PUBLIC HEALTH COMMUNICATION CENTRE AOTEAROA

Covid-19 Hospitalisations Now Peaking in Aotearoa NZ – But Key Covid-19 Control Measures Still Need to be Maintained

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In this blog we present hospitalisation data for Covid-19 suggesting that the numbers are now peaking across the country. To date, the peak burden of hospitalisations and ICU admissions in NZ has been lower than the peaks in Australia. Although various Covid-19 control measures are being de-escalated, we detail reasons why some controls need to be retained and even strengthened, and which we consider are most important to minimise harm to health and avoid burdening the health system.

Hospitalisation trends

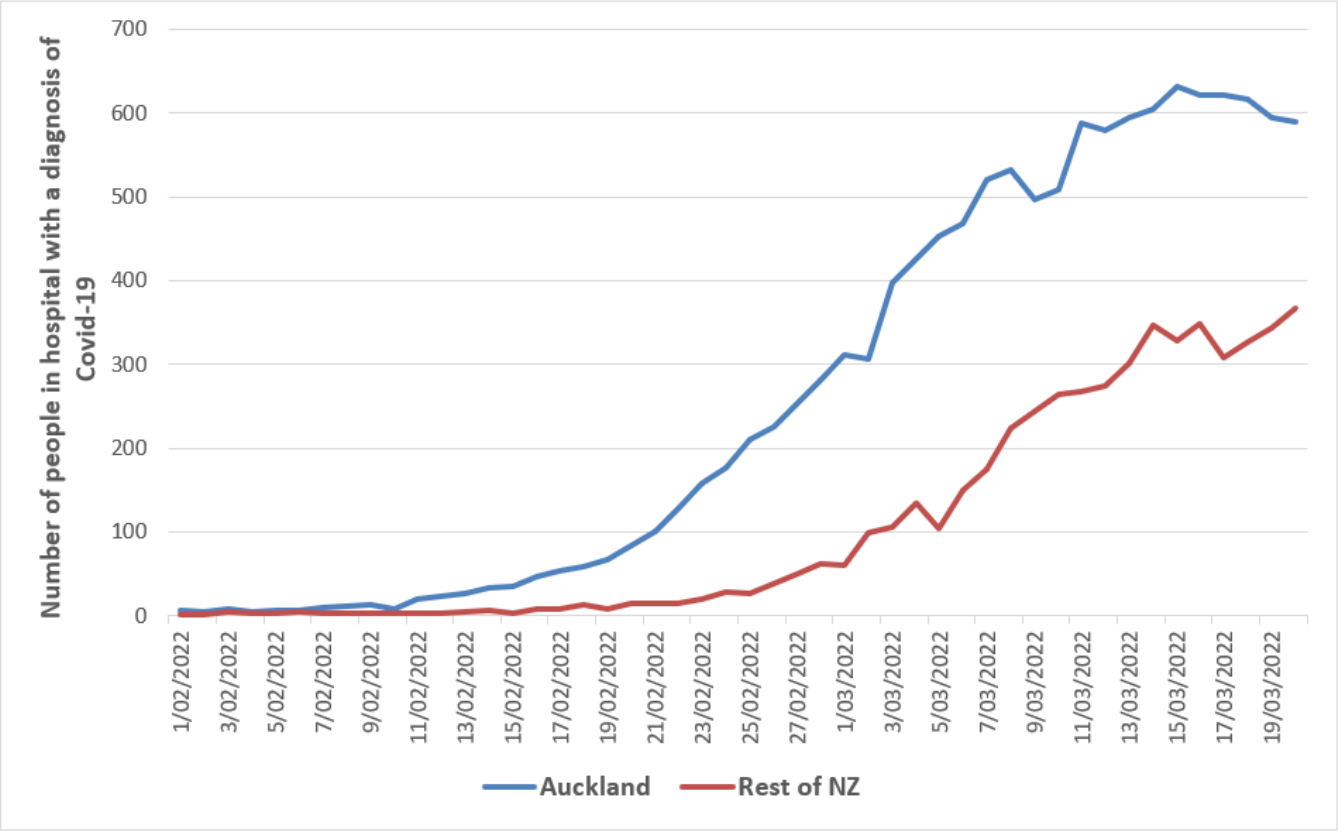
The peak burden in hospitalisations is an important data point in the Omicron epidemic as it is a more valid indicator of the epidemic peak than are daily case numbers. This is because case numbers massively under-represent true infections in the community since some people have no symptoms, some have symptoms that are too mild to motivate them to get tested, and some people may not upload their positive test (RAT) results.

The Figure below suggests that the number of people in hospital with a Covid-19 diagnosis peaked for Auckland on 15 March 2022, but for the rest of NZ this peak is still unclear with the highest number to date being yesterday – 20 March. The peaks for people in intensive care (IDU or High Dependency Units) and daily deaths may also be yet to come.

Overall the peak hospitalisation burden for all NZ (971 cases on 16 March) is lower than has been seen with Omicron in Australia (where on a per capita basis we would have expected 1107 people in NZ hospitals). This difference may partially reflect different hospital admission practices (relatively to community care for Covid cases) but it may also reflect better control measures in NZ. These include the benefit of better vaccination and booster coverage in NZ at the time of the Omicron wave, and possibly better use of masks and physical distancing interventions. It is also looking like the peak in ICU cases will be less than the 90 expected on a per capita basis if considering the Australian experience with Omicron. NZ is also doing very much better than another jurisdiction that initially took an elimination approach: Hong Kong. The very high current burden of hospitalisations and deaths in Hong Kong appears to be largely related to inadequate vaccination of the older population [1].

