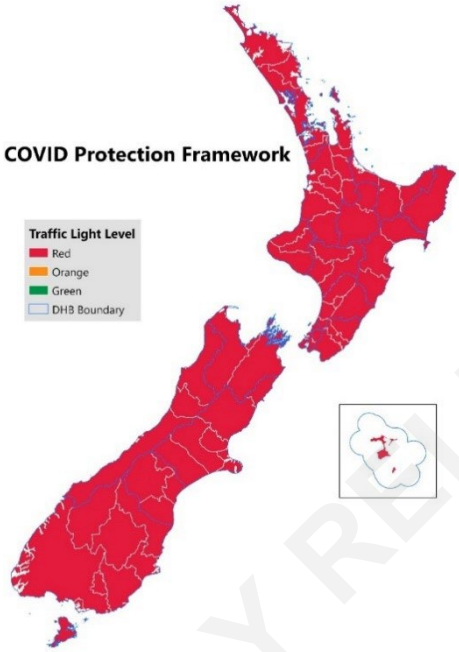
COVID-19

Trends and Insights Report

Updated 09 February 2022

Current State of Aotearoa



Snapshot of the past 7 days

- Overall, 1,267 new cases were reported in the week from 31 January to 06 February 2022. This is an increase from the 893 cases when last reported (28 January to 04 February 2022).
- Counties Manukau DHB continues to report the highest number of community cases, reporting 510 cases in the week, 40% of cases nationally.
- People of Asian ethnicity make up 42% of total cases since 31 January, as several early outbreaks were in Indian communities. Other ethnicities have increased as cases have increased since late January and we expect case rates across all ethnicities to converge as the outbreak spreads.
- Overall, case rates have been increasing in all age groups except for 66+. The increase was most prominent in the 13-25 and 26-45 age groups.
- Test positivity remains low nationally, at or below 2.5% in the reporting period, but is increasing in some regions. This indicates that diagnosed case numbers are likely an accurate reflection of prevalence, but that an increase in reported case numbers is still expected.
- Nationally, New Zealand has had a steady increase in cases from mid-January to early February, after which reported case numbers levelled out or even decreased. However, EpiNow estimates that it is more than 70% likely that infections are still increasing.

Contents

Exposure Events and Clusters of Interest

- **January 2022 Tukituki Christian Camp Hastings**
  - Retreat held at Tukituki Christian Camp from 20 January until 24 January.
  - Approximately 50-70 attendees during the duration, no masks worn during retreat.
  - Index case attended retreat. Currently no known link to existing clusters.
  - As of 1500hrs 6 January, 12 cases have been assigned to this cluster.
- **January 2022 Embrace Ministries Flaxmere**
  - Cluster is associated with a series of church services hosted over three days beginning on 23 January. An event on 24 January was a large gathering held at the church with up to 100 attendees.
  - As of 0900hrs 6 January, 11 cases have been assigned to this cluster.
  - Hawke's Bay DHB considers cluster to currently be uncontrolled.
  - There has been difficulty contacting close contacts.
- **January 2022 Ascend Church Hawke's Bay**
  - Index case attended two exercise classes held at the Ascend Global Church on 11 & 13 January.
  - As of 0900hrs 4 January, 21 cases have been assigned to this cluster.
  - Hawke's Bay DHB considers cluster to be currently under control.
- **January 2022 Garden of Life ECE Rotorua**
  - Early Childhood Education centre.
  - As of 0900hrs 4 January, cluster is made up of 7 cases.
  - Cluster origins linked to Rotorua Emergency Housing cluster.
- **January 2022 Auckland Church Events**
  - This cluster is associated with three exposure events at a Mangere East Samoan Church which include two choir practices on 28 January and a church service on 29 January. A case who attended the church events while unknowingly infectious is noted to have worn a mask and practiced social distancing.
  - This is an evolving cluster. ARPHS noted that the growth of this cluster may shift trends of case demographic in Auckland towards Pacific Peoples and those of higher age.
  - Probable index case was determined to be Omicron BA.1.
  - Work is underway to gather a full list of attendees for testing.
  - No further updates as of 6 February.
- **Rotorua Transitional Housing Facility Cluster**
  - On 2 February, Toi Te Ora reported 39 cases associated with this cluster.
  - A case possibly linked to this cluster is an individual who returned a positive test result on 1 February while at an antenatal unit of Rotorua Hospital for 10 days prior to positive result. Rotorua Hospital's Incident Management Team reviewed the situation on 2 February.
  - Collaboration between TTO and ARPHS/NRHCC was successful in utilising iwi social support services providing support at these facilities and securing extra MIQ accommodation in Hamilton, as well as extra lab capacity to address a backlog of testing.
  - As of 7 February, the cluster is over 40 cases and spread across 11 motels. Toi Te Ora DHB is struggling to contain the outbreak despite best efforts largely due to non-compliance with testing.

Recent cases

Table 1- Table 4 show new cases reported in the week to 06 February 2022 by DHB, age, sex and ethnicity. Cases have significantly increased since last reported from 396 (week up to 04 February) to 839 cases (week up to 06 February).

- Most cases reported in this period in were in Counties Manukau, Auckland, Waikato, Bay of Plenty and Waitemata DHBs (Table 1).
- The rates of cases by ethnicity are converging, as would be expected as the outbreak spreads from the initial seeding events; people of Asian ethnicity now make up just under half of recent cases (Table 2).
- Cases remain evenly distributed between sexes (Table 3).
- Cases are highest in age groups 10-19, 20-19 and 30-39 and similar between these groups (Table 4).

Table 1: Community cases by DHB from 31 January to 06 February 2022

DHB	Community cases reported since 31 January
Northland	94
Waitemata	110
Auckland	164
Counties Manukau	501
Waikato	207
Bay of Plenty	74
Taranaki	5
Lakes	40
Tairawhiti	8
Whanganui	2
MidCentral	2
Hawke's Bay	30
Capital and Coast	12
Hutt Valley	3
Wairarapa	0
Nelson Marlborough	9
West Coast	0
Canterbury	5
South Canterbury	1
Southern	0
National	1267

Source: EpiSurv 2359hrs 06 February 2022

Table 2: Community cases by ethnicity from 31 January to 06 February 2022

Ethnicity	New community cases since 31 January
Asian	530
European or Other	263
Pacific Peoples	310
Māori	117
Unknown	47
Total	1267

Source: EpiSurv 2359hrs 06 February 2022

Table 3: Community cases by sex from 31 January to 06 February 2022

Sex	New community cases since 31 January
Female	658
Male	606
Unknown	3
Total	1267

Source: EpiSurv 2359hrs 06 February 2022

Table 4: Community cases by age from 31 January to 06 February 2022

Age	New community cases since 31 January
0-9	155
10-19	258
20-29	258
30-39	226
40-49	165
50-59	126
60-69	49
70+	28
Unknown	2
Total	1267

Source: EpiSurv 2359hrs 06 February 2022

Epidemic Curves

Figure 1 and Figure 2 on pages 6 - 7 show the number of new cases reported in the three weeks from 16 January 2022 to 06 February 2022 nationally and by DHB.

Nationally, New Zealand has had a steady increase in cases from mid-January to early February, after which case numbers levelled out or even decreased. (Figure 1). However, EpiNow estimates that **it is more than 70% likely that infections are still increasing** (Figure 13).

