



Weekly Report on Severe Acute Respiratory Infection (SARI), Week 1 2024 (week ending 07/01/2024)

This report includes data on SARI hospitalised cases, aged 15 years and older who were admitted to St. Vincent's University Hospital (SVUH), Dublin, up to week 1 2024.

Please note that this report on SARI surveillance pertains to one hospital site only, data are not nationally representative. Therefore, caution is advised when interpreting rates and trends outlined in this report, as these may fluctuate due to the low case numbers. **Retrospective data collection is on-going for weeks 51 and 52 2023 (due to the holiday period), the data shown for these weeks is currently incomplete.**

Key points

Week 1 2024 (week ending 07/01/2024):

- **Number of cases:** 25 SARI cases admitted to the SARI hospital site, compared to 11 cases in week 50 2023¹ (127.3% increase).
- **Incidence rate per hospital catchment population:** 7.9 per 100,000 population aged 15 years and older, compared to 3.5 per 100,000 in week 50 2023.
- **Incidence rate per emergency hospitalisations:** 76.2 per 1,000, compared to 35.5 per 1,000 in week 50 2023 (114.6% increase).
- **Age profile:** 22 (88.0%) of SARI cases aged ≥65 years. Median age: 75 years; IQR: 69-83 years.
- **Underlying medical conditions:** 25 (100.0%) SARI cases reported having underlying medical conditions.
- **PCR testing:** Of those tested, four (17.4%) tested positive for SARS-CoV-2; five (21.7%) tested positive for influenza (5 A (not subtyped)); and one (4.3%) tested positive for RSV.

Last four weeks (weeks 50 2023-1 2024)

- **Number of cases:** 67 SARI cases admitted to the SARI hospital site.
- **Age profile:** 58 (86.6%) of SARI cases aged ≥65 years. Median age: 76 years; IQR: 68-83 years.
- **Underlying medical conditions:** 67 (100.0%) SARI cases reported having underlying medical conditions.
- **PCR testing:** Of those tested, 12 (19.7%) tested positive for SARS-CoV-2; eight (13.1%) tested positive for influenza (6 A (not subtyped); 2 AH3); and six (9.8%) tested positive for RSV.
- **SARS-CoV-2 whole genome sequencing (WGS):** *There can be a lag-time before WGS results are available.* Among those sequenced (n=9), eight (88.9%) identified as variant BA.2.86 sub-lineage JN.1; one (11.1%) identified as XBB.1.5-like with F456L mutation.

Season 2023/2024 to date (week 40 2023 - week 1 2024)

Collection of discharge data is a manual process, there is a significant lag time between discharge and data collection.

- **Number of cases:** 201 SARI cases admitted to the SARI hospital site.
- **COVID-19 vaccination status:** Among those who tested positive for SARS-COV-2 with known vaccination status (n=29), 15 (51.7%) had not received a vaccine dose within 180 days prior to their episode of illness.
- **ICU admissions:** Among those for whom admission to ICU and/or respiratory status is known (n=197), 46 (23.4%) reported admission to ICU and/or required respiratory support.
- **Outcome:** Of those discharged, with known outcome (n=60), one (1.7%) SARI case died in hospital.

¹ Data collection incomplete for weeks 51 and 52 2023

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Background

Severe acute respiratory infection (SARI) is of major relevance to public health worldwide. Surveillance of SARI is essential to monitor the (co-) circulation of respiratory pathogens and to assess disease severity. Data collected as part of SARI surveillance can provide important early warning information in the context of respiratory disease outbreaks and pandemics. SARI data can also be used as a platform to measure vaccine and antiviral effectiveness and impact. The objectives of SARI surveillance are:

- To describe the number and incidence of SARI cases by aetiology, time, place and person
- To describe and monitor trends, intensity of activity and severity of SARI infections
- To identify groups at risk of severe disease
- To detect unusual and unexpected events
- To assess the SARI burden of disease in the participating hospital
- To assess and monitor vaccine effectiveness

Methods

SARI surveillance was implemented in one tertiary care adult hospital; St. Vincent's University Hospital (SVUH), Dublin. Surveillance commenced on the 5th of July 2021. The SARI surveillance system includes people who are aged 15 years or older.

Case definition

SARI cases are identified from new admissions through the Emergency Department, based on clinical symptoms. Patients that develop SARI during their admission, or are admitted through alternate routes, are not included.

Clinical SARI case:

The European Centre for Disease Prevention and Control (ECDC) clinical SARI case definition is used for SARI surveillance in Ireland since week 34 2021:

- ECDC SARI definition: A hospitalised² person with acute respiratory infection, with at least one of the following symptoms: cough, fever, shortness of breath OR sudden onset of anosmia, ageusia or dysgeusia with onset of symptoms within 14 days prior to hospital admission.

Denominator data

Denominator data for the hospital catchment area are based on the Census of Population, 2022. The hospital catchment data were prepared and provided by the Health Intelligence Unit (HIU) of the Health Service Executive (HSE) and were extracted from Health Atlas Ireland on 15/12/2023.

Weekly denominator data on all-cause hospital admissions, through the Emergency Department, are provided by the SVUH Statistics Department.

² Hospitalised for at least 24 hours

Laboratory testing

SARS-CoV-2, influenza, and RSV PCR testing is carried out on admission.

