



National Ethics Advisory Committee

Kāhui Matatika o te Motu

Ethics and Equity: Resource Allocation and COVID-19

An Ethics Framework to Support Decision-Makers

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National Ethics Advisory Committee – Kāhui Matatika o te Motu

The National Ethics Advisory Committee – Kāhui Matatika o te Motu (NEAC) is an independent advisor to the Minister of Health. The members of NEAC are appointed by the Minister and bring expertise in ethics, health and disability research, health service provision and leadership, public health, epidemiology, law, Māori health and consumer advocacy.

NEAC published *Getting Through Together: Ethical values for a pandemic* in 2007 (NEAC 2007). *Getting Through Together* outlines values to inform decision-making, but provides limited guidance on allocation of resources. This Ethical Framework (the Framework) builds on the work of *Getting Through Together*, emphasising the ethical principle of equity in resource allocation decisions and providing a wider understanding of resources that are particularly relevant in the context of COVID-19.

Members

The current members of NEAC are Kahu McClintock, Wayne Miles, Neil Pickering, Liz Richards, Hope Tupara, Dana Wensley, Gordon Jackman, Mary-Anne Woodnorth, Cindy Towns, Penny Haworth and Vanessa Jordan.

Former members

Maureen Holdaway is a former member of NEAC.

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NEAC would like to thank all submitters who participated in the public consultation on earlier drafts of the Framework. Please see <https://neac.health.govt.nz/public-consultation-ethical-framework-resource-allocation-during-times-scarcity> to receive more information on the consultation and a summary of the submissions.

Introduction

Purpose of framework

Setting priorities and rationing resources in a global pandemic means making difficult choices, but these choices can and must be ethically justified. NEAC has developed this Framework to help decision-makers work through the ethical implications of resource allocation and prioritisation during the COVID-19 response.¹ In particular, the Framework commits to ensuring equity is at the forefront of decision-making and demonstrates how equity should feature in decision-making.

This Framework is not a set of rules and does not consider all potentially scarce resources or all potential decisions. Rather, it outlines a good decision-making process, and provides ethical principles and Te Tiriti principles to inform and justify decisions.

When does the Framework apply?

Ethical principles may be relevant or justified at different stages of resource scarcity during the COVID-19 response (from less scarcity to more scarcity). International guidance from the World Health Organization (WHO) (WHO 2020a) notes that:

where little scarcity exists, the allocation of resources such as ventilators may be most justified by the principle of first come, first served (which promotes the value of equality). When those resources become increasingly scarce, their allocation may be justified according to a principle that prioritizes those most in need. With even greater scarcity, a principle that aims to maximize benefit from the resource may be most justified.

NEAC acknowledges this rationale but notes that in the New Zealand context decision-making needs to address how equity sits alongside these generally accepted values and stages of scarcity. At each stage, those considering allocation should aim to promote equity – that is, to take steps to ensure marginalised groups are not worse off, and to avoid exacerbating existing inequities. This may include treating different people differently, due to their health needs.

¹ This Framework will be generalised to be applied to other pandemics with different features as part of a scheduled review of *Getting Through Together* (NEAC 2007).

Who is the Framework for?

NEAC developed the Framework primarily to help resource allocation decision-making groups² make ethically justified decisions that meet Te Tiriti obligations. The Framework will also be useful to help individuals and communities understand and be involved in the ethical aspects of decisions, as during the COVID-19 response a wide range of people and groups are faced with making difficult decisions.

Why is an ethical framework for the COVID-19 response needed?

Existing ethical frameworks guide resource allocation, yet there are unique factors to consider when allocating resources during the COVID-19 response. COVID-19 is a new virus and there is no population immunity. These factors distinguish COVID-19 from other well-characterised respiratory viruses that also cause illness worldwide. The COVID-19 virus spreads easily and is more severe in the elderly and in those with underlying comorbidities. This combination of factors means that COVID-19 has the potential to overwhelm acute hospital care resources – a phenomenon clearly observed in countries with large case numbers. The novel nature of the virus means that there is less evidence – in comparison to other medical conditions – available on which to base guidelines and policy. Research is being rapidly undertaken and published; this in itself can create challenges in terms of the accuracy and reliability of data. Innovative practice is expected and should be encouraged to effectively maintain care for individuals; however, in all cases of change to usual processes, safety data and evaluation must be recorded. Timely responses, consistent messaging and effective policy development are all reliant on quality data. Public health measures will be imperative to controlling the spread of the virus.

It is important the public trusts in central government alongside community leaders and content specialists when making important decisions, through the use of decision-making groups that are representative of the community they serve. A national ethical framework contributes towards public trust because it fosters continuity across resource allocation related decision-making and ensures that the governing principles are transparent. The public is more likely to cooperate with measures taken in the response to COVID-19 if they trust decision-makers. Increased unification should maximise the effectiveness of resource allocation decisions. The 'team of 5 million' is central to this context.

² For the purposes of this document, a decision-making group is a group, either existing or newly established, that is tasked with allocating and or prioritising resources during the COVID-19 response. Further information on decision-making groups can be found in 'Making decisions' below.

Key features of COVID-19

The COVID-19 virus can spread from person to person through:

- close contact with an infectious person (noting it is possible for a person to be infectious prior to symptoms developing)
- contact with droplets from an infected person's cough or sneeze
- touching objects or surfaces (such as doorknobs or tables) that have droplets from an infected person and then touching your mouth or face (Australian Government Department of Health 2020).

Symptoms of COVID-19 can range from mild to severe illness. Some people will recover easily, others may get very sick very quickly, and some will die. Recovery can be prolonged and may have a protracted impact on health care services.

The New Zealand context

Te Tiriti o Waitangi

Te Tiriti o Waitangi/the Treaty of Waitangi (Te Tiriti) is a fundamental component of New Zealand's constitution. Te Tiriti creates a basis for civil government encompassing all New Zealanders. The Government continues to respond to its obligations to honour Te Tiriti. Te Tiriti mandates that Māori participate in equal partnership with the Government. To this end, Māori must have protection and acknowledgement of their rights and interests within their shared citizenship.

The New Zealand health and disability system has a responsibility to contribute to meeting the Crown's obligations under Te Tiriti. In an emergency like COVID-19, it is even more important that the Crown upholds these obligations (Te Rōpū Whakakaupapa Urutā 2020). As an independent advisor to the Minister of Health, NEAC hopes this Framework will support the system in meeting its obligations under Te Tiriti by helping it to draw on the principles of Te Tiriti as articulated by the courts and the Waitangi Tribunal and consider their implications for resource allocation decisions.

Supporting the New Zealand health and disability system to meet its obligations under Te Tiriti is necessary if we are to ensure iwi, hapū, whānau and Māori communities are active partners in preventing, mitigating and managing the impacts of a pandemic or public health emergency on those communities (Ministry of Health 2020).

Equity

Pandemics and other public health emergencies often have the biggest impact on marginalised communities (Cormack et al 2020). They highlight and exacerbate existing inequities within the health system. For this reason, NEAC has prioritised achieving equity by including it as an ethical principle and highlighting how equity considerations may be in tension with other ethical principles. Equity recognises that different people with different levels of advantage require different approaches and resources to achieve equitable health outcomes – a one size fits all approach to the pandemic would therefore exacerbate existing inequities (Te Rōpū Whakakaupapa Urutā 2020). Measures taken must also consider the principle of intergenerational equity, which considers the concept of fairness for a cross-section of different generations, including future generations (Brown Weiss 2013). It may, for instance, encompass the right for different generations to attain a high standard of living. Actions taken in the present can affect the rights of later generations, and decision-makers should take these potential consequences into account – especially where there is a risk of potential harm.

Prioritising equity supports a view of COVID-19 as a syndemic, rather than a pandemic. This approach recognises that response to the pandemic is not only a case of containing an infectious disease, but also a case of responding to biological and social interactions between conditions and states that affect an individual's vulnerability to worse health outcomes (Horton 2020). Viewing COVID-19 as a syndemic provides a holistic, broad focus which looks at social determinants of health like education, employment, housing, food and environment (Te Rōpū Whakakaupapa Urutā 2020). When we address COVID-19, we must also address co-morbidities and conditions such as hypertension, obesity, diabetes, cardiovascular and chronic respiratory diseases and cancer. Co-morbidities and conditions are preventable and can often occur as a result of systematic inequities within the health and disability system. This creates an even greater imperative for a focus on equity as an integrated response to COVID-19 and the relational impacts of the wider health system (Horton 2020, Singer et al 2017).

Increased risk through unequal distribution and exposure to the determinants of health

This Framework recognises that all people are equal in terms of their rights to care and health (OHCHR 2020). However, significant health inequities exist among different groups of New Zealanders. These are influenced by socioeconomic factors and compounded by structural inequities, such as racism and discrimination, capitalism, neo-liberal logics and colonisation (Cormack et al 2020, Jones 2020, Te Rōpū Whakakaupapa Urutā 2020). Structural inequities systematically disadvantage individuals and groups based on ethnicity and other factors such as age, gender identity, sexual orientation, physical and cognitive abilities and socioeconomic factors. This results in the unequal distribution of power and resources and differentiated access and exposure to acknowledged determinants of health. Research persistently shows that Māori, Pacific peoples and people from lower socioeconomic demographics experience worse health and die younger than other New Zealanders (Ministry of

Health 2020). Refugees, migrants and the Lesbian Gay Bisexual Transgender Queer or Intersex (LGBTQI) community also have health disparities that should be recognised (United Nations 2020, Andajani-Sutjahjo et al 2018, Adams 2017).