A similar pattern occurred at the DHB level for both **Northland and Auckland**; with a very modest decline in cases in the past two days. Test positivity (see Figure 12, page 17) remains at or below 2.5% indicating this is still a relatively accurate view of the true community prevalence.

Waikato DHB had low cases until late January, with slower increases than in Northland and Auckland**.** However, there was a 6-fold increase on 03 February compared to the 02 February, before potentially also plateauing.

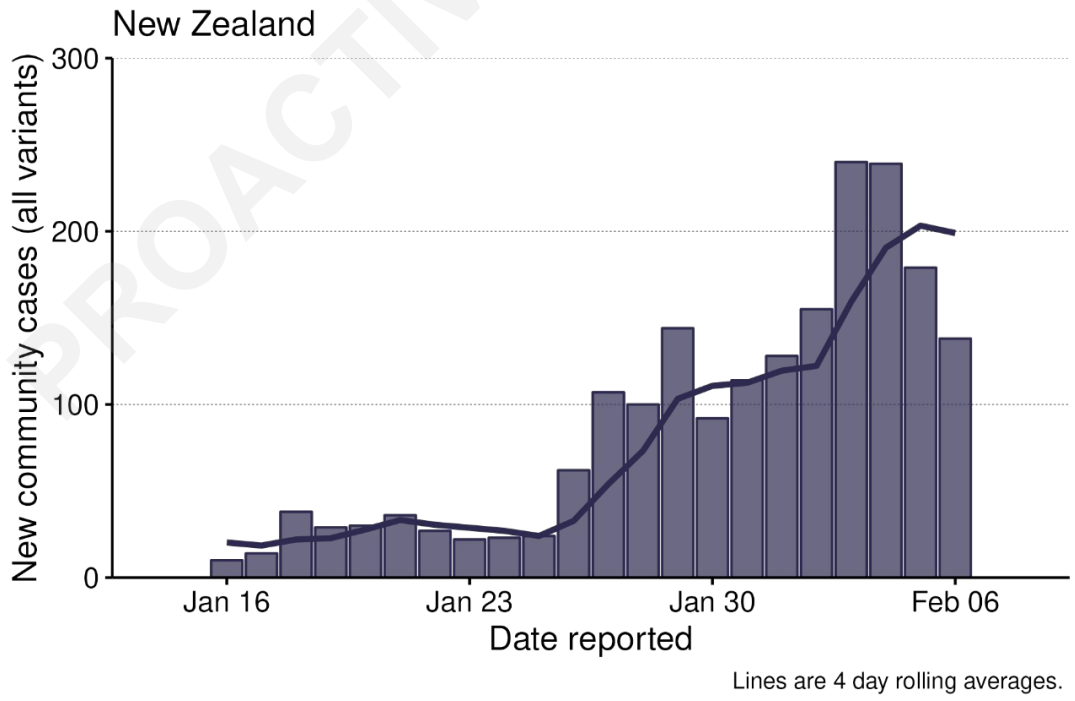
In other DHBs the small case numbers mean trends are less reliable, but they are still described below.

Lakes DHB has had fluctuating case numbers with three distinct peaks in mid January, late January and early February. These peaks are likely related to the Rotorua Emergency Accommodation cluster. The fluctuation is potentially attributable to confirmed backlogs in testing, with the lower case numbers aligning with days fewer tests were processed.

Bay of Plenty had the same late January and early February peaks as other DHBs but is progressing steadily upwards. **Hawke's Bay** had a small increase in mid-January followed by period in late January with no cases at all. This was followed by two more peaks but note that Hawkes Bay's cases are comparatively lower to other DHBs (highest peaks are 8 cases).

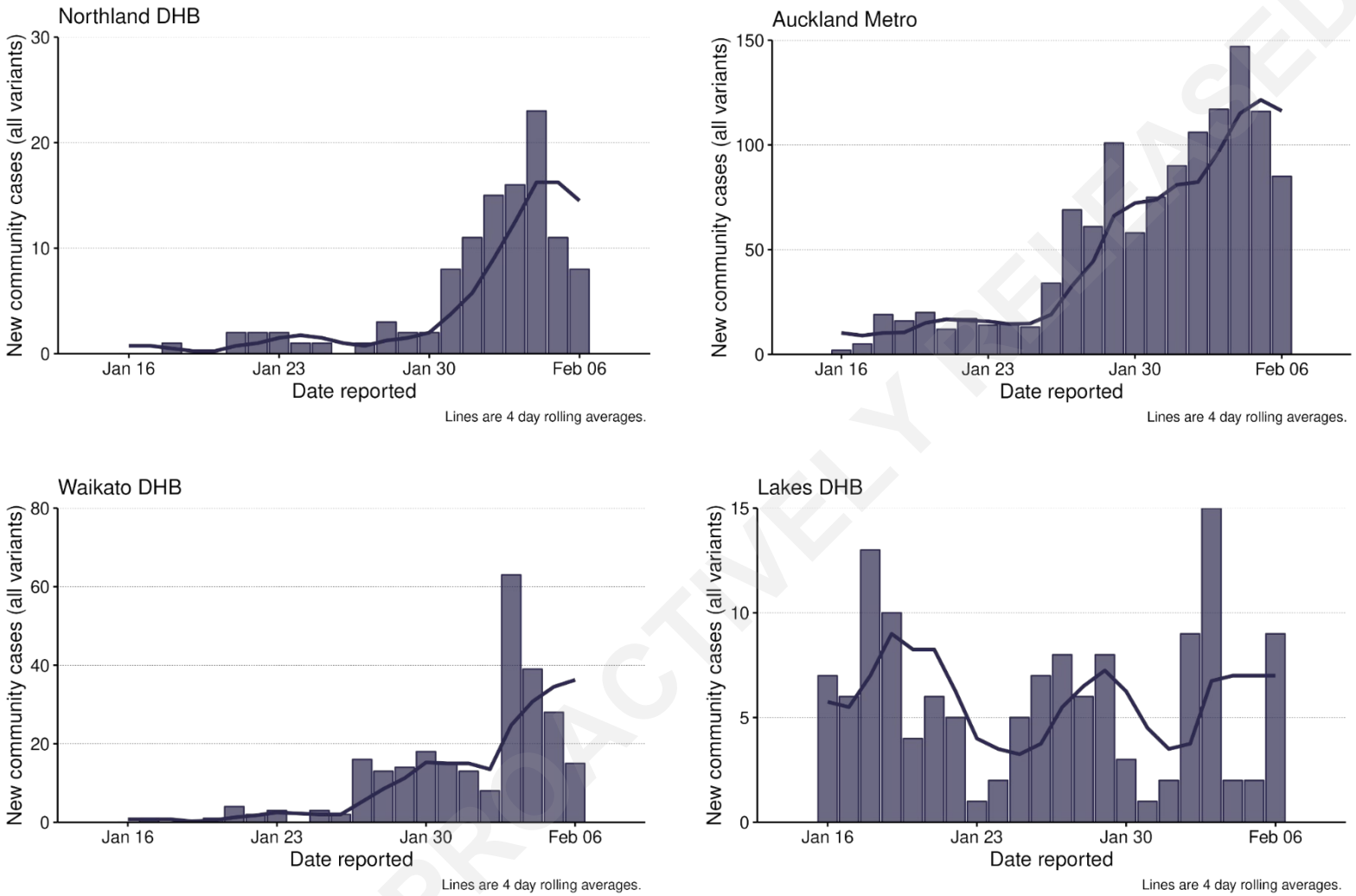
Aside from singular small peaks (8 cases), **Nelson Marlborough** and **Tairawhiti** DHB cases numbers have remained low.

