

Influenza Surveillance in Ireland – Weekly Report

Influenza Week 16 2020 (13th – 19th April 2020)



Summary

The ILI rate decreased during week 16 to 28.3 per 100,000. The ILI rate remains above baseline (18.07/100,000) in the low activity threshold levels. The rate is elevated for the time of year and is reflective of the current COVID-19 pandemic rather than influenza activity. Please see [HPSC COVID-19 webpage](#) for current reports on COVID-19 activity in Ireland. Overall, influenza A(H3N2) has been the dominant circulating virus this season. In week 16, no influenza cases were detected. Influenza activity peaked in late December 2019 and has decreased significantly since.

- **Influenza-like illness (ILI):** The sentinel GP influenza-like illness (ILI) consultation rate was 28.3 per 100,000 population in week 16 2020. This is a decrease compared to the updated rate of 33.4 per 100,000 population reported during week 15 2020.
 - The ILI rate remains above baseline and in the low activity threshold levels (18 to <57.5 per 100,000)
 - ILI age specific rate was highest in those aged ≥65 years (39.1/100,000) and lowest in those aged 5-14 years (3.1/100,000).
- **GP Out of Hours:** The proportion of influenza-related calls to GP Out-of-Hours services was 0.3% during week 16 2020 and remains at low levels.
- **National Virus Reference Laboratory (NVRL):**
 - No influenza positive non-sentinel specimens were reported by the NVRL during week 16 2020 or the previous week.
 - No respiratory syncytial virus (RSV) detections were reported by NVRL during week 16 2020 or the previous week.
 - Testing for influenza and RSV has been reduced significantly due to the COVID-19 pandemic response. Data on Influenza and other respiratory pathogen testing by the NVRL will no longer be included on the weekly influenza report.
- **Hospitalisations:** During week 16 2020, two confirmed influenza hospitalised cases were notified to HPSC. One of the cases was a late notification. For the 2019/2020 season to date, 4321 confirmed influenza hospitalised cases have been notified.
- **Critical care admissions:** No confirmed influenza cases were admitted to critical care units and reported to HPSC during week 16 2020. During the 2019/2020 season to date, 152 confirmed influenza cases have been reported as admitted to ICU.
- **Mortality:** During week 16 2020, no influenza associated deaths were reported to HPSC. During the 2019/2020 season to date, 103 influenza-associated deaths have been reported to HPSC. Excess all-cause mortality was reported, in adults aged 65 years and older, during weeks 51, 52 (2019) and weeks 1 and 2 2020. Excess all-cause mortality was also reported for those aged 15-64 years in week 3 2020.
- **Outbreaks:** No outbreaks of influenza, acute respiratory infection (ARI) or respiratory syncytial virus infection (RSV) were reported to the HPSC during week 16 2020.

International: In the temperate zone of the northern hemisphere, influenza activity decreased overall though influenza like illness (ILI) activity remained elevated in some reporting countries.

1. GP sentinel surveillance system - Clinical Data

- During week 16 2020, 65 influenza-like illness (ILI) cases were reported by sentinel GPs, this corresponds to an ILI consultation rate of 28.3 per 100,000 population, which is a decrease compared to the updated rate of 33.4 per 100,000 population reported during week 15 2020.
- The ILI rate for week 16 2020 remains above baseline and in the low activity threshold levels (>18 to <57.5 per 100,000) (figures 1 & 2). The ILI rate remains elevated for the time of year.
- The elevated ILI rate is reflective of the current COVID-19 pandemic rather than influenza. The symptoms of COVID-19 (fever, cough and shortness of breath) are similar to ILI symptoms and are self-reported to the GP by phone consultation.
- ILI cases reported include ILI cases by phone consultation where fever and cough were self-reported.
- During week 16, 49 (82%) of the 60 sentinel GP practices reported data (229,405 reporting population).
- ILI age specific rate was highest in the ≥65years olds (39.1/100,000) and those aged 15-64 years (34.0/100,000) and lowest in those aged 5-14 years (3.1/100,000) and 0-4 years (6.3/100,000).
- HPSC in consultation with the European Centre for Disease Prevention and Control (ECDC) has revised the Irish baseline ILI threshold for the 2019/2020 influenza season to 18.1 per 100,000 population; this threshold is used to indicate the likelihood that influenza is circulating in the community. The Moving Epidemic Method (MEM) has been adopted by ECDC to calculate thresholds for GP ILI consultations in a standardised approach across Europe.*

