

# Influenza Week 50 2022 (12<sup>th</sup> – 18<sup>th</sup> December 2022)



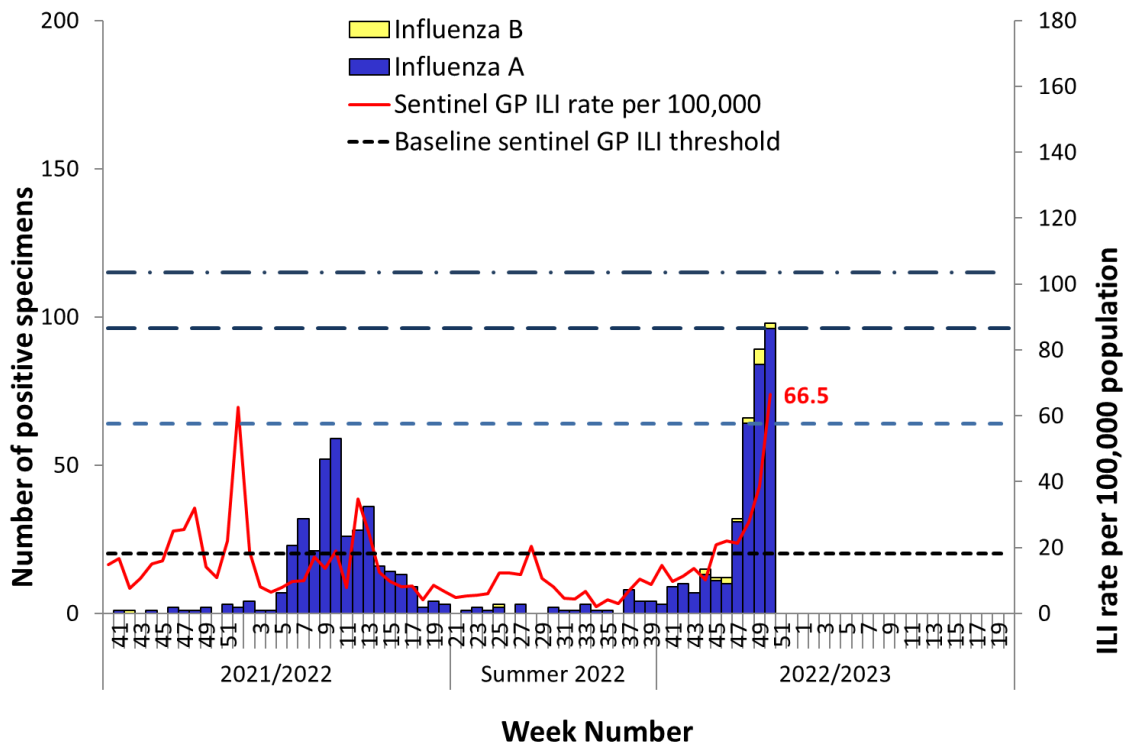
## Summary

Influenza activity continued to increase in Ireland during week 50 2022 (week ending 18/12/2022). Influenza A viruses are predominating this season, with circulation of both influenza A(H1N1)pdm09 and A(H3N2). Respiratory syncytial virus (RSV) activity remains at high levels in Ireland. HPSC considers that influenza viruses are widely circulating in Ireland. **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.**

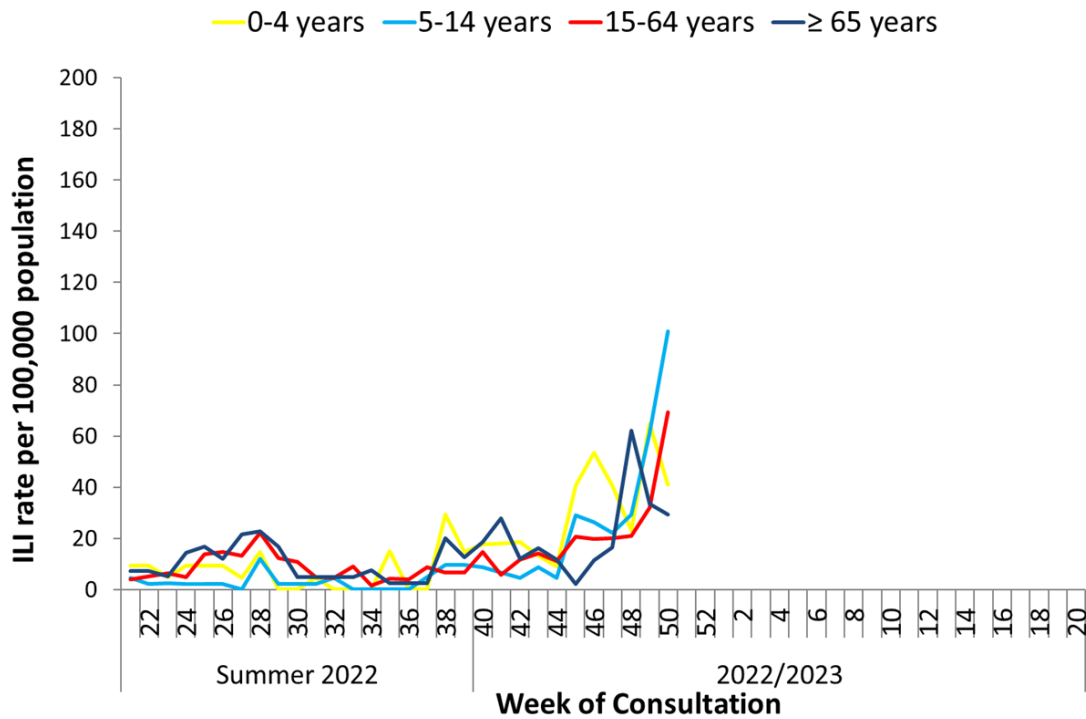
- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 66.5 per 100,000 population during week 50 2022 and is now above the medium intensity threshold. This is an increase compared to the updated rate of 38.6/100,000 during week 49 2022. ILI consultation rates have been above the Irish baseline threshold (18.1/100,000 population) for six consecutive weeks.
- Sentinel GP ILI age specific consultation rates were above baseline threshold levels in all age groups.
- **National Virus Reference Laboratory (NVRL):** Of 97 sentinel GP ARI specimens tested and reported by the NVRL during week 50 2022, 6.2% (6/97) were positive for influenza: two A(H3N2), two A(H1N1)pdm09 and two influenza B, 2.1% (2/97) were positive for RSV and 5.2% (5/97) were positive for SARS-CoV-2.
- Of 407 non-sentinel respiratory specimens tested and reported by the NVRL during week 50 2022, 98 (24.1%) were positive for influenza: 41 A(H1N1)pdm09, 45 A(H3N2), 10 A (not subtyped) and two influenza B.
- RSV positivity (non-sentinel respiratory specimens) appears to be decreasing in recent weeks, at 10.6% (37/349) during week 49 2022 and 6.6% (27/407) during week 50 2022.
- **Influenza notifications:** 1,174 laboratory confirmed influenza cases were notified during week 50 2022 – 85 A(H1N1)pdm09, 51 A(H3N2), 1,007 influenza A (not subtyped), 27 influenza B, three influenza A & B coinfections and one influenza A(H1N1)pdm09 & A(H3N2) coinfection. The number of influenza notifications increased during week 50 to 1,174, compared to 669 during week 49 2022. Age specific rates were highest in those aged 65 years and older.
- **RSV notifications:** 502 RSV cases including 187 hospitalised cases were notified during week 50 2022. Age specific rates were highest in those aged less than one year.
- **Hospitalisations:** During week 50 2022, 294 laboratory confirmed influenza cases were reported as hospital inpatients: seven influenza A(H1N1)pdm09, two A(H3N2), 279 influenza A (not subtyped) and six influenza B. This is an increase compared to 218 laboratory confirmed influenza notifications reported as hospital inpatients during week 49 2022.
- **Critical care admissions:** No laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 50 2022. During weeks 40-50, 25 laboratory confirmed influenza cases – six A(H1N1)pdm09, two influenza A(H3N2), 16 influenza A (not subtyped) and one influenza B have been admitted to critical care and notified to HPSC. Of 17 laboratory confirmed influenza cases with known influenza vaccination status, seven (41%) were reported as having received the 2022/2023 influenza vaccine.
- **Mortality:** No deaths in notified influenza cases were reported to HPSC during week 50 2022. During the 2022/2023 season (weeks 40 - 50 2022), 11 deaths in notified influenza cases were reported to HPSC – three influenza A(H3N2), one influenza A(H1N1)pdm09 and seven influenza A (not subtyped).
- **Outbreaks:** 16 influenza outbreaks (three hospital, four nursing home, three residential Institution, six family outbreaks) and four RSV outbreaks (one family outbreak, one residential institution, one community hospital/long-stay unit, one hospital), were reported to the HPSC during week 50 2022.
- **International:** In Europe, the sentinel ILI or ARI rate is above the ECDC influenza positivity threshold set at 10% for the fifth consecutive week and increased to 23% from 22% during week 49 2022. 16 countries reported widespread activity.

