenza B. There was one specimen (1.6%) positive for RSV and four specimens (6.6%) positive for SARS-CoV-2.
- During week 5 2023, of 107 sentinel GP ARI specimens tested and reported by the NVRL, 15 (14%) were positive for influenza: five A(H3), two A(H1)pdm09 and eight influenza B. There were two specimens (1.9%) positive for RSV and seven specimens (6.5%) positive for SARS-CoV-2.
- Of 183 non-sentinel respiratory specimens tested and reported by the NVRL during week 6 2023, 12 (6.6%) were positive for influenza: four A(H3) and eight influenza B.
- During week 5 2023, of 195 non-sentinel respiratory specimens tested, 16 (8.2%) were positive for influenza: two A(H1)pdm09, seven A(H3) and seven influenza B.
- RSV positivity (non-sentinel respiratory specimens) is at low levels in recent weeks, at 2.7% (5/183) during week 6 2023 and 2.6% (5/195) during week 5 2023.
- Rhinovirus/enterovirus positive detections from non-sentinel respiratory specimens have increased in recent weeks and were detected at a positivity rate of 21.3% (39/183) during week 6 2023, which is stable compared to a positivity rate of 23.6% (46/195) during week 5 2023 (Figure 3b).
- Other respiratory viruses (ORVs) are being detected at lower levels (Figure 3a and 3b).
- Of 1,817 sentinel GP ARI specimens and non-sentinel respiratory specimens positive for influenza and reported by the NVRL during the 2022/2023 season, 452 (24.9%) were coinfected with other respiratory viruses.

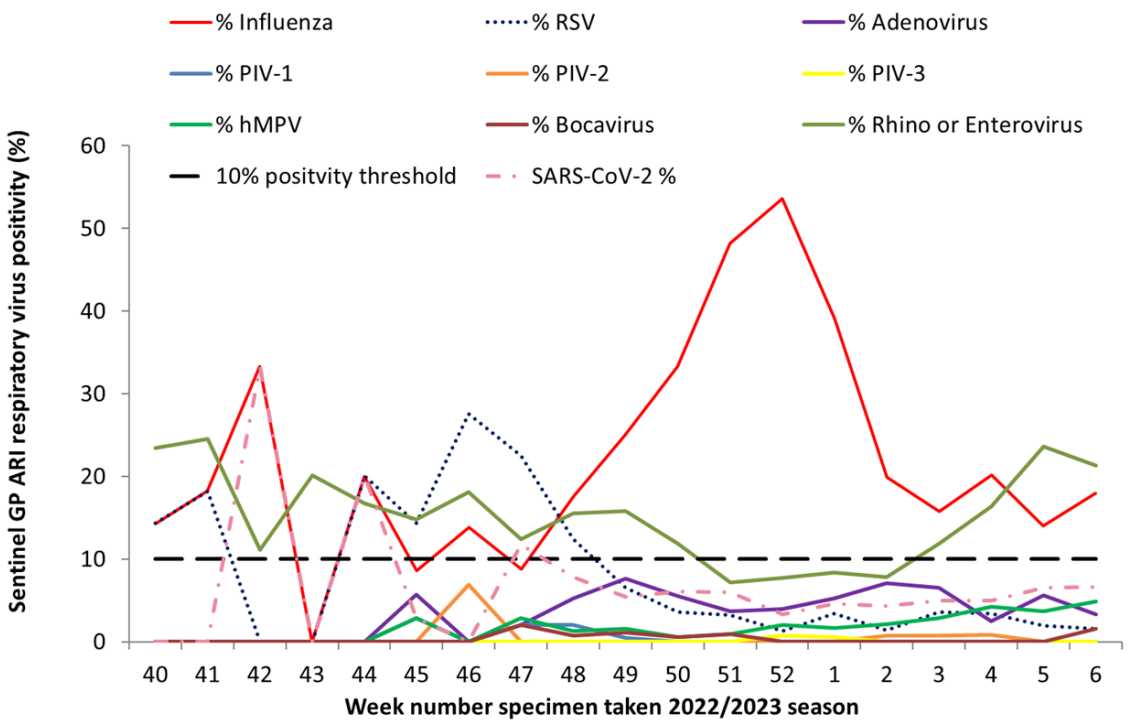

Figure 3a: Percentage positive results for **sentinel GP ARI** specimens tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-6 2023. *Source: NVRL*

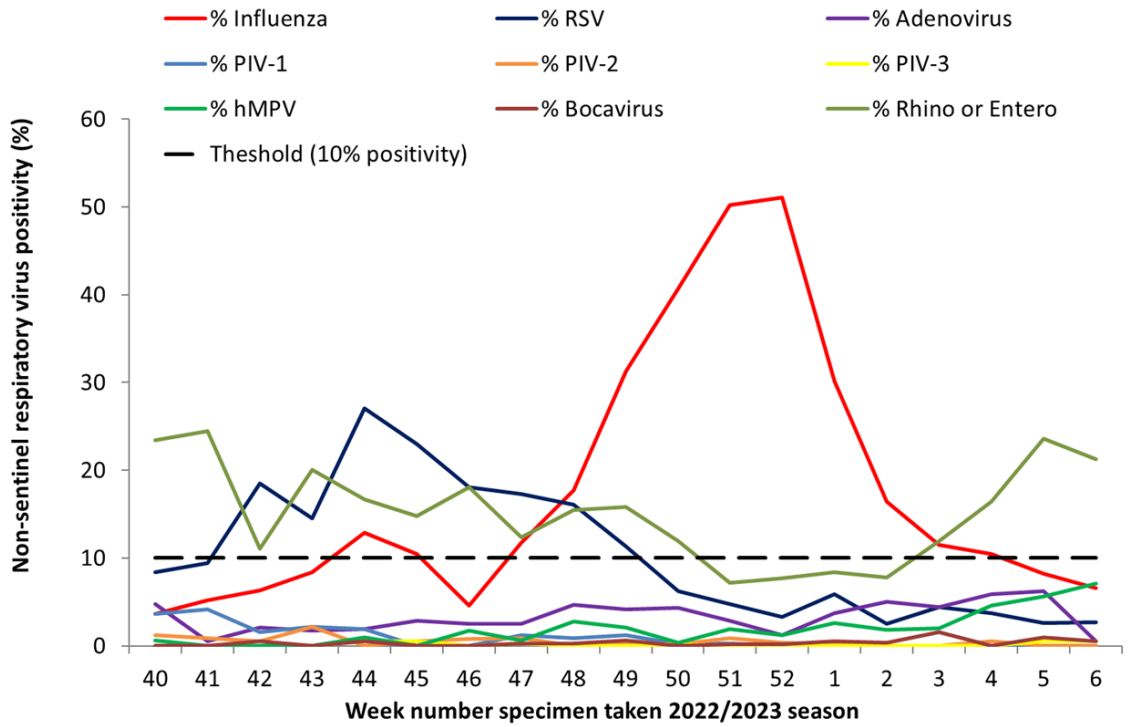

Figure 3b: Percentage positive results for **non-sentinel respiratory** specimens tested by the NVRL for influenza, RSV and other respiratory viruses by week specimen was taken, weeks 40 2022-6 2023. *Source: NVRL*

