

He tirohanga kounga 2024: He hūkeri, he kounga ki anamata hoki whānui A window on quality 2024: Turbulence, quality and the future



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.



Te Tāhū Hauora Health Quality & Safety 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:1

Ruia ruia

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

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.

Opea opea Kia tatata mai I roto i tana pukorokoro whaikaro He kūaka

He kūaka marangaranga **Gathering** Come close together From inside its throat a marauding party A godwit A godwit that hovers

Tahia tahia

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

ISBN: 978-1-991122-21-6 Published June 2024 by Te Tāhū Hauora Health Quality & Safety Commission, PO Box 25496, Wellington 6146, Aotearoa New Zealand.

This document is available online at: www.hqsc.govt.nz



Published under Creative Commons License CC BY-NC-SA 4.0. This means you may share and adapt the material provided you give the appropriate credit, provide a link to the licence, and

indicate if changes were made. You may not use the material for commercial use. <u>More information about this licence</u>

Contents | Ngā kōrero

Acknowledgements He whakamihi	6
Executive summary He kupu whakarāpopoto matua	7
Part 1: Turbulence 2020–23 Wāhanga 1: Hūkeri 2020–23	11
Part 2: Is our system safer after 20 years? Patient safety in Aotearoa New Zealand Wāhanga 2: He pūnaha haumaru ka pau te 20 tau? Haumaru tūroro i Aotearoa	24
Part 3: Large-scale change since the pandemic – two 'deep dives' into the evolving Aotearoa New Zealand health care system Wāhanga 3: He panoni kaha mai i te urutā – he 'ruku hōhonu' e rua ki te pūnaha manaaki hauora o	
Aotearoa	30
Part 4: Conclusion Wāhanga 4: He kupu whakakapi	58
Endnotes Kupu āpiti	63

List of figures | Rārangi whakaahua

Figure 1: Percentage of patients experiencing unmet need for a GP within the last 12 months because wait time was too long, Aotearoa New Zealand, 2021–23.	12
Figure 2: Percentage of patients who selected 'Waiting time to get an appointment too long' as the reason they could not get health care from a GP or nurse when they wanted it in the last 12 months, Aotearoa New Zealand, August 2020–November 2023.	13
Figure 3: Percentage of patients who selected 'Waiting time to get an appointment too long' as the reason they could not get health care from a GP or nurse when they wanted it in the last 12 months, by ethnicity, Aotearoa New Zealand, August 2020–November 2023	13
Figure 4: Patients waiting longer than 4 months for their first specialist assessment, Aotearoa New Zealand, January 2020–November 2023	14
Figure 5: Patients given a commitment to treatment but not treated within 4 months, Aotearoa New Zealand, January 2020–November 2023	14
Figure 6: Weekly actual and predicted combined admissions for elective care, Aotearoa New Zealand, 2019–23	17
Figure 7: Percentage of primary care patients who responded positively to the question 'Did the health care professional involve you as much as you wanted to be in making decisions about your treatment and care?', by ethnicity, Aotearoa New Zealand, August 2020–November 2023	18
Figure 8: Percentage of primary care patients who responded positively to the question 'Did you have trust and confidence in your health care professional?',	
by ethnicity, Aotearoa New Zealand, August 2020–November 2023	18

Figure 9: Percentage of secondary care patients who responded positively to the question, 'Were you involved as much as you wanted to be in making decisions about your treatment and care?', by ethnicity, Aotearoa New Zealand, August	
2020–November 2023	19
Figure 10: Percentage of secondary care patients who responded positively to the question, 'Did you have trust and confidence in the doctors?', by ethnicity, Aotearoa New Zealand, August 2020–November 2023	20
Figure 11: Rate of in-hospital falls with a fractured neck of femur per 100,000 admissions, Aotearoa New Zealand, July 2010–July 2023	20
Figure 12: Rate of wound infection per 1,000 procedures – hip and knee replacements, Aotearoa New Zealand, July 2013–July 2023	21
Figure 13: Rate of wound infection per 100 procedures – heart surgery, Aotearoa New Zealand, July 2016–July 2023	21
Figure 14: Rate of in-hospital cardiac arrest per 1,000 admissions, Aotearoa New Zealand, April 2018–October 2023	22
Figure 15: Observed versus expected number of cases of postoperative deep- vein thrombosis leading to a pulmonary embolism, Aotearoa New Zealand, January 2006–July 2023	22
Figure 16: Rate of hospital-acquired and non-hospital-acquired pressure injuries per 100 observed patients, Aotearoa New Zealand, October 2019–October 2024	23
Figure 17: Death rate from cardiovascular diseases per 100,000 population, United Kingdom, Australia and Aotearoa New Zealand, 1950–2021	25
Figure 18: Disability-adjusted life years lost to non-communicable disease per 100,000 population, Aotearoa New Zealand and high-income countries (including Aotearoa New Zealand), 1999 and 2019	26
Figure 19: Disability-adjusted life years lost to adverse events per 100,000 population, Aotearoa New Zealand and other high-income countries countries (including Aotearoa New Zealand), 1999 and 2019	27
Figure 20: Percentage of nurses with an annual practising certificate who identify as Māori and Pacific, and percentage of Māori and Pacific populations, Aotearoa New Zealand, 2014–23	32
Figure 21: Percentage of foreign-trained nurses among OECD nations, 2021 (or nearest year)	35
Figure 22: Total number of nurses and new nursing registrants, Aotearoa New Zealand qualified nurses and internationally qualified nurses, Aotearoa New Zealand, 2012/13–2022/23	36
Figure 23: New internationally qualified nurses gaining Aotearoa New Zealand registration, among the three highest countries where they originally registered, 2018–23.	37
Figure 24: New internationally qualified nurses gaining Aotearoa New Zealand registration, selected countries of last registration, 2018–23	37

Figure 25: New NHS nursing registrants by country of training, 6 monthly, United Kingdom, March 2018–September 2023	38
Figure 26: Aotearoa New Zealand nurses granted registration in Australia under the Trans-Tasman Mutual Recognition Act 1997, 2015/16–2022/23	39
Figure 27: Estimated number of nurses registered in Aotearoa New Zealand who apply for VoGS for Australia, and the number of these who are IQNs, 2019–23	40
Figure 28: Mode of care of most recent primary care appointment, Aotearoa New Zealand, August 2020–November 2023	48
Figure 30: Number of non-admitted outpatient events by telehealth mode (shared y-axes), Aotearoa New Zealand, 2017–23	51
Figure 31: Number of non-admitted outpatient events by telehealth mode (individualised y-axes), Aotearoa New Zealand, 2017–23	52

Acknowledgements | He whakamihi

Dr Benjamin Werkmeister Dr Debbie Ryan

.

Josh McMillan

Lewis Ablett-Kerr

Nadine Gray (Te Whakatōhea)

Pam Doole

Renee Murupaenga (Ngāpuhi, Te Rarawa, Te Aupōuri, Ngāti Kurī) Sue Gardiner

Dr Tara Officer

Te Puea Winiata ONZM (Ngāi Tamarāwaho, Ngāti Ranginui, Ngāi Te Rangi)

Toni Trinick-Pritchard (Te Whānau-ā-Apanui, Ngāti Porou)

Executive summary | He kupu whakarāpopoto matua

The 'Window on quality' series of reports from Te Tāhū Hauora Health Quality & Safety Commission is designed to highlight key issues affecting the quality and safety of Aotearoa New Zealand's health system.

The specific relevant issues covered in this Window report include how the turbulence to the system emerging from both the global pandemic and health system restructure has affected access to services and their quality, as well as risks to ongoing safety. It considers workforce challenges (which affect both access to and quality of care), and the potential and limitations of telehealth (as a means of increasing access to care) in greater depth. It concludes with some broad recommendations for improving the future quality of care.

Part 1: Turbulence 2020–23

Part 1 explores how the turbulence of a global pandemic and health system restructure has affected health care in Aotearoa New Zealand in the last 3 years.

Access to health care

In both primary and secondary care, timely access to services has deteriorated markedly since 2020. In primary care, the proportion of adults who reported difficulty accessing care due to long waits has doubled from roughly 10 to 20 percent over the last 3 years. This deterioration has been inequitable – in November 2023, nearly a quarter of Māori who responded said they couldn't get health care because wait times were too long.

The picture is similar in secondary care. By November 2023, the number of people waiting more than 4 months for a first specialist assessment was five times the number waiting in February 2020. Likewise, four times the number of people given a commitment to treatment were not treated within 4 months.

Patient experience and safety

Once people access care, however, their reported experience in both primary and secondary care has remained remarkably stable – and largely equitable – throughout pandemic-affected periods.

Despite the challenges the pandemic presented to workforce capacity, most improvements made in quality and safety over the last decade seem to have been maintained.

Part 2: Is our system safer after 20 years? Patient safety in Aotearoa New Zealand

All health care involves balancing risk (the possibility of harm) with benefit. Navigating these risks to provide acceptably safe care is what health professionals do every day. This balance changes over time as techniques, technology and the population develop.

The Global Burden of Disease Study reveals that in the 20 years to 2019, disabilityadjusted life years (DALYs) lost to all diseases in the populations of high-income countries, including Aotearoa New Zealand, have reduced by about 20 percent. Over the same time, DALYs lost due to adverse events occurring in health care (the outcome of care that is 'unsafe'), while roughly a thousand times smaller, are largely unchanged over the same period in both Aotearoa New Zealand and other highincome countries. This is despite numerous individual programmes having reduced specific harms worldwide, including several in Aotearoa New Zealand.

Our hypothesis to explain this apparently conflicting data is that, as health care develops, systems adapt the balance of risk between intervention and non-intervention, and intervene in some instances where previously they would not have. This occurs in such a way that systems maintain an equilibrium point of preventable harm of around 5–10 percent.

Despite the stability of the various harms we have tracked through periods of turbulence shown in Part 1, reduced access demonstrates the system is under pressure. Further, experts have shown how pressure can threaten safety, including by normalising shortcuts and suboptimal practices, such as working without enough qualified staff, so that these ways of working become the new status quo. This system adaptation creates risks, as shocks to the system increase and the capacity for adaptation in future decreases. Part 3 considers in more depth two areas where 'shocks to the system' have led to both challenge and opportunity: workforce and telehealth.

Part 3: Large-scale change since the pandemic – two 'deep dives' into the evolving Aotearoa New Zealand health care system

In Part 3 we examine two major shifts in Aotearoa New Zealand health care since the pandemic, and their implications for quality and safety:

- large-scale changes in nursing workforce composition
- use of telehealth.

Aotearoa New Zealand nursing workforce – complex flows and unexpected consequences

Aotearoa New Zealand faced critical shortages of nurses until mid-2022, creating widely reported risks of unsafe staffing levels. In 2022 and particularly 2023, the number of nurses joining the workforce remained static for those who had qualified in Aotearoa New Zealand while numbers of internationally qualified nurses soared. For example, more than 8,000 Indian-trained nurses gained Aotearoa New Zealand registration in 2023, typically after being previously registered in either the United Kingdom or, to a lesser extent, Middle Eastern countries. However, other data sources suggest many of these nurses are moving on to Australia rather than staying here.

In this context, it is particularly important to make efforts to recruit, support and retain a homegrown workforce that is representative of our population, particularly Māori and Pacific populations. Health New Zealand – Te Whatu Ora recognises this imperative in its workforce plan. Equally important is heightened awareness and implementation of Te Mauri o Rongo – the New Zealand Health Charter. The charter is an opportunity to create a workplace culture in Aotearoa New Zealand that makes internationally trained health care workers want to come here and stay, and domestically trained workers not wish to leave. The charter sets out a vision for working conditions that are satisfying to health care workers personally and professionally, where they are respected, trusted and able to grow and develop, and deliver care they are proud of.

The rise and recession of telehealth – an alternative future for Aotearoa New Zealand?

As we show in Part 1, one of the most striking challenges to quality of healthcare since the pandemic is simply access to necessary services. Telehealth (ie, remote modes of health care such as telephone or video conference appointments) has been touted as a potential solution (albeit one where its value is challenged).

Overseas, pandemic restrictions and loosened regulatory and funding settings led to rapid and large uptake of telehealth options for delivery of care. However, since the easing of these restrictions, many observers have noted a 'receding tide' of telehealth, as care has returned to business as usual (predominantly in-person). The implication of this trend is that health systems may be missing an opportunity to improve efficiency and access through thoughtful support of telehealth options.

Data from Aotearoa New Zealand conforms to this pattern, perhaps with an even stronger return to pre-pandemic business as usual. In addition, telehealth in this country has tended to mean **telephone** health, with lower uptake of other modes of delivery such as video conferencing.

However, a different perspective comes from a South Auckland Very Low Cost Access primary care practice that embraced telehealth early and strongly. It has shown a natural equilibrium of 30–35 percent of appointments delivered virtually is sustainable and, importantly, it is acceptable to whānau. The model also has benefits for providers in attracting and retaining staff.

Barriers to applying this model more widely that have been identified are clinician capability and confidence with technology, and resourcing and equipment available to support telehealth services. Both of these barriers contributed to the return to inperson care across the country. Findings strongly support the need to carefully consider the reasons behind choosing in-person, hybrid or telehealth appointments. For telehealth to be viable, services must consider quality and safety, clinician capability, service readiness and, most importantly, client engagement.