Disabled people are of equal value and have the same rights as all other New Zealanders. Yet an underlying, pervasive and often unquestioned devaluing of disabled people exists; this is called 'ableism'. When ableism intersects with ageism and/or racism, classism and sexism, it can compound discrimination and result in specific human rights violations, deprioritisation in access to resources and poorer-quality health services.

The health and wellbeing needs of refugee, migrant and asylum-seeker populations in Aotearoa New Zealand are not always recognised. These populations must also be taken into consideration as groups at risk of unequal distribution.

Indigenous health inequities in New Zealand

Māori experience higher rates of infectious diseases than other New Zealanders (Ballantyne 2020, Cormack et al 2020, Jones 2020). For instance, Māori infection rates of the 2009 H1N1 influenza pandemic were twice as high as Pākehā infection rates (Cormack 2020). We also know that older people and individuals with underlying conditions are at increased risk of severe infection from COVID-19. Māori as a population have higher rates of chronic conditions and comorbidities and are therefore more likely to develop severe COVID-19 as a result of contracting COVID-19 infection (Cormack 2020). As such, the relationship between age and COVID-19 may be different for Māori and potentially affect the population younger than other populations. In addition, Māori households often have more people than the New Zealand average, which places more people at risk from exposure to infectious diseases – but, conversely, more people in the household stand to benefit from preventative actions. The COVID-19 response should aim to avoid exacerbating existing inequities; solutions to address historical injustices are still required.

As stated in the Waitangi Tribunal's *Hauora* report, 'under an equity-focused health system, the depth of, or imminent threat posed by, health inequity should heighten the urgency of action; the Crown's Treaty obligations are heightened under similar conditions. The deeper the need, the more urgent and substantial the targeted response should be' (Waitangi Tribunal 2019, page 67). This is reiterated in the statement by Te Rōpū Whakakaupapa Urutā (Urutā), the national Māori pandemic group, that "equity is more than a word or an add-on at the end of a sentence supporting the value of 'diversity'. It represents the absence of the systematic, entrenched and pervasive inequities that we [Māori], our loved ones and our communities experience daily" (Te Rōpū Whakakaupapa Urutā 2020, para 2).

Human rights

Human rights are a foundational part of New Zealand's ethical landscape and important to consider in the response to COVID-19 in terms of resource allocation. A human rights approach is concerned with process as well as outcome, including the right to participation and the importance of fair, reasoned, robust and transparent decision-making alongside independent accountability when states exercise discretionary powers. Consideration of human rights is relevant to decision-making bodies and processes, as well as to the resource allocation principles expressed in this Framework.

Rights to life, health protection and health care without discrimination place obligations on the New Zealand Government to effectively respond to COVID-19. The right to the highest attainable standard of health is expressed in the 1966 International Covenant on Economic, Social and Cultural Rights, which also established the steps states should take to realise this right. This covenant is one of a collection of legally binding international human rights instruments including the Universal Declaration of Human Rights, the International Bill of Rights and the International Covenant on Civil and Political Rights. At a national level, New Zealand is legislatively bound to protect human rights through the Human Rights Act 1993 (see Human Rights Commission (nd)), the New Zealand Bill of Rights Act 1990, the Privacy Act 1993 and the Treaty of Waitangi. Thus, human rights create international and national legislative state obligations that remain legally binding in times of emergency.

A focus on Te Tiriti and equity aligns with a human rights-based approach to health in general and COVID-19 in particular. The United Nations' Committee on Economic Social and Cultural Rights clarifies that states must guarantee that the right to the highest attainable standard of health will be exercised without discrimination (High Commissioner for Human Rights 2000). The right to equality and non-discrimination further support an equitable approach to resource allocation. It also needs to be kept in mind that differential treatment is required where it can be justified rationally and objectively to restore the health rights of groups that have been rendered vulnerable via structural inequities within the health system (Human Rights Commission 2020b).

Human rights documents including the Convention on the Rights of Persons with Disabilities, the Convention on the Rights of the Child, the Convention on the Elimination of All Forms of Racial Discrimination and the Convention on the Elimination of All Forms of Discrimination Against Women further enforce the importance of equity. Furthermore, the United Nations Declaration on the Rights of Indigenous peoples supports the Te Tiriti by affirming the rights of indigenous peoples to self-determination, to traditional knowledge and to the highest attainable standard of physical and mental health.

Existing allocation frameworks

The health system already practices allocation of scarce resources day to day. That is, this Framework is located within an existing context of prioritisation and rationing structures. However, an unmanageable number of COVID-19 cases may result in extreme scarcity, requiring rationing principles beyond routine allocation. NEAC notes that existing frameworks for resource allocation are often more clinical and utilitarian in nature. Urutā have also stated that many models, guidelines and tools that focus on scarcity of resources have great potential to discriminate against Māori due to approaches that favour likelihood of survival and maximising lives saved. This Framework prioritises equity, with an understanding that it must be weighted heavily to be sufficiently considered and met. Furthermore, the Framework has a principles base, ensuring that the ethical values governing decision-making are transparent.

Internationally, the WHO has provided COVID-19 resource allocation prioritisation guidelines called *Ethics and COVID-19: resource allocation and priority-setting* (WHO 2020a). These guidelines advise prioritising groups such as frontline health care workers, older people and people at higher risk (such as people with co-morbidities). The University of Melbourne also developed a decision-making tool, *Planning for and Managing COVID-19: Ethical decision-making tool* (McDougal et al 2020). The tool could be adapted to the New Zealand context for guidance on local policy decisions. The Australasian College for Emergency Medicine has published guidance on a webpage called 'Ethics in ED Decision Making'; this can be utilised for further intensive care unit (ICU)-specific ethical guidance. Numerous academic publications also discuss resource allocation; recommending specific criteria, examining the role of public health ethics and analysing existing frameworks.

The New Zealand Government's Living Standards Framework examines societal ethical issues at a broader level (The Treasury 2019). Considerations include balancing wider societal trade-offs and potential outcomes. These may be considered in tandem with resource prioritisation. New Zealand also participates in the international 'Choosing Wisely' initiative, which aims to reduce harm caused by unnecessary and low-value tests and treatments. The New Zealand branch of 'Choosing Wisely' published a report in July 2020, *Choosing Wisely Means Choosing Equity 2020*, which supports prioritising equity as a crucial principle within the health care system (Adcock and Tipene-Leach 2020). This approach places focus on equity for Māori and the importance of ensuring Te Tiriti o Waitangi principles are met in the process. The report discusses equity within the health system in general. It was written during COVID-19, and acknowledges the pandemic situation and concerns that COVID-19 would exacerbate health inequities for Māori.

Clinical ethics advisory groups around the country provide clinical ethics advice for New Zealand health services. More specifically, PHARMAC's Factors for Consideration Framework (PHARMAC 2015) considers a number of allocation methods, rather than taking a specific allocative stance. PHARMAC has described advice structures for vaccines alongside its funding and decision-making role for current vaccines.

Decision-making groups need to work across local, regional and national contexts, and engage and establish relationships with existing groups, to foster consistency and solidarity.

Ethical principles

Introduction

This section sets out four general ethical resource allocation principles and four Te Tiriti principles (see Tables 1 and 2). The ethical principles draw on widely accepted principles for resource allocation, developed from an international literature review. During this review, NEAC found that general prioritisation principles have failed to adequately capture and demonstrate equity. NEAC has included equity alongside commonly used resource allocation principles, and explored how equity can be meaningfully incorporated into decision-making.

The Te Tiriti principles are derived from the *Hauora* report (Waitangi Tribunal 2019), and reflect the absolute need to empower Maori to make decisions that affect their health. These principles appear in the *Hauora* report as a set of principles for the primary health care system that are applicable to the wider health and disability system (Waitangi Tribunal 2019, pages 163–64).

This Framework does not prioritise either set of principles either ethically or conceptually. The two sets have one important common ground: they highlight important factors specific to Aotearoa New Zealand that decision-makers must consider when allocating scarce resources. Importantly, the way they are applied will vary depending on the resource being considered, the level of scarcity and the context (for example, either clinical or in the sphere of public health).

Tensions between the principles

NEAC holds that multiple principles that reflect a plurality of values comprise the best basis for ethical decision-making. It may be that, in some circumstances, decision-makers can follow different principles at the same time. For example, for some elective surgeries, prioritising those with the most need and achieving the most benefit might be considered in tandem. However, in a pandemic (as in many other contexts), values and principles can conflict.

In the context of the COVID-19 response, it may not be possible to achieve equity and to benefit the most people at the same time. As an example, in the case of ICU beds or ventilators, a clinician might make a decision to treat those with fewer comorbidities first, considering this to be the best way of saving as many lives as possible, or getting the most out of the resources. Yet this decision may undermine equity, as some groups (for example, Māori and disabled people) tend to have more comorbidities than other groups.

