Summary of SARS-CoV-2 virus variants in Ireland. Week 17 2025 (week ending 26/04/2025)

Prepared by HPSC on 01/05/2025
Please note: Data are provisional

Latest information on SARS-CoV-2 variants in Ireland

Since December 2023, JN.1 sublineages have dominated circulating SARS-CoV-2 variants worldwide. To date, a number of JN.1 sublineages have arisen with various combinations of mutations that offer a competitive advantage such as the spike mutations F456L and R346T. Since week 35 2024, the XEC variant (KS.1.1 and KP.3.3 recombinant, also a WHO and ECDC Variant Under Monitoring (VUM)) has steadily risen in prevalence in Ireland and globally.[1,2] Other lineages, particularly LP.8.1 (a WHO VUM), are beginning to rise in prevalence also. However, there is no evidence to date of an increase in clinical severity or reduction in vaccine effectiveness against severe disease among currently circulating variants.[3]

- The XEC lineage accounted for 15.0% of sequences between week 11 2025 and week 15 2025. This compares to 53.3% between week 6 2025 and week 10 2025.
- LP.8.1 and its sublineages accounted for 42.5% of sequences between week 11 2025 and week 15 2025. This compares to 18.7% between week 6 2025 and week 10 2025.

This report summarises all reported SARS-CoV-2 WGS data in Ireland. It focusses on data from week 40 2023 to 15 2025 and in particular data from more recent weeks. Results since week 40 2023, and for the most recent five weeks, are shown in Figures 1a and 1b, 2a and 2b, Tables 1a and 1b and Table 2.

Note: There is typically a lag time of 1-3 weeks between a case being notified, selected for sequencing and sequencing being completed. Therefore the % of cases notified in this time period who are ultimately sequenced will be higher than reported here.

[1] European Respiratory Virus Surveillance Summary

[2] WHO COVID-19 epidemiological update

[3] ECDC, Communicable disease threats report, 1-7 February 2025, week 6

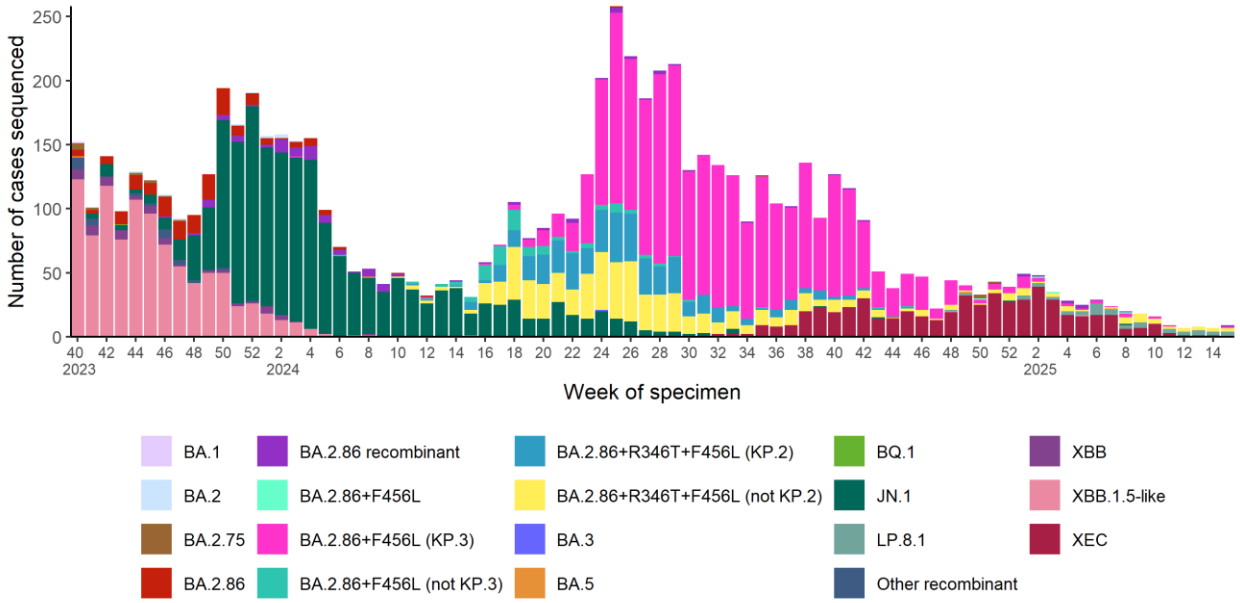

Figure 1a: SARS-CoV-2 whole genome sequencing results, specimen collection dates from week 40 2023 to week 15 2025, Ireland.[4]