As with all measures of Covid-19 epidemiology, it is important to recognise the limitations of the surveillance data. The Ministry of Health has been reviewing case definitions and classification of cases reported as Covid-19 hospitalisations and deaths. They note that hospitalised Covid-19 cases include three groups: people in hospital primarily because of Covid-19, those who have pre-existing conditions who get Covid which makes that condition worse, and people who are admitted for unrelated reasons and are found to be infected on routine screening tests. It is not clear the extent to which the daily case reports include all three groups.

Figure: Daily number of people with Covid-19 infection in Auckland hospitals (North Shore, Middlemore and Auckland) and in the rest of NZ from 1 February 2022 to as reported on 20 March 2022 (abstracted from Ministry of Health daily news reports)



What Covid-19 control measures do we still need to keep?

Overall the prevention of Covid-19 deaths with the country's initial elimination strategy [2] has been a remarkable success story with NZ having the lowest excess deaths in the OECD group of countries. Economic performance since the start of the pandemic has also been relatively good compared with other OECD countries when considering GDP and unemployment levels. Indeed, we have recently summarised some of the key lessons from the first two years of the pandemic in an article published in The Conversation on the 28 February to mark the 2-year anniversary of the first confirmed Covid-19 case in NZ.

NZ has transitioned to a mitigation strategy to manage widespread Omicron transmission. This strategy uses continuing control measures to limit Covid-19 transmission which in turn minimises suffering from illness, deaths and long-term health effects (eg, from long Covid in adults and in children). Keeping cases low will also minimise disruption to the health care system, both primary care and hospitals.

With the Omicron pandemic wave starting to recede (at least in Auckland) the government has started to lessen some of the pandemic control measures. But caution is needed. Even though the pandemic wave may be starting to decline, there are still tens of thousands of people being infected every day. If NZ follows the pattern seen in Australia, we may see case numbers decline to a new baseline level (perhaps of several thousand cases a day), and then increase again as a second wave. The medium to long term trajectory of the pandemic is highly uncertain.

The most important control measures in our view for the government to follow are as follows:

1) Raise levels of third dose Covid-19 vaccination coverage. To be fully vaccinated against Omicron requires three doses of vaccine. Higher levels of the third dose (booster)

coverage are needed for all NZ adults, but especially for Māori. Only 73% of the eligible NZ population (those over 18 years using Ministry of Health data) had a third dose and this is 59% for Māori and 60% for Pasifika (as of 19/3/2022). Additional resources to Māori and Pasifika providers are likely to be needed to build on their success with getting high coverage for the first two doses.

2) Raise levels of vaccination coverage among eligible children. The increasing evidence about the risk of long Covid in children and the likely protective effect of vaccine, provide further support for vaccinating children. Only 8% of the eligible child population have had a second dose (as of 19/3/2022). There is also an equity gap here with the figure for Māori and Pasifika both being <5% for the second dose. Initiatives may also need to boost coverage of routine immunisations – as these have fallen off during the pandemic.

3) Upgrade the vaccine pass and maintain selected vaccine mandates to protect vulnerable groups. The vaccine pass and upgraded immunisation register are key infrastructure to manage information about individual and population vaccination status. They need to be upgraded to reflect changing requirements such as the need for three vaccine doses to provide reasonably immunity against Omicron. Indoor vaccine mandates and occupational vaccine mandates will need to continue to protect selected groups eg, for health care settings and workers, aged residential care settings and workers, and potentially for first responders. Other occupational groups, venues and workplaces could be left to decide for themselves if they wish to have vaccine requirements – according to what is most appropriate for the safety of their workers and customers (albeit with evidence-based guidance provided by health authorities and a supportive legal framework that empowers the owners of these venues and workplaces).

4) Keep mandatory mask use in key indoor settings, particularly: public transport (including aircraft), all healthcare settings, and in aged-residential care settings. This will also help with preventing other respiratory infections in the coming winter months.

5) Continue making ventilation improvements for indoor environments, notably schools and workplaces (see these previous blogs on the ventilation issue: in schools, a study on selected schools, and elsewhere).

6) Continue to promote people staying at home when unwell and offering support to those who are isolating at home when they test positive for Covid-19. This may require increased support for service providers working with more deprived communities and also those providing culturally appropriate support for Māori and Pasifika communities.

7) Maintain essential border biosecurity measures against Covid-19. Additional unvaccinated people arriving in NZ is the last thing we need during a pandemic. Such travellers increase the pool of people who are vulnerable to getting infected, passing on the virus to others, and potentially adding to the burden on the hospital system. The entry requirement needs to be raised to require full protection, ie, three vaccine doses. Exceptions could be considered (eg, there is a Bill of Rights argument that NZ citizens could be exempt, though it would be highly preferable for them to delay their return until the Omicron wave has receded). A well organised system of testing is also needed to provide addition protection and surveillance for new variants (including RATs, backed up with PCR for positives, and whole genome sequencing to identify any new variants).

In future blogs we hope to discuss the need for potential refinements in the country's surveillance system for Covid-19 and other legacy benefits of the pandemic response (eg,

the need for purpose-build quarantine facilities and a successor Alert Level System that can cover a range of pandemics).

Given the likely continuing threat from Covid-19 for the foreseeable, it will be important to consolidate pandemic management activities into a national Centre that can provide the critical mass of expertise and experience to coordinate the response in a sustainable way. Such a Centre would presumably be a key part of planned enhancements to NZ's public health infrastructure, including the new Public Health Agency and Māori Health Authority.

Finally, another key action is to capture the lessons learnt through a Royal Commission of Inquiry into the pandemic response (as we argued for in June 2020). This is particularly important as the world could face pandemics far worse than Covid-19 in the future eg, from bioengineered weapons. These lessons might even help us reduce the annual health burden from winter respiratory illnesses, including seasonal influenza.

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Image by Luke Pilkinton-Ching, University of Otago Wellington

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