From a theoretical position, NEAC’s approach fits with the idea that the different and sometimes inconsistent values and principles of ethics are prima facie. This means that wherever they are relevant, they are significant, but a particular value or principle may sometimes have to be sacrificed to realise another value or principle, judged to be of greater weight or significance in the circumstances. From a psychological standpoint, people will often feel a variety of values pulling them in different directions, and experience internally the ethical dilemmas described later in this Framework in the context of the three case studies this Framework presents. NEAC believes that good decision-making involves recognising, rather than ignoring, these tensions.

These principles reflect the important considerations decision-makers face when prioritising scarce resources. They are in tension and must be considered in the specific context of each resource allocation decision.

Table 1: Resource allocation principles

Resource allocation principle	Application to resource allocation
All people are equally deserving of care	<ul style="list-style-type: none"> • Each person affected by the COVID-19 pandemic in New Zealand deserves equal respect and consideration. • Each person’s interest should count equally, unless there are good reasons that justify the differential prioritisation of resources. Differential treatment is not inconsistent with the right to equality and non-discrimination; in fact, differential treatment is sometimes required, if it can be justified on objective and rational grounds (Human Rights Commission 2020b). • Every human being is entitled to the enjoyment of the highest attainable standard of health conducive to living a life in dignity (under Article 12 of the International Covenant on Economic, Social and Cultural Rights: see High Commissioner for Human Rights 2000). • Resources should not be distributed arbitrarily or withheld on the basis of individual or group characteristics that are irrelevant to a clinical prognosis; for example, including: ‘race, colour, gender or gender identity, sexual orientation, language, religion, political allegiance or other opinion, national or social origin, property, birth or other status such as disability, age, marital and family status, health status, place of residence, economic and social situation’ (United Nations Committee on Economic, Social and Cultural Rights 2009).³ • Affirmed sick people should all be given care with the aim of achieving the best outcome. ‘Care’ in this instance may include quality end of life care, such as palliative care, that alleviates suffering for terminal patients.

³ Note also that under right 2 of the Code of Health and Disability Services Consumers’ Rights, every health consumer has the right to be free from discrimination.

Resource allocation principle	Application to resource allocation
All people are equally deserving of care (continued)	<ul style="list-style-type: none"> This principle can be used to justify the allocation of resources by a lottery – that is, randomly – in some situations. This principle is often used to justify a system of ‘first come, first served’. While this is often applied when allocating resources in health care settings, it is rarely appropriate in an emergency. In practice, it is very likely to favour certain groups, such as those closest to a distribution centre, those with access to better information, or those who have more money (WHO 2020a).
Getting the most from the resources	<ul style="list-style-type: none"> Resources required for the COVID-19 pandemic response must be managed responsibly. In the context of a health emergency, we should aim to allocate resources efficiently and maximise the clinical benefits. There are several competing interpretations of how best to gain the most clinical benefit; for example: to maximise lives saved, to maximise quality and/or life years saved (for example, by prioritising the young to maximise length of lives saved), to maximise the cost-effective use of resources and to prioritise essential workers (such as health care staff) so they can continue to serve and protect the public. These competing interests often conflict with equity goals. Careful assessment should occur to ensure decisions are not solely focused on efficiency. This principle involves acknowledging the skills, expertise and knowledge of people working in relevant fields as a crucial resource; for instance, the value of experienced clinical judgement provided in culturally safe contexts as an essential component of clinical decision-making.
Minimising harm and health protection ⁴	<ul style="list-style-type: none"> A foundational principle of public health ethics is the obligation to protect the public from serious harm. Harm is a broad concept, but includes physical, psychological, cultural, social and economic harm. In a pandemic, restrictions to individual liberty (for example, asking people to self-isolate), access to services (for example, cancelling elective procedures or out-patient clinics) or service areas (for example, limiting visitors to hospitals or residential facilities), as well as the imposition of infection control practices (for example, restricting public gatherings), may be necessary to protect the public from harm. Where they are considering such restrictions, decision-makers should provide reasons for them, to encourage compliance, and should establish a mechanism to review decisions (Department of Health Ireland 2020). A patient’s self-determination should be protected through their right to refuse treatment. This right is especially relevant where a high-level health intervention such as ventilation is required.

⁴ NEAC has combined the classical ethical principle of minimising harm with health protection to give the principle a strengths-based approach. It recognises that minimising harm can be used to protect populations (especially populations at high risk). It also aligns with the Te Tiriti principle of active protection and human right to health protection.

Resource allocation principle	Application to resource allocation
Minimising harm and health protection (continued)	<ul style="list-style-type: none"> Minimising harm is an ethical value outlined in NEAC’s 2007 ethical pandemic framework <i>Getting Through Together</i> (NEAC 2007). NEAC has defined minimising harm in a pandemic context as not harming others and protecting one another (and groups) from harm. For example, one way of minimising harm may be ensuring those most at risk are a prioritised group for vaccine allocation; this is a way to protect population health and prevent higher mortality rates. Reciprocity should consider providing additional support for those who accept extra responsibilities during a pandemic, especially those who put themselves at high risk by fulfilling their duties, such as frontline health care workers and other essential workers (NEAC 2007). Protecting the health of frontline health care workers and other essential workers also minimises harm by protecting patients and any other people these workers come into contact with, including groups that are at risk.
Achieving equity	<ul style="list-style-type: none"> ‘In Aotearoa New Zealand, people have differences in health that are not only avoidable but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes’ (Ministry of Health 2019). In working towards equitable outcomes, one option is to give priority to individuals or groups in greatest need.⁵ There are competing interpretations of how to determine those with the most need – we may define this as the sickest, the most disadvantaged or marginalised, those at greatest risk of harm or those subjected to previous injustices. Prioritising those in need will sometimes align with and sometimes conflict with prioritising those who can most benefit from health resources. It is likely to be difficult to ameliorate all existing inequity during a public health crisis; however, all efforts must be made to ensure equity is at the forefront of decision-making. An equity approach would consider how resources can be allocated to mitigate the adverse consequences of pandemic response measures and avoid or minimise growth in inequity deriving from those measures. An equity approach also involves identifying why the pandemic creates inequitable scenarios and making changes to address the sources of those inequities to avoid the same scenario arising in future pandemics. The Crown has specific obligations to commit to achieving equitable outcomes for Māori.

⁵ The WHO stated in the *Rio Political Declaration on Social Determinants of Health* (WHO 2011) that people have the right to ‘the highest attainable standard of health’. The highest attainable standard of health is a reflection of the standard of health enjoyed in the most socially advantaged group within a society. This indicates a level of health that is biologically attainable and the minimum standard for what should be possible for everyone in that society. See *Achieving Equity in Health Outcomes* (Ministry of Health 2018) for more information.

Te Tiriti o Waitangi recognises that Māori have the right to determine their own destiny (tino rangatiratanga) and that without self-determination Māori cannot achieve full equity with their fellow citizens (oritenga). The principles of Te Tiriti o Waitangi, as articulated by the Courts and the Waitangi Tribunal, provide the framework for how our health and disability system ought to meet its obligations under Te Tiriti in its day-to-day work.

The Waitangi Tribunal's 2019 *Hauora* report (Waitangi Tribunal 2019) highlights the degree to which systemic inequities are reflected in persistent health disparities for Māori. Against this backdrop, the system has an added weight of responsibility to ensure that resource allocation decisions do not perpetuate or exacerbate inequities.

The *Hauora* report recommends a set of principles for the primary health care system that are applicable to the wider health and disability system and are applied to resource allocation principles in Table 2 below (Waitangi Tribunal 2019, pages 163–64). The Te Tiriti principle of equity that appears here noticeably connects with the general resource allocation principle of 'Achieving equity' that appears above. It has been included in the table below to recognise its importance as a Te Tiriti principle and as inherent to Article 3 of Te Tiriti o Waitangi.. However, the Te Tiriti principle of equity should be considered with the resource allocation principle of equity in this Framework, as shown in the case-studies section.