Part 4: Conclusions

Being able to identify and address quality and safety risks in the health system is essential during this time of turbulence. Many of the building blocks are in place, but need to be brought together to work effectively. In practice, this means giving priority to:

- using a wide range of data held by different sources to identify risk in a timely manner
- creating a culture of caring for the carers by living Te Mauri o Rongo New Zealand Health Charter, and making health care in Aotearoa New Zealand attractive to both domestic and international health care workers
- recognising the different causes of unsafe and poor-quality care and what those causes tell us about appropriate responses
- taking a broader system view that recognises pathways of care and the complexities of patients with several co-existing conditions rather than providing isolated or fragmented atomised responses
- having a shared understanding of who in the broader health system can do what and avoiding both gaps and duplication
- establishing and maintaining structures and mechanisms that encourage openness, collaboration and accountability for addressing system-wide safety and quality risks.

Throughout the medium term, the impacts of the late pandemic are likely to be challenging to all health systems. The issues we report in this Window are by no means unique to (nor even especially pronounced in) Aotearoa New Zealand. In this climate, it is essential to closely monitor and ameliorate risks to safety and quality – across all parts of the system and use all the tools at our disposal.

Part 1: Turbulence 2020–23 | Wāhanga 1: Hūkeri 2020–23

In this part, we examine how the turbulence of a global pandemic and health system restructure has affected our health care in the last 3 years. The ongoing effects include disruption of relationships and processes within the system, which impact the delivery of services and quality of care. Our main focus is on the impacts on access, activity, experience and improvement. We also touch on the effects on safety before exploring these in more depth in Part 2.

Effects on access to health care

Access to primary care was delayed

The New Zealand Health Survey found that in 2021/22, 11.5 percent of adults (aged 15+ years) who had a medical problem did not visit a general practitioner (GP) in the past 12 months because the time taken to get an appointment was too long.² Strikingly, when the latest survey in 2022/23 asked the same question, the proportion had nearly doubled to 21.2 percent of adults – one-fifth of the entire adult population.

In 2022/23, this percentage translates to an estimated 891,000 adults who missed care due to wait times, up from an estimated 478,000 adults who missed care in 2021/22.

In 2022/23, Māori (23.8 percent) and Pacific peoples (22.4 percent) were both more likely than European people (20.9 percent) to report not visiting a GP due to wait times. Disabled people (24.3 percent) were similarly more likely than non-disabled people (20.9 percent) to have wait times as a barrier (Figure 1).





Source: New Zealand Health Survey

The question on unmet need due to wait time was only introduced in the 2021/22 round of the Health Survey. So, although the results show unmet need nearly doubled, it is based on only 2 years of data, limiting our sense of impact over time. For a broader view, we need to look to other sources.

Data from the Te Tāhū Hauora Health Quality & Safety Commission (Te Tāhū Hauora) primary care patient experience survey shows a steady rise over time in the percentage of people reporting difficulties accessing primary care because wait times to get an appointment were too long.³ Patients who said they could not get health care from a GP or nurse when they wanted it during the last 12 months were asked to give a reason why. Figure 2 and Figure 3 show the rise over time in the percentage of people who could not get care who selected 'Waiting time to get an appointment too long' as the reason.

The percentage of those who cited wait times were too long has risen from 11 to 20 percent between August 2020 and November 2023...

Figure 2: Percentage of patients who selected 'Waiting time to get an appointment too long' as the reason they could not get health care from a GP or nurse when they wanted it in the last 12 months, Aotearoa New Zealand, August 2020–November 2023 ... and these access difficulties due to wait times remained inequitable. Nearly a quarter of Māori responded they couldn't get health care because wait times were too long in November 2023.

Figure 3: Percentage of patients who selected 'Waiting time to get an appointment too long' as the reason they could not get health care from a GP or nurse when they wanted it in the last 12 months, by ethnicity, Aotearoa New Zealand, August 2020–November 2023





Source: Aotearoa New Zealand primary care patient experience survey

Access to elective services in secondary care was delayed

The pandemic has also had a dramatic impact on access to secondary care.

By November 2023, the number of people waiting more than 4 months for a first specialist assessment was five times more than in February 2020 (Figure 4)...

Figure 4: Patients waiting longer than 4 months for their first specialist assessment, Aotearoa New Zealand, January 2020–November 2023



... and the number of people given a commitment to treatment but were not treated within 4 months was four times more (Figure 5).

Figure 5: Patients given a commitment to treatment but not treated within 4 months, Aotearoa New Zealand, January 2020–November 2023



Source: Health New Zealand - Te Whatu Ora Elective Services Patient Flow Indicators

Box 1: Consumer voice: Josh McMillan, cancer, access to elective care and effects on mental health



Josh is a youth leader, ambassador and member director of the Canteen Aotearoa board – a non-profit organisation supporting rangatahi affected by cancer. He studies at Waipapa Taumata Rau University of Auckland, undertaking a Bachelor of Arts, double majoring in politics and international relations and history.

Sixteen years ago at age 9 I was diagnosed with a rare

form of leukaemia. My older sister had leukaemia at 6. We were the first case in the world – no genetic links, just bad luck.

I've had about 12 long-term side effects/diagnoses since, and when the pandemic started, my body didn't really care. In 2016/17, I started pushing for the removal of my spleen. It was triple its normal size, overworking, causing chronic thrombocytopenia. Investigations took 3–4 years, but I was ultimately diagnosed

with a rare liver disease. Everything needed surgical intervention which was too dangerous without addressing the spleen first. I was told no surgeon would touch me with the extreme risk of bleeding out.

The pandemic and access

My elective surgery in November 2019 was cancelled. A speedbump. The second was set for 22 March 2020. My surgeon rang us just before we got in the car, saying: wait. Then lockdown happened. Cancelled again. That day I left my family and partner and sat by the lake alone and sunk into a real depression. I couldn't work at my job in Rotorua Hospital due to my health risk. I was at home with family who were essential workers, so I pretty much hibernated in our basement.

After the first level 4 lockdown, I was rushed in before the next. My spleen was removed on 26 July and I spent 9 days in Auckland Hospital between HDU [high dependency unit] and a ward that was overwhelmingly elderly – me, just 21, with people dying of conditions I had.

Mental health impacts

A week after I left Auckland, I started to form blood clots, so I went to Rotorua Hospital. ED [The emergency department] told me there wasn't anything wrong from the way I presented. After some scans, my body proved them wrong, and they basically said, 'We're just going to listen to Auckland. You're above our paygrade.' Many medical professionals don't seem to understand that people like me are acutely aware of our bodies and know when something is wrong.

Isolated and invalidated in my experiences, plus COVID – I wasn't fully aware how it impacted me then. I was only 21, and my 'brush it under the rug' approach was beginning to crumble.

In February 2021, I'd had enough. I didn't feel like I was getting a better quality of life. I took some oxycodone and tramadol left over from surgery, much more than I knew was safe, then sat by the pool at home. I made some calls which went unanswered. One friend who did answer was training as a doctor and he offered to drop everything then and there. He called my sister. I spent the night in ED and 3 days detoxing from an overdose. Later, unpacking that with a psychologist, I realised the next step if no one answered was just 'going for a swim' and if I didn't come out then... yeah.

Canteen Aotearoa offers free psychosocial support. I went through 2 years of therapy with them. They helped me with intrusive thoughts, managing my emotions and the grief for a life I couldn't have. I was referred to a psychiatrist when firearms and my access to them came up. The psychiatrist pretty much told me I wasn't normal, and needed medication. My parents, on vacation, also got a call from police while driving to their house in Rotorua, saying I was going to shoot myself – I was actually in my Auckland flat decompressing, playing PlayStation. I don't trust psychiatrists to this day.

Earlier attempts at counselling in 2018 were similar. They tried to force things on me like cognitive behavioural therapy that didn't really work. It was so rigid and structured, and I was constantly getting told I needed to work this out. The psychosocial support that I received from Canteen was tailored to me – they listened as opposed to told. It's no secret New Zealand struggles with access to mental health support. In a way I was lucky I had cancer, so I had access to this service. When you think about that, it's pretty messed up.

Primary care access

In February 2021 when I moved to Auckland, finding a GP was incredibly difficult. The more central they are, the more they cost. I'm a young student who can't afford \$80–\$100 for a doctor's visit. The only place I could get into was in Torbay at the top of the North Shore on recommendation due to my history. He's a great GP, but for a 15–20-minute appointment it's around 2 hours of my day as I now live south of the CBD.

Telehealth

I still don't really understand this. I understand it was necessary during COVID, but it doesn't work well in my opinion. It's so disconnecting. The doctor can't pick up on anything you might be displaying. I had phone checkups, and the doctor would ask, 'How are you feeling?' I'd say, 'I feel okay.' I don't think my blood pressure is high because I don't know how to check. I don't know how deep the bruising is – to me it's just purple and sore. They're trying to ask stuff over the phone and for me, it's like, 'I don't know, I can't give you an answer... this is why I've come to you – the doctor.'

An abiding lack of trust

Presently, considering the pandemic and how things were handled, I feel 'iffy' around how and when I present to health care, and which service is appropriate. Do I go to ED, my GP...?

I'd say I have a medium distrust in the health system – the number of times I've presented with chest or abdominal pain etc, and been told I'm worrying too much, even with my conditions and history, makes me wonder if I as a patient will ever be taken seriously or be sufficiently investigated. I understand I'm a complicated case, but I'm not the only complicated case. It's so slow to get people into ED, but such a rush to get them out. I don't think there's a high level of care there, and that's not just the staff's fault. It's a systemic fault. I'm lucky I have a good GP who will follow up my concerns where I know others don't.

Effects on activity in elective care

The delays in access to elective care reflect a reduction in routine elective care in hospitals.

In Figure 6, the green line shows the level of elective activity we would expect in Aotearoa New Zealand hospitals based on data from the five previous years.⁴ The red line shows the **actual** activity that happened during pandemic-affected periods. The difference between the two represents the effects of the pandemic on normal elective work. So, for example, we see big dips in the red line below the green in the first lockdown in April and May 2020 and then dips continue consistently below normal levels of activity during Omicron-affected periods in 2022.



Figure 6: Weekly actual and predicted combined admissions for elective care, Aotearoa New Zealand, 2019–23

Source: Te Tāhū Hauora routine data analysis

Effects on patient experience of care

Primary care

Despite the challenges to access created by the pandemic, once patients accessed primary care, their reported experience of that care remained remarkably stable throughout pandemic-affected periods.

Patient experience survey data shows primary care patients responded positively to the question, 'Did the health care professional involve you as much as you wanted to be in making decisions about your treatment and care?' at consistent levels from August 2020 to November 2023 (Figure 7).

Figure 7: Percentage of primary care patients who responded positively to the question 'Did the health care professional involve you as much as you wanted to be in making decisions about your treatment and care?', by ethnicity, Aotearoa New Zealand, August 2020–November 2023



Source: Aotearoa New Zealand Patient Experience Survey

Patients attending primary care also responded positively to the question, 'Did you have trust and confidence in your health care professional?' at consistent levels from August 2020 to November 2023 (Figure 8).





Source: Aotearoa New Zealand primary care patient experience survey

Secondary care

Once patients accessed secondary care, their experience of care also remained remarkably stable over the period of the pandemic. No clear changes in inequity were evident.

The responses of patients in hospital to the question, 'Were you involved as much as you wanted to be in making decisions about your treatment and care?' were quite consistent throughout lockdowns and throughout Omicron-affected periods (Figure 9). In fact, a small but significant improvement in responses to this question occurred over the entire 3-year period.

Figure 9: Percentage of secondary care patients who responded positively to the question, 'Were you involved as much as you wanted to be in making decisions about your treatment and care?', by ethnicity, Aotearoa New Zealand, August 2020–November 2023



Source: Aotearoa New Zealand primary care patient experience survey

Likewise, the rate of those giving a positive answer to the question, 'Did you have trust and confidence in the doctors?' continued to be relatively stable throughout the extensively disrupted pandemic period. Inequity for Māori is more visible in the responses to this question (Figure 10).



Figure 10: Percentage of secondary care patients who responded positively to the question, 'Did you have trust and confidence in the doctors?', by ethnicity, Aotearoa New Zealand, August 2020–November 2023

Source: Aotearoa New Zealand primary care patient experience survey

Effects on improvement and safety

Most quality and safety measures show that improved outcomes associated with national improvement programmes were maintained throughout this turbulent period. These results suggest that quality improvements are embedded in practice.

Falls in hospital that led to a fractured neck of femur (broken hip) reduced following the introduction of a national quality improvement programme.⁵ ⁶ Over the pandemic period, numbers stayed consistently at that reduced level (Figure 11).





Source: Te Tāhū Hauora routine data analysis

A national programme to reduce surgical site infections after hip and knee replacement and cardiac surgery^{7 8} has reduced the rate of infection for both of these procedures. The rates stayed down over the pandemic period (Figure 12 and Figure 13).