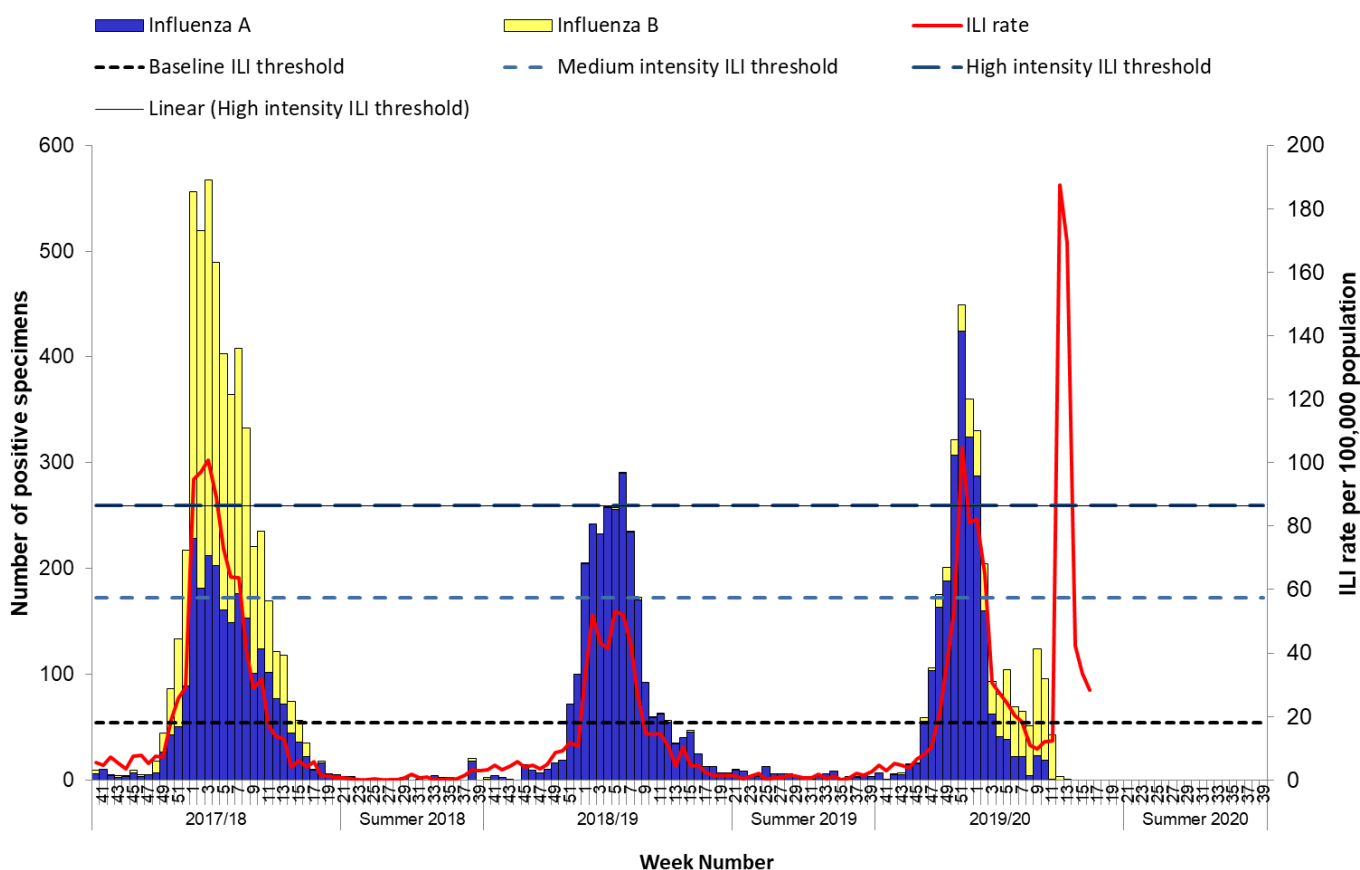


Figure 1: ILI sentinel GP consultation rates per 100,000 population, baseline ILI threshold, medium and high intensity ILI thresholds* and number of positive influenza A and B specimens tested by the NVRL, by influenza week and season. Source: ICGP and NVRL

* For further information on the Moving Epidemic Method (MEM) to calculate ILI thresholds: <http://www.ncbi.nlm.nih.gov/pubmed/22897919>

