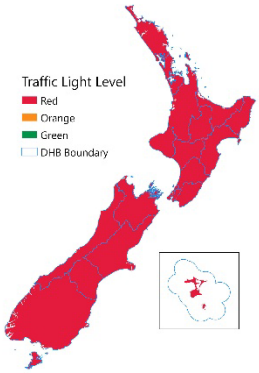
Trends and Insights Report

Updated 05 March 2022

Current State of Aotearoa

The whole of New Zealand is under the red traffic light, and the health sector response is in Phase 3.



Snapshot of the past 7 days

- Cases continue to rise rapidly as Omicron spreads, increasing by 56% from when last reported with 104,807 cases reported for the week of 24 February – 2 March. The **weekly case rate was 2,096 new cases per 100,000 which equates to 2% of the New Zealand population**.
- **61% of all new cases this week are in the Auckland region** DHBs (Waitemata, Auckland, Counties Manukau).
- **The case rate in those who had a booster vaccination was approximately 23% lower than those who were 'fully-vaccinated'**. It should be noted that this is not a full vaccine effectiveness estimate, as it does not account for differences in age and other factors that may affect the likelihood of becoming a case and/or being vaccinated.
- The greatest proportion of cases are in European or Other (39%) ethnicity, followed by Pacific People (26%), with Asian now having the lowest proportion (16%). However, **rates are highest in Pacific People** (7,510/100,000); followed by Māori (2,465/100,000) and Asian (2,234/100,000). The lowest rate is in European or Other ethnicities (1,322/100,000).
- **Ethnicity patterns vary markedly by region:** In the Northern Region the highest proportion of cases are Pacific People followed by European. Midlands has the largest proportion of cases who are Māori compared to any region. Nationally, the largest number of cases are of European and Other ethnicities. In Southern region, European and Other ethnicities account for almost all cases.
- **45% of cases live in areas with high housing deprivation** (7-10 IMD score). 20% of cases are from areas of low housing deprivation.
- "Nowcasting" to 28 February estimates the effective reproduction number **R_{eff} at 2.7** (95% Credible Interval [CI]: 1.9–4.0) nationally and 2.5 (90% CI: 1.8–4.0), the Auckland region. The **modelled national doubling time is 2 days** (90% CI: 1.1–3.6).
- The number of covid cases in hospital is rising rapidly**.** By 3 March, there were **544 confirmed COVID-19 positive cases in hospital** six times the peak level during the 2021 Delta outbreak. This is a **net increase of 249** positive cases in hospital in the previous 7 days.

- Hospitalisations are still aligned with the COVID Modelling Aotearoa group's "medium" scenario that peaks in the second half of March.
- As at 2 March 2022, there have been 56 deaths since the beginning of the pandemic. With mortality now increasing, it will be reported in more detail when it rises to a level where reporting by demographics can still protect privacy.

Contents

Exposure Events and Clusters of Concern

Please refer to daily SitReps for recent exposure events.

Future versions of this report may use National Contact Tracing System data to evaluate patterns and risks of contacts by location.

Data and Testing Issues

This section outlines recent changes in testing and hospitalisation data.

Rapid Antigen Tests

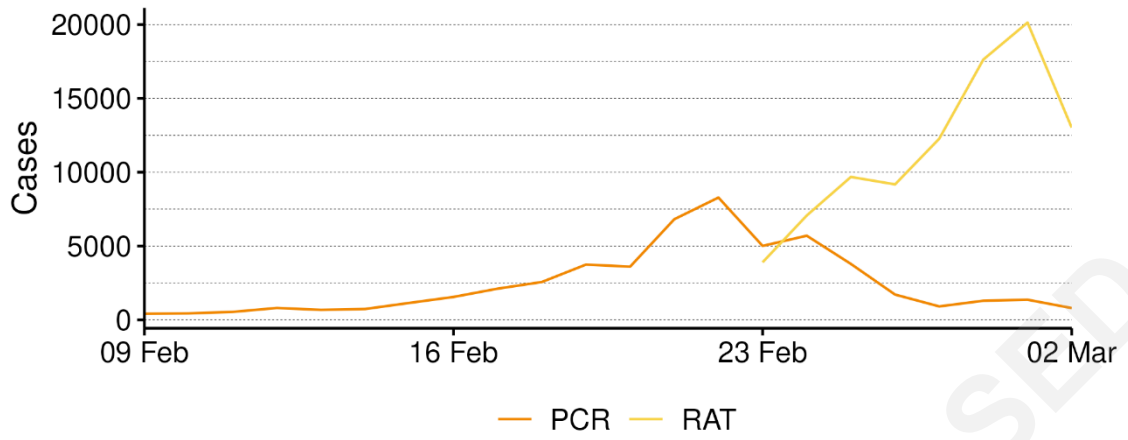
Rapid Antigen Tests have been offered to many people instead of PCR tests, with the first results being posted on 23 February (

Figure 1); their use has rapidly replaced PCRs almost entirely.

At first, the quicker turnaround time of the RATs meant that reported case numbers accelerated for several days. It may take another week for the time-series of reported cases to stabilise.

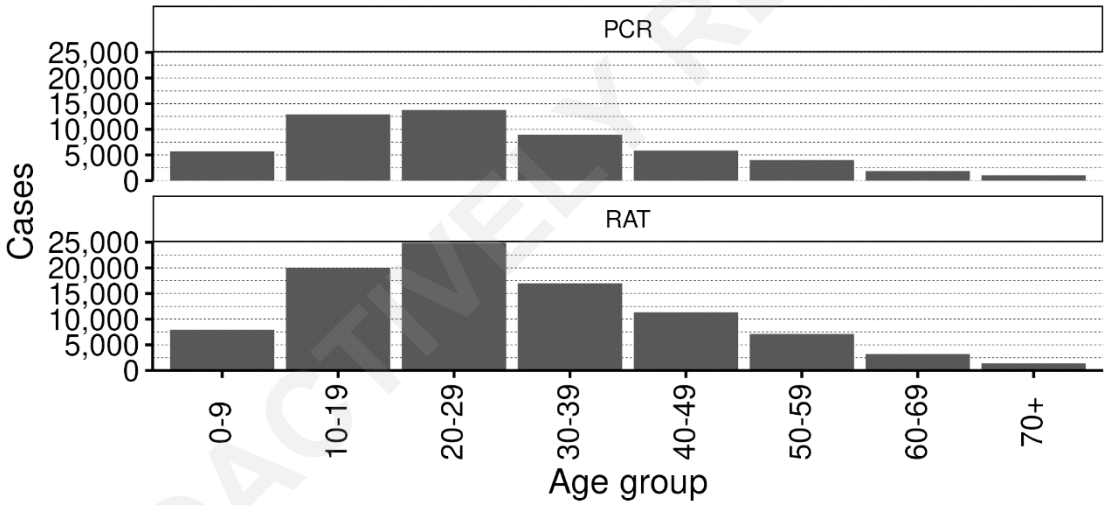
- A backlog of PCR tests from the week to 27 February will be processed and added to reported totals over the next week or so. The backlog was reported as 32,000 samples in that week.
- All cases in this document are by "report date". For PCR tests, that is the time when the result is notified by the laboratory to the Éclair national test repository. For RATs, "report date" is the time at which a case is uploaded to MyCovidRecord or the 0800 phoneline equivalent. RAT case records are also subsequently uploaded to Éclair. There is also a 'creation date', when is when case records are created in EpiSurv and the National Contact Tracing system from automatic notifications sent to them from Éclair.
    - Cases are not included in our reporting unless report date and creation date are both before our data cutoff (midnight on the last day in the reporting period).
    - Report date and creation date may differ by one or more days. This means that that the number of new cases newly included on a given day will include cases with a report date from the previous few days. **This means that it can look like there has been a reduction in cases for the most recent day. However, the most recent day will have more cases attributed to it as a few more days of data come in.**
- A RAT result is available sooner after sample date than a PCR test, as PCR samples are couriered to a laboratory for processing and labs sometimes have backlogs to process.

Figure 1: Cases confirmed by report date, by Rapid Antigen Test and PCR



The age distributions of Rapid Antigen Tests and PCR tests are different (Figure 2), with RATs having relatively more use in the 20-29 age group. However, all age groups are reporting RAT results, suggesting that there are no major surveillance gaps.

Figure 2: Age profile of PCR and RATs, 9 February to 2 March 2019



Hospitalisation data

There are two different sources of hospitalisation data.

National figures are taken from a daily questionnaire returned by all hospitals. The questionnaire asks for the number of COVID-19 positive people who are in hospital each day, and the number of people in intensive care or on ventilation, compared to the hospital's daily capacity.

Demographic data is now routinely available from hospitals in the Northern Region. These admissions can be analysed by ethnicity and age, and linked to vaccination and previous community test status. Admissions and length of stay can be analysed separately from daily bed occupancy.

The hospitalisation data recorded in EpiSurv is incomplete. It records only some of the cases flagged in the direct hospital data, and is not up-to-date with discharges.

The Ministry of Health is working with all District Health Boards to set up regular, automated feeds of data on recent hospitalisations.

Recent cases

Table 1 to Table 4 show new cases reported in the week to 02 March 2022 by DHB, age, sex and ethnicity.

Cases have continued to significantly increase with over 60,000 new cases reported in the three days to 02 March. In the previous 3 days there were over 40,000 new cases.

- The DHBs with the highest number of new cases were Counties Manukau, Auckland and Waitemata (
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- Table 1). Cases in these DHBs account for 61% of all cases reported in the week (27%, 17% and 16% respectively). These DHBs also have the highest case rates (cases per person)
- Pacific People continue to be disproportionately affected with the highest case rate, at least three times higher than any other ethnicity at 7,510 per 100,000, up from 4,608 cases per 100,000 three days earlier.
- "European & Other" account for the largest proportion of cases (39%) but have the lowest rate per person, with a case rate of 1,322 per 100,000.
- Case numbers are rising in all ethnicities. Māori are 18% of new cases, and Asian are 16% of new cases.
- New cases remain evenly distributed between sexes (
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- Table 3).
- Cases numbers continue to be highest in 20–29-year-olds (26% of all cases), then 10-19-year-olds (22%) (Table 4).

Table 1: Community cases by DHB from 24 February to 02 March 2022

DHB	Community cases reported since 24 February	Rate per 100,000
Northland	1837	950
Waitemata	16787	2668
Auckland	18448	3749
Counties Manukau	29167	4923
Bay of Plenty	6474	2498
Waikato	8870	2061
Tairawhiti	540	1050
Lakes	1985	1735
Taranaki	948	770
Hawke's Bay	1199	687
Whanganui	265	388
MidCentral	1562	859
Hutt Valley	1960	1261
Capital and Coast	4928	1563
Wairarapa	338	695
Nelson Marlborough	1133	719
West Coast	69	213
Canterbury	4824	852
South Canterbury	205	335
Southern	3218	960
Unknown	50	-
Total	104807	2096

Source: NCTS/EpiSurv 2359hrs 02 March 2022

Table 2: Community cases by ethnicity from 24 February to 02 March 2022

Ethnicity	New community cases since 24 February	Rate per 100,000
Māori	18898	2465
Pacific Peoples	27630	7510
Asian	16413	2234
European or Other	41082	1322
Unknown	784	-
Total	104807	2096

Source: NCTS/EpiSurv 2359hrs 02 March 2022

Table 3: Community cases by sex from 24 February to 02 March 2022

Sex	New community cases since 24 February	Rate per 100,000
Female	54222	2126
Male	50415	2059
Unknown	170	-
Total	104807	2096

Source: NCTS/EpiSurv 2359hrs 02 March 2022

Table 4: Community cases by age from 24 February to 02 March 2022

Age	New community cases since 24 February	Rate per 100,000
0-9	9471	1450
10-19	22897	3574
20-29	27210	4036
30-39	18854	2736
40-49	12672	2020
50-59	8142	1273
60-69	3779	707
70+	1782	329
Total	104807	2096

Source: NCTS/EpiSurv 2359hrs 02 March 2022

Epidemic Curves

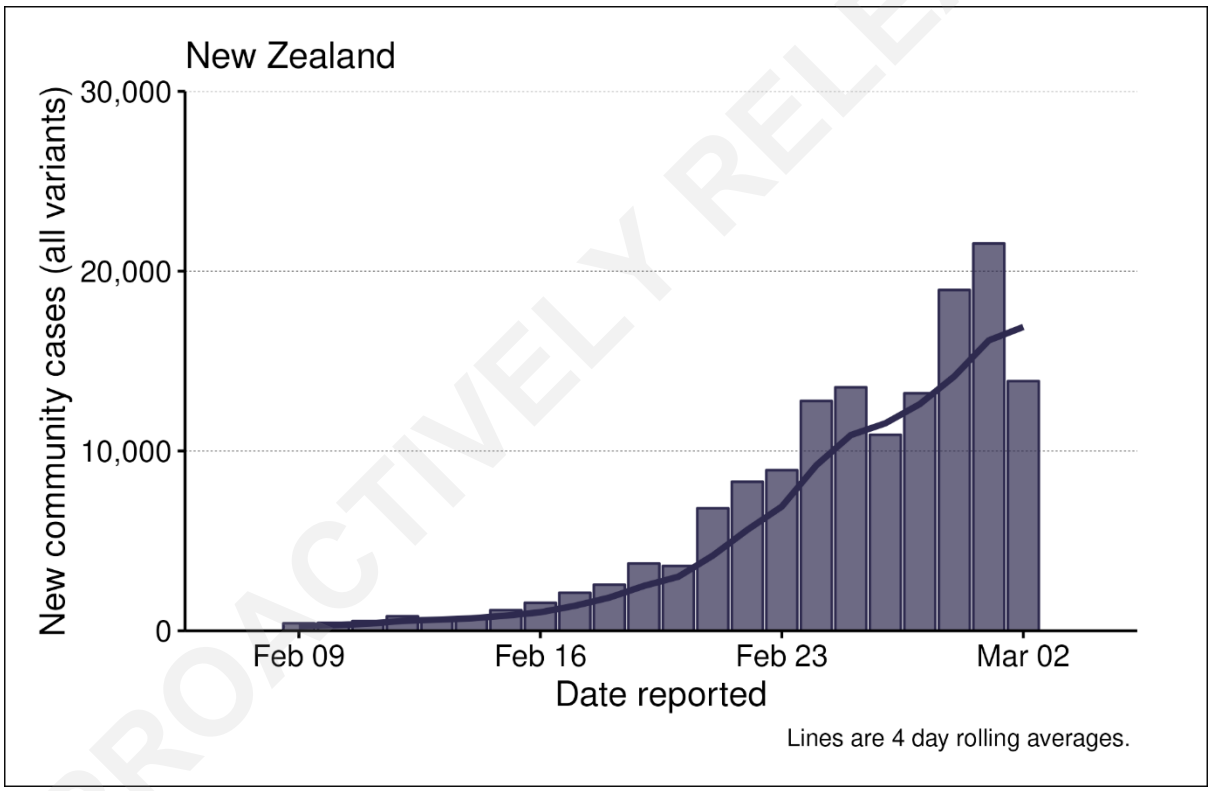
Figure 3 and Figure 4 below show the number of new cases reported in the three weeks from 09 February 2022 to 02 March 2022 nationally and by DHB.