Figure 12: Rate of wound infection per 1,000 procedures – hip and knee replacements, Aotearoa New Zealand, July 2013–July 2023

Source: Te Tāhū Hauora routine data analysis





Source: Te Tāhū Hauora routine data analysis

The national deteriorating patient programme⁹ has reduced the incidence of inhospital cardiac arrest. This incidence too has stayed down (Figure 14) despite the effects of the pandemic.



Figure 14: Rate of in-hospital cardiac arrest per 1,000 admissions, Aotearoa New Zealand, April 2018–October 2023

Source: Te Tāhū Hauora routine data analysis (note that gaps in the series are where data was not collected during the height of the COVID-19 period)

Among these markers of quality and safety, however, there are exceptions to the good results.

The incidence of postoperative deep-vein thrombosis leading to a pulmonary embolism (DVT/PE) rose above the level that would be expected in 2022/23 (Figure 15). Some of this unexpected rise in patient risk is likely to be due to the direct influence of COVID-19 because someone who has had COVID-19 is at greater risk of developing DVT/PE.¹⁰



Figure 15: Observed versus expected number of cases of postoperative deep-vein thrombosis leading to a pulmonary embolism, Aotearoa New Zealand, January 2006–July 2023

Source: Te Tāhū Hauora routine data analysis

Non-hospital-acquired pressure injuries have increased, while those acquired in hospital have remained consistent (Figure 16).



Figure 16: Rate of hospital-acquired and non-hospital-acquired pressure injuries per 100 observed patients, Aotearoa New Zealand, October 2019–October 2024

Source: Te Tāhū Hauora routine data analysis (note gaps in the series are where data was not collected during the height of the COVID period)

The overall picture seems to be that access to care has been widely blocked during the last three years but that, once patients do access care, the quality of that care has remained constant. Reductions in harm achieved over the previous decade have also generally proved durable. Both of these point to the continued commitment and skill of workforce during a period of intense pressure. Nevertheless, risks to safety remain, and the increased pressures on the system that have reduced access over the last 3 years add to these risks.

We explore the issue of safety in Part 2.

Part 2: Is our system safer after 20 years? Patient safety in Aotearoa New Zealand | Wāhanga 2: He pūnaha haumaru ka pau te 20 tau? Haumaru tūroro i Aotearoa

When we receive care in a hospital, undergo surgery or even start taking a prescription we have picked up from a pharmacy, we take a risk with our health. But what progress have we made to mitigate this risk over the last 20 years, and what can robust data show us about this risk? We answer these questions in this part.

All health care involves risk

Taken in the wrong way, any medicine can cause harm; and every surgery brings a chance of infection. Doctors and nurses must balance risks in deciding between what to do and what **not** to do. Every clinician, every hospital and every country balances these risks in very different ways.

End-of-life care is a good example. Atul Gawande in *Being Mortal*¹¹ discusses the perhaps very-American desire to do everything to save a life in mortal danger, even when those interventions may have limited or marginal benefit, and may have damaging effects on the final days of a patient's life. The US surgeon Clifford Ko gives us the example of a 106-year-old patient receiving a pancreatectomy (removal though major surgery of a cancerous pancreas).

The pancreatectomy is an extreme case, but all health care involves balancing the risk (the possibility of harm) with the benefit of care. Navigating these risks to provide acceptably safe care is what health professionals do every day. They constantly make trade-offs to keep the system 'efficient enough' to meet the needs of the population, while being 'thorough enough' to provide safe, person-centred care to the individual.

If health care is about balancing risks with expected benefits, then the aims of providing safe care are to:

- not intervene where potential benefits are limited
- intervene where benefit outweighs the longer-term harm of not intervening
- minimise the risks of intervening when it is beneficial, through good process, systems and culture, including by following agreed standards, while recognising that minimising is not the same as eradicating all risk.

How to balance these three aims depends greatly on context, such as which intervention is under consideration and what the patient's state of health is. Further, as techniques and technology develop, the context changes. Over time, we have seen technology advance, new treatments emerge, and evidence for and against existing treatments become stronger. As a result, it has been possible to undertake more interventions successfully on sicker patients.

A useful example of the impact of technological advances on reducing the risks in health care comes from the death rate from cardiovascular diseases, which nearly halved between 1980 and 2016 in Aotearoa New Zealand and many other countries (Figure 17). Experts attribute this improvement to 'the huge growth in knowledge and advances in prevention and treatment', including:

improvements in hypertension treatment and control, widespread use of statins to lower circulating cholesterol levels, and the development and timely use of thrombolysis and stents in acute coronary syndrome to limit or prevent infarction.¹²

Similarly, massive advances have been made in cardiac surgery and coronary artery bypass grafting.



Figure 17: Death rate from cardiovascular diseases per 100,000 population, United Kingdom, Australia and Aotearoa New Zealand, 1950–2021

Source: World Health Organization Mortality Database¹³

However, at the same time as we are making these advances in treatments and technology, populations are growing and ageing. Between 2000 and 2021, the number of New Zealanders older than 65 years nearly doubled, rising from 415,255 to 817,078 people. As a result, our health care systems are caring for more older people with multiple 'co-morbidities', or 'multi-morbidities' – that is, several co-

existing conditions, many of which are long term. Not only does each treatment for these conditions involve risk (medication, for example), but the different treatments may potentially interact (such as drug interactions and adverse events associated with 'polypharmacy', or use of multiple medicines¹⁴).¹⁵

With this greater complexity comes greater risk, especially in older people.

The interaction of these changes seems to create a paradoxical situation where, over time, health services around the world achieve better outcomes while on the face of it becoming no safer. We explore this possibility in the next section.

DALYs gained and DALYs lost

How can we measure progress in improving people's health? One way is to look at mortality – simply put, the number of people who die from a given condition. This measure immediately excludes those conditions that may cause disability to a greater or lesser degree without causing death.

So, to compare the overall health and life expectancy of different countries and understand the burden of disease and how it changes over time, we use a measure called the disability-adjusted life year, or DALY.¹⁶ A DALY measures a year of life lost due to premature death or a year lived with a disability due to a specific condition. One DALY equals one lost year of healthy life.

Due to advances in standards of living and the quality and delivery of health care in the 20 years to 2019, DALYs lost to all diseases in the populations of high-income countries have reduced by about 20 percent (Figure 18). In Aotearoa New Zealand, it's about the same. People in high-income countries, including Aotearoa New Zealand, are living longer, healthier lives, in part due to advances in health care.



Figure 18: Disability-adjusted life years lost to non-communicable disease per 100,000 population, Aotearoa New Zealand and high-income countries (including Aotearoa New Zealand), 1999 and 2019

Source: Institute for Health Metrics and Evaluation Global Burden of Disease Study¹⁷

However, when we look at DALYs lost due to adverse events occurring in health care (the outcome of care that is 'unsafe'), this number is roughly a thousand times smaller, and is largely unchanged over the same period in both Aotearoa New Zealand and high-income countries generally (Figure 19). The question is, why? With advances in quality and safety, shouldn't the number of DALYs lost to adverse events have come down in line with the decrease in all-cause DALY loss?



Figure 19: Disability-adjusted life years lost to adverse events per 100,000 population, Aotearoa New Zealand and other high-income countries (including Aotearoa New Zealand), 1999 and 2019

Source: Institute for Health Metrics and Evaluation Global Burden of Disease Study¹⁸

The answer seems to lie in clinicians' risk-benefit calculations on which health care depends. That is, as both the size of the population treated and the complexity of their health issues have grown, while safety, technology and treatments available have advanced, it appears that more people with greater risk can be treated at about the same level of trade-off between benefit and risk. This means that overall benefit increases while harm levels stay (more or less) constant.

The most recent large systematic review of preventable patient harm quantified the prevalence, severity and nature of preventable patient harm evident from studies in a range of medical settings globally from 2000 to 2019.¹⁹ These findings, when mapped over time, appear to show the results of preventable patient harm studies have remained consistent across the world throughout this period, with between 3 and 10 percent of patients experiencing preventable harm. There is no clear overall downward trend in patient harm over 20 years.²⁰

This level of harm is consistent with the results of a 2020 Commonwealth Fund survey of consumers. The survey found that, across 11 jurisdictions, respondents

reported safety incidents occurred for between 6 and 10 percent of patients during their treatment or care. (In this study, Aotearoa New Zealand reported 6 percent, at the low end of the range.)²¹

This finding sits uncomfortably with the emphasis placed on quality and safety over the last 20 years. Does it point to a failure of the huge investment in and policy prioritisation of safety? If so, how do we explain the overall dramatic improvements in outcomes?

Our hypothesis to explain the apparently conflicting data is that, as health care develops, systems adapt the balance of risk between intervention and non-intervention. They now intervene in some instances where previously they would not have, as the perceived balance of risk and benefit has changed. This occurs in a way that maintains an equilibrium point of preventable harm at around 5–10 percent.^a

In Part 1, we showed how various harms that we track routinely have held steady during a period of increased pressure on the health system. Moreover, the increased pressures on the system are real, as Part 1 also confirms in reporting the data showing the challenges in access to care that people have faced.

Based on studies of past health system failures, experts have identified a number of ways in which pressure can threaten safety.

First, a health system can normalise shortcuts and other suboptimal practices that previously staff only undertook in extreme situations but that now have become the new status quo. For example, it might become routine to work with too few qualified staff available, or not take the time to report and record safety issues. The concern then becomes that, at the next crisis point, the new set of 'adaptations' becomes dangerous.²²

We have found evidence that parts of the system have normalised risky levels of capacity. Adverse event reports notified to Te Tāhū Hauora have shown inadequate levels of staff capacity have become business as usual. Although reports identify that inadequate staffing levels have contributed to the adverse events they have analysed, very few reports have made recommendations around improving staffing levels. Discussions with quality and safety staff suggest that low staffing levels have been normalised. Similarly, stakeholders indicate managers are reluctant to include higher system-level findings within reviews of harm as they believe they are unable

^a This result is similar to safety expert Jim Reason's concept of an 'asymptotic value' of harm. According to this concept, systems find a new equilibrium point of harm after improvement: 'a general pattern in organisational responses to a safety management programme is that negative outcome data decline rapidly at first and then gradually bottom out to some asymptotic value. In commercial aviation, for example, a highly safety conscious industry, the fatal accident rate has remained relatively unchanged for the past 25 years. Comparable patterns are found in many other domains.' Source: Reason J. 2000. Safety paradoxes and safety culture. *Injury Control and Safety Promotion* 7(1): 3–14.

to action change. There is concern that, on occasion, this has led to 'normalising the abnormal'.

The developing understanding of health care as a complex adaptive system provides important context. The concern is that these normalisations represent system adaptations. However, the capacity to adapt has its limits and, as shocks to the system increase, it becomes more difficult for the system to adapt in future. It is feasible that the health system has adapted to the 'shock' of the last 4 years by limiting access and, in doing so, it may be creating the conditions for larger shocks at a later date to which it does not have the capacity to respond.²³

Understanding workforce is essential if a major risk to safety is the normalising of lower staff levels; and in an environment where access to services is a prominent concern, the use, potential and pitfalls of telehealth need better understanding. In Part 3 we consider both.

Part 3: Large-scale change since the pandemic – two 'deep dives' into the evolving Aotearoa New Zealand health care system | Wāhanga 3: He panoni kaha mai i te urutā – he 'ruku hōhonu' e rua ki te pūnaha manaaki hauora o Aotearoa

In this section we examine two major shifts in Aotearoa New Zealand health care since the pandemic, and the unknown implications for quality and safety these shifts may represent:

- large-scale changes in nursing workforce composition
- use of telehealth.

Firstly, we look at efforts to address the nursing shortages experienced by the Aotearoa New Zealand public health care service up to 2022 (with the risks to safety this created), and the large-scale efforts since to bolster the workforce using internationally qualified nurses (IQNs), and further challenges to quality and safety (and the unintended consequences) this strategy may have entailed.

As identified in previous reports, pressures on workforce can compound and create vicious cycles: workforce deficits contribute to staff burnout, leading to higher sickness rates and turnover, further increasing workforce deficits.²⁴ This pattern has been noted in reports from the New Zealand Nurses Organisation in 2021²⁵ and 2022,²⁶ and in contemporaneous press reporting.²⁷

Efforts to bolster the workforce to address these risks to patient safety and quality of care have led to rapid, large-scale rises in IQNs arriving in Aotearoa New Zealand. But this unprecedented increase in IQNs in our workforce may in itself present challenges to quality and safety. Turnover in staffing in and of itself may create instability, and threats to organisational function.²⁸ We also present evidence that much of this IQN workforce may be moving directly on from New Zealand, contributing to the high turnover and instability and associated risks.

Furthermore, these rapid influxes and risks of instability spill over into those of insufficient 'onboarding' of new staff, including communication of local knowledge and practice, trust, and the strong relationships critical to avoiding the kinds of communication issues associated with many adverse events.²⁹ Research into the experience of IQNs in Australia has identified addressing intercultural communication issues as 'a crucial factor' in overseas qualified nurses transitioning successfully into new contexts, and moving from 'peripheral participation to full participation in health care encounters'.³⁰

Secondly, we examine the uptake and retreat from telehealth in Aotearoa New Zealand health services, in the context of the large-scale challenges to access to the system identified in previous sections. The chief risk to quality and safety from the

period of turbulence we have examined appears to be timely access to care, long identified as a critical element of quality.³¹ Telehealth has been touted by many as a potential solution to problems of access, but with many aspects of its potential contribution contested: reach to and inequity for isolated and rural communities, reliance on digital literacy, acceptability to different parts of the community and in different contexts, and utility and effectiveness in comparison to in-person encounters.