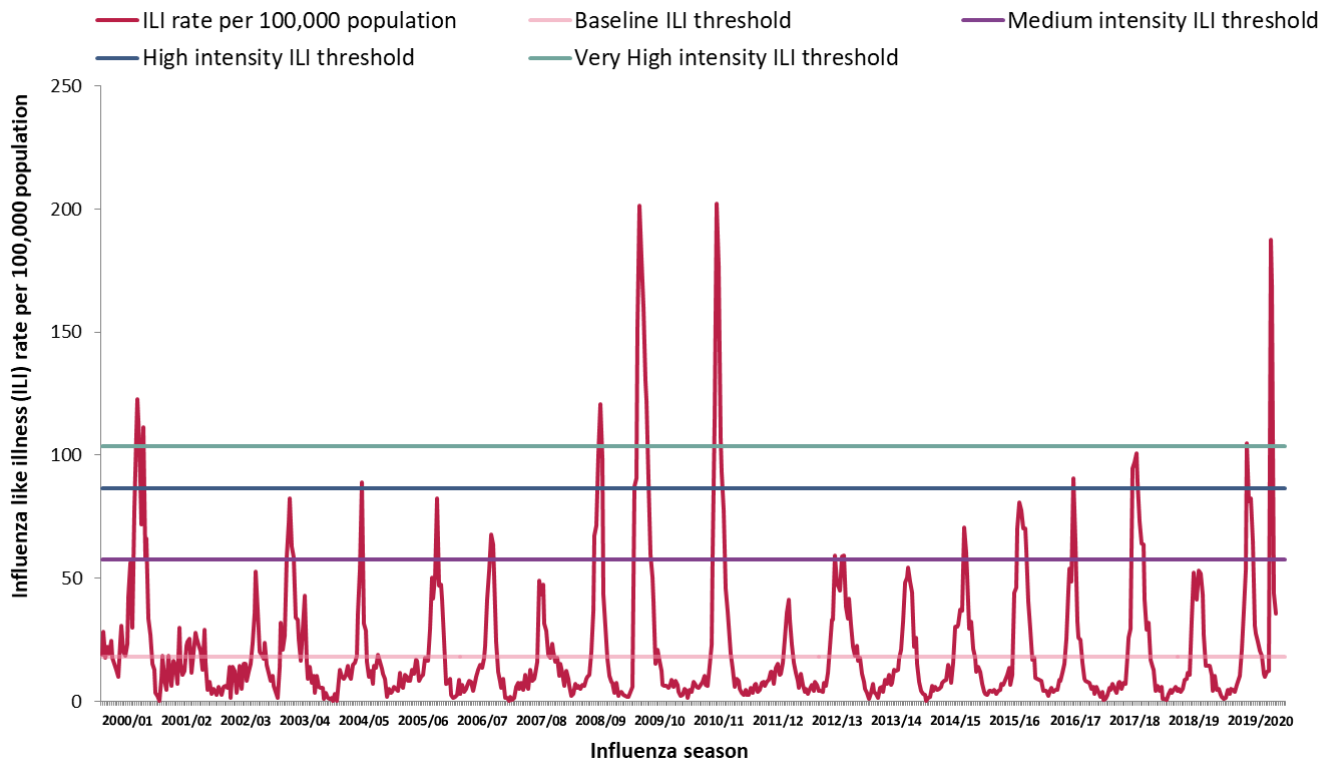


Figure 2: Sentinel GP ILI consultation rate per 100,000 population by week and influenza season (excluding summer periods). Source: ICGP.