There has been a rapid rise in national case numbers since 9 February. The fluctuations from day to day may reflect changes in testing volumes, processing times and when cases are reported by laboratories through the National Contact Tracing System (NCTS) to EpiSurv. **The inclusion of positive Rapid Antigen Tests (RATs) in case counts started on 23 February 2022.** The effect on timing of reported cases is discussed above in the *Data and Testing Issues* section.

The rolling average of case counts is a more reliable measure of trends in diagnoses than the daily case counts. **The dip on the last day in the series is due to lags in reporting of results.**

Over the past month, the Omicron outbreak has been mostly in the Northern Region (excluding Northland) and the Midland Region (Figure 4). Cases in the Southern Region, in particular Southern DHB, began to rise in late February (Figure 5), then were overtaken by Central Region (Figure 4).

Figure 3: Daily community cases nationally from 09 February to 02 March 2022



Source: NCTS/EpiSurv as at 2359hrs 02 March 2022

Figure 4: Daily community cases by region from 09 February to 02 March 2022

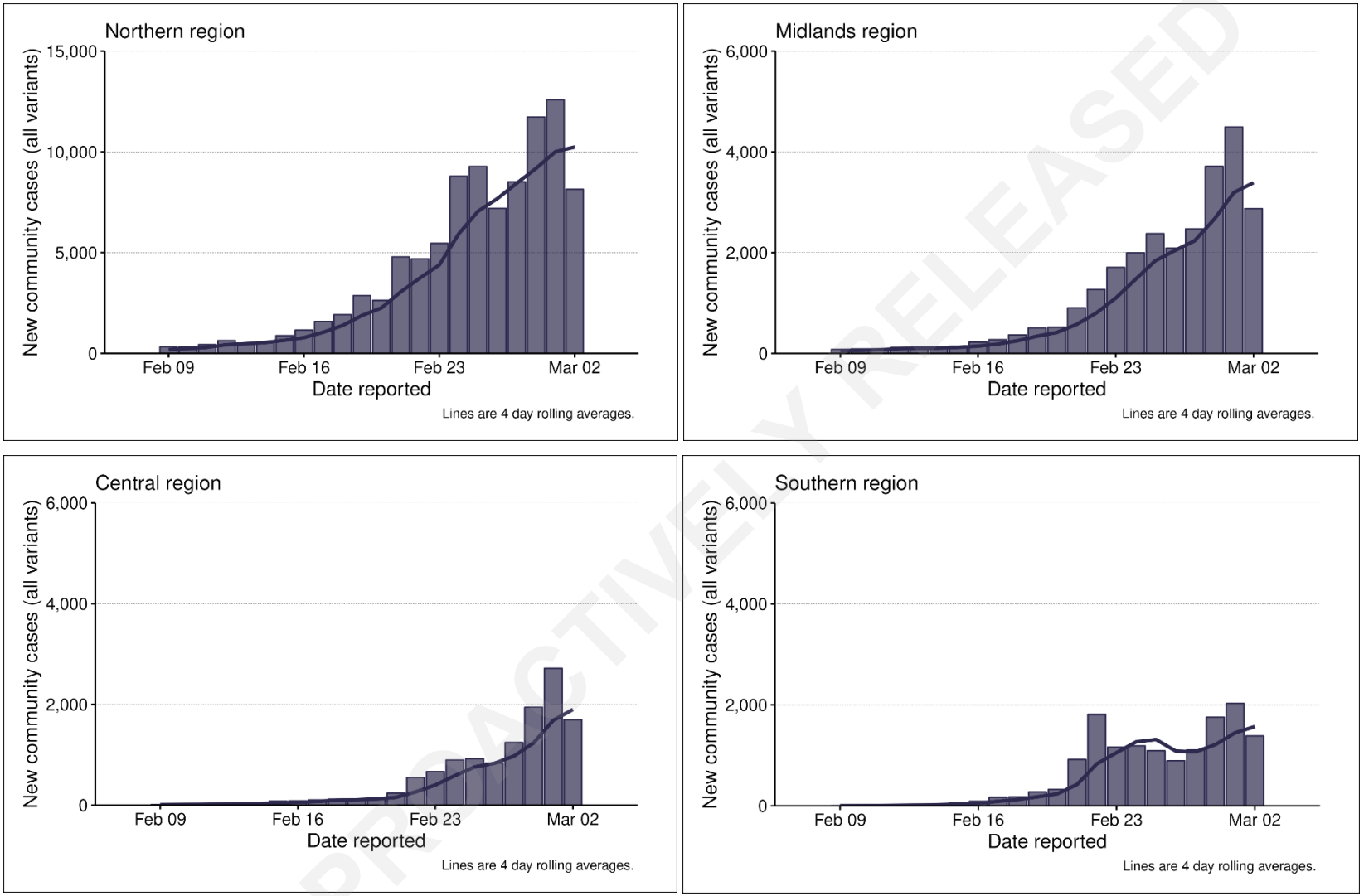
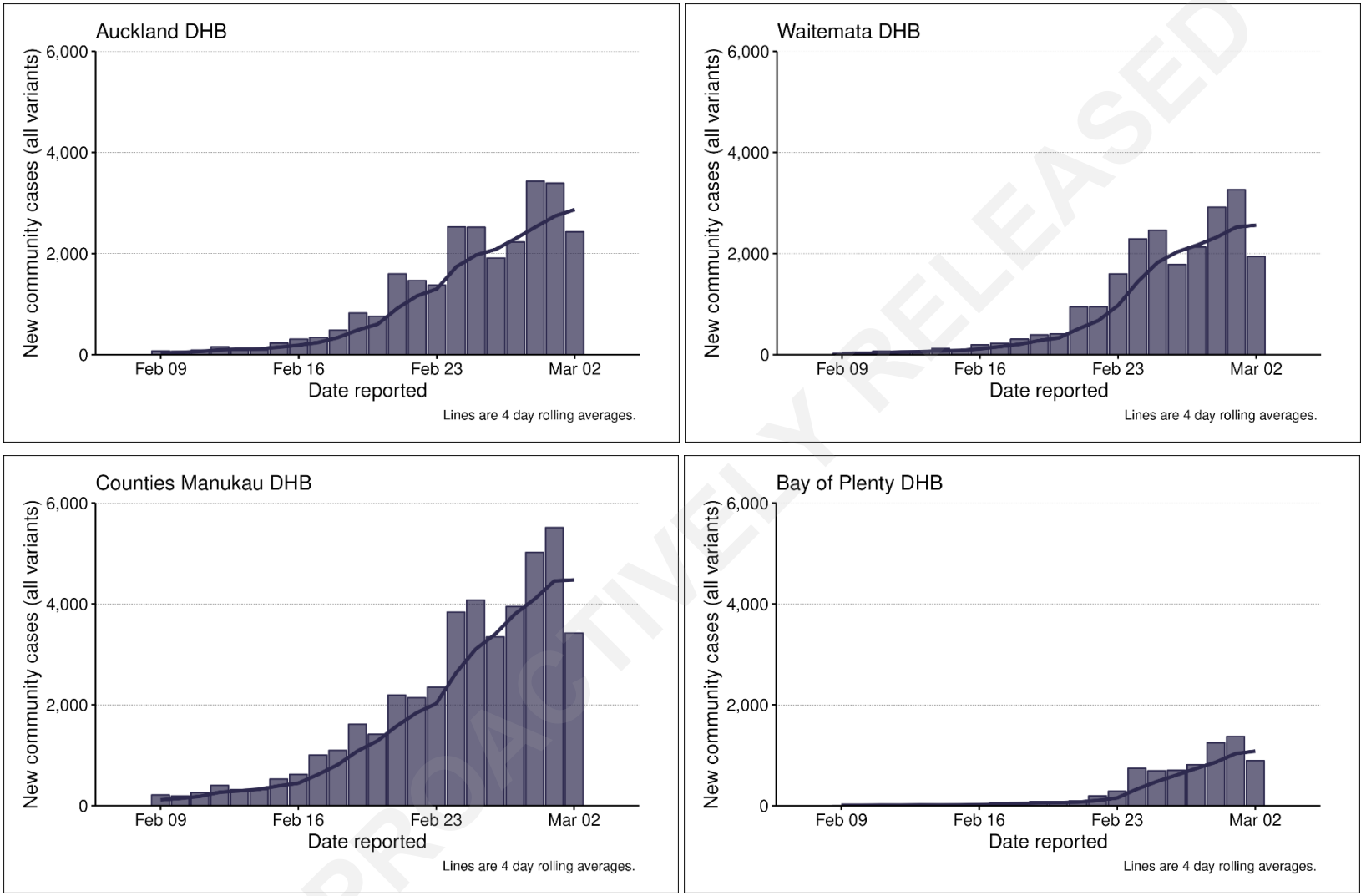
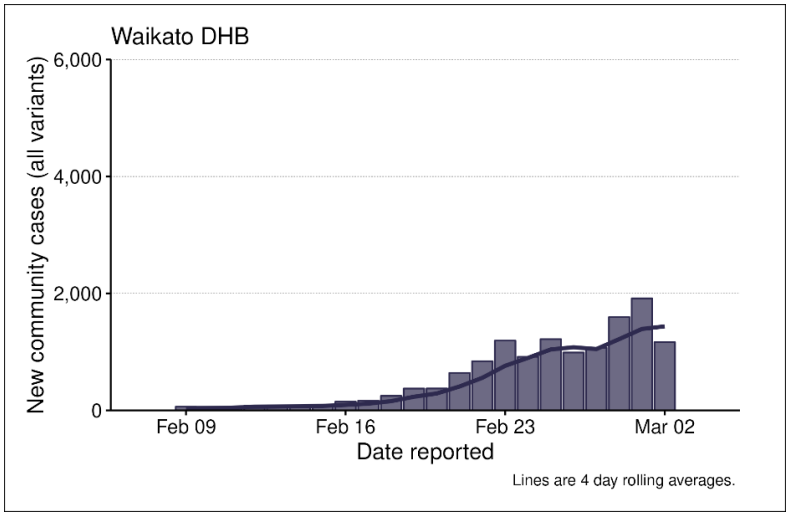
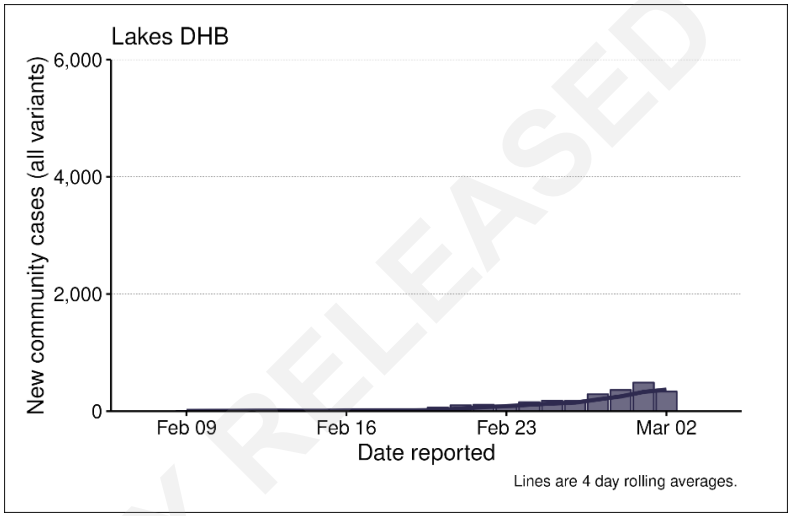
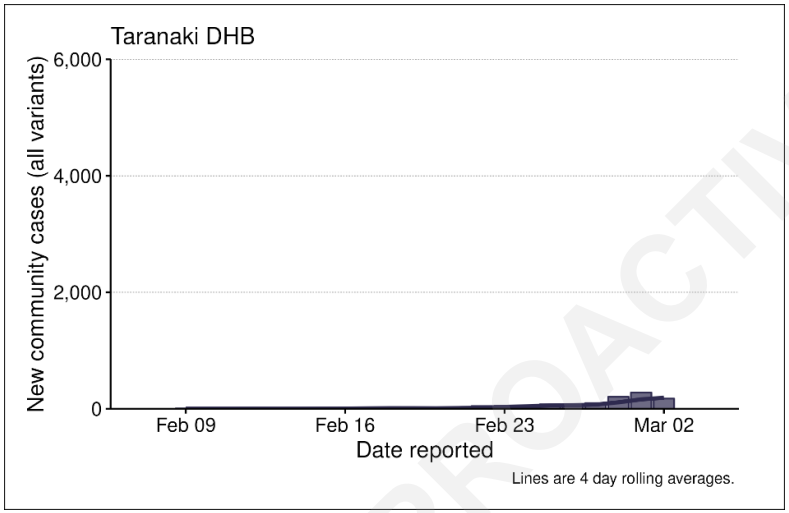


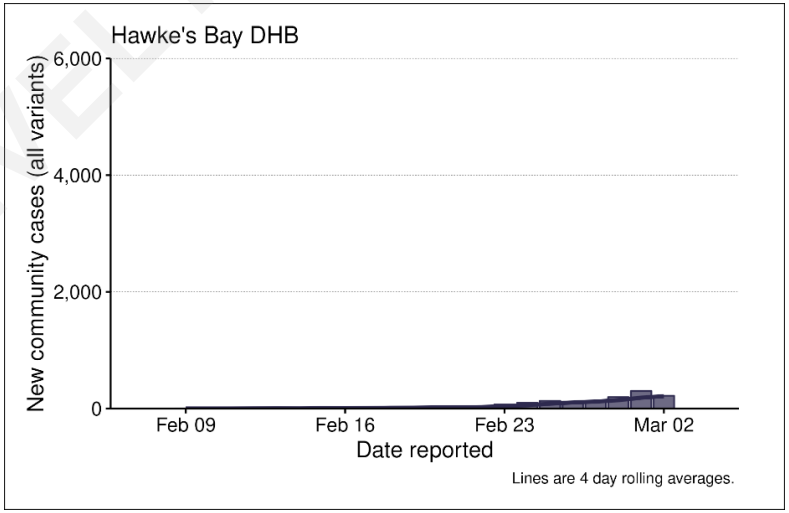
Figure 5: Daily community cases 09 February to 02 March 2022, selected DHBs