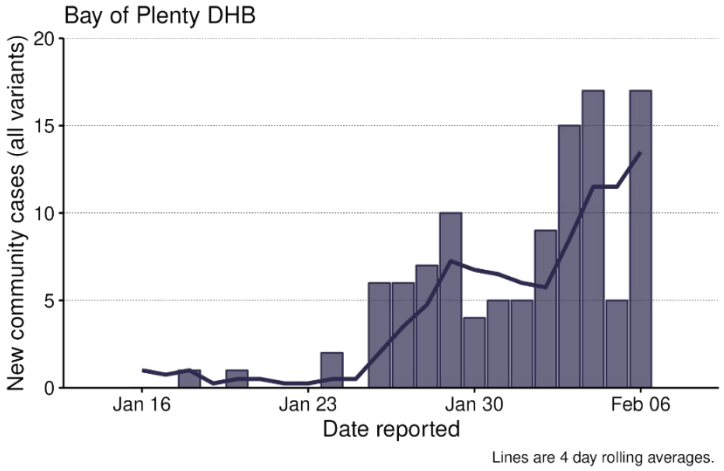
Figure 1: Daily community cases nationally from 16 January to 06 February 2022

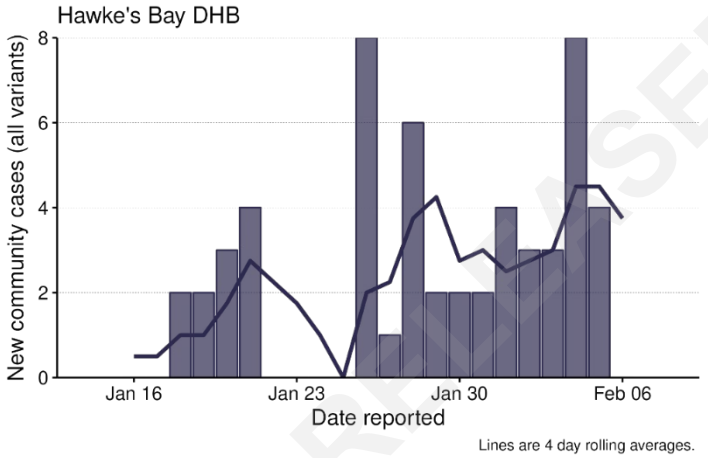


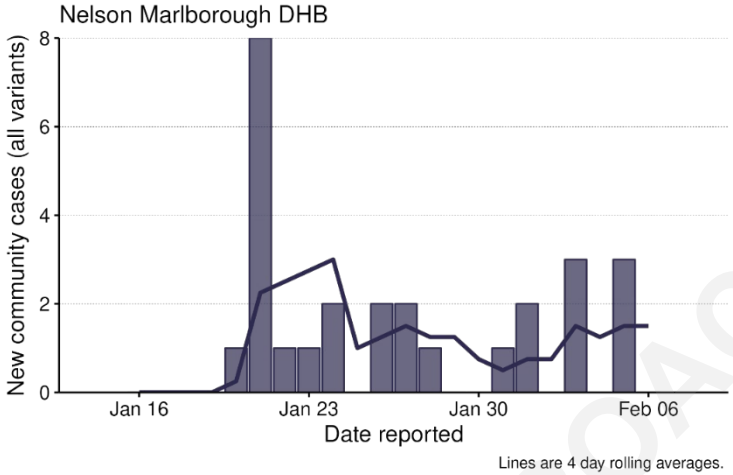
Source: EpiSurv 2359hrs 06 February 2022

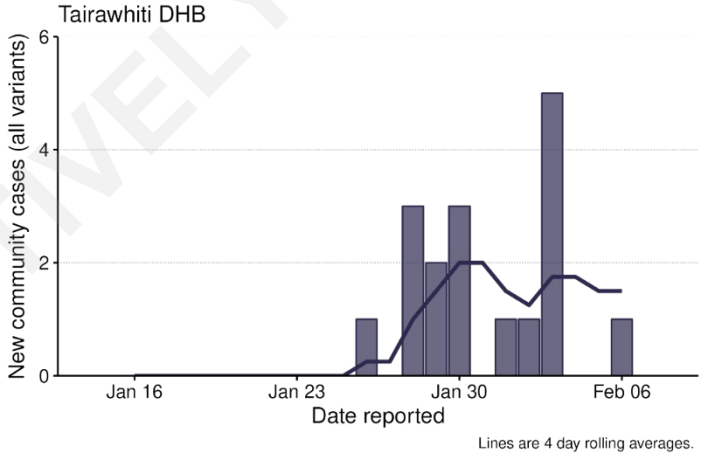
Figure 2: Daily community cases by DHB from 16 January to 06 February 2022











Source: EpiSurv 2359hrs 06 February 2022

Cases by Ethnicity

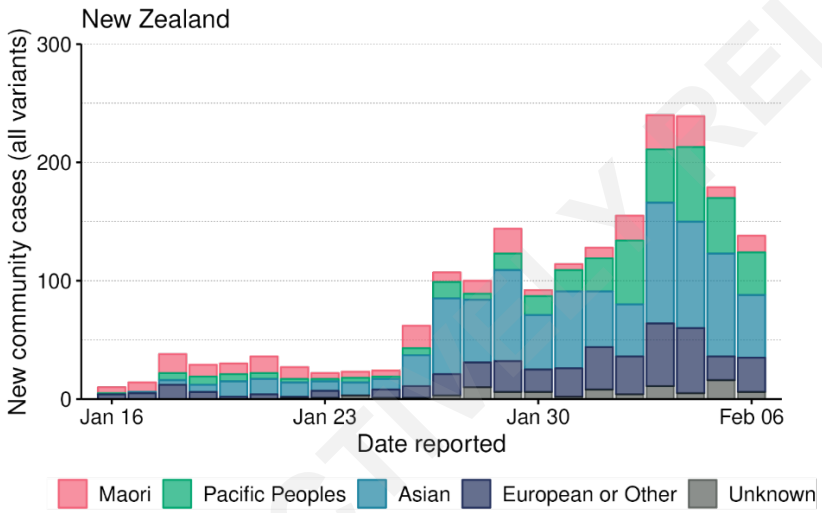
The Figure 3-Figure 5: on pages 9-11 show the ethnicity of new cases reported in the three weeks from 16 January 2022 to 06 February 2022, as a four-day rolling average.

Ethnicity of cases was relatively evenly distributed prior to a substantial shift on 27 January (Figure 3), with cases of **Asian** ethnicity increasing substantially, consistent with the outbreak initially affecting Indian communities. Over the past 2 days, cases have decreased.

Cases in **European or other** and **Pacific Peoples** have also steadily increased and now appear to be decreasing in the last few days of this period, while cases in **Māori** have remained relatively stable apart from a slight increase on the 03 and 04 of February.