SARI samples that are positive for SARS-CoV-2 and that have a cycle threshold (Ct) value <25 are referred for whole genome sequencing (WGS). All WGS testing was performed in the NVRL up to week 44 2022. The molecular laboratory in SVUH has been identified as a spoke WGS testing site as part of the national SARS-CoV-2 WGS surveillance programme. From week 45 2022, SARI WGS testing has been performed on-site at SVUH.

Samples that are PCR positive for influenza are sent to the National Virus Reference Laboratory (NVRL) for influenza typing/subtyping/genetic and antigenic characterisation.

Data collection and reporting

Clinical data are collected and managed using REDCap electronic data capture tools hosted at University College Dublin. Laboratory data are extracted from APEX, the laboratory information management system (LIMS), using IBM Cognos software hosted at SVUH.

Case-based data are reported by SVUH to the HSE Health Protection Surveillance Centre (HPSC) on a weekly basis. Data are also reported by HPSC to ECDC via The European Surveillance System (TESSy) on weekly basis as part of European level SARI surveillance.

COVID-19 vaccination data are obtained from the National COVID-19 Vaccination Management System (COVAX) and linked to SARI cases by the HSE-Integrated Information Service (IIS), where data are available.

The influenza season

The influenza surveillance season runs from week 40 (early October) to week 20 (end of May). During this time, seasonal viruses usually circulate at higher levels, compared to the summer period (weeks 21 to 39). The seasonal comparisons used in this report refer to the influenza surveillance season.

Reference dates

05/07/2021 (Week 27 2021) – commencement of SARI surveillance project
27/09/2021 (Week 39 2021) – rollout of the first COVID-19 booster vaccination campaign
22/04/2022 (Week 16 2022) – rollout of the second COVID-19 booster vaccination campaign
03/10/2022 (Week 40 2022) – rollout of the third COVID-19 booster vaccination campaign
28/04/2023 (Week 17 2023) – rollout of the fourth COVID-19 booster vaccination campaign
02/10/2023 (Week 40 2023) – rollout of the fifth COVID-19 booster vaccination campaign
04/10/2021 (Week 40 2021) - start of the 2021/2022 season
03/10/2022 (Week 40 2022) - start of the 2022/2023 season
02/10/2023 (Week 40 2023) - start of the 2023/2024 season

Week number refers to the week of hospital admission. Weeks are from Monday to Sunday, as per the international ISO week³.

³ Monday to Sunday (ISO week) used as per ECDC/WHO/International reporting protocol.

Results

Data were extracted from the HPSC SARI surveillance database on **11/01/2024**. Data are provisional and subject to ongoing review, validation and update. As a result, figures presented in this report may differ from previously published figures.

SARI cases and incidence rates

In total, 201 SARI cases were admitted to St. Vincent's University Hospital (SVUH) during the current season (weeks 40 2023-1 2024), 289 SARI cases were admitted during the same period in the 2022/2023 season (weeks 40 2022-1 2023).

In week 1 2024:

- 25 SARI cases were reported in week 1 2024, a 127.3% increase compared to 11 SARI cases reported in week 50 2023⁴ (Figure 1)
- The SARI incidence rate was 7.9 per 100,000 hospital catchment population aged 15 years and older, compared to the rate of 3.5 per 100,000 in week 50 2023.
- The incidence rate per emergency hospitalisations was 76.2 per 1,000 emergency admissions, a 114.6% increase compared to the rate of 35.5 per 1,000 emergency admissions in week 50 2023.