## 1. GP sentinel surveillance system - Clinical Data

- During week 50 2022, 186 sentinel GP influenza-like illness (ILI) consultations were reported from the Irish sentinel GP network, corresponding to an ILI consultation rate of 66.5 per 100,000 population, an increase compared to the updated rate of 38.6 per 100,000 during week 49 2022 (Figure 1) and exceeding the medium intensity threshold for the first time this season.
- The sentinel GP ILI consultation rate during the 2022/2023 was below baseline during weeks 40-44 2022 and above the Irish sentinel GP ILI baseline threshold (18.1/100,000 population) during weeks 45-50 2022.
- Sentinel GP ILI age specific consultation rates were above age specific baseline thresholds in those aged 0-14 (81.1/100,000), those aged 15-64 (69.3/100,000) and those aged ≥65 years (29.3/100,000) during week 50 2022 (Figure 2, Table 1).
- HPSC has reviewed the Irish sentinel baseline ILI threshold for the 2022/2023 influenza season, which will remain at 18.1 per 100,000 population. ILI rates above this baseline threshold combined with sentinel GP influenza positivity >10% indicate the likelihood that influenza is circulating in the community. The Moving Epidemic Method (MEM) is used to calculate thresholds for GP ILI consultations in a standardised approach across Europe. The baseline ILI threshold (18.1/100,000 population), medium (57.5/100,000 population) and high (86.5/100,000 population) intensity ILI thresholds are shown in Figure 1. Age specific MEM threshold levels are shown in Table 1.



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



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

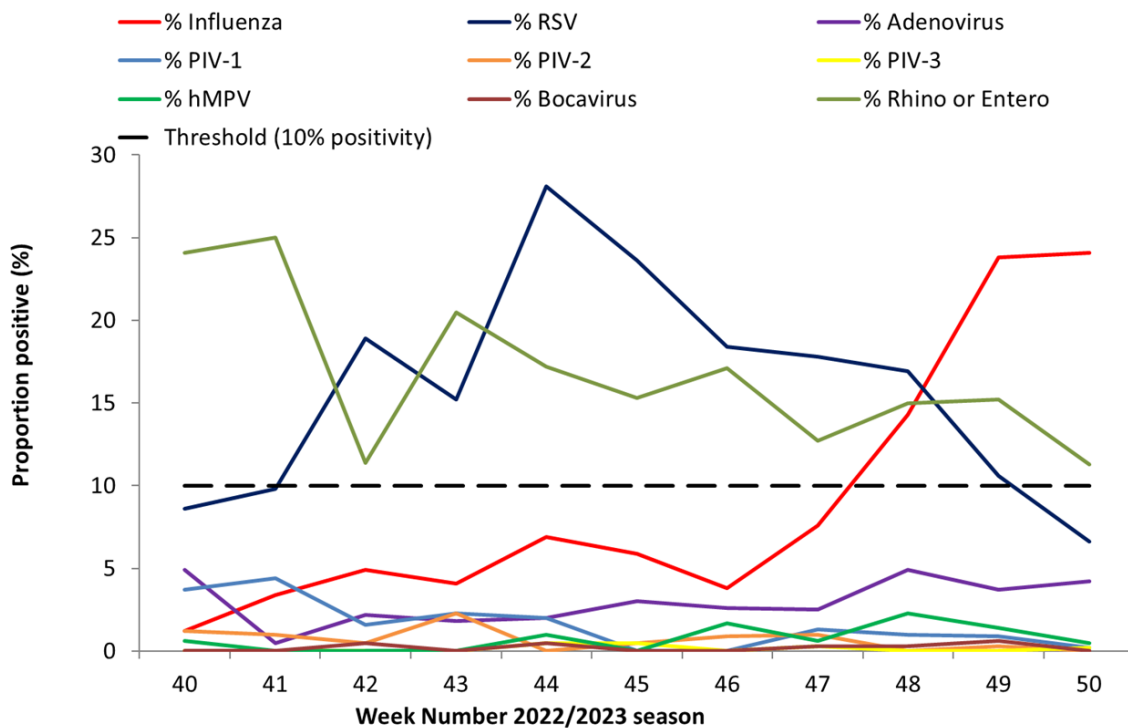
**Table 1:** Age specific sentinel GP ILI consultation rate per 100,000 population by week (weeks 40-50 2022), colour coded by sentinel GP ILI age specific Moving Epidemic Method (MEM) threshold levels. *Source: ICGP.*

MEM Threshold Levels	Below Baseline	Low	Moderate	High	Extraordinary						
Age group (years)	40	41	42	43	44	45	46	47	48	49	50
All Ages	14.6	9.7	11.3	13.7	10.1	20.8	22.0	21.4	27.9	38.6	66.5
<15 yrs	11.7	10.3	9.1	10.3	6.0	32.8	35.2	28.2	27.3	62.4	81.1
15-64 yrs	14.7	5.7	11.8	14.2	11.1	20.7	19.9	20.1	21.1	32.0	69.3
≥65 yrs	18.5	27.9	12.0	16.2	11.8	2.4	11.6	16.4	62.3	33.7	29.3
Reporting practices (N=61)	60	59	58	60	58	58	60	59	58	58	52

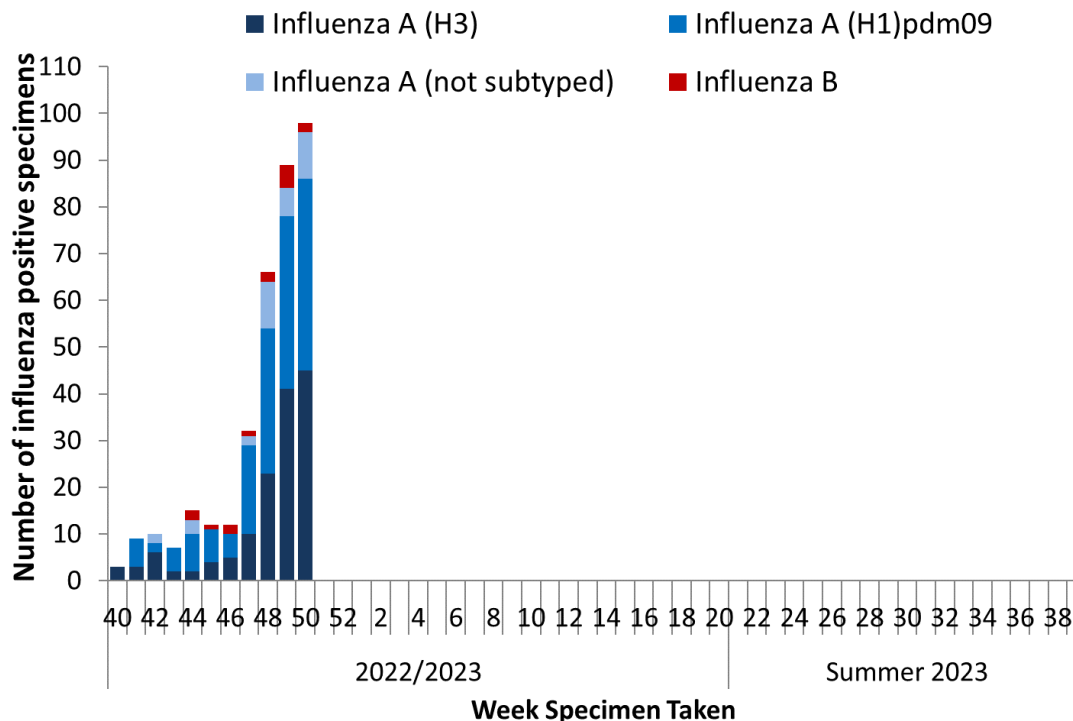
## 2. Influenza and Other Respiratory Virus Detections - NVRL

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 9<sup>th</sup> 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 16<sup>th</sup> 2022.