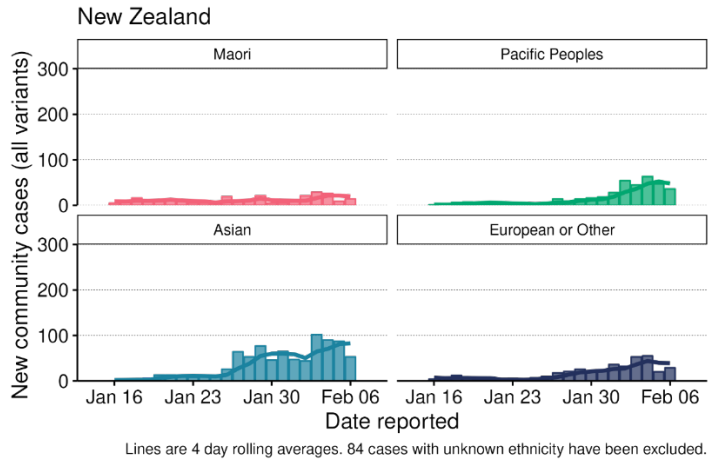
The increase in cases in the **Asian** population is most noted in **Auckland Metro, Waikato, Bay of Plenty and Nelson Marlborough** (Figure 5). **Lakes** DHB is the only area to have cases be predominantly in those of **Māori** ethnicity.

Figure 3: Daily community cases across New Zealand, by ethnicity from 16 January to 06 February 2022



Source: EpiSurv 2359hrs 06 February 2022

Figure 4: Daily and rolling 4 day of average community cases across New Zealand, by ethnicity from 16 January to 06 February 2022



Source: EpiSurv 2359hrs 06 February 2022

Figure 5: Daily cases by ethnicity and DHB from 16 January to 06 February 2022

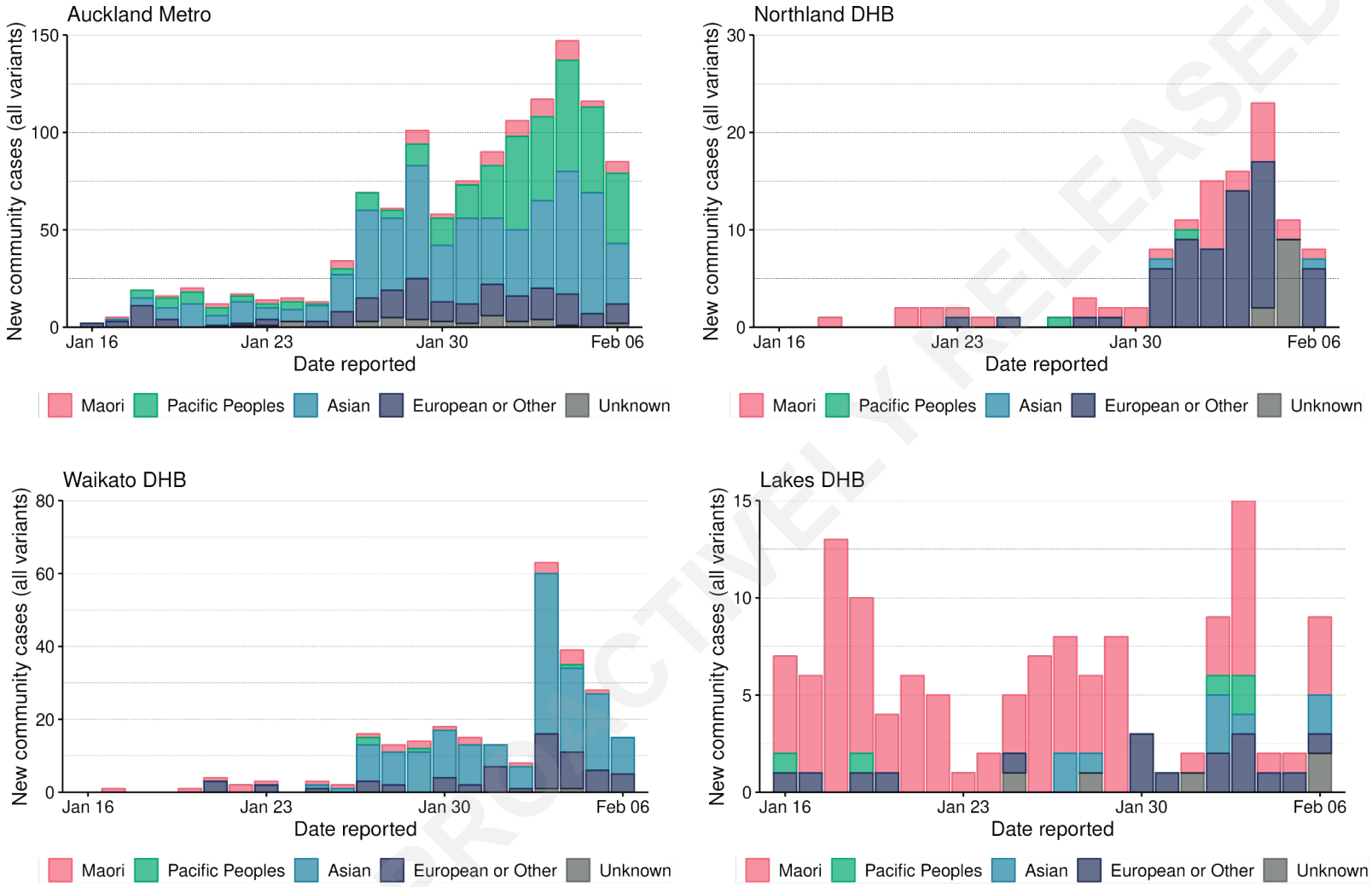
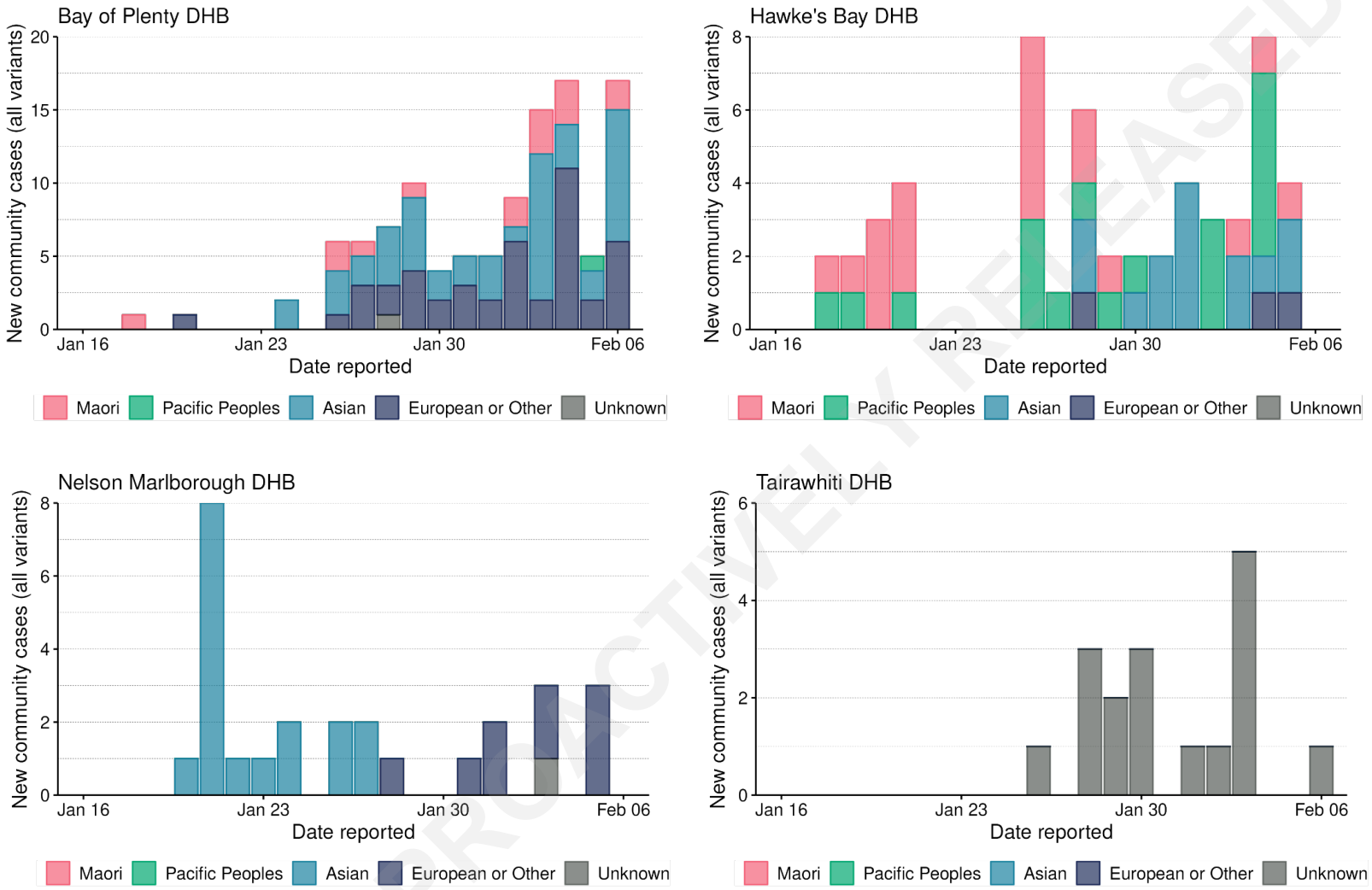