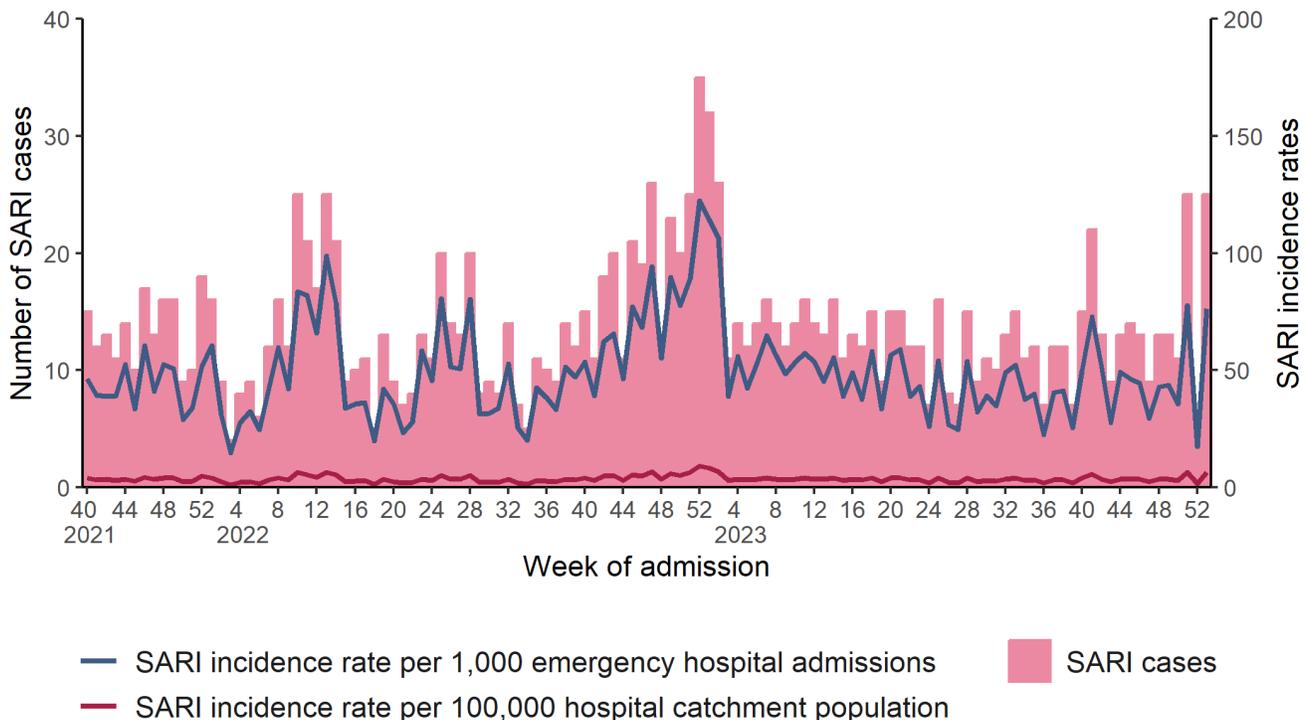


Figure 1: Number and incidence of SARI hospitalised cases (emergency admissions) by week of hospital admission, week 40 2021 to week 1 2024 (n=1,613)

⁴ Due to the holiday period, retrospective data collection for cases admitted during weeks 51 and 52 2023 is still ongoing.

Demographics

In week 1 2024, of the 25 SARI cases reported:

- Females accounted for a higher proportion of SARI cases, n=14 (56.0%) (Table 1)
- Median age of SARI cases admitted was 75 years (interquartile range: 69-83 years)
- Age specific incidence rate amongst those aged 65 years and older was 35.1 per 100,000 compared to 14.3 per 100,000 in week 50 2023.

The incidence rate per 100,000 hospital catchment population by age group is shown in Figure 2.

Table 1: Number and proportion of SARI cases by sex and age, for the current week, last four weeks (weeks 50 2023 - 1 2024), current 2023/2024 season (weeks 40 2023 - 1 2024) and the previous 2022/2023 season (weeks 40 2022 - 1 2023).

Period Week/Year	Current week W1 2024		Last 4 weeks W50 2023- W1 2024		Current season W40 2023- W1 2024		Previous season W40 2022- W1 2023	
	n	(%)	n	(%)	n	(%)	n	(%)
All SARI cases	25		67		201		289	
Gender								
Male	11	44.0	32	47.8	93	46.3	136	47.1
Female	14	56.0	35	52.2	108	53.7	153	52.9
Age (years)								
Mean	74		74		72		71	
Median	75		76		77		75	
IQR	69-83		68-83		67-83		65-83	
Range	29-96		29-96		18-99		20-101	
Age groups (years)								
15-24	0	0.0	0	0.0	2	1.0	8	2.8
25-34	1	4.0	1	1.5	8	4.0	5	1.7
35-44	0	0.0	2	3.0	10	5.0	10	3.5
45-54	1	4.0	3	4.5	11	5.5	11	3.8
55-64	1	4.0	3	4.5	11	5.5	35	12.1
65-74	9	36.0	22	32.8	47	23.4	74	25.6
75-84	8	32.0	25	37.3	68	33.8	97	33.6
85+	5	20.0	11	16.4	44	21.9	49	17.0