International experience and a burgeoning literature suggests telehealth was, by necessity, implemented rapidly and at scale worldwide early in the pandemic, with a widespread retreat from use thereafter. Did Aotearoa New Zealand follow these patterns of mass uptake and retreat and thus can we learn from international comparisons, or did we take up telehealth much less than other countries? Our evidence suggests the latter, and a substantial retreat to usual practice. There are possibilities of pursuing a more thoughtful and nuanced approach to telehealth implementation that maximise its benefits and minimise its risks to quality, safety and patient experience.

1. Aotearoa New Zealand nursing workforce – complex flows and unexpected consequences

Shortages and a more representative workforce

In July 2023, Health New Zealand – Te Whatu Ora and Te Aka Whai Ora | Māori Health Authority published their Health Workforce Plan 2023/24. The plan estimated we needed approximately 4,800 more nurses at the time of publication and, on thencurrent trends, approximately 8,000 more than we are expected to have by 2032.³²

However, since the plan was published, immigration settings and incentives have changed. As a result, the nursing workforce has grown significantly through overseas recruitment of IQNs.

While 2024 workforce data is pending, Health New Zealand – Te Whatu Ora believes the nursing workforce grew by over 1,300 full-time equivalent (FTE) positions between March and September 2023. It further estimated that it will have fully recruited generalist nurses for most of the country and will have reduced the shortfall in nurses from 4,800 to approximately 1,500 by the end of January 2024.

Although shortfalls in nursing will remain in some specialist areas, this influx of IQNs has addressed critical shortages in our hospitals.

However, recruitment of IQNs to rapidly address the urgent short-term need for nurses has two issues.

- 1. We are losing many IQNs to Australia (as we discuss later in this section).
- 2. While short-term influxes of IQNs address shortages, they exacerbate a longterm problem. That is, even well before the pandemic our workforce was not representative of our population. In particular, Māori and Pacific peoples are under-represented.

While the numbers of Pacific nursing graduates of the University of Auckland have steadily grown, their percentage of total graduates has remained largely static, growing from 7 to 9 percent in the last nine years.³³ Nursing Council of New Zealand data shows the percentages of qualified registered nurses who identify as Māori or Pacific have been virtually static for 9 years despite steady growth of the general Māori and Pacific populations. Our Māori and Pacific nursing workforces (solid lines in Figure 20), though slowly growing in size, have long been below the percentage of Māori and Pacific peoples in the general population (dashed lines).



Figure 20: Percentage of nurses with an annual practising certificate who identify as Māori and Pacific, and percentage of Māori and Pacific populations, Aotearoa New Zealand, 2014–23

Source: Nursing Council of New Zealand and Stats NZ

Box 2: Māori nursing and a representative workforce in Aotearoa



Nadine Gray (Te Whakatōhea) is Chief Nursing Officer Hauora Māori at Health New Zealand – Te Whatu Ora.

A worldwide shortage

Nursing is a mobile profession. I myself took the opportunity to go overseas because that is the nature of the profession and New Zealand nurses are well respected on the global stage.

But the whole world is grappling with a worldwide shortage of nurses. The World Health Organization and the International Congress of Nurses are bringing attention to the need for us to build our own domestic

supply with the diversity of nurses to meet the needs of our communities.

In Aotearoa our most under-served communities are Māori and Pacific, and the inequities in health outcomes for these communities are enduring. But the percentage of Māori nurses in our workforce has remained static for more than three decades.

Upstream barriers to Māori in nursing education

More than 30 percent of Māori undergraduate nurses are not completing their undergraduate studies. That is a huge hole in our supply into the system. Research has explained the barriers to Māori nurses completing studies: they are financial, but also critical is the need to improve the cultural responsiveness of our training and educational institutions.

But we also have to look back upstream. For Māori, entry into the undergraduate programme is difficult. Our secondary education system isn't serving rangatahi Māori well. Many leave school without direct entry into higher education programmes, which adds another year of foundational studies, money and time to then begin training.

But we can deliver models that are responsive to our students, layered with ways to address hardship.

Māori-specific nursing programmes and what can work

The need for Māori to succeed **as** Māori is important. Gains have been made in Māori-specific Bachelor of Nursing programmes, like Te Whare Wānanga o Awanuiārangi, that are culturally responsive to the needs of tauira Māori (students). The graduates from the programme come out confident in their duality of being a Māori nurse. The importance of ethnic concordance in the health provider–patient–whānau interface will contribute to elimination of inequities. This is where we have a workforce that reflects our communities: Māori nurses that look and sound like them (Māori), and have a deep understanding of cultural needs to deliver care.

Te Whare Wānanga o Awanuiārangi is also located in the regions, so tauira (students) don't have to leave home to access education. Particularly for those in hardship, or mature students with commitments to whānau or dependants, the local access is extremely valuable.

When Māori and Pacific graduates enter the workforce, we have a responsibility to support their needs so they stay. Not only their clinical competency, but also culturally, to provide learning opportunities to grow their Māori knowledge bases.

Seeding Māori leaders through the system

'To see is to be' and to aspire to, and we need to grow Māori clinical leaders, and layer diversity across our system.

We need Māori leaders that give voice to different ways of thinking strategically, thinking operationally and providing visibility out to our workforce – driving that model of partnership across the system.

We've shown we can have two knowledge bases in clinical practice and in clinical leadership that complement each other. It's a cultural shift, within an organisation and in the health system, and it takes people to champion that.

Māori 'staircasing' in health

Our biggest workforce in health is our support workforce. We saw in the pandemic how our people mobilised and stepped into health to help and to care for others.

There is an opportunity to enable people to step into health and then to staircase up into the regulated professions. As a system, we can support people to aspire toward careers, to bring their valuable skill sets in, build their capability and help them become the leaders of tomorrow.

There was a missed opportunity as the pandemic moved into business as usual. Things were rapidly changing and we learned through this extraordinary time that our system can be flexible and adapt.

We need to hardwire these experiences and continue to do more to grow our own workforce.

My mum was an enrolled nurse in the '70s, then she bridged and became an RN [registered nurse], and then Aotearoa New Zealand's first Māori nurse practitioner. It's possible. I'd like to grow the 'Poutama', or staircase of career opportunities, in nursing.

IQNs and a culture of nursing in Aotearoa

There's a real responsibility to manaaki our IQNs coming to Aotearoa, so that they are supported to understand the context of health, the principles of Te Tiriti o Waitangi and tangata whenua. To move all the way to Aotearoa to work in our health system is a huge undertaking, to integrate into life here, often with or without whānau. So, we need to make sure that they are looked after.

The importance of IQNs to our nursing workforce – and their growth

In 2021, Aotearoa New Zealand already had the second-highest share of foreigntrained nurses (30 percent) in the Organisation for Economic Co-operation and Development (OECD). Only Ireland was higher at 47 percent (Figure 21).³⁴

Since then, Ireland's share of nurses trained abroad has risen to 49 percent in mid-2023,³⁵ and some Health New Zealand – Te Whatu Ora data suggests that the percentage of Aotearoa New Zealand's nursing workforce who are IQNs may now sit at approximately 40 percent.³⁶

But, as an unexpected consequence of massive global nursing workforce mobility and incentives to move on to Australia, the real picture may be different.



Figure 21: Percentage of foreign-trained nurses among OECD nations, 2021 (or nearest year)

Note: OECD26 are the chief OECD countries for which this data was available. This figure represents the average.

Source: OECD health statistics 2023

Nursing Council data shows that new nurse registrations in Aotearoa New Zealand have doubled since our borders re-opened in 2022. Most new nursing registrants are IQNs, while numbers of newly registered New Zealand-qualified nurses (NZQNs) remain static (Figure 22).³⁷



Figure 22: Total number of nurses and new nursing registrants, Aotearoa New Zealand qualified nurses and internationally qualified nurses, Aotearoa New Zealand, 2012/13–2022/23

Abbreviations: APC = annual practising certificate; IQN = internationally qualified nurse; NZQN = New Zealand qualified nurse.

Source: Nursing Council of New Zealand

Where IQNs are coming from

Nursing Council data includes the country of original registration of IQNs – that is, the country where they first trained. The last 2 years have shown a modest rise in the number of nurses originally registered in the Philippines. However, the majority of new IQNs were originally trained in India.

In 2022, the number of nurses originally registered in India more than doubled in Aotearoa New Zealand. In 2023, the 2022 number then tripled as more than 8,000 Indian-trained nurses gained Aotearoa New Zealand registration (Figure 23).





Source: Nursing Council of New Zealand

However, Nursing Council data shows the majority of these nurses originally registered in India did not come directly from India. Data on the country of **last** registration show the largest influx of these nurses newly registered in Aotearoa New Zealand came from the United Kingdom. Large rises in their numbers coming from Middle Eastern countries and Ireland are also evident, along with a smaller rise from India itself (Figure 24).

Figure 24: New internationally qualified nurses gaining Aotearoa New Zealand registration, selected countries of **last** registration, 2018–23



Source: Nursing Council of New Zealand

Further evidence that supports these flows is that, among all nationalities of nurses gaining new registration to work in the UK National Health Service (NHS), the number of Indian nurses has grown the most in the last 3 years (Figure 25). Of other countries, only Nigeria (in red in Figure 25) has shown remotely comparable growth. New nursing registrants who are trained in the United Kingdom are included in the graph for context. From September 2020, in the midst of a major pandemic crisis in the United Kingdom, the 6-monthly number of nursing registrants who originally trained in India and entered the NHS climbed 700 percent to reach more than 7,000 new registrants in the 6 months to September 2023.



Figure 25: New NHS nursing registrants by country of training, 6 monthly, United Kingdom, March 2018–September 2023

Source: NHS Digital

However, recent analyses indicate that outflows from the NHS have continued. Further, they show that future outflows are likely, as measured by 'intention to leave' – that is, when UK-based NHS nurses apply for Certificate of Current Professional Status (CCPS), which is required to practise in other countries.

In 2022/23, over 12,000 NHS nurses applied for CCPS, double that of the year before and four times the number in 2018/19.³⁸ More than four in five of these applications were for Aotearoa New Zealand, Australia and the United States. Among NHS nurses who had trained somewhere other than the United Kingdom, nurses from India and the Philippines accounted for almost four in five applications for CCPS – that is, nearly 7,000 nurses in 2022/23.

These findings suggest large numbers of IQNs from, predominantly, India are flowing to the NHS and then on to Aotearoa New Zealand, and the number will continue to grow.

However, many may not stay here.

Aotearoa as a stepping stone - triangulating different data sources

Under the Trans-Tasman Mutual Recognition Act 1997 (TTMRA), Aotearoa New Zealand nurses can be granted registration and the ability to work in Australia.

Data from the Australian Health Practitioner Regulation Agency (AHPRA) show the number of Aotearoa New Zealand nurses granted registration to work in Australia under the TTMRA rose steeply in 2021/22 and then even more dramatically in 2022/23 to nearly 8,000 nurses (Figure 26).



Figure 26: Aotearoa New Zealand nurses granted registration in Australia under the Trans-Tasman Mutual Recognition Act 1997, 2015/16–2022/23

Source: Australian Health Practitioner Regulation Agency

AHPRA was unable to provide ethnicity data for the Aotearoa New Zealand nurses granted registration under the TTMRA. However, Nursing Council data shows how other measures may confirm that IQNs are flowing through Aotearoa New Zealand to Australia.

To practise in Australia, nurses registered in Aotearoa New Zealand must have Verifications of Good Standing (VoGS). Data is available on the number of VoGS sent to Australia, and whether these come from IQNs or NZQNs. There are limits to what we know from this data because requests for verification arise when a nurse makes an application to an overseas regulator so a request does not show whether the nurse actually practises in another country. The Nursing Council does not hold data on the international movement of nurses.

Despite the limitations, in the 2022/23 VoGS data, again we see large increases in the number of nurses lodging VoGS to practise in Australia. Again, the vast majority of these are IQNs (Figure 27).

IQNs appear to account for most of the trans-Tasman flow shown in Figure 266, as they move on through Aotearoa New Zealand to Australia.



Figure 27: Estimated number of nurses registered in Aotearoa New Zealand who apply for VoGS for Australia, and the number of these who are IQNs, 2019–23

Abbreviations: IQN = internationally qualified nurse; VoGS = Verifications of Good Standing.

Source: Nursing Council

Overview

While high global mobility was a characteristic of the nursing workforce before the pandemic, since then this trend has amplified significantly. Nurses are seeking better conditions and better pay, often remitting a substantial proportion of that pay to support family in their home countries. It may be that for this health care workforce, conditions and policy settings provide nurses, as rational economic actors seeking better conditions, with a pathway via the NHS and the Middle East to Aotearoa New Zealand and then on to Australia.

