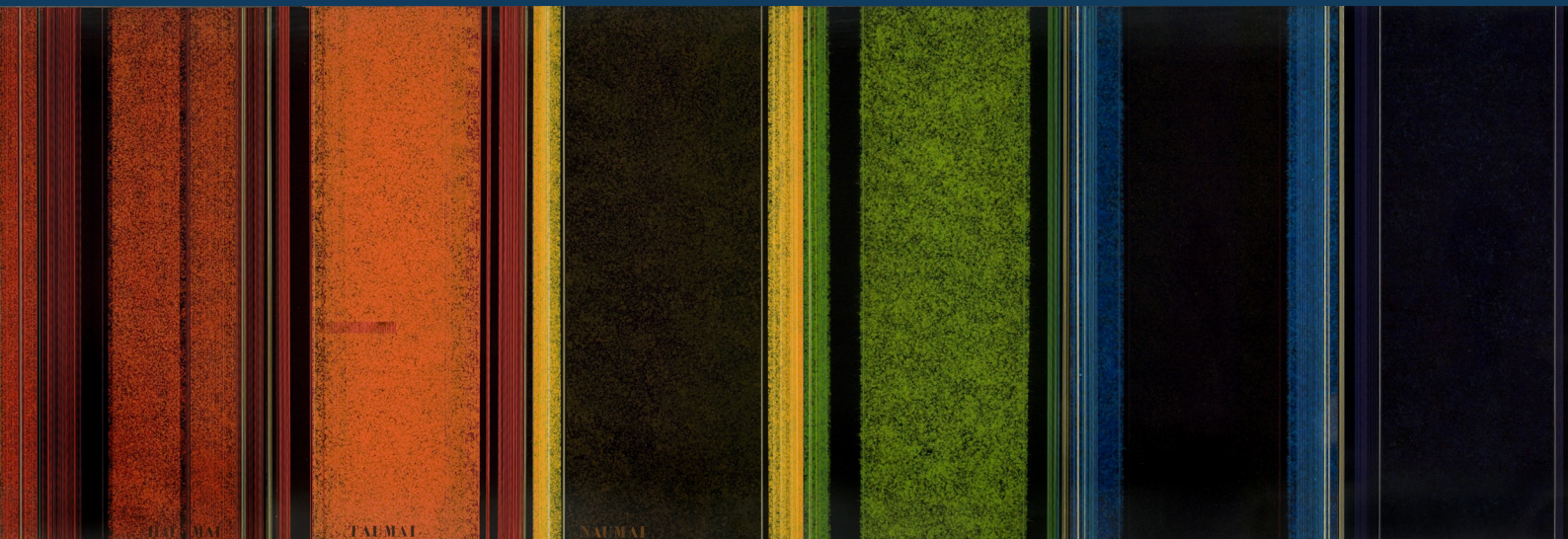


# A window on quality 2022: COVID-19 and impacts on our broader health system (Part 2)

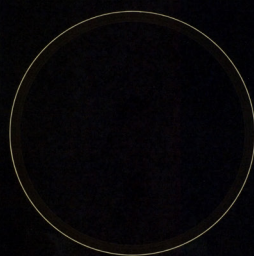
## He tirohanga kounga 2022: Me ngā pānga ki te pūnaha hauora whānui (Wāhanga 2)



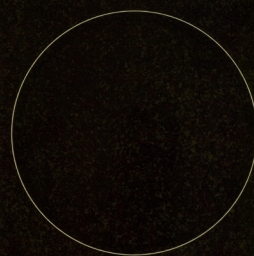
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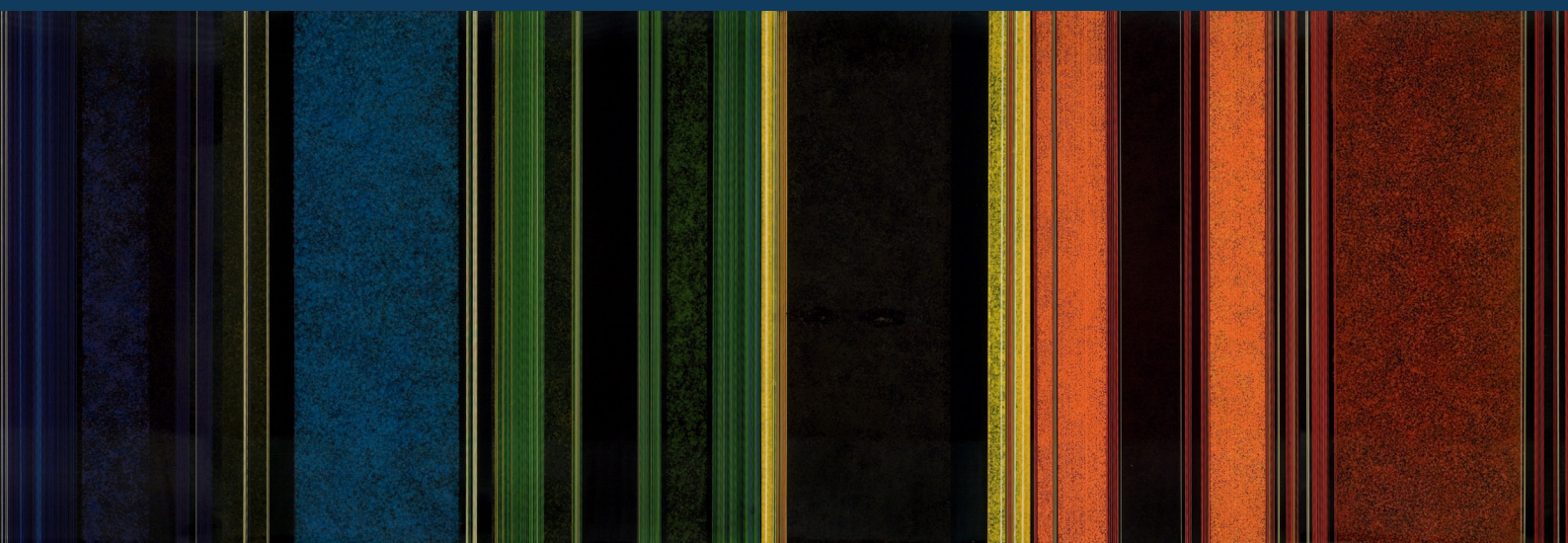
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KIA HEREA MAI  
TE KAWAI KOROKI



KIA TATATA MAI  
I ROTO I TANA  
PUKOROKORO WHAI KARO  
HE KUAKA  
HE KUAKA MARANGARANGA



KOTahi MANU  
I TAU KITE TAHUMA  
TAU ATU  
TAU ATU  
KUA TAU MAI





© Installation photograph courtesy of Auckland Art Gallery Toi o Tāmaki

### Note on the cover image | He kōrero mō te uhi

The cover features a reproduction of Ralph Hotere's *Godwit/Kūaka*, 1977, enamel on board, 2,400 x 18,000 mm. Chartwell Collection, Auckland Art Gallery Toi o Tāmaki, gift of Auckland International Airport Ltd, 1997.

The Commission thanks and acknowledges Auckland Art Gallery Toi o Tāmaki, the Chartwell Trust and the Hotere Foundation Trust for their permission and support to reproduce the artwork for this report.

In 1977, Ralph Hotere was commissioned by Auckland International Airport to create an 18-metre long mural for installation in the Arrivals Hall of the Jean Batten Terminal building. Hotere's mural remained in the airport's welcoming area until 1996, when redevelopment of the terminal building began. The mural was removed from the airport's art collection, purchased by the Chartwell Trust and lent to Auckland Art Gallery Toi o Tāmaki in 1996.

At the centre of the mural, the poem reads:<sup>1</sup>

#### **Ruia ruia**

*Kia hemo ake  
Ko te kaka koakoa  
Kia herea mai  
Te kawai koroki*

#### **Opea opea**

*Kia tatata mai  
I roto i tana pukorokoro  
whaikaro  
He kūaka  
He kūaka marangaranga*

#### **Tahia tahia**

*Kotahi manu  
I tau ki te tahuna  
Tau atu  
Tau atu  
Kua tau mai*

#### **Scattering**

*Death/exhaustion rises up  
It is the rope, koakoa (the cry  
of the bird)  
Binding you here to me  
The cry/chattering of the flock.*

#### **Gathering**

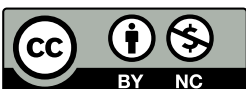
*Come close together  
From inside its throat—  
a marauding party  
A godwit  
A godwit that hovers*

#### **Forming a single unit**

*One bird  
Has settled on the sand bank  
it has settled over there  
it has settled over there  
They have settled here<sup>†</sup>*

<sup>†</sup> Note: poet and friend of Hotere's, Bill Manhire, remembers Hotere occasionally reciting the poem at the dinner table, with a slightly different translation for the final stanza:

*It has landed.  
It has landed.  
[pause, and then a slightly different inflection]  
It has landed.*



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**HEALTH QUALITY & SAFETY  
COMMISSION NEW ZEALAND**  
*Kupu Taurangi Hauora o Aotearoa*

ISBN: 978-1-98-859970-0 (online)

Published in October 2022 by the  
Health Quality & Safety Commission,  
PO Box 25496, Wellington 6146,  
New Zealand.

This document is available online at:  
[www.hqsc.govt.nz](http://www.hqsc.govt.nz)

Enquiries: [info@hqsc.govt.nz](mailto:info@hqsc.govt.nz)

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## Acknowledgements | He whakamihi

Adrian Jamieson  
Allison Plumridge  
Dr André Cromhout  
Dr Andrew Connolly  
Dr Anna Howe  
Api Talemaitoga  
Dr Brian O'Donnell  
Dr Carl Horsley  
Chartwell Trust  
Dr Claire Hardie  
Dr Clive Benseman  
Dr David Codyre  
Dr Fiona Miles  
Gabrielle Nicholson  
Geoffrey Heath  
Dr Greg Williams  
Holly Walker  
Hotere Foundation Trust  
Jason Gurney  
Jenny Wong  
Joanna Madsen  
John McDougall  
Karen Orsborn  
Kevin Sharkey  
Maine Mareko-Johnson  
Dr Maria Poynter  
Dr Michael Fletcher  
Michelle Liu  
Dr Mike Shepherd  
Morag McDowell  
Natalie Horspool  
Natasha Davidson  
Oliver Taylor  
Pamela Hewlett  
Patrick Firkin  
Peter Maciver  
Professor Di Sarfati  
Professor Jackie Cumming  
Professor Nikki Turner  
Associate Professor Susanna Every-Palmer  
Rachel McGillivray  
Dr Raewyn Gavin  
Robert Brooks  
Ron Brownson  
Sally McLean  
Samantha Murton  
Sue Gardiner  
Tessa Luff  
Teuila Percival  
Tim Boyle  
Tracy Silva Garay



## Foreword – Dr Dale Bramley | Kupu whakataki – nā Tākuta Dale Bramley

*Tēnā hoki koutou me ō tātou  
Tini mate e hingahinga mai nei,  
i te wā unga mai a te mate kowheori-  
19.*

*Tē taea te aha atu i te tangi,  
I te maumahara ki a rātou.*

*Ko te hunga mate ki a rātou*

*Ko tātou o te ao ora.*

*Kia ora huihui mai tātou*

*Greetings to you all and to the  
Many dead who have fallen from  
when COVID-19 arrived among us.*

*With little else to do than mourn them  
And remember their feats.*

*The dead have passed on*

*We of the world of the living remain.*

*Greetings to us all*

I wish to acknowledge those who have passed in the COVID-19 pandemic. Many have lost friends, whānau and loved ones to this virus. Māori and Pacific communities have experienced this burden most painfully as the weight of mortality has affected these communities most. I acknowledge those who have died.

Over the last two and a half years Aotearoa New Zealand's health care workers have worked tirelessly during rapid, large-scale change and under intense and unprecedented pressure. I salute their tremendous response, commitment and personal sacrifice.

Despite these challenges it is remarkable to note that the Health Quality & Safety Commission's patient experience data shows no significant changes in patient experience since the beginning of the pandemic. Under terrible strain, our health care workers have delivered a patient experience that compares favourably with that before the pandemic. This is extraordinary.

This report highlights several areas of the health system where the impacts of the pandemic have had complex effects aside from infections, hospitalisations and mortality. Similar findings would likely be found in other countries, should such a review be undertaken.

It is a long report, yet it necessarily represents only a partial and curated view of the system and these widespread impacts. However, if we were to attempt to summarise the key findings, we would have six connected points.

1. Aotearoa New Zealand's experience of and response to the pandemic was different to, and more successful than, most other countries. This allowed us to keep COVID-19 out of the country long enough to vaccinate strongly and save many, many lives.

2. However, the arrival of the Omicron variant in the community exposed long-standing, fundamental weaknesses in our system. The first of these weaknesses is the increasing mismatch between the demand for health services and the ability to meet that demand. The second weakness is the entrenched inequities in health status, health care quality and outcomes experienced by Māori, Pacific and disabled peoples.
3. This chronic mismatch between demand and supply has led to a focus on efficiency in the system – finding different ways to do more for less. This has also meant our system has less in-built resilience and capacity to adapt to crisis. There was little slack in the system to cope with external shocks.
4. There are ways out of this. Appropriate funding of health services must be balanced with the focus on efficiency and equity. Paradoxically, insufficient resources in one part of the system can create waste in others, as patient flow through the system breaks down. A wider system view is needed. Chapter 3, for example, covers the vicious cycle of increased demand and staffing pressures added to by the pandemic. Workforce deficits lead to burnout, leading in turn to departures and further staff deficits, and ultimately effects on quality of care. A vicious cycle of reduced staffing and poorer care can develop.
5. There is a compelling opportunity to better draw on the unique power of local communities that we have seen work so successfully in the Pacific and Māori responses to lockdowns, vaccination and to wider need in the community. Some of these we reflect in our consumer narratives throughout this report.
6. Drawing on points 4 and 5, there are opportunities in system-wide quality improvement approaches that combine established methodologies of collaboration and measurement for improvement with the strengths of consumers and local communities. Three areas in particular (childhood immunisations, acute care and planned care), which have been powerfully affected by the pandemic, could benefit from these approaches of collaborative expertise, local freedom and strong, innovative measurement.

Our new system makes new approaches possible and there are innovations and work currently in progress. The Planned Care Taskforce and the Workforce Taskforce are already at work. Initiatives in support of greater focus on mental health and the mental health workforce are also in progress, and we must keep in mind this report's findings on the mental health impacts affecting younger people. With the strengths of one system, this work in progress and with greater emphasis on shared knowledge and priorities, the hope of this report is that the problems identified are easier to address.

Dr Dale Bramley  
Chair, Health Quality & Safety Commission

# Executive summary | He kupu whakarāpopoto matua

## **Introduction**

Around the world, the COVID-19 pandemic has placed a massive strain on health systems, which have recovered only partly or, in some cases, not at all. Aotearoa New Zealand has been globally recognised for its response to COVID-19 through multiple phases of the pandemic. We have had a very different pandemic to many other places in the world. Before the pandemic, however, a wide range of measures and feedback from people in the health and disability sector indicated that Aotearoa New Zealand's health system was already experiencing a steadily rising tide of need caused by under-funding over time while our population has been growing and ageing. The effects of the pandemic added to this rising need rather than leading to the sudden pandemic 'tsunami' in 2020 and repeated waves afterward that many other countries experienced.

In this report, *A window on quality 2022: COVID-19 and impacts on our broader health system (Part 2) | He tirohanga kounga 2022: Me ngā pānga ki te pūnaha hauora whānui (Wāhanga 2) (Window 2)* we use perspectives from respondents in the health and disability sector and hard data to continue important lines of enquiry we began in *A window on quality 2021: COVID-19 and its impacts on our broader health system (Part 1) | He tirohanga kounga 2021: Me ngā pānga ki te pūnaha hauora whānui (Wāhanga 1) (Window 1)*, published in December 2021. We then investigate some aspects of what we know about the effects of the pandemic on the population's mental health and on our health care workforce. Focusing on a key issue Window 1 identified, we also examine the impacts of the pandemic on the experience of disabled people using health and disability services.

## **The broad view: stringency and mortality**

Aotearoa New Zealand has maintained more freedoms (or level of 'stringency') on average than many countries over the whole period of the pandemic to date. However, lockdowns associated with arrival of the Delta variant have now brought our level of stringency to a level similar to that of some Scandinavian countries. Measures of excess mortality using data to mid-2022 suggest that, during the initial lockdown period in 2020, fewer people died than would be expected for the time of year and over the winter of 2020. Most of the lives saved were people aged over 60 years. Most recent data shows that our excess mortality rate has risen above expected levels. Over the entire period of the pandemic in total, as of mid-2022, about the same number of people have died as would be expected in this period, but at different times. This is an extraordinary achievement, rare in the world, but we await more recent data to complete the picture.

We note that Pacific and Māori communities of south Auckland in particular have now faced three waves of COVID-19. These waves have had impacts on wellbeing,

employment and mental health, on top of the physical effects of the virus itself in terms of infections, hospitalisations and deaths. The Pacific and Māori responses to the pandemic show that community agency and voice have been key in leading effective responses.

**‘E fofo le alamea le alamea’ – solutions for problems lie within the collective intelligence of that community.** A response that looked and felt Pacific to Pacific peoples, and looked and felt Māori to Māori, was acceptable and effective. This remained true for initiatives ranging from promoting COVID-19 vaccinations to delivering care in the community during the first wave of the Omicron variant.

### ***Chapter 1: Continued lines of inquiry***

In this chapter, we continue and extend analyses from Window 1, looking at immunisations, cancer screening, the experience of emergency departments, delays in planned care/electives and cancer care.

- The pandemic has contributed to reductions in the rate of childhood **immunisations** in Aotearoa New Zealand. Since March 2020, rates of immunisations among six-month-olds have fallen from 80% to 66% in June 2022. Coverage of 24-month-olds has fallen from 91% in March 2020 to 83% in June 2022. This has particularly impacted Pacific and Māori babies and babies in families living in poverty.
- The pandemic has contributed to reductions in rates of **screening for breast and cervical cancer**. Total breast screening coverage fell from 72% in June 2019 to 66% in June 2020 and has remained at a lower level since then, after six years of stable 72% coverage. Pacific women have experienced the greatest change, and coverage for wāhine Māori remains most inequitable. In cervical screening, we have lost the gains achieved over the last 14 years. Coverage, already declining since 2016, fell further from 71% in June 2019 to 68% in June 2020. A slight uptick in 2021 was followed by another fall in 2022 to 67%, the lowest in 14 years.
- **Emergency departments** have experienced increasingly difficult circumstances. Feedback from frontline staff indicates the main reason for these difficulties is that limited system resources (made worse by pandemic effects on staffing levels) have come up against greater, more complex, demand arising from the pandemic. Recent data suggests the number of presentations to emergency departments has been steady overall but the number of more urgent presentations has increased since the first lockdown in 2020.
- Access to **planned care** has become clogged. The percentage of patients waiting longer than four months for their first specialist assessment has increased from 14% to 26% in the year to May 2022. The number of patients who were given a commitment to treatment but did not receive that treatment within the required timeframe (four months) has more than doubled in the last year to

almost 28,000 (41%) in May 2022. Planned care activity in hospitals dropped sharply over the first lockdown, creating a backlog, but this elective activity returned to expected levels. Starting again at the Delta outbreak in August 2021, however, the situation has worsened, with activity consistently lower than that expected based on earlier years.

- Disruption to **cancer services** has been minimised according to data from Te Aho o Te Kahu, the Cancer Control Agency. Despite the lower and inequitable rates of some kinds of cancer screening noted above, and early falls in registrations, diagnostics and treatment in March 2020, since then services have largely been maintained. Since June 2020 new cancer registrations have increased slightly.

## **Chapter 2: Mental health and COVID-19**

The pandemic has had a profound impact on people's mental health. However, quantifying and understanding this impact is challenging. We look at selected indicators of how the pandemic has impacted mental health over the life course.

### **Maternity**

- Well Child/Tamariki Ora checks help with maternal and whānau mental health in the infant's first year of life. The pandemic disrupted these checks: the percentage of contacts fell dramatically from March 2020, while recovering slightly to March 2022.
- Calls for help with mental health issues to PlunketLine rose strongly in late 2020. They peaked in the second quarter of 2021 at four times the number of calls received before the pandemic.
- Referrals to Aronui Ora, a maternal mental health service that serves the entire Auckland District Health Board (DHB)<sup>a</sup> area, rose sharply in the 2020/21 financial year after a steady number of referrals over the three previous years.

### **Child and youth**

Data indicates the pandemic has had an impact on the mental health of children and young people in particular.

- Calls to the Whakarongorau/1737 helpline from those aged 13–19 years asking for help spiked in April 2020. The volume of calls with a significant risk of suicide began to rise above the volume of all earlier periods from April 2020, peaking in January 2022.

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<sup>a</sup> We use the term 'district health board' in this report where the content relates to pre-July 2022, when the district health boards transitioned into being health districts under the auspices of Te Whatu Ora – Health New Zealand.

- There appears to have only been a small disruption to the percentage of clients aged under 25 able to see a mental health specialist within three weeks of referral for reasons that clearly relate to the pandemic. However, this first appointment is usually for an initial suitability assessment. Waiting times for follow-up appointments for further assessment and formulation of a treatment plan are not captured in the available data but information from the sector, media reports and recently published work suggest that treatment has been harder to access with longer waiting times since the start of the pandemic.
- The number of antidepressants and antipsychotics dispensed to those aged 0–17 years clearly increased at the start of the pandemic. More children aged 0–15 years were admitted to hospital for mental health reasons than would be expected from June 2020 to the August 2021 lockdown. Among children aged 10–14 years, hospital admissions with diagnoses of intentional self-harm (especially intentional self-poisonings) have risen since March 2020.
- The Eating Disorders Association of New Zealand reports a 58% increase in requests for assistance through its helpline in the 2020/21 financial year. New community referrals of those aged under 19 years to Auckland’s Tupu Ora community-based specialist eating disorder service rose from around 100 per year to a new high of 180 in 2020/21. Hospital admissions likewise rose to an unprecedented high in 2020/21 for young people in the area of metro Auckland DHBs who have become medically unstable as a consequence of the severity of their eating disorder.

### **Working-age adults**

- New Zealand Health Survey data in 2020/21 shows an overall prevalence of 9.6% of adults aged 15 years and over reporting psychological distress in the last four weeks, which is in line with the steady year-on-year increase occurring in previous years. However, the proportion of Pacific women reporting psychological distress nearly doubled in one year, from 11% in 2019/20 to 19% in 2020/21.
- Whakarongorau/1737 helpline data shows clear spikes in calls from younger working-age adults related to the first lockdown.
- The number of antidepressants dispensed increased after March 2020 and remained higher than the steady rates observed between January 2016 and January 2020. The change is not due to the introduction of wholesale limits to dispensings of medication for a period early in the pandemic.
- Zero seclusion project data<sup>b</sup> shows short-term rises related to the pandemic in the rate of seclusion as a strategy to deal with people with mental health needs in inpatient mental health services. The main reason for the first rise was that the overall number of inpatients held in inpatient facilities decreased while the

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<sup>b</sup> Zero seclusion is a Health Quality & Safety Commission mental health and addiction quality improvement project, described in more detail on page 79.

number of seclusions remained steady. In contrast, another spike in the rate in August 2021 was related more strongly to an increase in the absolute number of patients being secluded. During this phase of the pandemic, services reported significant impacts on staffing, such as through illness, isolation and staff redeployment. Pressures on services related to lockdown and community spread of COVID-19 may therefore have contributed to decreased capacity and ability to pursue quality improvement work, and to these spikes in rates of seclusion.

## **Older people**

Despite the obvious disruptions to the networks, organisations and connections between whānau that support older people, including restrictions on those in aged residential care facilities, it is challenging to find data to quantify the mental health impacts of the pandemic on older people. Recent qualitative work has shown the pandemic has had effects on loneliness in older people, coalescing around three inter-connected ways older people themselves conceptualised and experienced loneliness: feeling disconnected, feeling imprisoned and feeling neglected.

## **Chapter 3: Workforce**

The health care workforce across the entire system has felt the impacts of the pandemic. Virtually all have been affected professionally and personally. Impacts on inequity and quality and safety follow on from this.

The Government has made 'Developing the health workforce of the future' a priority in its *Interim Government Policy Statement on Health 2022–2024*. It announced a raft of new measures to support, grow and develop the workforce on 1 August 2022.

Around the world, staff in many industries have changed their jobs or left their field of work entirely since the pandemic began. This trend has affected health care in particular, as examples from the United States, England and Australia show. Large-scale surveys show high and rising levels of burnout and mental health issues in health care staff during the pandemic. In some countries, the departure of staff was delayed until after the first phase of the pandemic. Aotearoa New Zealand managed to avoid this trend at that time due to the effective nature of our response. With the arrival of COVID-19 in this country, however, this overseas experience potentially holds a warning for the future.

Staff turnover in Aotearoa New Zealand has been rising rapidly from the beginning of 2021 after dips for most role categories at the beginning of the pandemic in March 2020.

## **Long-standing system settings**

Existing workforce shortages and under-staffing have been reported across services. The Omicron outbreak has added to staffing pressures in terms of staff illness, isolation requirements and inability to recruit more staff offshore.

## **Immediate effects of the pandemic in creating a workforce deficit**

At the height of the first Omicron outbreak, services noted that the pandemic was having three simultaneous effects that combined to create substantial workforce deficits. The pandemic created more demand for health care, while reducing the available workforce through both ill health and the demand for isolation, and at the same time making supply of care less efficient in various ways.

## **Compounding effects of workforce stress and environmental instability**

Long-standing stresses on the health system are compounded by their effects on the workforce. Burnout leads to higher sickness rates and turnover, both of which further increase the workforce deficit. These effects bring the risk of creating a vicious cycle of further stress and departures.

Distraction occurs where staff simply have too few resources to provide the level of care they would like to, often with activities foundational to good-quality care being foregone. This risks worse health outcomes and adverse events, which result in a psychological toll on staff and make burnout more likely. Again, a vicious cycle of reduced staffing and poorer care can develop. Several surveys report high levels of burnout in general practitioners (GPs) and the specialist medical workforce.

## **Impact on health outcomes**

There are early signs that health outcomes associated with good quality and safety practice have worsened since mid-2021. Worse outcomes have been evident over repeated months in terms of increasing numbers of in-hospital falls that resulted in a fractured neck of femur (broken hip), in-hospital *Staphylococcus aureus* bacteraemia infections and postoperative deep vein thrombosis/pulmonary embolism.

## ***Chapter 4: Disabled patient experience and Health and Disability Commissioner complaints***

The Health Quality & Safety Commission's large survey of primary care patient experience shows the pandemic has neither worsened nor improved the disparities in access to and experience of primary care between disabled and non-disabled people. However, these long-standing disparities remain stark and must be addressed.

### **Access**

From August 2020 to May 2022:

- on average, about a quarter (24%) of disabled people could not always get care when they wanted it, compared with 17% of non-disabled people. This disparity is largely consistent with findings before the pandemic



- young disabled people experienced worse access to care than those in other age groups
- young disabled Māori (aged 15–44 years) reported the worst access to care of any ethnic group, with 41% reporting they were not always able to get care from a GP or nurse when they wanted it
- 43% of disabled people of another gender reported not always being able to access care when they wanted it in the last 12 months
- those who self-identified as being disabled or who had multiple impairments reported worse access to care than those with one impairment
- the most-reported barriers to getting primary care when people wanted it were long wait times to get an appointment, pandemic alert levels and restrictions, difficulty taking time off work and other reasons.

## **Experience**

Fifteen percent of disabled people were not involved in decisions about their care and treatment as much as they wanted to be, compared with 10% of non-disabled people. This difference did not change over the pandemic.

Disabled people wanted their health professionals to be better at communication and listening, and to spend more time with them.

## **Health and Disability Commissioner complaints**

The Health and Disability Commissioner (HDC) has received an unprecedented number of complaints in the financial year 2021/22, 45% higher than 2018/19. In 2021/22, 26% of all complaints received were about issues related to COVID-19. HDC is currently receiving around 60–70 complaints related to COVID-19 a month. In the latest year's data, 18% of the complaints related to COVID-19 (158 in total) were about the impact of the pandemic on the system, including delayed care, staffing and other issues.

## **Conclusion**

The pandemic has been a transformative experience for our society and our health care system. As well as having a different experience of the pandemic from many other places in the world, we met the pandemic with a health system in a different state compared with others. Services have experienced the pandemic as adding to a rising tide of need in a context of decades-long under-funding rather than as the sudden tsunami of need other countries have experienced. Aotearoa New Zealand has no 'before' state to return to. We need to understand the different ways in which the pandemic has affected those who live with poverty, disability or mental health needs. To improve this understanding, we need to make better use of data and learn from the examples of dynamic response that Pacific and Māori communities and health care providers have given us.

Data is never values-free. Better use and understanding of data with an eye for resilience and adaptive capacity can:

- show us how outcomes differ for different groups
- detect signs that the system may be decompensating, that is, becoming unable to maintain its functions
- increase our understanding of system performance by combining what we learn from 'soft' intelligence (such as feedback from staff and consumers about their experiences) with measurable data
- highlight keystone risks – that is, critical resources or vulnerabilities that create significant risk across multiple areas. For example, the workforce shortage is a keystone risk that is already having system-wide impacts.

The experiences of the pandemic are now woven into the whakapapa of the health care system, shaping its future. If the pandemic has shown us anything, it is that the future is not the same as the past. There is no going back and the reforms offer an important opportunity for transformation and building a more resilient health care system that is better suited to the uncertain and dynamic realities we face.

# Introduction | Kupu whakataki

## ***The international impact***

Around the world, the COVID-19 pandemic has placed a massive strain on health systems, which have recovered only partly or, in some cases, not at all. It has had extraordinary impacts on service delivery, both demand for and supply of services, the health care workforce, the mental health of populations generally, and the mental and emotional health of staff.

## ***The opportunity for Aotearoa New Zealand***

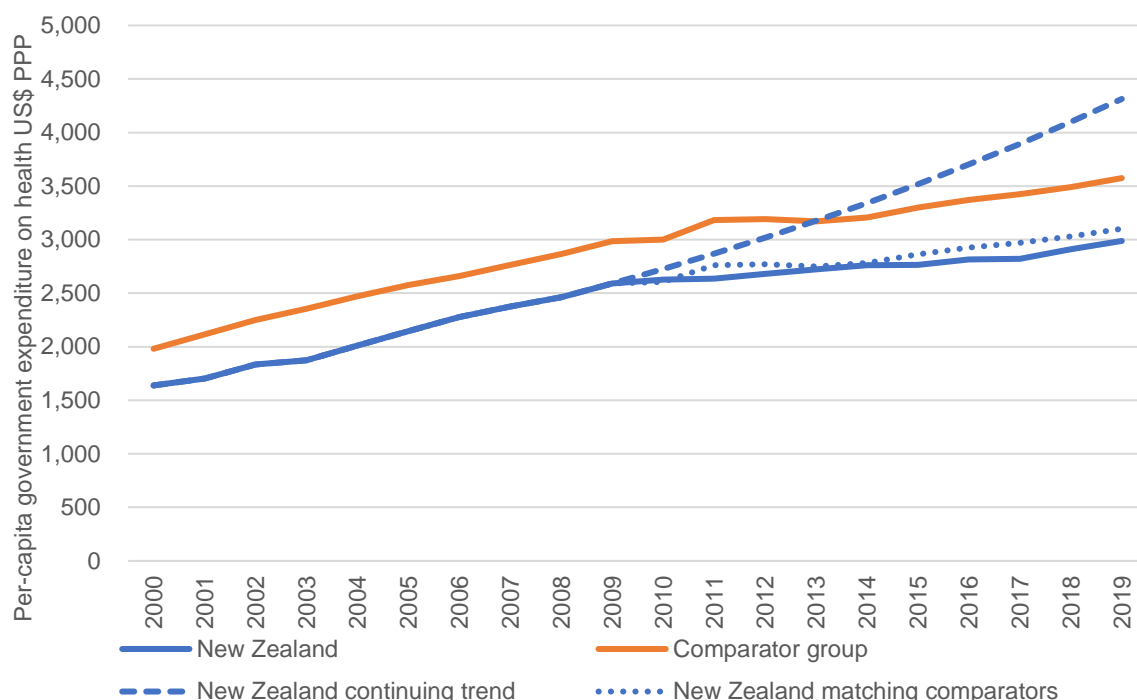
One of the key findings of this report, *A window on quality 2022: COVID-19 and impacts on our broader health system (Part 2) | He tirohanga kounga 2022: Me ngā pānga ki te pūnaha hauora whānui (Wāhanga 2) (Window 2)*, is that our experience of the pandemic to date has been very different from the experience of many other places in the world. A wide range of measures and perspectives from people in the health and disability sector indicate Aotearoa New Zealand's health system was already experiencing a steadily rising tide of need caused by under-funding over time while the population has been growing and ageing. The effects of the pandemic added to this rising need, rather than leading to the sudden pandemic 'tsunami' in 2020 and repeated waves afterward that many other countries experienced.

Figure 1 compares this period of under-funding with spending in a comparator group consisting of Australia, Canada, Ireland, Sweden, the United Kingdom and the United States. (We chose these countries because we have compared them with Aotearoa New Zealand before<sup>2 3 4</sup> and they have comparable data.)

As the graph shows, after the global financial crisis (GFC) in 2007, per-capita government expenditure on health flattened from its upward trend in the group of comparator countries (solid orange line). Aotearoa New Zealand's per-capita spending on health (solid blue line) has been consistently below the comparator group over time. The dashed blue line shows the projected trend of our per capita health spend if the GFC had not happened. Critically, however, the dotted blue line shows what Aotearoa New Zealand's health spend would be if it had matched the spending response of comparator countries after the GFC. A clear shortfall is evident; at its peak in 2017, our health spending was US\$150 lower per person.

Clearly then, we historically spent less per capita than comparator countries and limited health spend for longer after the GFC. Further, we limited the spend by **more** than comparator countries.

Figure 1: Government spending on health per person in US\$ purchasing power parity, 2015 constant prices, Aotearoa New Zealand and a comparator group of countries, 2000–19



Source: Organisation for Economic Co-operation and Development.

Note: Comparator group consists of Australia, Canada, Ireland, Sweden, the United Kingdom and the United States.

PPP = purchasing power parity.

Aotearoa New Zealand has been globally recognised for its response to COVID-19 through multiple phases of the pandemic. We are not immune to the pressures other systems have faced, but we are different. It is important to identify and quantify, as much as we can, the effects each phase of the pandemic has had on our very different system under very different conditions.

Despite long periods when we minimised the effects of the virus itself in comparison with other countries, we face challenges. *A window on quality 2021: COVID-19 and impacts on our broader health system (Part 1) | He tirohanga kounga 2021: Me ngā pānga ki te pūnaha hauora whānui (Wāhanga 1)*<sup>5</sup> (Window 1) was published in December 2021, drawing together a selected set of measures of the effects of the pandemic through to August 2021 and the arrival of the Delta variant in the community. Window 2 continues many of these analyses to June 2022 (or later) and adds new topics, so we may make the most of the opportunities offered by new legislation and the restructure of the health system to address the challenges we face now.

Because of our unique response, our unique context and our unique experience of the pandemic, our challenges are different to those of other countries. For this reason, it is critical to understand where we stand so policy- and decision-makers in the restructured system can proceed from an evidence-informed basis.

In Window 2 we begin by continuing important lines of enquiry from Window 1. We then investigate some aspects of what can be known about effects of the pandemic on the population's mental health and our health care workforce. Focusing on a key issue Window 1 identified, we also examine the impacts of the pandemic on the experience of disabled people using health and disability services. In the chapter on this topic, we include data on changes in the number and nature of complaints to the Health and Disability Commissioner.

Through this report, we aim to build a better understanding, with supporting data, of the broader sector impacts of COVID-19. We hope this will help guide decision- and policy-makers in their work to create a resilient, equitable, fair and high-quality system that delivers for all.

### ***Insights from sector engagement and real-time monitoring***

In 2021, the Government asked the Health Quality & Safety Commission (the Commission) to monitor the impacts of COVID-19 on the quality, safety and equity of the health system.<sup>6</sup> Our 'window on quality' report series typically uses robust and validated national data from multiple sources to support its findings. We supplement this with other intelligence, including studies, surveys and analyses, as well as clinical, consumer and whānau perspectives. However, the process of collecting and analysing national data sets is lengthy, as it must be to develop robust data that is consistent over time. As a result, these data sets, while a vital record, can reflect conditions as they were several critical months before the present moment, and so potentially be unhelpful in making decisions and planning in acute conditions.

To establish 'real-time' monitoring (or as close to it as possible) of the impacts of the Omicron outbreak on health sector quality, safety and equity, we actively collected 'soft' intelligence from key health service areas able to provide information within a short timeframe.

These insights cannot be comprehensive or completely representative but they do provide qualitative information about the active concerns of frontline staff during this critical phase of the pandemic.

Over March and April 2022, at the peak of the Omicron outbreak, we collected real-time monitoring reports on the impacts of COVID-19, and the Omicron variant specifically, from respondents from:

- primary care
- aged residential care
- emergency departments and ambulance services

- intensive care
- planned care
- Māori community providers
- home and community support services
- Pacific providers.

This soft intelligence identified recurring themes that supplement data now available. It sheds light on impacts on staff and their concerns that are consistent across the workforce areas we collected feedback from.

## ***The broad view***

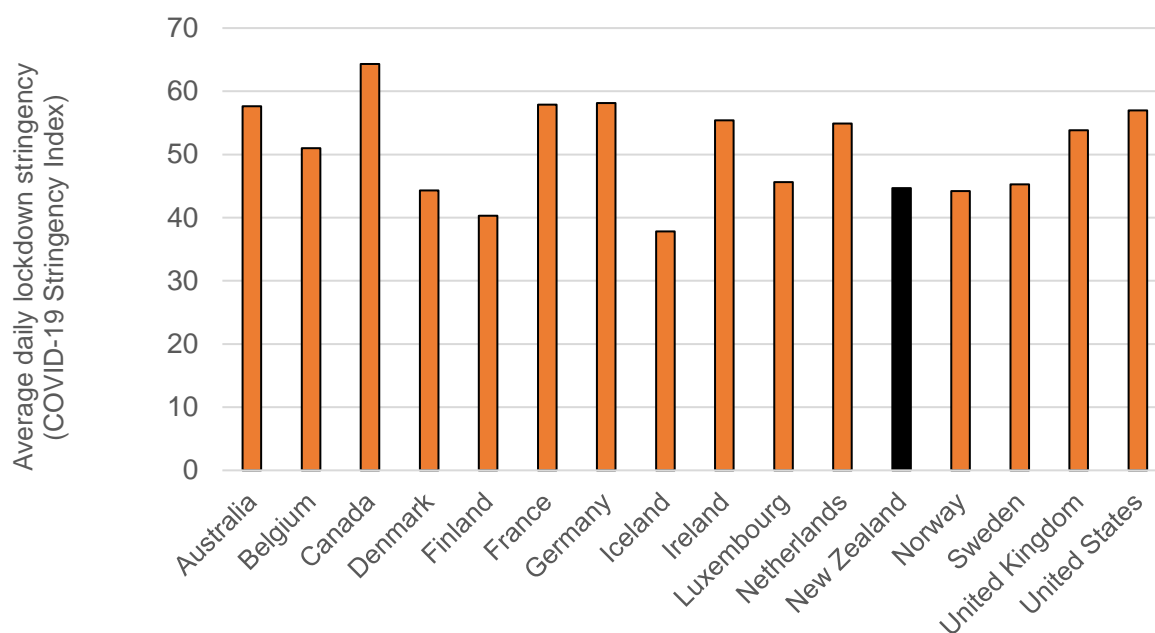
### **Stringency**

The COVID-19 Stringency Index is a composite measure of multiple public health response indicators that countries put in place during the pandemic. It re-scales these indicators, which include school closures, workplace closures and travel bans, to a value from 0 to 100, where 100 is the strictest.<sup>7</sup>

International comparisons here include most northern European and English-speaking developed countries. They exclude Asian countries that have experienced severe acute respiratory syndrome (SARS) such as Singapore, Taiwan and Hong Kong.