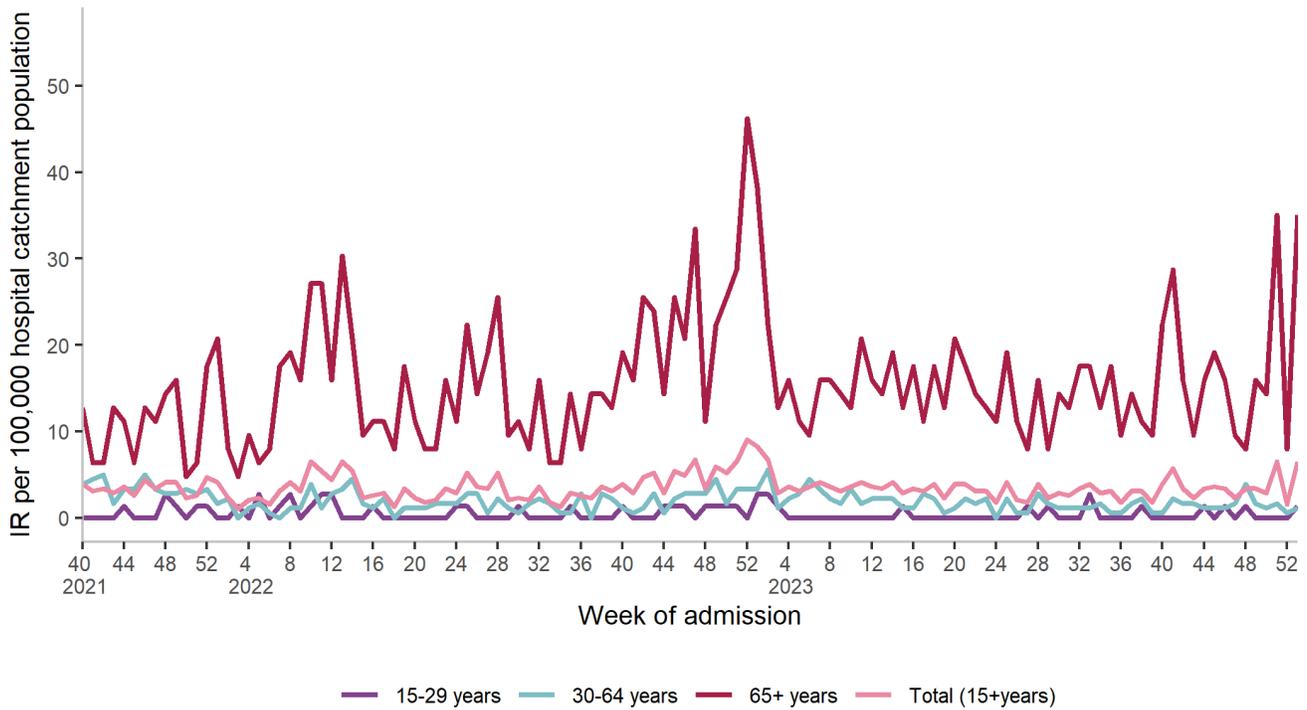


Figure 2: SARI incidence rate per 100,000 hospital catchment population by age group and week of hospital admission, from week 40 2021 to week 1 2024 (n=1613)

Underlying medical conditions and risk factors

The number and proportion of individuals with underlying medical conditions, where known, among those that reported having underlying medical conditions are displayed in Table 2.

Weekly proportions can be based on small numbers and vary from week to week, caution is therefore advised when interpreting changes in weekly proportions.

Table 2: Number and proportion of SARI cases with underlying medical conditions, reported on hospital admission, for the current week, last four weeks (weeks 50 2023-1 2024), current 2023/2024 season (weeks 40 2023-1 2024) and the previous 2022/2023 season (weeks 40 2022-1 2023).

Period Week/Year	Current week W1 2024		Last 4 weeks W50 2023- W1 2024		Current season W40 2023- W1 2024		Previous season W40 2022- W1 2023	
	n	%	n	%	n	%	n	%
Total cases*	25		67		191		271	
Heart disease	6	24.0	25	37.3	73	38.2	105	38.7
Hypertension	8	32.0	25	37.3	67	35.1	115	42.4
Lung disease	6	24.0	16	23.9	56	29.3	99	36.5
Cancer	7	28.0	14	20.9	36	18.8	42	15.5
Neurological disease	0	0.0	13	19.4	36	18.8	51	18.8
Asthma	3	12.0	9	13.4	25	13.1	44	16.2
Diabetes	4	16.0	15	22.4	37	19.4	44	16.2
Kidney disease	2	8.0	7	10.4	21	11.0	18	6.6
Intellectual disability	1	4.0	1	1.5	4	2.1	12	4.4
Immunocompromised	2	8.0	2	3.0	4	2.1	2	0.7
Obesity	0	0.0	1	1.5	2	1.0	6	2.2
Cystic fibrosis	0	0.0	0	0.0	1	0.5	0	0.0
Other chronic conditions**	6	24.0	24	35.8	78	40.8	139	51.3

*SARI cases could be reported with one or more underlying medical conditions, only cases where underlying medical conditions are reported are included.

**Data reported on “other chronic conditions” may include some of the chronic conditions listed above, these data are under review and may change over time

Among female SARI cases aged 15-49 years admitted during the 2023/2024 season (weeks 40-1), one (6.7%) case was reported as being pregnant at the time of admission. During the corresponding period in the 2022/2023 season, two (12.5%) were reported as being pregnant at the time of admission.

Among those admitted during the 2023/2024 season for whom healthcare worker status is known, two (1.0%) cases were reported as being healthcare workers at the time of admission. During the corresponding period in the 2022/2023 season, two (0.7%) of SARI cases were reported as being healthcare workers.

Symptoms

Information on clinical symptoms, either at or prior to hospital admission, was reported for all SARI cases. The most common symptoms reported were cough and shortness of breath (Table 3).

Table 3: Number and proportion of SARI cases with clinical symptoms, either at or prior to hospital admission, for the current week, last four weeks (weeks 50 2023-1 2024), current 2023/2024 season (weeks 40 2023-1 2024) and the previous 2022/2023 season (weeks 40 2022-1 2023).

Period Week/Year	Current week W1 2024		Last 4 weeks W50 2023- W1 2024		Current season W40 2023- W1 2024		Previous season W40 2022- W1 2023	
	n	%	n	%	n	%	n	%
Clinical symptoms*								
Total cases	25		67		201		289	
Cough	14	56.0	45	67.2	141	70.1	239	82.7
Shortness of breath	19	76.0	46	68.7	148	73.6	213	73.7
Fever	9	36.0	32	47.8	85	42.3	141	48.8
General deterioration	1	4.0	20	29.9	72	35.8	150	51.9
Malaise	6	24.0	8	11.9	32	15.9	28	9.7
Headache	0	0.0	1	1.5	5	2.5	15	5.2
Muscular pain	1	4.0	3	4.5	9	4.5	19	6.6
Sore throat	2	8.0	5	7.5	9	4.5	15	5.2
Ageusia	0	0.0	0	0.0	1	0.5	1	0.3
Anosmia	0	0.0	0	0.0	1	0.5	2	0.7
Dysgeusia	0	0.0	0	0.0	1	0.5	0	0.0

*SARI cases could be reported with one or more clinical symptoms

Severe clinical course during hospitalisation

Information on the clinical course during hospitalisation is only available after discharge, and there may be a delay between discharge and data collection, due to the manual data collection methods required. Among those for whom discharge information is available the most common complication reported was pneumonia (Table 4).