The data reported here supports a hypothesis that nursing workforce flows are changing globally. Of relevance to Aotearoa New Zealand, these data show Indian-trained nurses in particular move to the UK and complete their certificate of competence there³⁹ in order to practise in Aotearoa New Zealand, and then under the TTMRA move on to Australia. Some commentators believe many IQNs assessed as registered in Aotearoa New Zealand may never practise or even come here.⁴⁰

We conclude from this evidence of international flow of nurses that importing an overseas-trained workforce is unlikely to be a viable long-term strategy for addressing workforce shortages. In this context, efforts to develop and retain a local workforce become still more important. What is the best way of developing this workforce?

Health New Zealand – Te Whatu Ora workforce plan

The workforce plan of Health New Zealand – Te Whatu Ora recognises the tension between addressing gaps immediately and implementing a viable long-term strategy.

Centralisation allows for coherent unified workforce management based on centralised data, leading to opportunities to support six action areas in the strategy. These action areas include growing pathways for Māori and Pacific peoples in health (covered in and **Box**), supporting and retaining its workforce and growing future leaders.

The Pacific picture

Efforts to foster and cultivate Pacific nurses to make our workforce more representative of our population present challenges both in Aotearoa New Zealand and in Pacific nations themselves. Since 2022, Pacific nations, including those not protected by the World Health Organization 'red list' of countries with domestic workforce shortages,⁴¹ have experienced a 'brain drain' of nurses recruited overseas, leaving often critical shortages in their home countries. For example, 800 Fijian nurses left Fiji in the year to April 2023.⁴² Estimates of the proportion leaving range from a fifth to a half of Fijian nurses.^{43 44 45}

Some of these nurses are highly qualified, such as advanced clinical nurses or managers, but when they move overseas they are recruited into lower-paying positions for which they are over-qualified – for example, in aged residential care.⁴⁶ Policy settings in Australia, such as the Pacific Australia Labour Mobility scheme that began in April 2022,⁴⁷ have been adjusted to increase the numbers of Pacific workers in Australia. This includes positions in aged residential care settings 'not as a nurse, but as a sort of lower-paid, personal carer' – positions that are financially attractive, but relatively unskilled, according to commentators.⁴⁸

Recruitment, retention and support of Pacific nurses already resident in Aotearoa New Zealand are vastly more complex and involved than recruitment from elsewhere offshore. **Box** discusses efforts to recruit, support and retain Pacific nurses in Aotearoa New Zealand.

Box 3: Aniva Pacific workforce and leadership development programme

The problem: 2021 data shows an 8 percent gap in undergraduate nursing course completions between Pacific and non-Pacific learners, a 9 percent higher attrition rate in the first year for full-time Pacific learners and a 12 percent fall in the share of Pacific nursing graduates in employment after 5 years. Pacific peoples are much less likely to enrol in advanced study and complete than their non-Māori, non-Pacific peers.

The Pacific health workforce made incredible achievements throughout the pandemic in protecting, testing, vaccinating and caring for the Pacific community so sorely hit by COVID-19.⁴⁹ Yet the present system is still failing Pacific learners and enabling a non-representative nursing workforce, lack of Pacific leadership and loss of Pacific expertise in places where it is most needed.

The reasons for these shortfalls are complex. Some relate to the design of teaching and learning programmes, including where and how they are delivered. In addition, most teaching environments and curricula are not Pacific-centred or inclusive of Pacific cultural needs. Further, funding systems do not take account of the life and career trajectories of Pacific nurses.

Launched in 2011 to address such issues, Aniva is a workforce leadership development programme open to Pacific nurses and midwives. It is delivered by Pacific Perspectives Ltd and commissioned by the Ministry of Health – Manatū Hauora and Health New Zealand – Te Whatu Ora.

Postgraduate learning and leadership

The Aniva Pacific nursing and midwifery leadership programme has over time developed a tailored part-time master's qualification that can be completed over 3-and-a-half years. It is made up of three distinct qualifications:

- Postgraduate Certificate in Specialty Care (Pacific Health)
- Postgraduate Diploma in Specialty Care (Pacific Health)
- Master of Professional Practice (Leadership).

After completing each qualification, students can pause their study or progress to the next one.

The programme is approved by the Nursing Council of New Zealand and accredited for delivery of a curriculum approved by the New Zealand Qualifications Authority. It is delivered for Pacific nurses and midwives across the country, 'by Pacific, for Pacific'. The programme speaks specifically to Pacific learners via Pacific indigenous philosophies, giving them evidence-informed tools and knowledge to address inequities in health and service outcomes for Pacific peoples.

Critically, the programme's teaching methods are culturally appropriate and acceptable, reflecting Pacific identities. In this context, Pacific learners can study what matters to their communities in familiar and supportive ways, with tasks relevant to their workplaces. One goal of the programme is to grow, support and retain a Pacific nursing and midwifery workforce that reflects and has the unique abilities to address Pacific needs. A second is to support graduates to attain leadership positions, where they are better able to influence clinical practice and the quality of health services that meet the needs of Pacific individuals, families and communities. Senior distinguished Pacific clinicians, leaders and academics lead the programme.

Undergraduate learning and support of Pacific learners

Since 2021 the programme has included the Aniva future Pacific nurse leaders programme. Its aim is to support Pacific undergraduate student nurses to complete nursing programmes, gain formal registration and successfully transition into the health workforce. This is designed to address systemic barriers to achieving equitable numbers of Pacific learners, many of whom are attempting to balance family and work obligations alongside studying. The programme helps by addressing some of the financial costs such as uniforms and equipment, clinical placement travel and examination and registration fees, which prevent many Pacific learners from starting or continuing their studies.

Progress

One in six of all Pacific postgraduate health enrolments now passes through Aniva, as do two in five of all Pacific Master's health graduates. By the end of 2023, 209 Pacific learners had completed the postgraduate certificate and 103 had completed the postgraduate diploma. By the end of 2024, 52 Pacific learners will have completed the Master's degree. Aniva supported 555 learners in 2022, up from 384 in 2021.

Learner voice: 'It was really good for me because going away and finding out more about my Pacific self as opposed to just working in mainstream thoughts, mainstream way of doing things. When I started with Aniva what I suddenly realised is that we can walk in two worlds.'

Dr Debbie Ryan of Pacific Perspectives, which leads the Aniva programme, says it has 'provided a focus for Pacific health as a specialty, with its own body of evidence, knowledge and skills, and considers how this is applied in practice. Our learners report being more confident and courageous in advocating for the needs of Pacific patients, more able to identify gaps in policy and the quality of services for Pacific people and more confident about including their Pacific identity as a unique strength in their health practice. We acknowledge the generous support of many academic, Pacific and health leaders over the years and we remain committed to supporting the aspirations of Pacific learners to gain the education, skills and training to effect positive change in the health sector.'

2. The rise and recession of telehealth – an alternative future for Aotearoa New Zealand?

The OECD reports that across OECD countries, 'the number of teleconsultations skyrocketed in the early months of the pandemic, partly offsetting the reduction in inperson care services'. It also observes that 'across the OECD, patients who used telemedicine services are overwhelmingly satisfied'.⁵⁰

Despite concerns around digital inequity and exclusion, and barriers to access for those in remote or rural locations, older populations, disabled people and poorer patients, 'there is evidence that since the start of the pandemic access to remote care has increased for vulnerable groups in some cases'.⁵¹

The receding tide

Following on from the spike in use during the pandemic, however, evidence indicates that many countries have retreated from use of telehealth. Across the OECD:

physicians have more mixed views of the importance of remote care services, with the pandemic in a new phase in which vaccines are widely available, and in-person services have mostly resumed. Some physicians expect to reduce their provision of telemedicine services or even stop providing them altogether following a period of increased use in 2020. Moreover, changes to promote telemedicine through regulations in 16 countries and through financing in 12 countries are only temporary and subject to review. It is possible that, despite significant demand from patients for remote care services, these will soon become unavailable or subject to stricter regulations.⁵²

In the last 4 years, research, data and studies have proliferated, and the research has moved comprehensively from discipline-specific telehealth journals to major journals.⁵³

Some have characterised use of telehealth following the flood of adoption in the first years of the pandemic as a receding tide.⁵⁴ In many instances, ways of working are reverting to pre-pandemic models and loosened regulatory settings and funding policies are tightening again.

Is this true in Aotearoa New Zealand? Data from primary, outpatient and mental health care appears to support this view, and indeed that the initial rising tide was smaller than some suspect. We present this data below.

However, some services that embraced telehealth during the pandemic have continued to use it at levels driven by demand and have found success and new models of working that are attractive to clinicians and clients (**Box**).

Box 4: Turuki Health Care and telehealth: Renee Muru-Bernard on successful use of telehealth in a South Auckland primary care setting



Renee Muru-Bernard is primary health care manager at Turuki Health Care. Turuki is a multilingual kaupapa Māori health provider and a Very Low Cost Access practice. It provides local whānau-based primary health care and wellness, pharmacy, parenting, domestic violence, mental health and social services to more than 11,000 enrolled patients in South Auckland.

A natural equilibrium for telehealth delivery

At Turuki before the pandemic we would have seen less than 5 percent of our patient population via virtual services. At the peak of the pandemic, we were tracking at just

above 90 percent virtual presentations. We later dropped down to about 60 percent and we now, in early 2024, sit at about 30 percent of presentations serviced via telehealth. This is driven by natural demand. We do a number of quick consults virtually and a number of video and phone consults.

A number of our patients use telehealth due to poverty-related circumstances, such as lack of petrol or transport, or having no care for kids, or they have moved to areas where they cannot register with a GP. Taranaki and Te Tai Tokerau are two examples where we are still servicing whānau who live outside of Tāmaki Makaurau but cannot register as their region has no capacity.

That 30–35 percent of telehealth presentations is driven by our patients. And us to a certain extent, because we can be more efficient and while some things can be done via telehealth, we also realise, though, that a number of functions within general practice cannot and so a balance is required.

Our clinical staff are enjoying the work–life balance that they can have now with telehealth. Now they can work from home and have a virtual consult day. It helps with family commitments as well when children are unwell and staff need to be there but also work. Or they can live in another part of the country, and still work for us because they have two virtual days a week. I absolutely feel like 30–35 percent is an equilibrium where we are serving both our staff and our patients in the way that they want to be. It allows me to keep amazing, quality staff. So as an example, our clinical director lives in Dunedin and she works for us 2 days a week virtually. If I hadn't been able to offer her that, I may have lost her altogether. And you know, she's an absolute stand-out, so I want to keep her. We also have other GPs who live elsewhere but we can support with our virtual services.

A remote service for the rural north

We have a model where doctors are attracted to working and the way that we work here at Turuki in South Auckland. I always have a waiting list of doctors who want to come and work here. It's because we have an amazing team. But one of the things that I thought of over COVID is why don't I have a rural telehealth service? What if I could service Taranaki, Kaitaia and Tairāwhiti, sitting here in Manukau? There are ways that we could actually support our rural areas who are really struggling to get good clinicians there, because clinicians often don't want to live rurally. Nobody wants to live in Kaitaia, as an example. It breaks my heart because I'm from there, but I could have a whole heap of GPs sitting here in Manukau that are online working on telehealth, working virtually. But what happens is we don't have the money to create a service like that. So then you get many sorts of the virtual services that are currently out there that are very expensive and do not cater for our whānau. They are needed for the population but don't serve our types of whānau. Actually, we could have a kaupapa Māori service that would take care of the populations who are not being serviced. Where we have doctors who they would engage with and connect with who reflect those communities.

But we don't have infrastructure support so it's very hard to be able to do that, but we could literally do that in a couple of months. I just think you could have the flex where you go, 'OK, well, this week the priority is Northland. Next week it's Taranaki. Right, this week it's Gisborne actually, because they've just suffered all of these floods.' There's a way to flex so that you haven't got people sitting, doing nothing. I just think there's a better way to spend the health dollar.

Primary care patient experience and telehealth in Aotearoa New Zealand

Patient experience survey data⁵⁵ provides granular insights into how primary care patients experienced telehealth during the heights of pandemic restrictions and after.

While based on robust and validated measures, patient experience data reflects only the experience of those who responded to the survey. It cannot reflect the situation of all primary care providers and clients.

However, the available data suggests the rising 'tide' of telehealth was smaller than might have been expected (never going beyond 20 percent of appointments in primary care). Moreover, though the tide may not have receded completely, the drop was certainly substantial (to about 8 percent of appointments in November 2023). In other words, at all times, primary care was overwhelmingly dominated by in-person appointments.

Primary care patient experience since the 2020 lockdowns

Adult primary care patient experience survey data from August 2020 onward reinforces the trend of reduced telehealth use, other than when the Delta and Omicron variants arrived from late 2021 to late 2022 (Figure 28). Of note is the greater use of telephone services rather than video conferencing. We return to this issue in the following section on outpatient care.



Figure 28: Mode of care of most recent primary care appointment, Aotearoa New Zealand, August 2020–November 2023

Source: Aotearoa New Zealand primary care patient experience survey

Primary care patient experience of telehealth now

Data from the primary care patient experience survey can show us in more detail who is more likely to report accessing primary care via telehealth as at November 2023.

Māori and Pacific peoples were more likely than people of other ethnic groups to report that their most recent primary care appointment was via telehealth (the primary difference being in telephone, as so few used video). Users of telehealth were more likely to be aged under 65 years, and more likely to be women than men. Disabled people were also more likely to access primary care via telehealth than non-disabled people.

