

14 March 2024

By email: [lw@mcquinnessinstitute.org](mailto:lw@mcquinnessinstitute.org)

Dear Lucy,

**Official Information Act Request: ESR Wastewater Surveillance – Variant detection dates.**

On 29 February 2024 you requested information under the Official Information Act 1982 (Act) from ESR as follows:

*I am attempting to find the dates that each variant of COVID-19 (and subvariant) was first detected in New Zealand.*

From the [ESR Wastewater Surveillance Dashboard](#) (specifically Figure 4: Change in the national percentage of variants per week over the last 12 months – see below) I have noted the first detections of the following variants/subvariants as:

- EG.5: 11 June 2023
- HK.3: 6 August 2023
- BA.2.86: 10 September 2023
- JN.1: 5 November 2023

**Question 1:** *Are the above dates correct? If no, please provide the correct dates.*

*The other variants/subvariants I have listed are:*

- Alpha
- Delta
- Omicron
- BA.1/BA.2
- XBC
- Recombinant
- XBB
- BA.4/BA.5
- CH.1.1
- BA.2.75

**Question 2:** *What were the dates of first detection for the above variants/sub-variants.*

**Question 3:** *Are there any other variants/subvariants that have been detected that are not part of either list, including their dates of first detection.*

**Our response to your request:**

ESR performs surveillance of the SARS-CoV-2 variants using two approaches, whole genome sequencing of clinical samples and focused sequencing of viruses from wastewater samples.

For the purposes of this query, we have defined the first detection of a given lineage as the earliest of:

- (a) the collection date of a wastewater sample containing that variant, or
- (b) the case-report date of a clinical case from the community assigned to that variant.

Limiting the clinical samples to “community” cases means cases detected in MIQ and related measures are excluded.

It should be noted there are delays between the collection of a sample and reporting of the variant by ESR. Moreover, in some cases the first sample corresponding to a variant may *pre-date* the definition of that variant, meaning it would have been apparent that this genome represented a new variant at the time of sequencing.

Please refer to [Appendix 1](#) for the table of First Detections which contains dates of first detection of all of the variants currently under surveillance by ESR, with the first date of detection and the method by which they were detected. In some cases, the first detection of a variant in wastewater pre-dates the one you picked from the national average graph. This is a result of a variant being relatively common in one of our wastewater sites but too rare at a national level to include in the graph summarising national trends.

The table covers most of the lineages asked about in question 1 with the following exceptions:

- Mixed groups such as BA.4/BA.5 are excluded. These categories were created to reflect uncertainty/imprecision in the wastewater assay used early 2022. Both BA.4 and BA.5 can be distinguished from clinical samples so clinical samples were used as first dates.
- ‘Recombinant’ is not a natural grouping of lineages, but a ‘catch-all’ category for those lineages with more than one parent. We have not included recombinants in this case.
- Omicron is a parent group for the BA.1, BA.2 etc. lineages, so the Omicron line is a duplicate of the BA.1 one.
- The Alpha variant (which is a variant of concern and distinct from the ancestral virus) never circulated in the community in NZ.

In response to question 3, at the time of writing ESR has detected *1351 distinct named lineages* from COVID-19 samples. Only a small number of these lineages are reported on as part of our surveillance of SARS-CoV-2 in the community. [Appendix 1](#) includes all lineages currently under surveillance.

**Your right to seek a review**

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz) or freephone 0800 802 602.

Thank you for your request.

Yours sincerely



[Appendix 1](#)

**First Detections**

<b><u>Variant</u></b>	<b><u>Date</u></b>	<b><u>Source</u></b>
Delta	17/08/2021	clinical
Omicron (BA.1)	28/12/2021	clinical
BA.1	28/12/2021	clinical
BA.2	14/01/2022	clinical
BA.4	8/05/2022	clinical
BA.5	19/05/2022	clinical
BA.2.75	16/06/2022	clinical
XBB	4/07/2022	clinical
CH.1.1	2/10/2022	clinical
XBC	14/10/2022	clinical
EG.5	16/04/2023	wastewater
HK.3	11/06/2023	wastewater
BA.2.86	10/09/2023	wastewater
JN.1	9/10/2023	clinical
JN.1.4	22/10/2023	clinical
XDK	16/12/2023	clinical