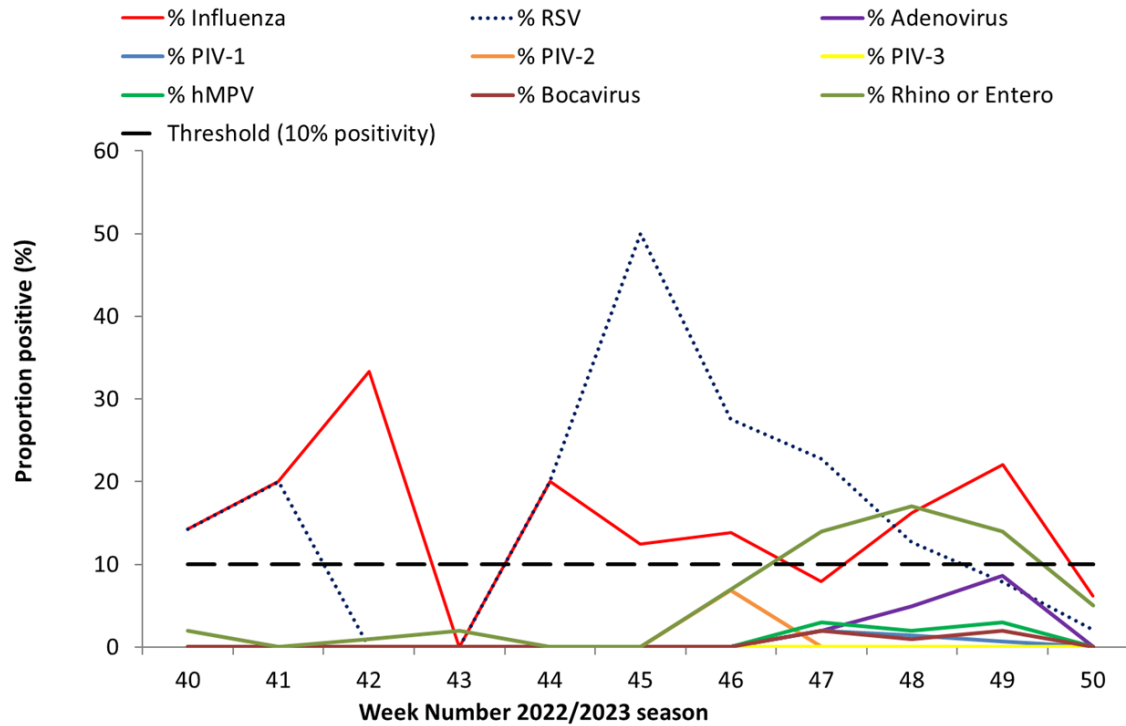
- A lag time with testing and reporting is noted for the most recent surveillance week.
- Of 97 sentinel GP ARI specimens tested and reported by the NVRL during week 50 2022, 6.2% (6/97) were positive for influenza: two A(H3), two A(H1)pdm09 and two influenza B, 2.1% (2/97) were positive for RSV and 5.2% (5/97) were positive for SARS-CoV-2.
- During week 49 2022, of 140 sentinel GP ARI specimens tested and reported by the NVRL, 31 (22.1%) were positive for influenza, 29 for influenza A: 14 A(H3), 14 A(H1)pdm09, one A (not subtyped) and two influenza B. There were 11 specimens (7.9%) positive for RSV and 10 specimens (7.1%) positive for SARS-CoV-2.
- Of 407 non-sentinel respiratory specimens tested and reported by the NVRL during week 50 2022, 98 (24.1%) were positive for influenza: 41 A(H1)pdm09, 45 A(H3), 10 A (not subtyped) and two influenza B (Figure 3b).
- During week 49 2022 of 349 non-sentinel respiratory specimens tested, 83 (23.8%) were positive for influenza: 35 A(H1)pdm09, 39 A(H3), six A (not subtyped) and three influenza B.
- RSV positivity (non-sentinel respiratory specimens) decreased in recent weeks, at 10.6% (37/349) during week 49 2022 and 6.6% (27/407) during week 50 2022.
- Rhinovirus/enterovirus positive detections from non-sentinel respiratory specimens were detected at a positivity rate of 13% (53/407) during week 50 2022, a decrease from 15.2% (46/349) during week 49 2022 (Figure 3a).
- Other respiratory viruses (ORVs) are being detected at lower levels (Figure 3a).



**Figure 3a:** Percentage positive results for non-sentinel respiratory specimens tested by the NVRL for influenza, RSV and other respiratory viruses, weeks 40-50 2022. *Source: NVRL.*



**Figure 3b:** Number of positive influenza specimens (from sentinel GP ILI and non-sentinel respiratory sources) tested by the NVRL by influenza type/subtype and by week for the 2022/2023 influenza season. *Source: NVRL*



**Figure 4:** Percentage positive results for sentinel respiratory specimens tested by the NVRL for influenza, RSV and other respiratory viruses, weeks 40-50 2022. *Source: NVRL*

**Table 2:** Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive influenza results, for weeks 49 and 50 2022 and the 2022/2023 season (weeks 40-50 2022). *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
50 2022	Sentinel GP ARI	97	6	6.2	2	2	0	4	2	0	0	2
	Non-sentinel respiratory	407	98	24.1	41	45	10	96	2	0	0	2
	<b>Total</b>	<b>504</b>	<b>104</b>	<b>20.6</b>	<b>43</b>	<b>47</b>	<b>10</b>	<b>100</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
49 2022	Sentinel GP ARI	140	31	22.1	14	14	1	29	2	0	0	2
	Non-sentinel respiratory	349	83	23.8	35	39	6	80	3	0	0	3
	<b>Total</b>	<b>489</b>	<b>114</b>	<b>23.3</b>	<b>49</b>	<b>53</b>	<b>7</b>	<b>109</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>
2022/2023	Sentinel GP ARI	546	78	14.3	35	34	3	72	6	0	0	6
	Non-sentinel respiratory	2739	309	11.3	140	124	31	295	11	2	1	14
	<b>Total</b>	<b>3285</b>	<b>387</b>	<b>11.8</b>	<b>175</b>	<b>158</b>	<b>34</b>	<b>367</b>	<b>17</b>	<b>2</b>	<b>1</b>	<b>20</b>

**Table 3:** Number of sentinel GP ARI and non-sentinel respiratory specimens tested by the NVRL and positive RSV results, for weeks 49 and 50 2022 and the 2022/2023 season (weeks 40-50 2022). *Source: NVRL*

Surveillance period	Specimen type	Total tested	Number RSV positive	% RSV positive	RSV A	RSV B	RSV (unspecified)
Week 50 2022	Sentinel GP ARI	97	2	2.1	0	2	0
	Non-sentinel	407	27	6.6	2	25	0
	<b>Total</b>	<b>504</b>	<b>29</b>	<b>5.8</b>	<b>2</b>	<b>27</b>	<b>0</b>
Week 49 2022	Sentinel GP ARI	140	11	7.9	0	11	0
	Non-sentinel	349	37	10.6	3	34	0
	<b>Total</b>	<b>489</b>	<b>48</b>	<b>9.8</b>	<b>3</b>	<b>45</b>	<b>0</b>
2022/2023	Sentinel GP ILI/ARI	546	70	12.8	2	68	0
	Non-sentinel	2739	415	15.2	53	362	0
	<b>Total</b>	<b>3285</b>	<b>485</b>	<b>14.8</b>	<b>55</b>	<b>430</b>	<b>0</b>

**Table 4:** Number of non-sentinel respiratory specimens tested by the NVRL for respiratory viruses and positive results, for weeks 49 and 50 2022 and 2022/2023 season (weeks 40-50 2022). *Source: NVRL*

Virus	Week 50 2022 (N=407)		Week 49 2022 (N=349)		2022/2023 (N=2739)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	98	24.1	83	23.8	309	11.3
Respiratory Syncytial Virus (RSV)	27	6.6	37	10.6	415	15.2
Rhino/enterovirus	46	11.3	53	15.2	437	16.0
Adenovirus	17	4.2	13	3.7	85	3.1
Bocavirus	0	0.0	2	0.6	6	0.2
Human metapneumovirus (hMPV)	2	0.5	5	1.4	23	0.8
Parainfluenza virus type 1 (PIV-1)	1	0.2	3	0.9	37	1.4
Parainfluenza virus type 2 (PIV-2)	0	0.0	1	0.3	16	0.6
Parainfluenza virus type 3 (PIV-3)	1	0.2	0	0.0	4	0.1
Parainfluenza virus type 4 (PIV-4)	2	0.5	2	0.6	17	0.6

**Table 5:** Number of sentinel GP ILI/ARI specimens tested by the NVRL for respiratory viruses and positive results, for weeks 49 and 50 2022 and 2022/2023 season (weeks 40-50 2022). *Source: NVRL*