Table 2: Te Tiriti o Waitangi principles

Te Tiriti o Waitangi principles as set out in the <i>Hauora</i> report	Te Tiriti o Waitangi principles' application to the health and disability system	Te Tiriti o Waitangi principles' application to resource allocation in a pandemic
<p>'The guarantee of tino rangatiratanga, which provides for Māori self-determination and mana motuhake in the design, delivery and monitoring of primary health care.'</p>	<p>Tino rangatiratanga requires clinicians, hospital administrators and public health policy-makers to provide for Māori self-determination.</p>	<p>Tino rangatiratanga means that Māori are key decision-makers in the design, delivery, prioritisation and monitoring of health and disability services and the response to pandemics or public health emergencies. This may also require transfer of resources directly to Māori Tiriti partners, rather than distribution through Crown agencies/services. It also respects the crucial decision-making role Hapū and Iwi have in adapting tikanga and ways of doing things in the pandemic (Te Rōpū Whakakaupapa Urutā 2020, para 8).</p>
<p>'The principle of options, which requires the Crown to provide for and properly resource kaupapa Māori primary health services. Furthermore, the Crown is obliged to ensure that all primary health care services are provided in a culturally appropriate way that recognises and supports the expression of hauora Māori models of care.'</p>	<p>Options requires clinicians, hospital administrators and public health policy makers to provide for and properly resource kaupapa Māori health and disability services.</p>	<p>Options means that the health and disability system is agile in adapting and responding to the pandemic resource needs of kaupapa Māori health and disability services to be able to serve Māori communities.</p>
<p>'The principle of active protection, which requires the Crown to act, to the fullest extent practicable, to achieve equitable health outcomes for Māori. This includes ensuring that the Crown, its agents and its Treaty partner are well informed about the extent, and nature, of both Māori health outcomes and efforts to achieve Māori health equity.'</p>	<p>Active protection requires clinicians, hospital administrators and public health policy-makers to act, to the fullest extent practicable, to protect Māori health and achieve equitable health outcomes for Māori.</p>	<p>Active protection requires clinicians, hospital administrators and public health policy-makers to prioritise resources to actively protect the health of the Māori population and implement approaches to equip whānau, hapū, iwi and Māori communities with the resources to undertake and respond to public health measures to prevent and/or manage the spread and transmission of disease among their people.</p>

Te Tiriti o Waitangi principles as set out in the <i>Hauora</i> report	Te Tiriti o Waitangi principles' application to the health and disability system	Te Tiriti o Waitangi principles' application to resource allocation in a pandemic
<p>'The principle of partnership, which requires the Crown and Māori to work in partnership in the governance, design, delivery, and monitoring of primary health services. Māori must be co-designers, with the Crown, of the primary health system for Māori.'</p>	<p>Partnership requires clinicians, hospital administrators and public health policy-makers and Māori to work in partnership in the governance, design, delivery and monitoring of health and disability services. This reflects a shared responsibility for achieving health equity for Māori.</p>	<p>Partnership means that the health and disability system works alongside Māori leaders to enable a coordinated and united response to a pandemic or public health emergency whereby Māori have the resources to govern, design, deliver, manage and monitor a response and the impacts of the pandemic or emergency on Māori communities. This principle should also include power-sharing arrangements, recognising that iwi and hapū should be selecting their own representatives, rather than the Crown identifying who it will or will not work with.</p>
<p>'The principle of equity, which requires the Crown to be committed to achieving equitable health outcomes for Māori.'</p>	<p>Equity requires clinicians, hospital administrators and public policy-makers to be committed to achieving equitable health outcomes for Māori in the health and disability system.</p>	<p>Equity requires the health and disability system to commit to achieving equitable health outcomes by prioritising Māori for resource allocation in a pandemic or public health emergency. In the process, clinicians, hospital administrators and public health policy-makers should identify, acknowledge and address existing inequities experienced by Māori. They should take into account resources related to the social determinants of health, such as adequate housing and access to primary health services and distribute them accordingly. The health and disability system should collect high quality ethnicity data reinforced by principles of Indigenous Data Sovereignty to monitor existing inequities and specific risks posed by the pandemic, and thereafter to target and maximise resource allocation for Māori communities (Cormack et al 2020). If it becomes evident that an approach is exacerbating inequities the practice should be changed. For instance, cost or transport barriers that affect accessibility to health services (Te Rōpū Whakakaupapa Urutā 2020). The pandemic response should not cause long lasting, negative impacts for Māori, including inter-generational impacts, that exacerbate inequities.</p>

Allocation of resources

Resources

When we do not have enough of a particular resource to meet demand, we must decide the best way to distribute the resource to ensure the most effective results. Resource allocation is an umbrella term for the different mechanisms and approaches for doing this.

Resource allocation can be viewed as taking place within a continuum of services and resources that interact within the wider health system. Within the continuum, allocation of resources can be considered at a prevention level (for example, vaccines), community and primary care level (for example, public health resources), secondary/tertiary care level (for example, critical care) and the level of enablers underlying the continuum (for example, support services). It is important to note that resources may overlap different levels of the continuum of services and may function differently in different contexts. See Figure 1 on page 20

The application of principles and their relative weighting may differ between different stages of the COVID-19 response. For example, a novel COVID-19 vaccine will always need to meet safety and efficacy standards, but it may be ethical to endorse a widespread immunisation programme without having access to long-term outcome data.⁶

Ethical resource allocation should not be limited to clinical resources. Many different kinds of resources may become scarce during a pandemic. Each has a different risk/benefit profile and may be rationed or prioritised using a different weighting of the principles.

If allocated well, support services can be useful in mitigating risk for individuals and communities.

Information generated by research is also an important resource and affects the approach taken to allocation of clinical, public health and support services resources. New information about COVID-19 may improve the response, especially where the issues being faced are not well understood.

Some examples of clinical resources, public health resources and support service resources are listed below. These resources may overlap, and the list that appears here is a guide only.⁷

⁶ For example, right 4 of the Code of Health and Disability Services Consumers' Rights states that every health consumer has the right to services of an appropriate standard. However, what is 'appropriate' will be interpreted differently depending on context and the resources available.

⁷ The options listed expand on those discussed in *Sydney Health Ethics: An Ethics Framework for Making Resource Allocation Decisions within Clinical Care: Responding to COVID-19* (University of Sydney 2020).

Clinical resources

Treatment has burdens and benefits; the decision to allocate a clinical resource is complex and requires assessment of futility/appropriateness of medical intervention, the patient's best interests, the patient's autonomy and the principles of resource allocation. Clinical resources include access to the following:

- Critical care:
 - Intensive Care Units (ICU)
 - ventilators
- Acute medical care:
 - high-dependency units
 - non-invasive ventilation
 - acute medical wards
 - supplemental oxygen
- Other clinical resources:
 - medications
 - palliative care
 - restorative care and rehabilitation resources
 - personal protective equipment (PPE)
 - support services and resources

Public health resources

Public health resources are clearly valuable resources, typically with minimal risks or downsides. They include:

- diagnostics
- clinical expertise
- vaccines
- PPE.

A syndemic approach to public health resources also sees the following as valuable:

- preventative care
- access to medicines
- access to primary care
- adequate housing that is not overcrowded
- adequate access to food
- adequate access to basic incomes.

Support service resources

Support service resources are measures that can increase people's access to services and mitigate the adverse impacts of allocation. They include:

- carers' visitation rights (and allocation of PPE to support this)
- accessible communication (public and patient)
- supported decision-making tools and services
- financial support for home carers
- interpreters
- social workers
- health navigators
- health and disability advocates
- rehabilitation support and restorative care services (which may be required given the complications that arise from critical care and prolonged hospital stays).

Making decisions

Establishing decision-making groups⁸⁹

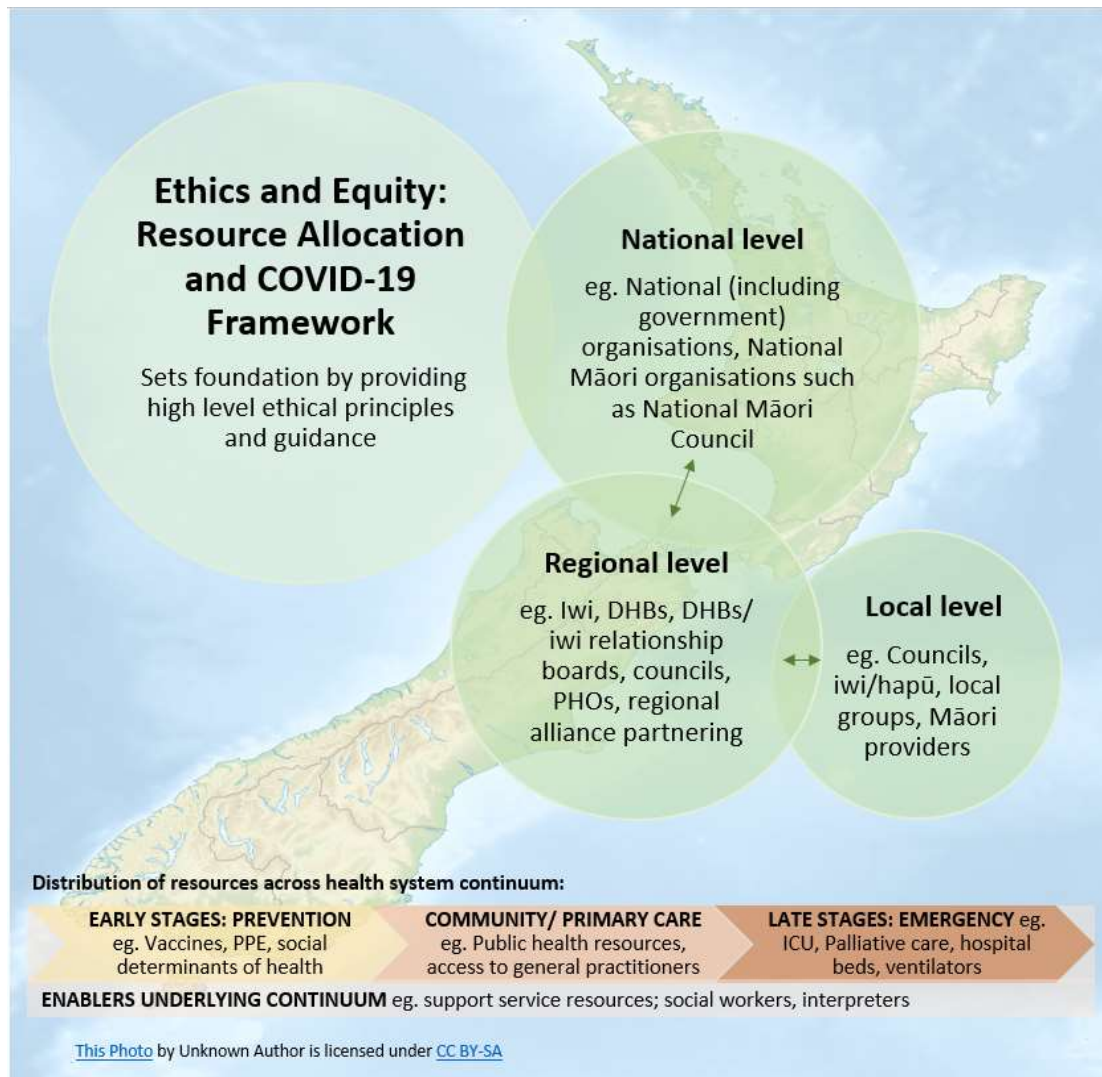
NEAC recommends that decision-making groups be established¹⁰ across New Zealand at national, regional and local levels). There will be a range of groups making different decisions. For example, some groups may be involved in clinical decisions about triage; others may be established to prioritise and distribute PPE in local settings. Decision-making groups at all levels will use this Framework as the foundation for ethical decision making of scarce resources (see . This will also ensure continuity across decision-making groups. See Figure 1 overleaf.

