

COVID-19 Independent Continuous Review, Improvement and Advice Group

20 May 2022

Hon Chris Hipkins
Minister for COVID-19 Response
Parliament Building
WELLINGTON

Dear Minister

Lessons from the Omicron response to inform the future

I attach a copy of the final report from the COVID-19 Independent Continuous Review, Improvement and Advice Group. As requested by yourself, the report represents our final set of observations and is focused on the most recent outbreak.

At a macro level, Aotearoa New Zealand has achieved some outstanding public health outcomes in the face of an unprecedented set of circumstances. The health system was able to cope with the various outbreaks and deaths have so far been minor relative to other jurisdictions. The outcomes achieved are a testament to many thousands of people within the system who delivered above and beyond in extremely demanding circumstances. For that they deserve the respect and thanks of us all.

While acknowledging the public health outcomes it also has to be acknowledged that there have been far-reaching impacts during the pandemic on virtually all aspects of our economy, way of life and community in general. COVID-19 has irrevocably changed our lives. The impacts of the last two years will require careful management, most likely including economic and social interventions to restore many aspects of our society. This is also an opportunity to re-invent and re-invigorate a number of things in our society and in the way we engage with each other and the global community.

With the move from a previously held strategy of elimination to a strategy of minimisation and protection with the virus continually in our midst, the systems and processes adopted to safeguard us will need to continue to be modified and optimised to keep us safe.

The very essence of continuous improvement is to make improvements today for a better future. And so, as we conclude our work, we would like to highlight some thoughts for decision-makers as they contemplate the future preparedness and response capacity.

We must prudently expect and plan for various scenarios, including new variants with greater severity and more ability to evade vaccine-induced immunity than Omicron. This possibility, which we would be lucky to avoid, necessitates a highly agile and responsive pandemic plan that is based on the key lessons and observations from our most recent experiences augmented by the best international exemplars.

In our view, key lessons to take forward for the ongoing response and future pandemic response planning are that a response system must be:

- able to quickly adapt
- optimised around multiple dimensions including a broad array of health, societal and equity indicators
- open to challenge, genuine collaboration, and consultation.

While a cross-government effort was adopted for the recent outbreaks, in our view there were missed opportunities to establish a bespoke response unit with the necessary leadership, culture, capability or capacity to respond to the unprecedented complexity of the global pandemic. This is not intended to be a criticism of the leadership of the response - as we have highlighted previously there is much credit deserved for what was achieved. Our comments are more a reflection of the incredible system complexity that was perhaps not fully anticipated or realised early in the pandemic. Our experiences should allow us to avoid a repeat in the future.

Particular focus should be applied to the systems and processes to be adopted around policy setting, decision-making and execution. Those systems and processes need to be augmented by a culture of leadership, collaboration, and innovation. The future system needs to reinforce a culture that innovates and adapts based on the best available insights and science. Without this culture, the system will struggle to keep pace with the course of any future virus.

As we have highlighted in our report, the creation of the health system structures potentially creates a catalyst and opportunity for addressing some of the areas that could be improved. However, as we know with any large-scale change management programme, unless a ring-fenced pandemic response team or centre of excellence is set up, the task of better preparing ourselves for the remainder of this pandemic and for future pandemics may become lost among all the other competing priorities within these new entities.

As identified in a recently released report from the International Science Council the COVID-19 pandemic is both unprecedented and unfinished. For that reason, we strongly urge a prudent approach to the dismantling of the existing architecture that has served us for the last two years to the next set of structures and processes that will safeguard us in the future. There will be ongoing reminders of the unfinished nature of the circumstances we will need to address. While the behavioural response is inevitably to move on as quickly as we can, leadership does require policy makers and the like to maintain a sense of perspective informed by evidence and the experiences of others rather than just relying on optimism and good luck.

On the behalf of the Group thank you for the opportunity to have been involved in this exercise. It has been a privilege.

Yours faithfully



Sir Brian Roche

Chair of the COVID-19 Independent Continuous Review, Improvement and Advice Group

Lessons from the Response to Omicron to Inform the Future

20 MAY 2022

THE COVID-19 INDEPENDENT CONTINUOUS REVIEW,
IMPROVEMENT AND ADVICE GROUP

Overview from the Chair

The people of Aotearoa New Zealand can be very proud of what we have achieved over the course of the COVID-19 response pandemic. The emergence of Omicron in our communities has presented the most significant challenge to us as a society to date. Our health system has been able to cope by and large albeit with consequential impacts on many other health needs of society. We have experienced lower mortality relative to many other jurisdictions. The outcomes we have achieved are a testament to many thousands of people within the system who delivered above and beyond in extremely demanding circumstances, as well as the efforts and sacrifices of all members of society.