Regionally, more people in the Northland, Tairāwhiti and MidCentral districts accessed primary care through telehealth than the Aotearoa New Zealand average. Conversely, telehealth access was lower for people in Nelson Marlborough and Canterbury districts than the national average. The differences, however, were marginal.

Primary care patient experience during the 2020 lockdowns

Primary care users were surveyed during level 3 and 4 lockdowns in the first year of the pandemic to understand their experiences of telehealth while the use of this service was rising.⁵⁶ Results showed experiences were largely positive. The five most popular aspects of this mode of care were that:

- respondents didn't have to visit a place where others may be unwell (47.3 percent)
- they saved time because they didn't need to travel (38.4 percent)
- the appointment itself was faster (33.3 percent)
- they didn't have to wait as long (32.2 percent)
- they felt more relaxed when they were at home or in a familiar place (17.4 percent).

Some respondents reported disadvantages about telehealth. The three aspects that people most commonly did not like about it were that they:

- could not show the GP their physical symptoms (34.4 percent)
- found it harder to explain themselves than in an in-person appointment (26.6 percent)
- found it harder to hear or understand the GP than in an in-person appointment (9.3 percent).

Telehealth for people with long-term mental health conditions during the lockdowns Data from the COVID-19 patient experience survey showed that people with and without long-term mental health conditions were equally likely to report reasons why they liked their telehealth appointments. However, people with long-term mental health conditions were more likely to report certain reasons for liking telehealth appointments than people who did not have long-term mental health conditions. In particular, people with long-term mental health conditions were more likely to prefer telehealth because:

- it saved time in that they didn't need to travel (43 vs 38 percent)
- they felt more relaxed at home or in a familiar place (22 vs 17 percent)
- it saved **money** because they didn't need to travel (19 vs 14 percent).

Telehealth appointments are quicker to get

Similarly to the COVID-19 patient experience survey,⁵⁷ most recent data shows that over the past year (from May 2023 to February 2024) the people most likely to report that when they booked their appointment they were able to get it the same day or next had had a telephone appointment (44 percent), followed by those who had a video appointment (36 percent). Only 28 percent of patients whose most recent appointment was in person were able to get this booked the same day or the next.

Telehealth appointments resulted in equivalent experiences to in-person, provided that people saw their regular health care professional

Over the past year, people who had an appointment with their regular health care professional reported similar rates of having trust and confidence in their health care professional and being involved as much as they wanted in decisions about their

treatment and care, regardless of whether the appointment was in person, by video or by phone. This was the case across all age groups.

Secondary care: a high-level view of telehealth use in outpatient care in Aotearoa New Zealand

Data from the National Non-Admitted Patient Collection (NNPAC)⁵⁸ bring together available information on medical and surgical outpatient and emergency department events. It is an administrative data set used for funding purposes that contains reasonably detailed information about activity in outpatient settings in Aotearoa New Zealand.

Analysis of NNPAC activity by mode (including in-person, video, phone, non-contact and remote monitoring) is possible. This can give us a broad, high-level view of the trends in taking up and discontinuing telehealth modes in the early years of the pandemic and afterwards, as restrictions eased.

The pattern of uptake of telehealth and return to near business-as-usual and inperson care mirrors that of findings from the primary care patient experience survey.

Three broad conclusions follow from this data.

- 1. Pandemic restrictions generated growth in telehealth use in outpatient care, but less than might be expected. Most growth was connected with periods of stringent restriction.
- 2. Most outpatient telehealth in Aotearoa is telephone health (not video).
- 3. Use of phone and video modes has settled at higher levels, but those levels remain still well behind the potential delivery and potential demand for these services.

As Figure shows, even at the heights of pandemic restrictions in early 2020, late 2021 and early 2022, in-person appointments (blue line) for outpatients still vastly outnumbered telehealth appointments. Telehealth rose to a peak of 25 percent of appointments in early 2020, filling the gap made by falling in-person appointments. Virtually all of these telehealth appointments were by telephone (red line).



Figure 29: Percentage of non-admitted outpatient events by mode of care, Aotearoa New Zealand, July 2017–April 2023

Note: 'Non-contact' means the outpatient event took place between clinicians without the patient being involved.

Source: Te Tahu Hauora analysis of National Non-Admitted Patient Collection data

When we exclude in-person contacts and look at trends in telehealth modes where they share measurements in the same intervals along the y-axis, it is clear that telephone was the dominant telehealth mode that outpatients used. For the telephone mode specifically, the dashed line shows that, even before the pandemic, telehealth use was rising steadily if slowly and, since the pandemic, telephone use has begun to settle at a new higher level (Figure 29).







Note: Dots indicate the periods when pandemic lockdowns had a heavy impact. Small dotted lines indicate pre-pandemic trend.

When we adjust the y-axes to give the numbers in intervals suited to examining each individual mode in detail, the trends in use of each mode are clearer (Figure 30). Rises in telephone and video use correspond directly to pandemic restrictions. Taking account of the difference in y-axis values, it is also evident that telephone events far outweigh video events.





Note: Dots indicate the periods when pandemic lockdowns had a heavy impact. Small, dotted lines indicate pre-pandemic trend.

In April 2020, telephone appointments peaked at almost 90,000, while the peak for video appointments at about 7,400 came in late 2021. By comparison, in-person appointments at these same periods were approximately 260,000 in April 2020 (almost half the usual number of in-person events as appointments were cancelled

and people did not attend) and 476,000 (closer to the usual number) in October 2021.

Despite pandemic-related peaks, and a modest trend of rising telehealth use generally over time, therefore, outpatient care delivery is vastly dominated by inperson appointments. When considering telehealth use specifically, most of these events occur via telephone.

Box 5: Toni Trinick-Pritchard (Te Whānau-ā-Apanui, Ngāti Porou), Whānau Ora Kaiārahi navigator



Toni has been a Whānau Ora Kaiārahi navigator for the last 2 years after being made redundant due to COVID-19. She has held kaimahi and frontline roles with Māori and tauiwi health organisations while raising her four children.

Pandemic impacts on family, mental health and telehealth

During the second lockdowns, I worked from home with my children, 12 hours a day, as a coordinator for home-based support. I was a solo mum. My

oldest daughter was in Auckland locked down with her clients. She did level 4 with a lady with a spinal injury. I had the three with me: my daughter was 15, my son 11 and my other daughter was 6. It was hard on them. We joke about it now when we look at photos. My son had his PlayStation. At the time I thought at least he's got something to do, but he just gamed and gamed all day and put on so much weight. Because I was working so hard, I wasn't able to cook properly for them. I think about it now and it was actually quite horrific. Later he lost all of the weight he gained, but the impact on their health was really bad.

One of my daughters began a downward spiral in terms of her mental health. She was diagnosed with bipolar disorder, but we had never really used Teams or Zoom or anything like that and didn't know how to use them. She had been referred to a psychiatrist for help. The first initial appointments were by telephone and then by Teams, and because I was using my phone and computer for work and to care for people, we missed a couple of appointments, and then not knowing how to use the technology at that time, she slipped through the cracks in the system. We were not able to access the services she needed and there was the fear of going to the doctor. This really impacted massively on her mental health and that had a flow-on effect to me because I'm still trying to work, trying to care for all these people that need me. It's really severe for her now. It was difficult to figure out how to get to your specialist or how it worked. We were told, 'Look, I'm sorry you didn't keep your commitments. There's a lot of other people we need to see.' And she just kind-of got kicked off the list, I guess. It was only the initial stages of her mental illness, and I guess, in hindsight, had I known it was going to become so bad now,

4 years later, I would have made a hell of a lot more effort to keep her in the system and understand the medication. There was just so much going on at the time.

My kids' health really sort of sickened, which was really sad because I look back on it now and as soon as the pandemic was all over, they made us all redundant. There wasn't any real value put on what we did during that time. Well, we see the value of it. You know, the agencies don't, but we do.

It's so sad. Because I guess we forgot how our young ones are. While we were in it, how were they seeing it? How is it impacting them and their perception of it? Because all I was doing was working, sleeping, working, sleeping. As far as I thought, my kids are fine. They're home. They're safe. But I wasn't thinking at all about the impact, their perception of what was going on around them and how it was impacting on them. We worked remotely and that enabled us to care for people, but we put our kids online to entertain them and then they paid a part of the price, didn't they?

Telehealth and mental health

I think that now that we've got a handle on these sorts of things, Teams and Zooms, for us here on the East Coast with our isolation, it could be amazing. It's an hour just to get to any close town and in that tiny town they don't have a lot of services. It's all free when you can get the face-to-face appointments, which is always the best, but if we could use telehealth to really assist our people with their mental health issues that would be hugely helpful for us. To have face-to-face psychologist or psychiatrist appointments, face-to-face appointments with Oranga Tamariki or social services via Teams, it would stop people missing them. Now we're really well set up here: we have beautiful technology, we have Starlink, a hub, and we can access nice big screens. To save driving my daughter two hours for her appointments, a 4-hour round trip, and having to take leave to do that for a half-hour appointment – if we could just sit down like this and have a face-to-face, that would be hugely helpful for our people here. It would minimise those impacts that COVID has had.

One good thing COVID has taught us is that we don't have to always sit in the same room as each other. We've got the technology here now, and if we could use it more to help shape people's futures in terms of their mental health, that would be epic for us.

Telehealth and mental health – a dive into regional service use

Telehealth-based mental health services in Aotearoa New Zealand during and after the pandemic have been studied in depth. These mixed-methods research studies⁵⁹ ^{60 61 62} combined population-level data on mental health telehealth use in the Wairarapa, Wellington and Hutt Valley with qualitative investigations that involved semi-structured interviews with mental health clinicians and clients. Findings from these peer-reviewed investigations broadly echo the findings reported above from the primary care patient experience survey and NNPAC data. Notably, these in-depth studies found the same patterns in terms of far greater use of telephone rather than video services, and in that the growth in uptake of telehealth was followed by rapid retreat outside of lockdown.⁶³ However, these findings are more granular than the previous data reported and have led to deeper insights and recommendations. Interestingly, both clinicians and clients suggested that telehealth-based appointments may limit the ability to note signs of risk.^{64 65}

The implementation of telehealth for this group was patchy at best. Early in the lockdown, clinicians described a lack of training programmes available through their employers, and poor access to training resources and procedures for establishing video services. As lockdown progressed, clinicians encountered a 'flood' of multiple and sometimes conflicting sources of information on video service use, which they said impaired their experience. These difficulties 'contributed to abandoning audiovisual service use when they were out of lockdown'.⁶⁶

Mode of care matters. Many psychiatrists and clinical psychologists, while noting they preferred in-person care, felt that video conferencing would be an effective way of conducting the types of psychological therapy and complex assessments that required client observation and examination of mental state. In their view, whether they received training and support in the use of video services influenced whether they continued to use those services. Medical doctors and clinical psychologists who received this support through their professional organisations used video services more than others.

By contrast, nursing contacts appear to lend themselves to telephone appointments in that they often involve large volumes of short contacts rather than in-depth assessments. However, since periods involving lockdowns, the levels of telephone contacts are similar to those before the pandemic.

Users of telehealth services were more likely to be younger. Clients aged between 0 and 18 years used video services more than other age bands, while those aged 18–33 years were the heaviest users of in-person and telephone services.

There was inequity in mental health telehealth use. Māori clinicians providing Māori mental health services that use kaupapa Māori approaches recognised that cultural barriers might make it harder for Māori to access telehealth services and that 'traditional Māori health practices and culturally important services did not translate well into a telehealth platform'.⁶⁷ During periods of lockdown, Māori used in-person services more and telehealth less than non-Māori. On the other hand, outside of lockdowns in the study period, the percentages of Māori and non-Māori use of in-person, telephone and video modes reverted to levels that were very similar.

In addressing the capability of kaupapa Māori services to deliver telehealth services, the researchers who investigated this topic are clear:

Kaimahi described more severe resource constraints for Māori clinicians and clients, limiting their access to audiovisual and telephone services and manifesting as fewer telehealth appointments with Māori populations. This is in line with disparities in Indigenous mental health care access.⁶⁸

One valuable secondary impact to these changes was that attendance at appointments improved. The number of appointments that clients were unable to attend fell sharply during lockdowns, which interviewees explained was due to isolation, fewer demands in lockdown periods and the need for greater support. After the lockdown period, attendance generally decreased again.⁶⁹

Some reasons behind the retreat from telehealth services

There is considerable debate about telehealth in primary care in particular. For example, does the receding tide in use of these services represent a missed opportunity? Are structural issues of funding these services preventing the implementation of an exciting opportunity to address current challenges to access?

A deeper dive into the experience of telehealth during the pandemic highlights that considerable challenges were involved in its implementation. As Toni's story (5) highlights, such challenges created considerable stress on those providing the service. What is also clear is that, even during the heaviest lockdown periods, only a minority of interactions were through telehealth, and the telehealth that did occur was largely tele**phone** health, while uptake of video approaches was much lower. Both clinicians and patients express some reservations about their experience and consider different modes are appropriate in different situations.