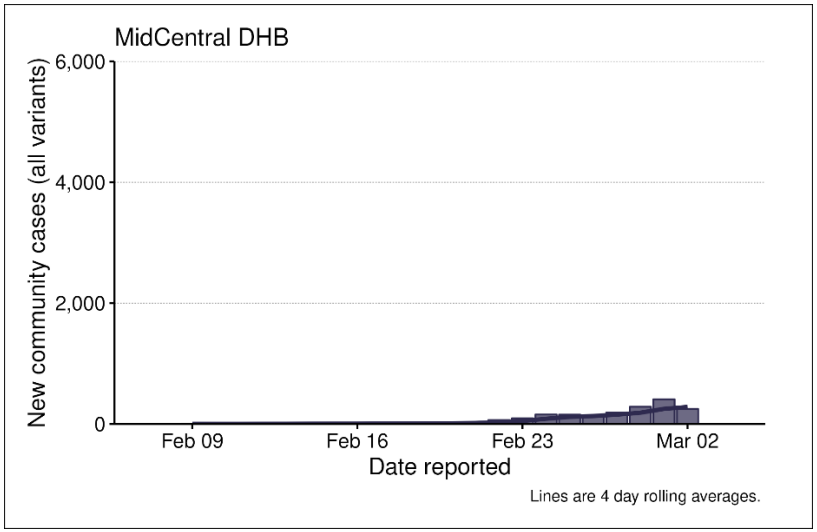


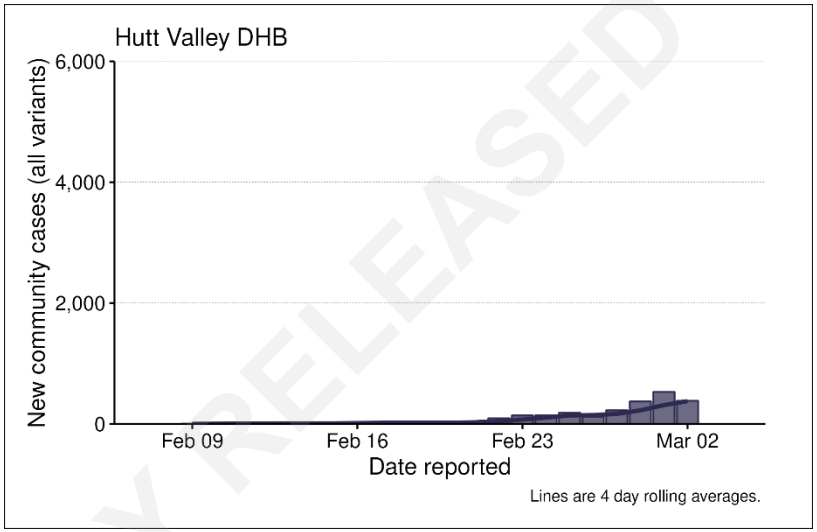


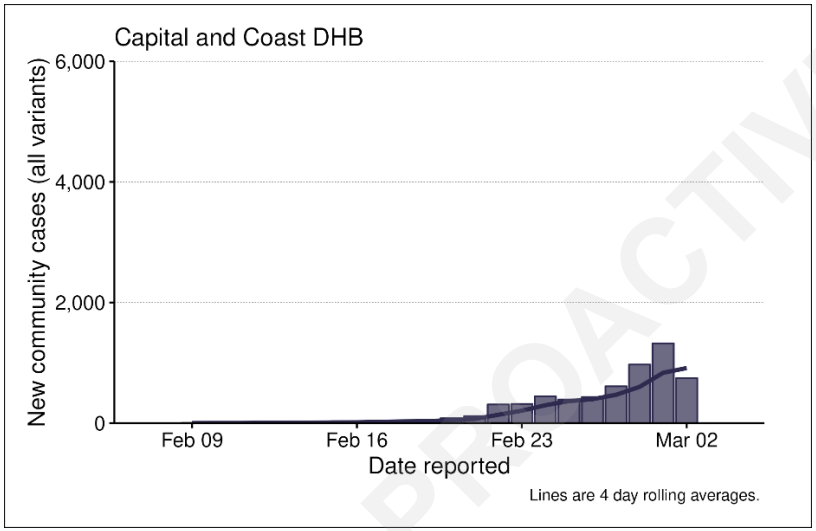


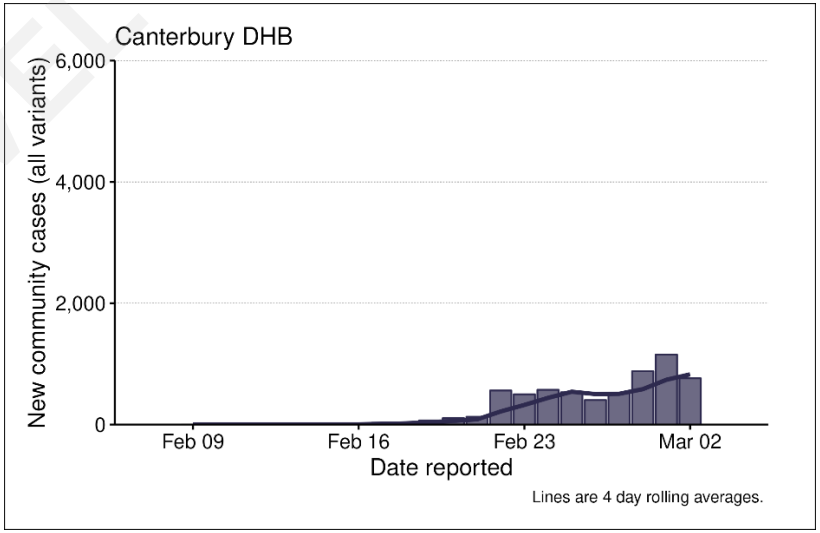


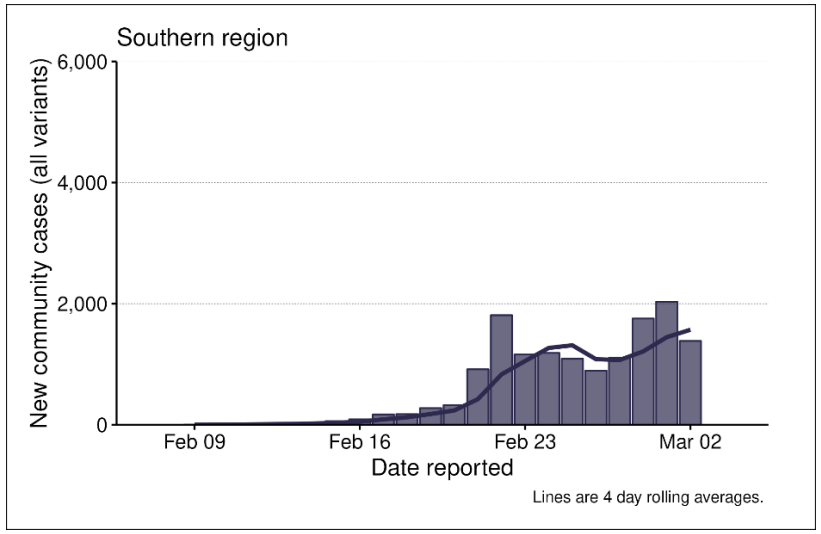












Source: NCTS/EpiSurv as at 2359hrs 02 March 2022

Cases by Ethnicity

Figure 6 to Figure 10 show the ethnicity of new cases reported in the three weeks from 09 February 2022 to 2 March 2022.

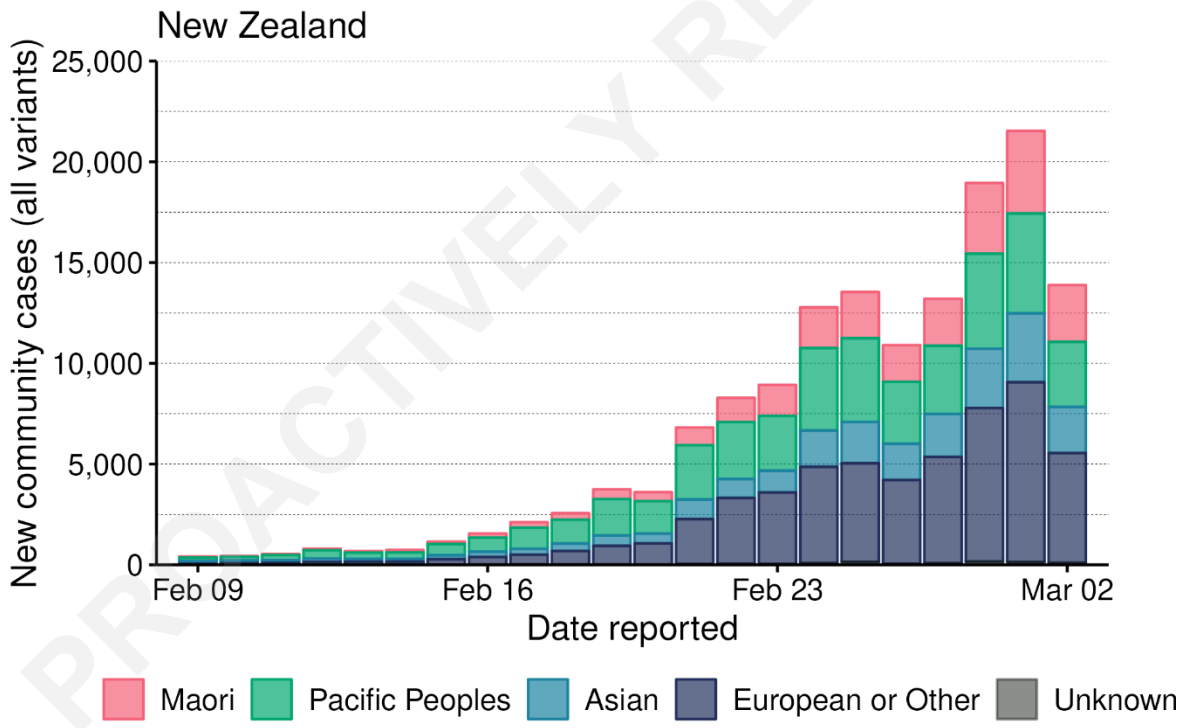
At the beginning of the Omicron outbreak[1], a high proportion of cases were reported to have Asian ethnicity, consistent with known early exposure events. Since 9 February, Asian case numbers have been overtaken by Pacific People and European or Other ethnicities. However, while **case numbers are higher in European or Other** ethnicities, this ethnic group is also at the least effected **if comparing case rates** (

Figure 7). **Pacific Peoples are most effected with the highest case rates**, showing the continued inequity of exposure to COVID-19 infection.

The number of cases with European or Other ethnicity has risen rapidly as the outbreak spreads down the motu and into the Central and Southern regions, particularly Capital and Coast, Canterbury, Nelson Marlborough and Southern DHBs.

The number of cases in Māori is also now gradually rising as the outbreak spreads beyond the Auckland Metro Region into Bay of Plenty, Waikato and Lakes DHBs.

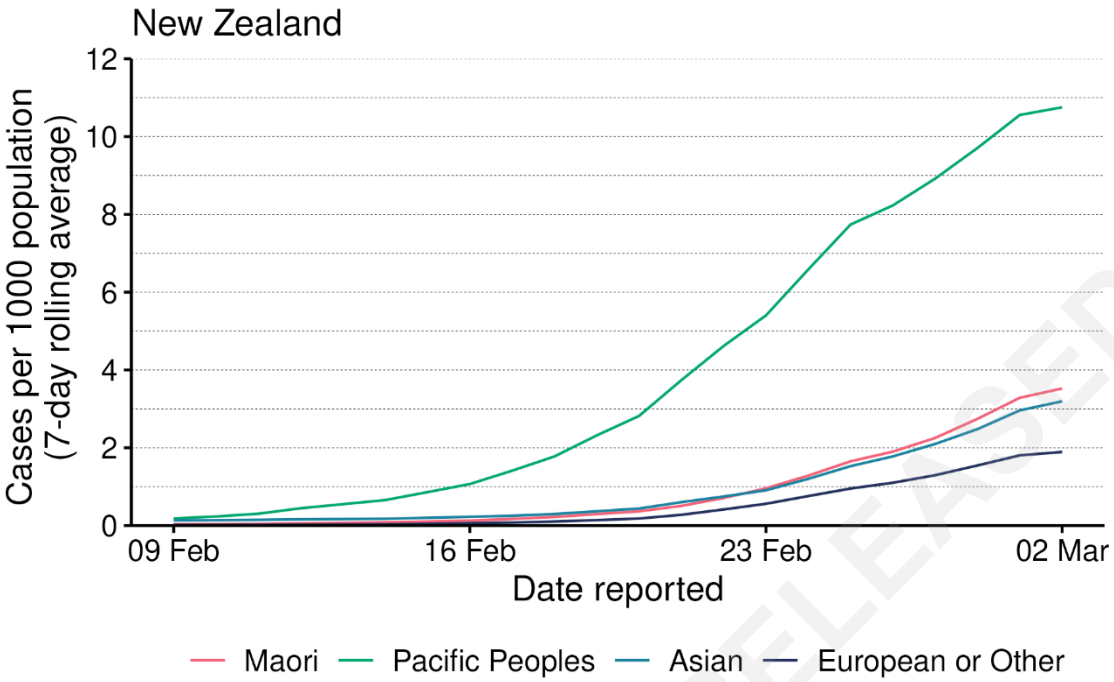
Figure 6: Daily community cases across New Zealand by ethnicity from 09 February to 02 March 2022



Source: NCTS/EpiSurv 2359hrs 02 March 2022

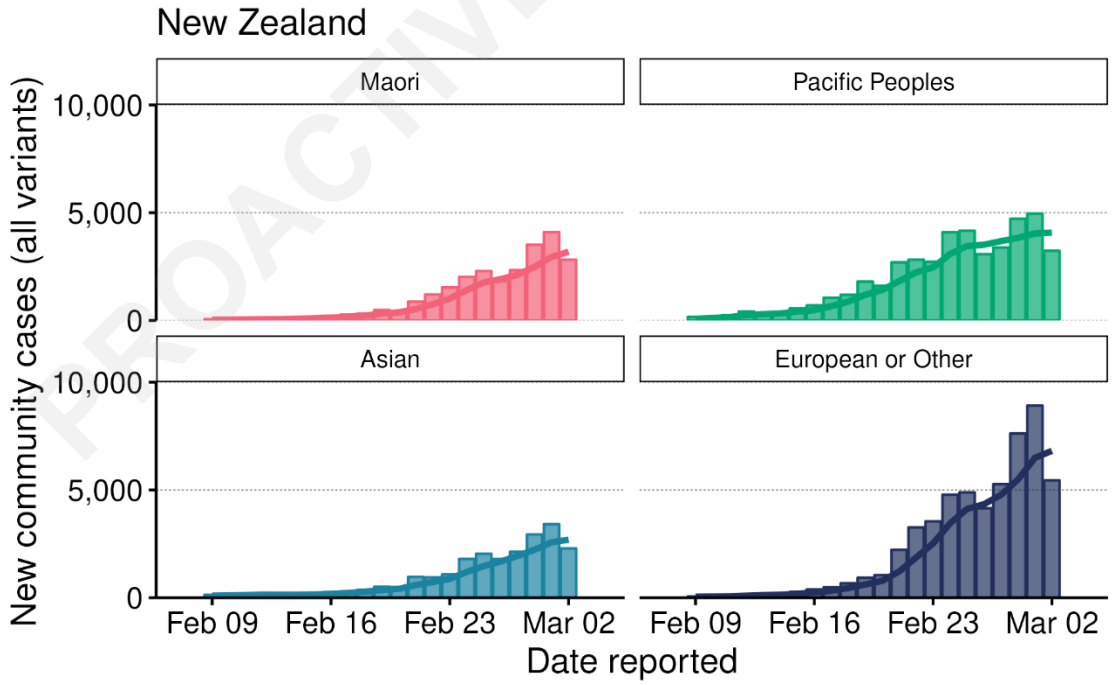
[1] Assumed to be 19 January 2022. The Delta variant has been identified after that date. Case numbers include all confirmed COVID-19 cases, regardless of variant.