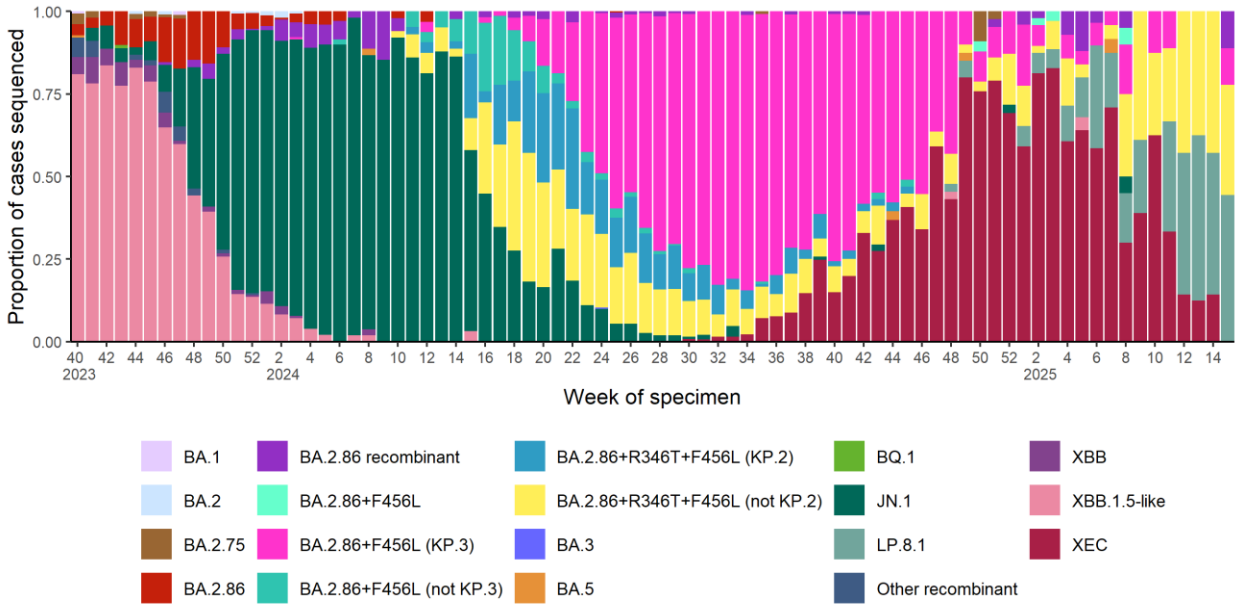

Figure 1b: Proportion of sequenced SARS-CoV-2 specimens by variant, specimen collection dates from week 40 2023 to week 15 2025, Ireland.

[4] 'XBB.1.5-like' is a grouping of lineages that share sets of spike protein mutations.