Aotearoa New Zealand has maintained more freedoms on average than many selected countries over the whole period of the pandemic to date. However, lockdowns associated with arrival of the Delta variant have now brought our freedom to a level similar to that of some Scandinavian countries (Figure 2).

Figure 2: Average scores of freedom as measured on the COVID-19 Stringency Index, selected countries, January 2020–May 2022



Source: [ourworldindata.org/covid-stringency-index](https://ourworldindata.org/covid-stringency-index).

## Mortality

Internationally, measures of ‘excess mortality’ have used mortality data from before the pandemic to estimate any higher rates of deaths during the pandemic. Excess mortality data offers the advantages of being independent of a country’s testing capacity, definition of COVID-19 deaths and any potential misclassification of COVID-19 deaths.<sup>8</sup> For these reasons, it measures something more like the general impact of the pandemic on mortality, rather than the deaths we can directly attribute to the virus, which is a narrower and potentially misleading measure.

In many countries, for example, people who died from COVID-19 were never tested for it. Likewise, some may have died from preventable causes because hospitals were overloaded with patients. On the other hand, some people we may have expected to die in the period of the pandemic lived because fewer road accidents occurred over lockdown or because reduced mobility and periods of border closure decreased the number of people who died from seasonal flu.

In summary, excess mortality captures more of the total impact of the pandemic on mortality, in contrast to measures that might just record those people who died and also had a COVID-19 diagnosis.

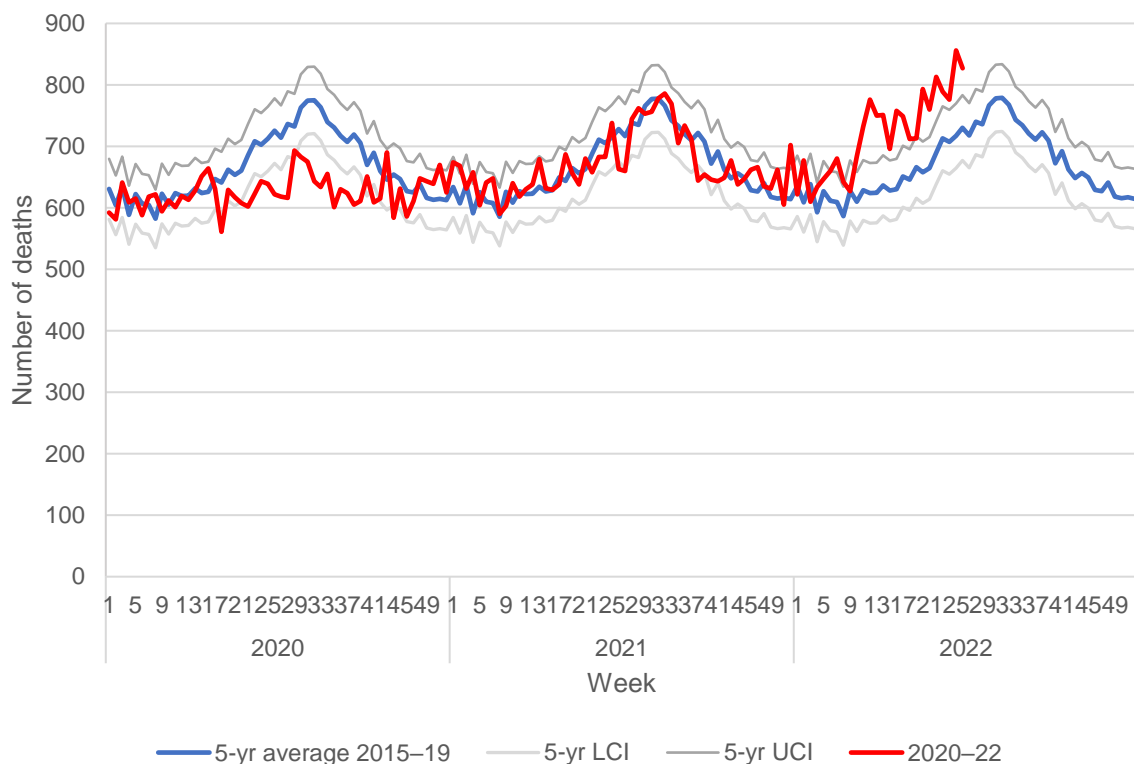
Window 1 found mortality rates in Aotearoa New Zealand decreased in 2020. During the initial lockdown period in 2020, fewer people died than would be expected for the time of year and also over the winter. By late 2020, our mortality rate broadly

returned to historical rates but, with the earlier reduction, by July 2021 there were 1,900 fewer deaths than we would have expected. Most of the lives saved here were of those over 60 years of age.

Figure 3 presents more recent data. It shows that our mortality rate since the beginning of the pandemic (red line) returned to historical rates (blue line) by around December 2020, and since January 2022 has been rising above expected levels.

Over the entire period of the pandemic, then, as of May 2022 we see near net-zero excess mortality.

Figure 3: Comparison of expected and observed deaths, crude five-year rate, all ages, by week, Aotearoa New Zealand, 2015–19 and 2020–22



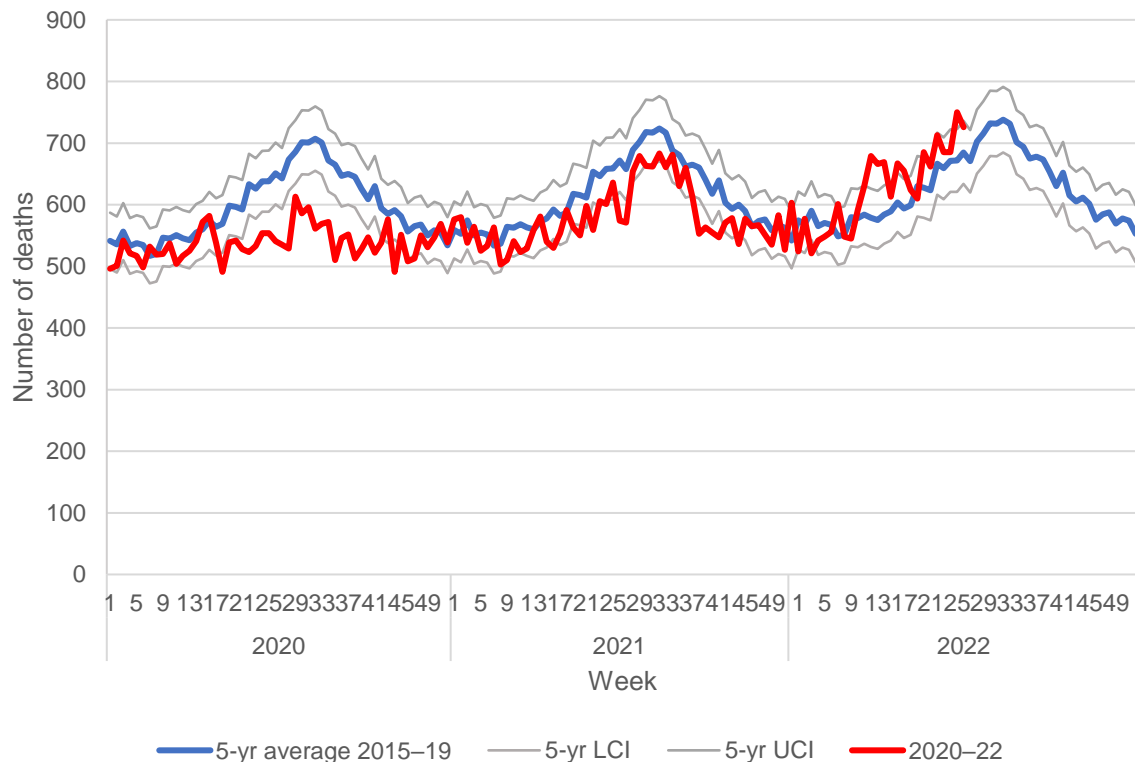
Source: Stats NZ.

Note: Expected deaths = crude average death rate (2015–19) applied to each week of the year for Stats NZ overall population estimate. Observed deaths (red line) are weekly all-age deaths. LCI = lower confidence interval; UCI = upper confidence interval.

When we look more closely at the data for people over 60 years of age, we see a similar pattern, though less pronounced. The mortality that lockdowns prevented has, by the end of June 2022, ‘caught up’. Overall, for the entire pandemic period, by June 2022 we see the same mortality in people over 60 years of age we would expect based on historical rates (Figure 4).



Figure 4: Comparison of observed and expected mortality, crude five-year rate, among people aged over 60 years, by week, Aotearoa New Zealand, 2015–19 and 2020–22



Source: Stats NZ.

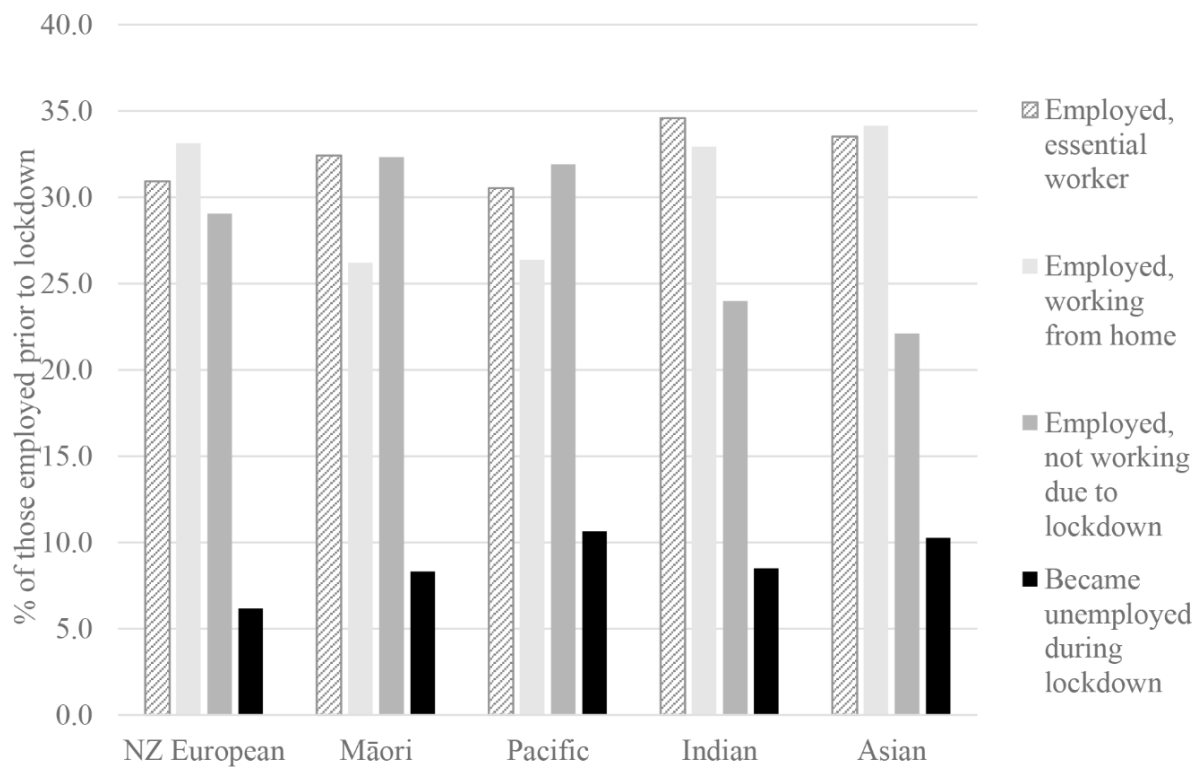
LCI = lower confidence interval; UCI = upper confidence interval.

However, as data catches up to the Omicron wave, we may see the lives saved by our response in 2020 further ‘unwind’ in 2022. Time will tell which groups that affects most.

### ***The inequitable impact of COVID-19 and the Pacific response in south Auckland***

South Auckland populations, particularly Pacific peoples, have borne the brunt of three successive waves of COVID-19: in August 2020, in August 2021 and with the Omicron variant in March 2022. As well as the impact of the virus, Pacific peoples experienced immediate, severe and inequitable impacts on employment, financial security and income as a result of public health policy to restrict spread of the virus. A survey of 2,002 respondents found almost 1 in 10 Pacific workers (11%) lost employment within three weeks of the beginning of the March 2020 lockdown, a higher percentage than any other ethnicity (Figure 5).<sup>9</sup>

Figure 5: Work status by ethnicity, Aotearoa New Zealand, April 2020

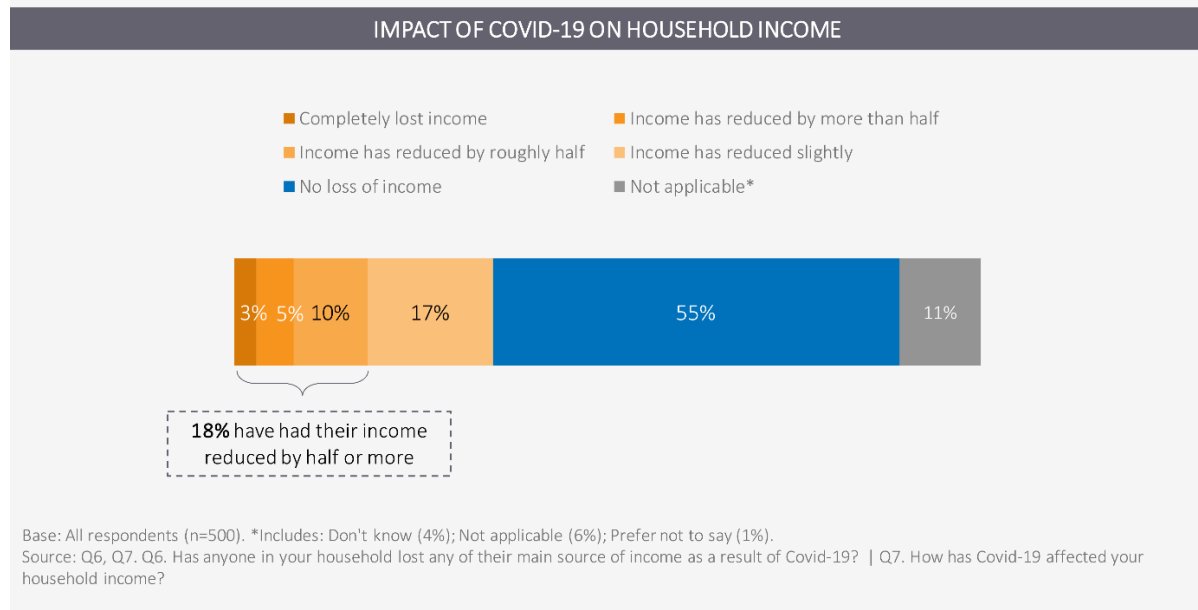


Source: Prickett et al (2020).<sup>8</sup> Reproduced with permission.

A survey<sup>c</sup> of Pacific peoples in south Auckland in November–December 2020 found nearly one in five Pacific households (18%) had lost half or more of their income (Figure 6).<sup>10</sup>

<sup>c</sup> The survey was weighted to represent the Pacific population in south Auckland by age within gender (according to 2018 Census figures).

Figure 6: Impact of COVID-19 on household income of Pacific peoples in south Auckland, Aotearoa New Zealand, November–December 2020



Source: Colmar Brunton (2021).<sup>9</sup> Reproduced with permission.

However, the response of Māori and Pacific providers and communities to the vaccination programmes and Covid care in the community has vividly shown the unique strengths, adaptability and resilience of these communities.

### The vibrant Pacific response

**Fritz Evile, Principal Advisor Tagata o le Moana**

The pandemic narrative could easily have been one of growing disparities in health data: the number of Pacific children getting immunised fell, diagnostic rates for cancer and for cancer screening times got slower and children presented to hospitals later and when they were sicker. The narrative could have been not just of family loss, but of financial loss, loss of security in homes and economic wealth, and loss of education and the escalation of social issues because of it. It could easily have been a narrative of broken trust in the system, lack of respect and lack of 'care' in health care, primary care, secondary care and any morsel of care in the system.

Pacific peoples, if anything, are resilient, resourceful and industrious. Despite the health inequities they face, this pandemic showed that community agency and voice are key in leading successful responses to health issues.

**'E fofo le alamea le alamea' – solutions for problems lie within the collective intelligence of that community.** What we saw was a response that allowed for local solutions to the pandemic. It provided what was needed: a response that looked and felt Pacific to Pacific peoples. It provided an agile and responsive

system that looked and felt Tongan for Tongans, Samoan for Samoans and youthful for youth.

The pandemic response showed glimpses of the intrepid, adventuresome voyaging fearlessness of our forefathers who criss-crossed the oceans. This was apparent in the 'celebration' festivities of vaccine centres that celebrated culture, included multigenerational and inter-generational approaches to care for the 'village'. They put the 'care' back in health care despite a pandemic raging on.

The pandemic response provided insights into the scientific, holistic and intentional exploration of our forefathers who sailed in search of land and prosperity. This was apparent in community solutions for upskilling generations to be digital natives with programmes that supported learning to address and access telehealth. This 'trusted faces and trusted places' theme rang out throughout the regions and local hubs so that our language, culture and village way of life supported the community.

During the pandemic, we saw a Pacific community that experienced social, health and wellbeing effects. We saw an increase in the number of Pacific peoples presenting with mental health issues. More and more parents challenged the need for a vaccine and immunisations because of anti-vaccination messages in social and other media. In response came, 'O le tele o sulu e maua ai figota' or literally, 'the many lamps (at night), help with a bountiful catch'. In other words, 'many hands make light work.' Community partnerships and relationships strengthened, working together in 'collaboraction' to address all the immediate social, health and wellbeing needs of the community. We saw a Pacific workforce that was stretched but didn't break and that took on the care for our community.

It could have been much worse. But the strength of warriors, leaders and chiefs runs through the blood of our Pacific workforce and community. Those who share the new vision of pae ora | healthy futures in the new health system should sit up and pay attention. Innovation is not needed. Listen to our community. Listen to our workforce. Listen to the voices of trusted faces and trusted places. We know. We have been doing it for years, decades, centuries, millennia.

# Chapter 1: Continued lines of inquiry | Upoko 1: Pakirehua anō

## *Summary*

In this chapter we continue and extend analyses from Window 1 on immunisations, cancer screening, emergency departments, delays in planned care/electives, and cancer care.

- The pandemic has reduced the rate of childhood **immunisations** in Aotearoa New Zealand. Since March 2020, rates of immunisations for 6- and 24-month-olds have fallen. This has particularly impacted Pacific and Māori babies and babies in families living in poverty.
- The pandemic has reduced rates of **breast and cervical cancer screening**.
- **Emergency departments (EDs)** have experienced increasingly difficult circumstances. Soft intelligence indicates these involve limited system resources (made worse by pandemic effects on staffing levels) coming up against greater, more complex demand arising from the pandemic. Recent data suggests numbers of more urgent presentations to EDs have increased since the first lockdown.
- Access to **planned care** has become clogged. The percentage of patients waiting longer than four months for their first specialist assessment has increased from 14% to 26% in the year to May 2022. The number of patients who were given a commitment to treatment but did not receive that treatment within the required timeframe (four months) has more than doubled in the last year to almost 28,000 (41%) in May 2022. Planned care activity in hospitals dropped sharply over the first lockdown, creating a backlog, but this elective activity returned to expected levels. Starting again at the Delta outbreak in August 2021, however, the situation has worsened, with activity consistently lower than that expected based on earlier years.
- Disruption to **cancer services** has been minimised according to data from Te Aho o Te Kahu, the Cancer Control Agency. Despite lower and inequitable rates of some kinds of cancer screening discussed above, and early falls in registrations, diagnostics and treatment in March 2020, since then services have largely been maintained.

## *Immunisations*

The pandemic has led to a reduction in childhood immunisations worldwide. Internationally, 24.7 million children have missed their first-dose measles immunisations.<sup>11</sup>

In Aotearoa New Zealand, the drop in our childhood immunisation rates as a result of the pandemic is clearly visible, as are increasing disparities by ethnicity and

socioeconomic deprivation that the pandemic has accelerated. These falling rates will likely lead to outbreaks of vaccine-preventable disease affecting, in particular, Pacific and Māori babies and babies in families living in poverty. Here we illustrate the issue by focusing on immunisations for 6- and 24-month-old babies.

### Six-month-old babies

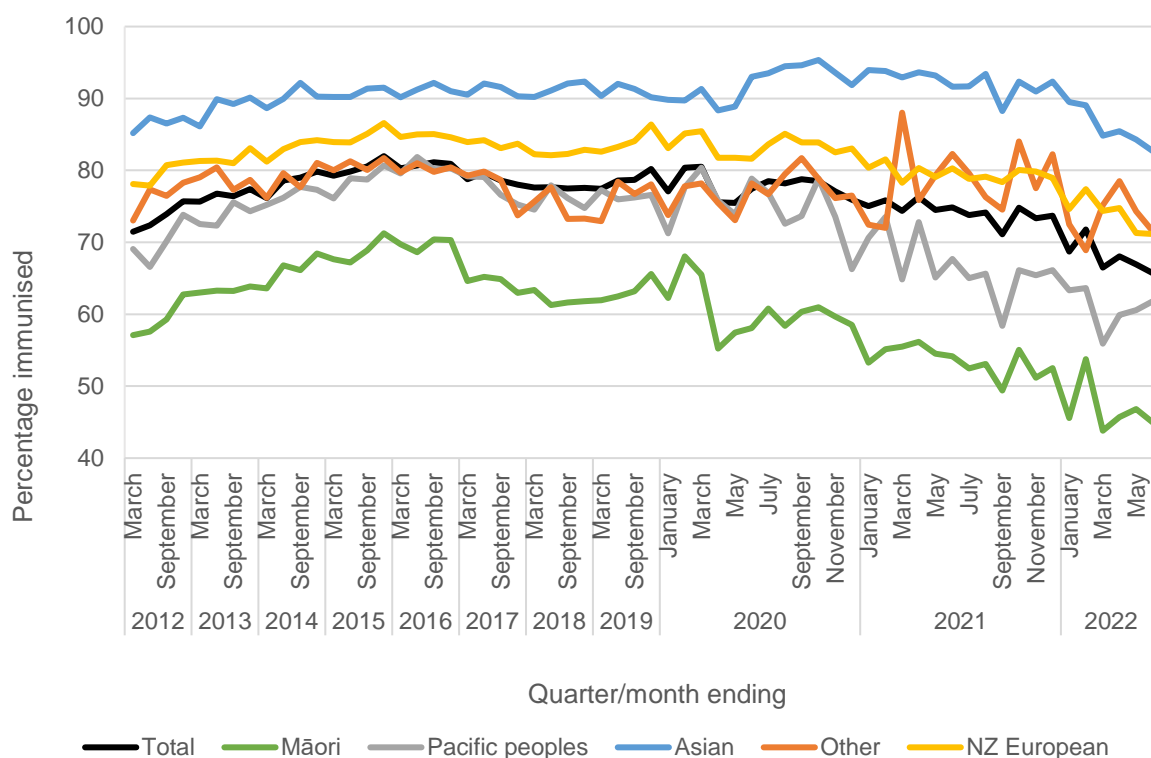
The percentage of all six-month-old babies receiving their full schedule of immunisations has declined by 15 percentage points since March 2020 and Aotearoa New Zealand’s first lockdown, from 80% to 66% in June 2022 (Figure 7).

Coverage of Māori infants fell 10 percentage points in the first month of lockdown and has continued to fall since, to only 45% of infants immunised in June 2022.

Coverage of Pacific six-month-olds has fallen from 80% in March 2020 to only 62% in June 2022.

The overall coverage is the lowest in 10 years. Even more concerning is the greatly widening inequity.

Figure 7: Immunisation coverage at six months of age, by ethnicity, Aotearoa New Zealand, March 2012–May 2022

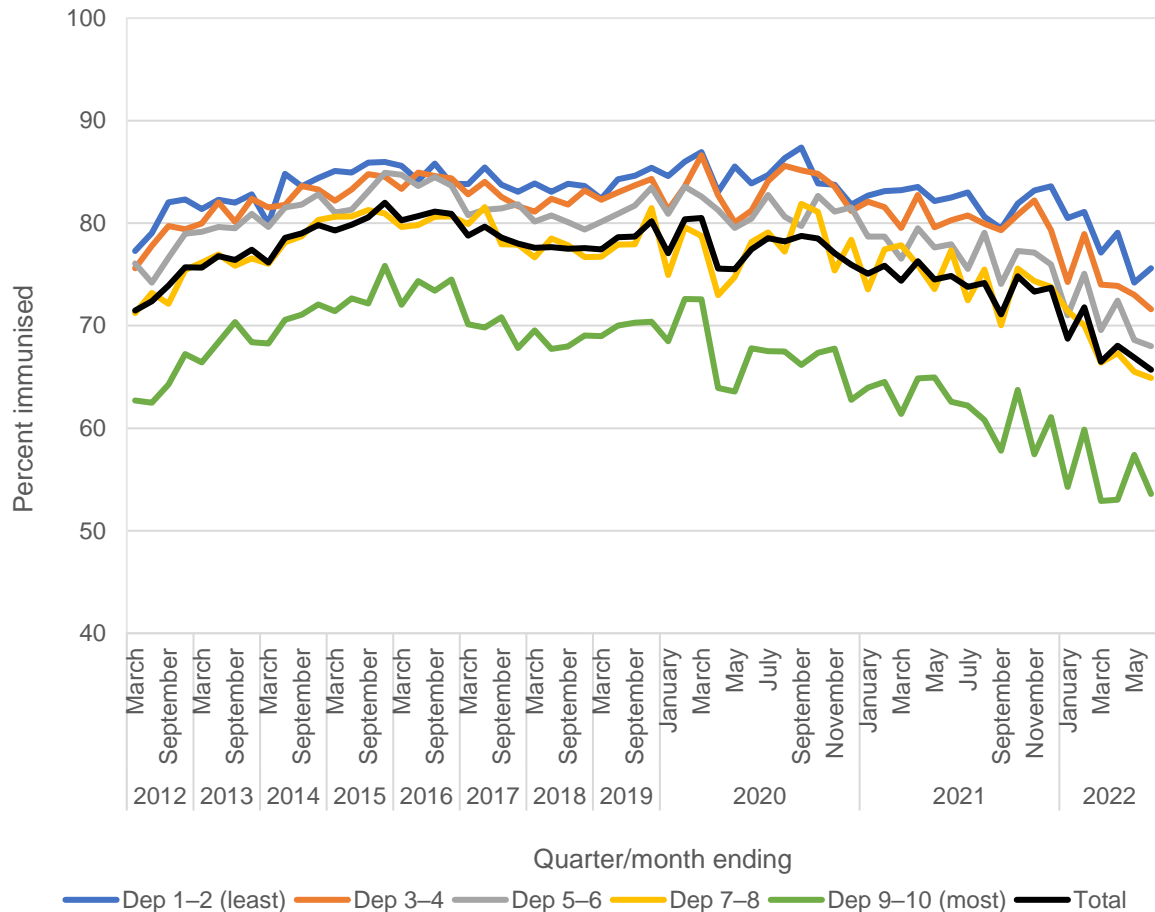


Source: Immunisation Advisory Centre.

These falls in coverage related to the pandemic have affected babies no matter what their socioeconomic status, as measured by deprivation quintiles. However, the falls have been greatest among the poorest families (Figure 8).

Coverage of six-month-olds whose families are in deprivation levels 9–10 (the green line in Figure 8 – the most deprived) has fallen from 73% in March 2020 to only 54% in just two years.

Figure 8: Immunisation coverage at six months of age, by socioeconomic deprivation quintile, Aotearoa New Zealand, March 2012–May 2022



Source: Immunisation Advisory Centre.

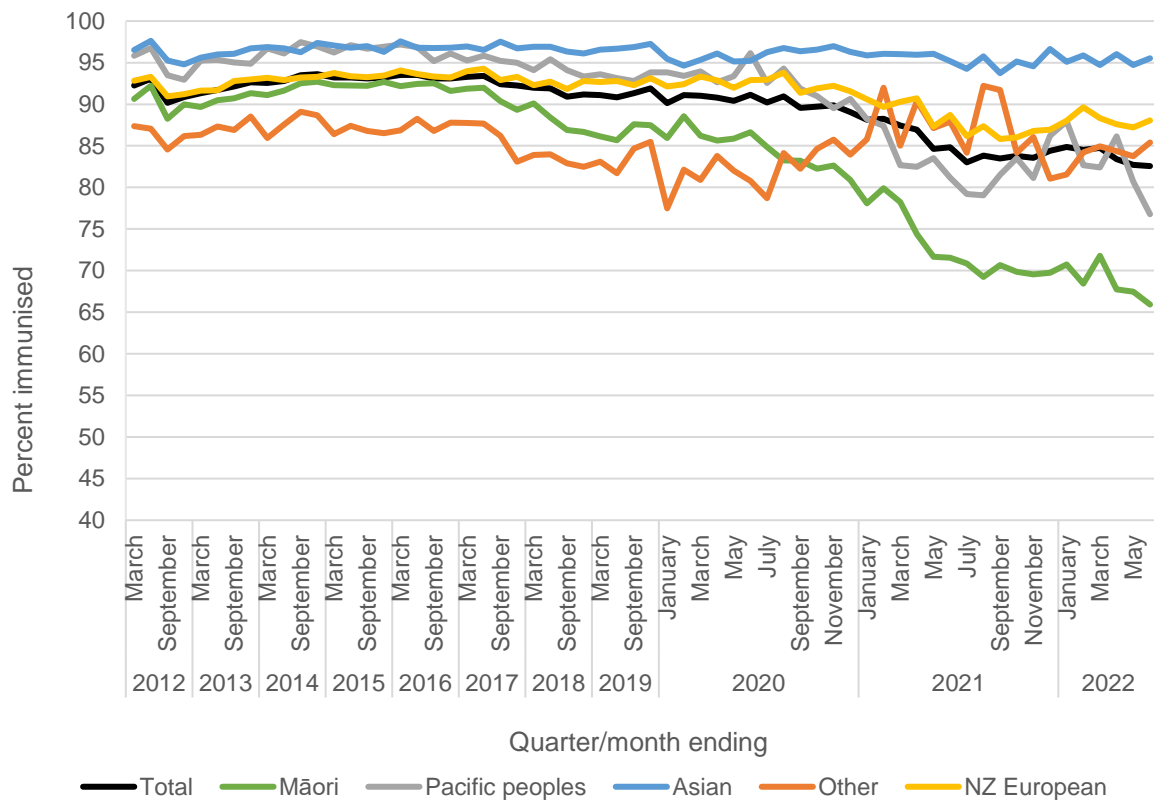
### Twenty-four-month-old infants

The pandemic has also powerfully affected the immunisation coverage of 24-month-old infants. Total coverage has fallen from 91% of 24-month-olds in March 2020 to 83% in June 2022 (Figure 9).

The overall figure remains relatively high because immunisation coverage in large New Zealand European populations continues largely to be high. However, coverage of Māori and Pacific babies has been hit much harder.

Coverage of Māori 24-month-olds has fallen from 86% in March 2020 to 66% in June 2022. Coverage of Pacific 24-month-olds has fallen from 94% in March 2020 to 77% in June 2022.

Figure 9: Immunisation coverage at 24 months of age, by ethnicity, Aotearoa New Zealand, March 2012–May 2022

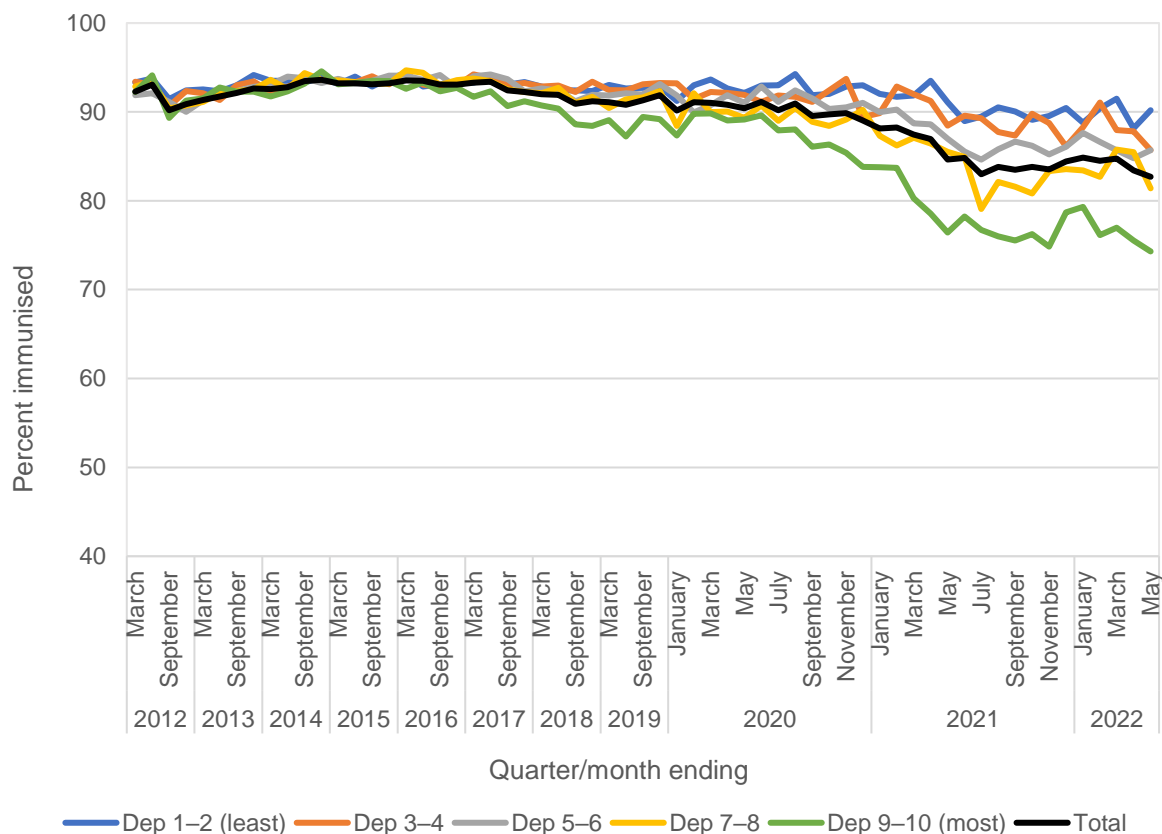


Source: Immunisation Advisory Centre.

Similarly, we see the dramatic effects of the pandemic on immunisation coverage for people living in poverty. Coverage for 24-month-olds in the least deprived families remains above 90%. However, coverage of 24-month-olds in families living in most deprivation has fallen from 90% in March 2020 to 74% in June 2022 (Figure 10).



Figure 10: Immunisation coverage at 24 months of age, by socioeconomic deprivation quintile, Aotearoa New Zealand, March 2012–May 2022



Source: Immunisation Advisory Centre.

The looming risk of opened borders and spread of vaccine-preventable disease for these missed vulnerable cohorts is real.

However, work is ongoing to expand the scope of the unregulated COVID-19 vaccination workforce to deliver childhood and other immunisations.<sup>12</sup> The newly formed Te Whatu Ora | Health New Zealand commissioned the Immunisation Advisory Centre to develop and deliver the COVID-19 Vaccinator Working Under Supervision (CVWUS) education programme, with the aim of creating a new vaccinator workforce to deliver COVID-19 immunisations. The programme, introduced in mid-June 2021, has limited scope in that vaccinators can only administer the Pfizer vaccine to those aged 12 years and under, under supervision and direction of an authorised vaccinator, or another suitability qualified health care professional.<sup>13</sup>

Te Whatu Ora has announced the introduction of the vaccinating health worker role, which will replace the CVWUS workforce over time and have expanded scope of practice to improve immunisation coverage. Vaccinating health workers can administer vaccines for: COVID-19 (Pfizer); influenza; tetanus, diphtheria and pertussis (TDAP); human papillomavirus (HPV9); and measles, mumps and rubella (MMR) (some of these vaccines are for those aged five years and over). In June

2022, the Immunisation Advisory Centre released an influenza vaccine training course for authorised CVWUS to upskill them to become vaccinating health workers and authorise them to administer influenza vaccines too. To date, 46 authorised CVWUS have attained authorisation as vaccinating health workers to administer influenza vaccines.<sup>13</sup>

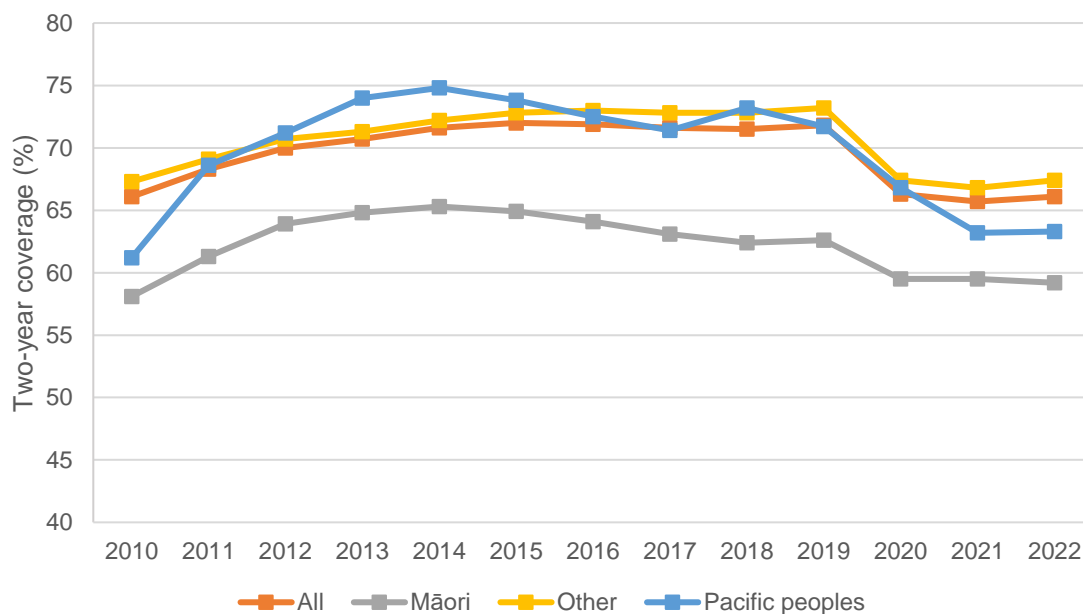
## Screening

Breast screening is an essential preventative service that reduces the risk of women dying from breast cancer.<sup>14</sup> Screening rates have fallen as a result of the pandemic. In March–April 2020 and August 2021, screening was paused nationally; however during that time women with a high likelihood of malignancy were prioritised for assessment. As COVID-19 alert levels rose, screening continued at reduced levels of capacity, depending on assessment of likelihood of malignancy.<sup>15</sup>

National breast screening data shows a decline in coverage from June 2019 after several years of steady (and steadily inequitable) coverage (Figure 11). Coverage for Pacific women has reduced from 73% in June 2018 to 63% in June 2022. Coverage of Māori women remains lowest and has reduced from 62% to 59% in the same period.