The pandemic is not over. We can and must expect more variants in the future and prepare for these now. We are also in a time of transition in our health system. While the transition will present challenges, it creates significant opportunities to embed lessons from the Omicron outbreak (and from the previous two years) to ensure we not only have a world-class pandemic response system, but also a health system that will deliver for all New Zealanders.



Sir Brian Roche

Chair of the COVID-19 Independent Continuous Review, Improvement and Advice Group

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PROACTIVELY RELEASED

Introduction

- 1 This rapid review looks at lessons from the Omicron response to identify where different capabilities and approaches did or would have made the most difference, with a view to:
informing future pandemic planning
a successful transition into the new health system structures, and
an approach to system stewardship and delivery that reflects a whole-of-system approach.
- 2 It brings together many of the key themes arising from our work over the last year (as identified in our earlier reports), along with new insights.
- 3 The response to COVID-19, including the Omicron variant in recent months, has shown us the extent to which an effective, high functioning system needs to involve the government, private sector, communities and individuals, or in other words, the whole of society working in partnership for success to be achieved. Furthermore, it has revealed that pandemics are not just a public health issue – it is considerably wider than that and needs to be thought about in that context.
- 4 It is our view that central strategic coordinating leadership of a pandemic response is crucial. That said, there is great value to be gained by utilising the capacity and capability that lies beyond government agencies and its operational entities. To ensure its overall effectiveness the response system needs to proactively identify where capabilities that can be easily activated or leveraged already exist across all sectors of society, rather than automatically defaulting to the government building new capability and capacity or expanding functions outside the core business of government agencies. The latter approach is inefficient from both a cost and time perspective and drives suboptimal outcomes.
- 5 There is an opportunity to analyse and embed the lessons regarding how systems can effectively deliver beyond the response to COVID-19, not only for future pandemic responses but to the delivery of health functions more broadly and systems outside of the health sector.

Te Tiriti o Waitangi and equity must continue to be a primary focus

Systems must be attuned to the different needs of our diverse communities

- 6 Equity underpins successful outcomes and reduction in harm. We have seen time and again that one size does not fit all. This principle must be considered in the design of all solutions going forward, particularly in the health and welfare space. As an example, and as we have previously raised, our Pasifika and Māori communities have been disproportionately impacted by COVID-19. This is indicative of a pattern of inequitable outcomes due to infectious disease outbreaks. We also acknowledge that the Human Rights Commission has brought adverse impacts on the disabled community to the fore. This can have the effect of people feeling abandoned as well as leading to real and ongoing harm. This reinforces the need to have mechanisms for our diverse communities to have a voice at the table early on and for co-design to become the preferred approach.

The principles of Te Tiriti o Waitangi are not an add-on to a system

- 7 Te Tiriti o Waitangi cannot be relegated to a compartment of a system or viewed as an add-on. Its principles must instead be embedded at all levels of strategy and delivery. True partnership with Māori requires them to be at the table and part of each problem definition and design process at the beginning and throughout the response. We have seen how Māori have been disproportionately impacted by COVID-19 compared with Pākehā populations and there are lessons that must be learned through a shift away from the mindset that partnership is optional and that consultation in the latter stages of decision-making and development processes is sufficient. The argument that partnership approaches were not able to be followed because of the urgency in responding to the pandemic does not hold up to scrutiny for the duration of the response. For example, the multiple claims to the Waitangi Tribunal have added costs and taken away capacity from the response. This could have been avoided by prioritising the embedding of partnership processes.
- 8 Late engagement such as asking for feedback on a strategy that has already been formed does not uphold Te Tiriti o Waitangi principles of partnership participation and protection. The Waitangi Tribunal reaffirmed the Treaty principles in its *Haumarū – The COVID-19 Priority Report* and determined that the Crown's Treaty obligations are heightened due to the threat posed by COVID-19 to the welfare and safety of Māori.