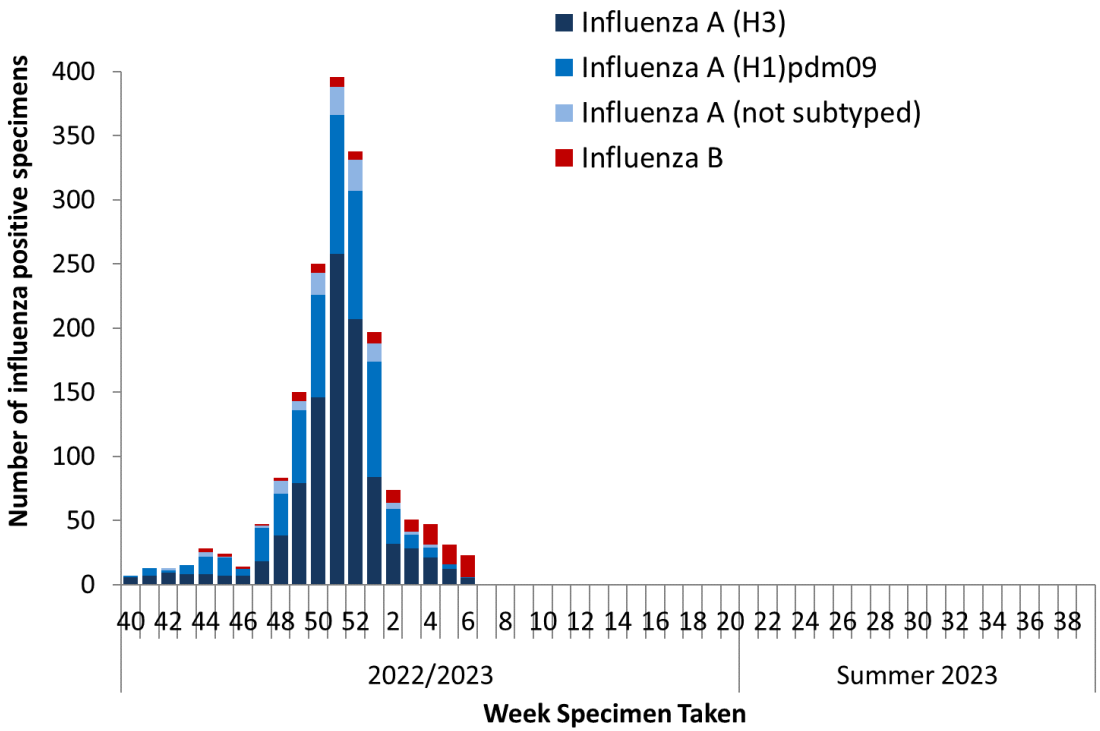

Figure 4: Number of positive influenza specimens (from sentinel GP ARI and non-sentinel respiratory sources) tested by the NVRL by influenza type/subtype and by week specimen was taken for the 2022/2023 influenza season. *Source: NVRL*

Table 2: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for weeks 5 and 6 2023 and the 2022/2023 season (weeks 40 2022-6 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 6 2023	Sentinel GP ARI	61	11	18.0	1	1	0	2	9	0	0	9
	Non-sentinel respiratory	183	12	6.6	0	4	0	4	8	0	0	8
	Total	**244**	**23**	**9.4**	**1**	**5**	**0**	**6**	**17**	**0**	**0**	**17**
Week 5 2023	Sentinel GP ARI	107	15	14.0	2	5	0	7	8	0	0	8
	Non-sentinel respiratory	195	16	8.2	2	7	0	9	7	0	0	7
	Total	**302**	**31**	**10.3**	**4**	**12**	**0**	**16**	**15**	**0**	**0**	**15**
2022/2023	Sentinel GP ARI	1808	503	27.8	204	215	22	441	62	0	0	62
	Non-sentinel respiratory	5529	1314	23.8	390	765	89	1244	54	15	1	70
	Total	**7337**	**1817**	**24.8**	**594**	**980**	**111**	**1685**	**116**	**15**	**1**	**132**

Table 3: Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive RSV results, for weeks 5 and 6 2023 and the 2022/2023 season (weeks 40 2022-6 2023). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number RSV positive	% RSV positive	RSV A	RSV B	RSV (unspecified)
Week 6 2023	Sentinel GP ARI	61	1	1.6	1	0	0
	Non-sentinel	183	5	2.7	0	5	0
	Total	**244**	**6**	**2.5**	**1**	**5**	**0**
Week 5 2023	Sentinel GP ARI	107	2	1.9	0	2	0
	Non-sentinel	195	5	2.6	0	5	0
	Total	**302**	**7**	**2.3**	**0**	**7**	**0**
2022/2023	Sentinel GP ILI/ARI	1808	106	5.9	3	103	0
	Non-sentinel	5529	525	9.5	59	466	0
	Total	**7337**	**631**	**8.6**	**62**	**569**	**0**

Table 4: Number of sentinel GP ILI/ARI specimens tested by the NVRL for respiratory viruses and positive results, for weeks 5 2023 and 6 2023 and 2022/2023 season (weeks 40 2022-6 2023). *Source: NVRL*

Virus	Week 6 2023 (N=61)		Week 5 2023 (N=107)		2022/2023 (N=1808)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	11	18.0	15	14.0	503	27.8
Respiratory Synctial Virus (RSV)	1	1.6	2	1.9	106	5.9
Rhino/enterovirus	17	27.9	19	17.8	186	10.3
Adenovirus	2	3.3	6	5.6	88	4.9
Bocavirus	1	1.6	0	0.0	9	0.5
Human metapneumovirus (hMPV)	3	4.9	4	3.7	37	2.0
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	7	0.4
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	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	4	6.6	7	6.5	103	5.7

Table 5: Number of non-sentinel respiratory specimens tested by the NVRL for respiratory viruses and positive results, for weeks 5 and 6 2023 and 2022/2023 season (weeks 40 2022-6 2023). *Source: NVRL*

Virus	Week 6 2023 (N=183)		Week 5 2023 (N=195)		2022/2023 (N=5529)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	12	6.6	16	8.2	1314	23.8
Respiratory Synctial Virus (RSV)	5	2.7	5	2.6	525	9.5
Rhino/enterovirus	39	21.3	46	23.6	749	13.5
Adenovirus	1	0.5	12	6.2	180	3.3
Bocavirus	1	0.5	2	1.0	18	0.3
Human metapneumovirus (hMPV)	13	7.1	11	5.6	99	1.8
Parainfluenza virus type 1 (PIV-1)	0	0.0	0	0.0	40	0.7
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	26	0.5
Parainfluenza virus type 3 (PIV-3)	1	0.5	1	0.5	6	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.

- 5,385 (37% of total calls; N=14,460) self-reported cough calls were reported by a network of GP OOHs services during week 6 2023, which was above baseline levels (10.7%) (Figure 5).
- 137 (0.9% of total calls; N=14,460) self-reported 'flu' calls were reported by a network of GP OOHs services during week 6 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 6 2023.

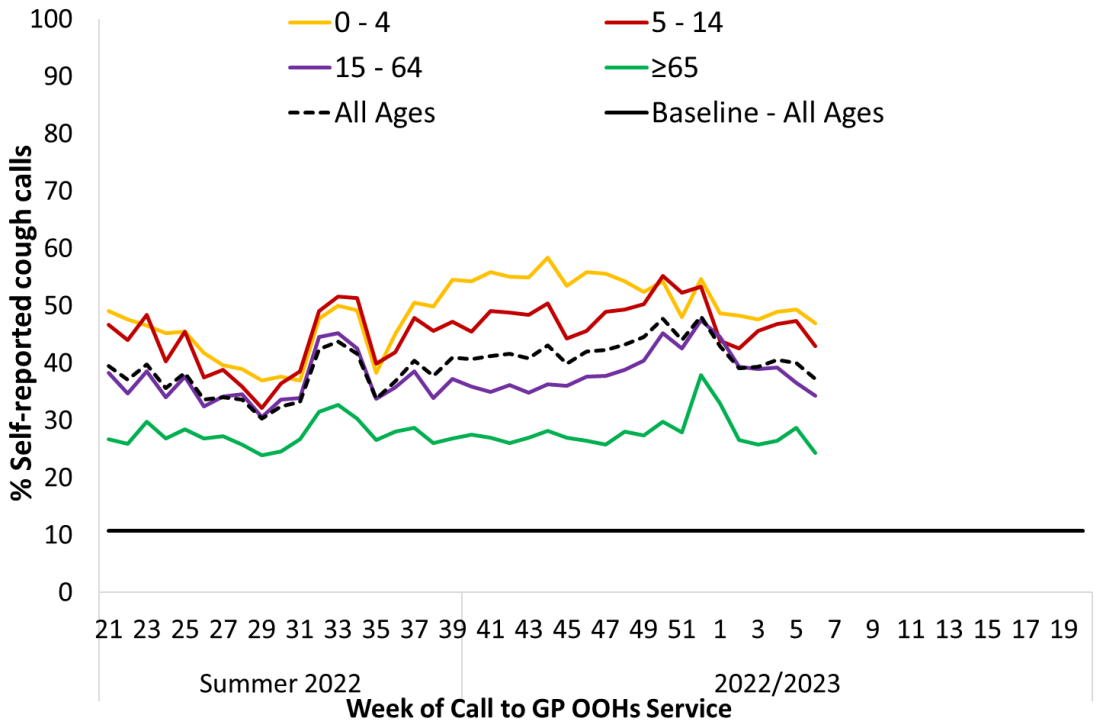

Figure 5: Percentage of self-reported COUGH calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, summer 2022 and the 2022/2023 season. The % cough calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: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