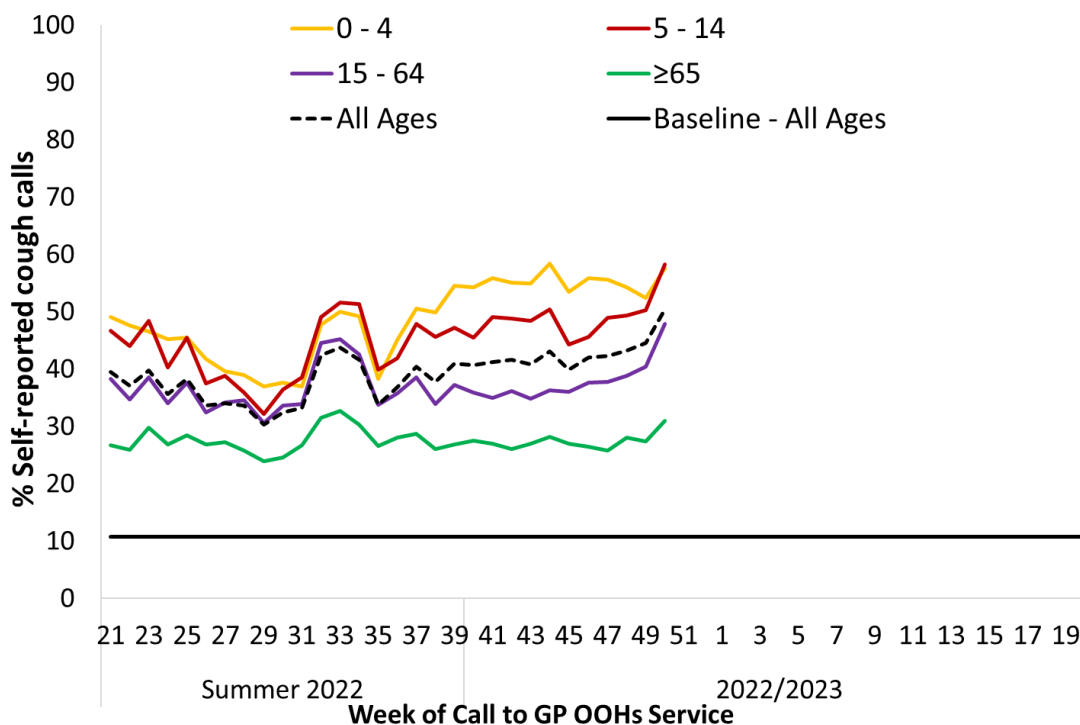
Virus	Week 50 2022 (N=97)		Week 49 2022 (N=140)		2022/2023 (N=546)	
	Total positive	% positive	Total positive	% positive	Total positive	% positive
Influenza virus	6	6.2	31	22.1	78	14.3
Respiratory Syncytial Virus (RSV)	2	2.1	11	7.9	70	12.8
Rhino/enterovirus	5	5.2	14	10.0	62	11.4
Adenovirus	0	0.0	12	8.6	21	3.8
Bocavirus	0	0.0	2	1.4	5	0.9
Human metapneumovirus (hMPV)	0	0.0	3	2.1	8	1.5
Parainfluenza virus type 1 (PIV-1)	0	0.0	1	0.7	5	0.9
Parainfluenza virus type 2 (PIV-2)	0	0.0	0	0.0	2	0.4
Parainfluenza virus type 3 (PIV-3)	0	0.0	0	0.0	0	0.0
Parainfluenza virus type 4 (PIV-4)	0	0.0	0	0.0	3	0.5
SARS-CoV-2	5	5.2	10	7.1	42	7.7



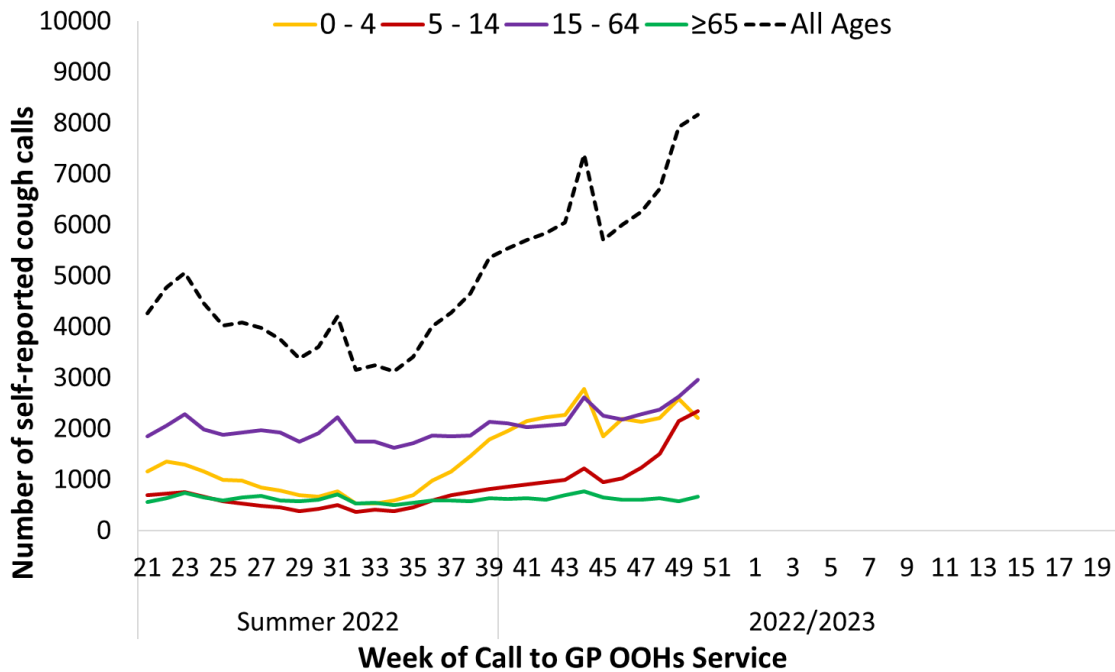
### 3. GP Out-Of-Hours services surveillance

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.

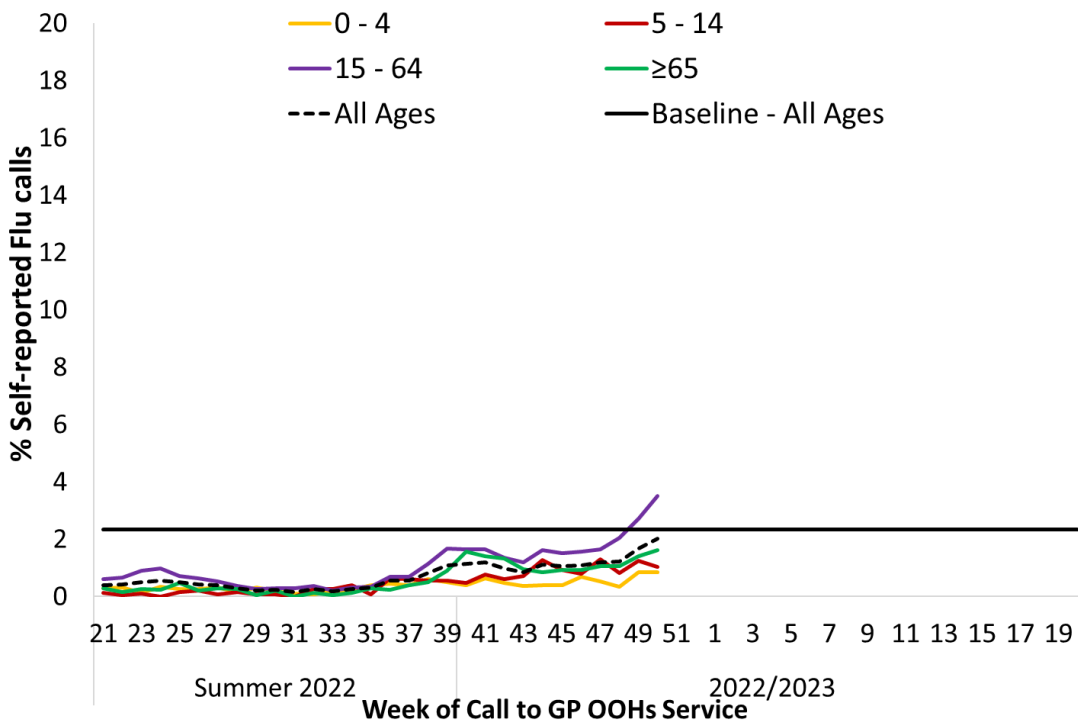
- 8,165 (50.4% of total calls; N=16,191) self-reported cough calls were reported by a network of GP OOHs services during week 50 2022, which was above baseline levels (10.7%) (Figure 5).
- 326 (2.0% of total calls; N=16,191) self-reported 'flu' calls were reported by a network of GP OOHs services during week 50 2022. The baseline threshold level for self-reported 'flu' calls is 2.3% (Figure 7).
- Four GP OOH services provided data for week 50 2022.