Figure 7: Daily case rate per 1,000 population by ethnicity from 09 February to 02 March 2022



Source: NCTS/EpiSurv 2359hrs 02 March 2022

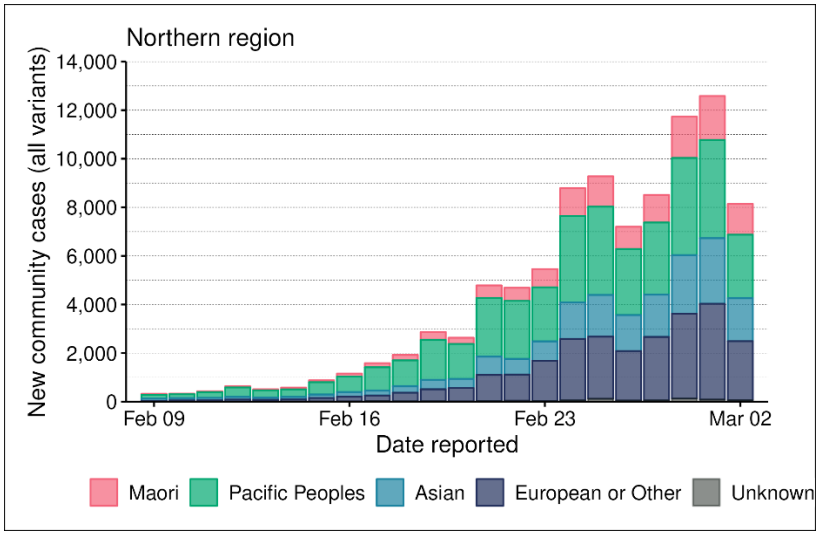
Figure 8: Daily and rolling 4 day of average community cases across New Zealand, by ethnicity from 09 February to 02 March 2022

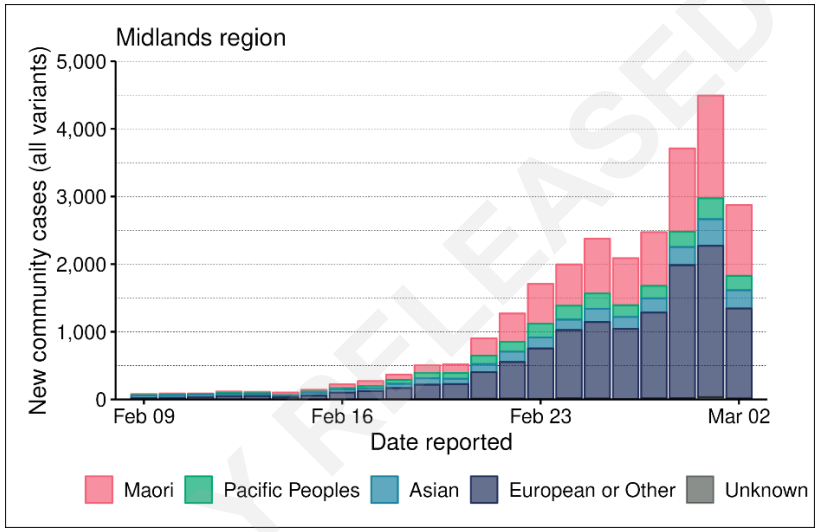


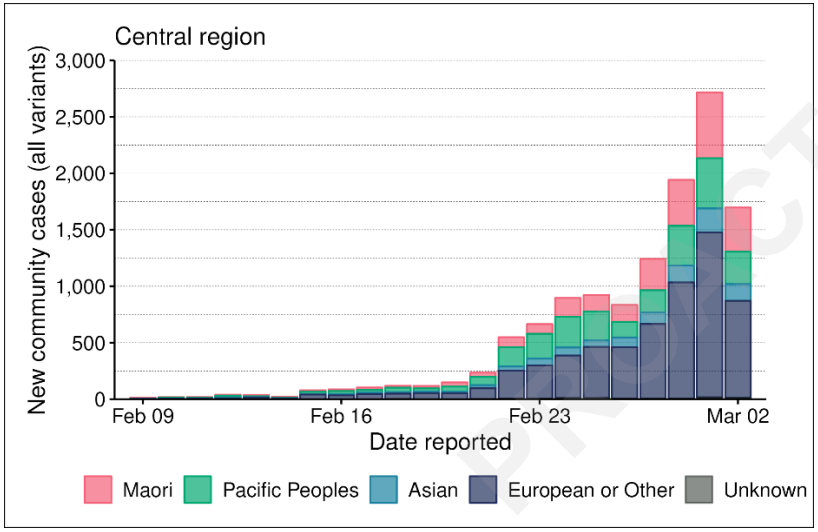
Lines are 4 day rolling averages. 1039 cases with unknown ethnicity have been excluded.

Source: NCTS/EpiSurv 2359hrs 02 March 2022

Figure 9: Daily cases by ethnicity and region from 09 February to 02 March 2022







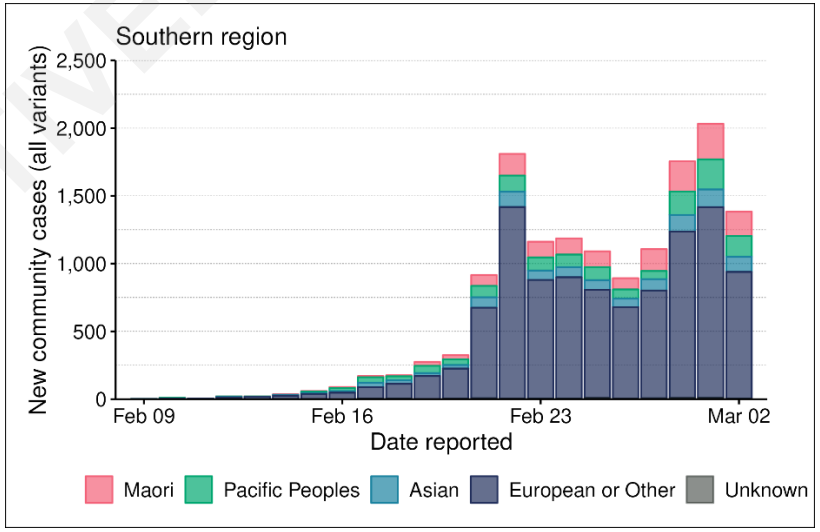
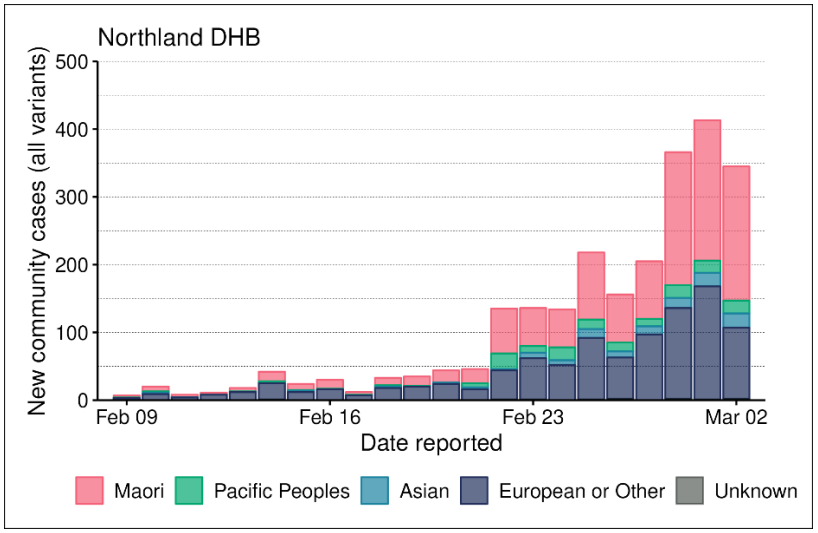
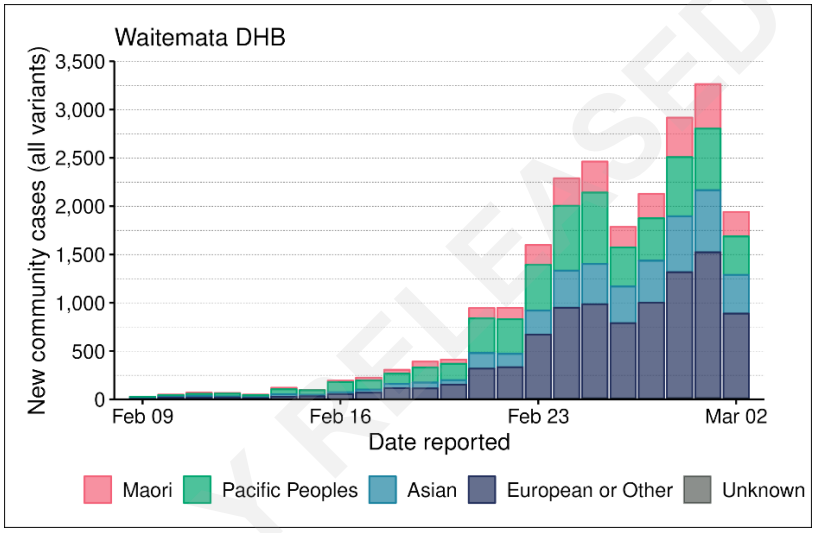
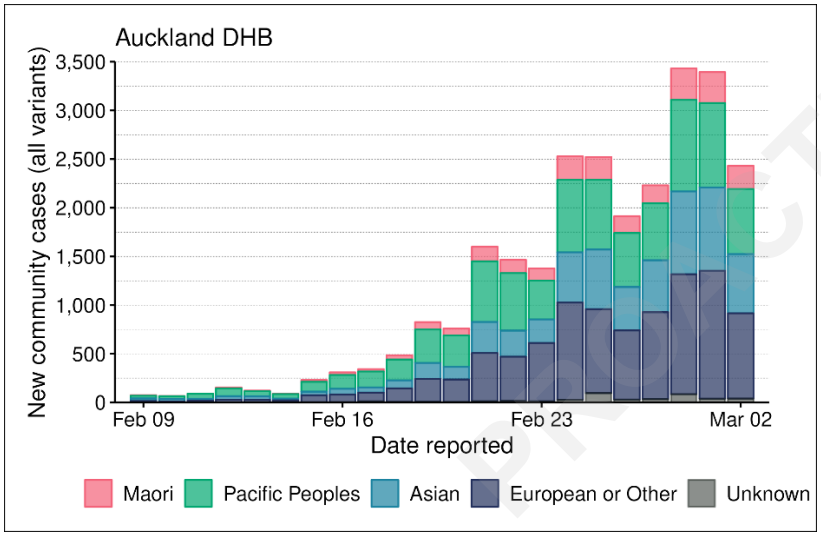
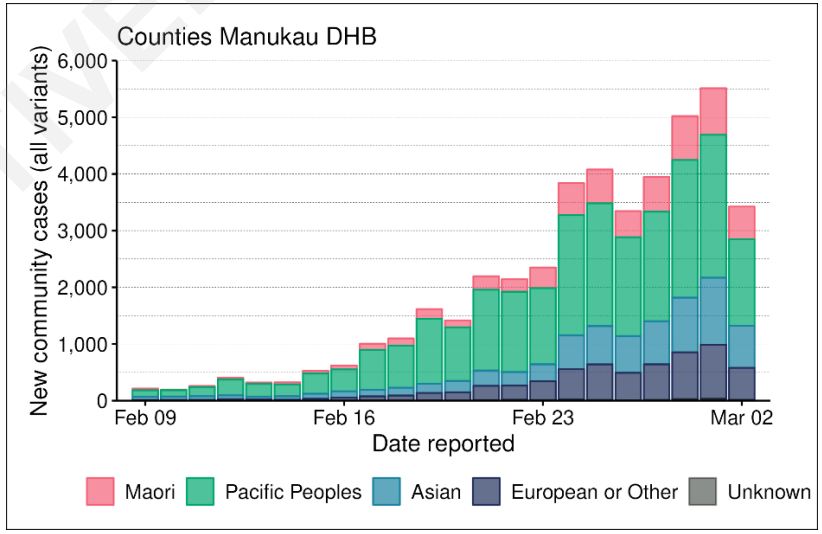


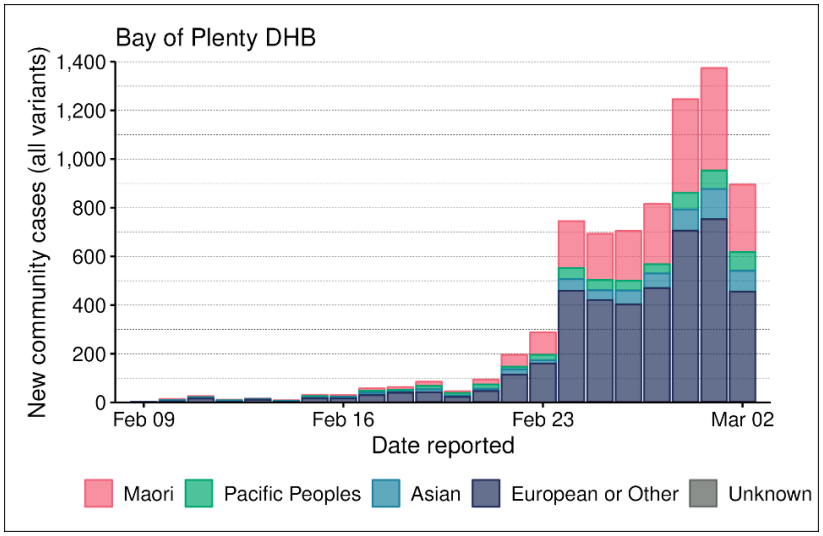
Figure 10: Daily cases by ethnicity from 09 February to 02 March 2022 by selected DHB