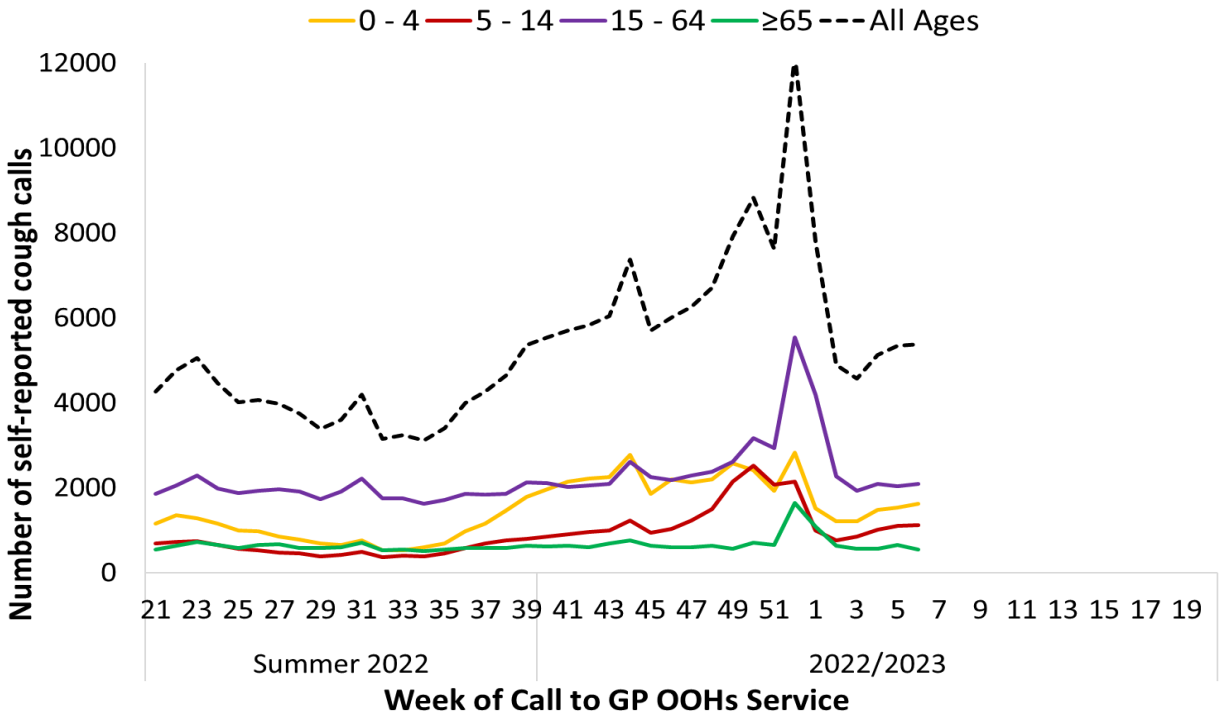

Figure 6: Number of self-reported COUGH calls for all ages and by age group to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. *Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE & ICGP).*

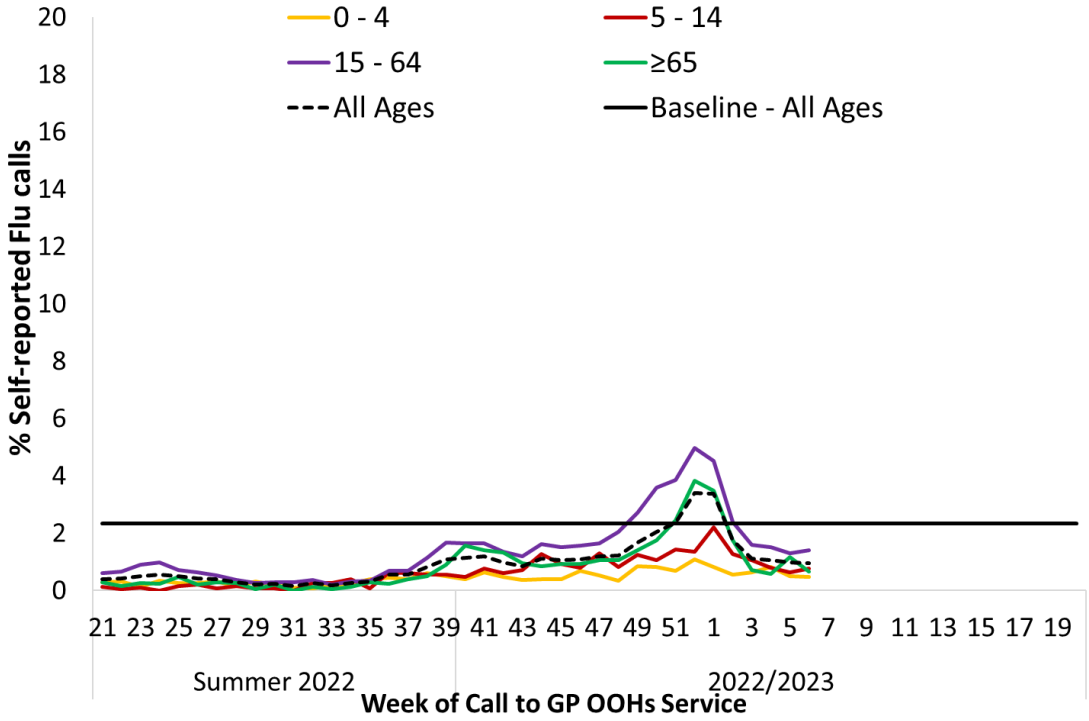

Figure 7: Percentage of self-reported FLU calls for all ages and by age group as a proportion of total calls to GP Out-of-Hours services by week of call, Summer 2022 and 2022/2023. The % flu calls baseline for all ages calculated using the MEM method on historic data is shown. *Source: GP Out-Of-Hours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

- 229 laboratory confirmed influenza cases were notified during week 5 2023 – six A(H1)pdm09, 10 A(H3), 102 influenza A (not subtyped), 109 influenza B and two influenza A & B coinfections. This is a decrease compared to 359 cases reported during week 5 2023 (Figure 8 & 9). Of note, as a proportion of the overall cases, influenza B cases increased to 48% of all cases in week 6 2023 (109/229) compared to 35% in week 5 2023 (125/359).
- During the 2022/2023 season to date (weeks 40 2022 - 6 2023), 14,039 laboratory confirmed influenza cases have been notified to HPSC – 1,116 A(H1)pdm09, 921 A(H3), 11,097 influenza A (not subtyped), 839 influenza B, 44 influenza A and B coinfections, 16 influenza A(H1)pdm09 & A(H3) coinfections and six influenza (type not reported) (Figure 8).
- 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 0-4 years. (Figure 10).
- 59 RSV cases were notified during week 6 2023, a decrease compared to 85 RSV cases notified during week 5 2023 (Figure 11).
- During week 6 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 12).