Transitioning to new health system architecture informed by lessons

The health reform is a significant change management exercise and opportunity

- 9 The establishment of Health New Zealand (HNZ) and the Māori Health Authority (MHA) will not, in themselves, ameliorate existing issues within the health systems. They do however provide the opportunity and the system framework to significantly improve the level of coordination, alignment and leadership within the preparedness and response system.
- 10 Given the significant change management exercise required to transfer functions into a different system architecture, it is critical to identify and triage problems and barriers that currently arise from and have been highlighted by our recent experiences with both the Delta and Omicron outbreak and ensure they are actively addressed. We are of the view that to not do so misses a genuine opportunity to learn from and through experience and bears the risk that the existing issues will be imported and embedded in the new system albeit unintentionally. This is a key risk to the ability to deliver the anticipated and desired outcomes through the reform and in doing so achieve sub-optimal outcomes.
- 11 As the COVID-19 response system transitions into a steady state and the health system transitions into a new system architecture, there is a unique opportunity to embed enduring acute pandemic response capability through the establishment of a permanent pandemic response unit as part of the implementation of the new system architecture. Both HNZ and the MHA will be critical in the design and operation of any future pandemic response. Clear accountabilities and delegations between them and the reformed Ministry of Health should be seen as a priority.
- 12 We have explored the concept of a pandemic response unit further in the section titled *The future of the COVID-19 response and pandemic response*.

Cultural attributes of leadership are critical to effective reform

13 There is a risk that existing system-cultural barriers to key desirable behavioural attributes, such as curiosity and openness to innovation, will be transposed into the new entities. In our letter to you on 4 June 2021 we set out what are, in our view, the attributes of high performing organisations which include:

- world-class leadership (that is typically demanding, inspiring, courageous, honest, transparent, empathetic, articulate and consistent)
- a clear and unifying sense of purpose and definition of success
- a culture that supports, encourages and celebrates people
- a performance management, measurement and recognition system that clearly identifies key performance criteria and connects people together across the organisation and with the organisation's sense of purpose
- being open minded to new ideas, seeking continuous performance engagement and demonstrating agility.

14 We strongly believe that these, or similar, attributes must be codified and inform the appointment of key leadership and management positions across the system to ensure that a necessary cultural shift can be achieved to deliver the change the reforms seek.

We need clear articulation of roles, accountabilities and decision rights that are widely understood

15 The legislative framework that establishes HNZ and the MHA sets out the functions of the entities. The Ministry of Health will be focused on policy, strategy and regulation, while HNZ will be responsible for planning and delivery of services. The MHA is being established to improve services and achieve equitable outcomes for Māori and will work with HNZ to achieve this. We have observed over the past year that there has been confusion and uncertainty where accountabilities, responsibilities and decision-rights sit within the response system which to us is indicative of broader uncertainty across the health system itself. This is an opportunity to gain clarity of these as we transition to the new system.

16 We also note the complexity of the health system and its various entities. We would support the establishment of a round table of key entities such as the Ministry of Health, HNZ, the MHA, Pharmac, the Institute of Environmental Science and Research (ESR), and the Health Quality and Safety Commission to support the interconnectedness of the health system going forward. Our future success will depend to a large part on the combination of good people and good system – it is a package and should be viewed as such.

17 The need for discussion and agreement on roles, responsibilities and decision rights should be a priority while the lessons of the last two years are still fresh in peoples' minds. It is not just that the functions of the response need to be reassigned properly, quality issues (such as peer review and monitoring, reporting and evaluation processes) in the response need to be identified and rectified through this process. The opportunity to do so while not confronting a fresh and expanding outbreak should not be lost.

Key attributes of a well-performing system

Well-performing systems make use of capability and capacity where they best sit

- 18 As we have expressed earlier, a well-performing and efficient system will leverage capabilities and capacity that can be easily activated and/or already exist, rather than default to the government building of new capability and capacity or expanding functions outside the core business of government agencies.
- 19 As an example, we have seen where capability has been effectively built to reduce capacity pressure on a specialised and regulated workforce during the response to COVID-19. The use of unregulated workforces to deliver vaccinations decreased pressure on the specialised primary care workforce and mobilised the capabilities and resources of local communities to improve access to underserved groups. To increase the capacity of this primary care workforce will take a significant amount of time and the shift of work that can be delivered elsewhere in the health system should be explored. This is a key lesson to be taken forward into the future pandemic response system, into the health system and other sectors. There is also an economic equation to this in terms of ensuring the best use of higher cost regulated workforces and the flow on benefits to communities of employing locals. There is also significant opportunity to develop pathways for further upskilling unregulated workers, that can contribute to addressing the underrepresentation of affected groups in the regulated health workforce. The strengthening of the broader primary and community-based care system will be a key element of the success of the reformed health system – the recent experiences can actively support and assist that outcome.