Initial pandemic-related losses in coverage appear to have potentially stabilised from June 2020 on. However, the coverage of Pacific women continues to fall, which is likely to reflect impacts on south Auckland communities.

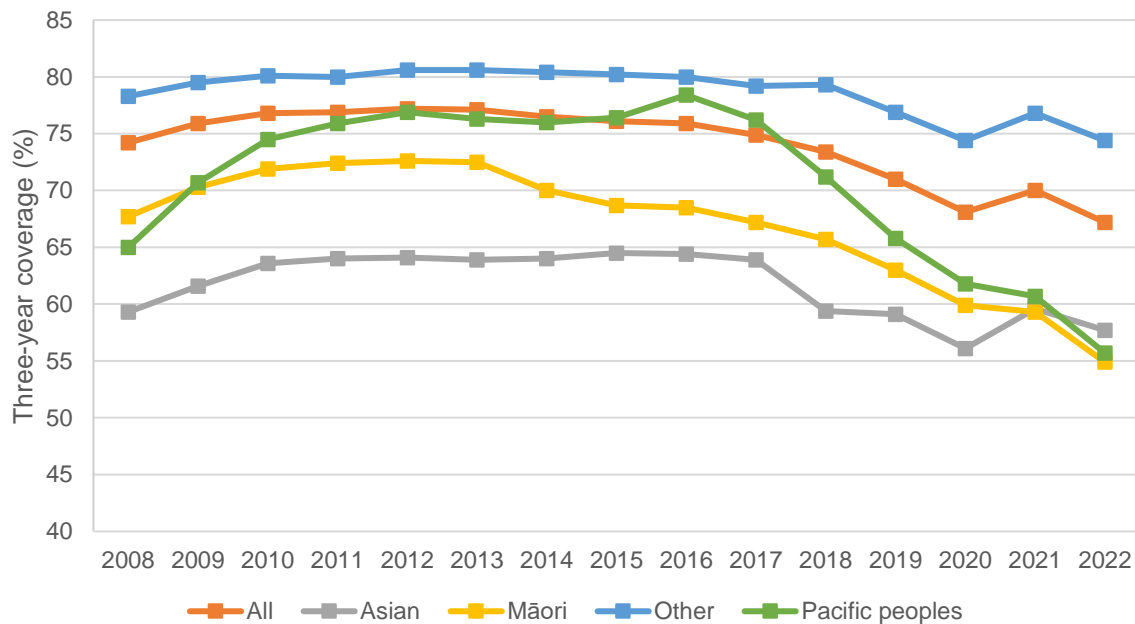
Figure 11: Two-year breast screening coverage by ethnicity, ages 45–69 years, Aotearoa New Zealand, 2010–22



Source: National Screening Unit, <https://minhealthnz.shinyapps.io/nsu-bsa-coverage-dhb/>

Cervical screening coverage for all women has slowly declined for 10 years, although it slightly improved in the year to June 2021 (Figure 12). Coverage of Māori has been falling since 2013, and only stabilises rather than recovers in the year to June 2021, then continues to decline in the following year. Coverage of Pacific women has declined rapidly since 2016 from just under 80% to under 60% – a steeper decline than other ethnicities.

Figure 12: Three-year cervical screening coverage by ethnicity, ages 25–69 years, Aotearoa New Zealand, 2008–22



Source: National Screening Unit, <https://minhealthnz.shinyapps.io/nsu-ncsp-coverage/>.

See page 49 for the impacts of the pandemic on cancer services.

### **Box: Consumer perspectives – Viola Huch**

My name is Viola Huch and I am born and bred here in Dunedin. In my previous work I was a Community Connector for the COVID response looking at the welfare side of things working with the contract through the Ministry of Social Development. We worked with not only Pacific, but the wider community. At times it was full on but very rewarding for us because we worked with the community as a whole, as Pacific, catering to the needs of people.



In terms of health care a lot of our people were frightened in regards to COVID, with not knowing. We tried to educate them on the impacts of COVID. We were lucky to have a team of nurses and doctors also working alongside us to make sure that if we had questions that we were unsure of to make sure that we directed it to them. They would give the families a call to ensure that the information that they were giving to them was correct. Constantly getting those updates also from medical professions on stuff that we needed to be aware of. Yeah, so it was pretty full on.

#### ***Impacts on health care and personal dignity***

We had a situation where my Mum had gotten sick and was taken to the hospital, but with the COVID restrictions she had to go alone. It was heart-breaking, because of the language barriers for my Mum, not being able to comprehend and understand the conversations around her, and finding out that she had COVID. What I found really sad was that her dignity was taken. When I picked her up the hospital had taken six hours before they contacted me to let me know what was going on.

A staff member brought her out in a wheelchair, and I was in shock to see mum in her dressing gown, undergarments and a pair of socks and that was it. Not only that, but mum from the waist down was wet. I had no idea how long she had been sitting like this, but it wasn't for a short time as she was saturated. I was so mad but at the same time I had to save what she had left in regards to dignity and just put her in the car and get her home and cleaned up. I felt really let down by health care to think that its ok to treat people – any people – in this way. People need that support to advocate and be a voice for them in these settings as it can be very overwhelming and create barriers. I know my mother had difficulty communicating and understanding what staff would have been saying to her as more often than not medical terms are used, and staff need to realize that not everyone speaks medical language.

### ***Doing it for our community***

We're doing it for our community. For me, it's a sense that if I don't work that extra mile, who's going to jump on board to take over? There are so many awesome organisations out here in Dunedin that are putting in the hard work and working above and beyond just to make sure that we are catering to the need of our communities. I know that our team have done something good when you get the feedback from the families, especially the non-Pacific families. They were so overwhelmed. We had people crying, calling, making videos, putting us out on Instagram for the good stuff that we did. That helped motivate us to keep doing what we were doing.

Because at the end of the day, for us Pacific it's the norm for us to just go out there and serve.

### ***Emergency departments***

In March–April 2022, the Health Quality & Safety Commission gathered perspectives from staff on the challenges they experienced in different parts of the health system. Respondents consistently identified the issue of limited system resources (made worse by the effects of COVID-19 itself on staffing levels through sick or isolating staff) coming up against greater, more complex demand arising from the pandemic. ED, by its nature at the 'sharp end' of health care, particularly felt this.

Throughout the analysis in this and following sections, we draw on information from respondents together with the data the Commission has gathered through a novel tool it developed called 'Rapid Effects Assessment of COVID-19 on Healthcare' (REACH – see Appendix 1).

Intelligence from across the ED sector points to concerns about a range of increasing pressures on emergency services from February 2022 onwards that may not be reflected in some data collections. Workforce shortages and understaffing are seen as the major problem facing emergency services across all professional groups. They are made worse by the heavy demand from patients, patient flow challenges and the high number of staff absences resulting from isolation requirements due to Omicron itself.

This problem had impacts on quality and safety in a range of ways. Some involved immediate delays to access to emergency care; some were knock-on effects on the quality of and access to care; and others are long-lasting effects. These impacts include:

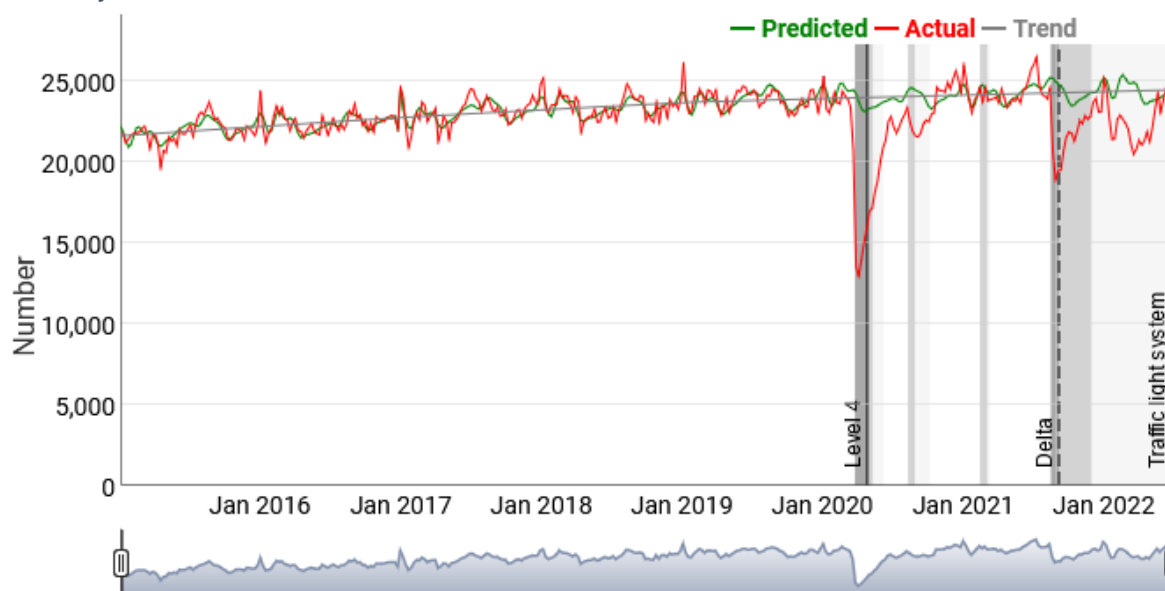
- more ambulances waiting longer for the patients they are carrying to be admitted to EDs (ambulance ramping), leading to delays in 111 response times
- longer wait times for assessment
- a longer time before antibiotic treatment and analgesia

- increasing patient frustration, including violence and aggression
- too few nurses looking after too many patients in ED
- delayed admission to hospital due to a lack of beds available with nursing support
- compromised practice for infection prevention and control
- an unprecedented number of resignations of nursing staff (frequently senior experienced nurses).

As a result of these conditions, clinical risks are higher. In addition, staff have been forced to set aside non-urgent work on quality improvement, audit, complaints and review of reportable events, as well as professional and leadership development.

Patient flow has also changed. For example, more patients are turning up at ED for issues typically handled in primary care and the community. Analysis using REACH reveals an important point. The increase in ED presentations of around 1–2% per year is a long-term underlying trend that has continued for at least a decade, and that trend alone would have led to an increase in ED presentations of around 1,000 a week between January 2019 and January 2022. In fact, overall presentations have not kept pace with this trend (Figure 13), but this overall total hides a variety of details that work together to increase pressure on EDs.

Figure 13: Weekly predicted and actual emergency department presentations (all ages, ethnicities, admission statuses and triage levels), Aotearoa New Zealand, January 2019–June 2022



Source: Routine Commission data analysis.

According to ED staff, patients have been presenting at ED with more severe health issues during the Omicron wave. Following the initial surge of younger patients presenting, EDs are now seeing more older people with chronic and multiple health conditions, and many are later diagnosed with COVID-19. In February, a Middlemore

Hospital spokesperson told media, ‘30–40 per cent of patients with COVID-19 admit to hospital for other reasons, and test positive on arrival’.<sup>16</sup>

The REACH analysis supports this position to some extent. Triage levels measure the urgency of a presentation rather than the severity of someone’s condition directly. At the urgent end of the scale are:

- triage level 1, covering illness or injury that is ‘immediately life-threatening’, which requires immediate simultaneous triage and treatment
- triage level 2, covering ‘imminently life-threatening, or important time-critical’ injury and illness, which requires a maximum of 10 minutes’ triage time before treatment.<sup>17</sup>

Compared with historical average activity, these more urgent triage levels are 1% higher than the historical increasing trend, while the lower urgency triage levels 3–5 have decreased by 6% against this expected level of activity (Table 1). In other words, while the number of less urgent presentations is lower than expected, this figure helps to hide the pressure EDs are experiencing in seeing higher numbers of more urgent presentations.

Table 1: Emergency department presentations since lockdown by triage level, Aotearoa New Zealand, May 2020–June 2022

<b>Triage levels</b>	<b>Expected activity since first lockdown ended</b>	<b>Actual activity since first lockdown ended</b>	<b>Change in presentations since first lockdown ended</b>	<b>Percentage change in presentations</b>
1, 2	383,700	388,400	4,700	1
3, 4, 5	2,307,300	2,163,000	-144,300	-6

Source: Routine Commission data analysis.

Note: Lockdown ended week commencing 17 May 2020.

To this analysis needs to be added the additional pressures felt by the workforce because of both increased staff sickness and absence, and the greater complexity of providing health care in a pandemic (eg, increased isolation and infection preventions required to operate safely). While demand for less urgent cases may have fallen during lockdowns (though not consistently over time), supply of care has also been restricted.

Against this increasingly challenging situation, we have noted a range of positive interventions and innovations. In particular, EDs have:

- planned well, fostered teamwork and collegiality, and engaged more with hospital management
- redeployed staff, with good support from unions to try new initiatives

- communicated well and kept everyone informed – for example, through regular webinars, question and answer sessions, email updates from the leadership team, making the most up-to-date documents available in a central location and accessible 24/7, and sharing information to avoid duplication
- provided good community care: regional pathways and agreed criteria
- operated an effective clinical governance group involving, for example, senior staff from hospital, primary health organisations and Māori providers, funders and planners, that meet every week across district health boards (DHBs) to oversee the issues and advise
- made good use of information technology (IT) and other technology, such as IDNow and telehealth
- developed infrastructure, for example, through upgrading ventilation to separate the ED from the rest of the hospital
- tested all admissions for COVID-19 using rapid antigen tests (RATs) and polymerase chain reaction (PCR) tests and undertaken RATs in ambulances to help stream cases
- taken innovative approaches to triage and assessment: conducting clinical triage remotely; conducting video assessments; paramedics assessing COVID-19 positive patients who are otherwise well; nurses leading assessment and discharge for less serious COVID-19 positive cases; giving nurse specialists the same referral rights as general practitioners (GPs) to inpatient units; fast-tracking patients to inpatients where possible; and informing people in the waiting room about the real-time wait times for ED and the alternative option of urgent care + voucher scheme
- introduced the role of COVID-19 oranga (wellbeing) coordinators who liaise with the welfare team
- funded necessary change: for example, the ambulance service received a prompt and supportive financial package to help with its surge response.

## **Conclusion**

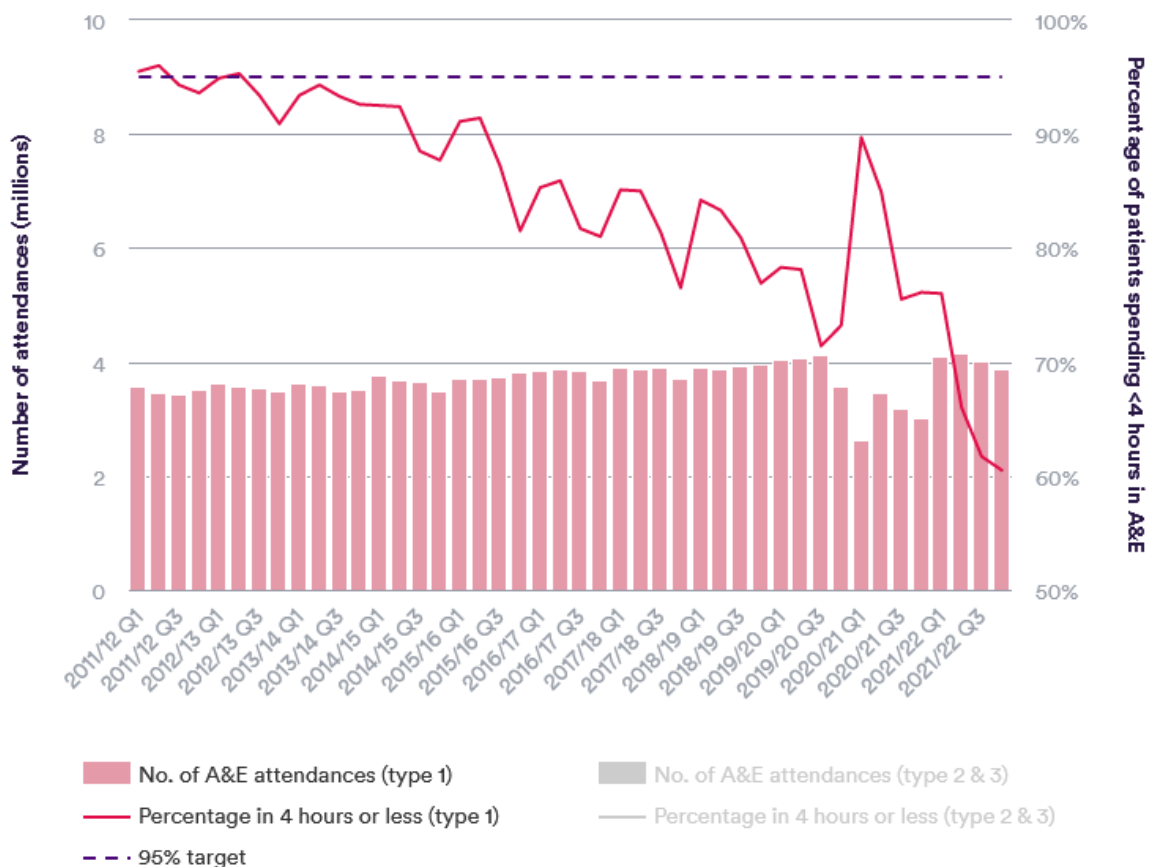
Measurement of what occurs in EDs is a marker of stress throughout the system. Data on the number of presentations, the nature of those presentations and how quickly patients are admitted or discharged reflects more than need in the community. It also indicates what primary care is available, the flow of patients within hospitals and the level of resources available on wards – patients cannot be discharged to beds on wards unless those beds are available.

The proportion of patients waiting longer than six hours in ED can be an attractive headline target. Yet more nuanced measurement, such as the distribution and composition of wait times within EDs, for example, may provide more useful information for identifying and understanding the problems and solutions to them.



In very real ways, our EDs have avoided major issues of overcrowding and long wait times that other countries have experienced. In a long-term trend starting in 2014, for example, major accident and emergency centres in the National Health Service (NHS) England have increasingly fallen short of meeting their target of seeing 95% of patients within four hours. By the last quarter of 2021, 61% of patients were waiting for longer than this target time (Figure 14).<sup>18</sup>

Figure 14: NHS England access to equivalent emergency departments, number of presentations and percentage of patients admitted, transferred or discharged within four hours, England, 2011/12–2021/22



Source: [www.nuffieldtrust.org.uk/resource/a-e-waiting-times#background](http://www.nuffieldtrust.org.uk/resource/a-e-waiting-times#background).

A&E = accident and emergency.

Even more strikingly, the latest statistics published by Ontario Health in Canada show that patients who came to an emergency room in April 2022 and were admitted to hospital spent **on average** 20 hours in the emergency room before getting a bed in a ward.<sup>19</sup> The reasons given for the delays were staff illness and COVID-19 isolation, more severe health issues among the patients who delayed seeking treatment, and beds in hospital wards being filled to capacity.

## ***Delays in planned/elective care***

### **International comparisons**

In England, the number of people on NHS waiting lists for consultant-led elective care rose from 4.24 million people in March 2020 to 6.18 million people in February 2022.<sup>20</sup> The number of patients waiting over 18 weeks for consultant-led elective care increased from 860,000 to 2.3 million people in the same period. These metrics do not include the 'hidden backlog' of those who have had their care cancelled or who have not presented despite needing care.

In Australia, 754,600 patients were admitted to hospital from the public elective surgery waiting lists in 2020/21, up from 688,000 admissions in 2019/20 but slightly lower than the 758,000 admissions in 2018/19.<sup>21</sup> This represents a partial recovery after hospitals placed restrictions on selected non-urgent elective surgical procedures for a period in March 2020 and in some states did so again after COVID-19 outbreaks in 2020/21. Wait times for elective surgeries in Australia have increased – half of patients waited 48 days or more for admission from waiting lists in 2020/21, up from half waiting 39 days in the previous year, and 7.5% waited more than a year, up from 2.8% in the previous year.<sup>21</sup>

### **Aotearoa New Zealand**

In Aotearoa New Zealand, Window 1 used the REACH tool to identify significant shortfalls in elective or planned care for the eight busiest (or highest-volume) elective surgery specialties<sup>d</sup> from March 2020 to June 2021 compared with the three years before 2020.

For numerous reasons, the data that DHBs submitted to the Ministry of Health in their annual plans and compared with data on their actual delivery did not reflect these shortfalls. However, international experience suggests these disruptions were to be expected, and now both respondents in the sector and REACH data indicate that with the Omicron outbreak the problems are widespread. On 4 May 2022, the Minister of Health announced a hospital waiting list taskforce that will conduct 'a national review of all waiting lists and a reassessment of the situation of everyone on it' and deliver a national plan by September 2022.<sup>22</sup>

In Aotearoa New Zealand, access to specialist care has become clogged and wait times are growing. To understand these trends, we need to consider all stages of the process of having an elective treatment.

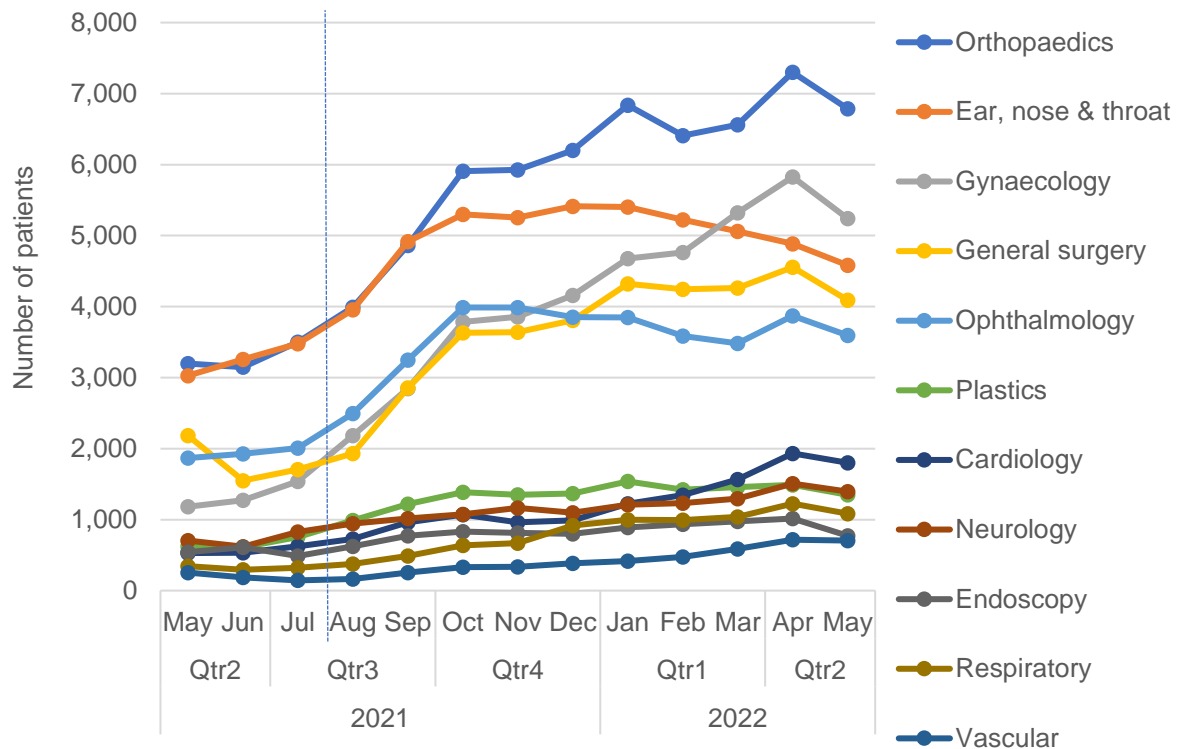
The percentage of patients waiting longer than four months for their first specialist assessment has increased from 14% (18,000) in May 2021 to 26% (35,500) in May

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<sup>d</sup> These high-volume elective surgery specialties are: general surgery; orthopaedics; urology; neurosurgery; ear, nose and throat surgery; gynaecology; specialist paediatric surgery (other); and dental surgery.

2022.<sup>23</sup> Figure 15 shows the trends in patients waiting more than four months for their first specialist assessment by different specialities.

Figure 15: Number of patients waiting longer than four months for their first specialist assessment, by specialty, Aotearoa New Zealand, May 2021–May 2022



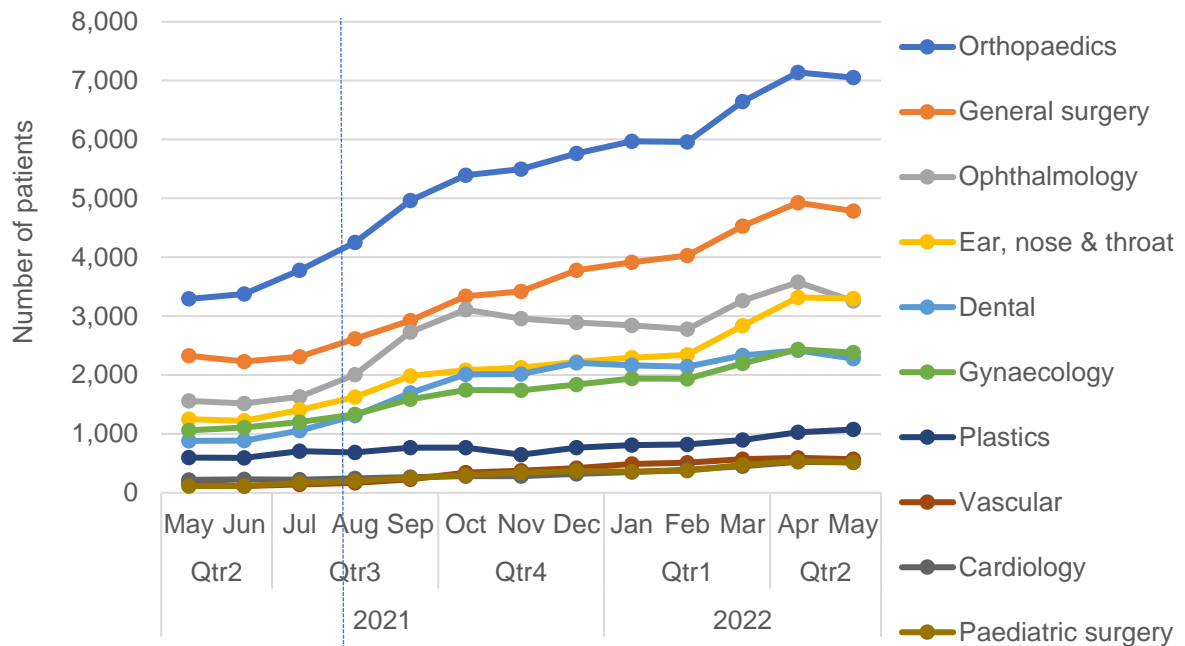
Source: Ministry of Health Elective Services Patient Flow Indicators.

Note: Blue dotted vertical line = Delta variant arrives in Aotearoa New Zealand.

In the last year, the number of patients who were given a commitment to treatment but did not receive that treatment within the required timeframe (four months) more than doubled from 12,797 (23%) in May 2021 to almost 28,000 (41%) by May 2022.

Figure 16 shows the top 10 specialties with the highest number of patients given a commitment to treatment but not treated within the required timeframe. For both measures there is a clear increase in the number of people suffering delayed access from August 2021, when the Delta outbreak began.

Figure 16: Number of patients given a commitment to treatment but not treated within the required timeframe, by specialty, Aotearoa New Zealand, May 2021– May 2022

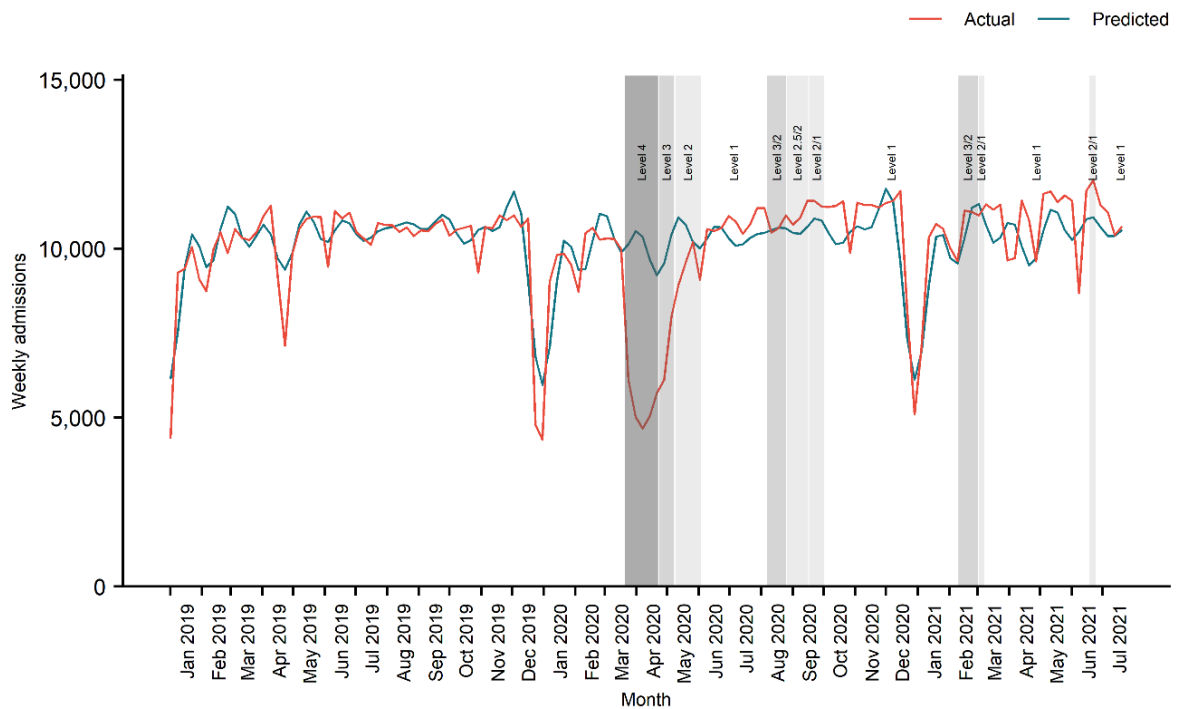


Source: Ministry of Health Elective Services Patient Flow Indicators.

Note: Dotted line = Delta variant arrives in Aotearoa New Zealand.

When we reported on elective admissions in Window 1, we noted that hospitals had not dealt with a ‘backlog’ of missed activity during the height of the initial lockdown, but that activity had essentially returned to expected levels. Figure 17 displays the missed activity as the dip in the red line (observed activity) compared with the blue line (expected activity) from March 2020. By the end of alert level 2 in July 2020, observed activity returned to and tracked closely with expected activity.

Figure 17: Actual and forecast weekly waitlist/planned inpatient admissions, Aotearoa New Zealand, January 2019–July 2021



Source: Health Quality & Safety Commission routine data analysis.

As Figure 18 shows, however, at the Delta outbreak in August 2021, activity dropped dramatically for a number of weeks. Since February 2022 and the advent of Omicron in the community, observed patient admissions for planned care have remained almost consistently below expected levels, adding again to the backlog of procedures.

Figure 18: Actual and forecast weekly waitlist/planned inpatient admissions, Aotearoa New Zealand, August 2021–June 2022



Source: Health Quality & Safety Commission routine data analysis.

### On the ground

The data supports information from clinicians, managers and service providers gathered during the height of the spread of the Omicron variant who have observed that planned care has significantly reduced or (in some areas) stopped altogether. This acute reduction follows a much longer period of disruption over the last two years of the pandemic. Currently, many organisations are planning theatre schedules on an almost daily basis with real-time prioritisation of urgent care. Some anecdotal reports indicate that, while services at first gave priority to cancer surgery, as more lists are cancelled clinical staff are now prioritising surgery within this category.

Clinical staff have raised major concerns about the clinical risk associated with the growing backlog of patients on surgical waitlists and those waiting for first specialist assessments. The latter in particular are of concern, as GPs are managing these patients while they have not had any specialist review. Clinical staff highlighted the possibility that these patients could clinically deteriorate without a specialist to identify this, while staff are less able to provide adequate oversight as the waiting lists grow. They also identified that these patients may eventually present acutely and, as a result, have poorer outcomes or a prolonged length of stay in hospital.

## **Inequity**

Reduced access to planned care impacts everyone but worsens pre-existing inequities. The reason is not so much because the rates of cancellation for public planned care have been higher for Māori and Pacific patients, but more because the services that were among the first to be cancelled (for example, community dental, ear, nose and throat surgery, and paediatrics) had high numbers of Māori and Pacific patients.

Similarly, delayed access to diagnostics has a greater impact on patients with significant underlying health issues or co-morbidities because they need more thorough diagnostic work-ups before surgery or similar interventions. This situation again disproportionately affects Māori and Pacific patients.

## **Quality and safety**

Managing planned care during a pandemic reduces the efficiency of a service. It needs extra administrative processes (for example, additional management of waitlists and rescheduling planned care) as well as additional clinical processes (for example, using RATs and personal protective equipment). This reduces capacity for quality improvement and assurance. The Health Quality & Safety Commission's quality and safety markers are starting to show deterioration in measures such as falls with a fractured neck of femur and postoperative deep vein thrombosis/pulmonary embolism (see Chapter 3 for detailed results). Respondents participating in the Commission's soft intelligence exercise also raised this concerning possibility.

## **Knock-on effects**

Resolving the effects of deferrals of planned care now is neither straightforward nor quick. Stakeholders told the Commission that they anticipated ongoing disruptions for two years.

The knock-on risks of deferral demonstrate how we need to understand health care as a complex and adaptive system, rather than as a linear one. In brief, deferring planned care increases the risk of more acute admissions when patients are admitted sicker (as their conditions deteriorate while they wait for access to care), which increases their risk of poor outcomes as well as the length of their stay in hospital. This in turn creates greater pressure on a constrained system. For example, having more acute and urgent cases places additional strains on critical care beds. These increased pressures create greater strains on the workforce (see Chapter 3), which in turn reduces capacity and access. One planned care respondent said:

Overall, we are worried [about] workforce post the surge as across all areas, the staff are exhausted but hanging in to make sure we get through this Omicron surge – all are worrying about the 'aftermath'.

## A reset of the planned care system

With this complexity in mind, solutions cannot simply be ‘do more of the same’, ‘do more for less’ and ‘here is a target to make sure you do’. Respondents to the Health Quality & Safety Commission’s real-time monitoring explicitly expressed anxiety about such an approach. Yet within the system itself lies a recognition of not just the need for a full system ‘reset’ but also innovations trialled in this period of stress that may form the building blocks of that reset. These innovations have included:

- better working across specialities (for example, working together to share theatre lists and so maximise the use of available theatre capacity), with primary care (to jointly prioritise waitlists and provide to them visibility of real time frames for accessing planned care) and with private providers (through outsourcing some surgery)
- rapidly implementing alternative models of care or care plans such as physiotherapy and allied health teams to support orthopaedic services
- exploiting communications technology to provide both better telehealth (such as Zoom outpatients) and learning opportunities. As one respondent said, ‘Telehealth and virtual consults have been a saviour’.

Respondents saw the health service reforms as offering the opportunity to standardise access to planned care and approach the backlog in a risk-based and equity-focused way across the whole sector by sharing combined resources. This includes evidence-based medicine and having honest discussions with consumers and their whānau about expectations for how our health system and planned care will work.



## **Cancer care**

As we reported in Window 1, the pandemic has substantially disrupted cancer screening, diagnosis, treatment and supportive care in other countries.

### **The international cancer impact**

Between March and September 2020 in the United Kingdom, 3 million fewer people were invited for cancer screening. Between March 2020 and March 2021 in England, 4.6 million fewer key diagnostic tests were carried out and 326,000 fewer people received an urgent referral for suspected cancer, as compared with the same time span before the pandemic.<sup>24</sup> From April 2020 to March 2021, 36,000 fewer people in England and 45,000 fewer people in the UK began cancer treatment compared with the same time span before the pandemic.<sup>25</sup>

‘England,’ reports Cancer Research UK in its submission to the Health and Social Care Committee report referenced above, ‘already lagging behind comparable countries, now faces the risk of cancer survival going back for the first time in decades.’<sup>26</sup>

Canada experienced less but still considerable disruption. Between April and September 2020, the volume of cancer surgeries fell by 20% compared with pre-pandemic volumes. By April to September 2021, it had recovered to be within 5% of pre-pandemic volumes and 97% of patients received radiation therapy within the recommended four weeks.<sup>27</sup> More than usual numbers of new cancer diagnoses and decreased long-term survival for many patients with cancer in Canada are expected in coming years.<sup>28 29</sup>

In Australia, diagnostic procedures fell by about 8% in 2020 (over 160,000 fewer services) and therapeutic procedures fell by about 9% (over 14,000 fewer services).<sup>30 31</sup> In the state of Victoria alone, cancer pathology notifications fell 10% in 2020, meaning an estimated 2,530 cancer diagnoses were either delayed or missed.<sup>30 32</sup> Cancer Australia reports ‘predicted stage shifts to more advanced disease and increased mortality in the longer-term’.<sup>30</sup>

### **Cancer care in Aotearoa New Zealand**

As we discussed earlier in this chapter, in the early days of the pandemic in Aotearoa New Zealand, rates of some kinds of cancer screening fell in inequitable ways, and registrations, diagnostics and treatment fell in March 2020. However, data from Te Aho o Te Kahu, the Cancer Control Agency continues to suggest that disruptions to cancer services have been minimised thanks to a national systems focus on maintenance of cancer services, anticipation, active monitoring and reporting, adaptation and eased escalation of regional issues. This is despite the additional pressures on the cancer care system over the time of the pandemic.