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

HSE area	Influenza confirmed cases week 6 2023	Influenza confirmed cases-season to date
HSE-East	75	**4591**
HSE-Midlands	20	**1299**
HSE-Mid-West	17	**1389**
HSE-North-East	18	**1375**
HSE-North-West	23	**1246**
HSE-South-East	31	**1306**
HSE-South	18	**1475**
HSE-West	27	**1358**
Total	**229**	**14039**

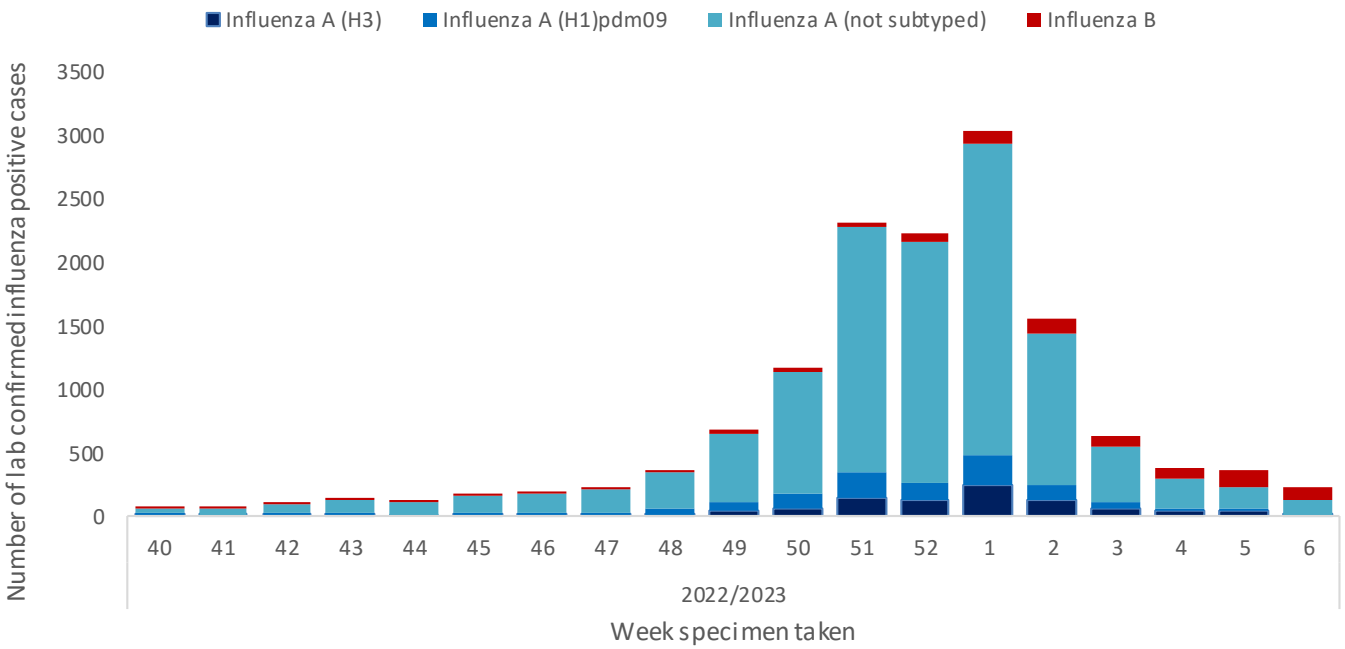

Figure 8: Laboratory confirmed **influenza** notifications by influenza type/subtype to HPSC by week and season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

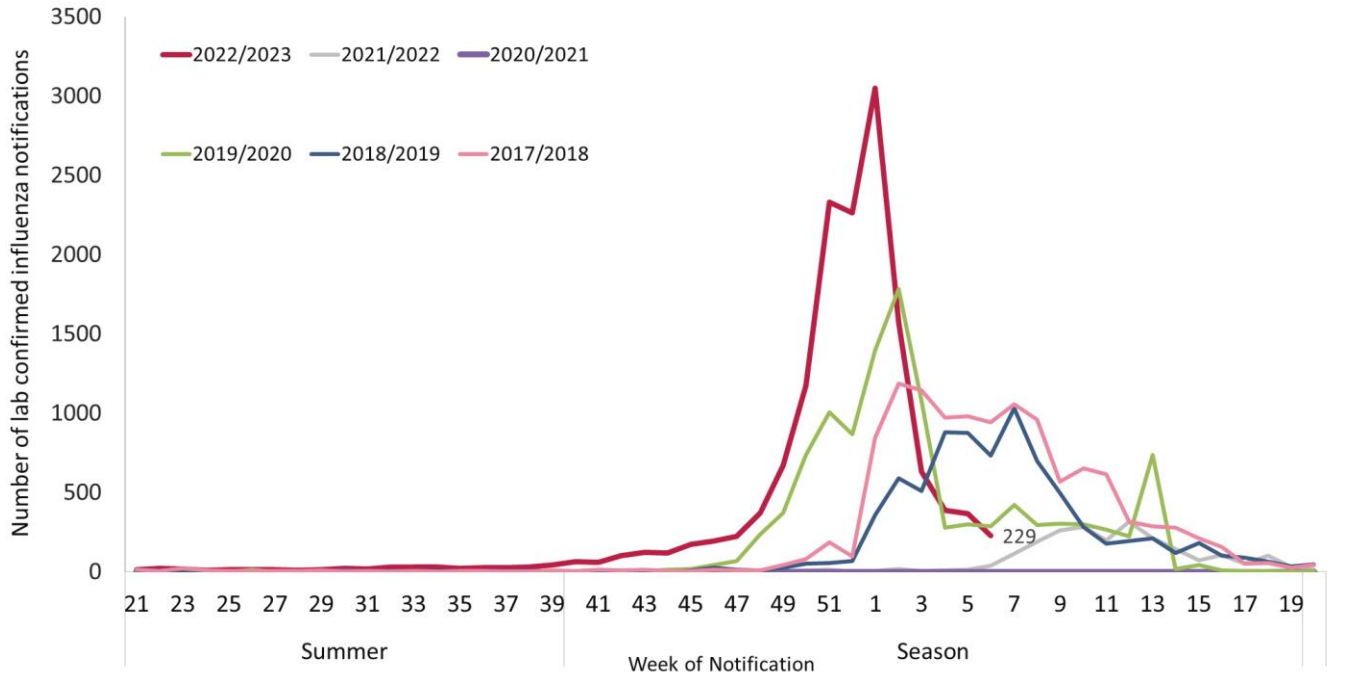

Figure 9: Laboratory confirmed **influenza** notifications to HPSC by week and season of notification, 2017/2018 to 2022/2023 influenza seasons. *Source: Ireland's Computerised Infectious Disease Reporting System.*