Figure 5 cont: Daily cases by ethnicity and DHB from 16 January to 06 February 2022



Source: EpiSurv 2359hrs 06 February 2022

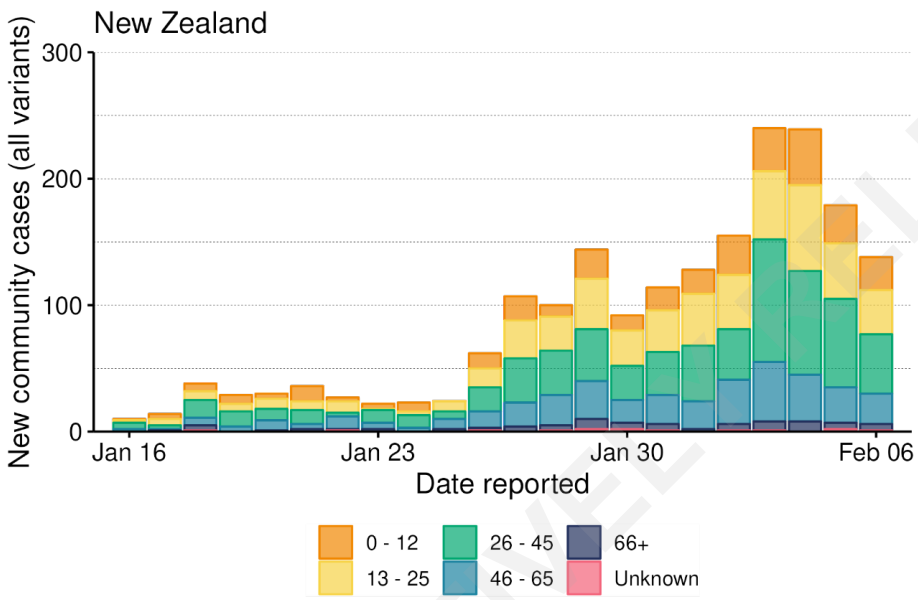
Cases by Age

Figure 6 shows new cases by age group from 16 January to 06 February 2022, as a four-day rolling average.

From January 26 all age groups experienced marked increases. The two groups most affected are 13-25 year olds and 26-45 year olds, consistent with what has been observed since August 2021 (the beginning of the Delta outbreak).

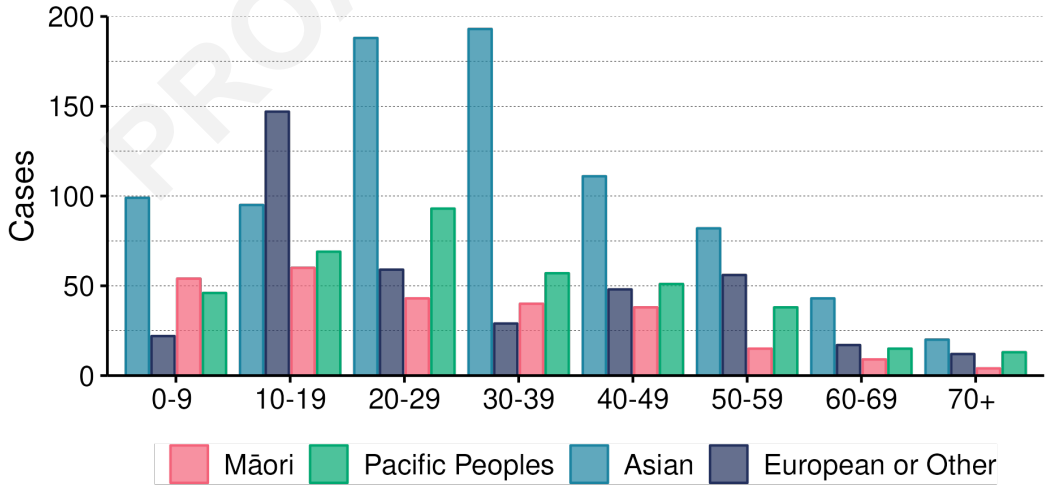
The outbreak affecting the Asian population is most apparent in the 20-29 and 30-39 age groups while being less noticeable compared to other non-Māori ethnic groups in the 70+ population (Figure 7). The continuing trend of a younger profile of cases among Māori compared with other ethnicities is also notable.

Figure 6: Four-day rolling average of COVID-19 community case numbers by age for 16 January to 06 February 2022



Source: EpiSurv 2359hrs 06 February 2022

Figure 7: COVID-19 community case numbers by prioritised ethnic group and age group, 16 January to 06 February 2022