Findings from research highlight the potential for both clients and clinicians to be excluded from digital services.^{70 71} In part, this may be due to service delivery barriers. Clients noted the need to improve clinicians' telehealth literacy, with several suggesting that parts of telehealth appointments focused on technological matters, which detracted from clinical care. Some went further to propose that the resourcing and equipment available to support telehealth services were limited. Similarly, clinicians pointed to technical difficulties they faced, in part due to incompatibility with hospital technology. They suggested that, 'these technical issues made it more difficult to practice via audiovisual mode and influenced their decisions to return to inperson service provision'.

In turn, both clients and clinicians noted changes in their therapeutic relationships because of engaging in telehealth services. While not all these changes were negative, this finding strongly supports the need to carefully consider the reasons behind choosing in-person, hybrid or telehealth appointments. For telehealth to be viable, services must prioritise carefully and consider clinician capability, service readiness and, most importantly, client engagement.

Nevertheless, as both Renee (**Box** 4) and Toni (**Box** 5) attest, telehealth has the potential to help address the access challenges we now face. If telehealth is to be

successful, we are likely to need a more targeted, planned, evidence-based and appropriately resourced approach.

Overview

Both workforce challenges and telehealth as a potential solution to access are prominent in current public discussions concerning health care. What both deep dives in this part have shown is that we need to consider a wealth of nuanced detail if we are to understand the true situation. Simple prescriptions for how to resolve access issues are likely to fall short when they come into contact with the complex realities of delivering a health system.

Part 4: Conclusion | Wāhanga 4: He kupu whakakapi

Measures of experience and past harm we report have so far indicated the quality and safety of the health system has remained remarkably resilient. However, measures of access and forward-looking measures of safety point to very high levels of pressure on the system and real risk to safety in the future. The system has adapted at considerable cost to reserves so far. It is unclear how much longer this can continue.

In line with global trends, workforce pressures are both substantial and unlikely to be resolved in the long term by international recruitment alone. Telehealth has not yet proven a sustainable solution to access to care. The level of use of telehealth has not been sustained since the pandemic and this service mode is not integrated with other methods of assessing patients such as imaging, laboratory testing or specialised assessments. Whether telehealth can help improve access will remain unproven until we solve the issue of integrating online appointments with in-person testing and assessment.

Te Tāhū Hauora has a mandate for monitoring and improving the quality and safety of services, and helping providers to improve the quality and safety of services. As such, our principal concern is how the situations described in this report affect the quality and safety of services. Timely access is itself a critical domain of health care quality⁷² but also affects all other aspects of quality. Delayed access is associated with worse patient outcomes.⁷³ Further, because it increases the number of sicker, more complex, patients entering the health system, delayed access adds further pressures to that system, in the long run threatening to overwhelm its capacity to adapt.⁷⁴

All of these concerns point to the importance of addressing access issues, as the recently announced health targets rightly seek to do. But improving access alone will not assure quality. In the current climate, it is essential to be able to identify and address risks to patient safety and quality of care. To do so, it is necessary to address the following six priorities.

- 1. Using a wide range of data held by different sources to identify risk in a timely manner
- Creating a culture of caring for the carers by living Te Mauri o Rongo the New Zealand Health Charter,⁷⁵ and making health care in Aotearoa New Zealand attractive to both domestic and international health care workers
- 3. Recognising the different causes of unsafe and poor-quality care and what those causes tell us about appropriate responses
- 4. Taking a broader system view that recognises pathways of care and the complexities of patients with several co-existing conditions rather than isolated or fragmented responses

- 5. Having a shared understanding of who in the broader health system can do what and avoiding both gaps and duplication
- 6. Establishing and maintaining structures and mechanisms that encourage openness, collaboration and accountability for addressing system-wide safety and quality risks

We discuss each priority in greater depth below.

1. Using a wide range of data held by different sources to identify risk in a timely manner

The range of data needed includes information about past harms and patient experience as well as prospective measures of how the system is operating and its capacity to deal with future shocks and day-to-day challenges.⁷⁶ The information needed includes not only 'hard' numbers but also intelligence gathered from patients and their whānau, clinicians and other members of the health system. The risk of inequity, and in particular of inequitable outcomes, reflecting inequities in access, treatment and experience, is a key risk to monitor as part of this process. The techniques required are well established,⁷⁷ much of the data needed is available somewhere, and work already under way in various parts of the system is starting to bring this together.

2. Creating a culture of caring for the carers by living the New Zealand Health Charter, and making health care in Aotearoa New Zealand attractive to both domestic and international health care workers

The Pae Ora (Healthy Futures) Act 2022 (the Act) legislated the creation of the Te Mauri o Rongo – New Zealand Health Charter. This statement sets out the values, principles and behaviours that health entities are expected to demonstrate; and that workers throughout the health sector are expected to demonstrate collectively, at an organisational level and individually.⁷⁸

Te Mauri o Rongo – the New Zealand Health Charter was developed through extensive consultation with providers, health workers and unions, and was endorsed by the Minister of Health in August 2023. It applies to the health entities named in the Act, as well as all organisations and workers involved in delivering publicly funded services. The charter sets clear expectations on how health workers must be treated while at work, and its intent is to ensure that health and care workers are supported and empowered by shared values in workplaces that value their contribution.

Living the charter is an opportunity to create a workplace culture in Aotearoa New Zealand that makes internationally trained health care workers want to come here and stay, and domestically trained workers wish to stay rather than leave. We may not have the financial wherewithal to compete with some other countries on salary alone, but we have the statutory requirements in place to develop something more

attractive: working conditions that are satisfying to health care workers personally and professionally, where they are respected, trusted and able to grow and develop and deliver care they are proud of.

3. Recognising the different causes of unsafe and poor-quality care and what those causes tell us about appropriate responses

In other jurisdictions, ideological differences about the right way to address identified problems have contributed to inertia and escalating poor outcomes.⁷⁹ In truth, professional and system regulation, policy interventions, judicious injections of funding, performance management techniques such as targets, and quality improvement science, among other strategies, may all have a role to play to address identified shortcomings in quality. To identify the right ones to use in any given circumstance, we need to have the capability to identify the combination of causes that are driving the poor-quality care.⁸⁰ In other words, we need to be able to identify, 'Why has this happened? Therefore, what should we do about it?' Building this capability more widely at all levels of the system is essential to improve quality and safety.

4. Taking a broader system view that recognises pathways of care and the complexities of patients with several co-existing conditions rather than isolated or fragmented responses

There is always a tension between holding a single organisation accountable and addressing safety issues that occur along a pathway in which many organisations are involved. Many of our system's risk defences are, reasonably, concentrated in the hospital sector (where many of the greatest risks to patients are). Yet the risks often reflect the operation of other health and care sectors (such as primary care or aged residential care), or even broader social effects (for example, an extended hospital stay, which of itself creates safety risks, may have its roots in housing, transport, social isolation and so on). In general, our system lacks mechanisms to intervene on these broader risks. While we need to take a broad view, it is inherent in Te Mauri o Rongo – the New Zealand Health Charter that we must set clear standards for behaviour, care and application of skill, and hold people to account to those standards.

5. Having a shared understanding of who in the broader health system can do what and avoiding both gaps and duplication

While the recent restructuring of the public health system has simplified 20 district health boards into one body, Health New Zealand – Te Whatu Ora, there remain many other bodies also concerned with quality of health services alongside Te Tāhū Hauora. These include the Health and Disability Commissioner, the Accident Compensation Corporation, the Ministry of Health – Manatū Hauora, iwi–Māori partnership boards, medical colleges and professional bodies. All hold slightly

different levers that they can use to improve quality of care and address safety concerns. It is essential that these bodies agree on their boundaries (including where these are necessarily fuzzy), who acts and when, and who is accountable for making a difference, just as it is essential to agree to share information. Notably, reaching such agreement is only the first step in dealing with risk inside the system.

6. Establishing and maintaining structures and mechanisms that encourage openness, collaboration and accountability for addressing system-wide safety and quality risks

In comparison with many jurisdictions, Aotearoa New Zealand is well positioned to make changes rapidly due to our relatively small size, provided that well-established relationships of trust are in place. However, these relationships inevitably depend on individuals and cannot necessarily withstand changes in office holder. It is therefore essential that structures (such as multi-agency working groups) and mechanisms (such as standard operating procedures that presuppose open sharing of information and collaborative decision-making) are in place, and that clear lines of accountability for delivering shared agendas exist.

Considerable activity concerning risk across the system is already taking place, with the cross-agency national Quality Forum as a mechanism already in place designed to address some of these risks (**Box**). However, we do not yet have a comprehensive approach to spotting and responding to risk that reflects the five other priorities listed in this conclusion.

Box 6: National Quality Forum

The health and disability system reforms called for Te Tāhū Hauora and the Ministry of Health – Manatū Hauora to establish a quality forum to 'share and assess quality risks across the health system'.

Membership of the national Quality Forum is diverse and extends across the health and disability system. It includes leaders with sufficient seniority within their respective organisations to provisionally commit resource to agreed actions, subject matter experts, strong Māori and Pacific representation, and consumers, who co-chair the forum.

The leaders participating in the forum have levers in key health agencies and are committed to quality but at times do not have a full view of emerging and enduring cross-sector quality problems. The forum's brief is to enable these leaders to gain greater awareness of key quality risks, and decide on and commit to a system response. The forum achieves this by convening this group of leaders and sharing key health quality intelligence (from multiple sources, including hard and soft intelligence and a strong consumer voice), to identify opportunities and facilitate agreement on priorities and collective action.

The national Quality Forum meets regularly at least four times a year to freely share intelligence across the system so that members develop a collective understanding of emerging and enduring quality and safety trends and risks in Aotearoa New Zealand. Members discuss and prioritise quality and safety issues, and decide on and monitor implementation of appropriate action.

Throughout the medium term, the so-called post-pandemic world is likely to be challenging to all health systems. The issues we report in this Window are by no means unique to (or even especially pronounced in) Aotearoa New Zealand. In this climate, it is essential to closely monitor and ameliorate risks to quality and safety – across all parts of the system, and using all tools at our disposal. The agenda set out above would start to put this approach to quality and safety in place.

Endnotes | Kupu āpiti

- ¹ Chartwell Trust. Ralph Hotere: Godwit/Kūaka. <u>chartwell.org.nz/seeing/exhibitions/ralph-hotere-godwitkuaka/</u> '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.'
- ² Ministry of Health Manatū Hauora. New Zealand Health Survey. Annual Data Explorer 2021/22. URL: <u>https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-annual-dataexplorer/</u> (accessed 13 May 2024).
- ³ Te Tāhū Hauora Health Quality & Safety Commission. Patient experience. URL: <u>www.hqsc.govt.nz/our-data/patient-experience/</u> (accessed 13 May 2024).
- ⁴ McBride P, Hoang T, Hamblin R, et al. 2021. Using REACH, a new modelling and forecasting tool, to understand the delay and backlog effects of COVID-19 on New Zealand's health system. *New Zealand Medical Journal* 134(1544): 159–68.
- ⁵ Jones S, Blake S, Hamblin R, et al. 2016. Reducing harm from falls. *New Zealand Medical Journal* 129(1446): 89–103.
- ⁶ Healey F. 2016. Falls prevention as everyday heroism. *New Zealand Medical Journal* 129(1446): 14–16.
- ⁷ Morris AJ, Panting AL, Roberts SA, et al. 2015. A new surgical site infection improvement programme for New Zealand: early progress. *New Zealand Medical Journal* 128(1414): 51–9.
- ⁸ Morris AJ, Roberts SA, Grae N, et al. 2018. The New Zealand Surgical Site Infection Improvement (SSII) Programme: a national quality improvement programme reducing orthopaedic surgical site infections. *New Zealand Medical Journal* 131(1479): 45–56.
- ⁹ Te Tāhū Hauora Health Quality & Safety Commission. Patient deterioration. URL: <u>www.hqsc.govt.nz/our-work/improved-service-delivery/patient-deterioration/</u> (accessed 13 May 2024).
- ¹⁰ Kollias A, Kyriakoulis KG, Lagou S, et al. 2021. Venous thromboembolism in COVID-19: a systematic review and meta-analysis. *Vascular Medicine* 26(4): 415–25.
- ¹¹ Gawande A. 2014. *Being Mortal: Medicine and what matters in the end*. New York: Metropolitan Books.
- ¹² Mensah GA, Wei GS, Sorlie PD, et al. 2017. Decline in cardiovascular mortality: possible causes and implications. *Circulation Research* 120(2): 366–80.
- ¹³ Dattani S, Samborska V, Ritchie H, et al. 2023. Cardiovascular diseases. URL: <u>https://ourworldindata.org/cardiovascular-diseases?insight=death-rates-from-cardiovascular-diseases-have-declined-in-many-countries#key-insights</u> (accessed 10 April 2024).