⁸ The recommendations in this section are based on information from *Ethical Framework and Recommendations for COVID-19 Resources Allocation When Scarcity is Anticipated* (University of Virginia Health System Ethics Committee 2020).

⁹ Decision-making groups have been recommended by NEAC to help ensure consistency across allocation decisions and to mitigate the impacts of COVID-19. As this is a high-level guidance document, it does not provide detail on how to set up and conduct decision-making groups.

¹⁰ NEAC recognises that the health system will undergo substantial change following the Health and Disability System Review (see *Final Report – Pūrongo Whakamutunga* (New Zealand Health and Disability System Review 2020)). It is vital that this review includes the strengthening of clinical and public health ethics infrastructure, and pandemic preparedness.

Figure 1: Decision-making groups across New Zealand that will make resource allocation decisions:



In establishing decision-making groups, consideration should be given to the importance of partnering with Māori and ensuring that Māori are part of the decision-making processes. This could be achieved by drawing from leadership and expertise within local iwi or hapū, national Māori organisations or Māori professional associations and/or working with Māori academics. When establishing these partnerships, or decision-making channels, those with mana or credibility should be identified as leaders to make decisions to mobilise communities, rather than just representative individuals or groups. Most DHBs have a DHB/iwi partnership that should also play a role in this space. This approach is consistent with the Te Tiriti principles of partnership and tino rangatiratanga.

For pandemic preparedness to be effective, these groups should be established in advance of a pandemic; however, NEAC acknowledges that there are varied levels of public health preparedness and capacity across the regions of New Zealand, and that ad-hoc groups may need to be established. NEAC recognises that smaller providers may not have the capacity or capability to establish a group that meets NEAC’s ideal composition. Institutions should work towards developing this capacity. This may

include decision-making channels and networks to support smaller providers, especially in small localities.

Māori perspectives of decision-making are necessary at national, regional and local levels. Ensuring Māori perspectives are present at all levels will ensure that the Te Tiriti principles of partnership and tino rangatiratanga are met. Arrangements for Māori participation could include:

- at the national level: national Māori organisations such as the National Māori Council, National Iwi Chairs Forum, Māori Women's Welfare League and Māori professional organisations
- at the regional level: iwi, DHB/iwi relationship boards, regional alliance partnering arrangements, Māori academics and Māori professional associations
- at the local level: Māori providers, iwi/hapū, DHB Māori expertise, and Māori professional organisations.

Why set up decision-making groups?

In the clinical context, a key aim is to separate care and advocacy for a particular patient from allocation decisions concerning that patient. This provides a level of detachment from the immediate clinical needs of each patient, better ensuring a clear and defensible decision-making process for resource allocation, thereby reducing the opportunities for bias. It also has the advantage of protecting those clinicians caring directly for patients from some of the direct stress and anxiety of being the decision-makers about allocation.

In the public health context, establishing a decision-making group allows transparency and clear communication between national, regional and local levels. It also ensures a clearer path to engaging with local communities.

Composition of each decision-making group

Decision-making groups will be composed differently depending on their level (national, regional or local), location, the resource they are allocating and the stage of the pandemic. Each institution will need to consider the kind of membership for their decision-making group that will work best for them. Factors such as population composition and the specific context that group is working in should be considered. 'Context' might include culture/s (especially in specific localities), proximity and access to health services including hospitals as well as other aspects related to a syndemic approach and social determinants of health, such as access to an adequate income, housing and food. Each group must include Māori representatives in order to meet the Te Tiriti principles of partnership and tino rangatiratanga. To ensure an equity lens, groups should include the perspectives of the following where relevant: the institution's patients, whānau, disabled people, the elderly, and any other relevant stakeholders who will be impacted by the decisions the group will be making.

Access to appropriate technical expertise, such as experienced clinicians relevant to the resource being allocated, as well as appropriate representation, is also vitally important for the decision-making groups. Groups should include members with expertise that is

relevant for the context and resource being prioritised or allocated.¹¹ This may include clinicians, nurses, ethicists and legal representatives. Removing specialist involvement in the decision-making process could foster a disconnection from the values set out in this document, resulting in worse outcomes.

Decision-making channels between local, regional and national levels may be useful where appropriate representation cannot be readily accessed, especially at a local level.

Function and role of decision-making group

The function of the decision-making group is to allocate and prioritise resources ethically and equitably.

In achieving its function, the group should:

- frequently re-evaluate their allocation criteria, since the application of ethical frameworks should be a fluid process that moves back and forth along a continuum contingent on available resources and as new information informs the understanding of the spread, pathophysiology, treatment and outcomes of COVID-19 infection evolves
- conduct risk management, which entails decision-making processes that assess, manage and balance risk in uncertainty (Asante-Duah 2002). Weighting potential, alternative outcomes and policies before choosing an appropriate course of action may be part of this process. Ensuring equitable processes and outcomes should be weighted heavily in this process. Risk is often mitigated by taking measures that reduce harm and thereby protect citizens in the process (Asante-Duah 2002). Opportunity cost and the precautionary principle, whereby safeguarding measures are taken in anticipation of potentially harmful consequences, may be considered. Managing risk also includes carefulness with potentially harmful innovations in the face of insufficient knowledge
- assess the opportunity cost of their decisions. Scarcity fundamentally operates within the concept of opportunity cost, as it involves the potential trade-offs of a decision under constraints such as time and budget. In opportunity cost scenarios, taking one course of action comes at the expense of other courses of action. In a scarcity context like the COVID-19 response, trade-offs must occur to ensure the best outcome within the parameters of constraint. Potential health losses – as part of those trade-offs – are an opportunity cost, because the 'cost' should result in opportunities for health gain. For instance, an equitable approach to allocating scarce resources may involve prioritising PPE allocation for groups that are more vulnerable to COVID-19 over allocation for less vulnerable groups (viewed as the trade-off or cost) to reduce the spread and subsequent harm of the virus (viewed as the opportunity). In so doing, existing inequities are less likely to be exacerbated
- determine the best way of communicating clearly and consistently to appropriate personnel about when crisis level allocation or re-allocation is and is not in effect. Equitable approaches to communication such as language should be considered

¹¹ In the DHB context, NEAC acknowledges DHB disaster plans which comment on the skill of the team required to perform clinical triage decisions, whether the context is a pandemic, major incident or natural disaster, and will include the readiness and ability of the DHB to accommodate potential patient surges which will impact on the day-to-day functioning of the health system.

- ensure that the process of the decision-making and the outcome reflect Te Tiriti articles and principles and their application to resource allocation
- consider plans for ensuring staff safety, maintaining appropriate clinician-to-patient ratios, training additional personnel, supporting organisational resiliency and providing support resources for staff (for example, child care, payment or sick leave)
- enact strategies and mechanisms to combat individual clinician conscious or unconscious bias; for example, the use of two senior clinicians (one external to the department concerned) or involvement of clinical ethics teams
- ensure appropriate communication with patients, the local community and the broader general public about plans for scarce resource allocation
- continually assess whether it is justifiable to defer resources or services
- maintain communication links between local, regional and national responses, including partnership with iwi and National Māori organisations

The decision-making process

Pandemic planning decisions should be clearly consistent and underpinned by ethical principles and Te Tiriti principles. A good decision-making process fosters public trust and goodwill towards institutions such as hospitals, leading to greater acceptance and satisfaction and fewer complaints. For Māori, a good process involves people with mana making decisions that their communities can respect and respond to. The four manas (mana whakahaere, mana motuhake, mana tangata and mana Māori) should also be considered in the process. Such processes identify values recognised in Māori tikanga or kawa (protocol or ceremonial actions) alongside other values.