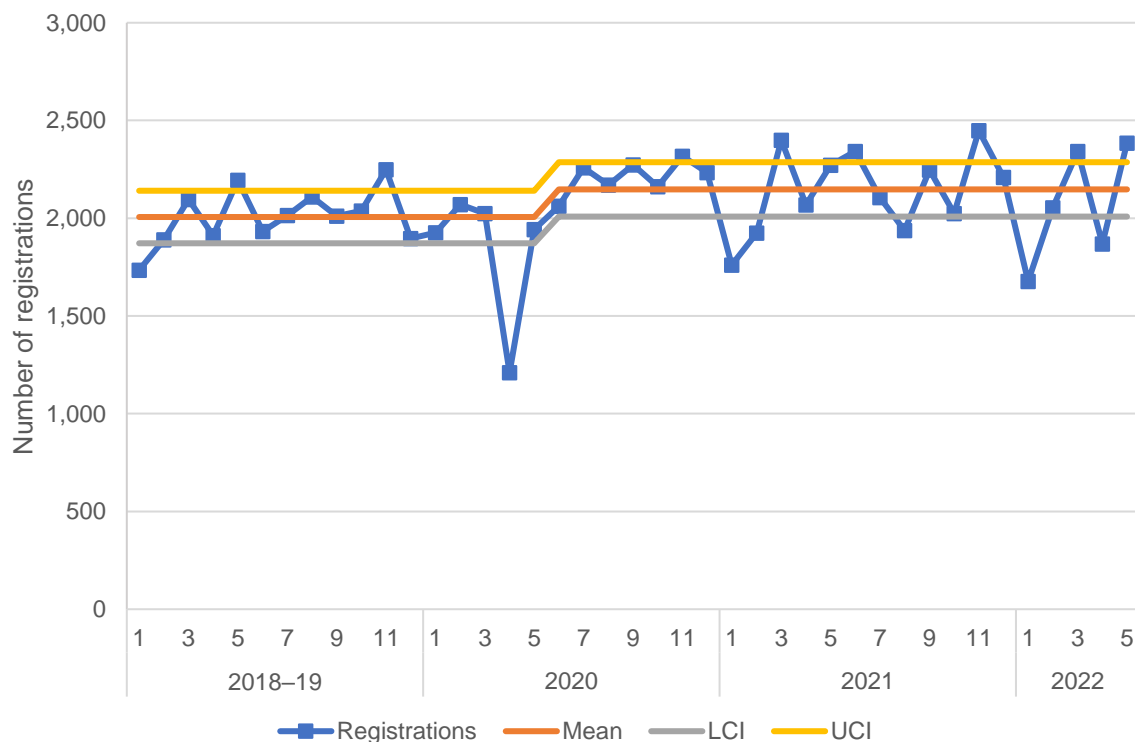
A few key areas remain of concern. We must emphasise that the indicators examined here are only part of people’s overall cancer journey and may not capture other impacts on services that individuals experience.

The views of the data below use statistical process control presentation in what is known as a ‘control chart’. This approach is now used widely in health care to show trends over time and whether trends represent a sustained significant shift from earlier service delivery.<sup>33 34 35</sup> Here the control chart plots time series data alongside an average for 2018 and 2019 (before the pandemic), with upper and lower confidence intervals. When the curve breaches the confidence interval, we have evidence that a ‘special cause’ is more likely than chance alone to have changed numbers of registrations, diagnostic or surgical procedures.

### New cancer registrations

Cancer registrations fell sharply in April 2020 at the time of the first national lockdown. This sharp fall led to concerns that lockdown and reduced access to care caused missed diagnoses that may present later. The number of new cancer registrations has increased slightly (but consistently) since June 2020 (Figure 19).

Figure 19: New cancer registrations, Aotearoa New Zealand, 2018–19 average and 2020–22



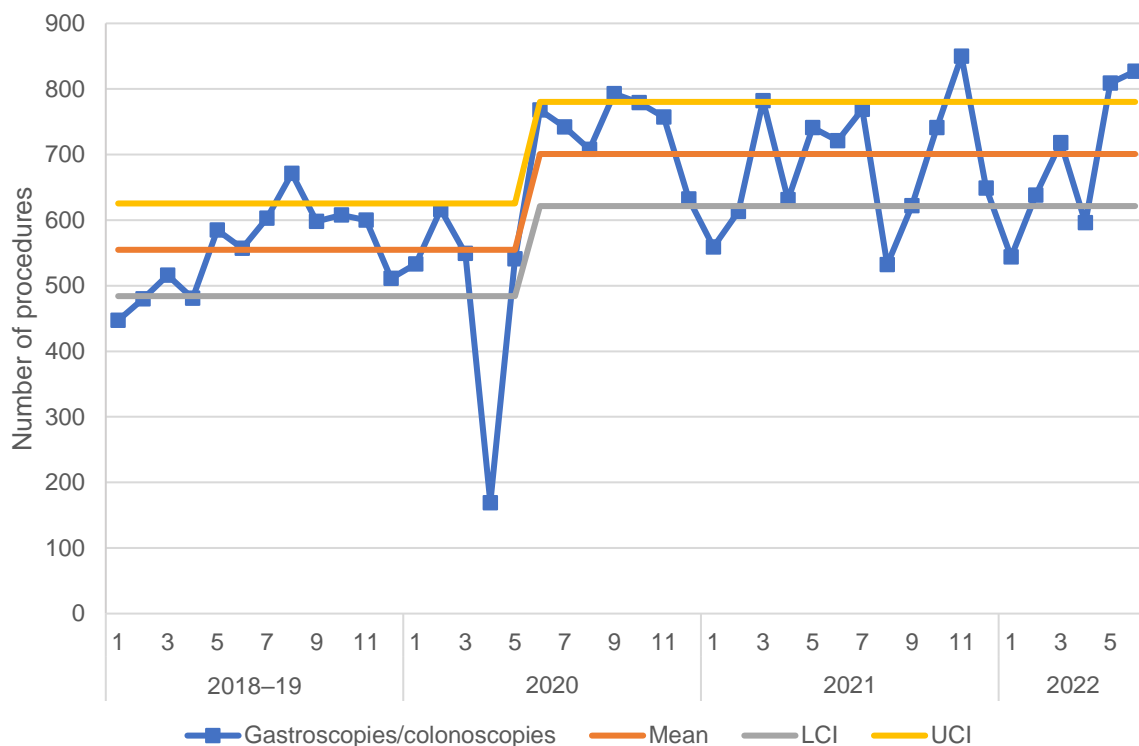
Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

## Diagnostic procedures

Diagnostic procedures also fell steeply in the first lockdown in 2020. As the figures below show, numbers of gastroscopies and colonoscopies dropped due to this special cause variation in April 2020. Since June 2020 services have increased to be consistently around 30% higher than before the pandemic for Māori (Figure 20), suggesting an increase in delivery that has far exceeded pandemic-related disruption.

Figure 20: Gastroscopy and colonoscopy procedures, Māori, Aotearoa New Zealand, 2018–19 average and 2020–22

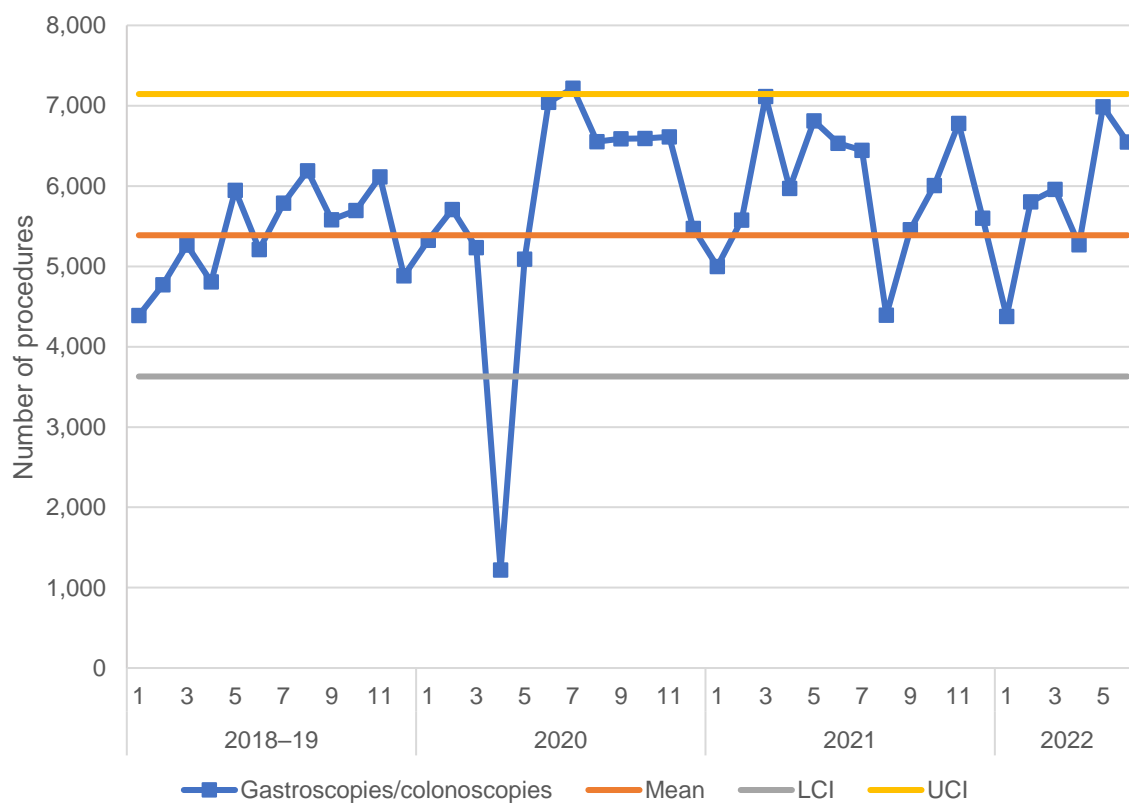


Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

For non-Māori, non-Pacific, notable drops in numbers of gastroscopies and colonoscopies occurred with the August 2021 lockdown and in early 2022 (Figure 21). Otherwise, however, people received these services at or above the 2018–19 mean.

Figure 21: Gastroscopy and colonoscopy procedures, non-Māori, non-Pacific, Aotearoa New Zealand, 2018–19 average and 2020–22



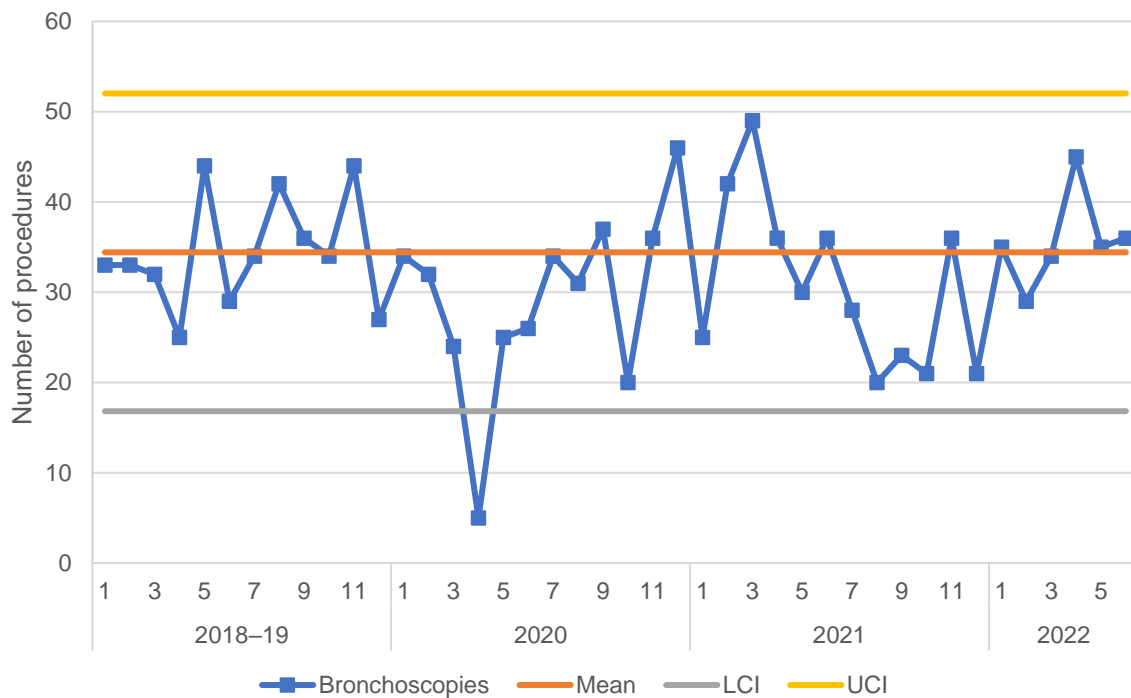
Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

Te Aho o Te Kahu leaders and stakeholders were aware of the likely impact of the pandemic on access to and delivery of lung cancer services. In particular, the agency identified that by late 2020 bronchoscopies had reduced by 15% for non-Māori, non-Pacific, but by nearly 28% among Māori.<sup>5 36</sup> Maintaining services for Māori was particularly important as Māori have a higher incidence of lung cancer than non-Māori.<sup>36</sup> Furthermore, the age-standardised lung cancer mortality rate for Māori is more than three times that of non-Māori.<sup>37 38</sup>

Figure 22 shows that, from 2020, Māori received fewer bronchoscopies than the 2018–19 mean. However, the reason for this change may be that, because of the pandemic, the method of lung cancer diagnosis moved away from use of bronchoscopies (due to risks of COVID-19 transmission, logistical challenges and other factors) to other methods. For example, more computed tomography (CT) lung biopsies were performed in 2021 than in previous years in eight out of twelve months.

Figure 22: Bronchoscopy procedures by month, Māori, Aotearoa New Zealand, 2018–19 average and 2020–22



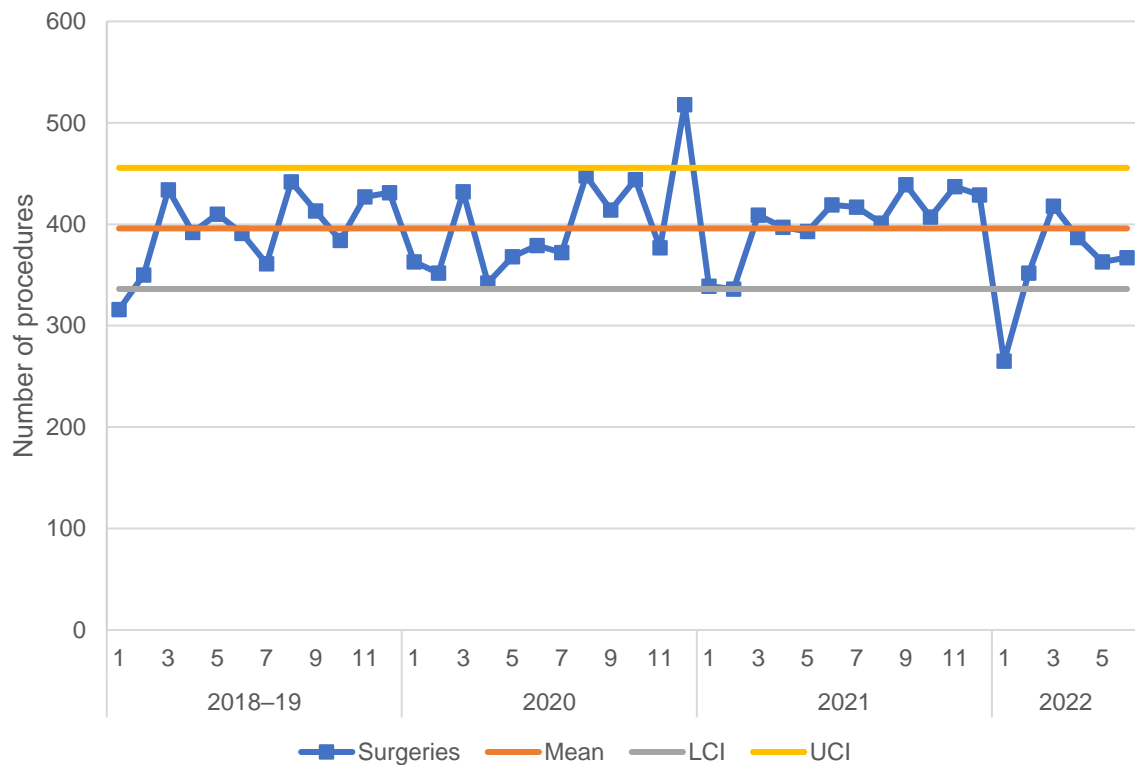
Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

### Surgeries

Analysis of numbers of curative cancer surgeries shows that generally the level of surgical services for non-Māori, non-Pacific was consistent with pre-pandemic levels through the pandemic period to date (Figure 23).

Figure 23: Monthly cancer surgeries, non-Māori, non-Pacific, Aotearoa New Zealand, 2018–19 average and 2020–22



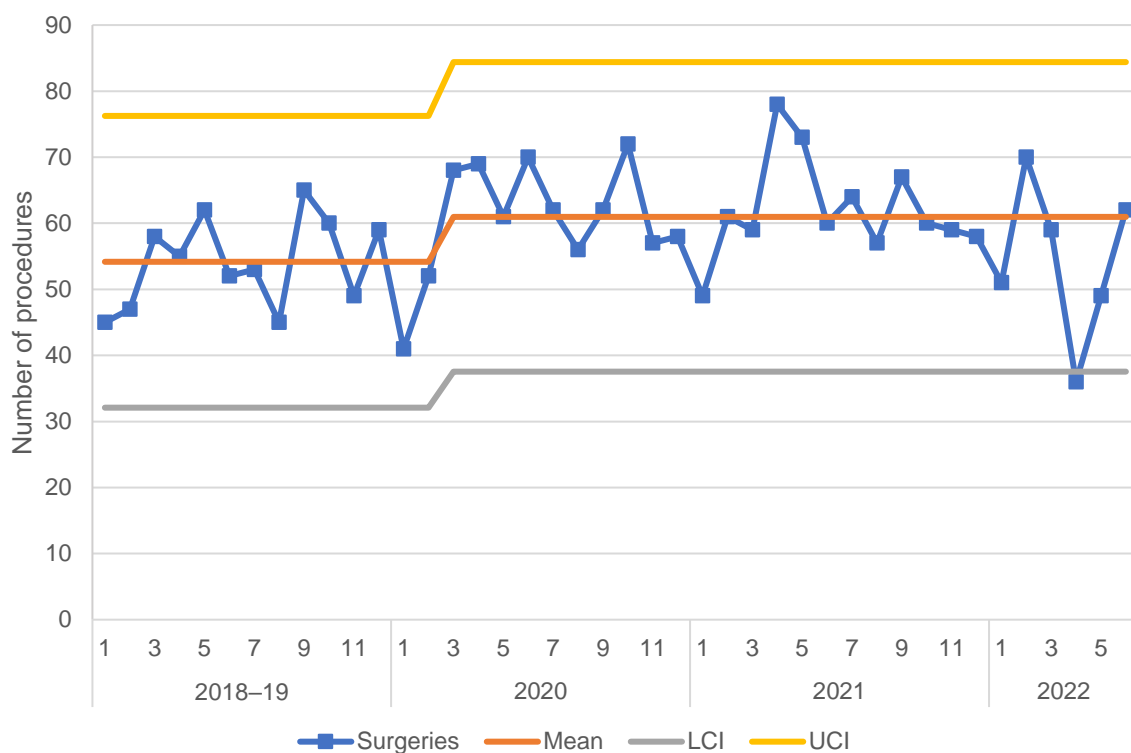
Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

For Māori, cancer surgeries have been delivered through the pandemic at above the 2018–19 average, with a small average increase of about eight surgeries a month (Figure 24). Support for this result comes from both cumulative views of the data in Te Aho o Te Kahu’s reports and control chart views of the data shown here. Te Aho o Te Kahu reports that the reasons for this success are:

- the hard work involved in the overall health system response and a focus on maintaining critical health services (including cancer surgery)
- its work in partnership with Hei Āhuru Mōwai (Māori Cancer Leadership Aotearoa) and cancer clinical leaders across the country to prevent inequities for Māori from becoming worse, which had been predicted as a likely outcome of pandemic-related restrictions and stressors, as much as possible.

Figure 24: Monthly cancer surgeries, Māori, Aotearoa New Zealand, 2018–19 average and 2020–22



Source: Te Aho o Te Kahu.

LCI = lower confidence interval; UCI = upper confidence interval.

Te Aho o Te Kahu continues to monitor the effects of the spread of Omicron in the community on delivery of services.

## Chapter 2: Mental health and COVID-19 | Upoko 2: Kowheori-19 me te hauora hinengaro

### Summary

The pandemic has had a profound impact on people's mental health. However, quantifying and understanding this impact is challenging. Here we look at selected indicators of pandemic impacts on mental health over the life course.

### Maternity

- The pandemic disrupted Well Child/Tamariki Ora checks, which help with maternal and whānau mental health in the infant's first year of life. The percentage of contacts fell dramatically from March 2020, while recovering slightly by March 2022.
- Calls to PlunketLine for help with mental health issues rose strongly in late 2020. They peaked in the second quarter of 2021 at four times the number of calls received before the pandemic.
- Referrals to Aronui Ora, a maternal mental health service that serves the Auckland DHB area most affected by lockdowns, rose sharply in the 2020/21 financial year after a steady number of referrals over the three previous years.

### Child and youth

The pandemic appears to have impacted on the mental health of children and younger people in particular.

- Calls to the Whakarongorau/1737 helpline from those aged 13–19 years asking for help spiked in April 2020. The volume of calls with a significant risk element of suicide began to rise above the volume of all earlier periods from April 2020, peaking in January 2022.
- There appears to have been only a small disruption to the percentage of clients aged under 25 years able to see a mental health specialist within three weeks of referral for reasons clearly related to the pandemic. However, this first appointment is usually for an initial suitability assessment. Waiting times for follow-up appointments for further assessment and formulation of a treatment plan are not captured in the available data but information from the sector, media reports and recently published work suggest that treatment has been harder to access with longer waiting times since the start of the pandemic.
- The number of antidepressants and antipsychotics dispensed to those aged 0–17 years clearly increased at the start of the pandemic. More children aged 0–15 years were admitted to hospital for mental health reasons than would be expected from June 2020 to the August 2021 lockdown. Among children aged



10–14 years, admissions to hospital with diagnoses of intentional self-harm (especially intentional self-poisonings) have risen since March 2020.

- The Eating Disorders Association of New Zealand reports a 58% increase in requests for assistance through its helpline for the 2020/21 financial year compared with 2019/20. New community referrals of those aged under 19 years to Auckland's Tupu Ora community-based specialist eating disorder service rose from around 100 per year to a new high of 180 in 2020/21. Hospital admissions likewise rose to an unprecedented high in 2020/21 for young people in the area of metro Auckland DHBs who have become medically unstable as a consequence of the severity of their eating disorder.

### **Working-age adults**

- Among working-age adults, dispensings of antidepressants and other medication related to mental health increased during the pandemic. Effects of the pandemic on rates of seclusion in forensic mental health services are also evident.
- New Zealand Health Survey data in 2020/21 shows an overall prevalence of 9.6% of adults aged 15 years and over reporting psychological distress in the last four weeks, which is in line with the steady year-on-year increase occurring in previous years. However, the proportion of Pacific women reporting psychological distress nearly doubled in one year, from 11% in 2019/20 to 19% in 2020/21.
- Whakarongorau/1737 helpline data shows clear spikes in calls from younger working-age adults related to the first lockdown.
- The number of antidepressants dispensed increased after March 2020 and remained higher than the steady rates observed between January 2016 and January 2020. The change is not due to the introduction of wholesale limits to dispensings of medication for a period early in the pandemic.
- Data from the Health Quality & Safety Commission's Zero seclusion project shows short-term pandemic-related rises in the rate of seclusion of patients with mental health needs in inpatient mental health services. The main reason for the first rise was that the overall number of inpatients held in inpatient facilities decreased while the number of seclusions did not. In contrast, a spike in the rate in August 2021 was related more strongly to an increase in the absolute number of patients being secluded. Pressures on services related to lockdown and community spread of COVID-19 may have been one reason why staff had less capacity and ability to spend time on quality improvement work, contributing to these spikes in rates of seclusion.

### **Older people**

Despite the obvious disruptions to the networks, organisations and connections between whānau that support older people, including restrictions on those in aged residential care facilities, it is challenging to find data to quantify the mental health impacts of the pandemic on older people. Recent qualitative work has shown the

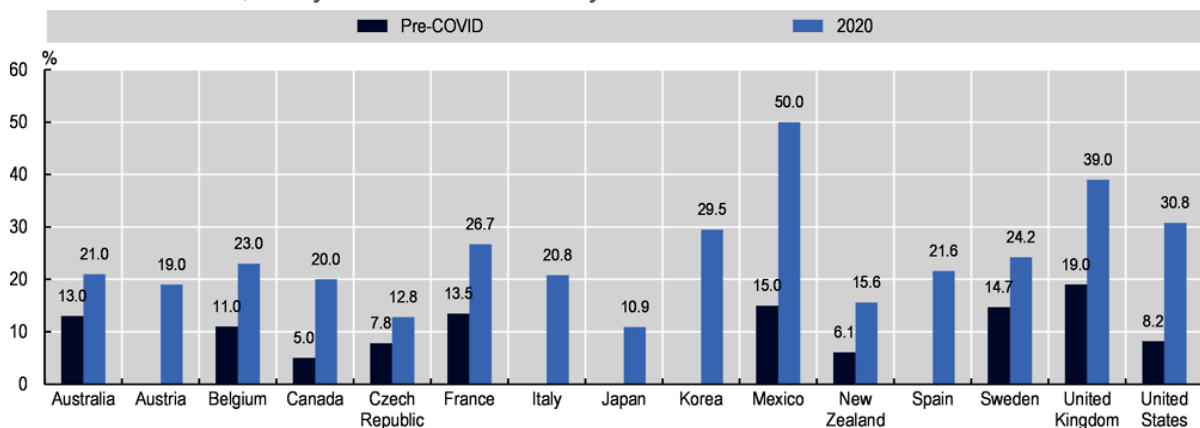
pandemic has had effects on loneliness in older people, coalescing around three inter-connected ways older people themselves conceptualised and experienced loneliness: feeling disconnected, feeling imprisoned and feeling neglected.

## Introduction

The pandemic has had a profound impact on people’s mental health. However, quantifying and understanding this impact is challenging.

Internationally, the Organisation for Economic Co-operation and Development (OECD) reports, ‘Population mental health has deteriorated significantly since the start of the COVID-19 pandemic.’ As evidence, it notes that the prevalence of anxiety and depression in many countries doubled or more than doubled in early 2020 compared with previous years (Figure 25).<sup>39</sup>

Figure 25: National estimates of prevalence of anxiety or symptoms of anxiety, OECD countries, early 2020<sup>1</sup> and earlier years



Source: OECD.<sup>39</sup>

Note: As much as possible, 2020 prevalence estimates were taken from March–April 2020.

This data is compelling and fits with our sense of how a changing and difficult period affected people’s mental health. However, we must acknowledge that countries used different survey instruments and measures to produce this data (that is, the results are not comparable) and surveys conducted during lockdown periods had much lower response rates than earlier surveys. Aotearoa New Zealand results in particular are difficult to compare with results in other countries because the effects of community spread of COVID-19 occurred later here than there. Aotearoa New Zealand has not had a dedicated comprehensive mental health survey since Te Rau Hinengaro: The New Zealand Mental Health Survey in 2003/04.<sup>40</sup>

In this chapter we take a life course approach to look at different areas where data is available that might shed light on the impacts of the pandemic on the mental health of people at different stages of life: from pregnant women and mothers of infants, to children and youth, to working-age adults and older people.

Unsurprisingly, by looking closely at more detailed data, we gain a more nuanced and complex understanding of the effects of the pandemic on mental health.

### ***Pregnant women and mothers of infants***

Recent research in the United Kingdom has shown the pandemic has increased rates of perinatal distress,<sup>41</sup> especially among those who became pregnant during the pandemic.

Before the pandemic, poor perinatal mental health in Aotearoa New Zealand was identified as ‘an already significant issue’. The pandemic has made it worse, in particular for Pacific, Asian and migrant women, who lost access to their support networks when the borders closed.<sup>42</sup>

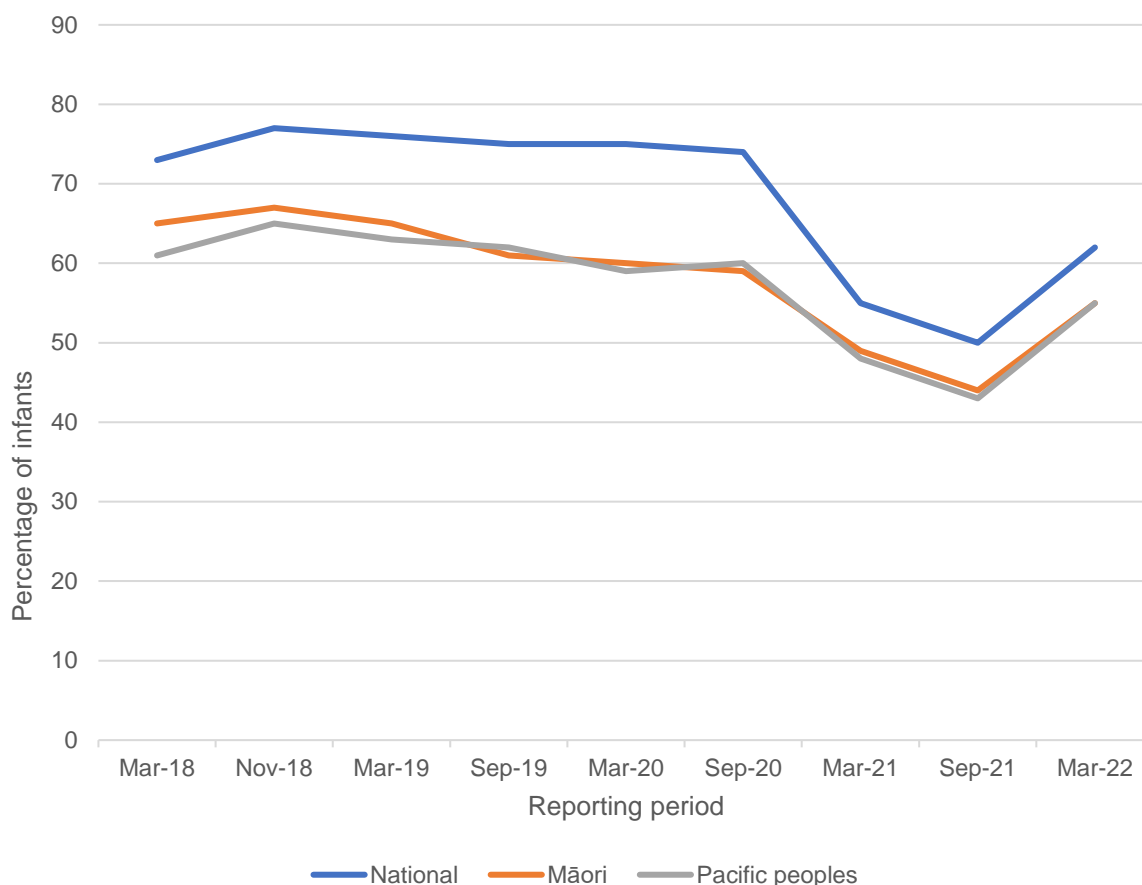
The pandemic has affected movement and socialising, and disrupted support networks during pregnancy and after birth. It has also created fear and concern about infection and giving birth in hospital settings where COVID-19 may be present.<sup>42</sup>

### **Well Child/Tamariki Ora services and checks on maternal mental health**

Crucially, we know the pandemic has disrupted services designed to monitor and help maternal and whānau mental health in the infant’s first year of life. By the age of one year, babies should have received all five Well Child/Tamariki Ora programme core contacts. These core contacts include checks for maternal– and parent–child interaction and bonding, family mental health, and parenting support and advice.<sup>43</sup> Further, Well Child/Tamariki Ora acts as an important gateway for parents in need to access primary and specialist health care, education and social services.<sup>44</sup>

The pandemic has powerfully affected the services’ ability to check in on the mental health of mothers and families in the first year of an infant’s life. Since March 2020 the national percentage of infants receiving core checks in their first year dropped from 75% to a low point of 50% in September 2021, although the most recent data shows it has since recovered somewhat to 63%. Checks on Māori infants and whānau have dropped year on year since 2018, with an accelerated fall – of 10 percentage points – between September 2020 and March 2021. Checks on the wellbeing of Pacific infants and their families dropped 12 percentage points in the same period. While under half of Māori and Pacific mothers and families were receiving their core checks in September 2021, the latest data for March 2022 shows some recovery (Figure 26).

Figure 26: Percentage of infants receiving all Well Child/Tamariki Ora core contacts in their first year of life, by ethnicity, Aotearoa New Zealand, March 2018– March 2022

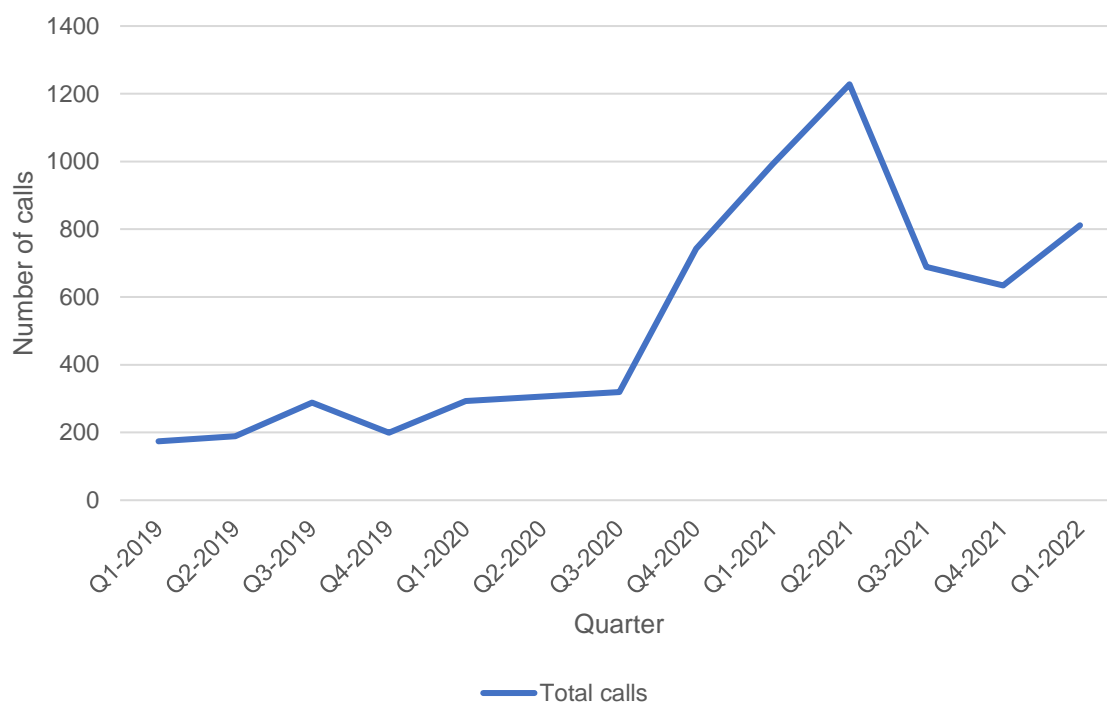


Source: Well Child/Tamariki Ora.

We can see signs of the pandemic’s effects on maternal mental health in calls for help to helplines. The pandemic increased people’s awareness of phone helplines in general, and usual sources of support like family, antenatal groups or primary care may have been less available or accessible for many women. However, these increases in calls for help may be interpreted as signs of worsening maternal mental health.

The number of calls to PlunketLine that included mental health issues rose sharply in the last quarter of 2020. They peaked in the second quarter of 2021 at four times the number of calls received before the pandemic (Figure 27). This peak coincided with the wide spread of respiratory syncytial virus in infants in Aotearoa New Zealand.

Figure 27: Number of PlunketLine calls related to maternal mental health, Aotearoa New Zealand, 2019–22



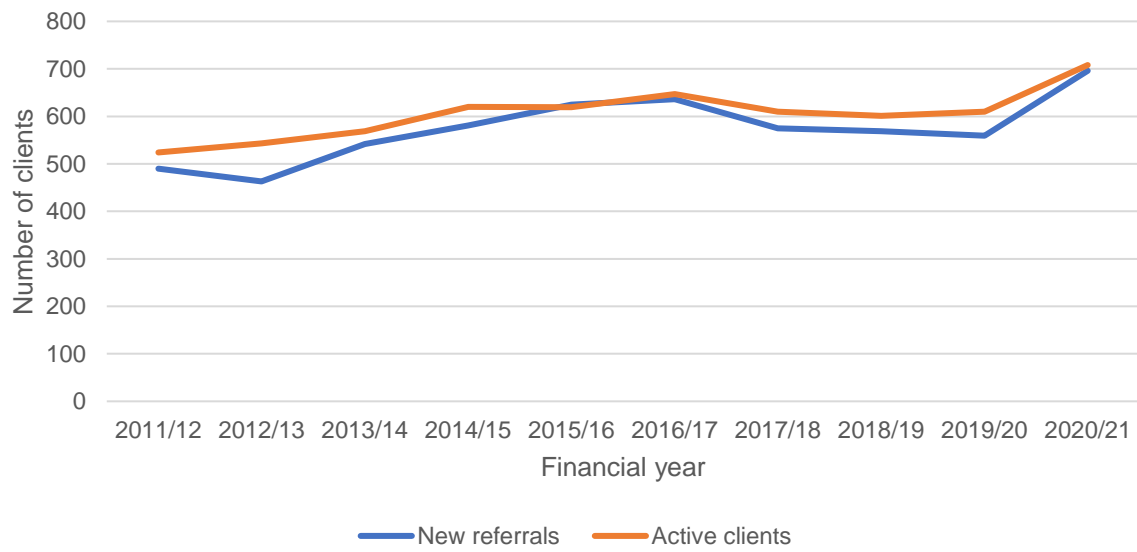
Source: PlunketLine.

Note: Calls include maternal mental health as the primary or second reason for call. In many calls that mothers make for a different primary reason, they also disclose their own mental health issues.

Lockdowns and community spread hit the Auckland area hardest. We can gain some indication of the severity of mental health issues in the Auckland area over the pandemic from hard data for Aronui Ora. This maternal mental health service provides mental health assessments, counselling, referrals and other services on behalf of the whole Auckland DHB area.<sup>45</sup>

Aronui Ora has seen a slow but steady increase in new referrals of women to its maternal mental health service over 10 years, with a steeper rise in the pandemic-affected period of the 2020/21 financial year (Figure 28). This represents 137 more women than in 2019/20 and the highest number in 10 years.

Figure 28: Number of new referrals and active clients at Aronui Ora maternal mental health service, Auckland DHB, 2011/12–2020/21



Source: Aronui Ora.

Further study is needed to understand the impacts of the Omicron outbreak and ongoing or enduring impacts on maternal mental health.

## **Child and youth**

In the UK, the Marmot Review into the effects of the pandemic on worsening inequalities outlined ‘highly concerning increases in mental health problems and lack of access to appropriate services for young people since the start of the pandemic’.<sup>46</sup>

Data from sources and services in Aotearoa New Zealand reveals that youth are using mental health helplines more and are being dispensed more mental health medication, including antidepressants and antipsychotics. In addition, more young people are reaching out for help with and being hospitalised for self-harming behaviours and eating disorders than before the pandemic.