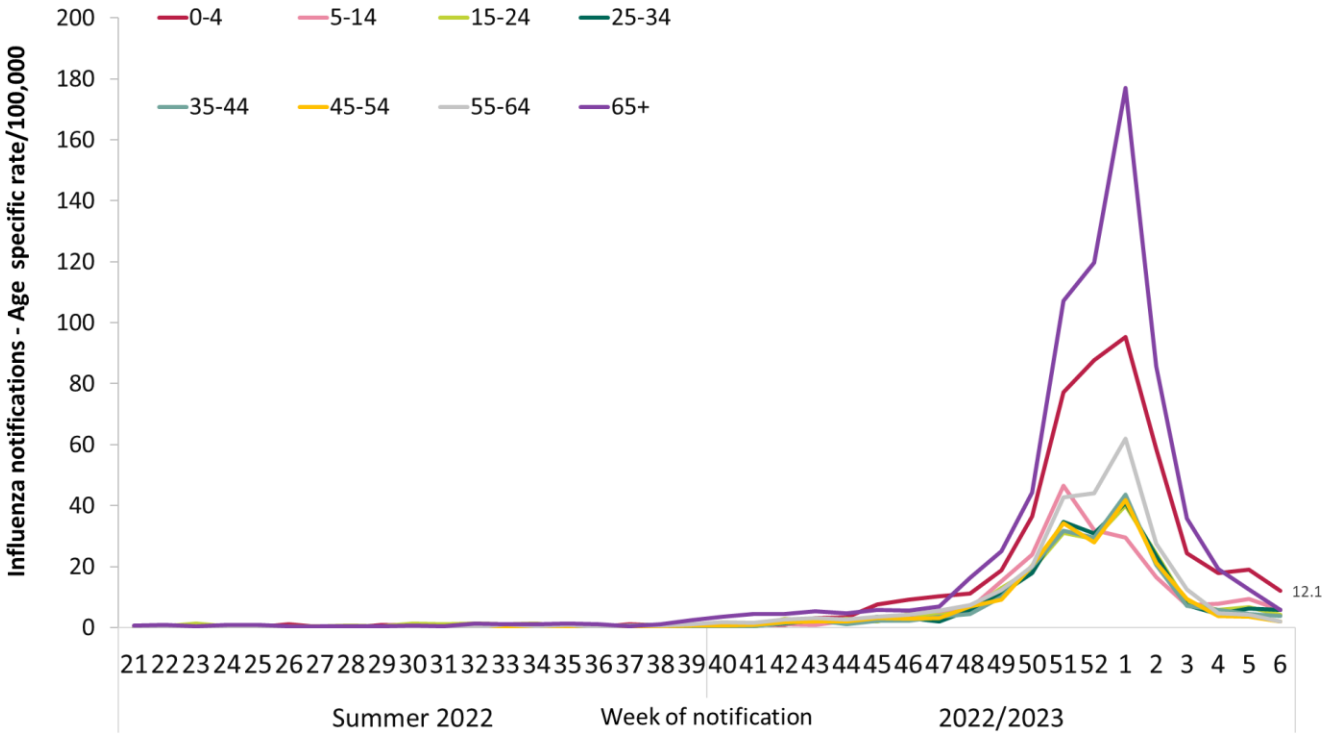

Figure 10: Age specific rates per 100,000 population for laboratory confirmed **influenza** notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

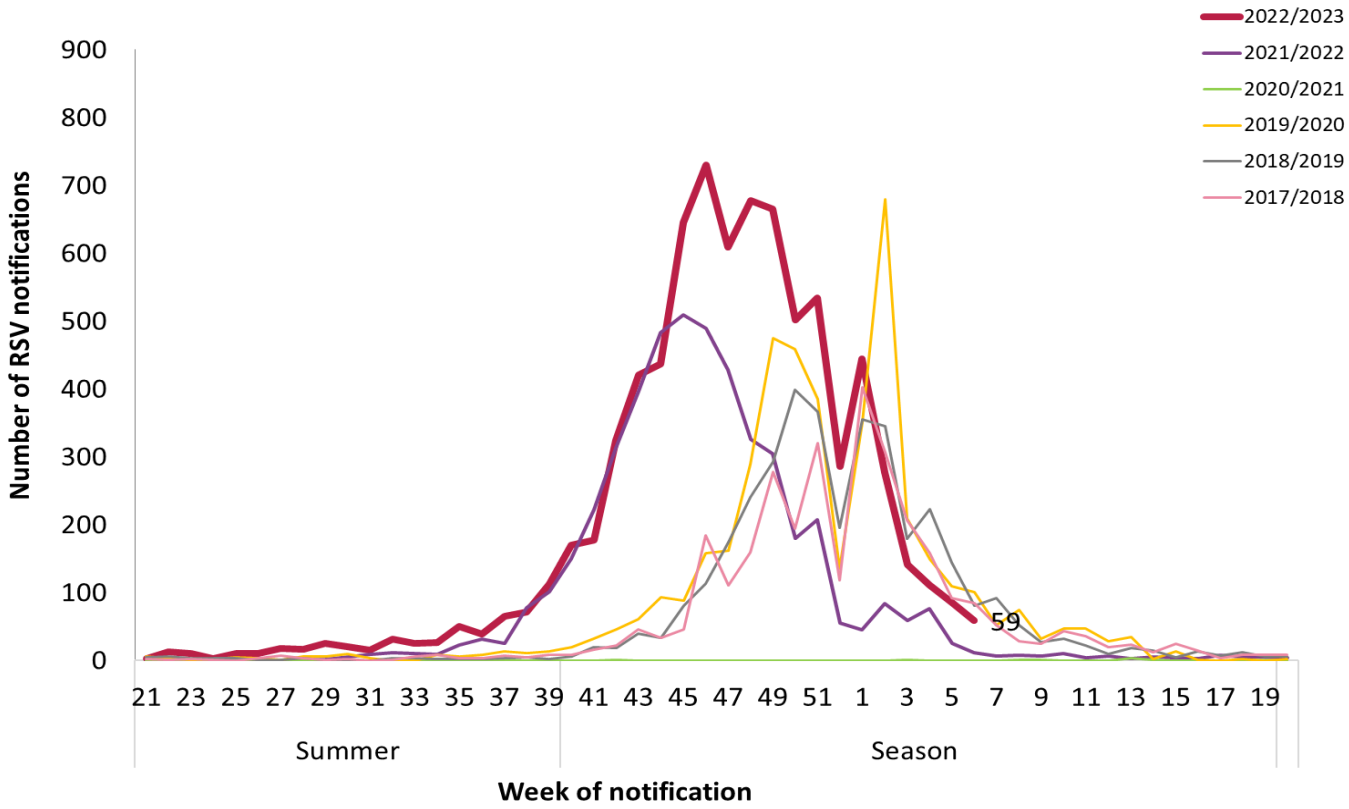

Figure 11: Number of laboratory confirmed **RSV** notifications to HPSC by week of notification, 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

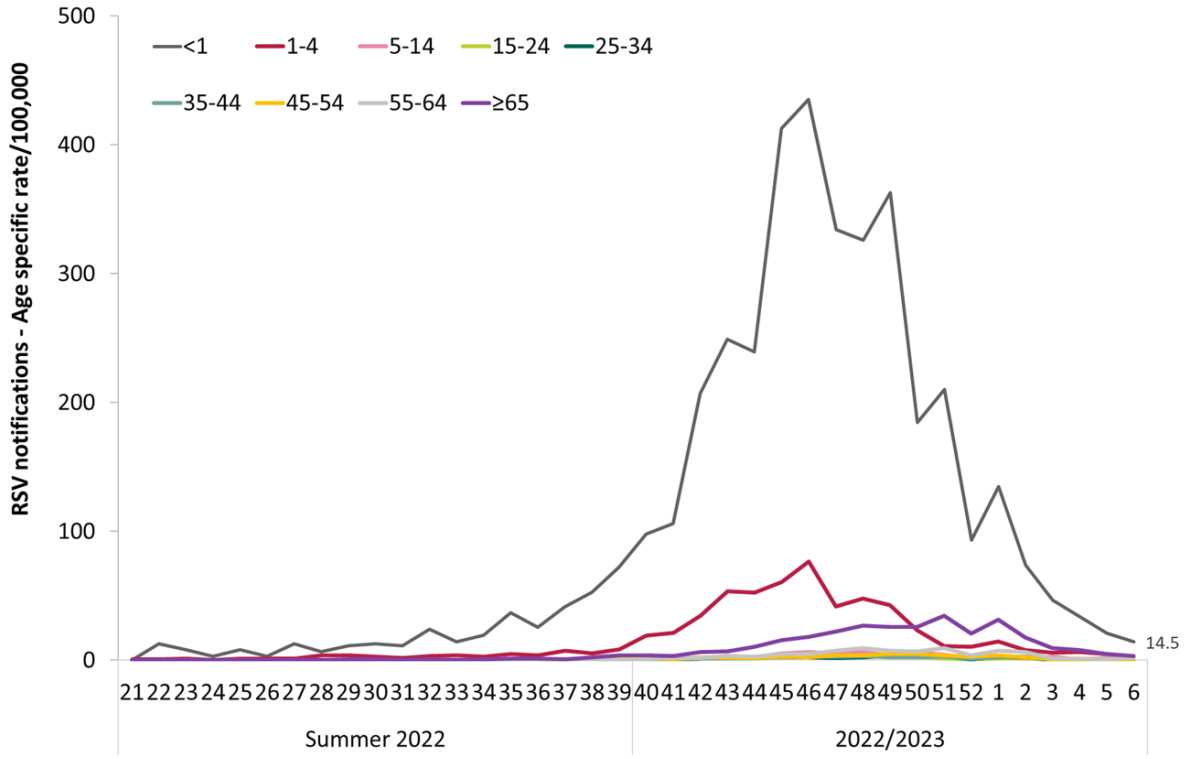

Figure 12: Age specific rates per 100,000 population for laboratory confirmed **RSV** notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