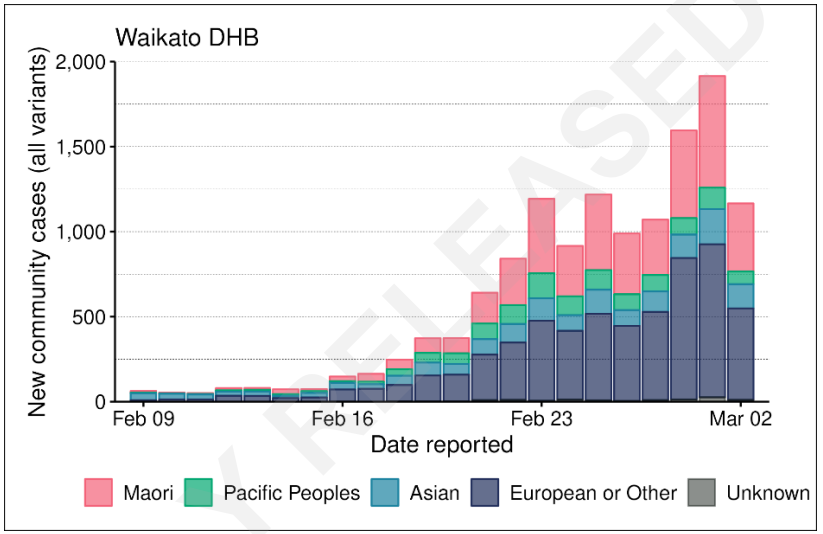


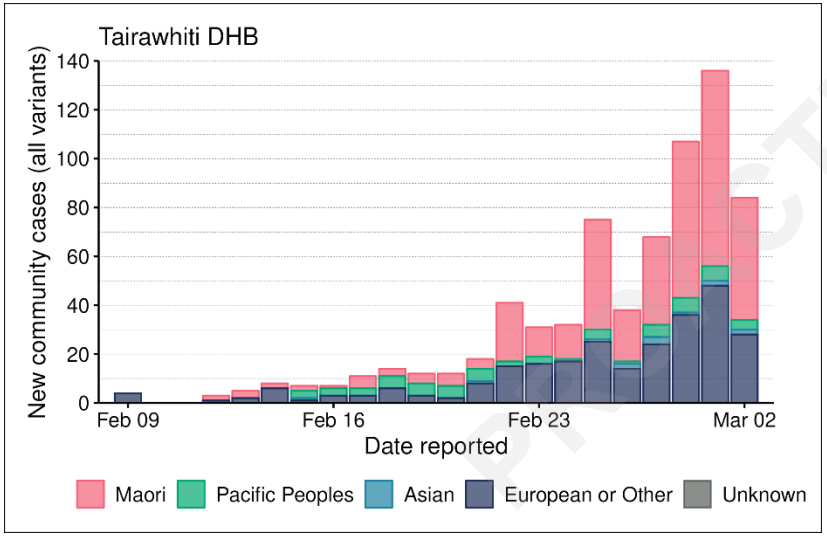


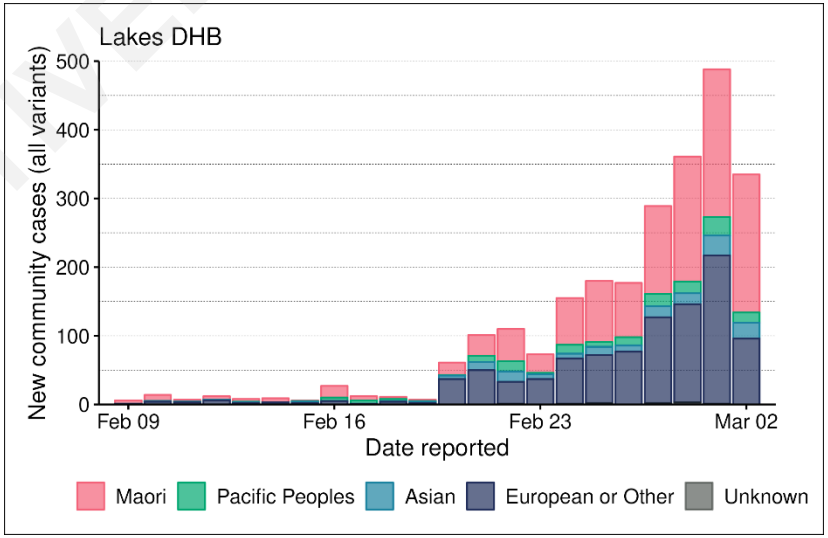


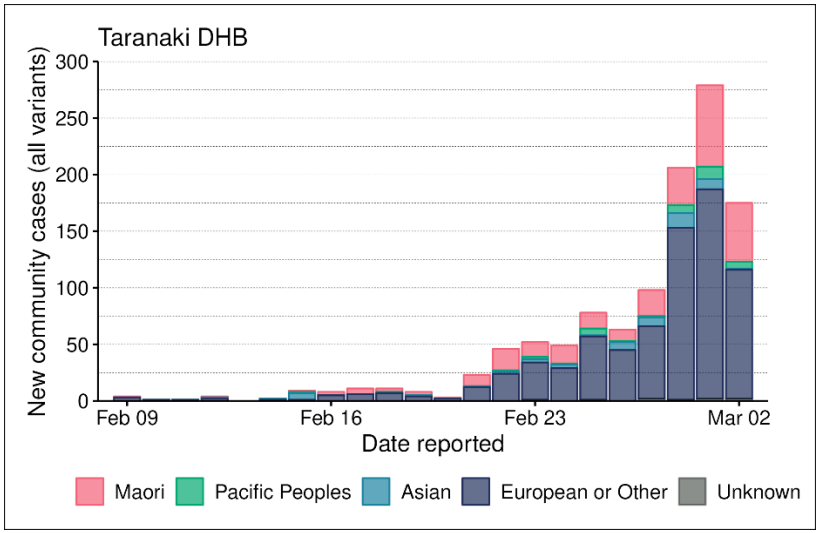


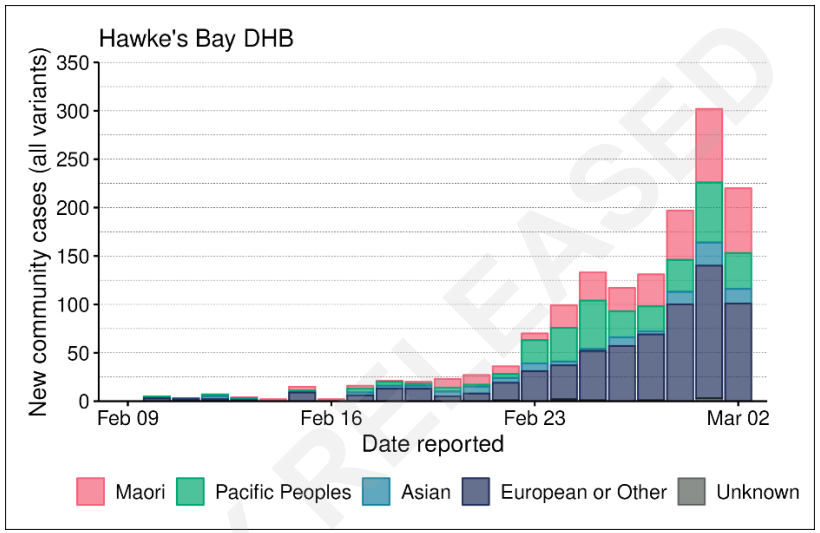


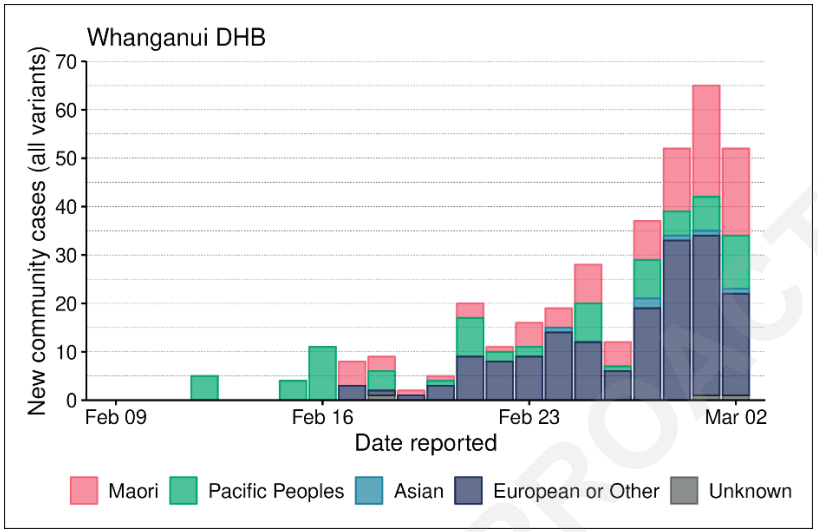


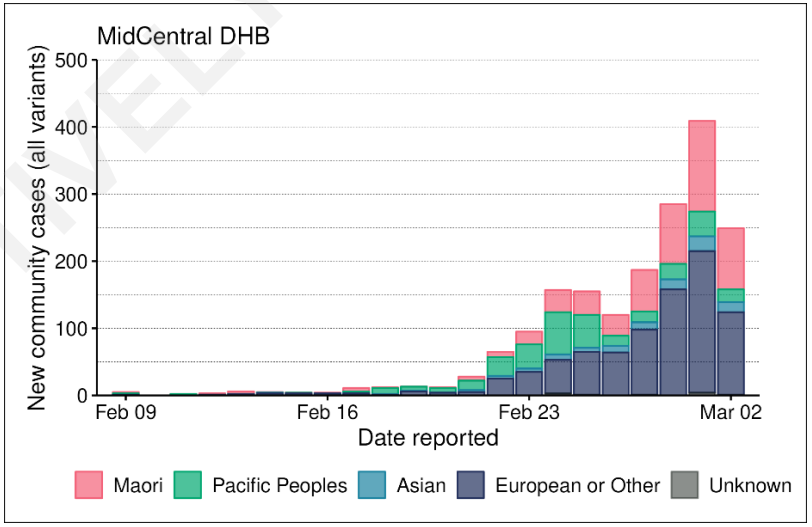


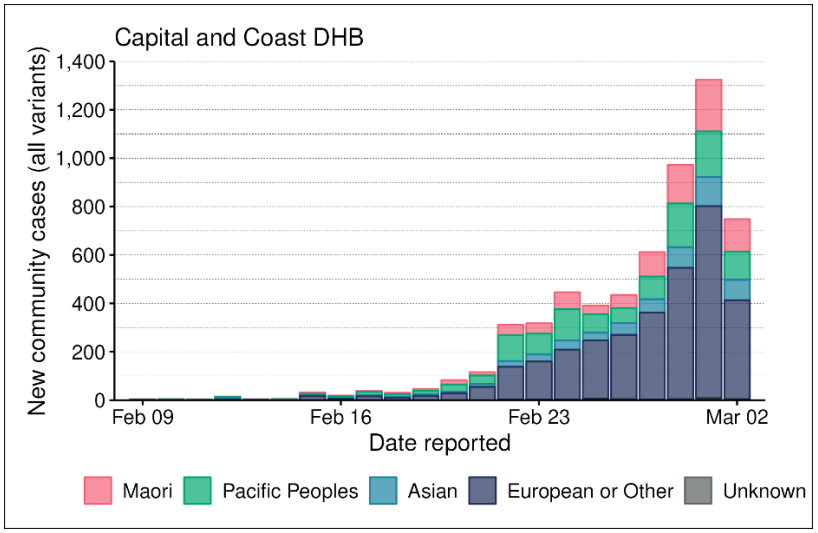


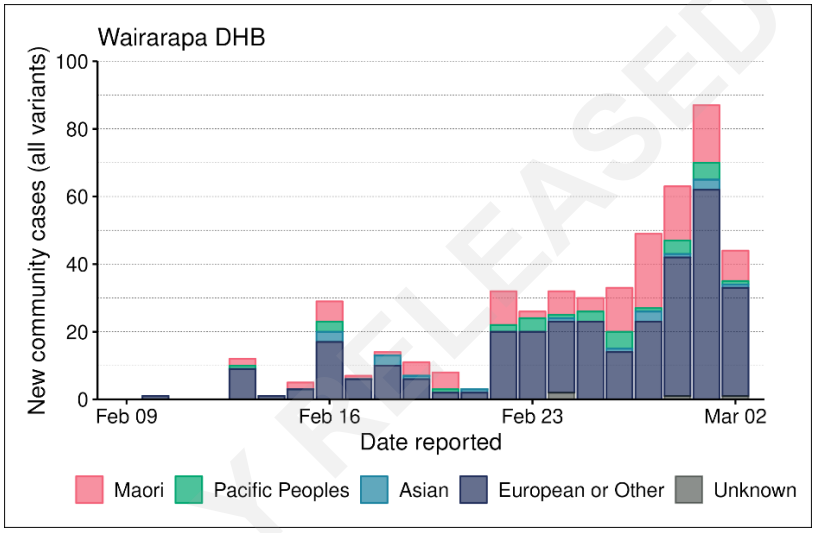


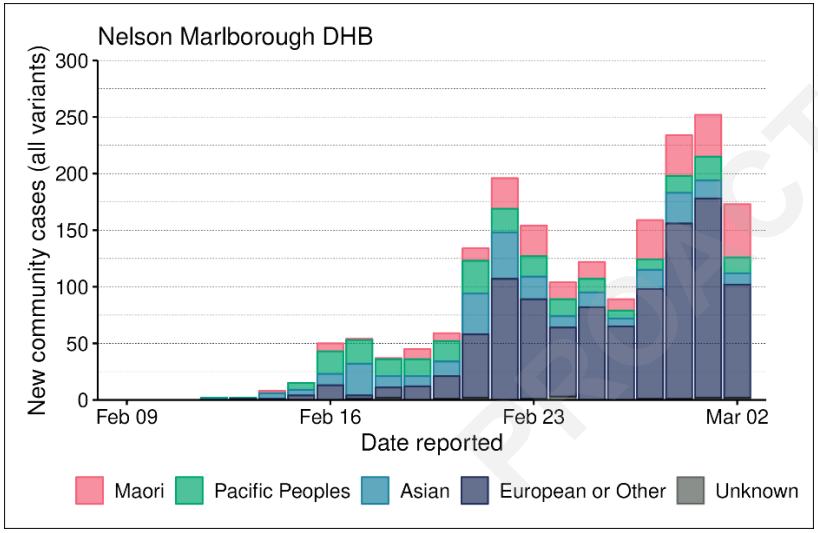


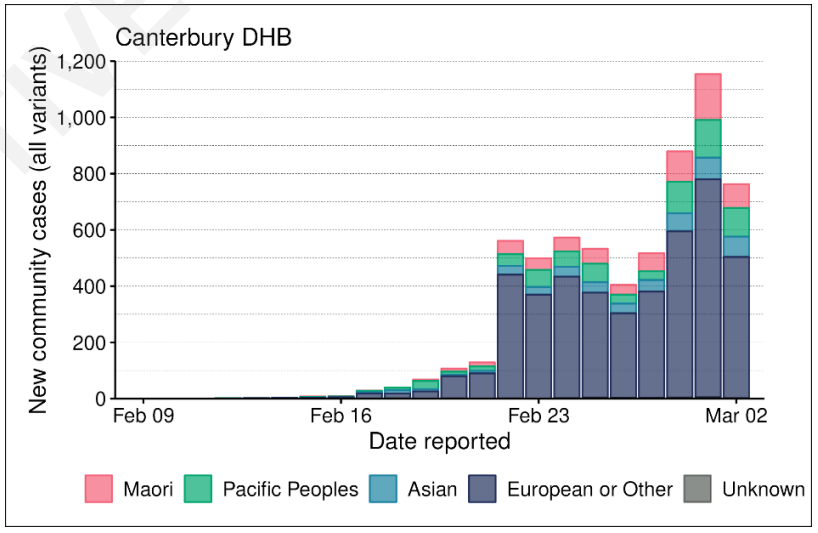


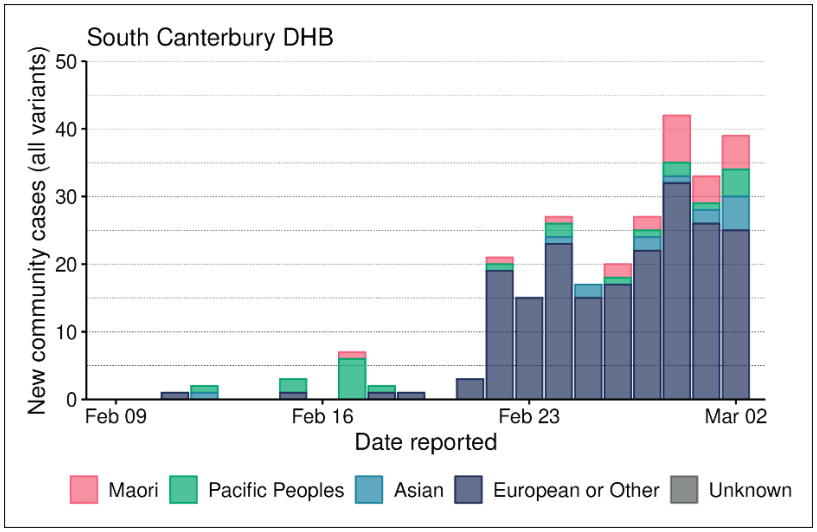


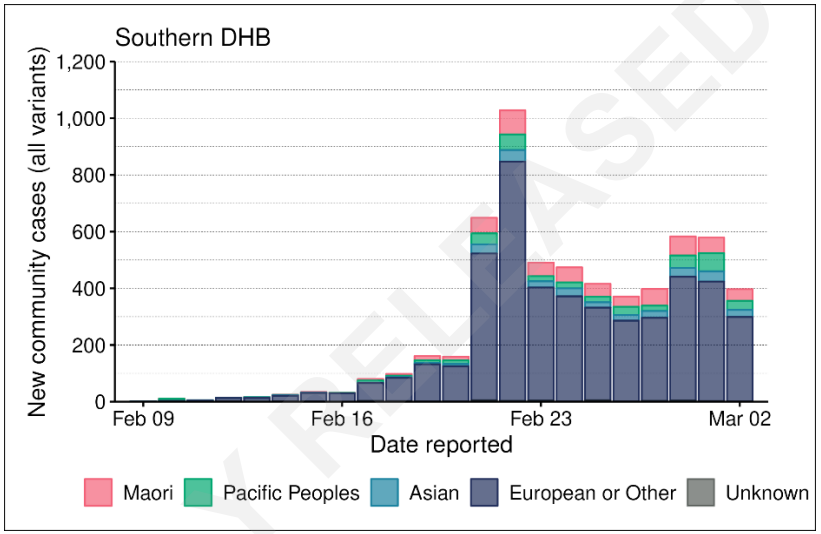












Source: NCTS/EpiSurv 2359hrs 02 March 2022

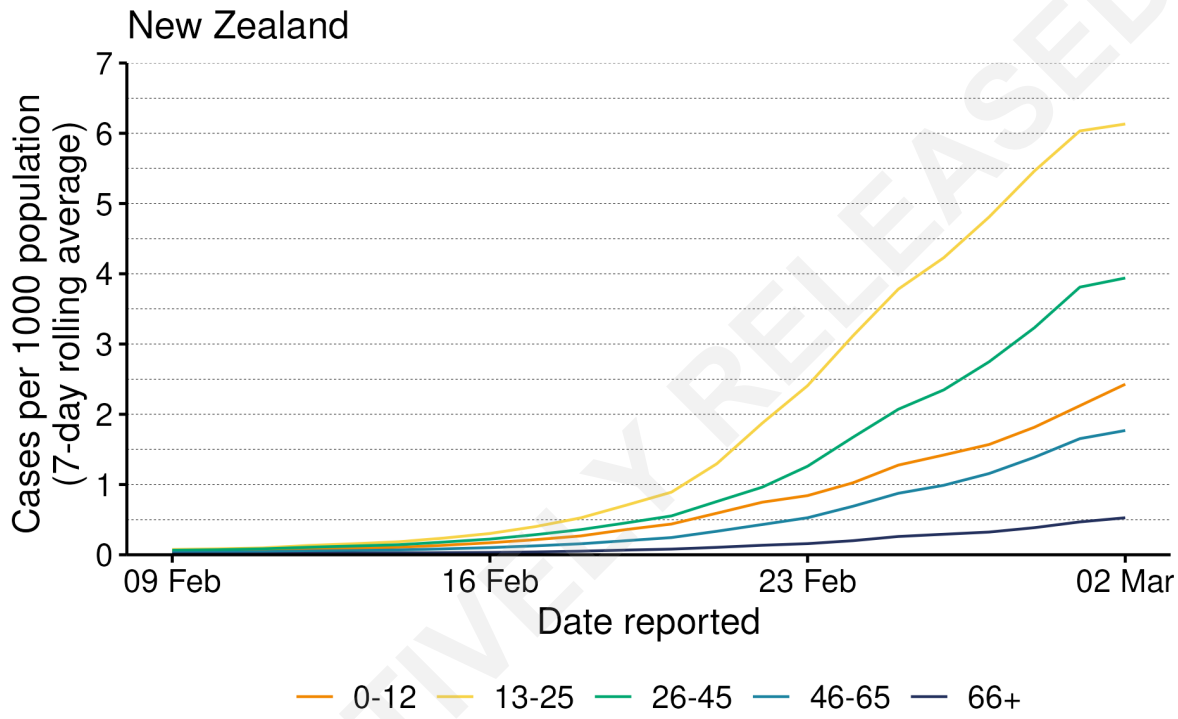
Cases by Age

Figure 11 and Figure 12 show new cases by age group from 09 February to 2 March 2022.

Case rates continue to be highest in the 13-25 and 26-45 age groups (Figure 11).

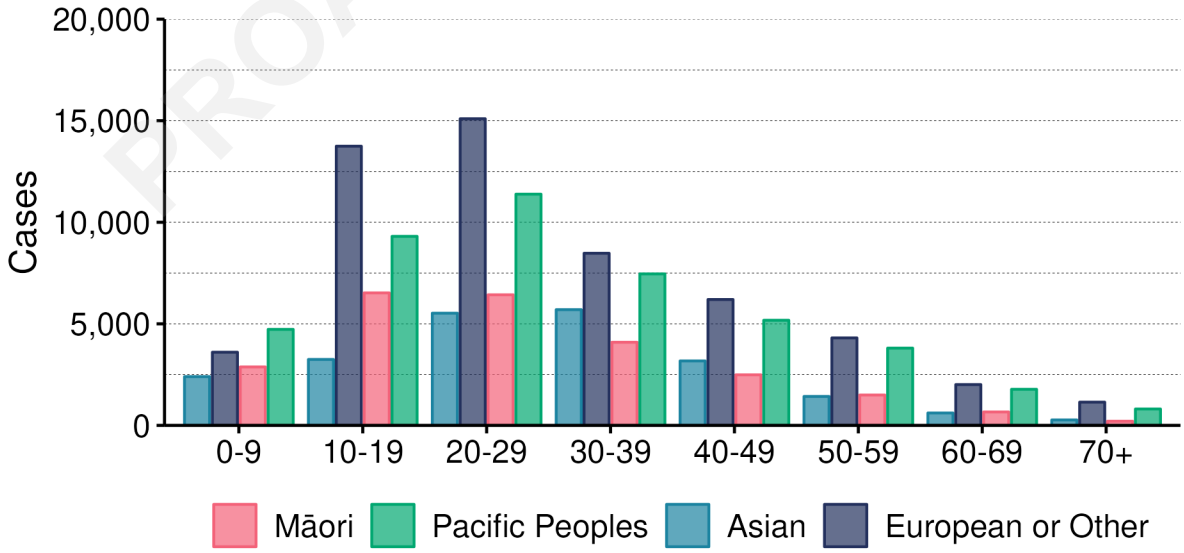
The breakdown of cases by age and ethnicity (Figure 12) shows that the age distribution of cases is broadly similar across ethnicities. Asian cases skew slightly older, and Pacific cases slightly younger, as would be expected by from the different age structures of those populations. Case numbers in European or other stand out as being higher in the youth and young adult age range 10-19 and 20-29.

Figure 11: COVID-19 community case rates per 1000 population by age, 09 February to 02 March 2022