Source: EpiSurv 2359hrs 06 February 2022

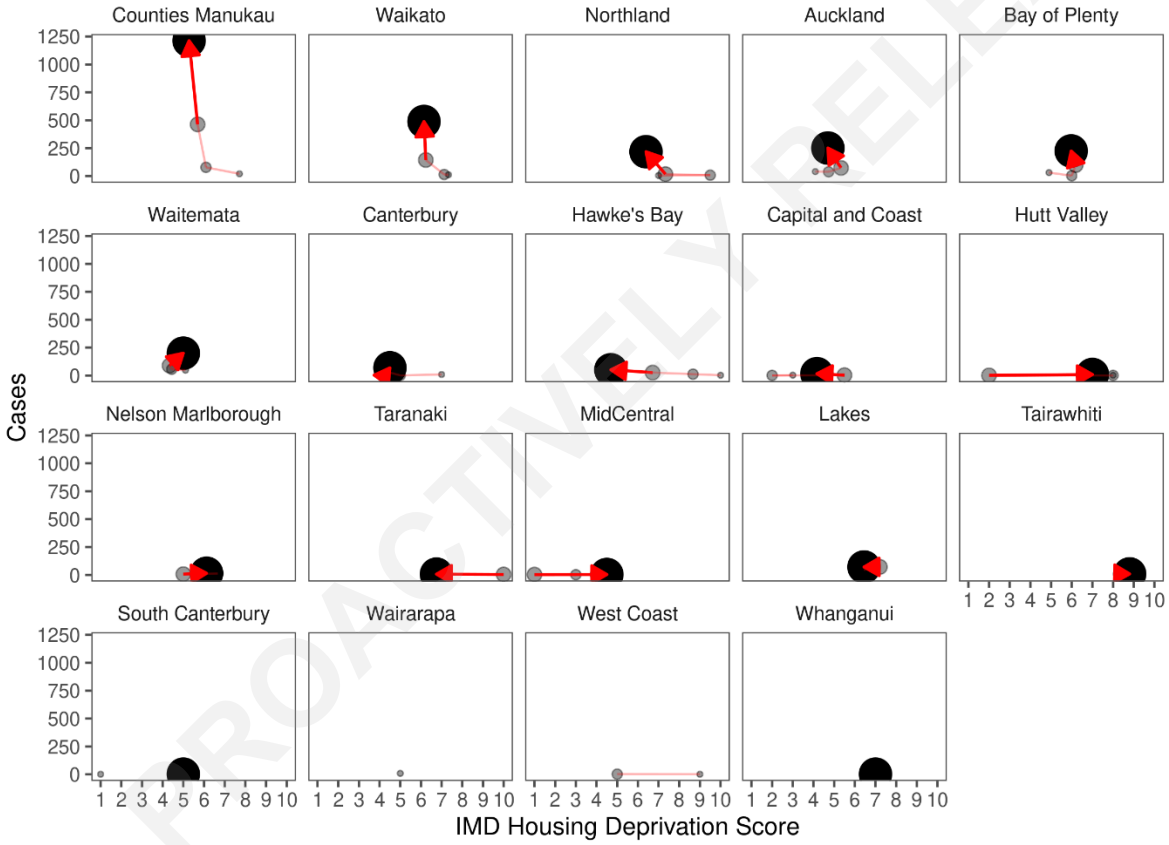
Cases by socio-economic indicators

Figure 8 shows cases by housing deprivation using the Index of Multiple Deprivation (IMD) Score[1], with lower scores indicating lower deprivation. These factors are key structural determinants of COVID-19 risk.

Housing is a key determinant of COVID-19 risk and transmission and housing deprivation is a proxy for structural determinants of health (such as income, employment, material deprivation, and ethnicity). The arrow shows the direction of travel from the previous week for the past four weeks, with each circle indicating cases reported per week and increasing circle size showing progressively recent weeks.

Cases in **Counties Manukau** have had the largest increase in case numbers this week, with a slight shift towards lower deprivation. **Waikato** and **Northland** appear to be **trending towards lower deprivation** also, though with lower case numbers than Counties Manukau. Deprivation of cases in Auckland, Bay of Plenty and Waitemata DHBs have stayed relatively stable. For other DHBs where there have been very few cases reported in recent weeks, determining a trend in case deprivation is difficult.

Figure 8: COVID-19 case trends by DHBs weighted by housing deprivation score for the four weeks to 7 February 2022



Source: EpiSurv 2359hrs **07** February 2022 and IMD18 Database

[1] The Index of Multiple Deprivation is a set of indices following a methodology developed in the United Kingdom. It measures relative disadvantage in New Zealand neighbourhoods based on employment, income, crime, housing, health, education and access to services. For more information, please refer to *The 2018 New Zealand Index of Multiple Deprivation (IMD18): Indicators for social and health research in New Zealand* (Brief-report-IMD18.pdf (auckland.ac.nz).

The majority of cases continue to be in the most deprived. However, since late January there has been an increasing proportion in the mid-range and least deprived groups, especially among those who are not fully vaccinated.

Figure 9 shows cases by **housing deprivation** from 16 January 2022 to 06 February 2022 among those **fully vaccinated.** Rising cases affects all deprivation groups but is **still most apparent in the most deprived**.

Those **not fully vaccinated** have experienced increases in cases but on a smaller scale (Figure 10). Across this period, those most deprived are the highest proportion of cases but **the proportion of cases in the mid-deprived and least deprived groups has increased since 01 February**.

Figure 9: COVID-19 cases from 16 January 2022 to 6 February 2022 comparing cases by housing deprivation for those fully vaccinated

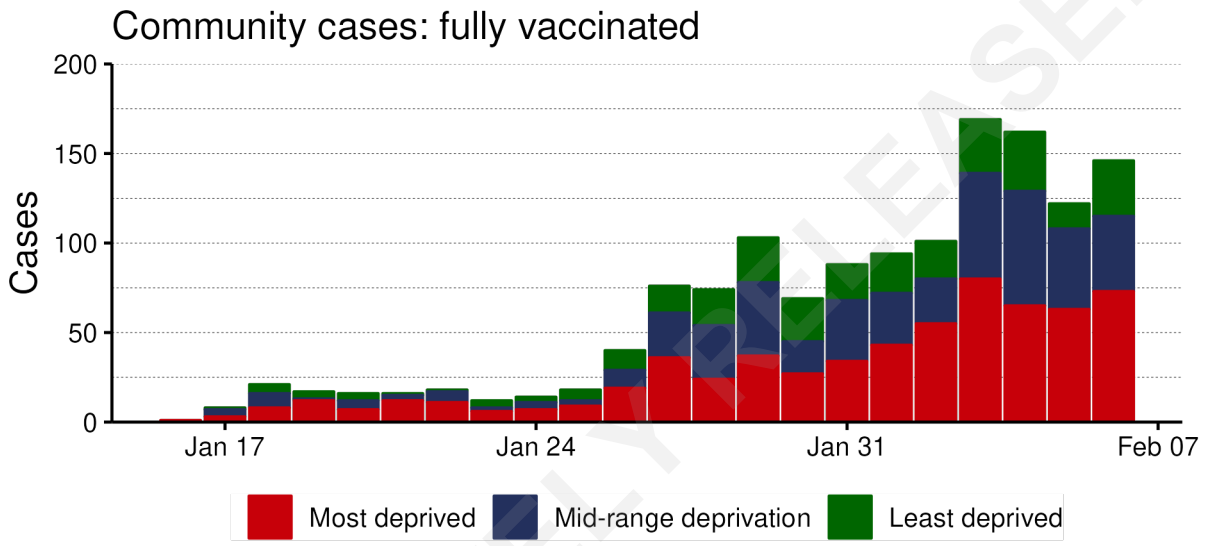
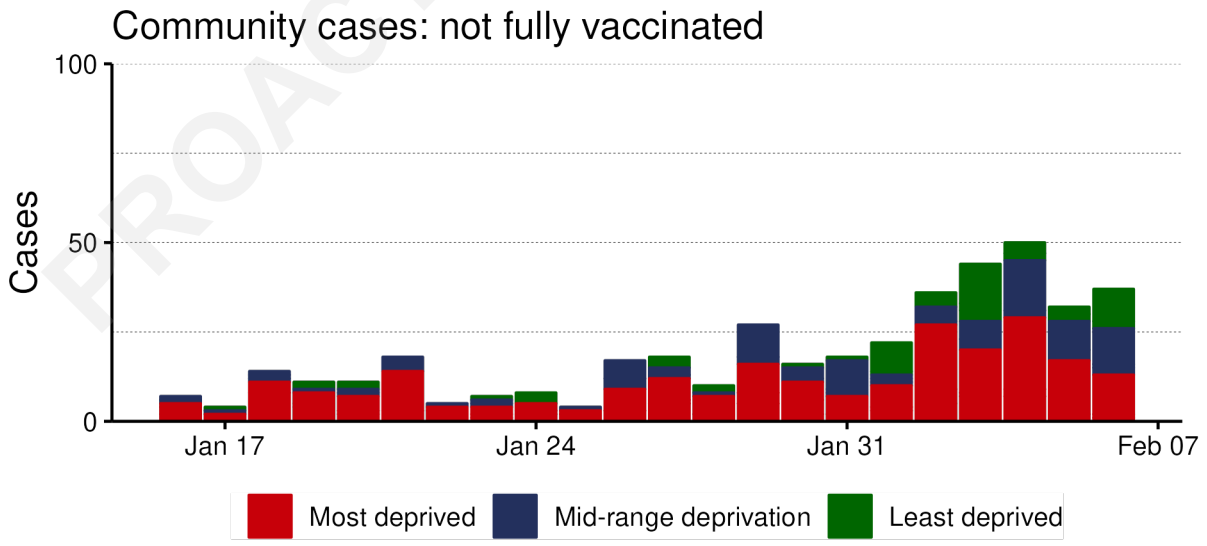