Innovation is fundamental to increased efficiency, delivery of desired outcomes and reducing harm

- 20 Innovation is necessary for systems to be able to continuously improve and run efficiently, particularly when there are surges in demand for a service. However, it is not necessarily a natural attribute of government systems and processes. As we have previously advised to the Associate Minister for COVID-19 Response on 24 March 2022, innovation in the current system is dispersed, lacks coordination, and often faces opposition. It is our view that innovation should not be viewed as optional or introducing unnecessary risk. Instead, innovation can flourish within appropriate and proportionate risk-management settings, and this requires the right cultural settings in which curiosity is valued.
- 21 Innovation does not only occur from deliberate and coordinated programmes or initiatives. It is our view, that the devolvement of functions and responsibilities closer to the people on the ground will allow innovation through creative problem solving and trialling in real-time.
- 22 Industry and entrepreneurial start-ups have vast experience in innovation practice. While acknowledging these types of businesses often operate in a high risk and high reward environment, it would make sense to take a close look at how they encourage and foster innovation or alternatively, bring this expertise into government to support the embedding of innovation cultures within appropriate risk-management settings.
- 23 It is important to have the ability to scan and have timely access to innovation insights both domestically and globally. We are pleased to hear that there is work occurring in the testing

innovation space. We support the relevance of that work to broader innovation practices and adjustments in regulatory settings and processes beyond the testing system to enable faster identification, adoption, and dissemination of innovation.

We can be smarter about our use of data

- 24 A high performing surveillance and response system requires high quality data and analysis. The challenges of the devolved health system were demonstrated in the problems with data collected through different systems and databases operated by ESR, the Ministry of Health's newly established National Contact Tracing Solution (NCTS), Public Health Units, DHBs and primary care. As we have raised previously through our advice, data and analysis to identify equity issues and trends must be a resourced and dedicated function with clear accountabilities and oversight. Data availability and information flows are and will continue to be critical to performance at the frontline and will empower decision making at the local level. Data analysis, in particular, will support a system's ability to anticipate those things that are key to reducing harm and avoiding higher costs associated with reactive changes.
- 25 We are pleased to see that data are starting to be used to address inequities such as Pharmac now tracking the inequity of access and prioritising access to particular medicines. Furthermore, the Ministry of Health has reduced the age of free access to the influenza vaccination to 55 years for Māori and Pasifika. As we have previously advised, we recommend that data analysis capability is embedded and resourced as a core function to inform both policy development and operational delivery both within the response system and beyond. This must also be explicitly set out as a core skill set required in pandemic response.

Monitoring is key to measuring system performance

- 26 Linked to the above point, having the right performance measures and indicators is integral to system stewardship and specifically the identification of areas for improvement in performance. We have seen how COVID-19 and the Omicron variant have impacted society at the community level and accordingly there needs to be performance measures and indicators in place that reflect the dispersed areas of impact. For example, while hospital bed numbers are a useful indicator of hospital system capacity, they do not shed light on the impact on primary care and community providers. It is our view that it is an opportune time to assess the current suite of performance measures and indicators to ensure that they will provide ongoing and real time visibility of system performance and impacts from COVID-19. This is applicable not only to health monitoring but is relevant to implications of any response or system operation across the different facets and levels of society, such as education attainment, economic and other social impacts.
- 27 We have also seen how monitoring and review roles have evolved in an opportunistic as opposed to a deliberate way. For example, the review of deaths was triggered by the two deaths in the community early in the Delta outbreak rather than being anticipated as a necessary role and deliberately put in place. Broader to this point, there was a lack of consistency in data collection, and connections between systems that contributed to attempts at developing dashboards in the middle of the outbreak that quickly became unusable as case numbers grew. Much of the COVID-19 information now has to be reported from the NCTS data which is not a surveillance system and lacks

data quality checks necessary for reliable surveillance. This led to problems with monitoring of the outbreak overall, particularly for equity due to problems with unreliable denominators, poor quality of ethnicity data, and changes in definitions such as hospitalisation. These talk to the point we have made around a lack of anticipation and preparation across the response.

Strategic oversight and anticipation are critical

- 28 Throughout the COVID-19 response we have seen, often in retrospect, that we did not have the systems, time and capacity in place to anticipate at the level that was required to maximise success against such a capable pathogen. From testing requirements through to international and internal border preparation, to strategic decision-making under pressure in response to new variants, we were often operating strategically and operationally “in the work” rather than “on it”. The level of expertise and headspace that is required to anticipate and make correct strategic decisions at pace in a pandemic should not be underestimated. It is important that the strategic oversight of the response is very clear and mandated adequately and that the expertise and strategic thinking capabilities required are in place and empowered.