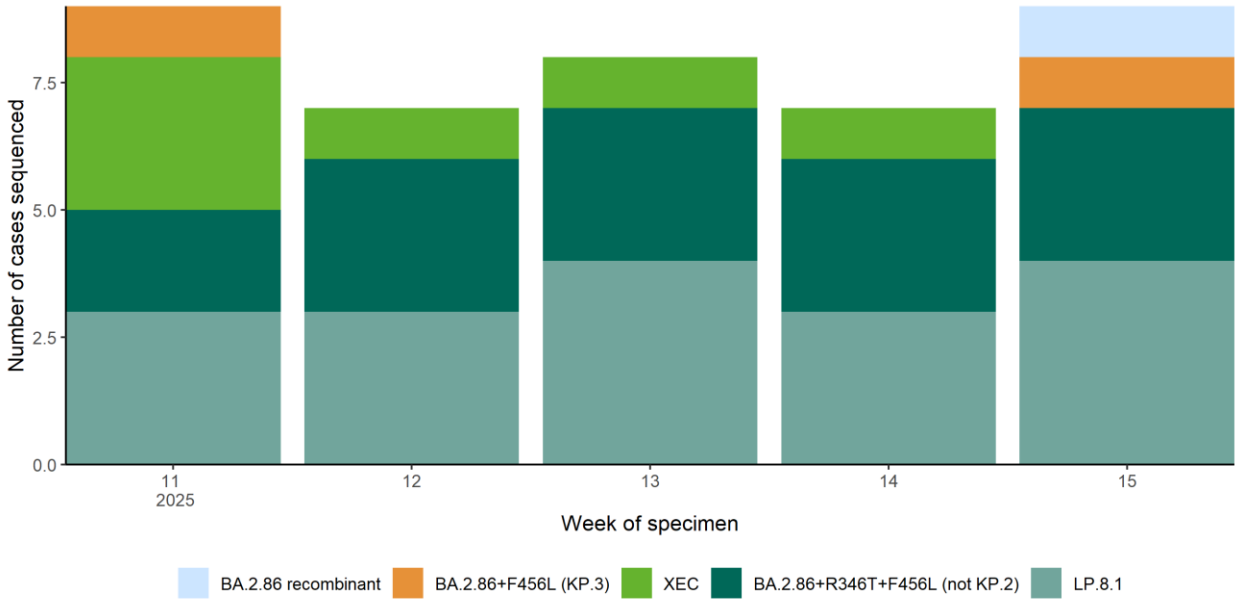

Figure 2a: SARS-CoV-2 whole genome sequencing results by week specimen collected from week 11 2025 to week 15 2025, Ireland.

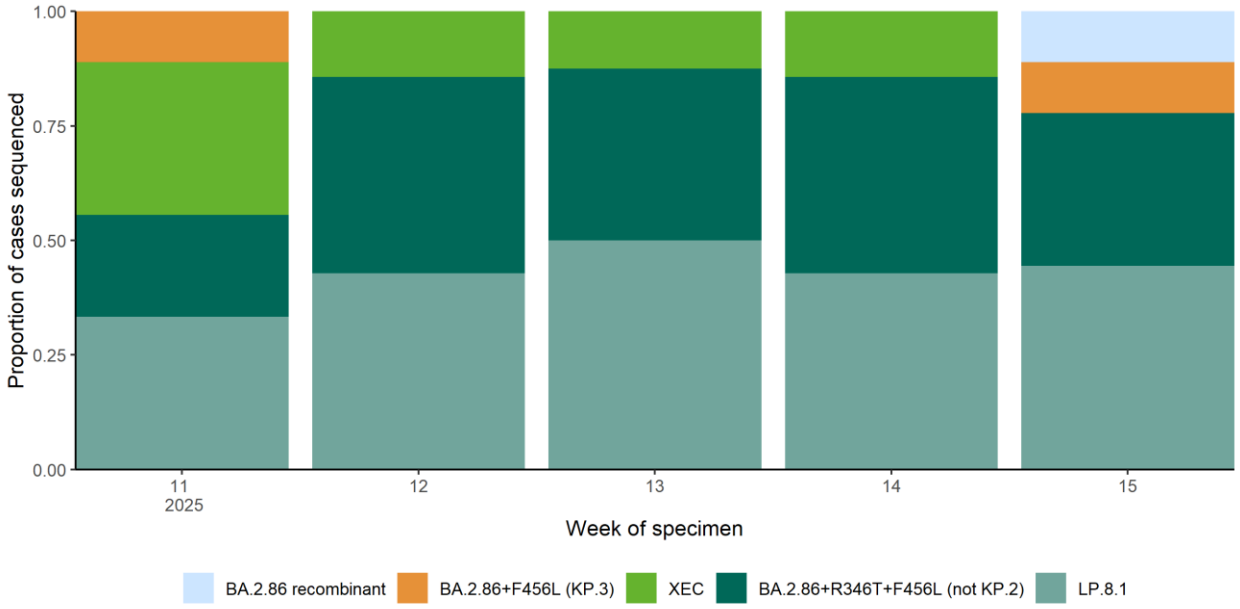

Figure 2b: SARS-CoV-2 whole genome sequencing results by proportion by week specimen collected from week 11 2025 to week 15 2025, Ireland.

Table 1a: Number of variants by week, from week 11 2025 to week 15 2025, Ireland.

Variant	11	12	13	14	15	Total
LP.8.1	3	3	4	3	4	17
BA.2.86+R346T+F456L (not KP.2)	2	3	3	3	3	14
XEC	3	1	1	1	0	6
BA.2.86+F456L (KP.3)	1	0	0	0	1	2
BA.2.86 recombinant	0	0	0	0	1	1
Total	9	7	8	7	9	40

Table 1b: Percentage of variants by week, from week 11 2025 to week 15 2025, Ireland.