- ¹⁴ Haijar ER, Cafiero AC, Hanlon JT. 2007. Polypharmacy in elderly patients. *American Journal of Geriatric Pharmacotherapy* 5: 345–51.
- ¹⁵ Tomlin AM, Woods DJ, Reid JJ, et al. 2020. Trends in prescription medicine use by older people in New Zealand 2010–2015: a national population-based study. *New Zealand Medical Journal* 133(1513): 61–72.
- ¹⁶ World Health Organization. Disability-adjusted life years (DALYs). URL: <u>www.who.int/data/gho/indicator-metadata-registry/imr-</u> <u>details/158#:~:text=DALYs%20for%20a%20disease%20or,health%20condition%20in%20</u> <u>a%20population</u> (accessed 13 May 2024).
- ¹⁷ Institute for Health Metrics and Evaluation (IHME). Global Burden of Disease (GBD). URL: <u>https://www.healthdata.org/research-analysis/gbd</u> (accessed 13 May 2024).
- ¹⁸ Ibid.
- ¹⁹ Panagioti M, Khan K, Keers RN, et al. 2019. Prevalence, severity, and nature of preventable patient harm across medical care settings: systematic review and metaanalysis. *BMJ* 366: I4185.
- ²⁰ *Ibid*.
- ²¹ Commonwealth Fund. 2021. Mirror, Mirror 2021: Reflecting Poorly. Health care in the U.S. compared to other high-income countries. URL: www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021reflecting-poorly (accessed 13 May 2024).
- ²² Amalberti R, Vincent C, Auroy Y, et al. 2006. Violations and migrations in health care: a framework for understanding and management. *Quality and Safety in Health Care* 15(suppl_1): i66–71.
- ²³ Woods DD, Branlat M. 2011. 10 basic patterns in how adaptive systems fail. In: E Hollnagel (ed) *Resilience Engineering in Practice: A guidebook*. Farnham, Surrey and Burlington, VT: Ashgate.
- ²⁴ Health Quality & Safety Commission. 2022. 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). Wellington: Health Quality & Safety Commission. URL: <u>https://www.hqsc.govt.nz/resources/resource-library/a-window-onguality-2022-part-2-whakarapopototanga-matua-he-tirohanga-kounga-2021-wahanga-2/</u> (accessed 13 May 2024).
- ²⁵ www.nzno.org.nz/about_us/media_releases/artmid/4731/articleid/6395/nzno-concernedat-hospital-staffing-level-pressures
- ²⁶ www.nzno.org.nz/about us/media releases/artmid/4731/articleid/6459/symptomaticnurses-asked-to-return-to-work-a-clear-sign-of-a-desperate-health-system
- ²⁷ www.nzherald.co.nz/nz/nursing-shortage-nurses-broken-while-sector-faces-thousands-ofvacancies/L7NUXOPG4AB472OKXOH5QJSUMU/#

- ²⁸ Staw BM, Sandelands LE, Dutton JE. (1981). Threat-rigidity effects in organizational behavior: A multilevel analysis. Administrative Science Quarterly, 26(4), 501–524. https://doi.org/10.2307/2392337
- ²⁹ <u>https://www.hqsc.govt.nz/assets/Our-work/System-safety/Adverse-events/Publications-resources/AdverseEventsSummary2020_final_web.pdf (accessed 4 June 2024)</u>
- ³⁰ Philip S, Woodward-Kron E, Noronha M. 2019. Overseas Qualified Nurses' (OQNs) perspectives and experiences of intraprofessional and nurse-patient communication through a Community of Practice lens. *Collegian* 26(1): 86–94.
- ³¹ Institute of Medicine (IOM). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C: National Academy Press; 2001.
- ³² Health New Zealand Te Whatu Ora. 2023. *Health Workforce Plan 2023/24*. Wellington: Health New Zealand – Te Whatu Ora. URL: <u>www.tewhatuora.govt.nz/publications/health-workforce-plan-202324/</u> (accessed 13 May 2024).
- ³³ C Wu, Auckland University, personal communication, 21 May 2024.
- ³⁴ OECD. Health at a Glance 2023: OECD Indicators. International migration of doctors and nurses. URL: <u>www.oecd-ilibrary.org/sites/7a7afb35-</u> <u>en/1/3/8/11/index.html?itemId=/content/publication/7a7afb35-</u> <u>en&_csp_=6cf33e24b6584414b81774026d82a571&itemIGO=oecd&itemContentType=bo</u> <u>ok</u> (accessed 13 May 2024).
- ³⁵ O'Donoghue E. 2023, 17 July. Almost half of nurses in State earned first qualification abroad, new data shows. *Irish Times*. URL: <u>www.irishtimes.com/health/2023/07/17/almost-half-of-nurses-in-state-earned-first-qualification-abroad-new-data-shows</u> (accessed 13 May 2024).
- ³⁶ T O'Brien, personal communication, 29 April 2024.
- ³⁷ Nelson M. 2023, 4 July. Government launches health workforce plan; nearly 13,000 extra nurses and over 5000 doctors needed within a decade. *New Zealand Herald*. URL: <u>www.nzherald.co.nz/nz/politics/government-launches-health-workforce-plan-nearly-13000extra-nurses-and-over-5000-doctors-needed-within-adecade/K5GHGVYMMNA4HOWWN5DBMLFUSE/ (accessed 13 May 2024).</u>
- ³⁸ Health Foundation. 2024. Nursing locally, thinking globally: UK-registered nurses and their intentions to leave. URL: <u>www.health.org.uk/publications/long-reads/nursing-locally-thinking-globally-uk-registered-nurses-and-their-intentions</u> (accessed 13 May 2024).
- ³⁹ Nursing Council. Nursing Council changes to competence assessment. <u>https://nursingcouncil.org.nz/Public/NCNZ/News-section/news-</u> <u>item/2023/9/Nursing Council changes to competence assessment.aspx</u> (accessed 13 May 2024).
- ⁴⁰ Quinn R. 2024, 20 February. Thousands of NZ nurses register to work in Australia. *RNZ News*. URL: <u>www.rnz.co.nz/news/national/509623/thousands-of-nz-nurses-register-to-work-in-australia</u> (accessed 13 May 2024).

- ⁴¹ Health Foundation. 2023. How reliant is the NHS in England on international nurse recruitment? URL: <u>www.health.org.uk/news-and-comment/charts-and-infographics/how-reliant-is-the-nhs-in-england-on-international-nurse-recruitment</u> (accessed 6 June 2024).
- ⁴² Cava L. 2023, 4 April. Ministry faces staffing shortage as nurses leave workforce. *FBC News*. URL: <u>www.fbcnews.com.fj/news/health/ministry-faces-staffing-shortages-as-nurses-leave-workforce/</u> (accessed 13 May 2024).
- ⁴³ Nasiko R. 2023, 27 April. Health workers 'tired'. *Fiji Times*. URL: <u>www.fijitimes.com.fj/health-workers-tired/</u> (accessed 13 May 2024).
- ⁴⁴ RNZ. 2023, 21 April. Exodus of health workers in Fiji. *RNZ News*. URL: <u>www.rnz.co.nz/international/pacific-news/488395/exodus-of-of-health-workers-in-fiji</u> (accessed 13 May 2024).
- ⁴⁵ Voloder D. 2022, 23 November. Labour schemes drawing nurses from across Pacific to lower-qualified aged care jobs in Australia, New Zealand. *ABC News*. URL: <u>www.abc.net.au/news/2022-11-23/aged-care-palm-scheme-sees-pacific-nurses-leavegaps/101682234</u> (accessed 13 May 2024).

- ⁴⁷ Australian Government. Pacific Australia Labour Mobility (PALM) scheme. URL: <u>www.palmscheme.gov.au/</u> (accessed 13 May 2024).
- ⁴⁸ Voloder D 2022, op. cit.
- ⁴⁹ Health Quality & Safety Commission. 2020. 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-2021pacific-health-in-the-year-of-covid-19-bula-sautu-he-mata-kounga-2021-hauora-pasifika-ite-tau-covid-19/ (accessed 21 May 2024).
- ⁵⁰ OECD. 2023. *The COVID-19 Pandemic and the Future of Telemedicine*. URL: <u>www.oecd-ilibrary.org/sites/ac8b0a27-en/index.html?itemId=/content/publication/ac8b0a27-en</u> (accessed 13 May 2024).
- ⁵¹ *Ibid*.
- ⁵² *Ibid*.
- ⁵³ Edirippulige S, Senanayake B, Fatehi F, et al. 2024. Telemedicine: niche or mainstream? A bibliometric analysis and review of the output of highly ranked clinical journals. *Journal of Telemedicine and Telecare* 30(1): 53–63.
- ⁵⁴ Doarn CR. 2022. The receding tide: is telemedicine in retreat? *Telemedicine and e-Health* 28(11): 1553–4.
- ⁵⁵ Gerard C, O'Brien I, Shuker C, et al. 2024. Patient experience surveys are vital in the twenty-first century: let's put some myths to rest. *New Zealand Medical Journal* 137(1588): 80–9.

⁴⁶ *Ibid*.

⁵⁶ Health Quality & Safety Commission. 2021. A window on quality 2021: COVID-19 and impacts on our broader health system. He tirohanga kounga 2021: COVID-19 me ngā pānga ki te pūnaha hauora whānui. PART 1: March 2020 to August 2021 | WĀHANGA 1: Poutū-te-rangi 2020 ki Here-turi-kōkā 2021. Wellington: Health Quality & Safety Commission. URL: www.hqsc.govt.nz/assets/Our-data/Publications-resources/COVID-Window-2021-final-web.pdf (accessed 13 May 2024).

- ⁵⁸ Health New Zealand Te Whatu Ora. National Non-Admitted Patient Collection. URL: www.tewhatuora.govt.nz/our-health-system/data-and-statistics/nz-healthstatistics/national-collections-and-surveys/collections/national-non-admitted-patientcollection/ (accessed 13 May 2024).
- ⁵⁹ Werkmeister B, Haase AM, Fleming T, et al. 2023. Global implications from the rise and recession of telehealth in Aotearoa New Zealand mental health services during the COVID-19 pandemic: mixed methods study. *JMIR Formative Research* 7: e50486.
- ⁶⁰ Werkmeister B, Haase AM, Fleming T, et al. Environmental factors for sustained telehealth use in mental health services: a mixed methods analysis. [unpublished]
- ⁶¹ Werkmeister BJ, Haase AM, Fleming T, et al. 2023. Experiences of the COVID-19 lockdown and telehealth in Aotearoa New Zealand: lessons and insights from mental health clinicians. *International Journal of Environmental Research and Public Health* 20(6): 4791.
- ⁶² Officer TN, Tait M, McBride-Henry K, et al. 2023. Mental health client experiences of telehealth in Aotearoa New Zealand during the COVID-19 pandemic: lessons and implications. *JMIR Formative Research* 7: e47008.
- ⁶³ Werkmeister et al 2023, op. cit.
- 64 Ibid.
- 65 Werkmeister et al 2023, op. cit.
- ⁶⁶ Werkmeister et al 2023, op. cit.
- ⁶⁷ Werkmeister et al 2024, op. cit.
- ⁶⁸ Werkmeister et al 2023, op. cit.
- ⁶⁹ Werkmeister et al 2023, op. cit.
- ⁷⁰ Mosnaim GS, Stempel H, Van Sickle D, et al. 2020. The adoption and implementation of digital health care in the post-COVID-19 era. *The Journal of Allergy and Clinical Immunology: In Practice*. 8(8): 2484–6.
- ⁷¹ Citizens Advice Bureaux New Zealand. 2020. Face to face with digital exclusion: a CAB spotlight report into the impacts of digital public services on inclusion and wellbeing. URL: <u>www.cab.org.nz/assets/Documents/Face-to-Face-with-Digital-Exclusion-/FINAL_CABNZ-report_Face-to-face-with-Digital-Exclusion.pdf</u>. (accessed 17 May 2024).

⁵⁷ *Ibid*.

- ⁷² Institute of Medicine. 2001. *Crossing the Quality Chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.
- ⁷³ Prentice JC, Pizer SD. 2007. Delayed access to health care and mortality. *Health Services Research* 42(2): 644–62.
- ⁷⁴ Woods and Branlat 2011, op. cit.
- ⁷⁵ Health New Zealand Te Whatu Ora. Te Mauri o Rongo NZ Health Charter. URL: www.tewhatuora.govt.nz/corporate-information/our-health-system/te-mauri-o-rongo-nzhealth-charter/ (accessed 6 June 2024).
- ⁷⁶ Health Foundation. 2013. The measurement and monitoring of safety. URL: <u>www.health.org.uk/publications/the-measurement-and-monitoring-of-safety</u> (accessed 17 May 2024).
- ⁷⁷ Spiegelhalter D, Sherlaw-Johnson C, Bardsley M, et al. 2012. Statistical methods for healthcare regulation: rating, screening and surveillance. *Journal of the Royal Statistical Society Series A: Statistics in Society* 175(1): 1–47.
- ⁷⁸ NZ Government. Pae Ora (Healthy Futures) Act 2022, s 56. URL: www.legislation.govt.nz/act/public/2022/0030/latest/whole.html (accessed 6 June 2024).
- ⁷⁹ Francis R. 2013. Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry. London: The Stationery Office. URL: <u>https://assets.publishing.service.gov.uk/media/5a7ba0faed915d13110607c8/0947.pdf</u> (accessed 17 May 2024).
- ⁸⁰ Hamblin R, Shuker C. 2021. Well spotted: but now you need to do something. *BMJ Quality* & *Safety* 30(3): 177–9.