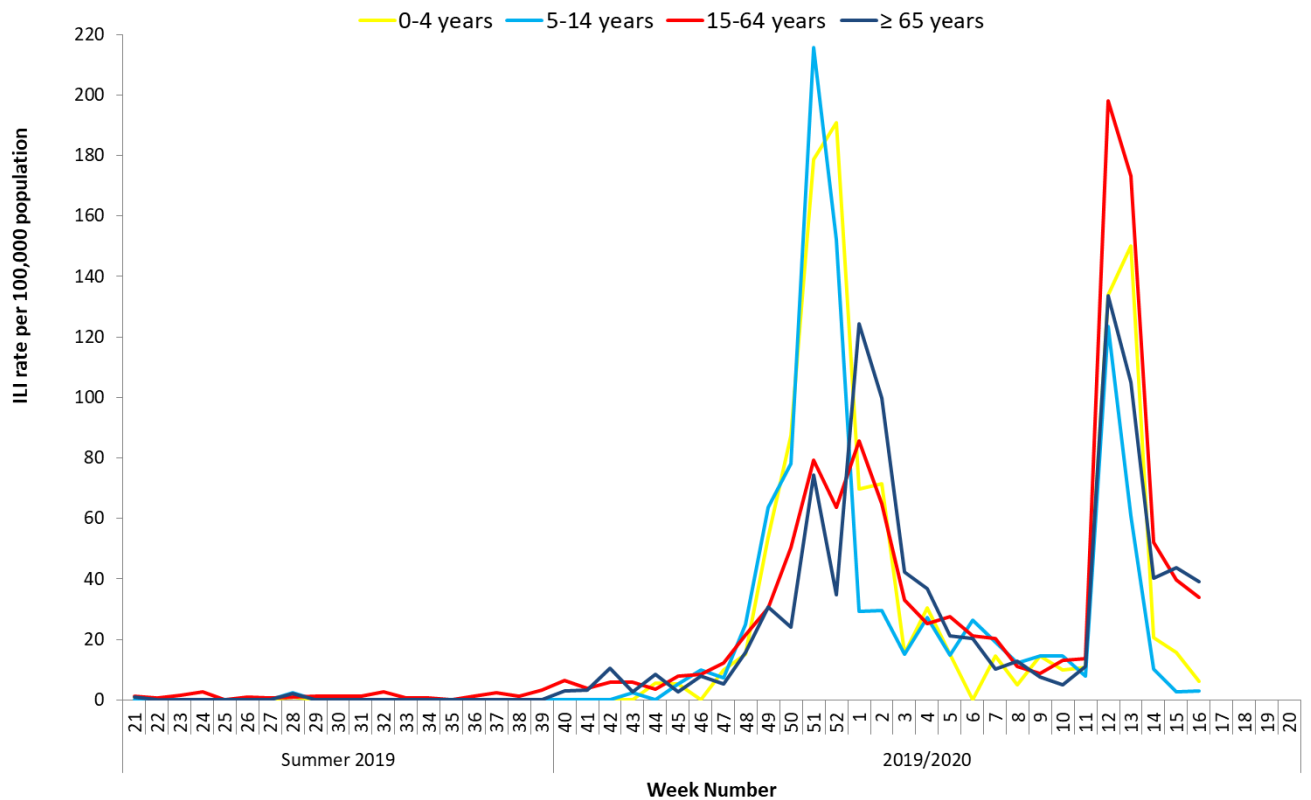


Figure 3: Age specific sentinel GP ILI consultation rate per 100,000 population by week during the summer of 2019 and the 2019/2020 influenza season to date. Source: ICGP.

2. Sentinel hospital surveillance

The Departments of Public Health have established at least one sentinel hospital in each HSE-Area, to report data on total, emergency and respiratory admissions on a weekly basis. However, between weeks 11 and 14 2020 only three hospitals reported data and two hospitals reported during week 15 and 16. Therefore, since week 11 2020, reporting from sentinel hospitals is incomplete and Figure 4 does not accurately reflect respiratory admissions and does not include COVID-19 admissions for this period.