Variant	11	12	13	14	15	Total
LP.8.1	33.3%	42.9%	50.0%	42.9%	44.4%	42.5%
BA.2.86+R346T+F456L (not KP.2)	22.2%	42.9%	37.5%	42.9%	33.3%	35.0%
XEC	33.3%	14.3%	12.5%	14.3%	0.0%	15.0%
BA.2.86+F456L (KP.3)	11.1%	0.0%	0.0%	0.0%	11.1%	5.0%
BA.2.86 recombinant	0.0%	0.0%	0.0%	0.0%	11.1%	2.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 2: SARS-CoV-2 variants of sequenced COVID-19 case specimens in the last five week period (week 11 2025 to week 15 2025) and percentage difference in prevalence compared to the previous five week period (week 6 2025 to week 10 2025), Ireland. *red indicates >=5% increase; green indicates >=5% decrease

Variant	Number of cases week 11 2025 to week 15 2025	% week 11 2025 to week 15 2025	Number of cases week 6 2025 to week 10 2025	% week 6 2025 to week 10 2025	% difference between week 11 2025 to week 15 2025 and week 6 2025 to week 10 2025
LP.8.1	17	42.5	20	18.7	23.8
BA.2.86+R346T+F456L (not KP.2)	14	35.0	17	15.9	19.1
XEC	6	15.0	57	53.3	-38.3
<5 cases	3		13		
Total	40		107		

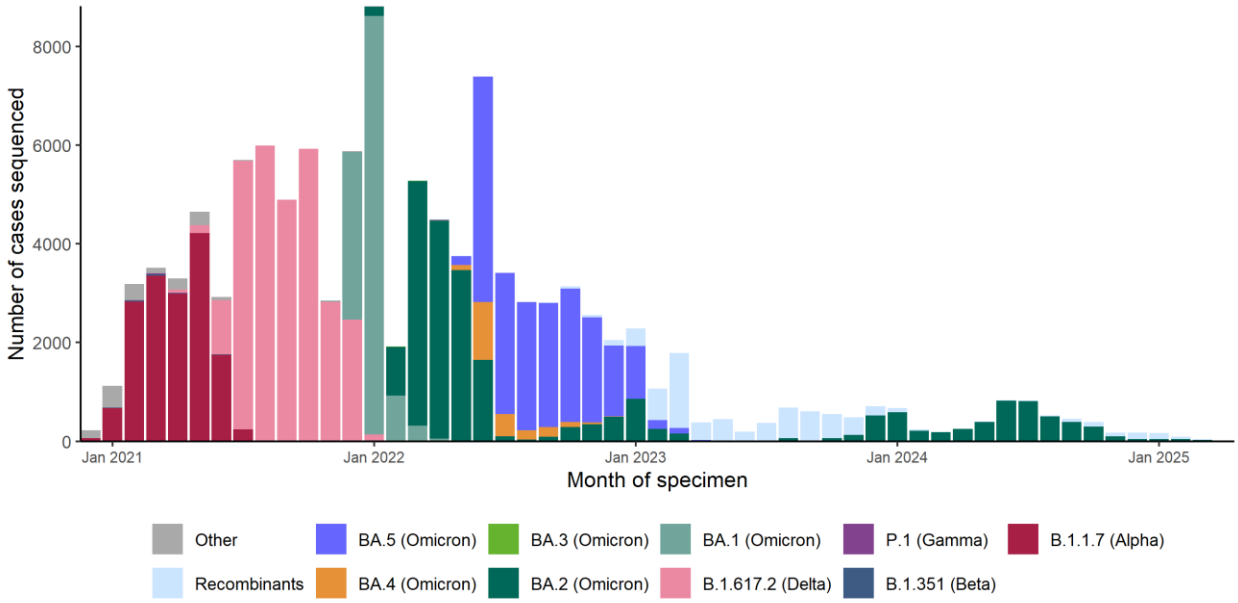

Figure 3a: SARS-CoV-2 whole genome sequencing results, specimen collection dates from December 2020 to April 2025, Ireland.