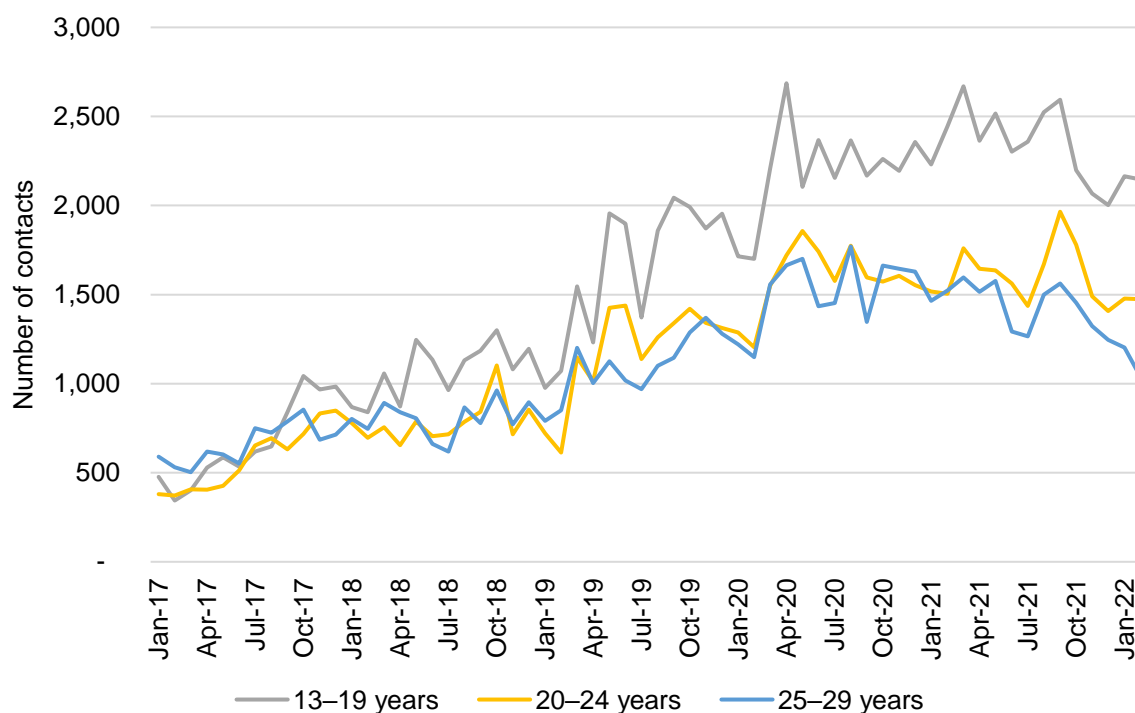
### **Whakarongorau/1737**

Whakarongorau Aotearoa provides virtual health, mental health and social services across seven digital channels including voice, webchat and text. All are free to the public and available 24 hours a day, 7 days a week.<sup>47</sup>

Whakarongorau data shows its calls for help with mental health were increasing in 2019 but then spiked from April 2020 onwards. Most of this increase in contacts came from those aged 13–19 years (making 1,000 more contacts in one month) and 20–24 years (Figure 29). We cannot use this data as a direct measure of change in mental health, as the service was promoted widely for those needing pandemic-related information as well. However, the dramatic increase in contacts does give an indication of underlying mental health need.

Whakarongorau reports that, while call volumes increased, subsequent referrals to specialist services did not. It explains the reason for this is that youth who make contact prefer text over calling, tending to decline shifting to phone calls, seeking episodic support rather than long-term intervention. Whakarongorau finds youth often will only attend a GP for acute medical issues or sexual health, not for mental health issues, thus referrals do not occur.<sup>48</sup> Youth consumer perspectives support this analysis (see box on p 72).

Figure 29: Number of contacts to Whakarongorau/1737, by age group, Aotearoa New Zealand, January 2017–February 2022



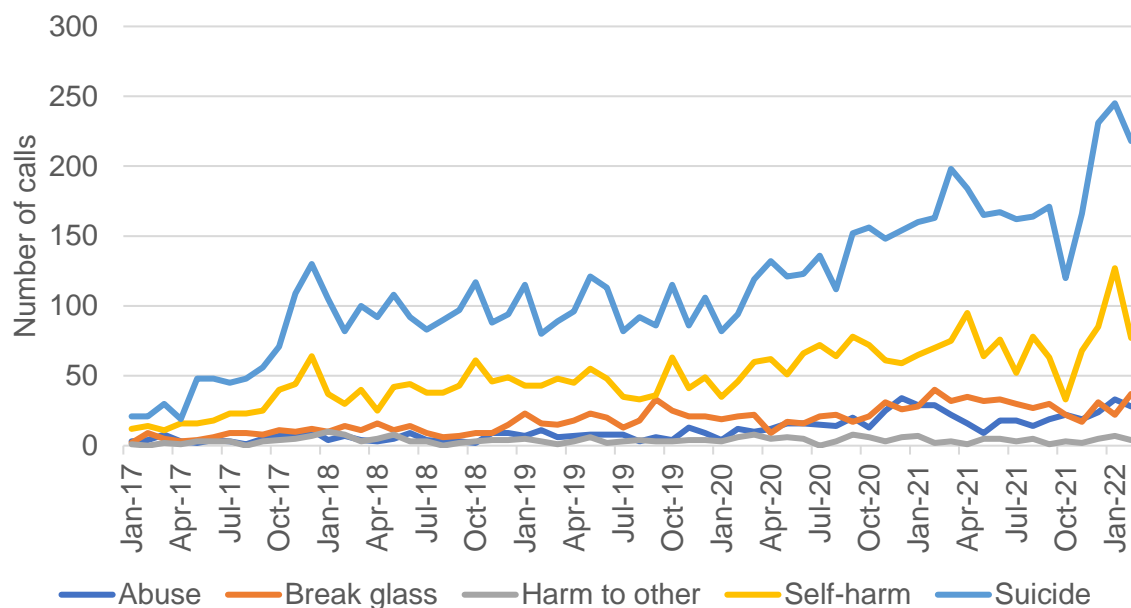
Source: Whakarongorau Aotearoa.

Whakarongorau reports that, over time, there was a steady increase in contacts from youth that involve a significant risk element, including discussion of self-harm and suicidal ideation.

In those aged 13–19 years, the volume of contacts with a significant risk element doubled from the first quarter of 2020 to the last quarter of 2021 (Figure 30). As a proportion of total contacts, contacts from this group rose from 5% to nearly 10% of total contacts in the last quarter of 2021. A marked rise in contacts with suicide as a significant risk element is evident from March 2020.



Figure 30: Contacts to Whakarongorau/1737, 13–19 years, by significant risk element, Aotearoa New Zealand, January 2017–February 2022



Source: Whakarongorau Aotearoa.

### Accessing primary care for youth with mental health needs

The Health Quality & Safety Commission’s patient experience survey data reveals that those young people who accessed primary care for any reason were less likely than other age groups to feel their health care professional recognised and/or understood any mental health needs that they might have had.

Across all age groups, 70.5% (CI 69.4%–71.6%) of all respondents who attended primary care for any reason felt their health care professional recognised and/or understood their mental health needs. However, only 56.6% (CI 51.3%–61.9%) of those aged 15–24 years gave this response.

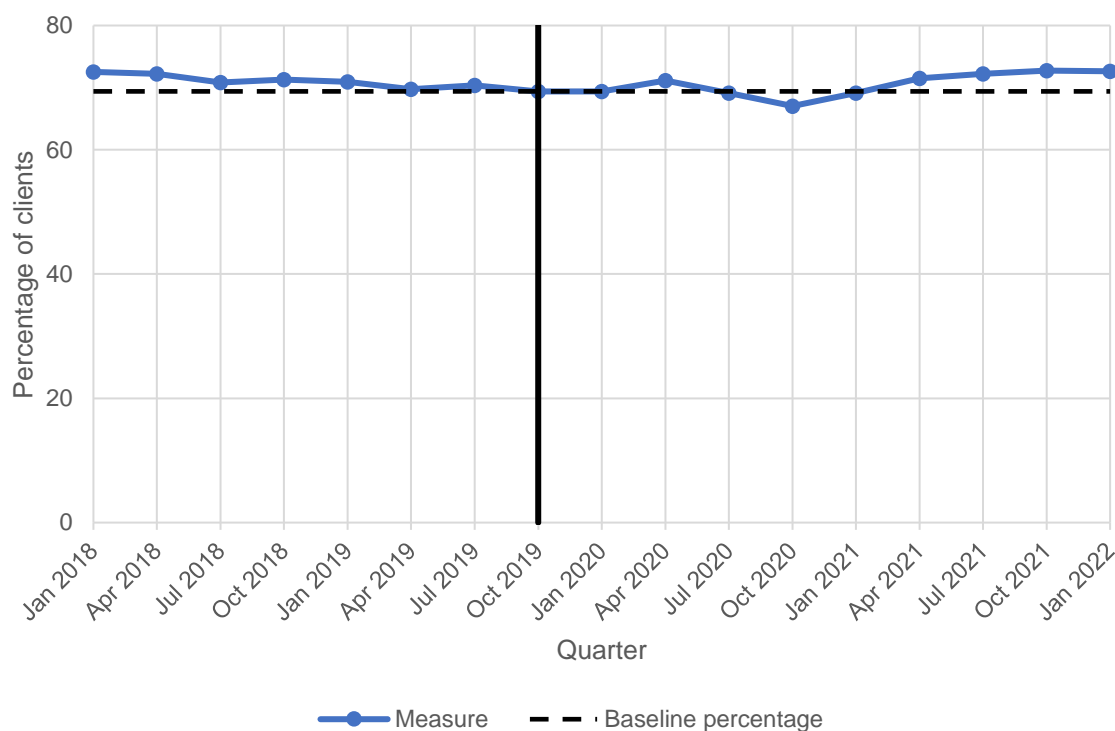
### Referral of young people to mental health services

After a young person receives a referral to a mental health service, prompt diagnosis and access to treatment in the initial stages of a mental illness can have significant consequences for their mental health. As part of the new Health System Indicators framework,<sup>49</sup> the Commission and the Ministry of Health report the percentage of new clients aged under 25 years who are seen within three weeks of referral to a mental health service.

As Figure 31 shows, only a small percentage of clients aged under 25 years appear to have been unable to see a mental health specialist within three weeks of referral for reasons associated with the pandemic. In the three months to October 2020, the proportion dropped to 67% of young people seen within three weeks, below the 2019

baseline, but soon recovered and has improved each quarter since, to 73% in the three months to January 2022.

Figure 31: Percentage of new clients aged under 25 years seen within three weeks of referral to mental health service, Aotearoa New Zealand, January 2018–January 2022



Source: Health System Indicators.

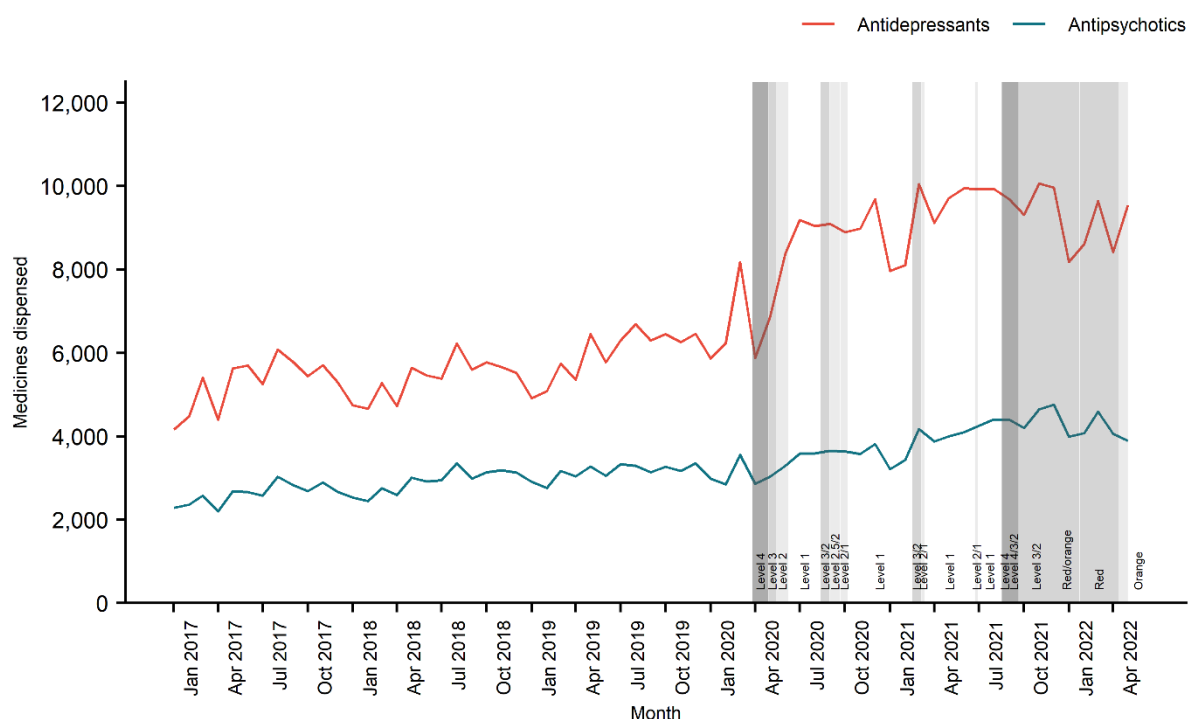
Despite this positive data, it does not tell the full story, and what happens after referral is key. When a young person is referred from a primary provider to a specialist health child and adolescent mental health service (CAMHS), they are usually seen for an initial suitability assessment (sometimes known as a ‘choice appointment’). If, after that initial assessment, the assessor believes the young person may have a moderate to severe mental health issue and that CAMHS are the best service to help, the young person will then be offered a follow up appointment for further assessment and formulation of a treatment plan. The waiting times for the follow-up appointments are not captured in the available data but information from the sector, media reports<sup>50 51 52</sup> and recently published work<sup>53</sup> suggest that CAMHS treatment has been harder to access with longer waiting times since the start of the pandemic. For example, an August 2022 Aotearoa New Zealand study found 90% of doctors practising in child and adolescent psychiatry surveyed thought that in the last two years waiting lists had increased or increased a lot. Just over half (59%) reported that staffing levels had decreased or decreased a lot while 89% reported that patient complexity had increased or increased a lot.<sup>53</sup>

## Dispensing of mental health medication

Dispensing of antidepressants and antipsychotics to children and young people aged 0–17 years had been rising steadily since at least the mid-2010s. For antidepressants, however, a clear step increase occurs in dispensing at the start of the pandemic (from around 6,000 to around 9,000 dispensings each month) (Figure 32). From this increased baseline, daily dispensings have continued to rise and stood at around 10,000 per month by the end of 2021.

These pandemic-related increases in dispensings to 0–17-year-olds are for the most part explained by short-term (0–30 days) dispensings of antidepressants to young people who had not been dispensed an antidepressant before the pandemic.

Figure 32: Number of dispensings of antidepressants and antipsychotics per day, 0–17 years, Aotearoa New Zealand, by month, January 2017–May 2022

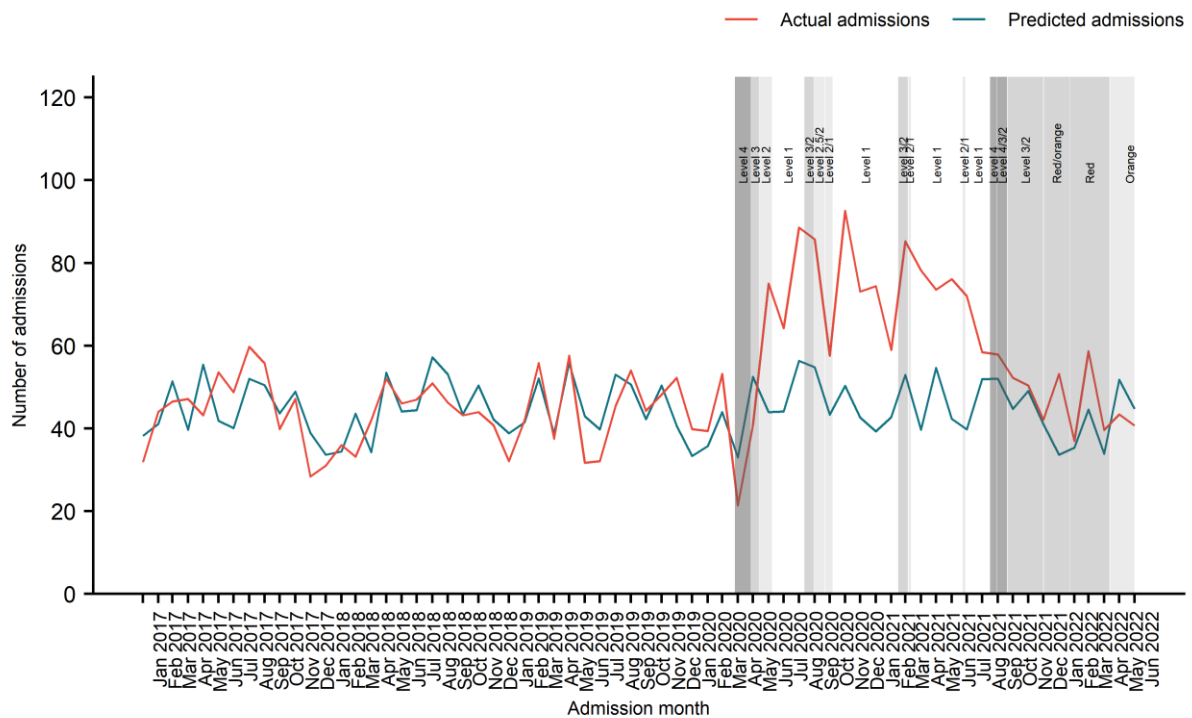


Source: Routine Health Quality & Safety Commission data analysis.

## Admissions to hospital of children aged 0–15 years for mental health reasons

As Figure 33 shows, from the end of the first level-4 lockdown in April 2020 to the August 2021 lockdown, more children aged 0–15 years were admitted to hospital for mental health reasons (red line) than would be expected (blue line). The actual number is about 300 more children than would be expected in total over this time, and in several months, hospital services were seeing double the number of children than they would usually see. Following the second lockdown, however, admissions returned to expected levels. This short-lived change occurs across all relevant diagnoses and no clear anomaly in the data appears to explain it.

Figure 33: Actual and predicted acute inpatient admissions for mental health reasons, 0–15 years, Aotearoa New Zealand, January 2017–June 2022



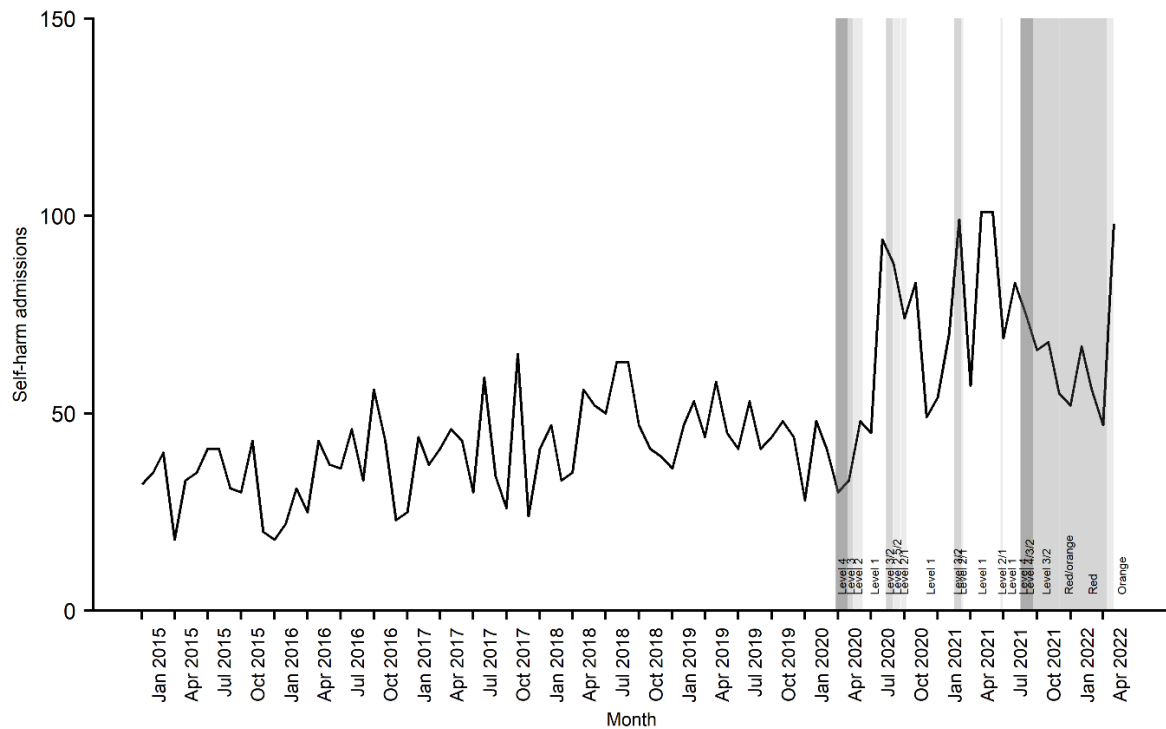
Source: Routine Health Quality & Safety Commission data analysis.

### Admissions to hospital for children who have self-harmed

Hospital admissions of children aged 10–14 years with diagnoses of intentional self-harm<sup>e</sup> have risen since March 2020 (Figure 34). This dramatic increase was particularly concentrated in this age group (it does not show as clearly for those aged 15–19 years). The increase appeared to be settling somewhat in later data, albeit at a new higher level than before the pandemic, but spikes again in May 2022.

<sup>e</sup> Intentional self-harm, sometimes known as parasuicide, is sometimes defined as ‘any nonfatal, self-injurious behavior with a clear intent to cause bodily harm or death. Thus parasuicide includes both lethal suicide attempts and more habitual or low-lethality behaviors such as cutting or other self-mutilation.’ Kreitman 1977, cited in: Comtois KA. 2002. A review of interventions to reduce the prevalence of parasuicide. *Psychiatric Services* 53(9): 1138–44.

Figure 34: Admissions to hospital for intentional self-harm, 10–14 years, Aotearoa New Zealand, January 2015–May 2022



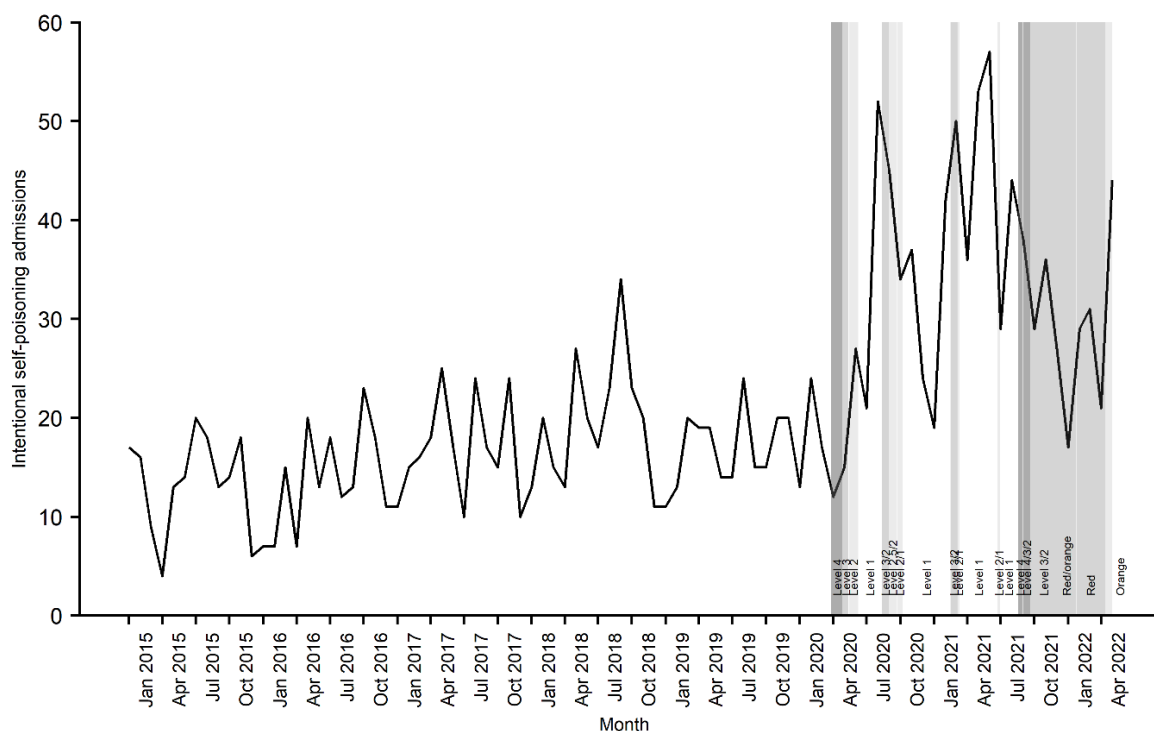
Source: National Minimum Dataset.

Perspectives from clinicians, particularly in Auckland, back up these findings. A south Auckland paediatrician says:

The clinical experience I think is only a small part of the mental health burden. But clinically what I and colleagues saw (and continue to see) was an increase in young people coming in to ED with overdoses and deliberate self harm. This seemed to be more than two to three times than pre-COVID.

Many of these admissions to hospital were for intentional self-poisonings, which mostly involved using non-opioid analgesics like paracetamol, antipyretics and antirheumatics. A clear rise in these hospitalisations is evident from mid-2020 (Figure 35).

Figure 35: Admissions to hospital for intentional self-poisoning by exposure to non-opioid analgesics, antipyretics and antirheumatics, 10–14 years, Aotearoa New Zealand, January 2015–May 2022



Source: National Minimum Dataset.

### Youth with eating disorders

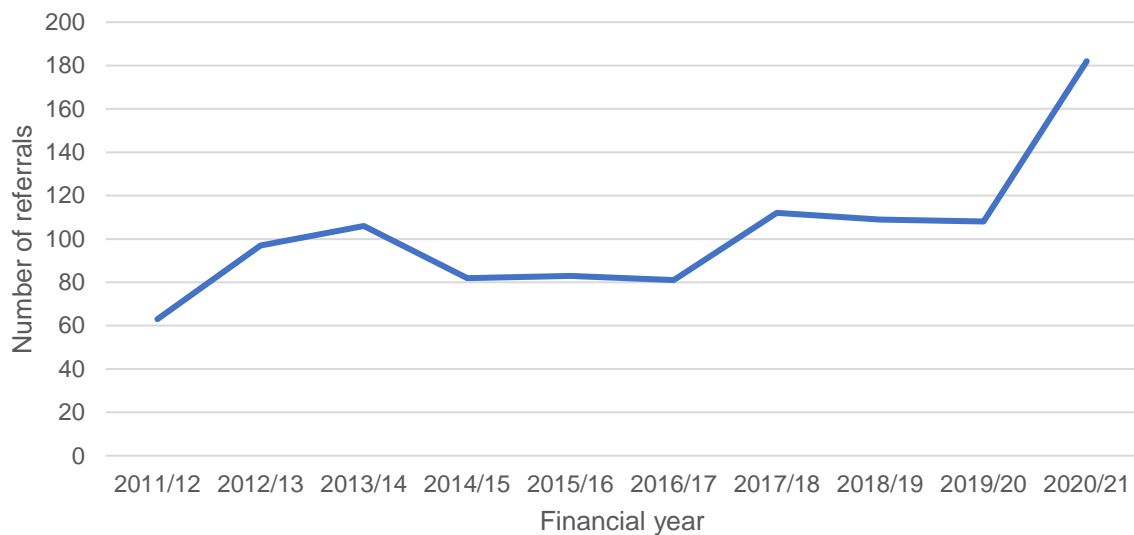
Internationally, a large study of the electronic health records of 5.2 million young people, mostly in the United States, found the overall incidence of eating disorders during the COVID-19 pandemic in 2020 increased by 15.3% compared with previous years.<sup>54</sup> The increase occurred solely in women and girls, most of them adolescents, and mainly for anorexia nervosa.<sup>55</sup> The relative risk of eating disorders identified in the study increased steadily from March 2020 onwards, to reach more than 1.5 by the end of 2020.

In Aotearoa New Zealand, media have reported on a rise in eating disordered behaviour in youth since the pandemic began.<sup>56</sup> The Eating Disorders Association of New Zealand reports a 58% increase in requests for assistance through its helpline in the 2020/21 financial year compared with 2019/20. The 2021/22 financial year saw a further 27% increase on the previous year.<sup>57</sup> A small before-and-after study of hospital admissions in the Waikato district in 2019 and 2020 found a pandemic-related increase in demand for eating disorder services. It also found hospital admissions related to an eating disorder increased significantly in 2020 (rate ratio [RR] compared with 2019 = 1.7,  $p = 0.01$ ), particularly for adults (RR 2.0,  $p = 0.005$ ), and greater proportions of both children and adults had a first-ever admission related to an eating disorder. In outpatient services, young people were referred more frequently during the pandemic and were more physically unwell when referred.<sup>58</sup>

Many youth with anorexia nervosa and other eating disorders are treated in specialist outpatient services. One such regional community-based specialist service is Tupu Ora, which provides assessment and evidence-based treatment for children, young people and adults with acute and complex eating disorders in DHBs in the metro Auckland region.<sup>59</sup>

For nearly 10 years, new community referrals to Tupu Ora of those aged under 19 years were steady at 80–100 referrals a year. Between the 2019/20 and 2020/21 financial years, however, the number of referrals rose sharply to over 180 children and young people aged under 19 years in the last year of data available (Figure 36).

Figure 36: New referrals to Tupu Ora regional community-based specialist service with acute and complex eating disorders, under 19 years, metro Auckland DHBs, Aotearoa New Zealand, 2011/12–2020/21

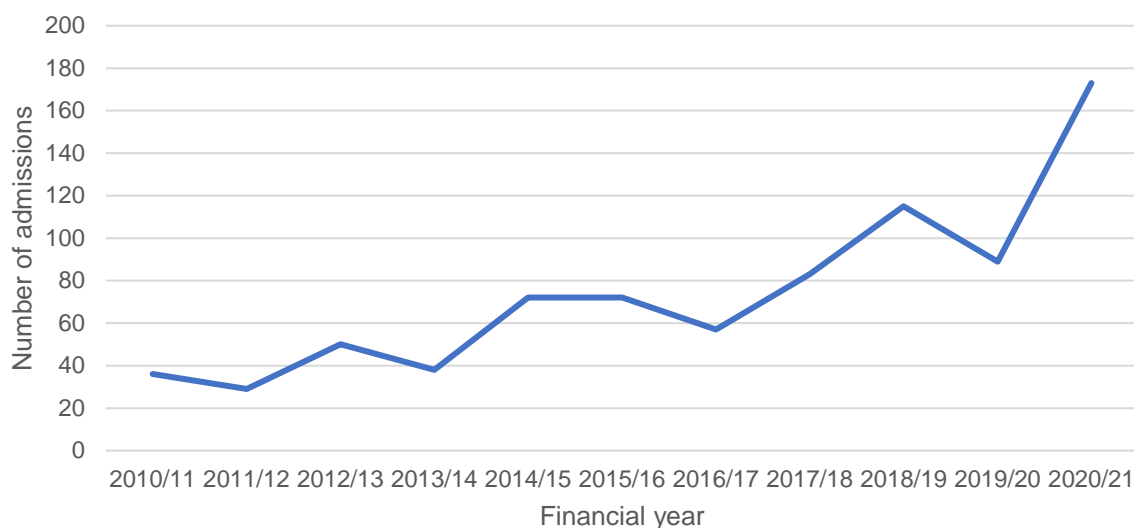


Source: Tupu Ora.

If an eating disorder becomes so severe that the young person becomes medically unstable, they are admitted to hospital and treated as an inpatient.

The trend of admissions to hospital for eating disorders to some extent mirrors the data for referral to the community service. That is, the number rose gradually over 10 years before a spike occurred in 2020/21 (Figure 37). The trend to some extent reflects how the first COVID-19 lockdown disrupted services towards the end of 2019/20.

Figure 37: Admissions to hospital for eating disorders, 16 years and under, metro Auckland DHBs, Aotearoa New Zealand, 2010/11–2020/21



Source: Tupu Ora, Starship.

**Box: Consumer perspective – Oliver Taylor, student and student residential adviser**

I’m a third-year University student at Victoria University in Wellington and my background is in public policy and political science.



One of my roles at the university is in student accommodation as a residential advisor. My job is to facilitate students’ experience and make sure that they’re looked after and that they have someone to go to. So the hall that I’m working in now is the one that I went to in my first year in 2020. It gives me an important connection to the community because I am able to have access to a bunch of first-year university students who’ve come from all over the country.

***The arrival of the pandemic***

My first year in 2020 was also the first year of lockdown and the first year of COVID-19. About four weeks into university at the hall of residence we were told we had to go into lockdown and they let us leave the hall. It was very disruptive to our learning. We weren’t able to study in any kind of normal way. Mental health issues were really, really strong at the time. The strain was quite abrupt and strong and it hasn’t really gone away. It’s just gone exponentially higher than it was.

There were people who were basically told they had nowhere to go because the Hall wouldn’t move those who couldn’t find somewhere to go into emergency



accommodation. There was a lot of stress around how young people were going to lock down and be safe in that time when it was so important to keep our distance.

That's going to cause some really horrific mental health outcomes for our young people and it's also going to put stress on their whānau so that's a chain reaction. When someone is going through those mental health issues, when someone is trapped the way they were and barred from housing, that links into everyone that they're connected to. So obviously that was really hard.

### ***Ongoing effects for students – and then Omicron***

Once lockdown was over we moved back to the hall in Alert Level 2 and the vibe was just deathly. When you move into a hall of residence you're supposed to have all this positivity around you, all this buzz for going to university and moving out of home, but it was just dead. And it really didn't pick up throughout 2020. People slowly moved back into the hall when they could, when they were able, when their whānau could help them, but the mood was just really, really hard. We had about 60 or 70 residents not move back to the hall so it was relatively empty. People were no longer interested in studying and I know people who, even if they did move back to the Hall, just gave up on their first year, which is really hard.

At the start of 2022 in March on the first day we moved in we had a case. The next day we had 30 cases. The day after that we had about 80 cases. That created challenges for us working but it also created a lot of anxiety. Young people don't want to be confined to their rooms or confined to themselves. In the hall you are even more confined if you got COVID-19. You don't have access to your own bathroom, you only have a single bed. You've got your little box and that's basically your life when you tested positive.

### ***Better services for young people***

We do have counsellors in the hall and they were pretty much booked out since the beginning of the pandemic. It's really ramped up with the amount of mental health stuff going on, not in just our hall but in all the halls. In 2021 I was a first-year residential advisor, and we had a lot of people going into ED for mental health concerns, more so than any physical reason, accident or any sudden illness – it was a lot more. It was averaging one or two a week going to ED for mental health reasons. We're talking about acute mental health issues, like self-harm, also suicide ideation.

Young people are facing rising mental health issues but this COVID-19 event has just elevated it. We know there are a lot of aspects to mental health. It's having somewhere safe to live, it's feeling nurtured. I feel that in the health system there need to be services that are a lot more tailored to young people so rather than getting them to reach out to you, there need to be mental health services that go out to young people – that go to halls of residence, that go to schools, that go to

universities, that have a visible presence. I think we need to encourage that positive mental health culture of actually talking to people.

I feel like young people obviously need more support but are services really engaging for them? Is there any reason for young people to engage with services? Many of our services are very clinical and very adult-focused. They don't have meaning for young people or have a youth element or youth perspective built into them. Young people often won't answer calls for GP visits, they won't go to a stale ED waiting room even if they are facing serious issues.

Young people are in a very awkward state. For example, in the halls of residence, they've just left home, they're beginning their life independently and they don't yet have the personal capability or understanding of the health system, or any sort of public system, and how to access and use it.

We need a lot more youth-tailored GPs who recognise the need that youth have. It needs to be very specific. It's different from adult health services. It's different from child health services. That transition between child health services and adult health services is really poor and there aren't a lot of tailored ways for people to transition from one to the other. To make health better for young people we need better primary care, and we need proper youth networks and youth support services that are tailored to them, not generalised.

### ***Working-age adults***

Among working-age adults, New Zealand Health Survey data shows effects of the pandemic on psychological distress for young people and Pacific women. Dispensings of antidepressants and other medication related to mental health to working-age adults increased during the pandemic. We can also see evidence of the effects of the pandemic on rates of seclusion in forensic mental health services. That is, during periods of the highest COVID-19 restrictions, services used more seclusion practices. However, after these periods, services returned to using seclusion at the improved rates that they had achieved before the pandemic began.

### **New Zealand Health Survey data**

Health Survey data suggests in 2020/21 an overall prevalence of 9.6% of adults aged 15 and over reporting psychological distress in the last four weeks (high or very high probability of anxiety or depressive disorder, ie, with a K10 score  $\geq 12^f$ ). This is a rise on 2019/20 but is generally in line with a long-term trend of an increase in rates and does not show any clear effect of the pandemic.<sup>60 61</sup>

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<sup>f</sup> Scores of 12 or more on the K10 survey instrument are strongly correlated with having an anxiety or depressive disorder.

More detailed analysis of the Health Survey data, however, reveals age, gender and ethnicity had inter-sectional effects on who was more likely to report psychological distress during the pandemic in 2020/21.

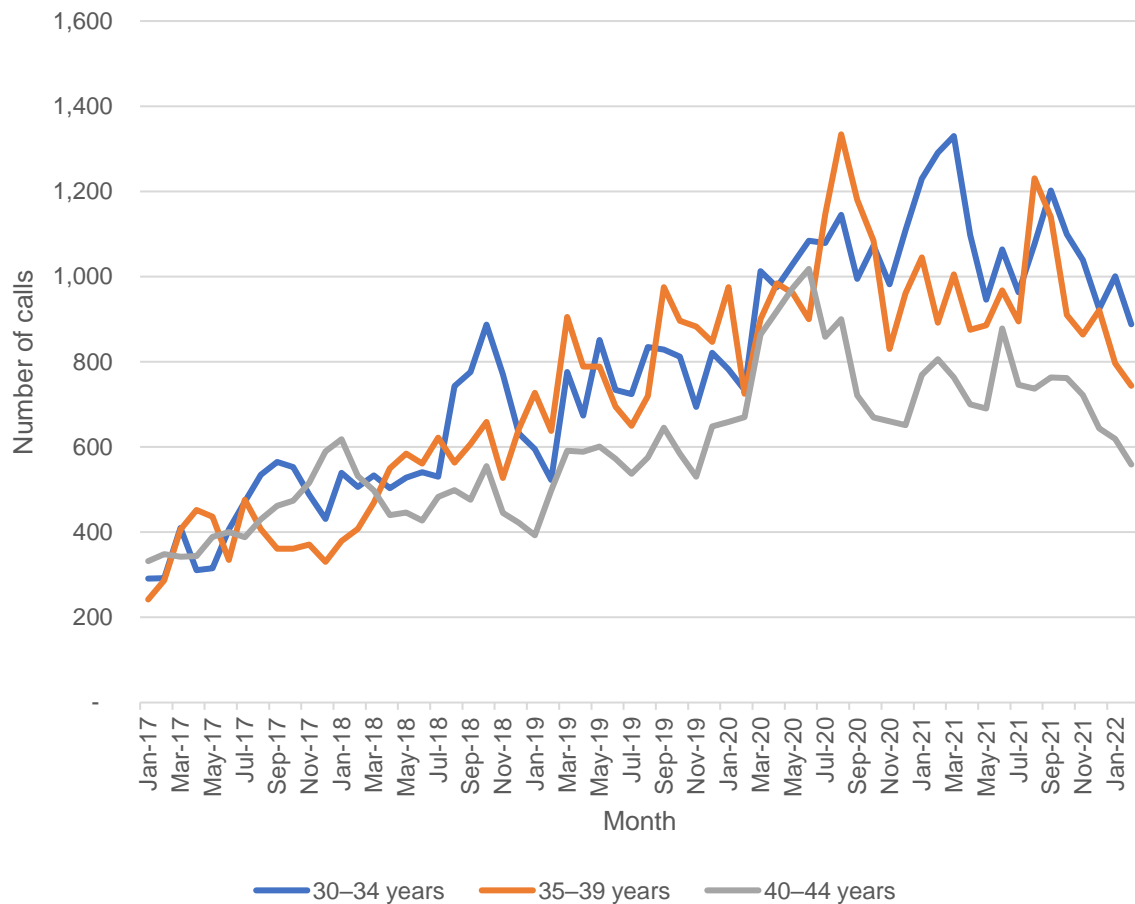
The proportion of young people aged 18–24 years reporting psychological distress nearly doubled in one year, from 11% in 2019/20 to 21% in 2020/21. Similarly, the proportion of Pacific women reporting psychological distress nearly doubled, from 11% in 2019/20 to 19% in 2020/21. That is, one in five Pacific women reported distress in most recent available data.