Information on ICU admission and respiratory support may be available prior to discharge, see Table 5. However, length of stay in ICU is only available after discharge, therefore, data on ICU length of stay for the current season are not included, due to the small numbers involved.

Data collection is ongoing for those not yet discharged from hospital.

Table 4: Number and proportion of SARI cases by complication, for the current 2023/2024 season (weeks 40 2023-1 2024), the previous 2022/2023 season (weeks 40 2022-1 2023), and cases admitted between week 40 2022 and week 1 2024.

Season Weeks	2023-2024		2022-2023		Since W40 2022	
	W40 2023- W1 2024		W40 2022- W1 2023		W40 2022- W1 2024	
Complications*	n	%	n	%	n	%
Total discharged cases	60		289		803	
Pneumonia	7	11.7	17	5.9	103	12.8
ARDS	3	5.0	6	2.1	40	5.0
Sepsis	1	1.7	7	2.4	19	2.4
Multiorgan failure	0	0.0	1	0.3	8	1.0
Myocarditis	0	0.0	0	0.0	0	0.0
Encephalitis	0	0.0	0	0.0	0	0.0
Bronchiolitis	0	0.0	0	0.0	1	0.1
Acute kidney injury**	0	0.0	-	-	0	0.0
Heart failure**	0	0.0	-	-	0	0.0
Secondary bacterial infection**	0	0.0	-	-	0	0.0
Other complications***	6	10.0	80	27.7	192	23.9
No complications	43	71.7	189	65.4	483	60.1

*SARI cases could be reported with one or more complications.

**Data collection for these complications began in week 49 2023.

***Data reported on “other complications” may include some of the complications listed above, these data are under review and may change over time.

Table 5: Number and proportion of SARI cases by respiratory support and ICU admission, for the current 2023/2024 season (weeks 40 2023-1 2024), the previous 2022/2023 season (weeks 40 2022-1 2023), and cases admitted between week 40 2022 and week 1 2024.

Season Weeks	2023-2024		2022-2023		Since W40 2022	
	W40 2023- W1 2024		W40 2022- W1 2023		W40 2022- W1 2024	
	n	%	n	%	n	%
Respiratory support status known	61		289		804	
High-flow oxygen therapy*	43	70.5	173	59.9	500	62.2
Invasive ventilation	0	0.0	11	3.8	18	1.4
No respiratory support	18	29.5	105	36.3	284	35.3
ICU status known	197		289		949	
ICU/ventilated**	46	23.4	184	63.7	522	55.0
Admitted to ICU	3	1.5	18	6.2	43	4.5
Admitted and discharged	0	0.0	18	6.2	40	4.2
ICU length of stay (days)						
Mean	-		11		9	
Median	-		6		5	
Interquartile range	-		2-13		2-10	
Range	-		<1-42		<1-42	

*Non-invasive ventilation

**SARI cases which required invasive and/or non-invasive ventilation and/or ICU admission

Laboratory testing for SARS-CoV-2, Influenza and RSV

PCR testing:

SARI cases are tested by PCR for SARS-CoV-2, influenza and RSV on admission.

In week 1 2024:

- SARS-CoV-2 PCR testing was carried out on 23 (92.0%) SARI cases, four (17.4%) tested positive, compared to three (30.0%) positive in week 50 2023.
- Influenza PCR testing was carried out on 23 (92.0%) SARI cases, five (21.7%) tested positive for influenza A (not subtyped), compared to one (10.0%) positive influenza A (not subtyped) in week 50 2023.
- Respiratory syncytial virus (RSV) PCR testing was carried out on 23 (92.0%) SARI cases, one (4.3%) tested positive. There were no RSV positive SARI cases in week 50 2023.

The weekly positivity rate of SARI cases for the three acute respiratory pathogens are presented in Figure 3. Table 6 displays the number and proportion of SARI cases tested by PCR and positive for SARS-CoV-2, influenza and RSV, and the type/subtype for all influenza PCR positive test results.