5. Hospitalisations

- During week 6 2023, 55 laboratory confirmed influenza cases were reported as hospital inpatients. Of these 55 hospitalised cases: 32 influenza A (not subtyped) and 23 influenza B (Figure 13 & 14). Influenza hospitalised cases during week 6 2023 decreased to 55 compared to 90 in week 5 2023.
- During the 2022/2023 season to date (weeks 40 2022 to week 6 2023), 4,040 laboratory confirmed influenza cases have been notified as hospital inpatients: 279 influenza A(H1)pdm09, 160 A(H3), 3,390 influenza A (not subtyped), 197 influenza B, 11 influenza coinfections and three influenza (type not reported) (Figure 13).
- During week 6 2023, age specific rates in notified laboratory confirmed hospitalised influenza cases were highest in those aged 0-4 years (Figure 15).
- 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 6 2023, 19 RSV cases were reported as hospital inpatients (Figure 16).
- During week 6 2023, age specific rates in notified laboratory confirmed hospitalised RSV cases were highest in those aged less than one year (Figure 17).
- Patient type of laboratory confirmed influenza and RSV notifications by week for the 2022/2023 season are reported in Tables 7 and 8.

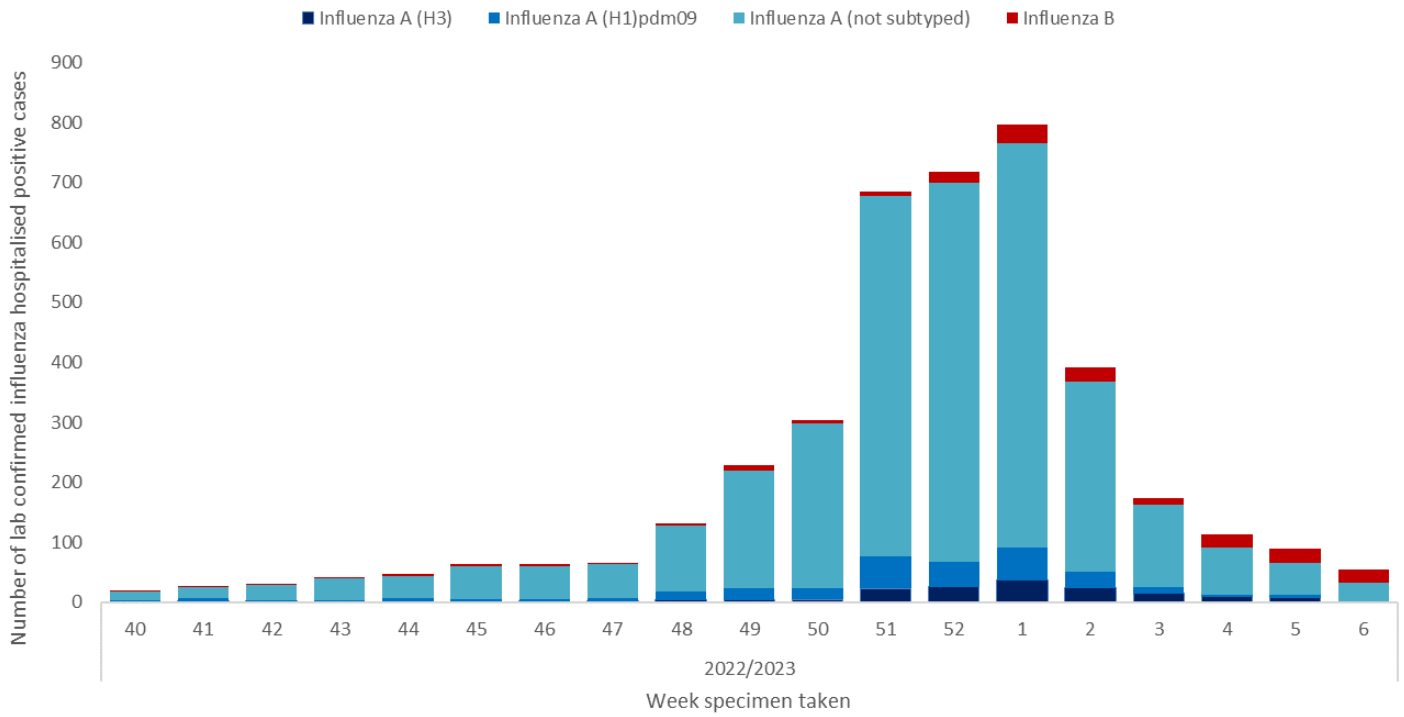

Figure 13: Laboratory confirmed **influenza** notifications reported as hospital inpatients by influenza type/subtype to HPSC by week and season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

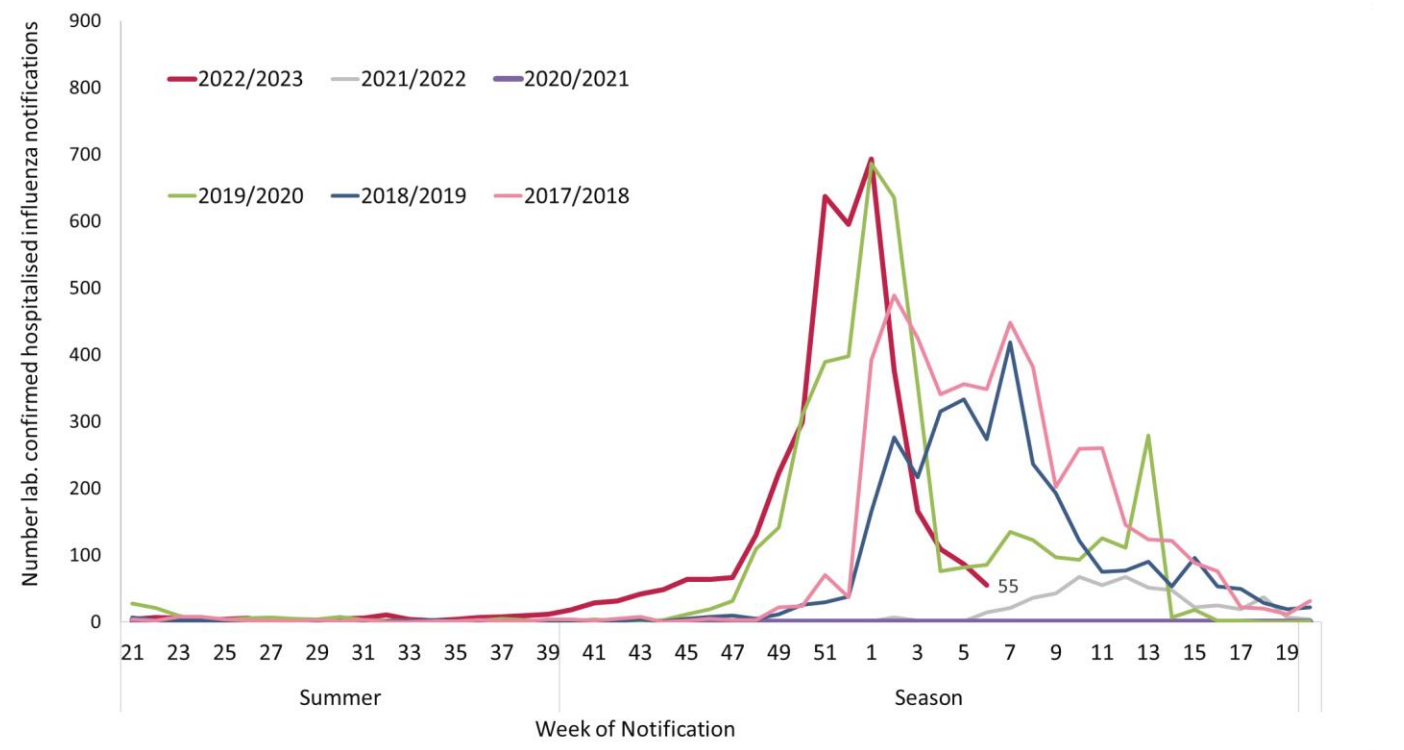

Figure 14: Number of notified laboratory confirmed **influenza** cases reported as hospital inpatients, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System*