Quality improvement will look at areas that work well

- 29 Quality improvement should not only be focussed on areas that are not working optimally but will often look at areas that are working well with the goal of reinforcing and magnifying these. There are some examples of where the response system is working very well, including the:
- Māori and Pasifika provider response to COVID-19 and the vaccination programmes
 - use of other community providers such as pharmacies
 - regional coordination centres such as the Northern Region Health Coordination Centre which provided significant analytical capacity to the national health system as well as a coordinated cross boundary response for Auckland.

A system that delivers successful outcomes is founded on partnership and engagement

- 30 Successful outcomes are seen where parties are trusted to deliver within a nationally consistent environment that empowers people to ‘get on with it’. The integrative and collaborative approach between government and the non-government sectors was novel at this scale and enabled reach and delivery beyond the capacity of the public service alone. However, there was an initial reluctance to trust community providers such as Pasifika providers even with their decades of experience in delivering to communities. Trust must be a principle that underpins collaboration and integrated delivery into the future.
- 31 Further to the above, funding contracts that tightly control and prescribe mechanisms of delivery signal a lack of trust and are inherently inflexible. Instead, shared and agreed outcomes and rules of engagement, adequate funding, access to tools and the autonomy to design delivery will support effective delivery to different communities that have different needs. A key example of where delivery was tightly controlled is earlier in the Omicron outbreak when Rapid Antigen Tests were not made available to community providers for them to determine (with appropriate guidance about

test performance and so on) where there was need and then provide them to whānau, even though these providers were best placed to do so.

- 32 Funding mechanisms must also provide certainty to providers especially within the community sector. At the beginning of the Omicron outbreak, many providers found themselves delivering services with little certainty around funding arrangements. This created challenges with their ability to secure capacity required to meet anticipated need. This may indicate that systems are not nimble enough to deal with the rapid dissemination of funding and accountability arrangements for that funding. It is also important to scrutinise the expenditure of these funds in terms of return on investment. It is not clear that this occurred nor where that function sits. Scrutiny of expenditure will likely yield valuable insights to inform a future pandemic response.
- 33 A partnership approach should extend beyond iwi and Māori groups to many other segments of society including Pasifika, the broader community and business. Through the COVID-19 community outbreaks we have seen the importance of the role of the community. It is our view that, by the time of the Omicron outbreak, we had reached a more mature stage of the response where there was sufficient time for proactive early engagement and partnership. The lack of timely involvement of such groups compromises the outcomes sought by government and further disempowers the general population.
- 34 We have seen some good examples of ground up community action to bring communities together with health and service providers. One such example is a recent community hui in Horowhenua about the COVID-19 Protection Framework. The hui was organised by a community trust who reached out to a range of health and social providers who were able to share information on topics such as COVID-19 care including free care for GP visits, ambulance services, and RATs. In our view, this is an example that shows the potential for collaborative action at the local level and a model for engagement in the ordinary course of business going forward.

Our communities and providers on the ground can help to fill unintended gaps

- 35 Even the most well-designed systems will not be able to factor in all variables and consequently gaps will appear. We have seen communities and providers step in to fill these gaps particularly in the space of welfare, but only where they have visibility of need. The emergence of gaps can be anticipated, and safety nets deliberately planned for through engagement with existing and trusted community networks that have reach into specific communities and targeted communications to those most at risk through channels they already use. The inevitability of gaps reinforces the point that the system needs to be agile and well informed as to what has happened and what is likely to happen.

The criticality of the communications function reflects that a system relies on the people

- 36 The role of communities and individuals in the successful operation of systems cannot be underestimated. Aotearoa New Zealand's population is incredibly rich with diversity. Consequently, the function of communications is an integral part of system delivery and delays in information create unnecessary gaps, risks and harms. Looking back to early in 2020, communications were a key part of the success of the elimination strategy due to their consistency and simplicity within, what was in hindsight, a simpler context.