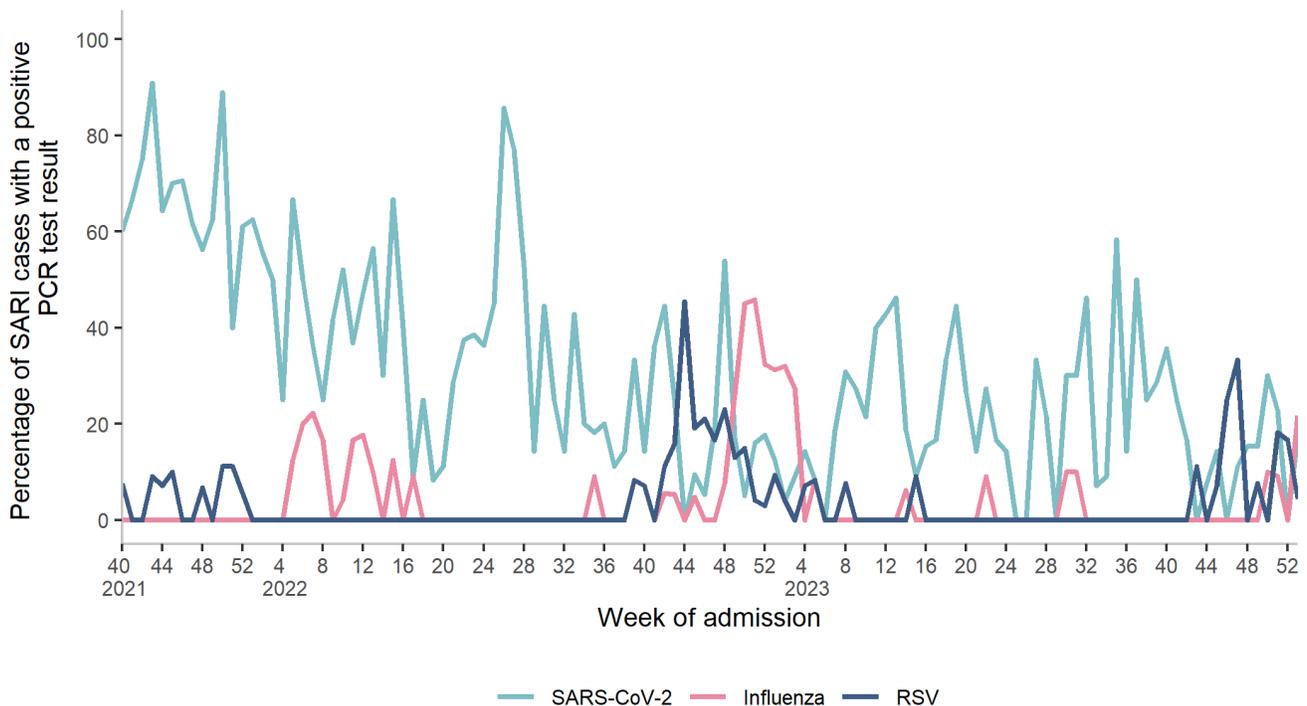


Figure 3: Percentage of SARI cases with a positive laboratory test result for SARS-CoV-2, influenza and RSV by week, from week 40 2021 to week 1 2024.

Table 6: Number of positive SARS-CoV-2, influenza, and RSV SARI cases, and influenza type/subtype for the current week, weeks 51 2023-1 2024, current 2023/2024 season (weeks 40 2023-1 2024) and the previous 2022/2023 season (weeks 40 2022-1 2023).

Period	Individual weeks						Current season		Previous season	
	W1 2024		W52 2023		W51 2023		W40 2023-W1 2024		W40 2022-W1 2023	
Test result	n	%	n	%	n	%	n	%	n	%
SARS-CoV-2										
Total tested	23		6		22		190		287	
Positive	4	17.4	0	0.0	5	22.7	32	16.8	53	27.9
RSV										
Total tested	23		6		22		190		283	
Positive	1	4.3	1	16.7	4	18.2	15	7.9	37	19.5
Influenza										
Total tested	23		6		22		190		283	
Positive	5	21.7	0	0.0	2	9.1	8	4.2	53	27.9
Influenza A (H3)	0	0.0	0	0.0	2	9.1	2	1.1	24	12.6
Influenza A (H1)pdm09	0	0.0	0	0.0	0	0.0	0	0.0	24	12.6
Influenza A (not subtyped)	5	21.7	0	0.0	0	0.0	6	3.2	4	2.1
Influenza B (Victoria lineage)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5
Influenza B (no lineage reported)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Genomic analysis

SARS-CoV-2

There can be a lag-time before WGS results are available. The WGS data presented is up to week 1 2024.

Sequencing results have been received for 364 SARI cases admitted between week 40 2021 and week 1 2024 (Figure 4).

BA.2.86 sub-lineage JN.1 is the dominant variant circulating among SARI cases admitted to the hospital site in the current season. Among SARS-CoV-2 positive SARI cases admitted during weeks 40 2023-1 2024, for whom WGS data are available (n=27), 11 (40.7%) were variant BA.2.86 sub-lineage JN.1, 9 (33.3%) were XBB.1.5-like lineages, and 7 (25.9%) were XBB.1.5-like+F456L mutation. Among SARS-CoV-2 positive SARI cases sequenced in the last 4 weeks (n=9), eight (88.9%) were variant BA.2.86 sub-lineage JN.1, and one (11.1%) was XBB.1.5-like+F456L mutation.

Further information on SARI variants is available in the appendix (Tables A1 and A2). For further information on circulating variants in Ireland, see the COVID-19 virus variants reports on the HPSC website⁵.