**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

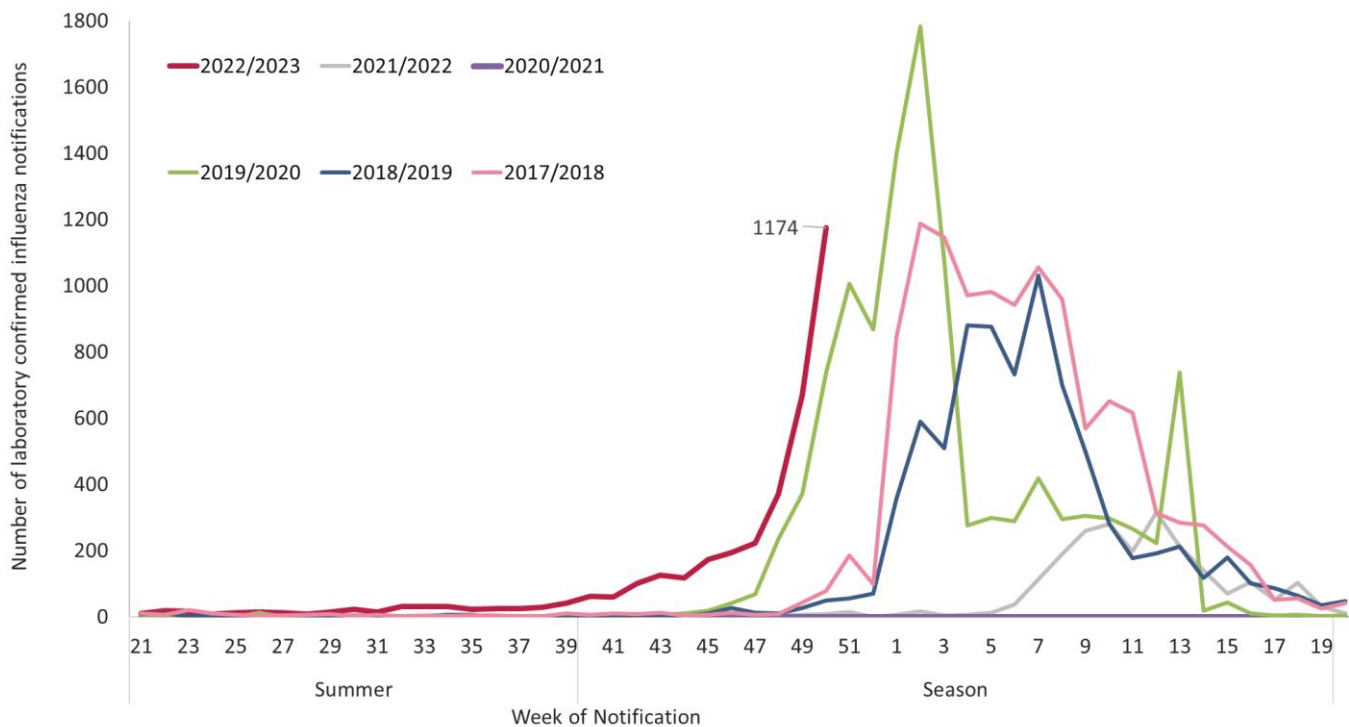
Influenza and RSV cases notifications are reported on Ireland's Computerised Infectious Disease Reporting System (CIDR), including all positive influenza/RSV specimens reported from all laboratories testing for influenza/RSV and reporting to CIDR.

Influenza and RSV notifications are reported in the [Weekly Infectious Disease Report for Ireland](#).

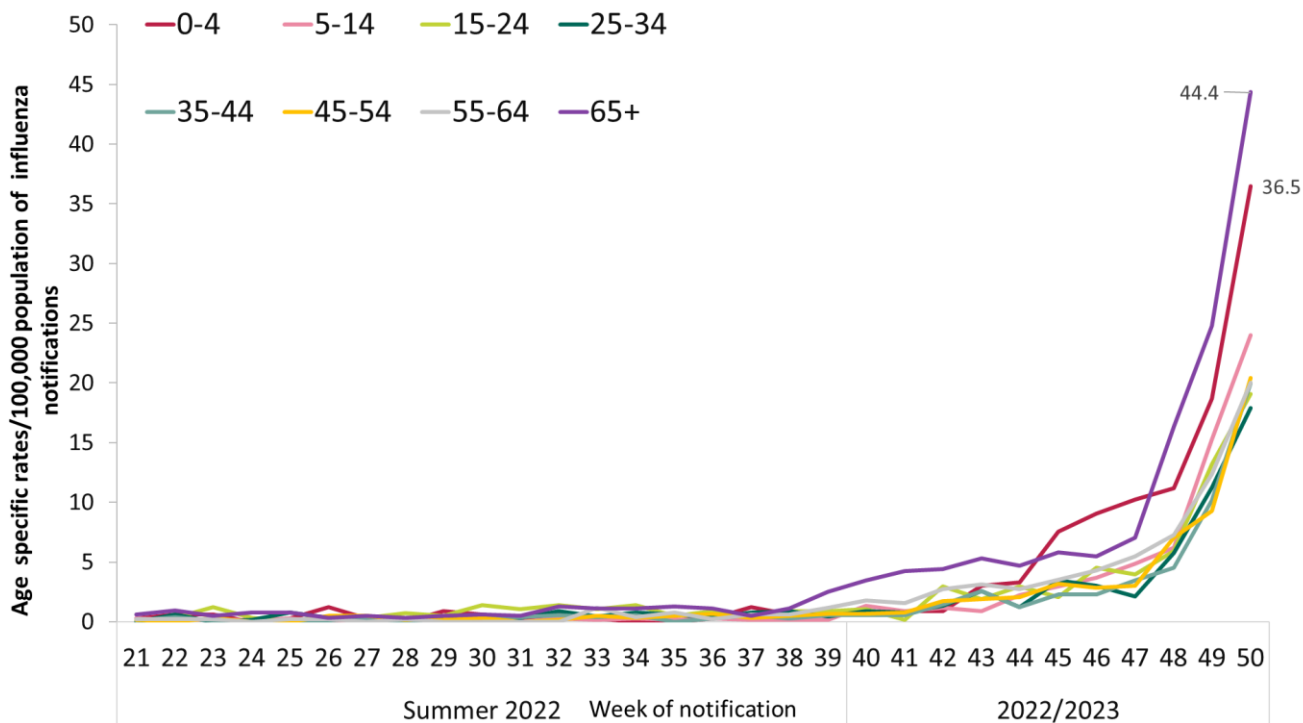
- 1,174 laboratory confirmed influenza cases were notified during week 50 2022 – 85 A(H1)pdm09, 51 A(H3), 1,007 influenza A (not subtyped), 27 influenza B, three influenza A & B coinfections, and one influenza A(H1)pdm09 & A(H3) coinfection. The number of influenza notifications increased during week 50 to 1,174, compared to 669 during week 49 2022.
- During the 2022/2023 season to date (weeks 40-50 2022), 3,263 laboratory confirmed influenza cases have been notified to HPSC - 274 A(H1)pdm09, 140 A(H3), 2,724 influenza A (not subtyped), 115 influenza B, eight influenza A and B coinfections, one coinfection of influenza A(H1)pdm09 & A(H3) and one influenza (type unknown).
- 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).
- 502 RSV cases were notified during week 50 2022, a decrease compared to 664 RSV cases notified during week 49 2022 (Figure 10).
- During week 50 2022, age specific rates in notified laboratory confirmed RSV cases were highest in those aged less than one year (Figure 11).