Source: NCTS/EpiSurv 2359hrs 02 March 2022

Figure 12: COVID-19 community case rates by prioritised ethnic group and age group, 09 February to 02 March 2022



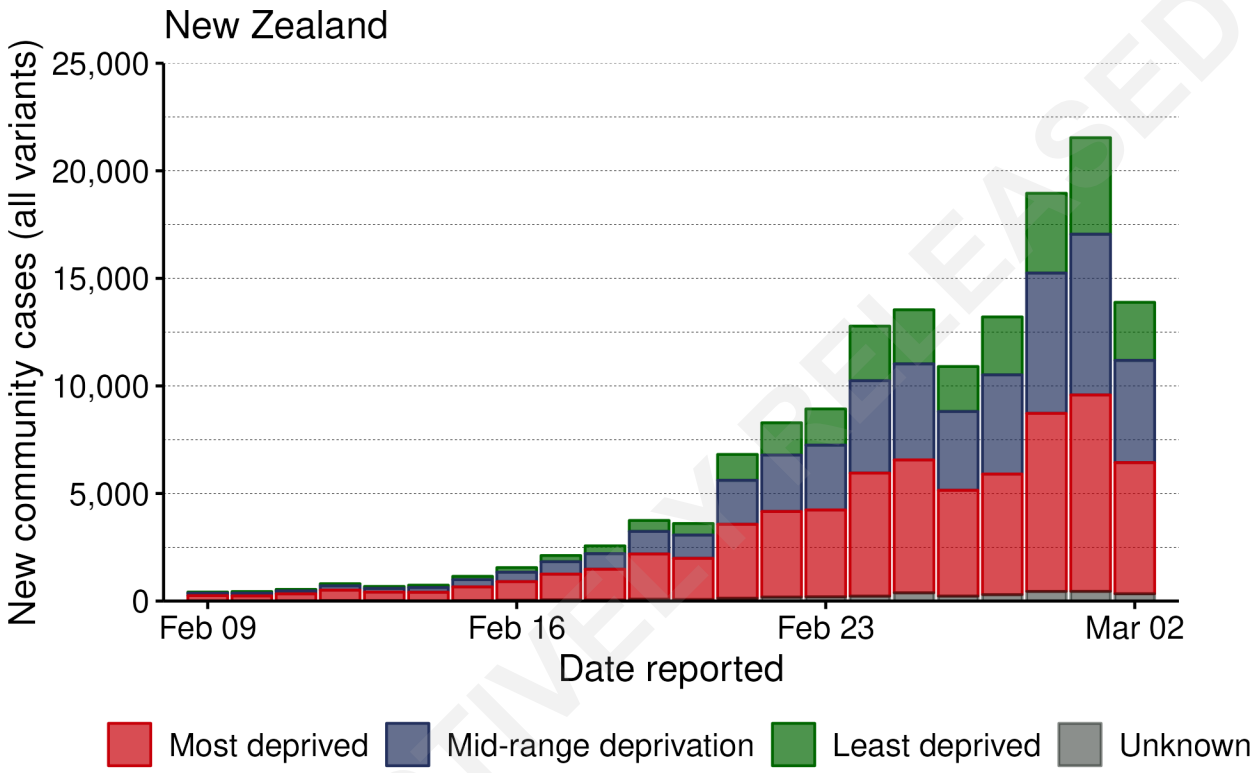
Source: NCTS/EpiSurv 2359hrs 02 March 2022

Cases by socio-economic indicators

Figure 13 shows cases based on the Index of Multiple Deprivation 2018 housing deprivation scores. The increase in cases observed from 9 February 2022 first affected people living in the most deprived areas. However, as case numbers increase, there is an increasing proportion of cases in mid- and least-deprived areas.

For the week ending 2 March 2022, the proportion of cases that were least deprived, mid-range deprived and most deprived remained stable at 20%, 35% and 45%.

Figure 13: COVID-19 community cases between 09 February 2022 and 02 March 2022 by housing deprivation level



Source: EpiSurv/NCTS/ 2359hrs 02 March 2022

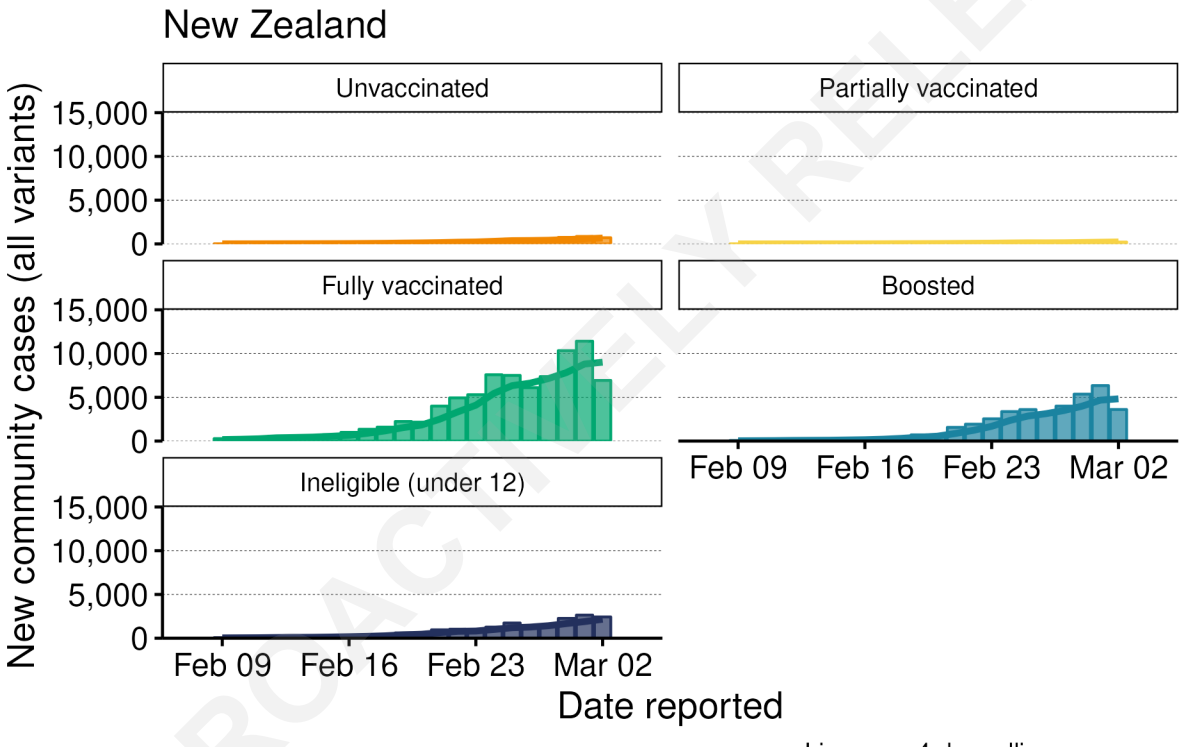
Cases by vaccination status

Cases by vaccination status are shown in Figure 14. Vaccinated case numbers are consistently substantially higher than the number of non-vaccinated cases. This is expected due to the high level of vaccination across New Zealand, with over 95% of people aged 12+ now having at least two vaccination doses. Cases are steadily increasing in children under 12, classified as ineligible for COVID-19 vaccination.