Figure 10: COVID-19 cases from 16 January 2022 to 6 February 2022 comparing cases by housing deprivation for those not fully vaccinated



Source: EpiSurv and COVID-19 Immunisation Register 2359hrs 06 February 2022, IMD18 Database

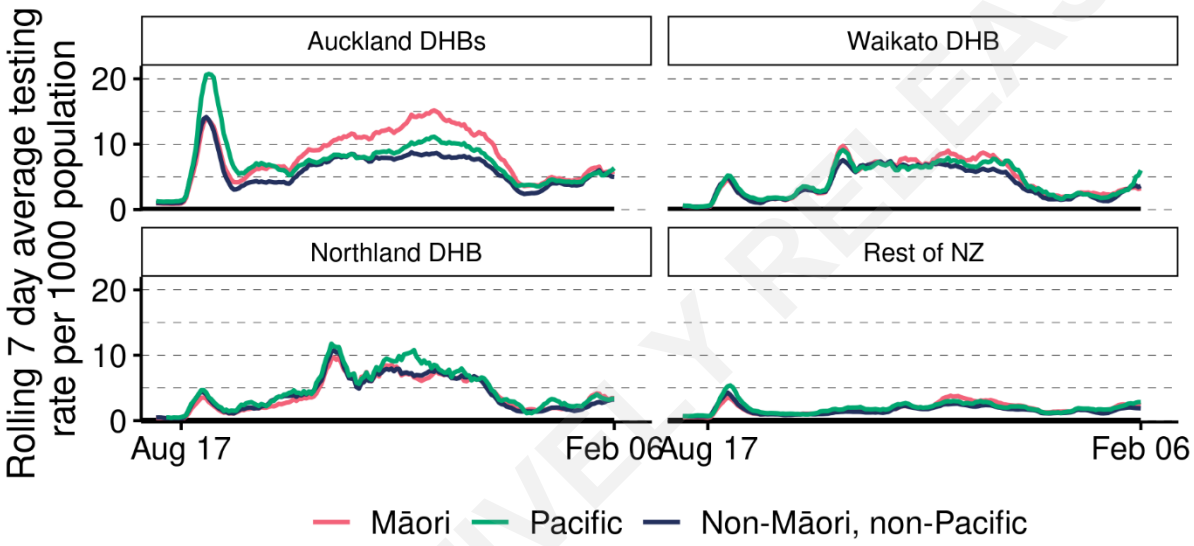
Community Testing

The figures in this section show the rates of community testing from 17 August 2021 to 06 February 2022.

The **Auckland, Waikato and Northland** DHBs continue to have the **highest number of tests per 1,000 population** (Figure 11). Testing across the country has remained lower and relatively stable since 01 January 2022.

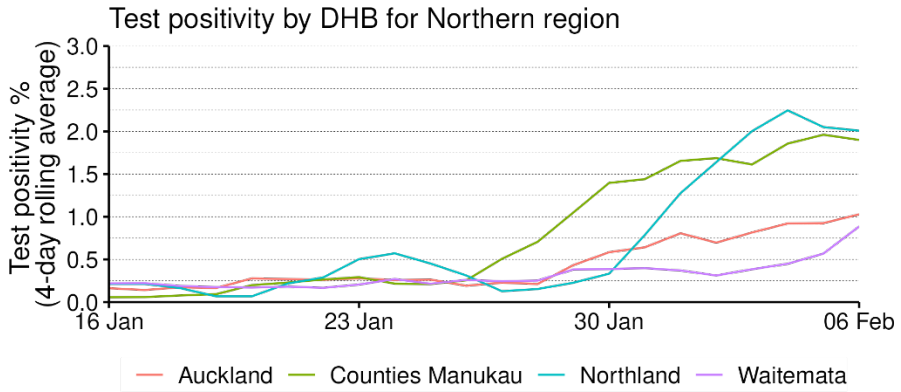
Test positivity remains low nationally, at 2.5% or lower in all regions (Figure 12). This is a slight increase from the highest being 2% when last reported. All regions, except Central and Southern DHBs, have been trending upwards since the last week of January. Northern and Midlands region currently have the highest test positivity at 2% and 2.5%. Northland and Counties Manukau are the highest in the Northern region while Bay of Plenty, Lakes and Waikato are the highest in the Midlands region.

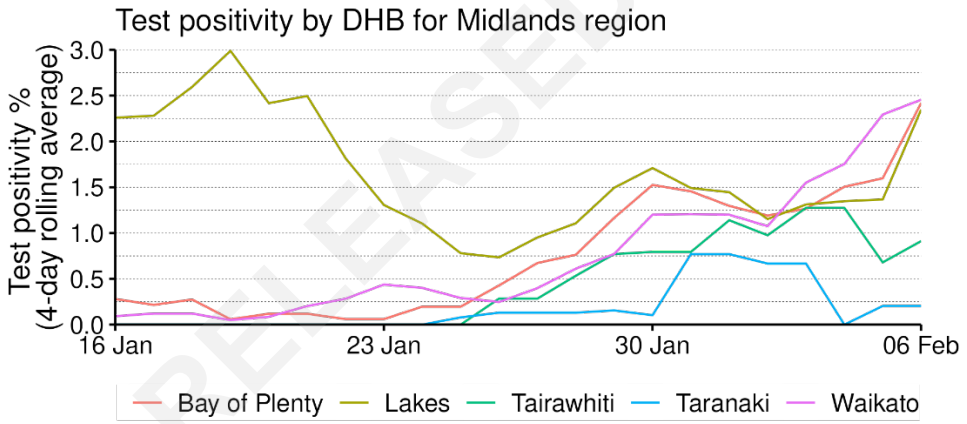
Figure 11: Seven-day rolling average COVID-19 testing rate by prioritised ethnic group and region, 17 August 2021 to 06 February 2022