**Table 6:** Summary of confirmed influenza notifications by HSE Area during the 2022/2023 season (weeks 40-50 2022) and week 50 2022 *Source: CIDR*

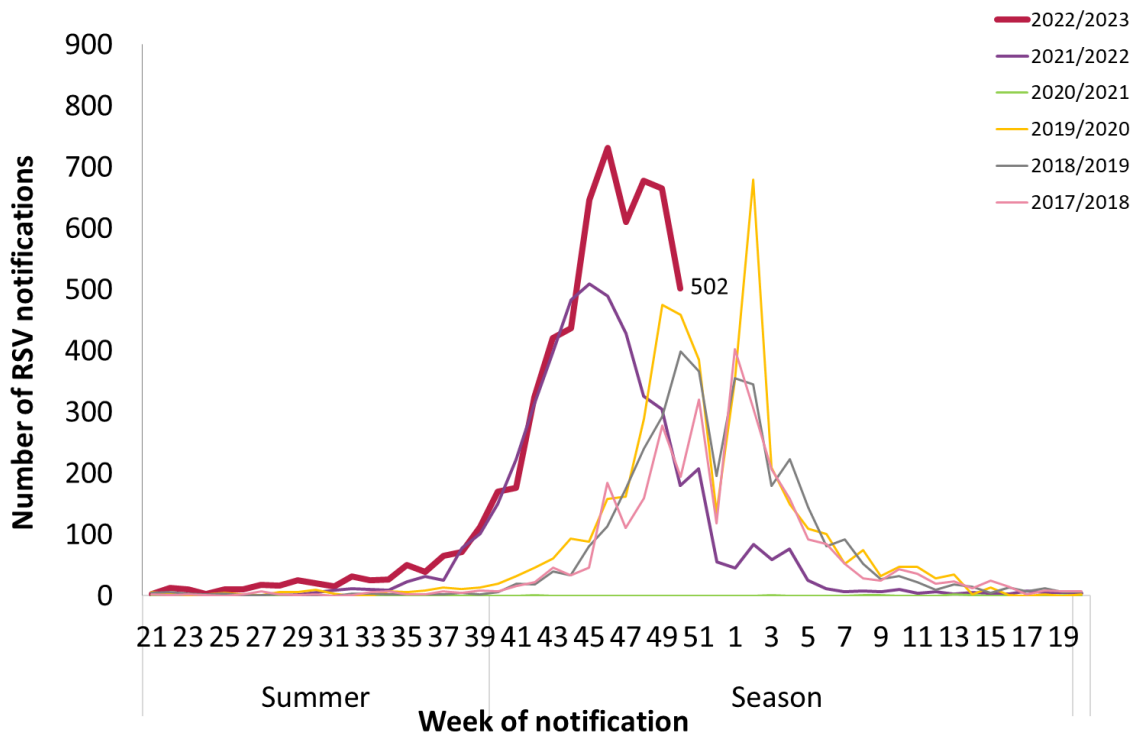
HSE area	Confirmed cases week 50 2022	Influenza confirmed cases- season to date
HSE-E	371	1079
HSE-M	143	321
HSE-MW	143	299
HSE-NE	167	406
HSE-NW	107	485
HSE-SE	43	130
HSE-S	97	243
HSE-W	103	300
<b>Total</b>	<b>1174</b>	<b>3263</b>



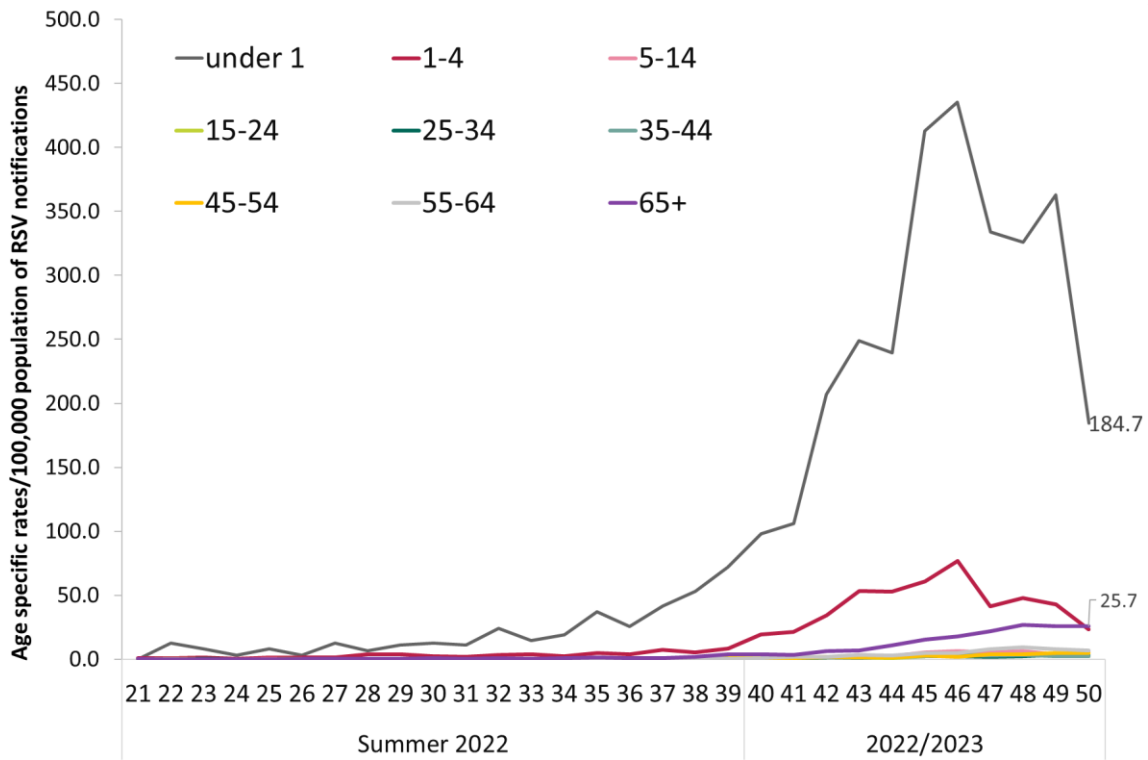
**Figure 8:** Laboratory confirmed influenza notifications to HPSC by week and season of notification, 2017/2018 to 2022/2023 influenza seasons. *Source: Ireland's Computerised Infectious Disease Reporting System.*



**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.*



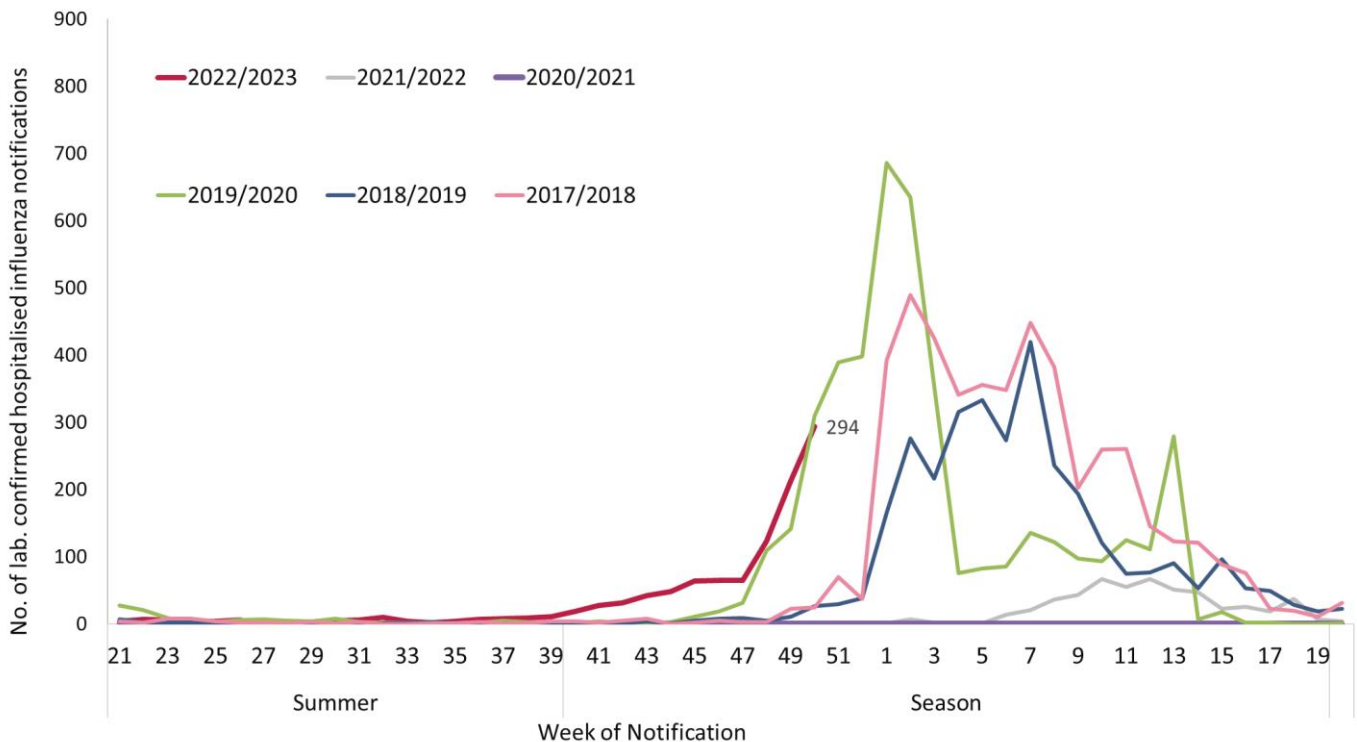
**Figure 10:** Number of laboratory confirmed RSV notifications to HPSC by week of notification, 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System.*