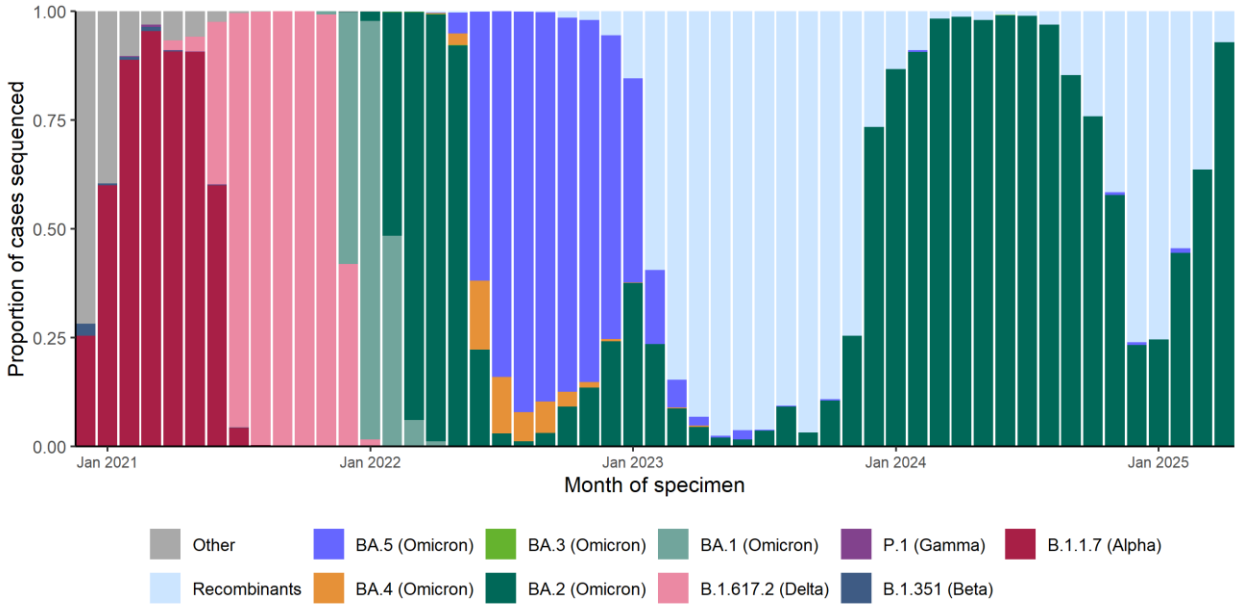

Figure 3b: Proportion of sequenced SARS-CoV-2 specimens, by variant of concern or interest, specimen collection dates, December 2020 to April 2025, Ireland.

