

COVID-19 Genomics Insights Dashboard (CGID) #23

The COVID-19 genomics insights dashboard (CGID) provides a public and high-level overview of viral genomic surveillance across Aotearoa. It aims to explain how whole genome sequencing (WGS) complements other epidemiological data to support public health decision making. As SARS-CoV-2, the virus that causes COVID-19, continues to adapt, mutate, and spread, the CGID reports trends and insights gained by our WGS surveillance programme here in Aotearoa, New Zealand and abroad.

Summary Infographics & Insights:

Genomes analysed:

648

genomes from cases reported within the past two weeks (3rd -16th Sept)

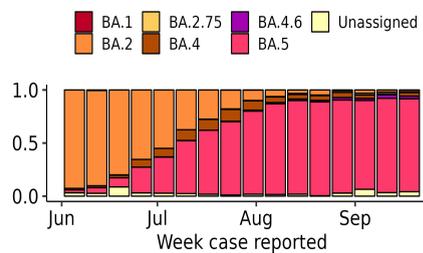
~21,500

genomes reported so far in 2022

Variant surveillance:

BA.5 (pink) continues to be the dominant Omicron variant across NZ, making up >90% of community cases in the last reporting week.

Other variants continue to be detected at low levels. *See next page for annotated figure.*



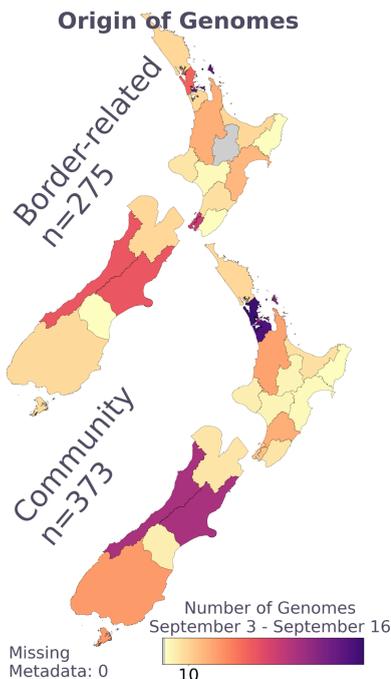
Hospital surveillance:

~21% (81 of 366)

of PCR positive cases with a hospital admission date from 3rd -16th Sept have been genome sequenced. Approximate composition of hospital cases:

- 2% BA.2
- 2% BA.2.75
- 2% BA.4
- 5% BA.4.6
- 87% BA.5
- <1% Unassigned

Graphical overview of sample acquisition (3rd -16th Sept)



Key Trends & Insights

- Omicron BA.5 remains the dominant variant and continues to make up the bulk of cases (community and border). In the last reporting week BA.5 was > 90% of all community cases.
- In the past fortnight ~1.9% of all community cases and 27% of border cases were sequenced.
- As case numbers continue to fall across Aotearoa, it is becoming more difficult to recruit samples for genomic surveillance
- We continue to monitor a relatively small number of community Omicron BA.4.6 (11 cases) BA.2.75 (6 cases), no detections of BA.2.75.2 (in the past fortnight, but trending up overseas). BQ.1 was detected for the first time in NZ this week (3 cases). Any growth advantage of these variants is small, and unlikely to result in significant increases in cases.
- BA.4/5 was detected at all wastewater sentinel sites - levels are at >99%. 35/40 (88%) of sentinel sites were 100% BA.4/5

The CGID report is produced 'at pace' by ESR in collaboration with Massey University, University of Auckland and University of Otago. Data & insights are subject to change and correction.

Figure: Frequency of SARS-CoV-2 variants in the New Zealand community each week (for the past 16 weeks) as determined by whole genome sequencing. Data is subject to change as samples may still be added to the most recent two-week period. [The category 'unassigned' is typically where a partial genome has been recovered and a definitive assignment to a variant is not possible.] **Bottom:** The Omicron variant 'Infection history' of Aotearoa New Zealand. Indicative percentage of SARS-CoV-2 variants and estimated number of cases for all major Omicron subvariants (see embedded table) across the country in 2022. The proportion of each variant is overlaid on the cumulative 2022 community case numbers as reported by MoH. Note; biases in samples referred for genomic sequencing and case underreporting will be reflected in these projections, accordingly they should be regarded as indicative