Twenty-seven percent of disabled adults reported psychological distress in 2020/21, five times more (95% CI 3.92–5.32) than non-disabled adults, but this rate had not changed from before the pandemic. We explore the experience of health care for disabled people during the pandemic in Chapter 4.

### **Whakarongorau/1737**

Whakarongorau/1737 helpline data for adults aged 30–44 years shows a somewhat different pattern from the data on youth (Figure 29). Volumes of calls are lower for this age group. Among the younger working-age adults, calls do spike in the first lockdown, no doubt in part due to promotion of the Whakarongorau service during the pandemic. Among older working-age adults, demand follows a linear increase before mid-2020 and then tends to plateau after that (Figure 38).

Figure 38: Number of calls to Whakarongorau/1737, by age group, Aotearoa New Zealand, January 2017–February 2022



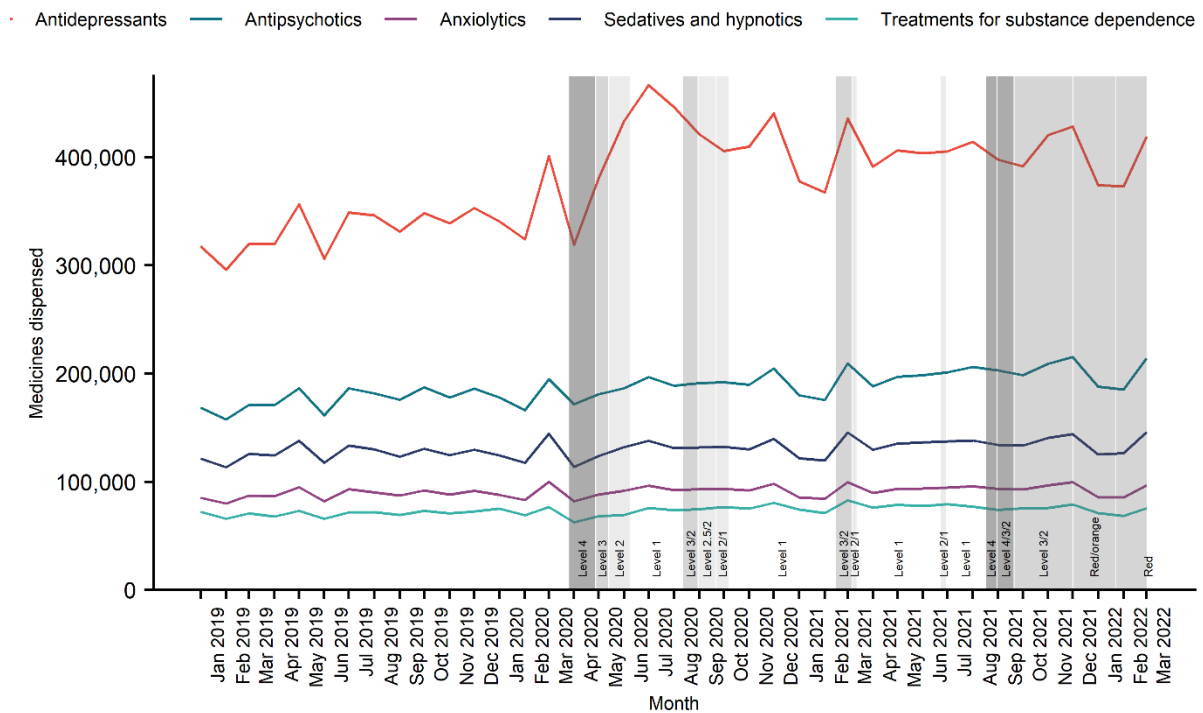
Source: Whakarongorau Aotearoa.

### Use of mental health medication

The number of dispensings of antidepressants increased after March 2020 and remained higher than the steady rates observed between January 2019 and January 2020, and indeed from 2016 (Figure 39).

Dispensings of other medication related to mental health appear to have increased steadily but only slightly for the last five years. Most of the increases observed are in line with trends over time, such as those for antipsychotics, anxiolytics, sedatives and hypnotics and treatments for substance dependence.

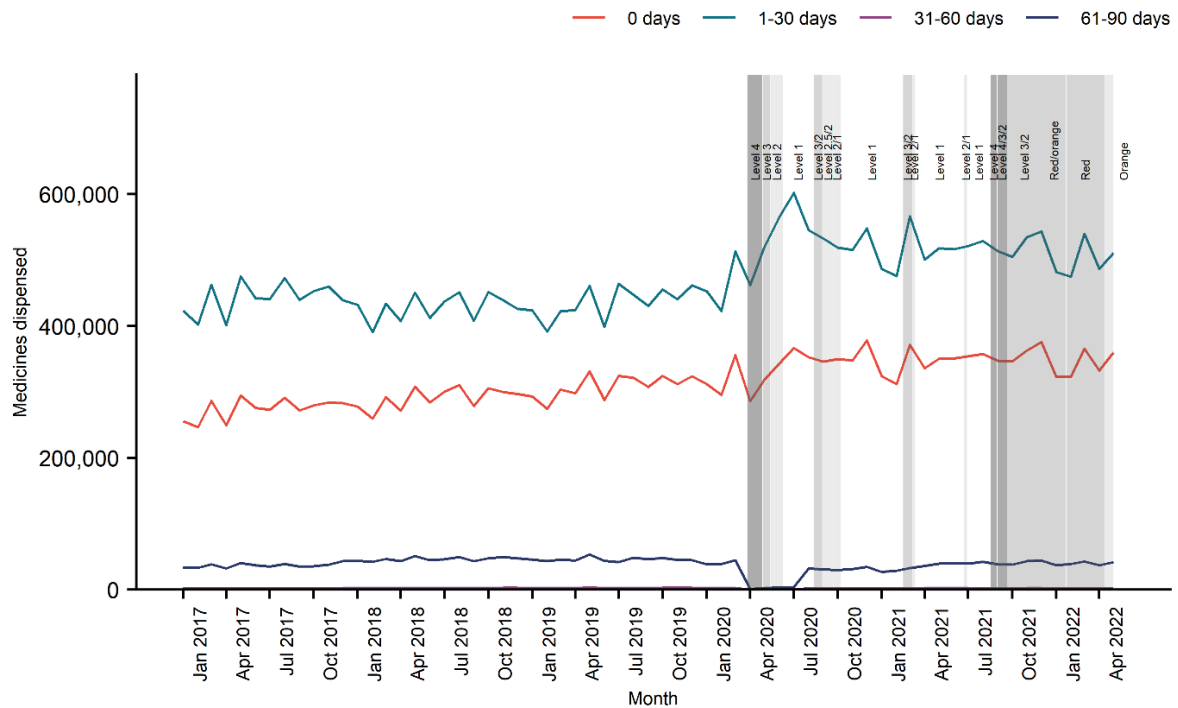
Figure 39: Monthly dispensings of medication related to mental health, Aotearoa New Zealand, January 2019–May 2022



Source: Routine Health Quality & Safety Commission data analysis.

At the start of the pandemic, concerns arose around the possibility that people might stockpile medication and how to manage supply issues. In response, wholesale limits on dispensing medication for a supply of 61–90 days were introduced on 1 March 2020 in an effort to maintain sufficient stock in the country. For most medicines, these limits were removed on 1 August 2020.<sup>62</sup> As Figure 40 shows, dispensings of a supply of antidepressants for 61–90 days dropped to zero until August 2020, then returned to slightly below normal dispensing levels. At the same time, dispensings of antidepressants for 1–30 days increased to a level not explained by the drop and later rise in dispensings for 60–90 days.

Figure 40: Monthly dispensings of antidepressants, supply of 0, 1–30, 31–60 and 61–90 days, Aotearoa New Zealand, 2017–22



Source: Routine Health Quality & Safety Commission data analysis.

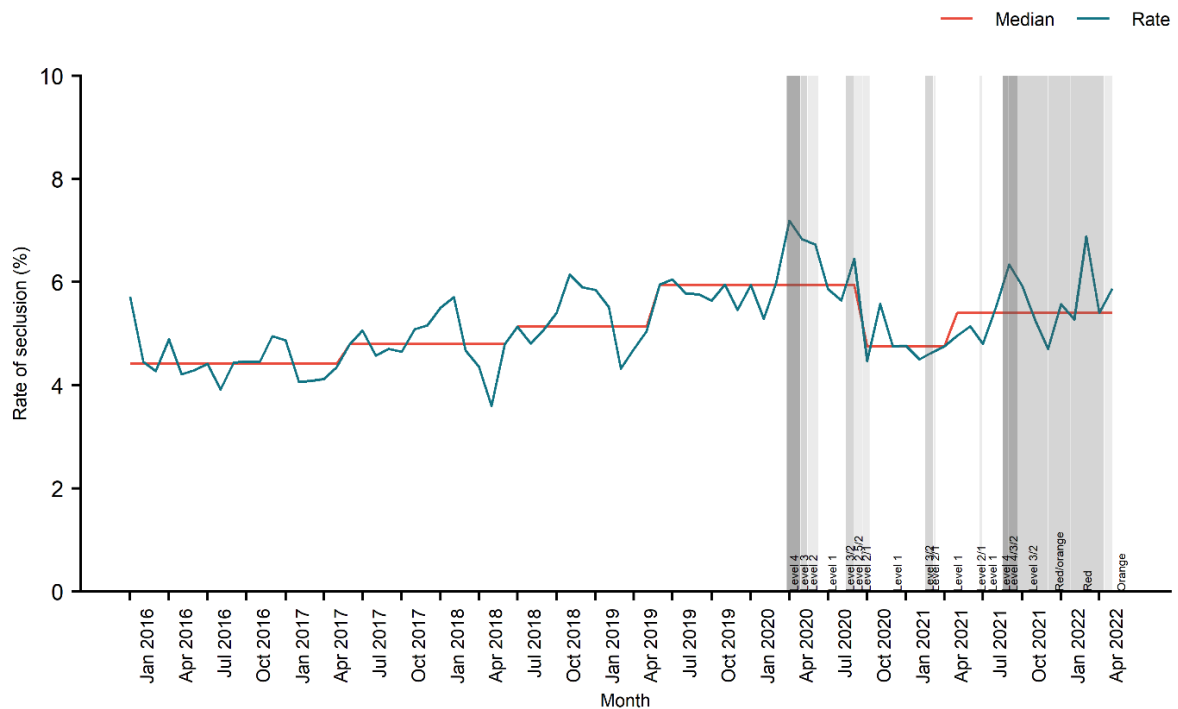
### Use of seclusion in mental health services

The practice of seclusion means isolating mental health patients in a locked area.

As an intervention to manage patients with mental health needs it is widely viewed as having no therapeutic benefit and as being potentially harmful to patients and also to staff. The mental health and addiction quality improvement programme run by the Health Quality & Safety Commission has led the nationwide Zero seclusion programme<sup>63</sup> since 2019, with the goal of eliminating the use of seclusion in mental health services. The programme has shown steady progress in reducing the rate and duration of seclusion events in Aotearoa New Zealand mental health services. What effects has the pandemic had on progress towards eliminating the use of seclusion?

Around the beginning of the first lockdown in early 2020, the rate of seclusion spiked (see the blue line in Figure 41). The main reason was that the total number of inpatients admitted to inpatient facilities fell, while the absolute number of people being secluded remained relatively steady so the proportion of secluded patients was higher.

Figure 41: Rate of seclusion of patients in mental health services, Aotearoa New Zealand, January 2016–April 2022



Source: Routine Health Quality & Safety Commission data analysis.

After April 2020, rates of seclusion fluctuated for a period. They began to improve from around October 2020 and continued to do so until about the time of the first Delta lockdown in August 2021. In contrast to the spike in 2020, the main reason for the spike at this time was that the absolute number of patients being secluded increased, while the number of inpatients held relatively steady. A range of factors might have contributed to this. Clinical feedback suggests that at this time services were seeing more complex patients, particularly those who might have been affected by methamphetamine, or potentially more challenging behaviour in patients who had reduced access to ward activities, reduced opportunity to leave the ward for periods and reduced support from family and whānau.

Towards the end of 2021 the rate of seclusion reduced again, before clearly rising with the arrival of Omicron through early 2022. During this phase of the pandemic services reported significant impacts on staffing, such as through illness, isolation and staff redeployment. Pressures on services related to lockdown and community spread may therefore have contributed to decreased capacity and ability to pursue quality improvement work, and to these spikes in rates of seclusion.

The impact of the pandemic on progress towards elimination of seclusion is clearly visible in the data, but the specific causes are not fully understood and are likely due to more than one factor.

## ***Older people***

It is challenging to find data to quantify the mental health impacts of the pandemic on older people. Networks and organisations and connections between whānau have been substantially disrupted. Visiting at aged residential care facilities has been restricted. However, data sources showing these impacts in any definitive way have been hard to come by. Rates of dispensing of mental health medication for older people do not show any clear patterns of increase or change attributable to the pandemic, nor does data on calls for help from Whakarongorau/1737.

One study conducted early in the pandemic investigated interRAI<sup>9</sup> data for impacts on the health and psychosocial wellbeing of people aged 60 years and older resident in aged residential care facilities between March 2020 and June 2020 and compared it with data from the same period in the previous year. The study found a lower rate of loneliness in Māori residents and a slightly higher rate of severe depressive symptoms (6.9% vs 6.3%,  $p = 0.028$ ) in New Zealand European populations.<sup>64</sup> This study was comprehensive and rigorous but completed early in the pandemic. The authors have since conducted a follow-up study covering the first year of the pandemic to March 2021, and their preliminary findings (as yet unpublished) suggest no significant impact in the first year.<sup>65</sup>

A recent, as yet unpublished, mixed-methods qualitative study combined data from letters ( $n = 870$ ) and interviews ( $n = 44$ ) collected from 914 people aged over 60 and living in Aotearoa New Zealand during the COVID-19 pandemic.<sup>66</sup>

The study notes the ambivalent findings and low sample sizes of international studies of impacts on older people to date, and how they show both positive and negative pictures of lockdown experiences. The study then uses targeted strategies to increase participation and explores how older people themselves have conceptualised loneliness during this period. Findings coalesced around three interconnected ways in which older people conceptualised and experienced loneliness during the pandemic: 1) feeling disconnected, relating to lack of emotional closeness to another often resulting from being physically separated from others and not being able to touch; 2) feeling imprisoned, relating to separation from preferred identities and activities, and frequently associated with boredom and frustration; and 3) feeling neglected, which often related to feeling let down by generalised and idealised forms of support, such as one's neighbourhood and health care system. The authors recommend that solutions to alleviate loneliness should be tailored to the particular forms and types of loneliness older people are experiencing, which may occur on an individual, inter-personal or societal level.

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<sup>9</sup> interRAI is a suite of clinical assessment instruments. It is developed by interRAI™, an international consortium of experts, and licensed for use in New Zealand by interRAI Services, part of Te Whatu Ora – Health New Zealand.



## ***Conclusion***

The mental health impacts of the pandemic are complex and diverse across the life course. However, it is clear that younger people have been particularly affected.

## Chapter 3: Workforce | Upoko 3: Ohumahi

### **Summary**

The health care workforce across the entire system has felt the impacts of the pandemic. Virtually all have been affected professionally and personally. Impacts on inequity and quality and safety follow on from this.

The Government has made 'Developing the health workforce of the future' a priority in its *Interim Government Policy Statement on Health 2022–2024*.<sup>67</sup> It announced a raft of new measures to support, grow and develop the workforce on 1 August 2022.

Around the world, staff in many industries have changed their job or left their field of work entirely since the pandemic began. This trend has affected health care in particular as examples from the USA, England and Australia show. Large-scale surveys show high and rising levels of burnout and mental health issues in health care staff since the pandemic. In some countries, the departure of staff was delayed until after the first phase of the pandemic. Aotearoa New Zealand managed to avoid this trend at that time due to border closures and public health measures. With the arrival of COVID-19 in this country, however, this overseas experience potentially holds a warning for the future.

There are trends of rapidly rising staff turnover in Aotearoa New Zealand from the beginning of 2021 after dips for most role categories at the beginning of the pandemic in March 2020.

### **Long-standing system settings**

Existing workforce shortages and under-staffing have been reported across services. The Omicron outbreak has added to staffing pressures in terms of staff illness, isolation requirements and inability to recruit more staff offshore.

### **Immediate effects of the pandemic in creating a workforce deficit**

At the height of the first Omicron outbreak, services noted that the pandemic was having three simultaneous effects that combined to create substantial workforce deficits. The pandemic created more demand for health care, while reducing the available workforce through both ill health and the demand for staff to isolate, and at the same time making supply of care less efficient in various ways.

### **Compounding effects of workforce stress and environmental instability**

Long-standing stresses are compounded by their effects on the workforce. Burnout leads to increased sickness rates and increased turnover, both of which further increase the workforce deficit. These effects bring the risk of creating a vicious cycle of further stress and departures.

Distraction occurs when staff simply have too few resources to provide the level of care that they would like to, often with the result that they are forced to forego basic activities foundational to good-quality care. This risks worse outcomes and adverse events, which themselves take a psychological toll on staff and make burnout more likely. Again, a vicious cycle of reduced staffing and poorer care can develop. Several surveys report high levels of reported burnout among GPs and the specialist medical workforce.

### **Impact on health outcomes**

There are early signs that health outcomes associated with good quality and safety practice have worsened since mid-2021. Worse outcomes have been evident over repeated months in terms of increases in in-hospital falls that resulted in a fractured neck of femur (broken hip), in-hospital *Staphylococcus aureus* (*S. aureus*) bacteraemia infections and postoperative deep vein thrombosis/pulmonary embolism (DVT/PE).

### **Introduction**

The health care workforce across the entire system has felt the impacts of the pandemic. Few have been exempt and virtually all have been affected professionally and personally. Although it is plausible that these impacts may have reached their peak at the height of the Omicron outbreak, they are not time limited. The acute demands of the COVID-19 period follow a real or perceived chronic shortage of staff that stretches back years.<sup>68</sup> Despite recent increases in workforce funding, the time required for training and deploying new staff means current staff feel no promise of respite in the near future. They are also acutely aware of the task of recovery looming ahead, while we remain uncertain of when Omicron waves will ease, and the implications of other future outbreaks.

Impacts on inequity and quality and safety follow on from this.

The Government is aware of the challenges. On 1 August 2022 it announced a new plan, a suite of policies and funding to boost the health workforce and attract more international health workers, recognising the opportunities afforded by having one national system since 1 July 2022.<sup>69</sup>

In the Government's *Interim Government Policy Statement on Health 2022–2024*, published in July 2022, priority 4 of 6 is 'Developing the health workforce of the future'.<sup>67</sup> The policy statement is clear that both long-term planning and action to mitigate current risks are needed.

Across Aotearoa New Zealand we have a talented, skilled and dedicated workforce. However, our health workforce is under significant pressure and proactive interventions are required to grow and develop a future workforce that is resilient, sustainable and representative of the entire population, and ensure that our existing workers are valued, developed and supported.

While some of the risks facing the workforce today can be mitigated through immediate actions such as recruitment and retention initiatives, a longer-term plan is required to meaningfully address long-term issues of workforce supply and demand. This includes planning and management to build the workforce of the future, with the skills and competencies to respond to people's diverse needs and support system change.

The new measures announced on 1 August 2022 include leveraging the status of Te Whatu Ora | Health New Zealand as a single national health service. In particular, it can provide a single point of coordination for national and international recruitment to address long-standing workforce shortages and eliminate the previous situation where DHBs were sometimes competing with each other to recruit staff.<sup>69</sup>

The measures also include support, with funding, for international health workers to register in Aotearoa New Zealand, and for non-practising nurses who are already in the country to re-register and return to practice. Targeted support is available to increase the numbers of GPs, nurse practitioners and training slots for radiology registrars, and to help non-health workers involved in the COVID-19 vaccination programme enter the health workforce.<sup>69</sup> A new package to boost GP remuneration 'to bring the pay of first-year GP registrars in line with that of hospital registrars' and support training was announced by Health Minister Hon Andrew Little on 4 October 2022.<sup>70</sup>

In this chapter, we include the perspectives that we received from respondents in all parts of the health system during the Omicron wave in the first half of 2022. Their stories leave little doubt that the workforce pressures discussed have both long-standing and immediate causes. The media has reported these pressures widely, but only superficially analysed them. While the pressures are real, their causes are complex. To successfully address them, we need to examine the evidence closely, considering both the global context (as many health care systems report similar problems and the marketplace for health professionals is increasingly international) and the historical context (workforce pressures did not suddenly begin in 2022). This chapter interweaves staff stories and hard data to support this work.

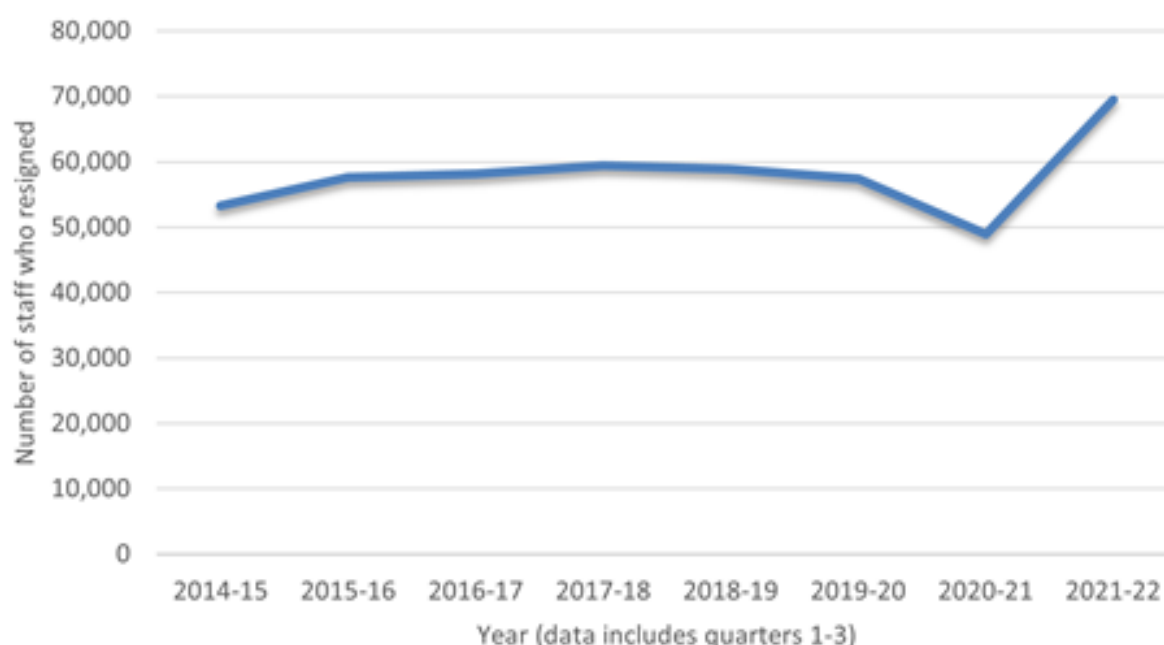
### ***The global context of the great resignation***

'The great resignation' is shorthand for a phenomenon identified in many industries around the world where workers have changed jobs or left their field of work entirely since the pandemic began.<sup>71</sup>

According to US Bureau of Labor Statistics data, more than 3 million American health care and social assistance workers have left their jobs in the year to April 2022, or nearly 3% per month.<sup>72</sup> American Hospital Association survey data shows job vacancies for various types of nursing personnel increased by up to 30% between 2019 and 2020.<sup>73</sup>

In the English NHS, nearly 70,000 staff resigned voluntarily in the nine months to January 2022, up from 49,000 in the same period to January 2021 and from 57,000 in the nine months to January 2020 (Figure 42).

Figure 42: Number of voluntary resignations, NHS England, 2014/15–2021/22



Source: HSJ, using data from NHS Digital.

Note: Data includes all voluntary resignation categories except for 'promotion' and 'relocation'.

The 2021/22 rise following the 2020/21 dip still amounts to 5,000 more staff leaving the system than long-term trends would account for. In any case, even if most of the increase consists of people who would have been expected to resign in 2020 during the height of the first COVID-19 wave but delayed their resignations by a year, the stresses that the increase puts on the system are real. Expert commentators at the Nuffield Trust suggest staff delayed leaving in 2020 at the height of the pandemic and then left in 2021, while a number of surveys identified 'issues around work pressure and burnout... [were] cited as reasons for clinicians considering leaving'.<sup>74</sup>

Given that our experience of community spread of COVID-19 came later, this overseas experience potentially has implications for Aotearoa New Zealand in terms of future trends in the workforce in late 2022 and 2023 after six months of coping with the Omicron outbreak.

### The Australian experience

The Australian COVID-19 Frontline Healthcare Workers Study, a major survey with 9,518 respondents, was conducted between August and October 2020. At this time, Australia was experiencing its second wave of COVID-19 with almost 27,500 active cases of COVID-19 (for context, in January 2022 new confirmed cases peaked at more than 175,000 a day in Australia).<sup>75 76</sup> The survey investigated Australian health

care workers for symptoms of mental illness (both subjectively and using validated tools), coping strategies and help-seeking behaviours, and their relationship to mental health symptoms during the COVID-19 pandemic.

More than one in ten health care workers reported thoughts of suicide or self-harm over a two-week period, and fewer than half of these sought professional support.<sup>77</sup> Across all professional roles, the study found 71% of respondents reported moderate to severe burnout, 60% reported mild to severe anxiety and 57% reported mild to severe depression.<sup>78</sup>

One study conducted in early 2021 suggested nearly half (48.2%) of ED nurses intended to leave emergency nursing within five years, and one in five (21%) intended to leave the profession entirely within five years.<sup>79</sup> The leading factor associated with their intention to leave was that they did not feel sufficiently connected to their emergency nursing colleagues, the broader ED team or their organisation since the pandemic had begun.<sup>79</sup> The Australian COVID-19 Frontline Healthcare Workers Study also found almost two-thirds of paramedics self-reported experiencing burnout.<sup>80</sup>

Another survey, this time at the height of the Omicron wave in Australia in January–February 2022, focused on 761 participants from the hospital-based nursing and midwifery workforce across the country. It found just over one in five staff (21%) reported they planned to leave their position within the next 12 months and more than a third (36%) of participants reported plans to leave their job within one to five years. Younger staff were more likely to signal their intention to leave: 23% of those aged 20–29 years said they were likely to leave their current role within the next year.<sup>81</sup>

In one example of the attempts to support the Australian workforce, the New South Wales government announced a \$4.5 billion funding package to recruit more than 10,000 health care staff. It includes a one-off AU\$3,000 ‘thank you’ bonus to select existing frontline health care workers for service during the pandemic.<sup>82 83</sup>

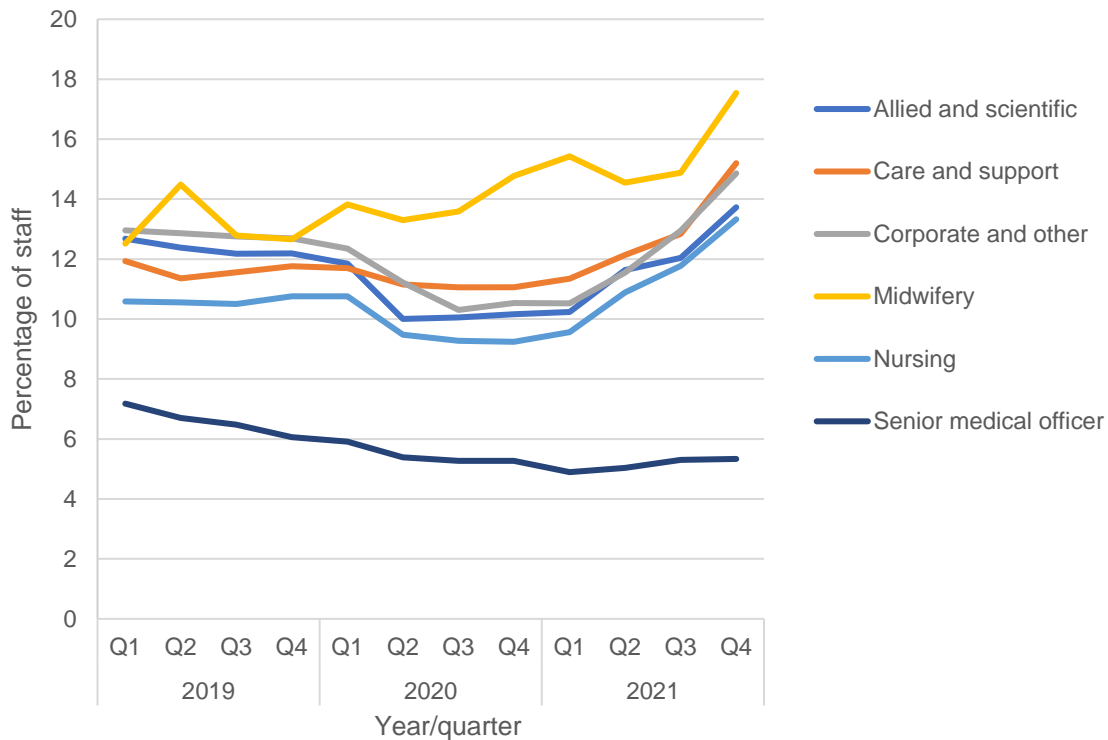
The temptations for our health workforce of different conditions in Australia are a constant in Aotearoa New Zealand, so understanding our context is critical. Will our experience mimic that of other countries that have had to deal with the arrival of COVID-19 earlier than us? And what should we do in response?

### ***The experience of the Aotearoa New Zealand workforce***

Insights about the workforce in Aotearoa New Zealand come from TAS | Kahui tuitui tangata, a professional shared services organisation providing a range of strategic, advisory and programme management services to the health sector.<sup>84</sup> Its data indicates rapidly rising trends in staff turnover from the beginning of 2021 after dips for most role categories at the beginning of the pandemic in March 2020 (Figure 43). Midwifery is an exception, with trends of higher turnover throughout, spiking further at the end of 2021. Even before the start of the Omicron wave, staff turnover was

pointing to increased pressure on the workforce. This pressure is likely to have only increased since then.

Figure 43: Staff turnover each quarter, by occupational role, Aotearoa New Zealand, 2019–21



Source: TAS | Kahui tuitui tangata.

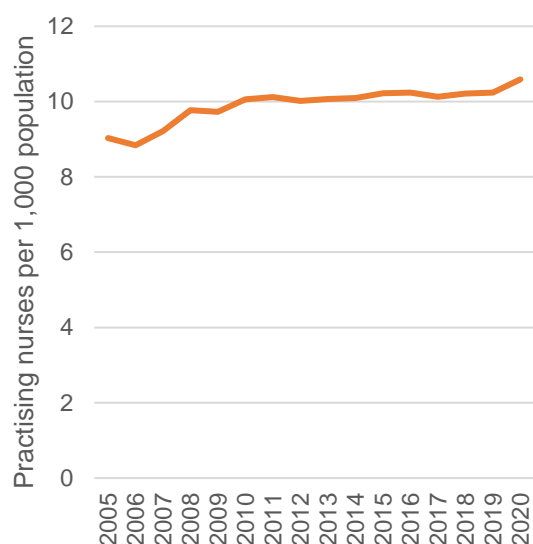
In the primary care sector, the Royal New Zealand College of General Practitioners’ (RNZCGP’s) 2020 General Practice Workforce Survey<sup>85</sup> found nearly one-third (31%) of survey respondents were intending to retire from the GP workforce in the next five years, double the proportion in 2014, and nearly half (49%) in the next 10 years, up from 36% in 2014.

The rest of this chapter considers what we know about workforce pressures under four main headings: long-standing system settings; immediate effects of the pandemic in creating a workforce deficit; compounding effects of workforce stress and environmental instability; and impact on health outcomes. It weaves perspectives from frontline health care workers’ ‘on-the-ground’ reporting together with hard data where this is available.

## Long-standing system settings

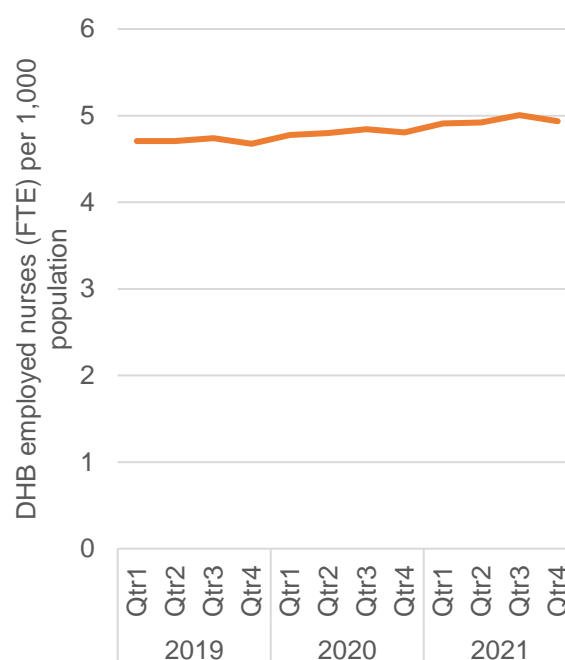
OECD data suggests that the number of nurses in Aotearoa New Zealand remained static relative to the size of the population for around 10 years after the Global Financial Crisis in 2007, only starting to tick up over 2019–20 (Figure 44). Although this data is consistent in itself, we need to interpret it carefully as the figures represent the number of active nurses (some of whom will be in management rather than frontline roles) and do not distinguish between full- and part-time work. Figure 45 presents TAS data for full-time equivalent (FTE) employment, which shows a trend of an increasing number of FTEs from 2019 onwards. However, the number dips slightly in the last quarter of 2021, mirroring the increase in turnover.

Figure 44: Nurses per 1,000 population, Aotearoa New Zealand, 2005–20



Source: OECD.<sup>86</sup>

Figure 45: Nursing FTEs by quarter, Aotearoa New Zealand, 2019–21



Source: Routine Health Quality & Safety Commission data analysis.  
 Note: Numerator TAS; denominator Stats NZ quarterly population estimates.  
 DHB = district health board; FTE = full-time equivalent.

## Nearly all services we talked to mentioned long-standing staffing pressures

In EDs, respondents to the Health Quality & Safety Commission’s real-time monitoring saw workforce shortages and understaffing as the major problem facing emergency services across all professional groups. As one respondent commented, ‘Omicron has simply highlighted for all to see the pre-existing issues – it is not an issue in itself’. A respondent in an intensive care unit (ICUs) commented that, ‘the public system doesn’t have the [necessary] bed capacity or the workforce’. Inside



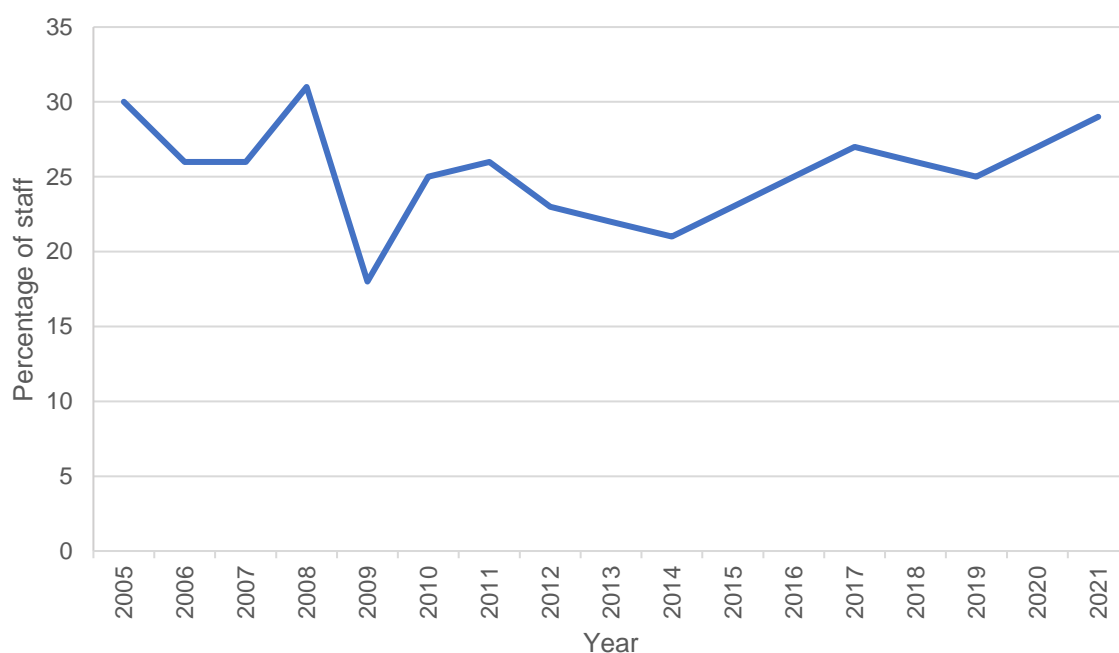
planned care, respondents noted that Omicron added to the workforce shortages already present at the beginning of the pandemic and the requirements of isolation compounded the issue.

Because health providers could not recruit outside of Aotearoa New Zealand for an extended period, they were essentially competing for each other's staff. More positively, the health system restructure implemented in July 2022 opens up the possibility of improving this issue by taking a centralised, coordinated approach to recruitment. For Pacific providers, however, 'the biggest thing is that there is just not enough Pacific staff around'.

The responses of aged residential care providers demonstrated that the issues were not just about overall resource but also about how the system regarded aged care as unimportant. They had long-standing disadvantages in finding the staff they needed. Shortages of both registered nurses and suitably experienced caregivers highlighted a chronic problem and a fragile sector. Aged residential care respondents talked about major difficulties recruiting and retaining staff, with the New Zealand Aged Care Association (NZACA) reporting over 1,000 vacancies.

The long-running trend of high turnover of staff highlighted the particular challenges that the aged care sector faces. Certainly turnover has increased since the beginning of the pandemic to 29% (nearly one in three of all staff – twice as high as in the public health system) in 2021. What is most striking, however, is that these very high figures are not much different to the last fifteen years (Figure 46).<sup>87</sup>

Figure 46: Staff turnover each year in the aged residential care workforce, Aotearoa New Zealand, 2005–21



Source: NZACA Member Profiling Survey, December 2021.