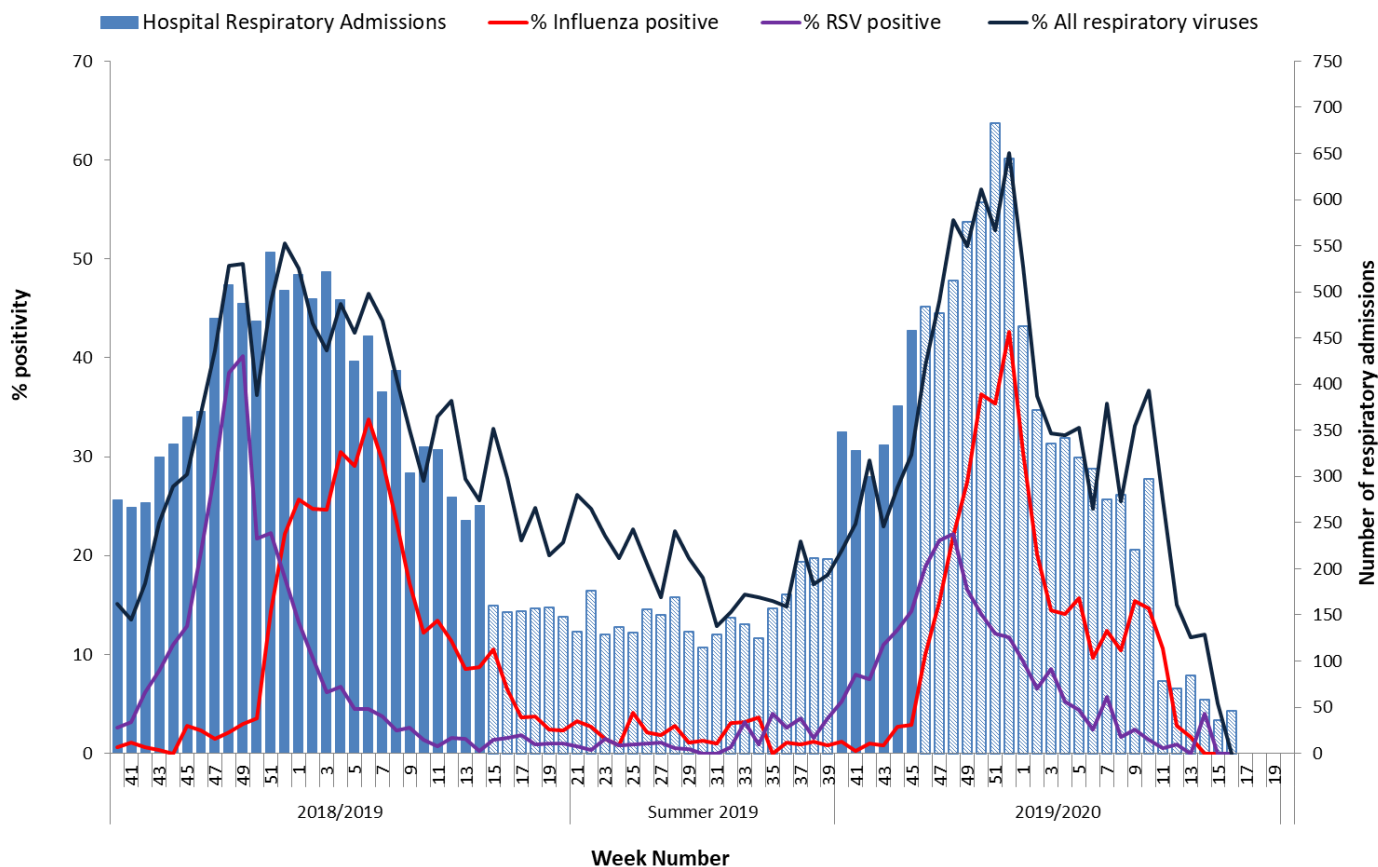


Figure 4: Number of respiratory admissions reported from the sentinel hospital network and % positivity for influenza, RSV and all seasonal respiratory viruses tested* by the NVRL by week and season. *Source: Departments of Public Health - Sentinel Hospitals & NVRL. *All seasonal respiratory viruses tested refer to non-sentinel respiratory specimens routinely tested by the NVRL including influenza, RSV, adenovirus, parainfluenza viruses and human metapneumovirus (hMPV). Weeks with missing data are represented by the hatched bar.*

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 or influenza are extracted for analysis. This information may act as an early indicator of increased ILI activity. However, data are self-reported by callers and are not based on coded influenza diagnoses.

The proportion of influenza-related calls to GP Out-of-Hours services was 0.3% during week 16 2020, which is a decrease compared to week 15 (0.5%). Four services reported data for the current week and there were 23 calls relating to self-reported influenza (figure 5).