- 37 However, as we have journeyed through to our current situation with the Omicron variant, new tools such as vaccination and alternative testing modalities have prompted a change in strategy where elimination is no longer the goal. This along with the rise of mis- and disinformation and eroding social licence has resulted in an incredibly complex context, and as a result we have seen a correlation with increasingly complex and changing messaging.
- 38 The strategic role of communications should be brought to the forefront. We can now reflect that even the most competent public sector communications expertise is not able to alone reach our diverse communities. Communications experts and the holders of key relationships and existing communications channels within diverse and vulnerable communities must be brought into the planning, design and delivery of communications. Such an approach is imbued with rich opportunity to elevate the role of communities and individuals in delivering successful outcomes and to ensure critical feedback loops are embedded from those who otherwise struggle for their voices to be heard by government.
- 39 How these voices and experiences are brought in as a part of how we do our business going forward is open for exploration but must be considered as fundamental. The cost effectiveness of such collaboration and engagement will not be insignificant. We recommend that the strategic role of collaborative and targeted community level communications is part of the design of the health system operations and embedded future pandemic response frameworks, including the recognition of those within the community as part of the communications workforce. The solution needs to result in simple user-friendly 'front-ends' at all times.

The end-user interface can shape system outcomes

- 40 As we have stated above, the successful operation of a system relies on the people. As such, the end-user interface is fundamental to supporting individuals to play their part in system function. Where this is not optimised through end-user engagement, this can lead to difficulties for users and reduced interaction even from those who want to 'do the right thing'. It is our view that the end-user interface across the COVID-19-response should be reviewed and optimised with end-user engagement and this process should be scheduled to be repeated regularly.

Use of Advisory Groups

- 41 There has been considerable use of advisory groups to support Ministers as they navigated their way through the complexity and often conflicting demands of the various outbreaks plus to provide a different perspective and or voice to that which comes from the system. These groups have been orientated around particular issues and or themes.
- 42 While such initiatives are to be encouraged, their ability to add value and an informed perspective is predicated on an open and transparent mindset from those who operate the system. That has not always been the case with a sense, at times, that parts of the system were resistant to the intervention. Despite that, a separate stream of independent advice and perspective has been provided to Ministers which assisted in their decision making.

- 43 To the extent that Ministers require such groups in the future is ultimately a matter for them and still under consideration. If a decision is taken that a Group is required, then their mandate and engagement model with the broader system needs to be clear and articulated.

Transparency

- 44 As referred to above, an open and transparent mindset is required from system leadership. Visibility across and into the system is not only important for the independent advisory groups to perform their mandated functions but is critical for the effective operation of what is a complex system comprised of multiple government agencies and delivery entities. A lack of transparency will only serve to slow down the system and disempower people to make decisions where needed, particularly on the frontline.

The future of the COVID-19 response and pandemic response

As the response system in its current mode is dismantled, we must leave an enduring framework for the future

- 45 It is human nature to focus on the immediacy of our environment. As Aotearoa New Zealand is coming through our first significant wave of the COVID-19 Omicron variant and other countries around the globe are appearing to move into a new state of normal, it is tempting to push to dismantle what was set up as a temporary system to respond to an immediate threat. It is our view that the mindset should not be seated in a dismantling of our current response system, but to lock in and build on the lessons we have learned along our journey. Given our recent experiences, and the need for prudence in the face of an ongoing virus to ensure a well-informed future, maintaining capacity within the system to prepare and respond to any eventuality should be non-negotiable.
- 46 While it is necessary to devolve responsibilities and functions back to home agencies this must be done with caution and consideration of what enduring frameworks and assets must either be retained or built on without losing the capacity, capability and intellectual property that may be required for the future. In particular, the border and surveillance settings will continue to be a critical part of our armour and are, in our view, the areas where a gold standard approach and systems are required. This will be even more crucial as the flow of people across the borders accelerates.
- 47 For example, we have seen the effectiveness of border controls in reducing harm to New Zealanders and allowing more time to prepare for a significant domestic outbreak. While it may prove to be that the Managed Isolation and Quarantine (MIQ) system is not required for the remainder of the COVID-19 pandemic (although this cannot be assumed), a future pandemic caused by a novel virus must be anticipated and regarded as inevitable. We are aware that the procurement process to purchase an online booking system for MIQ has been stopped and the MIQ system largely disbanded (although we are aware that the pros and cons of such a booking system are being incorporated into advice relating to the readiness workstream and the National Quarantine Capability programme). It is our view that the retention of the ability for people to book fit-for-purpose MIQ accommodation is necessary and justifiable to build and maintain for future preparedness. Latency in our systems (particularly in those areas that should be at the heart of

preparedness) must not be viewed as an unnecessary expense or inefficient, but as akin to necessary insurance policies that will ultimately enable efficiency and benefit the New Zealand public.