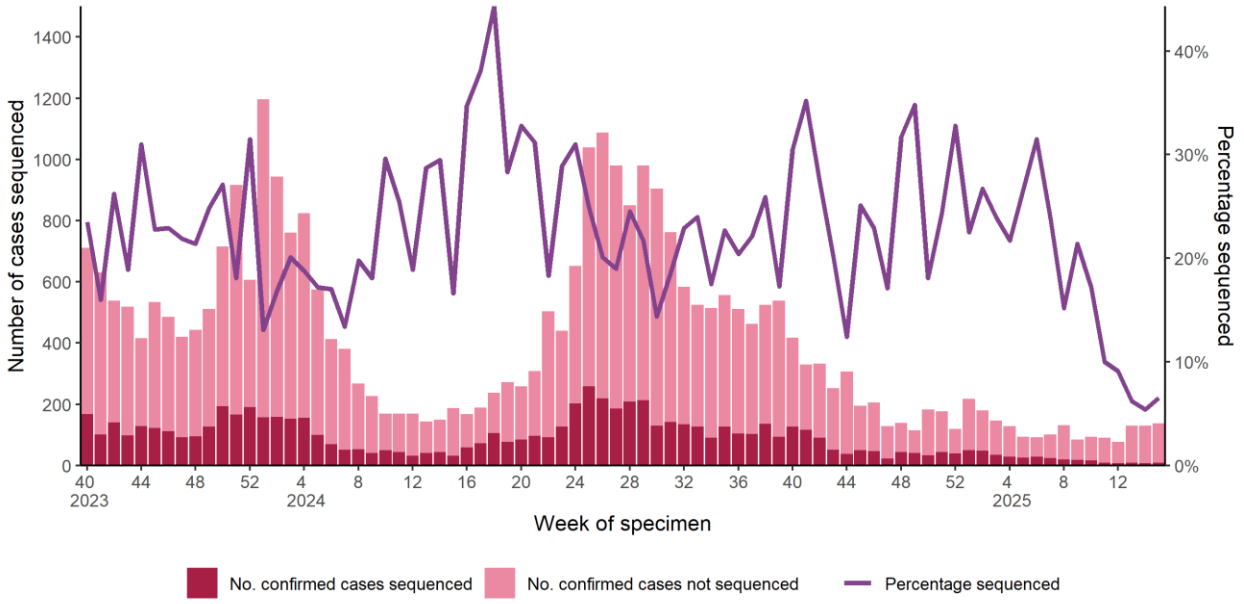

Figure 4: Number of confirmed cases of COVID-19 notified, by number sequenced/not sequenced, and percentage sequenced, week 40 2023 to week 15 2025, Ireland.

Reasons for sequencing

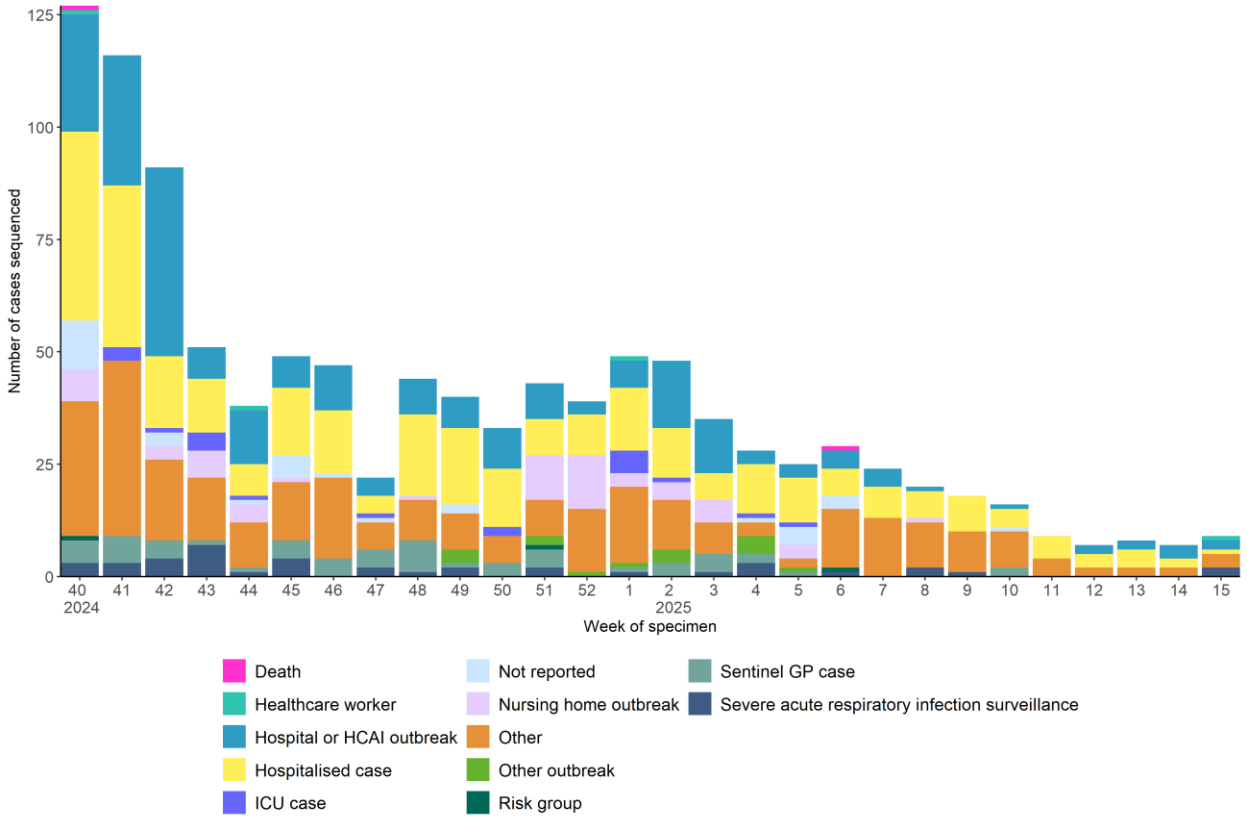

Figure 5: Reason for COVID-19 sequencing results provided from week 21 2024 to week 15 2025, Ireland.