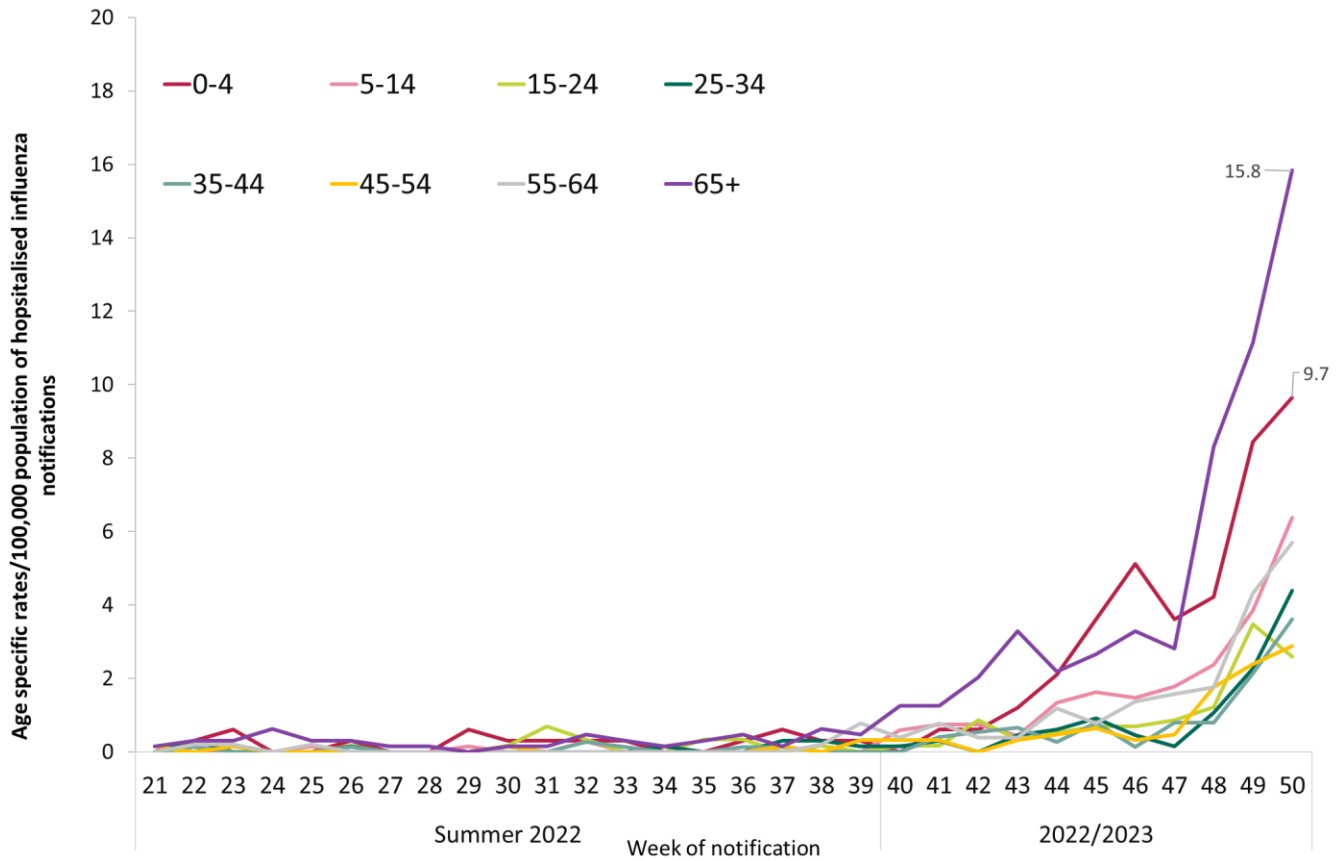
**Figure 11:** Age specific rates per 100,000 population for laboratory confirmed RSV notifications to HPSC by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

## 5. Hospitalisations

- During week 50 2022, 294 laboratory confirmed influenza cases were reported as hospital inpatients (Figure 11): seven influenza A(H1)pdm09, two A(H3), 279 influenza A (not subtyped) and six influenza B. This is an increase compared to 218 laboratory confirmed influenza notifications reported as hospital inpatients during week 49 2022. During the 2022/2023 season to date (weeks 40-50 2022), 1,003 laboratory confirmed influenza cases have been notified as hospital inpatients.
- In week 50 2022, age specific rates in notified laboratory confirmed hospitalised influenza cases were highest in those aged  $\geq 65$  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 50 2022, 187 RSV cases were reported as hospital inpatients (Figure 14). Patient type of laboratory confirmed influenza and RSV notifications by week for the 2022/2023 season are reported in Tables 7 and 8.
- In week 50 2022, age specific rates in notified laboratory confirmed hospitalised RSV cases were highest in those aged less than one year (Figure 15).



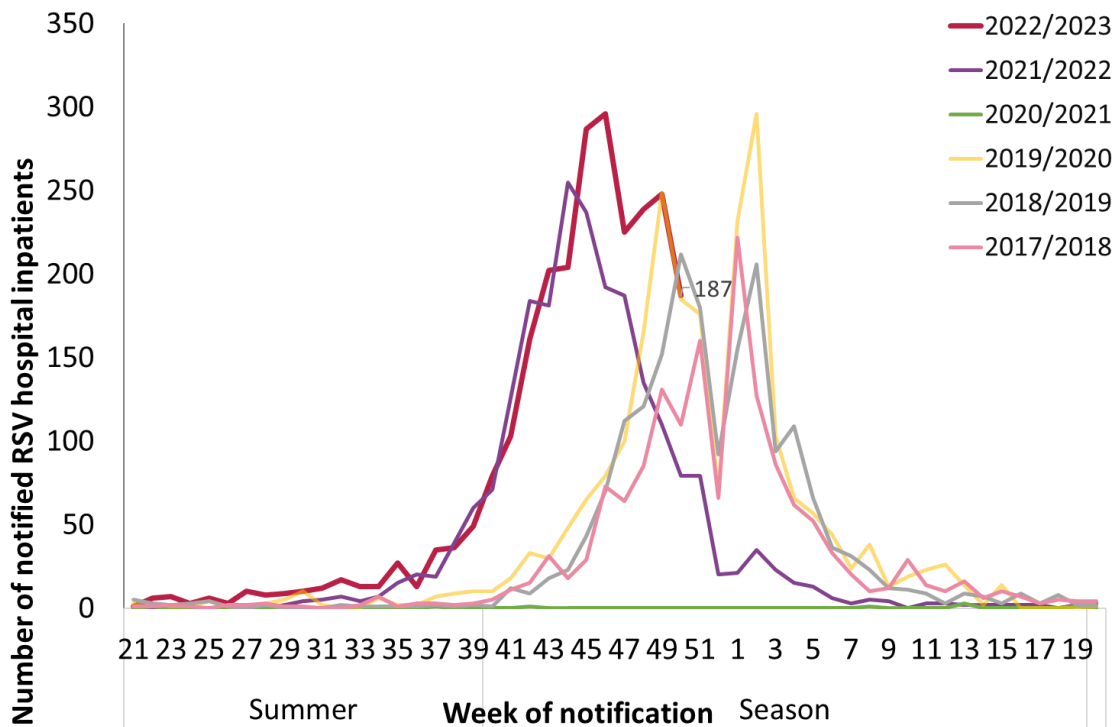
**Figure 12:** Number of notified laboratory confirmed influenza cases reported as hospital inpatients, for the 2017/2018 to 2022/2023 season. *Source: Ireland's Computerised Infectious Disease Reporting System*