Good decision-making processes also confer legitimacy on the final decisions, even when disagreement persists, and may help to resolve ongoing disagreement. They also help ensure transparency in regard to the values that underpin decisions and the comprehensive consideration of relevant issues.

It has been suggested that 'due process requirements are inherently important because fair hearings affirm the dignity of the person' (Bayer et al 2007). Good decision-making processes are necessary to show respect for people and ensure procedural fairness. As such, they may also reflect the value of tika, in the sense of acting in a way that is just and proper. Māori tikanga and mātauranga Māori needs to be considered in the context of potentially challenging other values, not just sitting alongside those values.

A wide range of views can be present when considering ethical issues, and it is common for there to be a lack of consensus about which values and principles are the most important on which to base a decision. This is another reason why we need to develop acceptable, equitable and fair processes.

Ethical values to inform how we make decisions

The ethical values that inform good decision-making processes are set out in the national ethical pandemic plan published by NEAC in 2007, *Getting Through Together*. The values of Whanaungatanga and Rangatiratanga are included in *Getting Through Together* but have been adapted here based on *Te Ture Whakaruruhau* (Public Health Association of New Zealand 2012). They are summarised below.

Ethical value	Actions associated with the value
Inclusiveness	<ul style="list-style-type: none"> • including those who will be affected by the decision • including people from all cultures and communities • taking everyone’s contribution seriously • striving for acceptance of an agreed decision • process, even by those who might not agree with the decision made
Whanaungatanga	<ul style="list-style-type: none"> • recognising the social organisation of whānau, hapū and iwi and acknowledging rights and reciprocal obligations consistent with being part of a collective
Openness	<ul style="list-style-type: none"> • letting others know what decisions need to be made • letting others know how they will be made and on what basis they will be made • letting others know what decisions have been made and why • letting others know what will come next, being seen to be fair
Rangatiratanga	<ul style="list-style-type: none"> • expressing the attributes of rangatira (weaving the people together), including humility, leadership by example, generosity, altruism, diplomacy and knowledge of benefit of the people • ensuring promotion of self-determination for Māori
Reasonableness	<ul style="list-style-type: none"> • working with alternative options and ways of thinking • working with and reflecting cultural diversity • using a fair process to make decisions • basing decisions on shared values and best evidence
Responsiveness	<ul style="list-style-type: none"> • being willing to make changes and be innovative • changing when relevant information or the context changes • enabling others to contribute whenever we (and they) can • enabling others to challenge our decisions and actions
Responsibleness	<ul style="list-style-type: none"> • acting on our responsibility to others for our decisions and actions • helping others to take responsibility for their decisions and actions

General allocation guidance

How will resource allocation impact electives and routine health care?

If resources such as clinical expertise become scarce, it may be necessary to prioritise responding to the pandemic over less urgent interventions (such as elective surgeries, cancer screening) that can be postponed. However, such a decision could have significant health impacts for individuals and should not be taken lightly. Consideration of what existing services may be cut from diverting resources and the populations most likely to be hit should be taken into account (Jones 2020). Decisions such as these are grounded in two interrelated justifications: to reduce the spread of COVID-19 and to prepare for a potential swell of COVID-19 patients.

Postponing non-essential interventions necessarily involves a trade-off between the harm caused by postponing routine care and the potential harm of health systems being overwhelmed. Decisions relating to postponing non-essential interventions need to be continually reassessed. National instructions to prohibit non-essential services may cause harm if they are applied to organisations in regions that do not have a high risk of COVID. The decision-making group needs to make its decisions based on local, regional and national data including ethnicity data

Should the standard of care for patients change in an epidemic?

Patients should receive the best available care during a pandemic. However, the range of options for what is 'best' could well change as a result of the constraints imposed by a pandemic.

For example, patients may not be allowed to have visitors (especially when PPE is scarce). Such a restriction may be necessary to protect staff and other patients and reduce the risk of transmission from and to visitors. This could mean that some patients become seriously ill and die without the support of relatives and friends. This will inevitably cause distress. Access to other modes of communication, such as phone and video calls, should be provided where possible. Organisations should transparently communicate decisions about changes to standard of care to patients, whanau and staff, and should seek to review and, where appropriate, to reverse these decisions when the pandemic crisis allows.

Where patients who are not infected are discharged earlier because of the risk of a potential transmission of COVID-19, those patients should receive more extensive continuing care at home, to ensure they are not disadvantaged (University of Sydney 2020). This could be assisted through increased telehealth services and should only occur when clinically appropriate.

The decision-making group needs to give explicit consideration to the implications of tikanga and mātauranga Māori, including by involving tikanga experts in the discussion, when making decisions about standards of care in times of crisis.

How should clinical trials operate during the COVID-19 response?

Clinical trials are one of the ways to offer quality care to patients. Knowledge gained from research can also improve our healthcare system and, is an aspiration stated in the Health Research Strategy. If we wish to continue to provide vital healthcare during the worst of an outbreak, clinical trial patients should not be excluded.

As outlined in guidance above in relation to routine healthcare, the trade-off between harm caused by postponing the treatment option of a clinical trial and the potential harm of health systems being overwhelmed needs to be considered.

Treatment and management of patients on clinical trials may be impacted during the COVID-19 response. There is a need to balance the resource of clinicians and service providers with the demands of the pandemic response and conducting related research into it. Clinical trials are often an important treatment option for many groups of patients and effort should be made to continue the availability of clinical trials. However, in the pandemic setting, research should only be conducted if it does not impede emergency response efforts. As such, researchers should consider how their research might consume medical resources that may otherwise be made available to clinical staff working in response to the pandemic. Any new recruitment and screening of participants may continue where there is no contravention of the rules applicable to the relevant level of alert (according to the national COVID-19 response plan) and where continuing would have no adverse effect on the provision of care for those patients during the DHB's individual COVID-19 response.

It is paramount that those conducting clinical trials prioritise participant and staff safety. All research, including any research related to COVID-19, should consider any risk related to transmission of the virus, and must be justified accordingly. Participants must be informed of any risk of transmission in this process. The standards set out in the NEAC *National Ethics Standards* must also be met and accompanied by evidence of scientific review (NEAC 2019).

NEAC recognises and endorses the rapid response guidance and procedures that the Ministry of Health and Health and Disability Ethics Committees (HDECs) enacted to ensure the safe conduct of health and disability research during the COVID-19

response (see HDECs 2020). The HDECs have established a new emergency committee and are receiving COVID-19 related applications.

How will data be collected and shared?

Data sharing between different institutions is critical for effective resource allocation. For example, there may be opportunities for DHBs to share resources, depending on the extent of impact of COVID-19 in each region. It will be important to ensure that adequate care standards are in place to protect privacy and maintain confidential communications – crisis standards of care do not weaken DHBs’ fundamental obligation to protect the privacy and confidentiality of patients.

Collecting high-quality ethnicity and disability data for monitoring is fundamentally important. Data collection and sharing enables response measures and allocation decisions to be monitored and tailored to respond promptly and effectively to evidence of inequitable impacts and outcomes.

What are organisations’ obligations?

Organisations must share information, adjust protocols and balance resources and patient loads across their immediate surrounding region to ensure that the most consistent standard of care possible is maintained. Public health decisions should be transparent.

Proliferation of information in a pandemic situation can result in misinformation. Doctors are in a position of power during these situations, and in the context of ever-expanding amounts of misinformation and disinformation being proliferated through technological channels, it is important that information presented by health professionals and institutions is factual and correct.

Hypothetical cases

The three hypothetical cases presented below illustrate application of the ethical principles and Te Tiriti principles identified in this Framework. They are intended to generate discussion about the issues that may arise in particular cases, and the different demands they may require of decision-makers.

Case study one: Personal protective equipment allocation

Introduction

COVID-19 is an easily transmissible infectious disease. PPE is an important component of protecting staff and other patients from cross-infection, and can be considered a harm reduction resource, since appropriate use significantly reduces risk of viral transmission. During a pandemic, PPE may need to be prioritised and allocated. To support consistency and transparency, allocation should be based on a proportionate response to health risk (including population health risk) and need posed by the virus alongside reasoned guidelines.

Importantly, if staff are not provided with adequate PPE, their ethical and legal obligations to work in such environments may be weakened (Schuklenk 2020). Staff have an ethical obligation, based on their obligation to patients and colleagues, to contribute to a safe working environment. This includes the obligation to raise concerns about inadequate PPE. Managers must ensure that clear and safe communication channels are available. Staff should not be censured or reprimanded for raising reasonable concerns about PPE supply.

In order to optimise PPE availability, health systems must coordinate and cooperate to minimise the need for PPE, coordinate supply chain and distribution, and use PPE effectively and appropriately.¹² This also encourages solidarity.

Ensuring effective use of PPE requires appropriate training in infection prevention and control.

¹² For specific guidance, see WHO 2020b.

Using the Framework

All people are equally deserving of care

PPE should not be arbitrarily distributed. PPE prioritisation involves consideration of risk and risk minimisation. It is important to work with consumer and interest groups when making resource allocation decisions (for example, the Disabled Persons Assembly NZ), to ensure vulnerable people are not left behind, and risks are understood by decision-makers.