Acknowledgements

Sincere thanks are extended to all those who participate in the collection and reporting of COVID-19 and SARS-CoV-2 sequencing data. This includes the National Virus Reference Laboratory staff, Enfer Laboratories, Beaumont Hospital, St James's Hospital, CHI Crumlin Hospital, St Vincent's University Hospital, Cork University Hospital, University Hospital Limerick, Galway University Hospital, Eurofins/Biomnis, Office of the Chief Information Officer, HSE Integrated Information Services (IIS), HSE Health Intelligence, Strategic Planning & Transformation Unit, notifying clinicians, public health doctors, nurses, surveillance scientists, contact tracers, microbiologists, laboratory staff, staff in ICU units and administration staff.

Appendix

Description of SARS-CoV-2 whole genome sequencing in Ireland

All medical practitioners, including the clinical directors of diagnostic laboratories, are required to notify the Medical Officer of Health (MOH) of any confirmed, probable or possible cases of COVID-19 that they identify. Laboratory, clinical and epidemiological data, on notified COVID-19 cases, are recorded on the Health Protection Surveillance Centre's (HPSC) Computerised Infectious Disease Reporting System (CIDR).

As the SARS-CoV-2 testing policy in Ireland has changed from one of mass SARS-CoV-2 PCR population-based testing to more targeted testing, the National SARS-CoV-2 Whole Genome Sequencing Surveillance Programme has consequently revised the national SARS-CoV-2 sequencing sampling framework. The revised SARS-CoV-2 sequencing sampling framework will therefore focus on cases with severe disease (hospitalisation, ICU admission) and deaths, outbreaks in health and care settings, sentinel surveillance programmes in the community and acute hospitals and targeted sequencing based on public health risk assessment/clinical requests and virological changes e.g. new variant of concern. As per ECDC and WHO recommendations, the Programme will focus on quality sequencing, rather than quantity and will also work towards improving the representativeness of samples selected.

HPSC link WGS results received from laboratories to epidemiological data on COVID-19 cases reported on the CIDR system. This report summarises WGS results and epidemiological data for COVID-19 cases that have been sequenced in Ireland since week 51 2020 (specimen dates between 13/12/2020 and 11/04/2025). The WGS results included in this report reflect all data available as of 29/04/2025. Epidemiological data on these cases were extracted from CIDR on 29/04/2025. CIDR is a dynamic system and case details may be updated at any time. Therefore, the data described here may differ from previously reported data and data reported for the same time period in the future.

For more details on the Programme visit the website here.

WHO and ECDC variant working defintions

The World Health Organization (WHO) working definitions for 'SARS-CoV-2 variants of concern' (VOC), 'SARS-CoV-2 variants of interest' (VOI) and 'SARS-CoV-2 variants under monitoring' (VUM) are available here. The WHO list of VOCs, VOIs and VUMs is available here. The ECDC working definitions of list of VOCs, VOIs and VUMs are available here. The European Centre for Disease Prevention and Control (ECDC) list of VOCs, VOIs and VUMs is available here.

Table A1: Sequencing results for COVID-19 cases sampled week 51 2020 to week 15 2025, Ireland.

Variant	Number of cases sequenced	% cases sequenced
BA.1 (Omicron)	13,194	11.6%
BA.2 (Omicron)	15,936	14.0%
BA.2.75 (Omicron)	2,484	2.2%
BA.2.86 (Omicron)	172	0.2%
JN.1 (Omicron)	5,150	4.5%
BA.3 (Omicron)	12	0.0%
BA.4 (Omicron)	2,279	2.0%
BA.5 (Omicron)	15,699	13.8%
BQ.1 (Omicron)	4,690	4.1%
XBB.1.5-like (Omicron)	4,072	3.6%
XBB.1.5-like+F456L (Omicron)	1,429	1.3%
XBB.1.5-like+L455F+F456L (Omicron)	254	0.2%
XBB (Omicron)	420	0.4%
Other recombinant	199	0.2%
B.1.1.529 (Omicron)	19	0.0%
B.1.1.7 (Alpha)	16,130	14.2%
B.1.617.2 (Delta)	28,989	25.5%
B.1.351 (Beta)	77	0.1%
P.1 (Gamma)	33	0.0%
Other	1,639	1.4%
Total	113,600	100.0%