There is a unique opportunity to embed enduring acute pandemic response capability

48 It is our view that pandemic response has a level of importance and complexity that warrants bespoke system arrangements, rather than an extension of current provisions and roles. For that reason, Aotearoa New Zealand needs to establish and maintain a world-class acute pandemic response capability. Building a future pandemic response 'on the fly', such as happened with COVID-19, is not acceptable nor warranted given the collective knowledge and experience we have accumulated. We suggest that overseas models of pandemic response are looked to for examples of best practice. We recommend that Taiwan's model is looked to for an enduring model within the new health system. Taiwan's rapid response was a planned implementation of key components of a system including:

- border control from the air and sea
- case identification (using new data and technology)
- quarantine contacts and suspicious cases
- proactive case finding
- resource allocation (assessing and managing capacity)
- reassurance and education of the public while fighting misinformation
- negotiation with other countries and regions
- formulation of policies toward schools and childcare, and relief to businesses.

49 There was strategic integration of a big data and incorporation of state of the art technology from the start. Social support systems were pre-planned for and implemented, and a very clear communication strategy was established. Many of Taiwan's systems and tools had been developed, piloted and optimised before the pandemic began.

50 There is significant overlap between the need for an ongoing COVID-19 response that is capable of responding effectively to a new and more dangerous variant, and an acute pandemic response capability embedded in New Zealand's government systems. Therefore, we recommend that these be brought together if possible.

51 Pandemic response is a highly specialised area of expertise, and while our government officials have gained invaluable experience over the past two years, it may be necessary to bring in outside expertise to support fit-for-purpose future pandemic response function. We recommend this is done with a view to carry out an assessment to determine the match between what is needed and what is and is not in place. Certain aspects of the COVID-19 response will require specific attention, of course. For example, it is crucial that the monitoring for new variants at the border is optimised as a matter of urgency, particularly as we have recently become aware that there have been gaps in processes for international arrivals who test positive with a RAT to receive a follow-up polymerase chain reaction test and whole genome sequencing. Because of the need to build and optimise world class systems and to continually innovate, test and modify approaches, the core unit's staff should never be without work to do.

Deliberate stewardship, strategic direction and leadership of the pandemic response system are critical for future protection

- 52 The dismantling of the current response system has the added short term complexity of the health system reform. As we transition the health system to a new model, we are transferring our management of both COVID-19 and future pandemics. It is critical to take a preparatory approach and be ahead of the curve. The criticality of ongoing and deliberate stewardship of the pandemic response system as separate to the health system must be recognised. If not already set out, the response system leadership and strategic direction needs to be urgently identified and made clear with detailed plans for transition before any part of the current system is dismantled. We wish to highlight in particular that the transfer of functions, reporting lines and decision rights from the Ministry of Health and the District Health Boards (DHBs) to HNZ will not leave a lot of space for anticipatory response activities.
- 53 As we have noted earlier, the extensive nature of the COVID-19 response system has been made clear through the response to Omicron. Aotearoa New Zealand is a small country, and we must understand and make use of the expertise, knowledge and capacity across society. We recommend that there is a mapping exercise undertaken that identifies and considers who the right people, organisations or sectors are to perform functions across society to support an agile and responsive system. Such an exercise must not be limited to government departments and their operational entities. This type of mapping, if not already done, will provide an invaluable basis for an acute pandemic response unit to develop and implement response system coordination and delivery mechanisms and will support system flexibility, capacity and pace during response periods.
- 54 Further to the above, it is critical that there is visibility of roles, accountabilities and decision rights to ensure that people in the system can feed information and insights into the appropriate part of the system.

What are the key capabilities that will make the most difference in a future pandemic?

- 55 The acute and chronic response to a future pandemic needs to be planned for and the functions integrated into the new health system. Given the cost of failure, significant investment in preparations for inevitable future pandemics is warranted. As described above, a pandemic response unit needs to be a permanent feature of the new health system. It can be built at the same time as we transition to chronic management of our response to COVID-19 while ensuring acute response capability for the early response to a new SARS-CoV2 variant or a new pandemic. In between pandemics it can optimise the tools needed for the pandemic response.
- 56 As with any significant component of the health system, it needs to have fit for purpose policy, financing, human resources, information and monitoring systems, support systems, and advisory and governance components. It needs to be set up with a view to all its key agency inter-relationships, including those that will need to 'come on board' as the response to a new pandemic scales up. These include engagement of multiple government agencies, non-governmental organisations, the business and social sectors, and strategic research investment. Given the complexity and the obligations and opportunities under Te Tiriti o Waitangi, we suggest that a

working group of key stakeholders be formed to advise how this entity is best constructed, with a relatively short timeline given the priority.