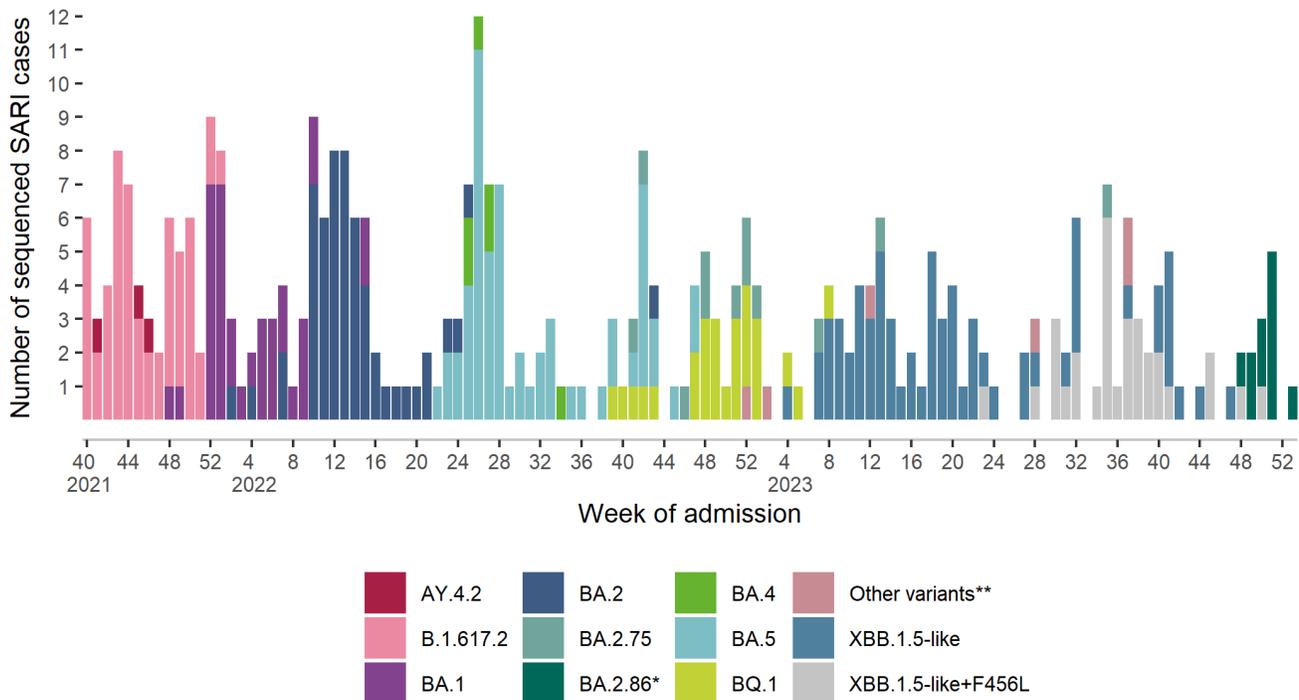


Figure 4: Number of SARI cases sequenced and reported, by week of hospitalisation, week 40 2021 to week 1 2024 (n=364)

*Includes sub-lineage JN.1

**All other variants

Note: As described by the ECDC, 'XBB.1.5-like' and 'XBB.1.5-like + F456L' refer to groupings of lineages that share sets of spike protein mutations

⁵ <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/surveillance/summaryofcovid-19virusvariantsinireland/>

Outcome

Collection of discharge data is a manual process, therefore there is a significant lag time between patient discharge and data collection.

Of the 201 SARI cases admitted to the SARI hospital site during the current 2023/2024 season (weeks 40 2023-1 2024), 60 (29.9%) have been reported to HPSC as discharged. Of those admitted during the previous 2022/2023 season (weeks 40 2022-1 2023), 289 (100.0%) cases have been discharged (Table 7).

Among SARI cases admitted during the current 2023/2024 season (weeks 40 2023-1 2024) and discharged with known outcome, one (1.7%) death has been reported.

Among SARI cases admitted during the previous 2022/2023 season (weeks 40 2022-1 2023), and discharged with known outcome, 36 (12.5%) died in hospital, 18 (50.0%) were male and 18 (50.0%) were female. The median age was 76 years (IQR: 74-82 years).

Table 7: Number and proportion of discharged SARI cases by outcome and hospital length of stay, for the current 2023/2024 season (weeks 40 2023-1 2024), the previous 2022/2023 season (weeks 40 2022-1 2023), and cases admitted between week 40 2022 and week 01 2024.

Season Weeks	2023/2024		2022/2023		Since W40 2022	
	W40 2023- W1 2024		W40 2022- W1 2023		W40 2022- W1 2024	
	n	%	n	%	n	%
Known outcome	60		289		803	
Discharged alive	59	98.3	251	86.9	732	91.2
Transferred*	0	0.0	2	0.7	8	1.0
Died in hospital	1	1.7	36	12.5	63	7.8
Hospital length of stay (days)						
Mean	9		13		11	
Median	5		6		5	
Interquartile range	3-9		3-12		3-11	
Range	1-53		1-140		1-271	

*Transferred to another hospital

COVID-19 Vaccination status

Amongst the SARI cases admitted in the current season (weeks 40 2023 - 1 2024) who were PCR positive for SARS-CoV-2, the proportion with known COVID-19 vaccination status was 90.6% (n=29). Of cases with known vaccination status, 15 (51.7%) had not received a vaccine dose within 180 days prior to their episode of illness (Table 8).

Characteristics of **all** SARI cases by time since last COVID-19 vaccine dose and hospitalisation during the current season are presented in the Appendix (Table A3).

Please refer to the technical notes for the full list of definitions on COVID-19 vaccination status⁶.

Table 8: Characteristics of **SARS-CoV-2 positive** SARI cases by time since last COVID-19 vaccine dose and hospitalisation during the current season (weeks 40 2023-1 2024). Note: SARS-CoV-2 positive SARI cases by with unknown vaccination status (n=3; 9.4%) are excluded.