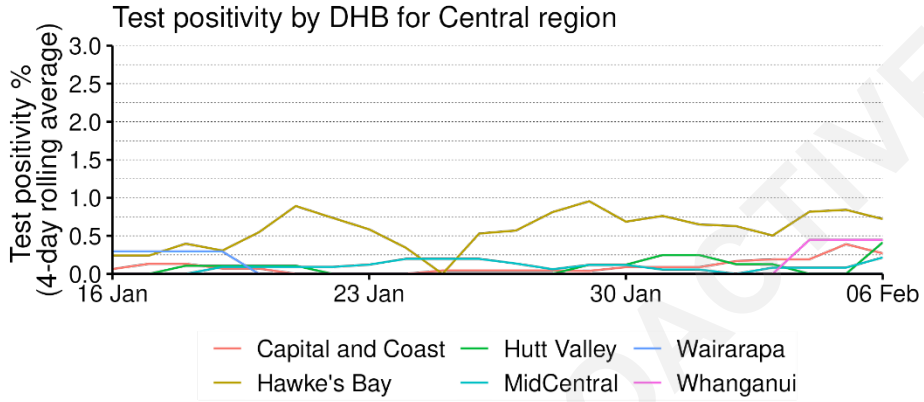


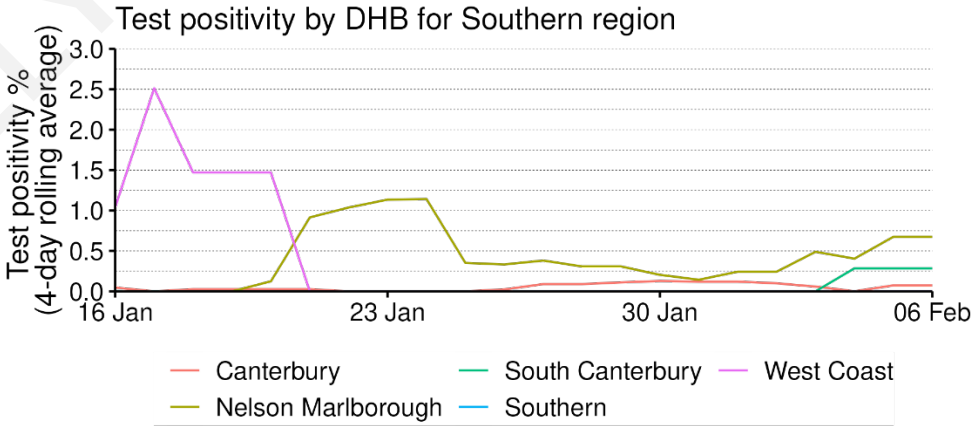
Source: Éclair testing database 06 February 2022; Excludes tests in returnees and border workers.

Figure 12: Test positivity (four day rolling average) by region and DHB, 16 January to 06 February 2022









Source: Éclair testing database 6 February 2022, EpiSurv 06 February 2022

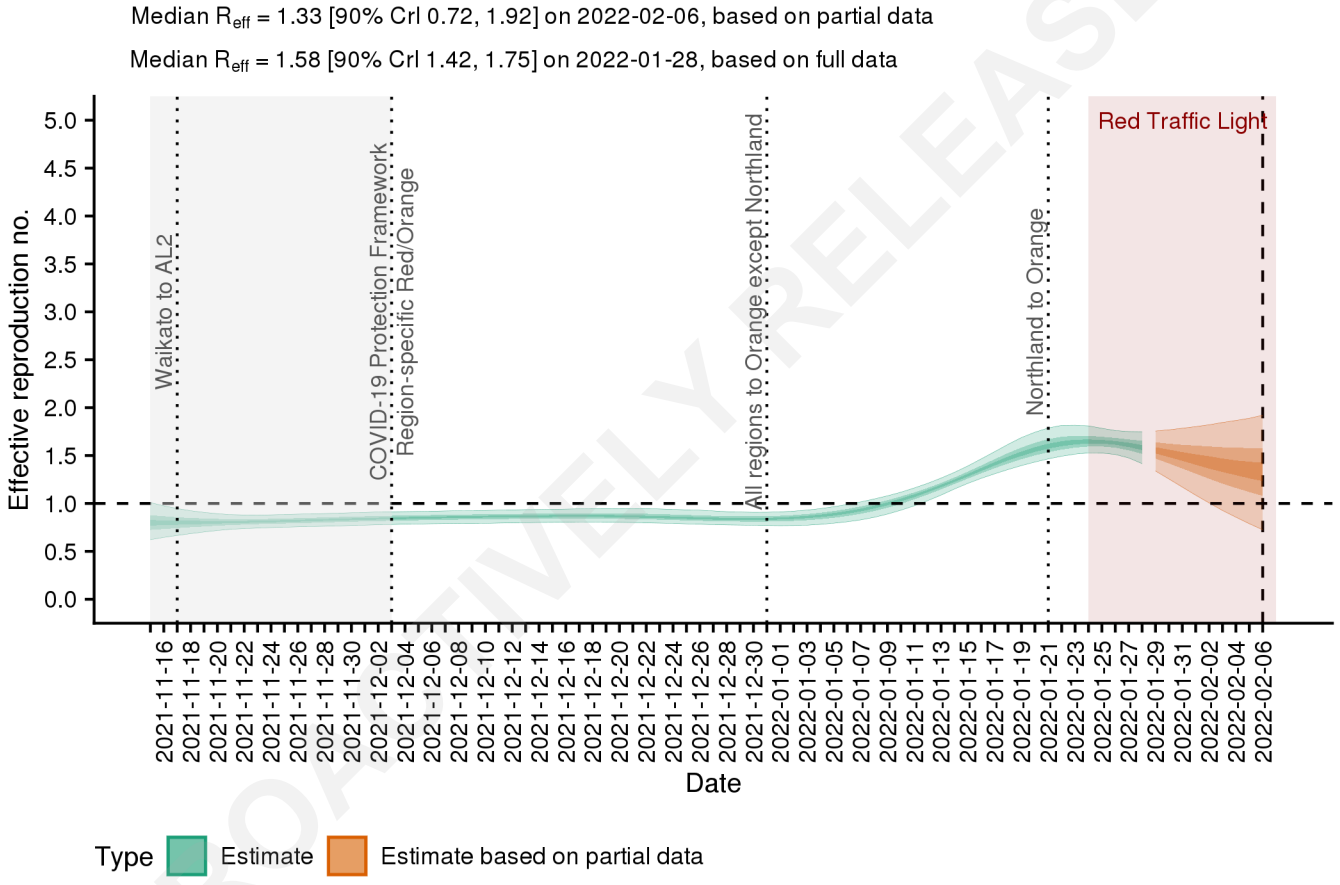
Actual Reproduction number and short-term projections

Figure 13 and Figure 14 show 'Now-casts' from the EpiNow package[2]. The results are presented with credible intervals: the darkest colour is for a credible interval of 20%, then 50%, and 90%. Smoothed estimates in green are based on complete data; estimates in orange allow for reporting delays in recent cases.

Figure 13 shows the estimated effective R (R_{eff}), indicating infections are likely increasing nationally, with **R_{eff} estimated to be between 0.72 and 1.92 as at 02 February 2022**.

While the credible interval includes a true decrease in cases ($R_{eff} < 1$), **it is more than 70% likely that the effective R is still above 1** and that the doubling time is around 8 days.

Figure 13: Estimated Effective R, all New Zealand



These estimates will be generated for individual DHBs when there are sufficient reported cases. Regional estimates will be provided next week.

[2] The EpiNow package 'now-casts' cases to measure current and past transmission nationally by calculating and then extrapolating the effective reproduction number, R_{eff}. Note that 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, and forecasting has been excluded in this report. There have been too few recent cases to estimate reasonable forecasts.

Figure 14: Community case numbers by date of report and date of infection, all New Zealand