- 57 To support the success of the transition to the new health system architecture and to a sustainable steady state for responding to COVID-19, we have set out specific recommendations below, noting the areas to which they best apply across the health system transition, the ongoing COVID-19 response and future pandemic response.

Te Tiriti o Waitangi and equity must continue to be a primary focus	Relevant areas
1 There needs to be active work to design and embed business-as-usual mechanisms that bring in the voices of diverse communities early on in policy and operational design processes.	All areas
2 Partnership processes with iwi and other Māori groups need to be continuously modified and adapted to ensure Te Tiriti principles are upheld and reflect heightened obligations due to the threat posed by COVID-19 to the welfare and safety of Māori.	Ongoing COVID-19 response
Transitioning to a new health system informed by lessons	
3 Processes should be put in place to identify and triage barriers that exist within the current health system and which have been highlighted through our most recent experiences to ensure that plans are actively developed to address these.	Health system transition
4 The establishment of clear and understood accountabilities and delegations between the Ministry of Health, Health New Zealand and the Māori Health Authority should be a priority.	All areas
5 There is considerable merit in codifying the desired attributes of leadership across the reformed health system to inform the appointment of key leadership and management positions. These attributes should include openness to transparency and innovation.	Health system transition
6 To support health system interconnectedness and to cement collaboration as a key foundation, a round table of key entities such as the Ministry of Health, Health New Zealand, the Māori Health Authority, Pharmac and the Health Quality and Safety Commission should be established.	Health system transition Future pandemic response
7 It should be explored where work can be shifted from the primary care workforce to unregulated workforces to support health system capacity and contribute to addressing the underrepresentation of affected groups in the regulated health workforce. There have been some very valuable learnings from the recent experiences that need to become a new norm.	Health system transition

Key attributes and functions of a well performing system		
8	Innovation models and practices from industry and entrepreneurial start-ups should be incorporated actively within appropriate risk-management settings to support embedding innovation cultures within government.	All areas
9	Data analysis capability should be embedded and resourced as a core function to inform both policy development and operational delivery, including as a core skill set required in pandemic response.	All areas
10	The current suite of COVID-19 response system performance measures and indicators should be assessed to ensure they provide ongoing and real time visibility of system performance and impacts from COVID-19 across the different facets and levels of society. This should actively inform the design and operation of the future system. The development of fit-for-purpose performance measures and indicators across the new health system more broadly should be prioritised.	All areas
11	Guidelines for funding contracts should be reviewed to ensure contracts are based on outcomes and rules of engagement and allow the flexibility of providers to deliver (rather than rely on prescribed mechanisms of delivery). Funding mechanisms should also be reviewed to ensure they provide necessary and reasonable certainty for providers as well as expenditure scrutinised to understand return on investment and provide insights for future pandemic planning.	All areas
12	Engagement with communities and providers should be built into system planning, design and stewardship to maximise potential for collaborative action as well as to anticipate/identify gaps and build safety nets including for unanticipated gaps.	All areas
13	The strategic role of collaborative and targeted community level communications should be part of the design of the new health system operations and embedded into future pandemic response frameworks, including the recognition of those within the community as part of the communications workforce.	Health system transition Future pandemic response
14	The end-user interface across the COVID-19-response should be reviewed and optimised with end-user engagement and this process should be scheduled to be repeated regularly.	Ongoing COVID-19 response
The future of the COVID-19 response and pandemic response		
15	Enduring system frameworks must be in place and a clear understanding of assets and intellectual property required to be retained/built before any devolvement of the All-of-Government system functions to home agencies.	Ongoing COVID-19 response
16	A gold-standard approach to the border and surveillance settings should be prioritised, including the development of necessary technology and assets.	Ongoing COVID-19 response

	Future pandemic response
<p>17 Embed enduring acute pandemic response capability through the establishment of a permanent response unit, and that:</p> <ul style="list-style-type: none"> • this is brought together with the ongoing response to COVID-19 • Taiwan's model is looked to for an example of good practice • it is considered that a working group of key stakeholders is formed to advise how this entity is best constructed. 	Future pandemic response
<p>18 If not already done, the response system leadership and strategic direction should be identified and made clear with detailed plans for transition before any part of the current system is dismantled. Strategic leadership and oversight should be separate from operational leadership and oversight to support the system's ability to anticipate.</p>	Ongoing COVID-19 response
<p>19 We recommend there is a mapping exercise undertaken that identifies and considers who the right people, organisations or sectors are to perform pandemic response functions across government and society.</p>	Ongoing COVID-19 response Future pandemic response

PROACTIVELY RELEASED