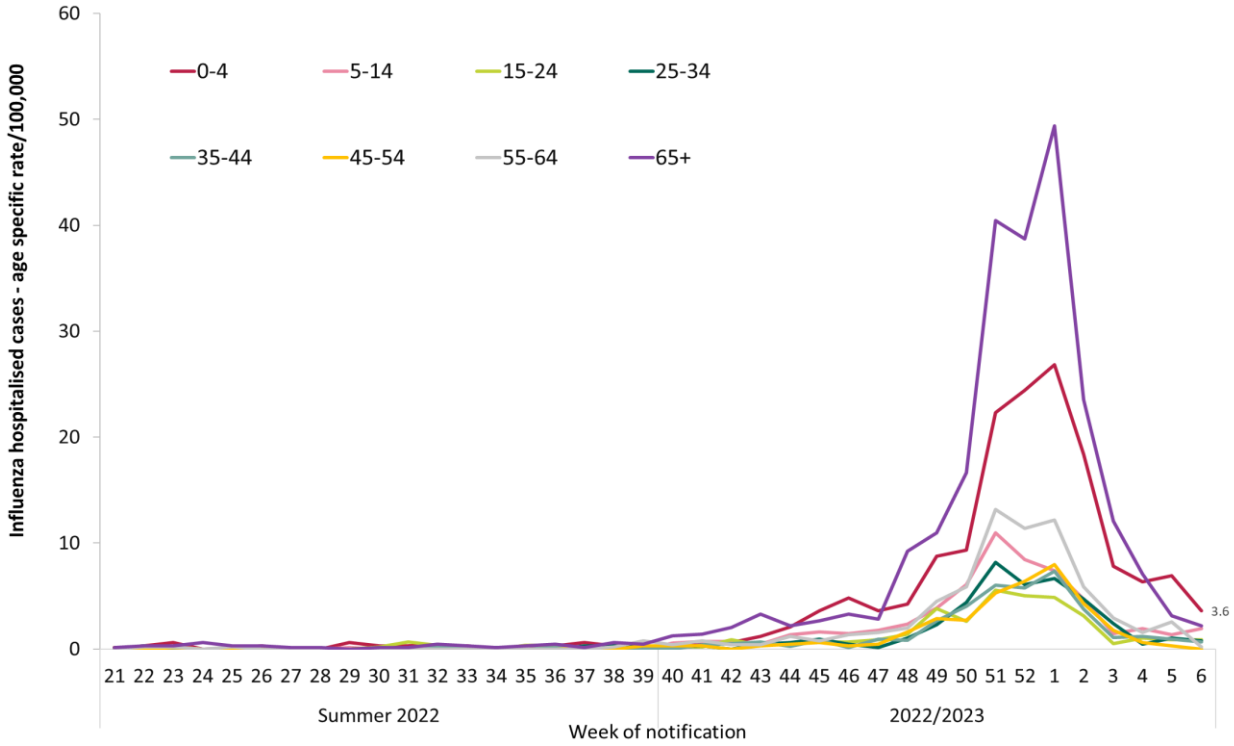

Figure 15: Age specific rates per 100,000 population for laboratory confirmed **influenza** cases reported as hospital inpatients by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

Table 7: Number of notified **influenza** cases reported by patient type and week of notification and 2022/2023 season (weeks 40 2022-6 2023). *Source: Ireland's Computerised infectious Disease Reporting System*

	Patient Type							
	GP Patient	ED patient	Hospital Inpatient	Hospital Day Patient	Hospital Outpatient	Other	Unknown	Total
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	2	66	65	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	1009	713	16	163	144	141	**2235**
Week 1	120	1333	800	47	200	197	350	**3047**
Week 2	42	596	391	26	146	167	195	**1563**
Week 3	31	237	171	8	51	25	102	**625**
Week 4	20	150	109	5	27	24	51	**386**
Week 5	31	138	90	7	32	17	44	**359**
Week 6	9	108	55	3	19	14	21	**229**
Total	**506**	**5594**	**4040**	**255**	**1168**	**858**	**1618**	**14039**

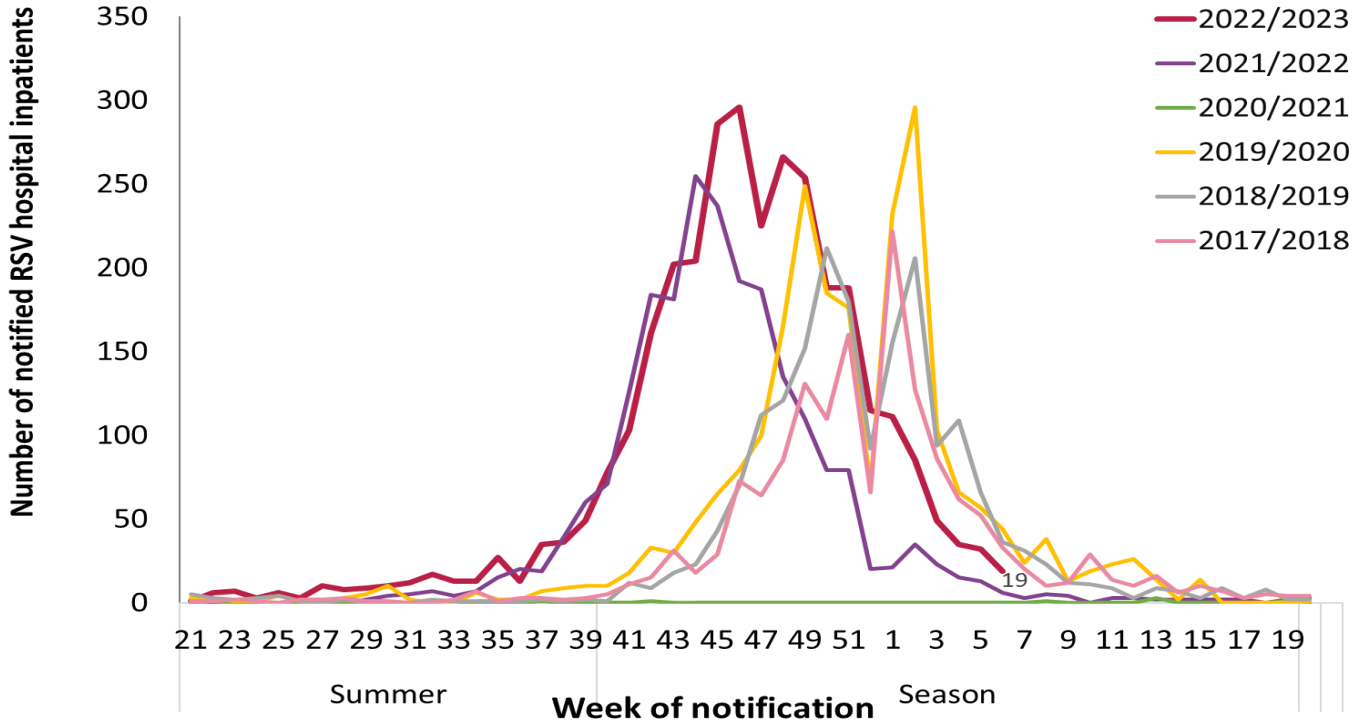

Figure 16: Number of notified **RSV** cases reported as hospital inpatients, by week of notification and season, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System.*