Weeks	W40 2023 – W1 2024		
	<180 days, N = 14 ¹	>=180 days, N = 15 ¹	Not vaccinated, N=0 ¹
Characteristic			
Total	14 (48.3%)	15 (51.7%)	0 (0.0%)
Age(years)			
Mean	77	75	-
Median	78	74	-
IQR	73 - 82	69 - 83	-
Range	65 - 91	52 - 92	-
Gender			
Female	4 (40.0%)	6 (60.0%)	0 (0.0%)
Male	10 (52.6%)	9 (47.4%)	0 (0.0%)
Age groups (years)			
15-49	0 (0.0%)	0 (0.0%)	0 (0.0%)
50-69	2 (33.3%)	4 (66.7%)	0 (0.0%)
70+	12 (52.2%)	11 (47.8%)	0 (0.0%)
Patient residence			
Residential care facility	3 (100.0%)	0 (0.0%)	0 (0.0%)
Private residence/home	10 (50.0%)	10 (50.0%)	0 (0.0%)
Other residence	0 (0.0%)	0 (0.0%)	0 (0.0%)
Patient residence not known	1 (16.7%)	5 (83.3%)	0 (0.0%)
Underlying medical conditions			
Yes	14 (48.3%)	15 (51.7%)	
No	0 (0.0%)	0 (0.0%)	0 (0.0%)
Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)

¹n (%) of SARI cases with known COVID-19 vaccination status

⁶ Refer to www.hse.ie for further information on the COVID-19 vaccination rollout

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Technical notes

1. SARI case
 - A SARI case refers to an individual patient episode of care.
2. Epidemiological date
 - Epidemiological date is used to determine timing of Severe Acute Respiratory Infections. Epidemiological date is based on the earliest date available on the case, taken from date of onset of symptoms, laboratory specimen collection date, and date of hospitalisation.
3. Vaccination status
 - For the purposes of SARI surveillance, vaccination status of cases is as follows:

Vaccinated:

A case who received their last COVID-19 vaccine dose ≥ 14 days prior to the epidemiological date.

Time since vaccination:

For vaccinated cases, time since vaccination is calculated by subtracting the date of vaccination from the epidemiological date and categorised as <180 days or ≥ 180 days since vaccination.

Not vaccinated, if the following applies:

- Vaccination record on the National COVID-19 Immunisation system indicates the person was vaccinated after the epidemiological date.
- The SARI patient was reported as not vaccinated on the SARI hospital clinical questionnaire, and there is no identifiable linked record of COVID-19 vaccination on the National COVID-19 Immunisation system.

Vaccine status unknown, if:

- The SARI patient is reported on the SARI hospital clinical questionnaire as vaccinated, however there is no identifiable linked record of COVID-19 vaccination on the National COVID-19 Immunisation system. Vaccination status is reported as unknown, until verified on the National COVID-19 Immunisation system.
- The SARI patient is reported on the SARI hospital clinical questionnaire as vaccination status unknown, AND there is no identifiable linked record of COVID-19 vaccination on the National COVID-19 Immunisation system.

Appendix

Table A1

Number and proportion of SARI cases sequenced and reported, by pango lineage and variant, admitted during weeks 40 2023-1 2024 (n=27)

Virus Variant	Pango Lineage	Number of cases	Sequenced cases %
XBB.1.5like+F456L	EG.5.1	1	3.7
	EG.5.1.1	1	3.7
	EG.5.1.3	1	3.7
	HK.3	1	3.7
	HV.1	1	3.7
	XBB.1.16.6	2	7.4
XBB.1.5-like lineages	FL.15	1	3.7
	FL.9	1	3.7
	GE.1	2	7.4
	XBB.1.5	2	7.4
	XBB.2.3	1	3.7
	XBB.2.3.11	1	3.7
	XBB.2.3.13	1	3.7
BA.2.86 lineages	JN.1	11	40.7
Total		27	

Table A2

Number of SARI cases sequenced and reported by Pango Lineage and week of admission, SARI cases admitted in weeks 49 2023-1 2024

Virus variant	Lineage	2023- W49	2023- W50	2023- W51	2023- W52	2024- W01	Total
XBB.1.5-like+F456L	EG.5.1.3	0	1	0	0	0	1
	EG.5.1.1	0	0	0	0	0	0
BA.2.86	JN.1	2	2	5	0	1	10
Total		2	3	5	0	1	11

Table A3

Characteristics of all SARI cases by COVID-19 vaccination status by time since last COVID-19 vaccine dose and hospitalisation during the current season (weeks 40 2023-1 2024). Note: SARI cases with unknown vaccination status (n=39; 19.4%) are excluded.

Characteristic	<180 days, N = 86 ¹	>=180 days, N = 76 ¹	Not vaccinated, N=0 ¹
Total	86 (53.1%)	76 (46.9%)	0 (0.0%)
Age(years)			
Mean	77	70	-
Median	80	73	-
IQR	73 - 85	62 - 82	-
Range	18 - 99	18 - 94	-
Gender			
Female	48 (55.8%)	38 (50.0%)	0 (0.0%)
Male	38 (44.2%)	38 (50.0%)	0 (0.0%)
Age groups (years)			
15-49	7 (8.1%)	10 (13.2%)	0 (0.0%)
50-69	7 (8.1%)	22 (28.9%)	0 (0.0%)
70+	72 (83.7%)	44 (57.9%)	0 (0.0%)
Patient residence			
Long-term care facility	0 (0.0%)	0 (0.0%)	0 (0.0%)
Private residence/home	0 (0.0%)	0 (0.0%)	0 (0.0%)
Other residence	0 (0.0%)	0 (0.0%)	0 (0.0%)
Patient residence not known	86 (100.0%)	76 (100.0%)	0 (0.0%)
Underlying medical conditions			
Yes	85 (98.8%)	73 (96.1%)	0 (0.0%)
No	1 (1.2%)	3 (3.9%)	0 (0.0%)
Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)

¹n (%)