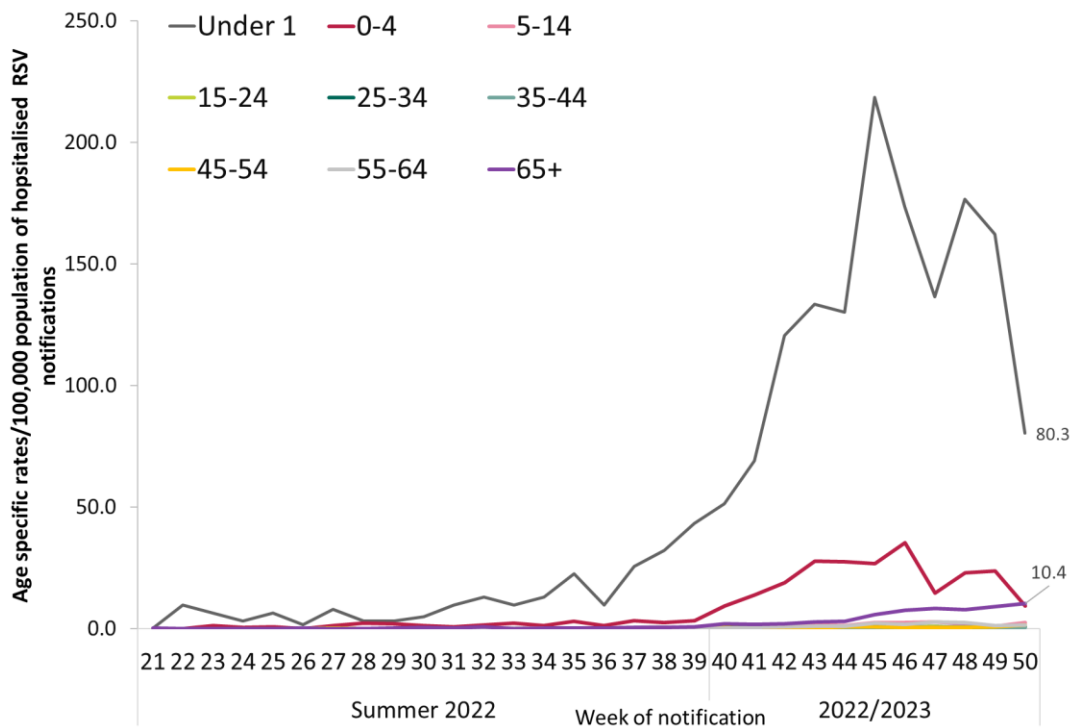
**Figure 13:** Age specific rates per 100,000 population for laboratory confirmed influenza cases reported as hospital inpatients by week of notification. *Source: Ireland's Computerised Infectious Disease Reporting System.*

**Table 7:** Number of notified influenza cases reported by patient type and week of notification and 2022/2023 season (weeks 40-50 2022). *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	<b>62</b>
Week 41	4	20	28	1	3	2	2	<b>60</b>
Week 42	0	45	31	1	16	3	5	<b>101</b>
Week 43	7	35	42	6	20	10	4	<b>124</b>
Week 44	2	38	48	6	16	3	4	<b>117</b>
Week 45	2	66	64	7	12	13	8	<b>172</b>
Week 46	5	81	64	11	15	12	5	<b>193</b>
Week 47	3	92	66	18	19	9	14	<b>221</b>
Week 48	18	123	130	8	31	25	35	<b>370</b>
Week 49	17	266	218	31	58	20	59	<b>669</b>
Week 50	43	456	294	21	105	145	110	<b>1174</b>
<b>Total</b>	<b>103</b>	<b>1233</b>	<b>1003</b>	<b>113</b>	<b>304</b>	<b>249</b>	<b>258</b>	<b>3263</b>



**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 40-50 2022). *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	260	248	13	17	26	81	664
Week 50	21	176	187	1	26	27	64	502
<b>Total</b>	<b>122</b>	<b>2050</b>	<b>2256</b>	<b>65</b>	<b>253</b>	<b>271</b>	<b>342</b>	<b>4857</b>

## 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.

- No laboratory confirmed influenza cases were admitted to critical care and notified to HPSC during week 50 2022.
- During the 2022/2023 season to date (weeks 40-50), 25 laboratory confirmed influenza cases – six A(H1)pdm09, two influenza A(H3), 16 influenza A (not subtyped) and one 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 40-50 2022), of 17 laboratory confirmed influenza cases with known influenza vaccination status, seven (41%) were reported as 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 40-50 2022. *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	25	40.2	0	0.0
1-4	105	39.0	1	0.4
5-14	144	21.3	0	0.0
15-24	69	12.0	2	0.3
25-34	71	10.8	1	0.2
35-44	80	12.1	2	0.3
45-54	63	10.1	2	0.3
55-64	96	18.9	4	0.8
≥65	350	54.9	13	2.0
Unknown		-		-
<b>Total</b>	<b>1003</b>	<b>21.1</b>	<b>25</b>	<b>0.5</b>

## 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 50 2022.
- During the 2022/2023 season (weeks 40 - 50 2022), 11 deaths in notified influenza cases were reported to HPSC – three influenza A(H3), one influenza A(H1)pdm09 and seven influenza A (not subtyped).
- No excess all-cause mortality in all ages was reported during week 49 2022 or for weeks 40-49 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/>

- 16 laboratory confirmed influenza outbreaks were notified to HPSC during week 50 2022, 15 influenza A (not subtyped) and one influenza type unknown.
- For an overview of outbreaks for the season to date (weeks 40-50 2022) 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 50 2022 and the 2022/2023 season (weeks 40-50 2022) *Source: CIDR*

HSE area	Influenza		Respiratory syncytial virus infection		Acute respiratory infection		COVID-19 & Influenza		Total	
	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023
HSE-E	5	12	1	7	0	0	0	0	6	19
HSE-M	0	0	0	0	1	1	0	0	1	1
HSE-MW	0	0	0	1	0	0	0	0	0	1
HSE-NE	5	12	1	15	0	0	1	1	7	28
HSE-NW	4	11	1	4	0	2	0	0	5	17
HSE-SE	0	1	0	0	0	0	0	0	0	1
HSE-S	1	2	1	6	0	0	0	0	2	8
HSE-W	1	4	0	1	0	0	0	0	1	5
<b>Total</b>	<b>16</b>	<b>42</b>	<b>4</b>	<b>34</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>22</b>	<b>80</b>

**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 50 2022 and the 2022/2023 season (weeks 40-50 2022). *Source: CIDR*

HSE area	Influenza		Respiratory syncytial virus		Acute respiratory		COVID-19 & Influenza		Total	
	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023	Week 50	2022/2023
Community hospital/Long-stay unit	0	1	1	4	0	2	0	0	1	7
Nursing Home	4	9	0	9	1	1	1	1	6	20
Hospital	3	18	1	5	0	0	0	0	4	23
Residential Institution	3	8	1	3	0	0	0	0	4	11
Childcare facility	0	0	0	1	0	0	0	0	0	1
Family Outbreaks	6	6	1	12	0	0	0	0	7	18
<b>Total</b>	<b>16</b>	<b>42</b>	<b>4</b>	<b>34</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>22</b>	<b>80</b>

\*ARI outbreaks are negative for SARS-CoV-2, influenza and RSV

## 9. International Summary

In the European region, during week 49 2022 (week ending 11/12/2022), influenza virus positivity in sentinel primary care specimens increased to 23% from 22% which is above the ECDC influenza positivity threshold of 10%. For week 49 2022, 921 (23%) of 3,937 sentinel GP specimens tested positive for an influenza virus; 95% were type A and 5% were type B. Of 658 subtyped A viruses, 82% were A(H3) and 18% were A(H1)pdm09. Of 7 type B viruses ascribed to a lineage, all were B/Victoria.

For week 49 2022, 9,458 of 73,395 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; 9,032 (95%) were type A and 426 (5%) were type B. Of 2,865 subtyped A viruses, 1,773 (62%) were A(H1)pdm09 and 1,092 (38%) were A(H3). Of 9 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, two reported no activity, seven reported sporadic spread, five reported local spread, eight reported regional spread and 16 reported widespread influenza activity.

As of 27<sup>th</sup> November, WHO reported, globally, influenza activity increased and where subtyped, influenza A(H3N2) viruses predominated overall. In North America, Europe, East Asia and Southern Asia influenza activity increased with influenza A(H3N2) the predominant virus detected. In central Asia, however, Kazakhstan reported high influenza activity with B/Victoria-lineage viruses predominating. In tropical Africa, influenza activity remained low with detections of influenza A(H1N1)pdm09, A(H3N2) and B/Victoria reported. 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>

## 12. Case Definitions

<p><i>Influenza-like illness (ILI)</i></p> <ul style="list-style-type: none"> <li>• Sudden onset of symptoms</li> </ul> <p>AND</p> <p>at least one of the following four systemic symptoms:</p> <ul style="list-style-type: none"> <li>• Fever or feverishness, malaise, headache, myalgia</li> </ul> <p>AND</p> <p>at least one of the following three respiratory symptoms:</p> <ul style="list-style-type: none"> <li>• Cough, sore throat, shortness of breath</li> </ul>	<p><i>Acute respiratory infection (ARI)</i></p> <ul style="list-style-type: none"> <li>• Sudden onset of symptoms</li> </ul> <p>AND</p> <p>at least one of the following four respiratory symptoms:</p> <ul style="list-style-type: none"> <li>• Cough, sore throat, shortness of breath, coryza</li> </ul> <p>AND</p> <ul style="list-style-type: none"> <li>• A clinician’s judgement that the illness is due to an infection</li> </ul>
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Further information on influenza in Ireland is available at [www.hpsc.ie](http://www.hpsc.ie)

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