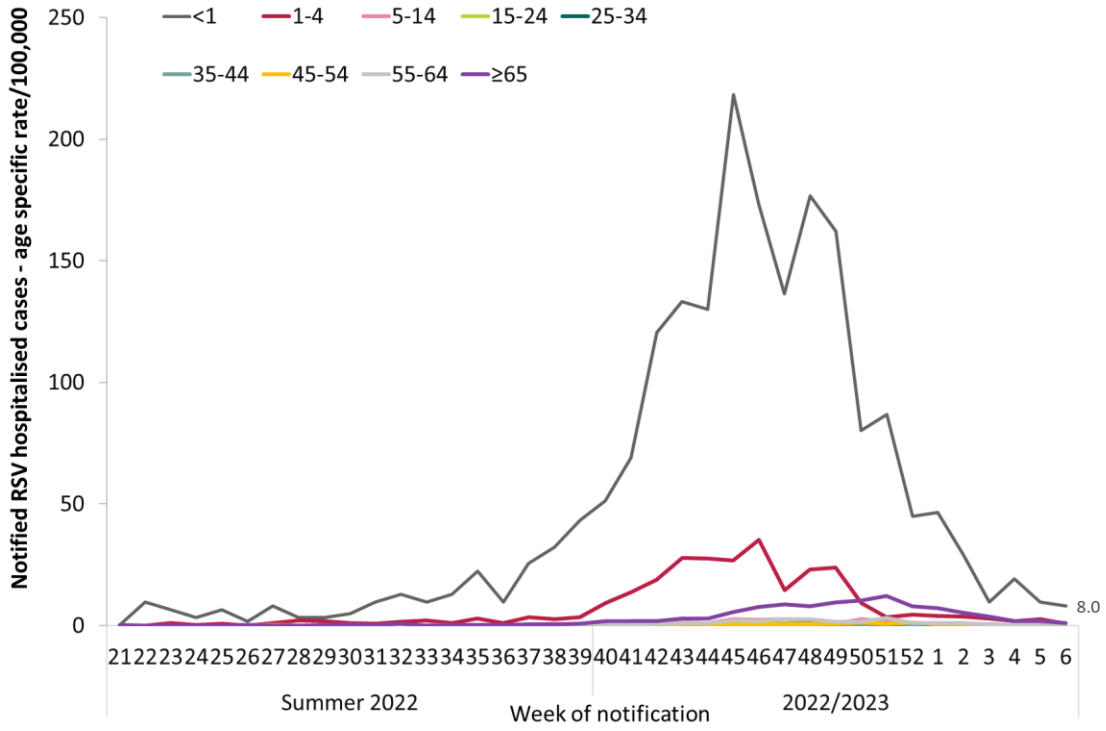

Figure 17: Age specific rates per 100,000 population for laboratory confirmed **RSV** cases reported as hospital inpatients by week of notification and season, Summer 2022 and 2022/2023. *Source: Ireland's Computerised Infectious Disease Reporting System*

Table 8: Number of notified **RSV** cases reported by patient type and week of notification (weeks 40 2022-6 2023)*Source: Ireland's Computerised infectious Disease Reporting System*

	Patient Type							
	GP Patient	ED patient	Hospital Inpatient	Hospital Day Patient	Hospital Outpatient	Other	Unknown	Total
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	254	255	13	17	24	83	**665**
Week 50	20	175	187	2	28	23	67	**502**
Week 51	14	172	190	5	33	30	88	**532**
Week 52	8	82	119	0	12	29	36	**286**
Week 1	26	165	126	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	6	40	35	5	6	11	9	**112**
Week 5	4	27	32	0	9	1	12	**85**
Week 6	3	23	19	0	3	4	7	**59**
Total	**194**	**2688**	**2923**	**86**	**371**	**368**	**667**	**7297**

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.

- Three laboratory confirmed influenza cases (one influenza A not subtyped, two influenza B) were admitted to critical care units and notified to HPSC during week 6 2023.
- During the 2022/2023 season to date (weeks 40 2022-6 2023), 161 laboratory confirmed influenza cases – 29 A(H1)pdm09, 30 influenza A(H3), 94 influenza A (not subtyped) and eight influenza B have been admitted to critical care units 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 2022-6 2023), of 139 laboratory confirmed influenza ICU cases with known influenza vaccination status, 96 (69%) 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 2022-6 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	119	191.1	2	3.2
1-4	403	149.7	12	4.5
5-14	415	61.5	11	1.6
15-24	209	36.3	8	1.4
25-34	292	44.3	4	0.6
35-44	304	46.1	18	2.4
45-54	251	40.1	22	3.5
55-64	373	73.3	22	4.3
≥65	1674	262.6	62	9.7
Unknown		–		–
Total	4040	84.8	161	3.4

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 6 2023.
- During the 2022/2023 season (weeks 40 2022- 6 2023), 140 deaths in notified influenza cases were reported to HPSC – 24 influenza A(H3), 16 influenza A(H1)pdm09, 98 influenza A (not subtyped), one influenza B and one influenza A and B coinfection.
- Overall low-level excess mortality was reported in weeks 51-52 2022, low level pneumonia and influenza excess mortality was reported between weeks 51 2022 – 2 2023, reaching moderate levels during week 52 after correcting data for reporting delays with the standardised EuroMOMO algorithm. Low level excess mortality was also reported in:
  - the 75 to 84 year age group during weeks 49 2022-2 2023
  - those aged 85 years and older in weeks 51-52 2022
  - those aged 65 years and older in weeks 51-52 2022

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/

- One laboratory confirmed influenza (Influenza A) outbreak in a nursing home was notified to HPSC during week 6 2023.
- Two RSV laboratory confirmed outbreaks in a nursing home and residential institution were notified to HPSC during week 6 2023.
- For an overview of outbreaks for the season to date (weeks 40 2022-6 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 6 2023 and the 2022/2023 season (weeks 40 2022-6 2023) *Source: CIDR*

HSE area	Influenza		Respiratory syncytial virus infection		Acute respiratory infection		COVID-19 & Influenza		Total	
	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023
HSE-East	0	54	2	15	0	0	0	0	2	69
HSE-Midlands	0	6	0	0	0	1	0	0	0	7
HSE-Mid-West	1	13	0	4	0	0	0	0	1	17
HSE-North-East	0	22	0	19	0	3	0	2	0	46
HSE-North-West	0	20	0	6	0	4	0	3	0	33
HSE-South-East	0	13	0	0	0	0	0	0	0	13
HSE-South	0	8	0	8	0	0	0	0	0	16
HSE-West	0	15	0	3	0	0	0	0	0	18
Total	**1**	**151**	**2**	**55**	**0**	**8**	**0**	**5**	**3**	**219**

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 6 2023 and the 2022/2023 season (weeks 40 2022-6 2023). *Source: CIDR*

Setting	Influenza		Respiratory syncytial virus		Acute respiratory		COVID-19 & Influenza		Total	
	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023	Week 6	2022/2023
Community hospital/Long-stay unit	0	8	0	8	0	2	0	1	0	19
Nursing Home	1	54	1	21	0	4	0	2	2	81
Hospital	0	67	0	8	0	0	0	2	0	77
Residential Institution	0	10	1	4	0	2	0	0	1	16
Childcare facility	0	0	0	1	0	0	0	0	0	1
Family Outbreaks	0	8	0	12	0	0	0	0	0	20
Other settings	0	4	0	1	0	0	0	0	0	5
Total	**1**	**151**	**2**	**55**	**0**	**8**	**0**	**5**	**3**	**219**

9. International Summary

In the European region, during week 5 2023 (week ending 05/02/2023), influenza virus positivity in sentinel primary care specimens remained stable at 24% compared to 22% in the previous week, which is above the ECDC influenza positivity threshold of 10%. For week 5 2023, 818 (24%) of 3,478 sentinel GP specimens tested positive for an influenza virus; 58% were type A and 42% were type B. Of 277 subtyped A viruses, 37% were A(H3) and 63% were A(H1)pdm09. Of 79 type B viruses ascribed to a lineage, all were B/Victoria.

For week 5 2023, 9,200 of 65,434 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; 5,769 (63%) were type A and 3,431 (37%) were type B. Of 889 subtyped A viruses, 608 (68%) were A(H1)pdm09 and 281 (32%) were A(H3). Of 66 influenza B viruses ascribed to a lineage, all were of B/Victoria lineage. Of 33 countries and areas reporting on geographic spread of influenza viruses, one reported no activity, two reported sporadic spread, two reported local spread, five reported regional spread and 23 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 22nd 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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