The number of cases who have received a booster is increasing from when last reported, from one third to nearly half of those fully vaccinated. Between 9 February and 2 March 2022, boosted cases account for 26% of total cases while those fully vaccinated account for 56%. However, when accounting for population vaccination rates, the case rate in those who had a booster vaccination was approximately 23% lower than those who were 'fully-vaccinated'. This is a change from when last reported where the case rate for those with a booster was approximately 33% lower than those fully vaccinated.

It should be noted that **this is not a vaccine effectiveness estimate** and does not account for differences in age and other factors that may affect the likelihood of becoming a case and/or being vaccinated.

Figure 14: COVID-19 community cases between 09 February 2022 to 02 March 2022 by vaccination status



Source: EpiSurv/NCTS/CVIP 2359hrs 02 March 2022

In the graph above, "unvaccinated" refers to people who have had no doses prior to becoming a case. "Fully vaccinated" are people who received their second dose at least 7 days before being reported as a case. "Boosted" refers to people who have received a total of 3 doses of an approved COVID-19 vaccine, one week prior to their report date as a case.

Community Testing

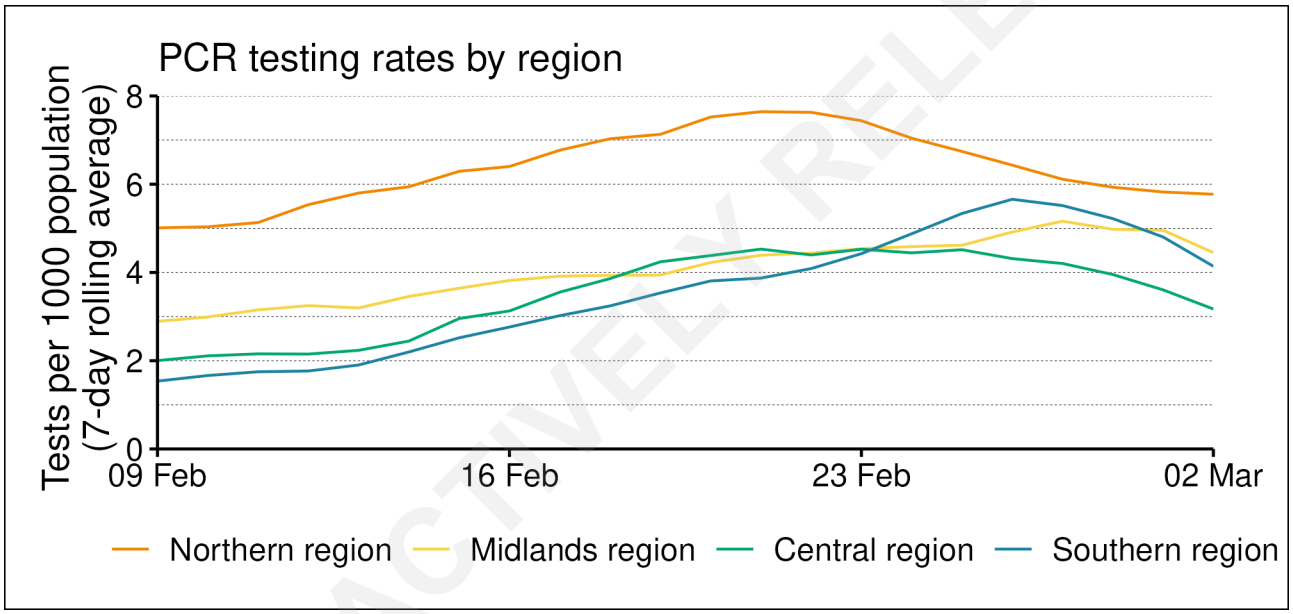
As New Zealand has entered Phase 3 of the Omicron response[2], an increased proportion of testing is carried out through rapid antigen tests (RATs) rather than PCR tests. RATs are self-administered and therefore require the individual to report their results using My Covid Record or through calling the helpline, which may result in under-reporting.

Testing rates and test positivity are shown for PCR testing only. At this time, it is not possible to provide the same for RATs due to the lack of information on total RATs (especially negative results). Please note that, as PCR testing is only used to monitor priority populations and confirm positive RATs in specific situations, this testing data is not representative of the current testing state of New Zealand. New analyses will be constructed to assess test positivity from PCR tests and also assess the demographics of cases who self-upload their RAT results.

The figures in this section show the rates of community testing from 9 February to 2 March 2022.

Tests per 1,000 are between 2 and 6 in all regions. Testing rates remain highest in the Northern Region DHBs.

Figure 15: Testing rate by region (seven day rolling average) by region and DHB from 09 February to 02 March 2022

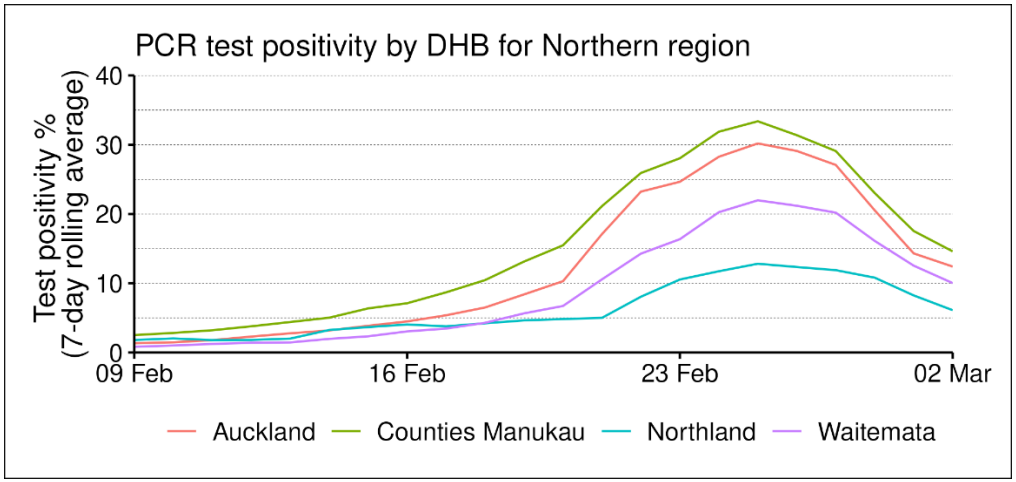


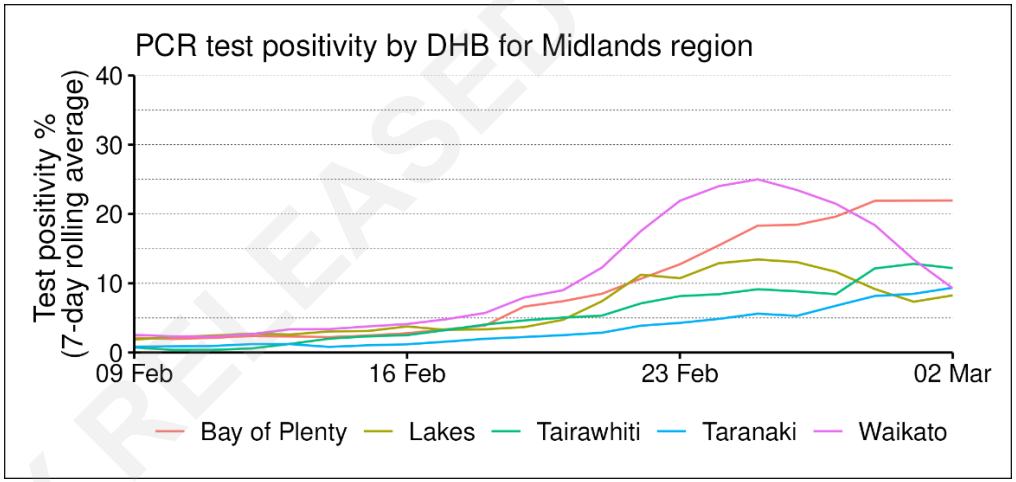
PCR test positivity for the Northern region reached a peak in late February and has since decreased significantly, likely due to testing changes under Phase 3. Test positivity in the Midland region has slowly increased since early February with all DHBs now between 10% and 20% positivity. Test positivity in Bay of Plenty DHB is markedly higher than in others, while Waikato DHB has declined from its peak around 23-25 February.

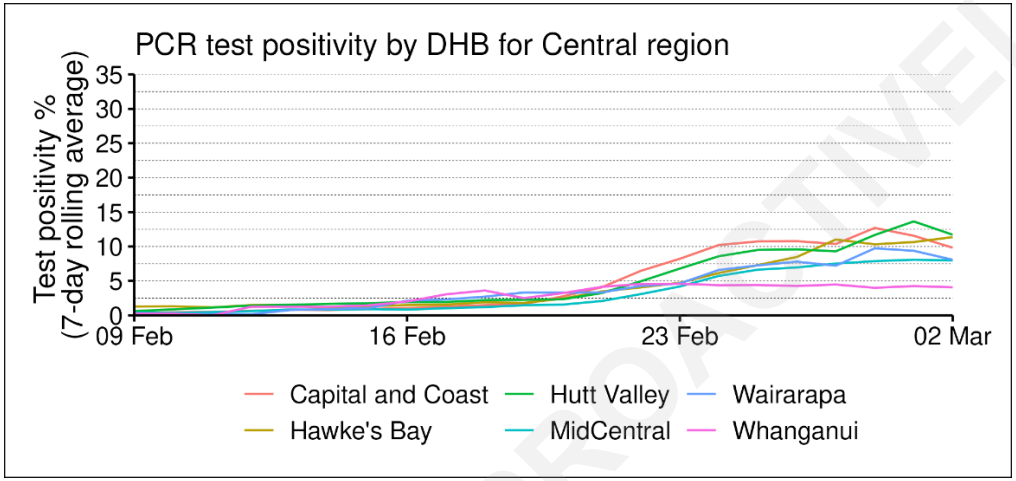
Central and Southern region test positivity is lower with all DHBs at around 12% or less. Southern DHB rose to nearly 30% test positivity in late February at the time that university students moved into halls of residence and shared living facilities.

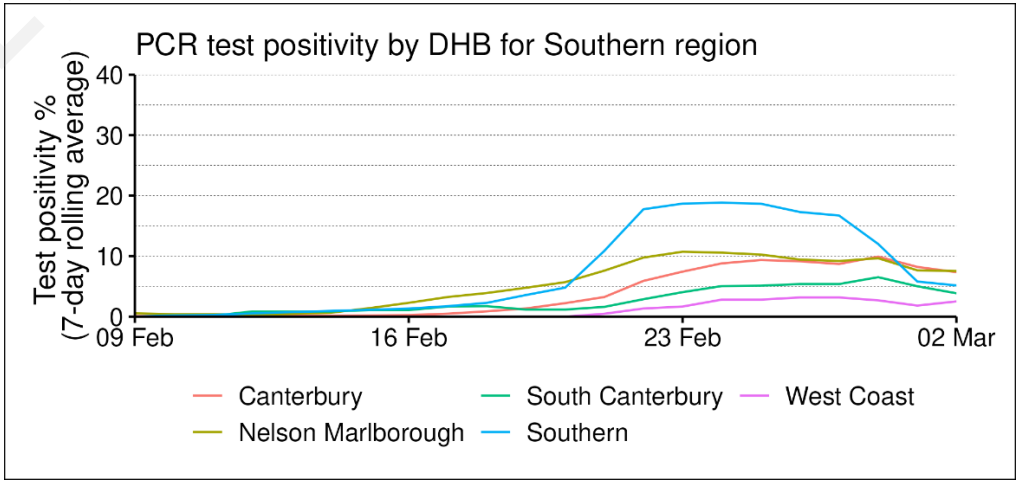
[2] Our response to Omicron | Unite against COVID-19 (covid19.govt.nz)

Figure 16: Test positivity (seven day rolling average) by region and DHB from 09 February to 02 March 2022







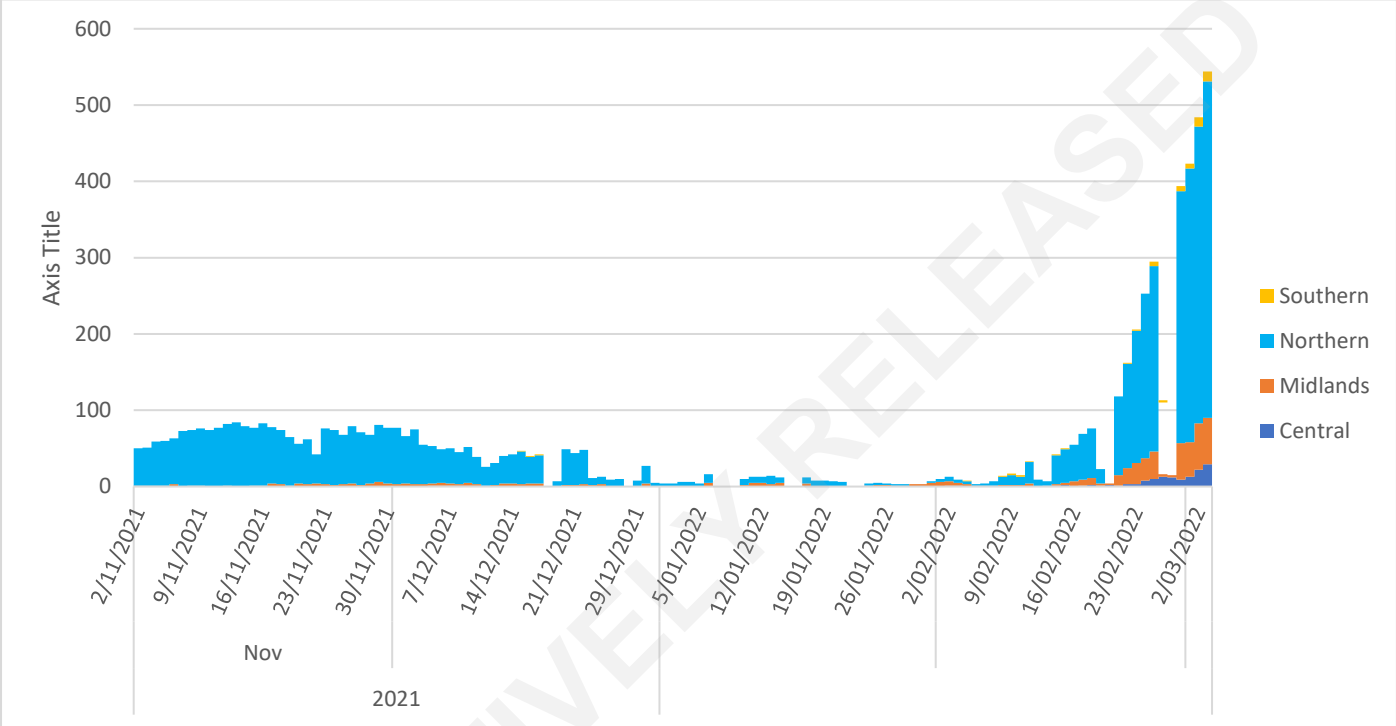


Hospitalisation

The number of COVID-19 positive cases in hospital is based on reports that DHBs file on most days to the Ministry of Health.