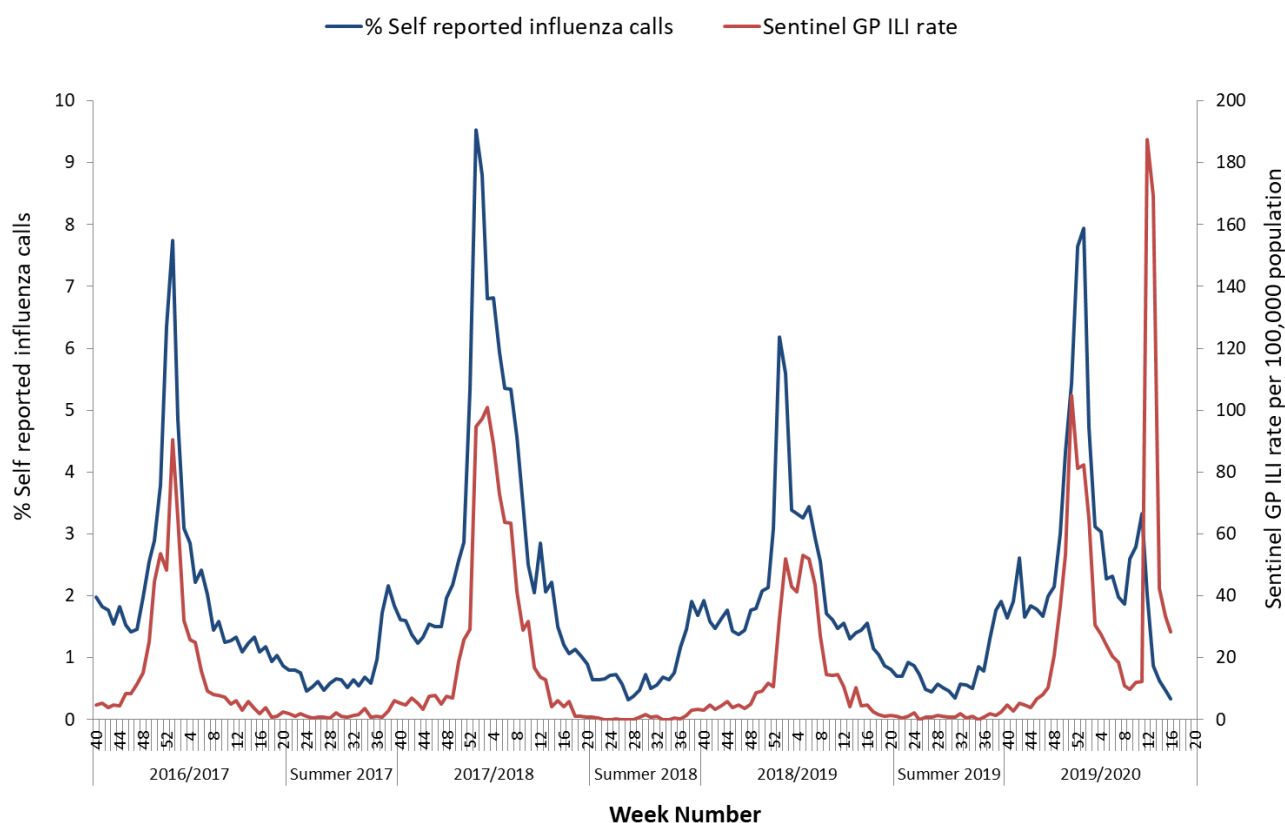


Figure 5: Self-reported influenza-related calls as a proportion of total calls to Out-of-Hours GP Co-ops and sentinel GP ILI consultation rate per 100,000 population by week and season. Source: GP Out-Of-Hours services in Ireland (collated by HSE-NE) & ICGP.

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](#).

- Influenza notifications remained stable at 10 during week 16 2020, compared to 43 during week 15 2020.
- Table 1 outlines the number of laboratory confirmed influenza notifications by organism subtype, for the current week and 2019/2020 season to date.
- Influenza A(H3N2) dominated for most of this season, with B viruses dominating in recent weeks.
- During week 16 2020, one RSV case was notified, a decrease compared to 14 reported the previous week.

Table 1: Number of laboratory confirmed influenza notifications by organism, week 16 2020 and 2019/2020. Source: CIDR

Influenza type	Influenza A		Influenza A(H1N1)pdm09		Influenza A H3N2		Influenza A (unsubtyped)		Influenza B		Influenza (type unknown)		Total
	n	%	n	%	n	%	n	%	n	%	n	%	
Week 16 2020	1	10	1	10	-	-	-	-	8	80	-	-	10
2019/2020	6619	59.6	353	3.2	1752	15.8	1	.	2361	21.3	16	.1	11,102

5. Influenza Hospitalisations

- Two confirmed influenza hospitalised cases were notified to HPSC during week 16 2020. One case was a late notification to HPSC.
- Table 2 outlines the number of hospitalized laboratory confirmed influenza notifications by organism, for the current week 2020 and 2019/2020 season to date.
- Age specific rates for hospitalised influenza cases are reported in table 3, with the highest rates reported in adults aged 65 years and older and in children aged 0-4 years.