### ***Immediate effects of the pandemic in creating a workforce deficit***

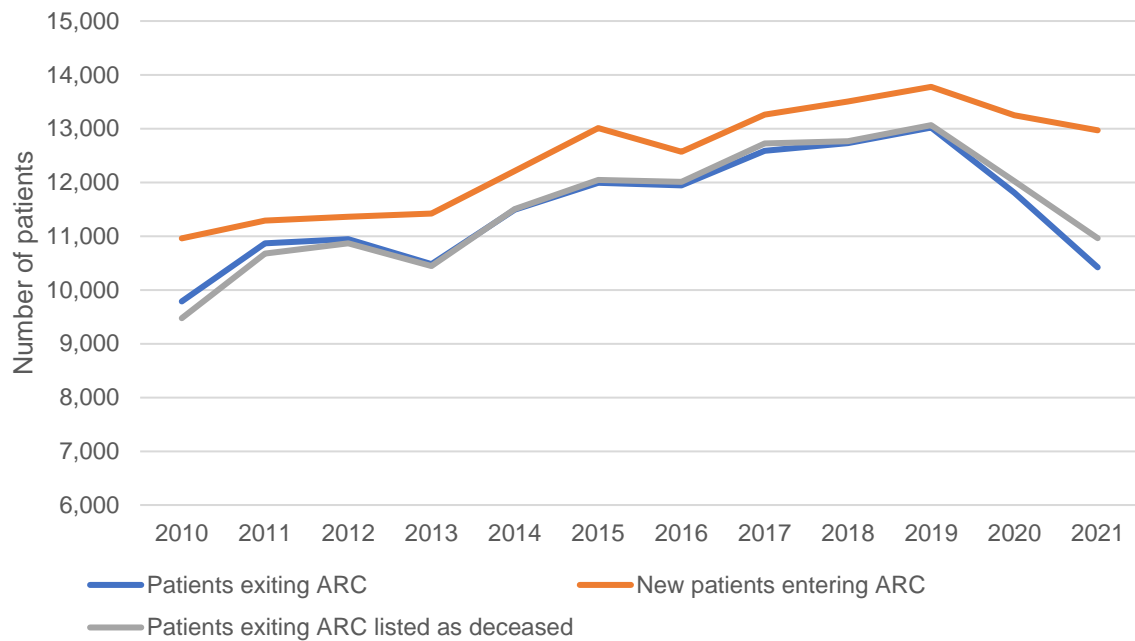
At the height of the first Omicron outbreak, services noted that the pandemic was having three simultaneous effects that combined to create substantial workforce deficits: the pandemic created more demand for health care, while reducing the available workforce through both ill health and the demand for isolation, and at the same time making supply of care less efficient in various ways. Together these three factors created a deficit in the workforce available to meet demand.

#### **Increased demand**

As previous chapters have demonstrated, demand for services increased during the pandemic, but respondents highlighted the different ways this occurred across the sector. For example, ED respondents noted that patients have been presenting with more severe health issues as the Omicron wave continues. Respondents in the primary sector indicate the pandemic made delivery of care more inequitable. That is, practices that serve populations with high concentrations of patients with complex needs were unable to contact all of their high-needs patients, in contrast to practices with lower concentrations of high-needs patients.

Again, aged residential care services show particular demand pressures, partly as a consequence of the reduced mortality rate in 2020 and 2021 among older people. While admissions to aged residential care only decreased by around 800 between 2019 and 2021, there were nearly 2,200 fewer deaths in care over that time, which drove a reduction in discharges. The result was an overall increase in pressure on beds (Figure 47).

Figure 47: Admissions to and discharges from aged residential care facilities, Aotearoa New Zealand, 2010–21



Source: Routine Health Quality & Safety Commission data analysis of aged residential care data collected by the Ministry of Health.  
ARC = aged residential care.

### Reduced supply

The pandemic directly reduced supply of staff through illness and isolation. Respondents in ED, planned care, primary care and aged residential care all mentioned illness and particularly isolation as reducing available staff numbers directly at the height of the Omicron outbreak. The indirect and knock-on effects, discussed below, may be even more stark.

### Reduced efficiency

This mismatch of supply and demand is further exacerbated by services becoming harder to provide efficiently because of the pandemic, both the destabilising of the system and the need for enhanced infection control adding to the work required for each patient. For example, planned care services noted that having to manage the rescheduling of planned care as well as the extra processing of admitting patients for surgery (such as conducting RATs and using personal protective equipment) has reduced efficiency. ED noted the effects of ambulance ramping, while ICU noted increased bed block on wards, making it harder to discharge recovering patients.

## ***Compounding effects of workforce stress and environmental instability***

This exacerbation of long-standing stresses is further compounded by its effects on the workforce. This operates in a number of ways. Burnout leads to both increased sickness rates and increased turnover, both of which further increase the workforce deficit, risking vicious cycles of further stress and departures. Distraction occurs when staff simply have too few resources to provide the level of care they would like to, often with the result that they cannot undertake basic activities foundational to good-quality care. This risks worse outcomes and adverse events, which themselves take a psychological toll on staff, and makes burnout more likely. Again, a vicious cycle of reduced staffing and poorer care can develop.

### **Workforce stress – burnout**

Across all parts of the system, staff talked about starting to feel burnout – and in nearly all sectors respondents used the word ‘burnout’ explicitly. Such comments ranged from primary care providers (‘... impact on GP mental health, burnout, not conducive to delivering the best possible care’), through ED (‘[COVID-19] has severely impacted staff morale and increased burnout’) to ICU (‘Increased busy-ness generally – SMO [senior medical officer] burnout’).

Staff at a Pacific provider stated directly, ‘So especially with the limited resources and the workforce capacity that we had, yeah, “hello burnout”.’ Respondents from Māori providers expressed this idea in a similar way: ‘The capacity of our workforce is very stretched and it’s hard for some kaimahi [workers] to feel good about coming to work when they’re unable to handle the load presented to them.’

#### **Box: Consumer perspective – Maine Mareko-Johnson, Justice Team Leader**

I am the Justice Team Leader at Te Hou Ora Whānau Services and I work at a non-governmental organisation in Dunedin.

My role is working with youth, especially in the youth justice system. I also have a couple of roles within the community. I sit on a sports board and also on the Basketball New Zealand board.

#### ***Impacts and delays across systems, including justice***

COVID-19 has had a massive impact on our whānau. There was a massive increase in family violence. I think on the first weekend that we had lockdown there was an increase of 35%, which is huge. The last year since COVID’s really come into town and the students have come back, the ED in Dunedin Hospital has been under lots of pressure. I think a month ago we nearly went into Code Black, which



is pretty much no beds at the hospital, and I think we went into Code Black twice in one week nearly. There's a huge lack of staffing across the whole health sector, so especially in mental health there are heaps of clinician roles that have been advertised and they just can't fill the void. That has increased some of the wait times within the justice system.

So, traditionally, before COVID, if we had some reports due it would take six weeks. At the moment we're looking at 12–18 weeks. So, while that is happening the young person will traditionally have to stay in a youth remand residence for that amount of time because they need the report to figure out what's going to be the best outcome for this young person within the community. So having our young people in residences for 12 weeks longer than they should be is quite stressful, not only for the young person, but for the whānau.

### ***Pressures in the community are everywhere – and they are personal***

There have been lots of people dying within the community. Within our family there have been four or five in just over a period of a month. We sometimes go to a funeral once a week. With that is a lot of financial pressure and stress on families because it is a lot of the same families who struggle financially that are getting hit and it's not actually that cheap to pass away. These are a lot of natural-cause deaths, things like heart disease, diabetes. This has really accelerated and the flu has had a massive impact as well.

Most people that I've talked to that have had COVID – it's the flu that's hit them the worst. We've been creating food banks. There is so much need in the community for food. So currently we hold the Ministry of Social Development contract but within that contract you're only supposed to spend \$100 per whānau. How they can justify \$100 per family? What we've been doing is just giving what they need, especially rent, energy and heating in Dunedin, and then ask for forgiveness later because the need is here and now. These aren't just families that are sitting at home on the dole. These are people that are working with two or three jobs.

Personally, within our family, trying to get help for my Mum has been quite hard. She's had some mental stuff go on. Trying to get her help is really hard. There's such a massive waiting list but the help needs to happen now. Luckily, I was there to be able to pick up the pieces and find mental health clinicians straight away, especially someone that she wanted, because Dunedin's a small place. It is hard to find someone that doesn't know you or know all your business and that you trust isn't going to tell somebody that you know.

### ***Pressures on the workforce***

Personally, I haven't had a real break since COVID has hit. I've just come off 1 days of leave and that's the most leave I've had within a three-year period just because there's always something that needs to be done within the community.

The workforce is just tired. All of us are so sick of COVID but we're still just grinding it out at the moment. In terms of the life sacrifice that we've had to make, we're burnt out, but there are things that we have to do for our community for them to be able to survive. We sacrificed time with our families because of the time that we're spending making sure that our community is okay. I've missed so many things with my family because I've had to make sure that I'm at this meeting or I'm at this appointment with somebody just so that our community can kind of survive. So, I think, yeah, in terms of the sacrifice, yeah, there's been a lot but it's kind of all worth it because I'm really over going to different tangis and I'm sick of seeing my people die.

Because planned surgical care relies on multiple teams such as pre-operative, theatre and sterile services, the sequential impact on these teams has led to an extended period of disruption for theatres. As a result of these pressures, there are reports of staff fatigue and burnout across all professional groups in planned care.

Even before the spread of the Delta and Omicron variants, the RNZCGP 2020 General Practice Workforce Survey<sup>88</sup> reported nearly a third (31%) of GPs who responded rated themselves as 'high' on the burnout scale, as compared with 22% of respondents in 2016.

Alerted by these findings, the RNZCGP conducted a survey specifically on burnout in November 2020.<sup>89</sup> Among the 1,495 GPs across Aotearoa New Zealand who responded, those reporting high burnout were more likely to be aged between 40 and 64 years, a practice owner or partner, and working full time. Most (92%) cited increasing complexity of patient presentations as having a big or overwhelming effect. Other issues cited were barriers to timely patient hospital/other specialist referrals (78% said this had a big or overwhelming effect) and the number of patient consultations a day (71% said this had a big or overwhelming effect). Significantly, as noted above, the burnout survey was conducted before GPs had to deal with the workloads created when Delta and Omicron variants entered the community. In its report on the results, the RNZCGP described burnout as, 'now an entrenched feature of our specialist medical and dental workforce'.

The Association of Salaried Medical Specialists (ASMS) conducted a survey specifically targeted at burnout in August 2020, assessing levels of patient-related burnout, work burnout and personal burnout.<sup>90</sup> It received responses from 2,102 ASMS members, a 45% response rate. Supporting the findings of the RNZCGP 2020 survey, more than a third of GPs who responded reported experiencing patient-related burnout, which was the highest percentage of all specialties in this burnout category. Strikingly, 70% of radiation oncologists reported experiencing both work-related and personal burnout in combination, by far the highest combined rate out of all the specialties (see Figure 48 and the box that follows).

Figure 48: Work-related and personal burnout by specialty, Aotearoa New Zealand, 2020



Source: ASMS. Reproduced with permission.

### Box: A radiation oncologist's perspective

What lies behind the high levels of work-related and personal burnout that radiation oncologists in particular report? A radiation oncologist describes these challenges.

- The country has six major public oncology centres. Each of them serves a large geographic area and radiation oncologists must conduct visiting clinics to the more remote parts of it.
- Just 65 radiation oncologists are working in Aotearoa New Zealand. Some of these are not working full time and some work only in private practice.
- Because the workforce is so small, it is hard to take leave and staff have little or no non-clinical time available in their working day.
- Given the nature of the conditions they are seeing, radiation oncologists can't decline cancer referrals and must see them quickly if radiation will be the patient's first definitive cancer treatment. They are highly aware that any delay to starting radiation treatment will likely lead to a worse outcome for the patient.
- Seeing a large proportion of palliative patients creates a heavy mental and emotional load.
- It is difficult to fill vacancies when a radiation oncologist leaves or retires as not enough people are coming through training to replace these staff nor are there many suitable applicants from overseas. Existing staff are therefore needing to cover the workload of these vacancies.
- The pandemic has made a bad situation worse.

## **Workforce stress – distraction**

Numerous respondents noted that the busy-ness of work driven by the pandemic-related workforce deficit has compromised care in different ways. In EDs, for example, infection prevention and control practice suffered. In ICUs, staff were unable to maintain business-as-usual activities: they had to put on hold many quality improvement projects due to ongoing planning and disruption from the pandemic, as well as routine audits, surveys and implementation of policies and procedures to improve efficiency and care. GPs expressed concern that the pandemic was crowding out other needs, especially unrecognised and unmet mental health needs, which the RNZCGP findings echoed in terms of increased patient complexity and more patients presenting with mental health needs.<sup>88</sup>

## **The wider environment**

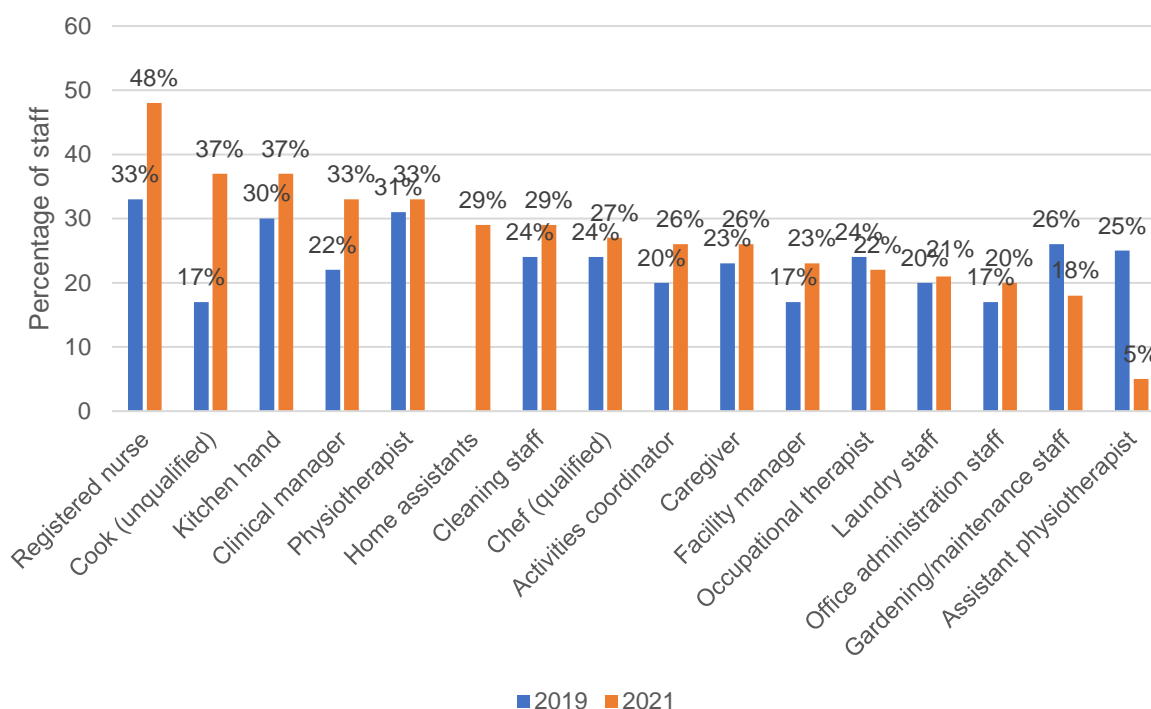
Of course, health workers do not exist in a vacuum. The challenges that the pandemic places personally on individuals apply to them just as much as the professional challenges. As a planned care respondent noted, 'The workforce is tired after two years of a pandemic'. A Pacific provider captured the impact of the social effects of the pandemic on health workers in this way:

We have other responsibilities, you know we start at the break of dawn, and we go right into the evening because we have our work obligations, our family obligations, our community obligations and all of us have had Zooms late into the evening, for community, our church communities, our local communities, our families and it's really tiring, really tiring, but you can't say no... we're still paid terribly.

This last point is important. Money, or the lack of it, together with ability of health workers to vote with their feet was a point our respondents often raised. Within aged residential care, respondents regularly noted that qualified and experienced workers moved to the better-paid DHB sector, while respondents from DHBs were concerned that their staff might move to Australia. In fact, in 2021 turnover for registered nurses in aged residential care was nearly one in two (Figure 49). This is not just the practical response of economic rationalists; respondents made it clear that the public sector pay freeze policy had directly led to feelings of being under-valued.



Figure 49: Turnover of aged residential care staff each year by staff category, Aotearoa New Zealand, 2019 and 2021



Source: NZACA Member Profiling Survey, December 2021.

Our public health workers have been at the front lines of the COVID-19 response and they report pressures also (see box).

**Box: Public health and the pandemic**

A key workforce group involved in our response to COVID-19 has been medical officers of health (MOoH). These are a group of doctors who have specialised in public health medicine who are designated under the 1956 Health Act by the Director General of Health to improve, protect and promote the health of the population in their health districts. MOoH have been at the front line of our national response, providing clinical and population health leadership in all aspects of outbreak management and control activities at public health units around the country. The workload has been unprecedented, with huge pressure on public health units on a background of years of underinvestment in public health infrastructure and staffing.

A national survey inviting all MOoH to participate was conducted in December 2021–January 2022 using the Mini Z Burnout Survey, with a response rate of 75%. The results showed that 53% (19) of respondents described themselves as burnt out.<sup>91</sup> This was nearly twice the proportion of public health physicians identified as burnt out in the ASMS 2020 workplace survey.<sup>90</sup>

In the MOoH survey there was a strong, significant relationship between the presence of burnout and ‘dissatisfaction with current job’, ‘feeling a great deal of

stress because of my job', 'an over-busy work area atmosphere' and 'a mainly frustrating workday'. MOoH role-specific recommendations from the study included the protection of non-clinical time, reduction of after-hours and on-call demands and upscaling of the clinical leadership provided by MOoH. Recommendations for population health nationally included the development of the population health workforce, establishment of collaborative practices and surge arrangements as part of a health-system-wide approach to outbreak management, the need to manaaki non-COVID and non-outbreak work and improve national/central support, coordination and guidance.

### **The Auckland Regional Public Health Service COVID-19 response: A case study**

For the Auckland Regional Public Health Service (ARPHS), the January 2020 emergence of COVID-19 triggered major, prolonged and ongoing changes to its priorities and workload.

From standing up a border team at Auckland Airport on 27 January 2020 and interviewing the first New Zealand COVID-19 case in late February, ARPHS was quickly at the forefront of case and outbreak management, contact tracing and source investigation.

Developing and applying new ways of responding to a novel virus, within existing and limited resources, became the norm and change became the constant. Numerous staff were seconded from their substantive roles in areas such as health promotion to various streams of the COVID-19 response, for months at a time.

Throughout five distinct outbreaks, ARPHS developed and refined all-new standard operating procedures, trained and inducted surge staff and learned new IT systems.

The service also created new Pae Ora and Pasifika teams for a more equitable response and supported the operational stand-up of the regional Māori and Pacific Response Coordination Hubs, other public health units around the country and Reach Aotearoa.

The work was relentless, intense and tiring for all staff, and its effects are still being felt. While working long hours, team members were also juggling families and personal lives affected by COVID-19 and associated lockdowns. Despite this, it was also a time of growth, development, whakawhanaungatanga (establishing relationships) and manaakitanga (support).

The pandemic revealed the potential power that can be harnessed when teams, regional services, public health units and community providers stand shoulder-to-shoulder with a shared purpose.

As the sector embarks on major reform, COVID-19 has provided a 'trial by fire' insight into those factors that can restrict, limit and fatigue us and those that, if

adopted, nurtured and appropriately resourced, can truly effect transformative change for the sector and the communities it serves.

Feedback from ARPHS staff suggested there were positives about being part of the COVID-19 response:

‘A huge sense of shared purpose and a common goal.’

‘The passion, commitment and loyalty everyone has to the work.’

‘The people, especially meeting all the bright and energetic nurses and medical students.’

‘... the mix of professional, ethnic and cultural backgrounds and ages. Everyone knew they were part of the team and their voices mattered.’

‘The sense of pride from having the privilege to support the incredible mahi the teams delivered day-in and day-out ...’

‘The feeling that I have been part of a really important effort to save lives during a major pandemic event in the life of Aotearoa.’

‘The feeling of camaraderie and support. We were “all in this together” (even if it felt like the ship was sinking at times).’

Staff were also asked to share the negative aspects of their frontline work. They said the hardest thing about being part of the COVID-19 response was:

‘The effect of long work hours on work–life balance and our families.’

‘Definitely the August 2020 surge with new staff, limited knowledge of COVID, and the new NCTS [national contact tracing solution] system.’

‘Long days, the sense of overwhelm, deep fatigue and the impact on family and relationships – especially during the Delta outbreak.’

‘The virus! It kept changing so we had to keep changing to keep up with it!’

‘Having hard conversations with people [in the community] and asking them to do difficult things that cause a lot of inconvenience.’

### ***Impact on health outcomes***

It is clear from the evidence above that access to care (especially planned care) has been adversely affected in the first half of 2022 in particular. But data on some health outcomes may shed light on whether care has become less safe as a result of these pressures. The Health Quality & Safety Commission’s data on outcomes it routinely monitors suggests that this has not clearly happened yet, although there may be early signs of deteriorating outcomes.

We have measured a set of outcomes associated with good quality and safety practice for around 10 years. These include in-hospital falls that resulted in a fractured neck of femur (broken hip), in-hospital *S. aureus* bacteraemia infections and postoperative DVT/PE.<sup>92</sup> We use a technique called statistical process control to

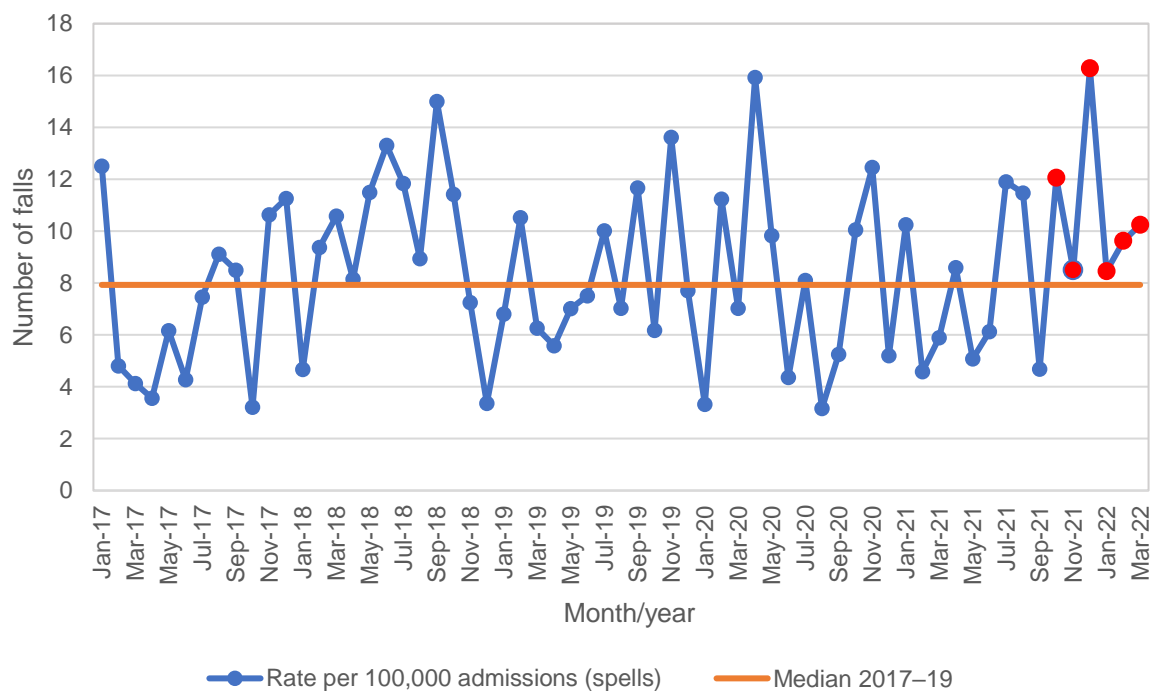
identify any clear trends indicating these outcomes are getting better or worse. (By using this technique, we avoid over-interpreting normal fluctuations in results.)

In each case, we can see early signs that these poor outcomes have been worsening since mid-2021. That is, worse outcomes have been evident repeatedly over several months, which is statistically unlikely to have occurred by chance alone. Figure 50,

Figure 51 and Figure 52 show these outcomes as red dots, which are visible from mid-2021.

In Figure 50, we see the number of preventable in-hospital falls that resulted in a fractured neck of femur between January 2017 and January 2022. Since October 2021 the rate has risen above the 2017–19 median six times.

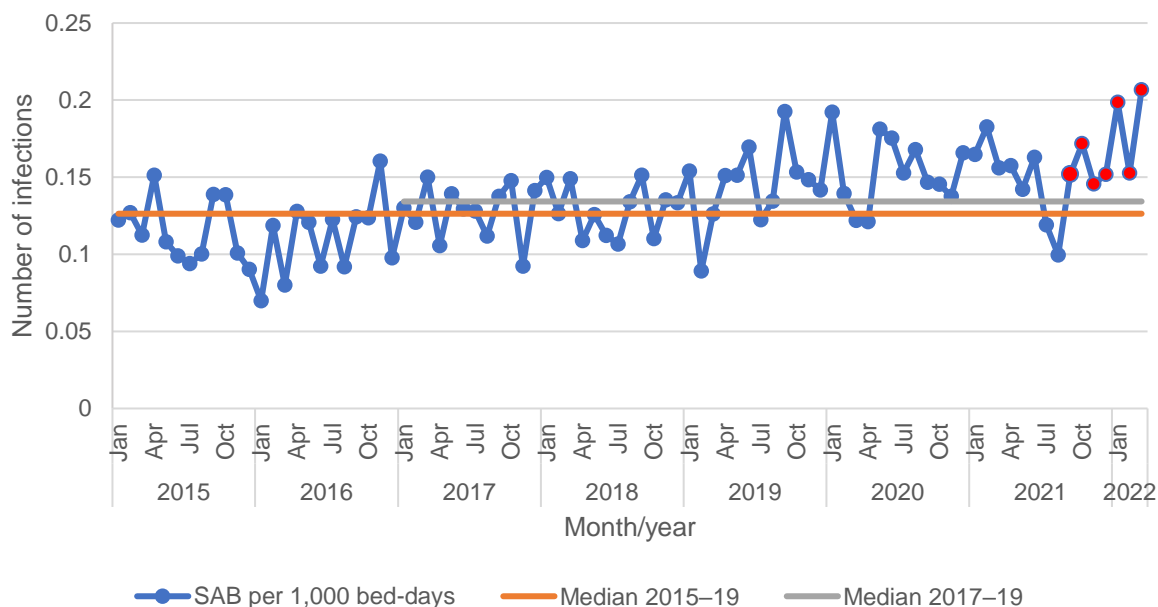
Figure 50: In-hospital falls with a fractured neck of femur per 100,000 admissions, Aotearoa New Zealand, 2017–22



Source: Health Quality & Safety Commission routine data analysis.

Figure 51 shows the number of cases of healthcare-associated infection resulting in *S. aureus* bacteraemia per 1,000 bed-days between January 2015 and January 2022. Since September 2021, the rate has risen above the 2017–19 median seven times.

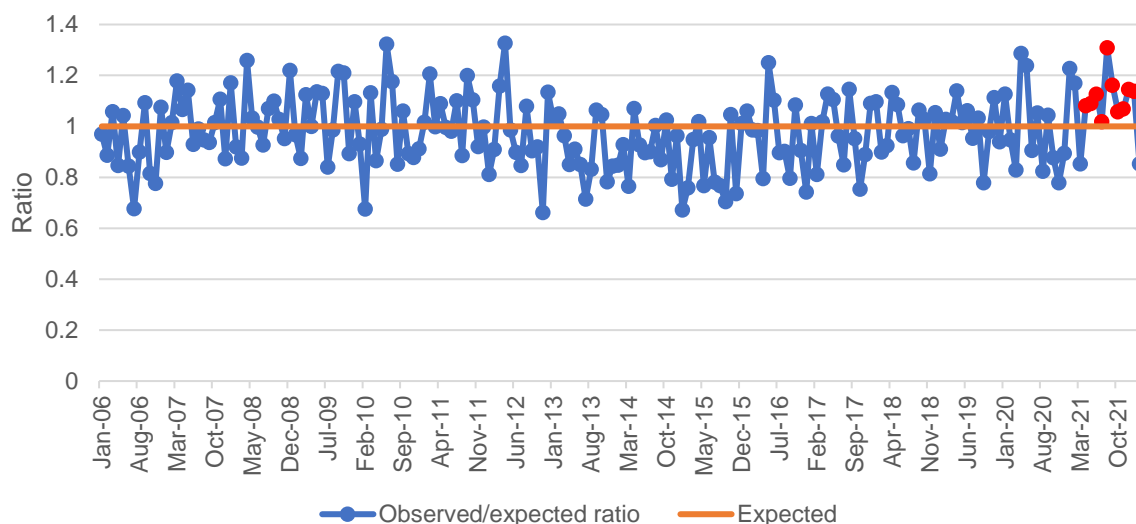
Figure 51: Healthcare-associated *Staphylococcus aureus* bacteraemia infections per 1,000 bed-days, Aotearoa New Zealand, January 2015–January 2022



Source: Health Quality & Safety Commission routine data analysis.  
SAB = *Staphylococcus aureus* bacteraemia.

In Figure 52, we see the ratio of observed postoperative DVT/PE to expected numbers between January 2006 and 2022. The ratio of observed to expected DVT/PE after an operation has gone higher than one 10 times since April 2021.

Figure 52: Observed to expected ratio for postoperative deep vein thrombosis/pulmonary embolism, Aotearoa New Zealand, January 2006–March 2022



Source: Health Quality & Safety Commission routine data analysis.  
Note: A ratio higher than 1 indicates more deep vein thrombosis/pulmonary embolism cases occurred than expected given the individual risk of each patient.

Currently the Health Quality & Safety Commission's adverse event learning programme shows no clear patterns. However, the caveat remains that reporting adverse events is voluntary and when the system and workforce are under stress, reporting on safety events may be less likely to occur.

In a more encouraging finding, patient experience survey data reveals that generally patient experience has not become obviously worse. Importantly, while the workforce is clearly under considerable pressure, the quality of care as patients experience it has not yet reduced dramatically.

The single exception is that the proportion of patients reporting whānau/family involvement in care dropped 10 percentage points in November 2021 and February 2022. Most of this decrease came from the metro Auckland DHBs, likely as a natural consequence of lockdown and infection prevention and control policies. What effect this decrease has on outcomes and experience of care is unclear but will be investigated.

The data on patient experience of care continues at about the same level for most measures, which is testament to the professionalism and compassion of staff in maintaining their high standards. However, the risk – which feedback from the sector and the outcomes data above point to – is that this capacity is reaching its limits.

## ***Interactions***

It is critical to keep sight of the way in which each of the factors discussed in this section interacts with the others, creating feedback loops that amplify effects. Poor outcomes and adverse events have a psychological effect on health care professionals, which can in turn increase staff turnover and the number of departures in a phenomenon known as the 'second victim'.<sup>93 94</sup> Escalating workplace pressures increase turnover, which then increases workplace pressures. Factors outside the health system – such as society's general exhaustion with the pandemic – also interact in unpredictable ways.

Because of these interactions, relationships between long-standing system settings, immediate pressures and worse outcomes are not simple and linear. It could be argued that the current pressures have their roots in decisions made around the time of the Global Financial Crisis, but they are expressing themselves now. While they have not yet led to dramatic reductions in the quality of services, the interactions described above raise the possibility that services may suddenly and dramatically fail. It is impossible to assure the future quality of the health system without addressing these concerns as a matter of urgency.

## **Chapter 4: Disabled patient experience and Health and Disability Commissioner complaints | Upoko 4: Wheako o te tūrora hauā me ngā nawe ki te Toihau Hauora, Hauātanga**

### **Summary**

The Health Quality & Safety Commission's large survey of primary care patient experience shows the pandemic has neither worsened nor improved the disparities in access and experience of primary care between disabled and non-disabled people. However, these long-standing disparities remain stark and must be addressed.

### **Access**

From August 2020 to May 2022:

- on average, about a quarter (24%) of disabled people could not always get care when they wanted it, compared with 17% of non-disabled people
- young disabled people experienced worse access than those in other age groups
- young disabled Māori (aged 15–44 years) reported the worst access to care of any ethnic group, with 41% reporting they were not always able to get care from a GP or nurse when they wanted it
- 43% of disabled people of another gender reported not always being able to access care when they wanted it in the last 12 months
- those who self-identified as being disabled or who had multiple impairments reported worse access than those with one impairment
- the most-reported barriers to getting primary care when people wanted it were long wait times to get an appointment, pandemic alert levels and restrictions, difficulty taking time off work and other reasons.

### **Experience**

Fifteen percent of disabled people were not as involved in decisions about their care and treatment as much as they wanted to be, compared with 10% of non-disabled people. This difference did not change over the pandemic.

Disabled people wanted their health professionals to be better at communicating and listening, and to spend more time with them.

## ***Introduction***

This chapter addresses how disabled people experienced primary health care during pandemic-affected periods, drawing on the Health Quality & Safety Commission's primary care patient experience survey.

In general, the pandemic has neither worsened nor improved the disparities in access to and experience of primary care between disabled and non-disabled people. Although we applaud primary care teams for their work in extraordinary circumstances, particularly during recent months of the Omicron wave, these disparities remain stark and must be addressed.

## ***The survey***

This analysis includes responses from eight survey quarters from August 2020 to May 2022. A total of 185,553 people who completed the survey answered the disability questions, of whom 19% were classified as disabled and 81% as non-disabled.

When interpreting these results, it is important to remember that the sample is those who access primary care, not a sample of the population as a whole. This means disabled people who are not enrolled with or who do not access primary care are not included in these results, so it is not accurate to generalise the results to the population level. A better way to use the results is to make between-group comparisons, such as disabled versus non-disabled respondents, and between age groups, ethnic groups and genders. Because the sample size is large, the results show any statistically significant differences between sub-groups.

Below we present the results by age group, ethnic group and gender to show how these variables affected patient experience.

## ***The results***

The results from the patient experience survey over the two-year COVID-19 period to May 2022 show that the progression of the pandemic since 2020 does not seem to have affected results from the survey. That is, patients are not reporting access to care or their quality of interaction with primary care staff significantly worsened over this time. Clearly primary care teams played an extraordinary role in continuing to provide high-quality care.

However, it is also clear that over the last two years inequities in access to and experience of primary care for disabled people have continued.

To explore the experience of disabled people, we analysed two questions from the primary care patient experience survey. Broadly, these questions concerned:



- access to primary care – that is, people’s ability to get health care from a GP or nurse when they wanted it
- the quality of the interaction once patients accessed primary care – in particular, whether they were involved in decisions about their treatment and care.

Together, these questions provide insights into disabled people’s ability to access primary health care and the quality of the interaction once they do.

### ***Access to primary care for disabled people***

Disabled people were less able than non-disabled people to access care from a GP or nurse when they wanted it. This result is both consistent and statistically significant, and the pandemic does not seem to have changed it.

Here we look at results from the survey question: ‘In the last 12 months, was there ever a time when you wanted health care from a GP or nurse, but you couldn’t get it?’<sup>h</sup>

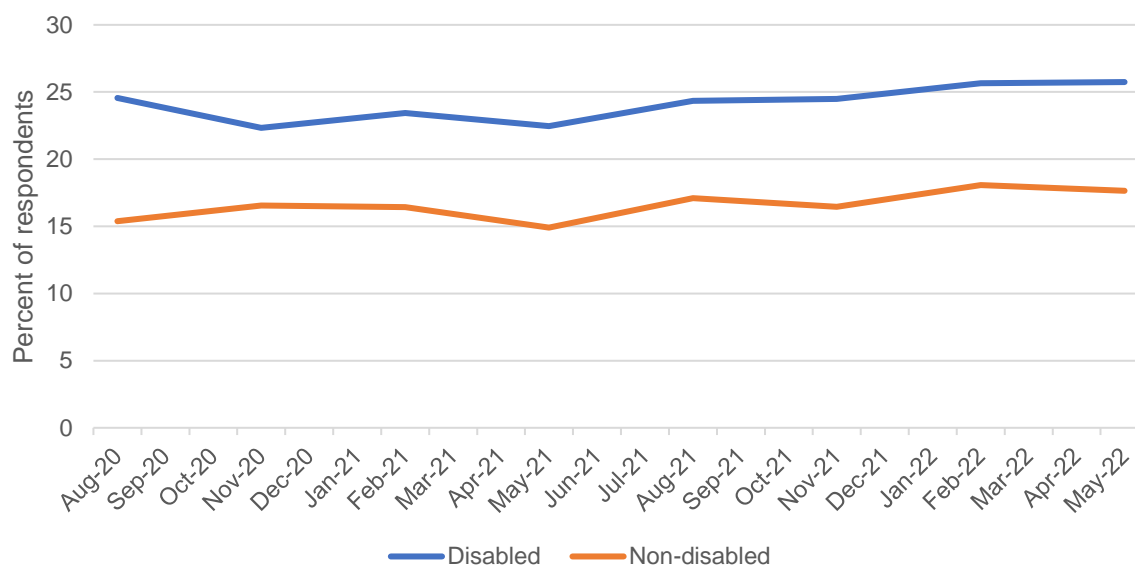
From August 2020 to May 2022, on average about a quarter (24%) of disabled people could not always get care when they wanted it compared with 17% of non-disabled people (Figure 53). Data from before the pandemic shows these inequities in access were similar. While the results are not directly comparable due to changes in the question from August 2020, the size of the difference between disabled and non-disabled people over the two survey quarters for August and November 2019 is consistent (20% of disabled people could not always get care when they wanted it, compared with 15% of non-disabled).

That is, the pandemic neither improved nor worsened this disparity.

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<sup>h</sup> Response options are yes or no, where ‘no’ is the more positive response: that is, the respondent was always able to access care from a GP or nurse when they wanted it in the last 12 months.

Figure 53: People reporting not always being able to access care from a GP or nurse when they wanted it in the last 12 months, disabled compared with non-disabled, Aotearoa New Zealand, August 2020–May 2022



Source: Health Quality & Safety Commission’s primary care patient experience survey.

### Age, disability and access

Young disabled people experienced worse access than others: 40% of those aged 15–44 years were not always able to access care when they wanted it. While the ability to get care improved with age, disabled people at all ages reported worse access than non-disabled people of the same age.

### Ethnicity, disability and access

Ethnic group had less effect on access than age and disability. Differences by ethnicity within age groups were limited.

However, young disabled Māori (aged 15–44 years) reported the worst access to care of any ethnic group: 41% reported they were not always able to get care from a GP or nurse when they wanted it (Table 2). Given that Māori experience a higher burden of disease at a younger age and have a younger population overall, they are likely to be disproportionately affected.

Table 2: Percentage of disabled and non-disabled people reporting they were not always able to get care from a GP or nurse when they wanted it in the last 12 months, by age and ethnicity, Aotearoa New Zealand, August 2020–May 2022

Age (years)	Māori (%)		Pacific peoples (%)		Non-Māori, non-Pacific peoples (%)	
	Disabled	Non-disabled	Disabled	Non-disabled	Disabled	Non-disabled
15–44	41	29	35	25	38	25
45–64	31	23	28	19	29	19
65–74	20	14	21	14	19	10
≥ 75	18	10	21	10	13	8

Source: Health Quality & Safety Commission’s primary care patient experience survey.

Note: All the differences between disabled and non-disabled comparators are statistically significant.