Seniority within the health system or organisational hierarchy is irrelevant to PPE distribution; that is, it should not be the case that an organisation distributes PPE to senior staff before junior staff as a matter of policy. The only exception to this is a situation in which senior staff with critical expertise require PPE, where the absence of such staff would disproportionately impact the system's ability to provide adequate treatment. Where this justification is used, the reasoning must be transparent.

Getting the most from the resources

As with vaccines, prioritisation of PPE for health care workers can be justified on several grounds: because of the increased risk health care workers face (with the principle of protection of the vulnerable in mind) and their instrumental role in maintaining essential social services (with the principle of the best use of resources in mind) and in recognition of the greater burdens they are carrying on behalf of society before the development of any vaccine (with the principle of reciprocity in mind).

NEAC recommends that health care workers receive PPE as a priority. This recommendation arose from the recognition that some members of society are critical to a successful response to a pandemic.

When decision-makers are considering distributing limited PPE to health staff during a pandemic, an egalitarian approach that treats all roles as equal may not serve the principle of getting the most from the resources. Application of that principle would require assessment of the instrumental value of individual people in the pandemic response, both during and after the pandemic.

Another way to get the most from the resources is to divert PPE from other health care contexts. PPE should not be diverted from standard clinical use in the treatment of other diseases or conditions (for example, surgery) except when the risk of exposure and harm from COVID-19 exceeds the risks related to those other applications.

Telehealth services can help conserve PPE but must not be used inappropriately. The acceptance and effectiveness of telehealth services should be assessed with due consideration of the nature of the patient population. For example, the availability of translation and support services.

As stated above, cancelling non-urgent or elective procedures that require use of PPE can assist in responding to pandemic outbreaks. However, decision-makers should continually reassess such restrictions.

Minimising harm and health protection

Distribution of PPE should protect health at individual, local, regional and national levels by minimising infection rates of COVID-19 (and other pathogens) in order to reduce mortality and morbidity from COVID-19 (and other diseases) across the population.

This takes account of the risk of exposure and the risk of infection resulting in COVID-19 morbidity or mortality. Some groups may be at high risk of exposure but low risk of severe COVID-19, or vice versa, and decision-makers should prioritise their needs to minimise harm by ensuring their health protection when PPE is scarce.

Risk of harm to providers contracting COVID-19 within the health care system will vary according to:

- the nature of the clinical encounter (for example, intubation is more dangerous than transporting patients)
- the infectious status of individual patients (that is, whether the patient has confirmed COVID-19, has suspected COVID-19 or does not have COVID-19)
- other patient characteristics (for example, whether they are agitated or violent)
- other health provider characteristics (for example, comorbidities or age).

Actively protecting the health of high-risk areas and groups, such as hospitals and essential workers, is necessary by minimising harm, not only to protect these areas and workers, but also to protect others, including patients and the broader community. This actively protects against, prevents and mitigates the impacts of COVID-19 for high-risk population groups and links into the Te Tiriti principle of tino rangatiratanga.

Achieving equity

Equity requires that distribution of PPE be prioritised to protect marginalised groups and prevent or minimise inequality relating to the risk of contracting COVID-19 or of suffering from a severe COVID-19 infection.

Because the principle of getting the most from the resources in this case is defined in terms of harm minimisation, this will for the most part align with prioritising the people most in need or those who might not do well if infected with COVID-19 and achieving equity. For both principles, decision-makers should prioritise those at greatest risk (both of infection and risk of severe COVID-19 mortality).

'Need' can relate to several distinct criteria. In the case of PPE, these include: the need to reduce the chance of those who take greater risks because of their health care or other roles contracting infection; the need to protect those who are most likely to contract COVID-19 through contact with carers; and the need to preserve the welfare of those who are most affected by COVID-19 (for example, those who are dying and their families).

Another option is to prioritise populations that are particularly impacted by COVID-19. One way to conserve PPE is to restrict visitors to inpatients or residents of care facilities. Equity requires that exceptions to this rule be made for minors or disabled patients who need access to carers and, in some cases, for patients at the end of life. Where visitors to such people are permitted, the value of openness should be

practiced. They should be provided with clear instructions about how to put on and remove PPE, and about performing hand hygiene before putting on and after removing PPE. The instructions should be provided under the supervision of a dedicated health care worker. NEAC understands that the pandemic may overload health providers and further reduce resources including access to a dedicated healthcare worker. Where this occurs, detailed written instructions should be available.

Tino rangatiratanga

Taking into account the principle of options, PPE distribution within Maori communities should be decided by Māori, and the resources required to make those decisions given to Maori at all levels of resource allocation.

Options

PPE is of particular importance in avoiding transmission of COVID for Maori and is an effective way to avoid inequitable outcomes. PPE is also of particular importance in the context of the system's ability to deliver a holistic model of whānau-centred care and services that are culturally safe and culturally responsive. It is also important in the context of creating alternative 'options' for rigid public health measures; for instance, utilising PPE as a mechanism for whānau to continue to visit with patients at the end of their life, or to support hapū mama and pēpē during labour and delivery.

Active protection

Equity and active protection may require the additional provision of PPE to Māori health providers and groups in which Māori and Pacific peoples are more highly represented; for example, care home workers. This ensures the patient, whānau and broader community are actively protected and the impacts of COVID-19 are minimised and mitigated. Using ethnicity data to target frontline workforces with high populations of Māori and Pacific peoples will ensure these populations are appropriately identified. It will also provide information about the impacts of PPE for whānau and communities (Te Rōpū Whakakaupapa Urutā 2020).

Partnership

Partnership can be achieved in the context of PPE by recognising epistemic authority; that is, listening to marginalised groups regarding what they need and how best to distribute resources – they have valuable and specialist knowledge about their own needs. Examples of partnership include working with iwi and Māori health groups to ensure the needs of Māori are met and that Māori are involved in or control distribution within their communities. This recognises the principle of partnership and enables decision makers to work with the scientific evidence that underlies decision-making during a pandemic.

Case study two: Vaccine allocation

Introduction

Efforts to control the COVID-19 pandemic at the national level will only succeed under a coordinated regional and global strategy. New Zealand should participate in and support international conversations about fair vaccine allocation globally.

From an epidemiological perspective, all individuals living in a geographic area (such as New Zealand) must be considered as part of the immunisation programme, regardless of their immigration status. This includes all non-residents currently living in, or unable to leave, New Zealand.

Safe and effective vaccines are the straightest route to controlling the COVID-19 pandemic. When a vaccine is developed, demand will likely exceed immediate supply and decisions regarding prioritisation will be necessary.

A COVID-19 immunisation programme must be driven by the science of the vaccine, including vaccine efficacy using both the recommended full schedule and less than the full schedule, the course of vaccine administration, contraindication and vaccine safety considerations, vaccine presentation (for example, whether it requires multiple doses), the cost of the vaccine and vaccine supply (that is, whether sufficient quantities can be purchased or produced locally and maintaining quality of product across distribution chains). Immunisation must be based on sound infection control principles developed from the best available immunological, epidemiological and clinical evidence. Pharmacovigilance and surveillance to monitor for adverse events and effectiveness will be especially important given the anticipated lack of long-term safety and efficacy data.

Vaccination must be voluntary. Efforts to maximise efficient use of resources and save lives may conflict with the principle of individual autonomy. Given the enormous economic and social impact of the COVID-19 pandemic and unprecedented restrictions on personal liberty, decision-makers may consider incentivised vaccination for COVID-19. The core public health principles of necessity and least infringement require that any restriction on individual liberty must be deemed to be necessary to achieve the public health goal.

Prioritisation of specific groups for access to a vaccine will require careful public justification and communication, to ensure that these groups do not perceive themselves as test subjects and that others do not perceive them as being unfairly privileged.

Applying the principles

All people are equally deserving of care

Priority may be given to individuals with inadequate or limited capacity to respond to COVID-19 using non-pharmacological public health measures (such as social distancing and PPE).

Other people will require greater health protection due to vulnerability caused by their social situation or role, including frontline health workers at high risk exposure to COVID-19 patients and people with less capacity to socially isolate (for example, prisoners or those in residential care facilities).

Another way to minimise risk is to vaccinate health care workers who may be at risk of becoming vectors of disease to protect vulnerable patient groups, particularly in the hospital setting (for example, young cancer patients who are immunocompromised due to chemotherapy). In this instance, vaccinating health care workers may have a wider population health benefit as a form of active protection. It may also result in equity benefits, if disadvantaged groups that may be at a higher risk of harm are more likely to be exposed to health care workers should they become infected.

Getting the most from the resources

Several principles can support specific distribution mechanisms. For example, prioritising health frontline workers can be justified by their greater risk (protect the vulnerable) and their instrumental role in maintaining essential social services (best use of resources), as well as in recognition of the greater burdens they carried on behalf of society before an effective vaccine was developed (reciprocity).

An immunisation programme should aim to maximise the benefit of a vaccine in reducing national mortality and morbidity as a result of COVID-19 and enable the functioning of essential social services.

Priority may be given to individuals whose work is essential for maintaining health care systems, and pandemic response and essential social services.

Minimising harm and health protection

Priority may be given to individuals with inadequate or limited capacity to respond to the COVID-19 using non-pharmacological public health measures (eg, social distancing, PPE).