Table 2: Number of hospitalized confirmed influenza notifications, for week 16 2020 and 2019/2020. Source: CIDR

Influenza type	Influenza A		Influenza A(H1N1)pdm09		Influenza A H3N2		Influenza B		Influenza (type unknown)		Total
	n	%	n	%	n	%	n	%	n	%	
Week 16 2020	1	50.1	-	-	-	-	1	50	-	-	2
2019/2020	2937	68.1	83	1.9	535	12.4	755	17.5	7	.2	4321

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 influenza cases were reported as admitted to ICU during during week 16 2020.
- During the 2019/2020 season to date, 152 confirmed influenza cases have been reported as having been admitted to ICU. Of those, 32 were due to influenza A (H3N2), 13 were due to A(H1N1)pdm09, 90 were due to influenza A (not subtyped) and 16 were due to influenza B. The remaining ICU admission did not have the organism reported.
- Of the cases admitted to ICU, half were aged 65 years and older. The age specific rates for admission to critical care are shown in table 3.

Table 3: Age specific rates for confirmed influenza cases hospitalised and admitted to critical care during the 2019/2020 influenza season to date. Age specific rates are based on the 2016 CSO census.

Age (years)	Hospitalised		Admitted to ICU	
	Number	Age specific rate per 100,000 population	Number	Age specific rate per 100,000 population
<1	187	300.4	4	6.4
1-4	580	215.4	13	4.8
5-14	666	98.7	12	1.8
15-24	206	35.7	4	0.7
25-34	227	34.4	3	0.5
35-44	202	27	6	0.8
45-54	166	26.5	8	1.3
55-64	320	62.9	26	5.1
>65	1766	277.0	76	11.9
Age unknown	1	n/a	0	n/a
Total	4321	90.7	152	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/>

- During week 16 2020, no influenza associated deaths were reported to HPSC. To date this season, 103 influenza-associated deaths were reported to HPSC. Eighty seven (84%) of the deaths occurred in adults aged 65 years and older, thirteen (13%) were in adults aged between 15-64 years, three (3%) occurred in children aged less than 15 years.
- Excess all-cause mortality was reported in Ireland, in adults aged 65 years and older, during weeks 51 & 52 2019 and weeks 1 and 2 2020 (mid-December to mid-January). Excess all-cause mortality was also reported for those aged 15-64 years in week 3 2020, after correcting GRO data for reporting delays with the standardised EuroMOMO algorithm.

8. Outbreak Surveillance

- No outbreaks of influenza, acute respiratory infection (ARI) or respiratory syncytial virus infection (RSV) were reported to the HPSC during week 16 2020
- Please refer to week 15 influenza surveillance report on the [HPSC website](#) for outbreak numbers to date.

9. International Summary

- For international updates on influenza activity in the European Regions please refer to [ECDC](#) and [Flu News Europe](#).
- For updates on the current influenza epidemiological and virology data from WHO please refer to [WHO](#)
- Further information is available on the following websites:
 - Northern Ireland <http://www.fluawareni.info/>
 - Flu News Europe <http://flunewseurope.org/>
 - Public Health England <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>
 - 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>
- Information on the novel coronavirus (2019-nCoV) is available on the [ECDC](#) and [WHO](#) websites. ECDC has also produced Rapid Risk Assessments which are available on the [ECDC](#) website. The [HPSC](#) has a dedicated webpage on novel coronavirus (2019-nCoV), which is updated regularly.
- Information on Middle Eastern Respiratory Syndrome Coronavirus (MERS), including the latest ECDC rapid risk assessment is available on the [ECDC website](#). Further information and guidance documents are also available on the [HPSC](#) and [WHO](#) websites.
- Further information on avian influenza is available on the [ECDC website](#). The latest ECDC rapid riskassessment on highly pathogenic avian influenza A of H5 type is also available on the [ECDC website](#).

10. WHO recommendations on the composition of influenza virus vaccines

On the 28th February 2020, the WHO vaccine strain selection committee issued recommendations for the composition of influenza virus vaccines for use in the 2020-2021 northern hemisphere influenza season, please see [WHO Vaccine Recommendations](#) for further information.

Further information on influenza in Ireland is available at www.hpsc.ie

Acknowledgements

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