The number of hospitalised people confirmed as being COVID-19 positive was only 3 at the end of January 2022. By 3 March, there were **544 confirmed COVID-19 positive cases in hospital** (Figure 17). This is an increase from 394 confirmed COVID-19 positive cases in hospital in the week to 28 February 2022.

Figure 17: COVID-19 cases in hospital, by region and day



Source: DHB daily reports to MoH, 3 March 2022. Hospitalisation data are reported manually by DHBs. Data may be incomplete on some days, especially weekends. DHBs are grouped by region.

Mortality

As cases increase, it is expected that reported deaths will increase too. As numbers increase, *Trends & Insights* will analyse patterns in the location, age, ethnicity, sex, vaccination status and socioeconomic status of deaths due to or associated with COVID-19.

Variants of Concern

Most hospitalised cases are Omicron

The majority of hospitalised cases who have been sequenced are Omicron (Table 5), but most cases are still to be sequenced. As community cases increase, sequencing resources will be prioritised to gathering genomic data on the most serious cases.

Hospitalised cases from 01 January to 03 March 2022 include both Delta and Omicron, with BA.1 and BA.2 Omicron variant being the most common. As 182 out of 234 hospitalisations in this period have no available sequencing data, there is no full picture of the distribution of variants and subvariants in hospitalised COVID-19 cases.

Table 5: Hospitalised cases reported from 01 January to 03 March 2022

DHB	Delta	Omicron BA.1-like	Omicron BA.2	To be received	Total
Auckland	0	7	3	10	**20**
Bay of Plenty	2	1	5	35	**43**
Canterbury	1	0	0	0	**1**
Capital and Coast	1	1	1	42	**45**
Counties Manukau	1	4	2	23	**30**
Hawke's Bay	2	0	0	1	**3**
Hutt Valley	0	0	0	6	**6**
Lakes	1	0	0	19	**20**
MidCentral		1	1	10	**12**
Southern	0	1	0	0	**1**
Tairāwhiti	0	0	0	3	**3**
Waikato	1	2	1	29	**33**
Waitemata	3	6	5	3	**17**
West Coast	0	0	0	1	**1**
Total	**12**	**22**	**18**	**182**	**234**

Note: This includes cases reported as hospitalised in EpiSurv and may include cases hospitalised for reasons other than their COVID-19 infection.

Source: ESR Whole Genomic Sequencing data, 03 March 2022. EpiSurv and Microreact 12pm 03 March 2022

No recent community sequences are Delta variant

431 community cases were identified as Omicron in the past fortnight (Table 6).

In the past fortnight, there have been no Delta cases found. Whether this marks the complete transition to severe cases being exclusively caused by the Omicron variant will only be clear as and when more sequencing is carried out on future priority cases.

Among Omicron cases, the BA.1-like and BA.2-like variants are approaching similar representation with BA.1 leading slightly. It is expected that, in coming weeks, New Zealand's representation of the subvariants will see the BA.2 Omicron become the dominant lineage as per the pattern internationally.

As case numbers grow only a minority of positive cases are being referred for sequencing, the sequences reported here reflect biases in the capacity of testing labs to refer samples, the severity of disease, and the cases referred for urgent sequencing.

Table 6: Community cases based on variant in the past 14 days to 03 March 2022

DHB	Delta	Omicron BA.1-like	Omicron BA.2-like	Omicron (Unassigned)	Total
Northland	0	1	0	0	1
Waitemata	0	31	35	1	67
Auckland	0	14	17	0	31
Counties Manukau	0	37	24	0	61
Waikato	0	24	9	0	33
Lakes	0	0	0	0	0
Bay of Plenty	0	5	12	0	17
Tairawhiti	0	0	0	0	0
Taranaki	0	12	13	0	25
Hawke's Bay	0	0	1	0	1
Whanganui	0	0	0	0	0
MidCentral	0	1	3	0	4
Wairarapa	0	0	0	0	0
Hutt Valley	0	15	3	0	18
Capital and Coast	0	22	9	2	33
Nelson Marlborough	0	1	20	0	21
West Coast	0	0	0	0	0
Canterbury	0	48	20	1	69
South Canterbury	0	0	2	0	2
Southern	0	34	13	1	48
Total	**0**	**245**	**181**	**5**	**431**

Source: ESR Whole Genomic Sequencing data, 03 March 2022. EpiSurv and Microreact 12pm 03 March 2022

Sequencing data may be two or more weeks after infection date. These cases are not a representative sample of all COVID-19 cases in the community.

Short-term projections

Scenario modelling versus actual cases

Predicted scenarios were updated by Te Pūnaha Matatini on 4 March.

As before, the scenarios are based on international transmission rates and the peak cases seen in **South Australia** ("low"), **London** ("middle") and **New York** ("high"). These scenarios:

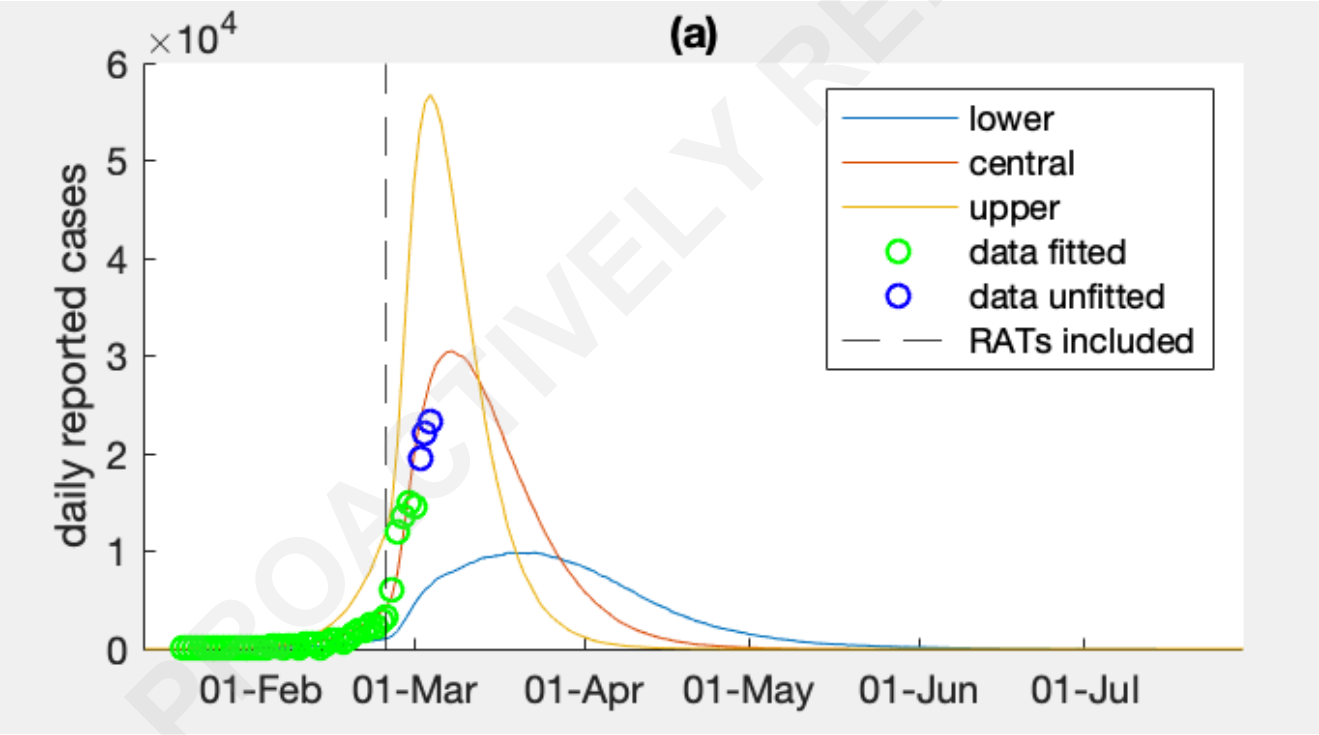
- Align the start date of outbreak with NZ surveillance data
- Adjust the "contact matrix" to match recent actual distributions of cases by age
- Adjust transmission to include more people choosing to self-isolate or reduce their personal risk

After adjusting the report dates of RATs for their shorter delay from sample to report, reported case numbers remain closer to the model's "medium" scenario than the "high" scenario (**Error! Reference source not found.**18).

Hospital numbers are also still tracking close to the medium scenario.

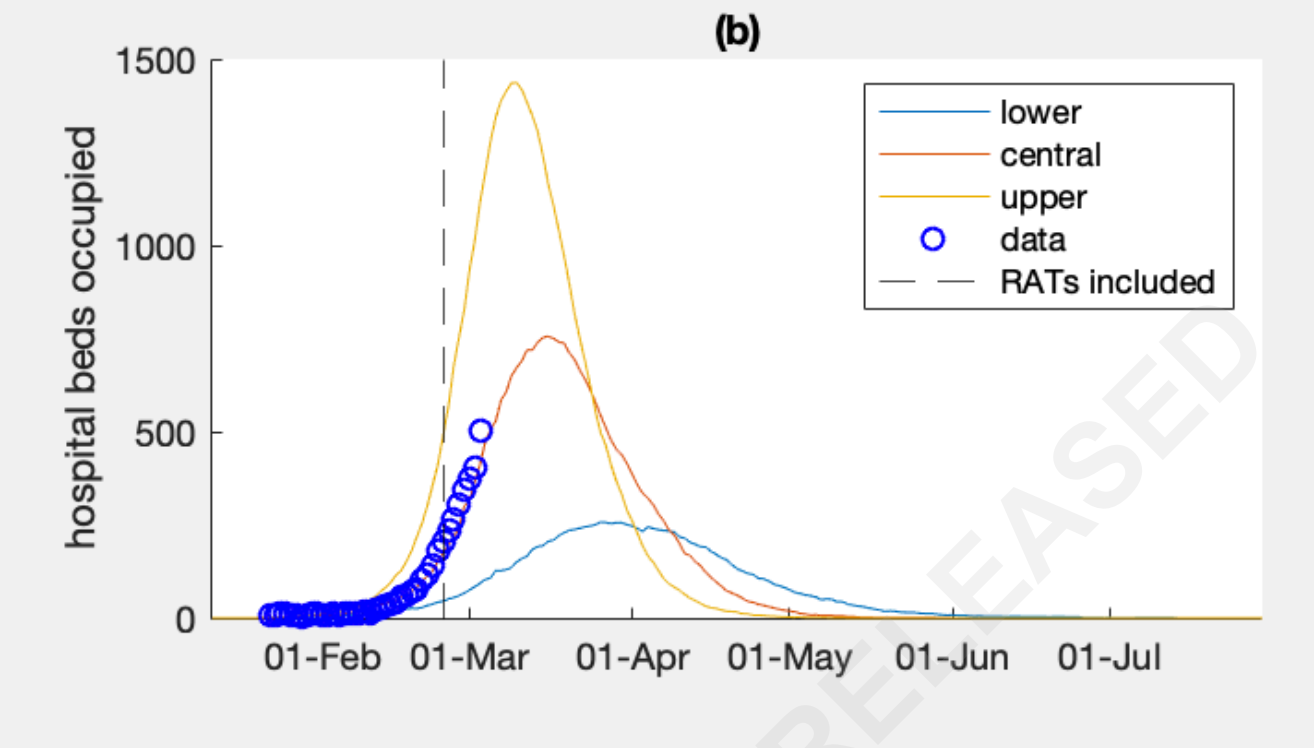
On balance, the modelling team is cautiously advising that New Zealand is closer to the "medium" scenario than the "high". The medium scenario is consistent with peak hospital bed occupation being reached in the second half of March.

Figure 18: COVID-19 Modelling Aotearoa scenarios compared to actual cases with adjusted timing



Source: COVID-19 Modelling Aotearoa group (Te Pūnaha Matatini), 27 February 2022; Actual cases MoH to 3 March 2022.

Figure 19: Hospitalisations: COVID-19 Modelling Aotearoa TPM scenarios compared to actuals



Source: COVID-19 Modelling Aotearoa group (Te Pūnaha Matatini), 27 February 2022; Actual cases MoH to 3 March 2022.

Effective reproduction rate

These estimates used the *EpiNow2* package on 3 March using data to 28 February.[3]

- The median estimate of **effective R (R_{eff}) nationally has risen to 2.7** (90% Credible Interval [CI]: 1.9–4.0) for cases to 28 February, after adjusting for data lags. The increase is due to the acceleration in reported cases; discussed in the section *Data and Testing Issues*.
- The median **estimate of doubling time** has reduced from 4 to around **1.8 days**, with narrower confidence intervals than 3 days earlier (90% CI: 1.1–3.1 days).
- The R_{eff} for the Auckland region is 2.5 (90% CI: 1.8–4.0), and the doubling time is 2 days (90% CI: 1.1–3.6).
- The R_{eff} for the Waikato public health unit region is 2.9 [90% CI: 1.4, 5,75), and the doubling time is 1.6 days (90%CI: 0.7, 6.6)

Estimates for other regions will be possible when case numbers have risen further.

Forecasts of cases and infections

Full forecasts and charts have not been provided this week while case numbers are unstable. They will resume when the transition from PCR to RATs has been resolved.

[3] The EpiNow package 'now-casts' and forecasts cases to measure current, past and future transmission nationally by calculating and then extrapolating the effective reproduction number, R_{eff}. The model does not consider several factors that may impact transmission, such as rapid changes in public health measures, population behaviour, mobility, or school holidays. This model requires sustained daily cases before it can make predictions. It only counts cases that become confirmed at some stage.

Figure 20: Effective R and projected cases, Waikato DHB