### Gender, disability and access

When stratified by gender, 43% of disabled people of another gender reported not always being able to access care when they wanted it in the last 12 months (Table 3). The majority (73%) of disabled people of another gender were aged between 15 and 44 years so an age effect is likely to be involved. However, disabled people of another gender in this age group still reported worse access (42% could not always access care) than their non-disabled peers (30%).

Those who self-identified as being disabled or who had multiple impairments reported worse access than those with one impairment. See Appendix 2 for definitions of these impairments and methodology.

Table 3: Percentage of disabled and non-disabled people reporting they were not able to get care from a GP or nurse when they wanted it in the last 12 months, by gender, Aotearoa New Zealand, August 2020–May 2022

Gender	Disabled (%)	Non-disabled (%)
Female	28	19
Male	18	11
Another gender	43	27

Source: Health Quality & Safety Commission’s primary care patient experience survey.

Disabled people with cognition and communication impairments were the least likely to report being able to access care when they wanted it (noting that this group tends to be younger). This group includes those who are deaf, non-verbal or have learning disabilities (see Appendix 2 for more details). These impairments may limit their ability to access information more generally and they are likely to require resources and other forms of communication to be available in accessible formats.

## Why disabled people could not get health care from a GP or nurse when they wanted it during the last 12 months

Disabled people reported experiencing almost all barriers to care to a greater extent than non-disabled people. Common reasons why disabled people could not always access health care from a GP or nurse when they wanted it included long wait times to get an appointment, pandemic alert levels and restrictions, difficulty taking time off work and other reasons.

For example, 15% of disabled respondents identified wait times to get an appointment as a problem compared with 11% of non-disabled respondents (Table 4). Disabled respondents found pandemic alert levels and restrictions prevented them from accessing care at the twice the rate (6%) of non-disabled respondents (3%). One possible explanation for some of this difference may be that some disabled people – for example, those living with a chronic condition – were classed as immunocompromised under some alert levels and so had greater levels of restriction to services.

Table 4: Reasons why people could not get primary health care when they wanted it, disabled compared with non-disabled, as a percentage of respondents, Aotearoa New Zealand, August 2020–May 2022

Reason	Disabled (%)	Non-disabled (%)
Wait time to get appointment too long	15	11
COVID-19 alert level restrictions; stay-at-home orders; didn't want to make providers too busy	6	3
Difficulty taking time off work	2	2
Appointment too expensive or owed money to the medical centre	2	1
Fear of getting sick (including fear of catching COVID-19)	2	1
No transport	2	0.3
Other	7	4

Source: Health Quality & Safety Commission's primary care patient experience survey.

Note: The survey gives respondents a range of common reasons to select from, along with a free-text option for 'other' reasons. The results in the table group the response options. They are reported as a percentage of those who answered the survey to give a patient population estimate.

Among those experiencing difficulty with appointment wait times, the pattern holds that disabled people who were younger, Māori, Pacific peoples, another gender or female, and those with multiple impairments experienced more difficulty than non-disabled people in these groups (Table 5).

Table 5: Percentage of people reporting wait time to get an appointment was too long as a barrier to accessing primary care, by age, ethnic group, gender and number of impairments, disabled compared with non-disabled, Aotearoa New Zealand, August 2020–May 2022

Wait time to get appointment too long	Disabled (%)	Non-disabled (%)
<b>Age (years)</b>		
15–44	25	19
45–64	20	14
65–74	12	7
≥ 75	8	4
<b>Ethnic group</b>		
Māori	19	16
Pacific peoples	18	13
Non-Māori, non-Pacific	14	10
<b>Gender</b>		
Female	18	14
Male	11	7
Another gender	25	14
<b>Number of impairments</b>		
Self-identified*	14	-
One WG-SS**	16	-
Two WG-SS	18	-
Three or more WG-SS	19	-

Source: Health Quality & Safety Commission's primary care patient experience survey.

\* Excludes those who met Washington Group Short Set (WG-SS) criteria.

\*\* See Appendix 2 for WG-SS definitions and criteria.

### What disabled people say about why they could not always access primary care when they wanted it

Key themes from free-text comments disabled people made around barriers to access included:

- no appointments were available in general or they were not able to get a timely appointment with their preferred GP
- the time of day/week limited access to primary care (not available after hours)
- they were unable to contact the clinic, had difficulty with phone booking or the clinic did not reply to messages
- no in-person appointments were available and/or there were issues with telehealth.

Other barriers to access included:

- inadequate quality of care or poor experience (eg, felt like GP wasn't listening to or didn't believe me)
- having COVID-19 symptoms or needing to wait until result of COVID-19 test
- issues with how clinics implement COVID-19 processes – for example, staff were confused, patients had to wait outside or reception did not triage them as urgent
- being unable to leave home or get to the clinic for health reasons.

## **Implications**

This question asks people whether there was a time when they wanted care and couldn't get it. We cannot infer how serious the need for health care was, but we need to understand why services are consistently less accessible to disabled people, particularly younger disabled people, than to non-disabled people.

While some of the issues limiting access are universal, such as a longer wait time to see their usual GP, they have different implications for disabled people. The disabled community is a diverse group who tend to have more complex health histories, making continuity of care even more important. When it was difficult to get an appointment with their usual GP, some patients felt less confident and comfortable during the consultation, lost continuity of care and had to spend more time explaining their history and health need.

## ***Experience of primary care for disabled people***

The experience of being involved in decisions about treatment and care is an important indicator of people feeling their care is a partnership with their primary health care provider. All consumers of health and disability services can expect to be communicated with effectively, to be fully informed and to make an informed choice.<sup>95</sup>

Here we look at results from the survey question: 'Did the health care professional involve you as much as you wanted to be in making decisions about your treatment and care?'<sup>i</sup>

This question is a good marker of the quality of the interaction. Responses strongly correlate with responses to questions on being listened to, having trust and confidence in the health care professional, being informed about their own health condition, treatment or care as much as the person wants, and feeling comfortable to ask questions.

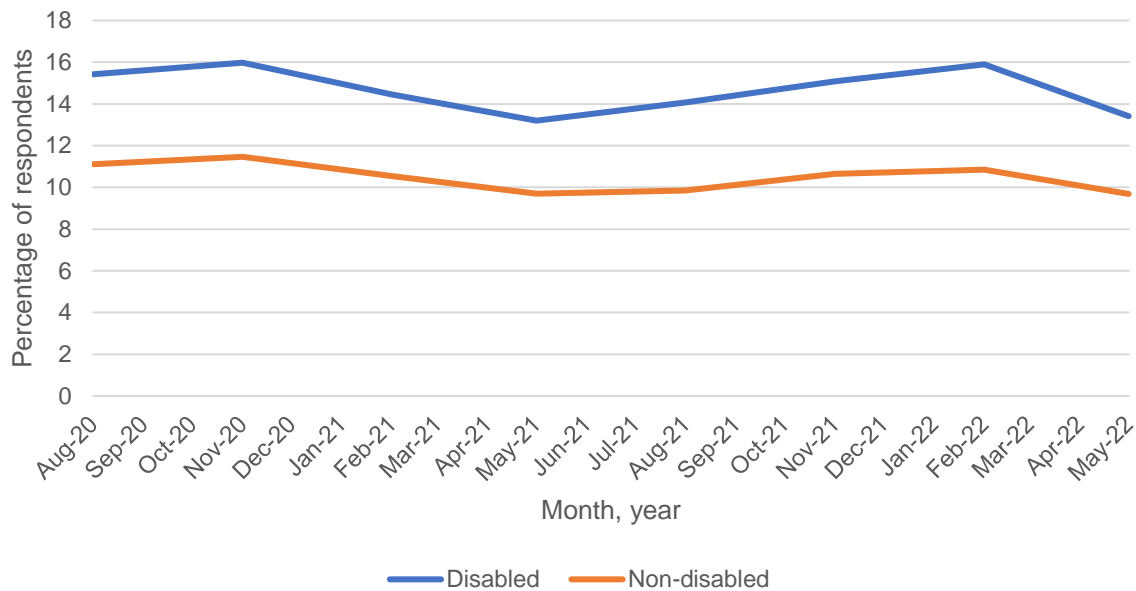
Fifteen percent of disabled people were not involved in decisions about their care and treatment as much as they wanted to be, compared with 10% of non-disabled

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<sup>i</sup> Response options are: yes, definitely; somewhat; no; I did not want to be involved.

people. This difference did not change between August 2020 and May 2022 (Figure 54).

Figure 54: Percentage of people reporting not being involved in decisions about treatment and care, disabled compared with non-disabled, Aotearoa New Zealand, August 2020–May 2022



Source: Health Quality & Safety Commission’s primary care patient experience survey.

Disabled people reported being less involved in decisions about their treatment than non-disabled people of the same age, ethnic group or gender (Table 6). Young disabled people of all ethnic groups were more likely to report they were less involved than they wanted to be.

Table 6: Percentage of people reporting not always being involved in decisions about their treatment and care as much as they wanted to be, disabled compared with non-disabled, by age and ethnic group, Aotearoa New Zealand, August 2020–May 2022

Age (years)	Māori (%)		Pacific peoples (%)		Non-Māori, non-Pacific (%)	
	Disabled	Non-disabled	Disabled	Non-disabled	Disabled	Non-disabled
15–44	22	15	22	14	21	16
45–64	14	11	15	9	16	10
65–74	13	9	17	10	12	8
≥75	14	7	20	5	11	7

Source: Health Quality & Safety Commission’s primary care patient experience survey.

Twenty-six percent of disabled people of another gender reported being less involved in decisions about their treatment and care than they wanted to be (Table 7).

Table 7: Percentage of people reporting not always being involved in decisions about their treatment and care as much as they wanted to be, disabled compared with non-disabled, by gender and number of impairments, Aotearoa New Zealand, August 2020–May 2022

Gender	Disabled (%)	Non-disabled (%)
Female	15	11
Male	14	9
Another gender	26	21
Number of impairments		
Self-identified*	13	-
One WG-SS**	15	-
Two WG-SS	19	-
Three or more WG-SS	21	-

Source: Health Quality & Safety Commission’s primary care patient experience survey.

\* Excludes those who met Washington Group Short Set (WG-SS) criteria.

\*\* See Appendix 2 for WG-SS definitions and criteria.

The type of disability had a marked impact on responses on whether disabled people were involved as much as they wanted to be. The responses of those with difficulty communicating were significantly less positive than those with any other type of disability (Table 8).



Table 8: Percentage of disabled people reporting not always being involved in decisions about their treatment and care as much as they wanted to be, by type of disability, Aotearoa New Zealand, August 2020–May 2022

Type of disability	Percentage not as involved
Communication	28
Cognition	21
Self-care	18
Seeing	16
Hearing	15
Walking	15
Self-identified*	12

Source: Health Quality & Safety Commission’s primary care patient experience survey.

\* Excludes those who meet Washington Group Short Set (WG-SS) criteria.

**‘What could have been done better to involve you in decisions about your treatment and care?’**

The quote below illustrates the experience of one young disabled person, who, in responding to the survey question above, asks that doctors understand the communication needs associated with their disability. This person (male, 15–24 years, having difficulty with walking, cognition and communication) emphasises the importance of continuity of care with their GP and taking time to listen.

‘I think in general the doctors need to better understand how to communicate properly with autistic patients and patients with mental health problems. Also, with people who have these problems and must see doctors frequently it can be very frustrating and stressful. Especially if you’re having to explain things about your medical history to them and repeatedly describe the issues you’re having. More time and care should be put into making sure patients are comfortable during appointments and able to communicate their needs without feeling pressured or stressed out when speaking to a doctor. I have also had situations where I felt uncomfortable and like I was being pressured and talked over by cis male doctors and as a trans autistic person that is an extremely stressful and invalidating experience.’

In comments explaining why they did not feel involved in decisions, some disabled people did not feel listened to.

‘All I am asking is to be listened to and be helped, something that I feel you have all let me down with.’

‘Give me different options and let me decide rather than telling me what they think the best medication treatment is. But very understanding and kind with my issues my doctor [name] is incredible. Never rushes me and has so much compassion.’

Survey data also shows that 8% of disabled people did not feel listened to compared with 5% of non-disabled people. Other research has found that health care practitioners often interrupt patients when they are telling their story.<sup>96</sup> If health care practitioners just listen, most people don’t talk for long, and they will report feeling that they have been listened to.

Other respondents found the appointment length was a barrier to making decisions or didn’t feel enough time was spent. These responses correlate with not feeling listened to and are likely to reflect an interaction that felt rushed.

### ***Conclusion and ways ahead***

Our results show overall 15% of disabled people felt they were not involved in decisions compared with 10% of non-disabled people. Disabled people in every age group consistently reported less involvement in decisions than non-disabled people of the same age. Twenty-two percent of young disabled people (aged 15–44 years) of any ethnic group and 28% of disabled people who had difficulty communicating felt they were not involved in decisions as much as they wanted to be.

### **Involving disabled people in decisions**

In explaining how their experience could have been improved, disabled people wanted their health professionals to:

- know how to communicate with disabled people, particularly those who have some problems with talking, listening or understanding speech. This can include mechanical problems (hearing or speech impairment) or be related to difficulties with auditory processing or verbalising
- listen
- spend enough time with them.

### **Improving access and involving disabled people in decisions**

Health providers are encouraged to answer the following questions.

- Do you offer alternatives to phone bookings for appointments?
- Do you consider disabled people’s needs appropriately when offering the choice of appointment time and mode (telehealth versus in-person)?
- Is your clinic accessible for disabled people? Consider physical access, mental access (addressing fear/anxiety), communication and sensory barriers.

- Are you offering a patient portal to all patients? Do you use OpenNotes? Do you offer email via the portal? Can patients book appointments via the portal?
- Do you know which are the greatest barriers to disabled people in your community? Have you involved disabled consumers in identifying barriers and generating ideas to improve access? Consider focus groups or local disabled organisations and networks.
- Have you considered prioritising disabled people for consultations with their usual GP?
- The wider general practice team is a source of diverse knowledge, experience and local wisdom. Have you engaged your team to consider how to improve access and services for disabled people? Are there different ways that you could use the wider team to work more closely with the disabled community?
- What local iwi, community and social service organisations could you develop relationships with to help you with this mahi?
- How accessible are the resources and information you provide in your practice for disabled people? Are resources available in a range of formats?
- When did the general practice team last undertake equity awareness training? Did this training include disability?
- Due to their complex health issues, disabled people may require longer appointments. Do you offer funding to disabled people to help reduce the cost of this, for example, Care Plus?

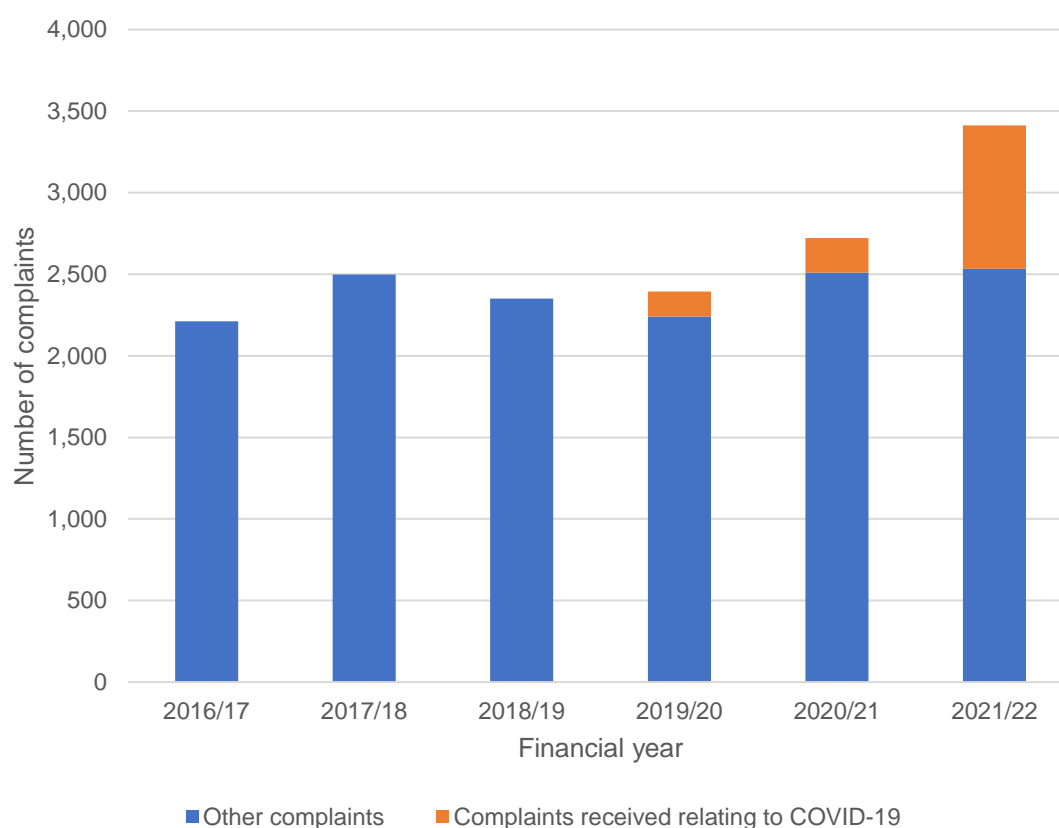
As Sheridan and colleagues note, 'The onus to facilitate communication and relationships with patients lies with health providers'.<sup>97</sup>

## Health and Disability Commissioner complaints

The Health and Disability Commissioner (HDC) is Aotearoa New Zealand’s independent watchdog for the promotion and protection of people’s rights when using health and disability services, as set out in the Code of Health and Disability Services Consumers’ Rights. HDC receives and resolves complaints relating to the quality of care provided to people by health and disability service providers. Resolution options are broad-ranging and include resolution at source (at times with the assistance of the National Advocacy Service) through to full investigation.

Complaints received by the HDC in the financial year 2021/22 rose 45% since immediately before the pandemic (2018/19). In 2021/22 the 879 complaints received about issues related to COVID-19 represented around 26% of all complaints received (Figure 55). HDC is currently receiving around 60–70 complaints related to COVID-19 a month.

Figure 55: Health and Disability Commissioner complaints received by financial year, with complaints relating to COVID-19, Aotearoa New Zealand, 2016/17–2021/22



Source: Health and Disability Commissioner.

Most complaints related to COVID-19 in 2021/22 were about vaccination (52%). However, these became less prominent over time, falling from approximately 70% of COVID-19 complaints in 2021 to 30% since January 2022.

Of particular relevance to this report, in 2021/22 18% of the complaints related to COVID-19 (158 in total) were about the impact of the pandemic on the system, including delayed care, staffing and other issues. These complaints related to:

- deferred or delayed access to services due to impacts of COVID-19, particularly in relation to planned care, emergency care, and home care and community support services
- the standard of care providers delivered during COVID-19 outbreaks or restrictions (including impacts of reduced staffing on care standards), particularly in regard to hospital care and aged residential care
- lack of access to support people or visitors (mainly in aged residential care facilities and hospitals).

### **Home care and community support**

Complaints to HDC about home care and community support providers have been increasing in recent years. Recently, HDC has received a number of complaints highlighting the impact that staff shortages related to COVID-19 and service disruptions in home care and community support has had on disabled and older people. People's complaints to HDC raise common issues around these services being suddenly withdrawn or reduced, inconsistencies in support worker availability and difficulties in contacting the service. Reduction or withdrawal of services can have serious impacts on a vulnerable population who are often reliant on the care provided to them by support staff and can place additional pressure on their whānau who are then required to fill the gaps.

Home care and community support resourcing is variable across the country. This is likely to exacerbate the inequities that currently exist for consumers accessing home care and community support services.

### **Aged residential care**

In recent months, HDC has received complaints about aged residential care facilities reflecting people's concerns about the impact of staffing shortages, which have been exacerbated by recent COVID-19 outbreaks, on the care provided. Some of the issues raised by complainants include delays in care, reduced hygiene cares and difficulties in finding placements for older people as their needs evolve.

The capacity constraints in both aged residential care and home care and community support services can also place additional pressure on emergency and

specialist care, may result in longer lengths of hospital stay and are potentially associated with poorer outcomes for older people.

While visiting restrictions have been an important and necessary public health control to protect older people, complaints to HDC highlight people's concerns around the impact they have had on the wellbeing of older people. Complaints to HDC also reflect whānau concerns about inconsistencies in visiting practices across the sector (with some facilities taking a more restrictive approach than others), and a lack of communication with whānau about such restrictions.

# Conclusion | Kupu whakatepe

## ***Resilience in action***

This report shows that, generally, and certainly in comparison with many other countries, Aotearoa New Zealand has coped well with the pandemic to date, as the measures of excess mortality show. Within this report, however, we start to see some of the unintended consequences and opportunity costs arising from the response to date, including impacts on:

- mental health
- immunisations
- elective surgery.

The concept of resilience is central to thinking about what Window 2 tells us. The health care system faced an unprecedented challenge and was able to reconfigure itself rapidly.

## ***Precarious success***

However, the fluency and success of frontline staff in delivering care often mask the difficulties involved. This is the ‘tragedy of adaptability’,<sup>98</sup> where successful adaptation enables dysfunctional systems to appear to be performing better than they are. Yet the increasingly challenging work required to provide safe care remains invisible to those looking only at distant or indirect measures of performance. This may be especially true when single measures of a system become performance targets. We may meet the target, but the increasing effort required to do so remains unseen until the system starts to fail.

The limited picture to come from single measures is perhaps clearest in the mismatch between staff feedback and hard data from EDs. The number of presentations to EDs seems at odds with the stories from staff about facing increasingly difficult conditions. These stories most likely reflect a phase where the system is ‘coping’, but the capacity to adapt to new demands has been eroded. Frontline staff may be aware of this reduced capacity, while those managing the system do not recognise it and become progressively out of touch with where the system is functioning relative to the boundary of acceptable performance.<sup>99</sup>

So, perhaps we should reframe the pandemic response as a ‘precarious success’. That is, the overall success of the response has masked a loss of adaptive capacity and the emergence of a system that is now more vulnerable to future shocks.

## ***A perfect storm?***

Already there are calls for a return to ‘business as usual’, highlighting a focus on recovery or rebound to some previous ‘normal’ state. Yet ideas of ‘resilience as rebound’<sup>100</sup> rarely address the long-term issues that contributed to the crisis and inadvertently may leave the system vulnerable to the next disaster.<sup>101</sup> Issues such as strained system capacity, workforce shortages and problems working across system boundaries (such as between primary and secondary care) were present well before the pandemic and have shaped the response to it.

In common with many other industries, health systems have also had a long-term tendency to attempt to make improvements through increased productivity, rather than aiming for more resilient, robust and safer systems.<sup>102</sup> It follows that, while our health care system may have been optimised to ‘do more with less’, it may have inadvertently become increasingly brittle as its adaptive capacity has been eroded over time.<sup>103</sup> The risk is therefore that we might face a ‘perfect storm’ of long-term structural issues coming together with the recent impacts of the pandemic response. This potential is clearly feasible if we consider the following conditions facing the health system.

- A long-term focus on health productivity, in a context of long-term constraints on funding, results in a system operating near capacity and with relative staff shortages in many areas.
- The pandemic response placed a significant load on the system through the need for rapid reorganisation, creating trade-offs and opportunity costs.
- The pandemic is ongoing, which brings increased demand for services, staff sickness and complicating routine care.
- Dealing with the deferred planned care will require additional capacity from a system already working at the limits.
- The health reforms, while creating important opportunities for positive change, may place further adaptive demands on the system due to structural reorganisation and the need for new ways of working.
- Existing staff shortages may get worse as skilled staff leave health care or pursue better pay or conditions overseas, in turn worsening working conditions for the staff who remain.

This situation highlights a risk whereby the adaptive capacity is inadequate to meet the coming demands, leading to a sudden deterioration in system performance.<sup>104</sup> Health care systems overseas have already experienced this consequence as they exhaust their ability to deal with surges in demand and unexpectedly ‘go solid’, where systems become too tightly coupled and seemingly insignificant events in seemingly distant areas can suddenly have important effects on other areas.<sup>105</sup> Examples come from reports of widespread ambulance ramping and overloaded hospitals in the United Kingdom and Australia. The underlying brittleness arising



from a loss of adaptive capacity is suddenly revealed, with cascading failures impacting on care across the system.

We can now see the significant effect of the pandemic, not only through increased demand and deferred care but also in terms of its impacts on the adaptive capacity of an already stretched system.

Like a patient recovering from a severe illness, the system has survived COVID-19 but is now in a more vulnerable state, potentially less able to deal with new challenges and demands.

### ***Resilience as sustained adaptability***

The health care system and the environment in which it exists have been transformed through the pandemic response, meaning there is no going back to some 'before' state. Rather than returning to outdated ways of working, we should learn from what the recent response tells us about the vulnerabilities and sources of adaptability within the system.

For example, the differentiated impacts of the pandemic tell us much about how our systems perform for various groups, as seen in the disproportionate effect on those who live with poverty, disability or mental health needs. This allows us to examine the underpinning assumptions that inform our system design and think about how we might improve them.

Likewise, contained within the pandemic response are stories of innovation in the face of challenge. For example, the communities of south Auckland created new ways of working to protect their people, and many services embraced telehealth to connect with those seeking care. It was their ability to adapt and transform services that enabled safe health care to be delivered in spite of the challenges. These innovative approaches point us to new ways of working that might better meet the needs of those seeking care, while also highlighting the resources and relationships that enabled their success.

Therefore, what the pandemic has highlighted is the need for a resilient health care system that has 'the capacity to adapt to challenges and changes at different system levels, to maintain high quality care'.<sup>106</sup> This capacity to adapt is needed at all levels, whether in meeting the differentiated needs of those seeking care or in dealing with the uncertain and dynamic impacts of a pandemic. It is this capacity to recognise and respond to changing conditions that underpins the ability to deliver high-quality care, even in the face of challenge.

### ***The role of data***

How then can we use data to help guide us in making better decisions? As this report shows, the successful pandemic response has still involved trade-offs and opportunity costs. What we need is data that can highlight the consequences, often

unintended, of decisions and makes visible how risk is changing within the system. This report highlights several areas in which data may be useful to achieve this aim.

1. Data can highlight the differentiated outcomes of the system and use these to identify both areas of vulnerability and sources of resilience, as described above.
2. We can use data to detect signs of increasing system strain before systems start to decompensate. Such strain may be evident in increasingly frequent or impactful episodes of delayed recovery from challenge, highlighting the loss of adaptive capacity. For example, this pattern may be visible in the ED wait-time data, especially now that this measure is no longer subject to the distorting effects of being a publicly reported 'target'.
3. We can examine the gap between hard data and soft intelligence to increase our understanding of system performance. This means using the granular knowledge of frontline staff to bring meaning to the numbers, while also situating their experiences in an understanding of the wider system. This allows us to recognise what the data tells us and what it hides, and potentially to identify measures that more accurately capture the situation.
4. Data can highlight 'keystone risks' within the system – that is, critical resources or vulnerabilities that create significant risk across multiple areas. For example, this report highlights the system-wide impacts that shortages in the workforce are already having and makes visible the potential of these shortages to constrain attempts to reduce the planned care backlog.

From the above it is clear that data is never values-free but is instead informed by our underpinning model of how the system works. What we choose to measure, the meaning we assign to those measures and the changes we implement in response all flow from our ideas of how the system functions. Incorporating ideas of resilience and adaptive capacity gives us a different understanding of the issues highlighted in this report, making visible future risks and opportunities, and new avenues for improvement.

The experiences of the pandemic are now woven into the whakapapa of the health care system, shaping its future. If the pandemic has shown us anything, it is that the future is not the same as the past. There is no going back and the reforms offer an important opportunity for transformation and building a more resilient health care system that is better suited to the uncertain and dynamic realities we face.

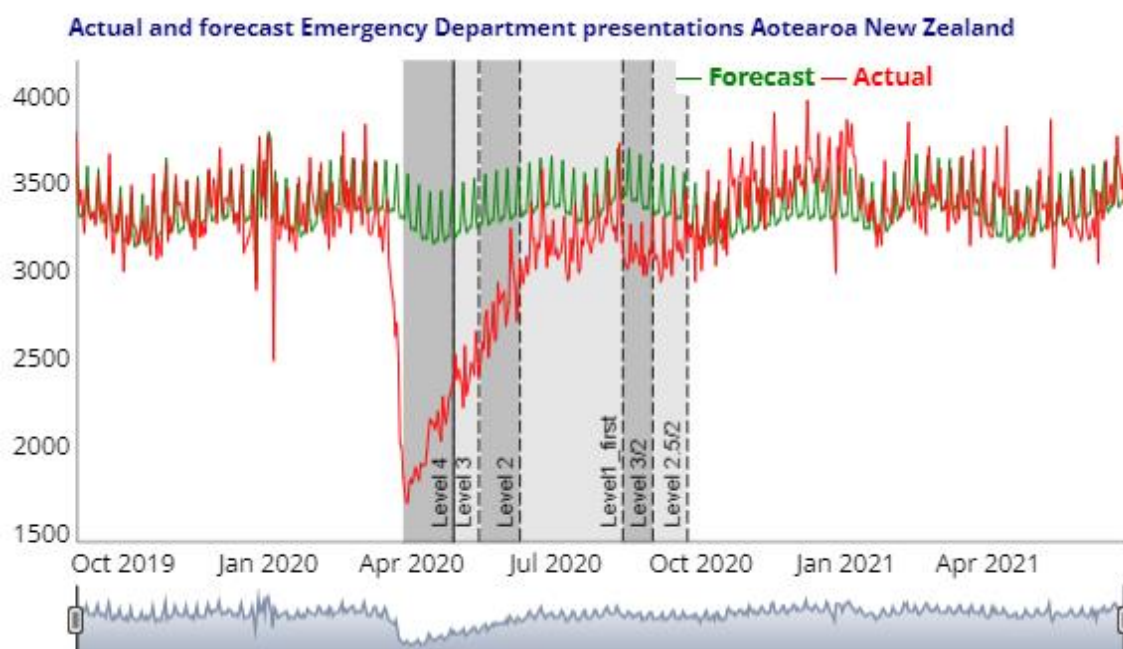
## Appendix 1: How REACH works and what it shows | Āpitihangā 1: Mō REACH

The 'Rapid Effects Assessment of COVID-19 on Healthcare' (REACH) tool compares expected activity in our health system based on past data with observed activity in 2020–22. We use it as a way of understanding the effects of COVID-19 and associated public health measures on our health care system, and the likely directions that activity is going in.<sup>107</sup> The tool is available to all health districts.

Expected levels of activity in our public hospitals are calculated by applying the forecasting model to historical activity data from 1 January 2017 to 29 February 2020. This approach identifies both seasonal effects (such as seasons, day of the week and public holidays) and underlying trends, and applies to both estimated and expected activity, all else being equal.

Thus, in the example of ED data in Figure 56, the green curve shows the kind of activity we would **expect** from three earlier years and the red curve shows the **actual** activity, affected by the pandemic. As you can see, from the beginning of the pandemic in March 2020 the actual numbers of people attending ED dropped markedly compared with the number that would normally attend.

Figure 56: Actual and forecast emergency department presentations, Aotearoa New Zealand, example data only



Source: Health Quality & Safety Commission routine data analysis.

REACH provides an exploratory approach to the data and is designed to raise useful questions rather than provide explicit answers or judgements. It uses an open-source forecasting tool<sup>108 109</sup> applied to Aotearoa New Zealand's national data

collections for admitted and non-admitted patients in our public hospitals. The tool is written in R<sup>110</sup> and presented using the Shiny visualisation platform.<sup>111</sup>

REACH was originally developed and trialled on one district health board's data. It has since been applied to national collections: the National Minimum Dataset for admitted patients and the National Non-Admitted Patient Collection. REACH can quickly estimate, at multiple degrees of detail, the expected level of activity during the lockdown period based on historical trends and patterns from three years of national data. The forecast is compared with actual activity to calculate the patterns of difference resulting from the pandemic.

## Appendix 2: The adult primary care patient experience survey and the Washington Group Short Set | Āpitihanga 2: Tirohanga whānui mō te wheako o te tūroro pakeke me te Rōpū WG-SS

The adult primary care patient experience survey asks respondents two sets of questions to understand whether they were disabled: the Washington Group Short Set on functioning (WG-SS) and a self-identification question.<sup>112</sup>

**The WG-SS** measures a respondent's ability to carry out six activities:

- seeing
- hearing
- walking or climbing steps (walking)
- remembering or concentrating (cognition)
- washing all over and dressing (self-care)
- communicating in a respondent's usual language (communication).

Respondents to the survey were asked to rate whether they had no difficulty doing the activity, some difficulty or a lot of difficulty or whether they could not do it at all. Difficulty (or inability to do it at all) would 'in an unaccommodating environment place an individual at risk of restricted social participation'. If a respondent indicated they could not do or would have a lot of difficulty doing one or more of the activities, they were classified as having a disability according to the WG-SS. This may or may not differ from how the person identified themselves.

The WG-SS has received some criticism because it does not necessarily identify all people with a disability; in particular it may exclude people with developmental disabilities.<sup>113</sup>

**The self-identification question** for disability in the survey was, 'Do you think of yourself as disabled (or as having a disability)? Yes; No; Unsure.' The inclusion of this question allowed us to capture a different measure of the disabled population, particularly given the potential deficits in the WG-SS.

The WG-SS and the self-identification question ask different things of respondents, so we would not necessarily anticipate that all those who qualified under the WG-SS would self-identify, and vice versa.

### **Type of disability by age group**

Disabled people are a diverse group. Sixty percent of disabled people surveyed were classified as disabled according to the WG-SS, while the remainder self-identified as disabled but were not classified as such under the WG-SS. Of those with a WG-SS disability, nearly one-quarter (22%) reported they had more than one impairment.

Difficulty walking was the most common type of WG-SS disability and rates increased with age (noting that walking can be impacted by impairments in balance, endurance or other non-musculoskeletal systems, such as blindness and deafness).

Young people (15–24 years) responding to the survey reported the highest rates of cognitive difficulty (remembering or concentrating)<sup>j</sup> and difficulty communicating<sup>k</sup> (Table 9).

Table 9: Type of disability by age group, as a percentage of disabled survey respondents, Aotearoa New Zealand, August 2020–May 2022

Age (years)	Washington Group Short Set						Self-identified* (%)
	Seeing (%)	Hearing (%)	Walking (%)	Cognition (%)	Self-care (%)	Communication (%)	
15–24	7.6	4.5	11.7	53.3	6.1	10.3	5.3
25–44	12.1	7.9	19.2	33.3	6.9	6.3	8.3
45–64	11.4	12.0	34.3	15.7	6.8	2.9	14.6
65–74	8.9	15.9	41.4	7.8	5.8	2.2	19.1
≥ 75	9.1	19.1	45.0	10.2	7.8	2.8	20.6
Total	10.1	14.1	36.4	15.5	6.8	3.4	16.3

\* Excludes those who meet Washington Group Short Set criteria.

<sup>j</sup> Difficulty remembering or concentrating means people have some problems with remembering or focusing attention that contribute to difficulty in doing their daily activities. Remembering should not be equated with memorising or with good or bad memories. This includes problems finding one's way around and problems remembering what someone just said or becoming confused or frightened about most things. (Source: Washington Group Short Set)

<sup>k</sup> Difficulty communicating (for example, understanding or being understood by others) means people have some problems with talking, listening or understanding speech such that it contributes to difficulty in making themselves understood to others or understanding others. Communication difficulties can originate in numerous places in the exchange process. It may involve mechanical problems such as hearing impairment or speech impairment, or it may be related to the ability of the mind to interpret the sounds that the auditory system is gathering and to recognise the words that are being used or an inability of the mind to compose a sentence or say a word even when the person knows the word and sentence. (Source: Washington Group Short Set)

## Endnotes | Kupu āpiti

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- <sup>1</sup> Chartwell Trust. Ralph Hotere: Godwit/Kūaka. [chartwell.org.nz/seeing/exhibitions/ralph-hotere-godwitkuaka/](https://chartwell.org.nz/seeing/exhibitions/ralph-hotere-godwitkuaka/) 'From Kriselle Baker's essay on the Godwit/Kūaka Mural, published by Ron Sang Publications. Baker thanks Te Whanaupani Thompson (Ngāpuhi/Ngātiwai) whose help proved invaluable with the translation of this poem.'
- <sup>2</sup> Health Quality & Safety Commission. 2018. *A Window on the Quality of New Zealand's Health Care 2018*. Wellington: Health Quality & Safety Commission. URL: [www.hqsc.govt.nz/assets/Our-data/Publications-resources/Window-Jun-2018.pdf](https://www.hqsc.govt.nz/assets/Our-data/Publications-resources/Window-Jun-2018.pdf) (accessed 16 August 2022).
- <sup>3</sup> Health Quality & Safety Commission. 2019. *A Window on the Quality of Aotearoa New Zealand's Health Care 2019 – a view on Māori health equity | He Matapihi ki te Kounga o ngā Manaakitanga ā-hauora o Aotearoa 2019 – he tirohanga ki te ōritenga hauora o te Māori*. Wellington: Health Quality & Safety Commission. URL: [www.hqsc.govt.nz/resources/resource-library/a-window-on-the-quality-of-aotearoa-new-zealands-health-care-2019-a-view-on-maori-health-equity-2/](https://www.hqsc.govt.nz/resources/resource-library/a-window-on-the-quality-of-aotearoa-new-zealands-health-care-2019-a-view-on-maori-health-equity-2/) (accessed 16 August 2022).
- <sup>4</sup> Health Quality & Safety Commission. 2021. *Bula Sautu – A Window on Quality 2021: Pacific health in the year of COVID-19 | Bula Sautu – He mata kounga 2021: Hauora Pasifika i te tau COVID-19*. Wellington: Health Quality & Safety Commission. URL: [www.hqsc.govt.nz/resources/resource-library/bula-sautu-a-window-on-quality-2021-pacific-health-in-the-year-of-covid-19-bula-sautu-he-mata-kounga-2021-hauora-pasifika-i-te-tau-covid-19/](https://www.hqsc.govt.nz/resources/resource-library/bula-sautu-a-window-on-quality-2021-pacific-health-in-the-year-of-covid-19-bula-sautu-he-mata-kounga-2021-hauora-pasifika-i-te-tau-covid-19/) (accessed 16 August 2022).
- <sup>5</sup> Health Quality & Safety Commission. 2021. *A window on quality 2021: COVID-19 and impacts on our broader health system – Part 1 | He tirohanga kounga 2021: me ngā pānga ki te pūnaha hauora whānui – Wāhanga 1*. Wellington: Health Quality & Safety Commission. URL: <https://www.hqsc.govt.nz/resources/resource-library/a-window-on-quality-2021-covid-19-and-impacts-on-our-broader-health-system-part-1-he-tirohanga-kounga-2021-me-nga-panga-ki-te-punaha-hauora-whanui-wahanga-1/> (accessed 10 October 2022).
- <sup>6</sup> Minister of Health. 2021. Letter of Expectation to the Health Quality & Safety Commission.
- <sup>7</sup> Our World in Data. COVID-19: Stringency Index. URL: [ourworldindata.org/grapher/covid-stringency-index](https://ourworldindata.org/grapher/covid-stringency-index) (accessed 21 June 2022).
- <sup>8</sup> Nepomuceno MR, Klimkin I, Jdanov DA, et al. 2022. Sensitivity analysis of excess mortality due to the COVID-19 pandemic. *Population and Development Review* 48(2): 279–302. DOI: 10.1111/padr.12475 (accessed 4 September 2022).
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