Other people will be vulnerable because of their social situation or role, including frontline health workers at high risk exposure to COVID-19 patients and people with less capacity to socially isolate (eg, prisoners or those in residential care facilities).

The option of vaccinating healthcare workers to minimise risk and thereby protect health also links into this principle (see discussion in 'All people are equally deserving of care', above).

Achieving equity

Vaccine allocation could also prioritise people who are the most vulnerable to contracting COVID-19 or developing severe COVID-19 disease. Such vulnerability depends on both biological and social features.

In relation to vaccination, protecting the most vulnerable and those at highest risk typically aligns with the principle of maximising the population benefit of vaccines. This assumption must be supported by evidence, as some research indicates that older people are less likely to benefit from a COVID-19 vaccine, because their immune systems are weaker and less reactive. It could therefore be the case that the priority would be to vaccinate the people who will be most likely to catch COVID-19 (for example, people working, out in society, or accessing health care) but less likely to suffer harm themselves, in order to protect the most vulnerable.

Some people with underlying health conditions or pre-existing co-morbidities will be vulnerable to developing severe or critical COVID-19 infection and at increased risk of dying or suffering serious and possible long-term COVID-19-related morbidity.

Vaccine allocation should avoid remediable differences among groups of people based on social, economic, demographic or geographic factors. An equitable immunisation programme will require:

- recognition of epistemic authority (vulnerable and marginalised communities have valuable understandings of their own needs)
- allocation of resources to protect and promote the interests of vulnerable or marginalised populations
- funding for equitable access to vaccines, including funding for programmes for Māori to design and deliver vaccine programmes to their own communities. Affordability and access must not become barriers to widespread vaccine availability.

Vaccine allocation decisions should try to avoid or minimise compounding disadvantage by ensuring those who are not prioritised for access to vaccines receive other essential resources, such as PPE or priority access to health care.

Tino rangatiratanga

If a vaccine is available but in short supply, Māori should be able to decide the best mechanism for allocation in response to Māori aspirations for wellbeing. This may include consideration of the proportion of vaccines Māori require and allocation methods for distribution across Māori population groups.

Options

Vaccination distribution decisions must consider Māori-led models of care and service delivery, and look at a range of options as to how individuals access and receive vaccinations. Māori must be included in clinical trials testing potential vaccines to ensure the safety data is relevant for Māori.

Active protection

Māori must receive additional resources to ensure they have access to vaccine; this may include different models of distribution/communication etc. For instance, solutions may include outreach vaccination programmes (or hub-and-spoke models of care) as a means of engaging with, and actively protecting, Māori traditionally underserved by health and disability services.

Partnership

National discussions involving vaccine development/purchasing should involve Māori to ensure they take part in in the design, delivery and monitoring of a national vaccination strategy and campaign.

Case study three: Intensive care unit allocation

Introduction

To show fairness and sustain public trust, we need to implement triage guidelines consistently throughout New Zealand. Solidarity requires that resource allocation reflect our common interest in addressing any pandemic; collaborative regional cooperation may require the reallocation of resources between health services based on differential need. Clear and consistent triage guidelines and triage committees can reduce the moral injury and distress frontline health workers can experience during a pandemic.

Current approaches in the guidelines for access to ventilators and ICU beds use comorbid conditions, future life expectancy, age and likelihood of recovery, and status as health and public safety workers as the key determinants for prioritisation – all of which select against lower socioeconomic classes, Māori, Pacific peoples, the elderly and people with a disability.

There are several tensions to be considered when allocating resources in the clinical setting, as there is the additional consideration of clinical appropriateness to take into account. In terms of ICUs, both medical futility and the risk for harm need to be fully considered (Ballantyne 2020) These values/principles will limit the ability for equity to be fully realised in critical care.

Applying the principles

All people are equally deserving of care

NEAC agrees with *Sydney Health Ethics: An Ethics Framework for Making Resource Allocation Decisions within Clinical Care: Responding to COVID-19* that there are no ethically defensible grounds to prioritise a patient infected with COVID-19 over a patient who is not infected (University of Sydney 2020). Triage guidelines must be applied to all current and new patients presenting with critical illness, regardless of their diagnosis of COVID-19 or another illness. This means we use the same standards (for example, chance of benefit); not necessarily the same processes on the ground (given such patients need to be kept separate). The point here is that not all ICU resources should necessarily be allocated to COVID-19 patients. If someone comes in with an anaphylactic reaction or a car crash injury and has a high prospect of benefit, clinicians should/could prioritise them over a COVID-19 patient who has less chance of benefit.

Disability status or age must not be used as a simple proxy for health status or capacity to benefit. Screening measures, including the quality-adjusted life year (QALY) measure, must be avoided, as they are inherently biased against people with disabilities. Triage decisions should be based on assessment of an individual's personal medical history.

Decision-making on resource allocation should take into account the goals of increasing patient autonomy/choice and increasing patient quality of life. For example, if a particular health intervention is only available for one of two patients, the chance of death might be equal, but one patient may be willing to accept their own death rather than have another patient die. The other patient, in contrast, may wish for the intervention.

Age should not be used to categorically exclude individuals from standard-of-care therapeutic interventions; nor should specific age-based cut-offs be used in allocating resources.

Getting the most from the resources

Most critical care triage guidelines prioritise saving lives as the primary ethical value; for example, they may maintain that resources should be allocated to patients with the greatest capacity to benefit from ICU. This is often defined as the likelihood of surviving an ICU admission and for one year following discharge (Biddison 2018). This principle sometimes conflicts with the principle of achieving equity. Giving priority to individuals who have the most chance of benefiting from treatment in ICU may achieve the aim of saving the maximum number of lives. But greater ability to benefit is often associated with wider determinants of health, such as higher socioeconomic status. Socioeconomic status in turn may be systematically distributed to some groups and away from others. As a result, a socioeconomically advantaged group may be more likely to be represented among those individuals selected for ICU. Where reduced ability to benefit by reason of socioeconomic disadvantage is linked to injustice, this results in a tension with the value of equity.

Given the unequal distribution of comorbidity and multi-morbidity among the New Zealand population (for example, on the grounds of socioeconomic deprivation and ethnicity), it will be very difficult to avoid unequal outcomes based on demographic factors.

Time trials of ICU may be necessary to manage patients and families' expectations and avoid prolonged stays in ICU with minimal and decreasing prospects of benefit. Clear criteria and schedules for re-assessing patients on time trials will be necessary.

Minimising harm and health protection

For critically ill COVID-19 patients, the primary consideration should be whether ICU care is in the patient's best interest and what other care may comprise appropriate harm minimisation and health protection, including palliative or supportive care.

It is important to ensure that patients who do not initially receive critical care resources are still provided with the best supportive care possible and are re-evaluated regularly for consideration of resource allocation as supplies become available.

Patients who are unable to receive invasive mechanical ventilation may be able to receive supplemental oxygen through a non-invasive route as resources permit.

ICU care may be ethically withdrawn when it is no longer in the patient's best interests (that is, where harm of treatment outweighs the prospect of benefit). Decisions about patients' best interests must follow the process and principles of right 7(4) in the Code of Health and Disability Services Consumers' Rights. Care may also be ethically withdrawn if it is judged to be medically inappropriate because the prospect of benefit falls below a predetermined threshold. Minimising harm and health protection consequently becomes more nuanced where focus is placed on minimising harm by alleviating suffering and protecting quality of life.

The implementation of early palliative care interventions can provide 'a better quality of life, less treatment intensity, and no consistent impact on mortality' (Maves et al 2020). In these cases, the patient's health is protected by recognising the harm, or suffering, ICU interventions would cause to the remaining level of health the patient has while they are alive. Here, the patient's psychological health is also protected. This offers a strong rationale for carefully integrating early palliative care for all patients who are impacted by crisis care.

Decisions will also need to be made in the community setting; patients may decide to stay at home with their whānau to die, rather than to go to the hospital.

There is no ethically significant difference between withholding and withdrawing life-sustaining treatment, but health care providers, patients and families often find decisions to withdraw treatment more emotionally and psychologically challenging. Considering the implications of withdrawing treatment may subsequently protect emotional and psychological health.

Achieving equity

Patients with the most severe disease who are most likely to die or suffer without treatment should be prioritised for ICU access. Often this principle will align with getting the most out of resources, because the sickest patients will be most likely to benefit from ICU care. However, some patients will be so sick they have minimal chance of survival, even with ICU intervention. Importantly, there is considerable risk of harm for these patients if ICU is offered on grounds of equity rather than clinical appropriateness. In these cases, the equitable approach may be to alleviate suffering by ensuring the patient has access to palliative care.

Tino rangatiratanga

For Māori, kaumatua (tribal elders) and kuia (female elders) are considered guardians of their culture, but mana whenua and whānau should be involved. In some cases, individuals might be all of these. This should be taken into account to ensure ICU decisions are culturally appropriate to Māori.

At an organisational level, decision-making groups, such as those within DHBs, should ensure that Māori have a decision-making role in the design, delivery and monitoring of ICU services and resource allocation. At a patient level, tino rangatiratanga could be enacted by Māori patients (or their whānau) having the final decision over whether to enter ICU, based on available information.

Options

Service providers must ensure Māori patients (or their whānau) are provided with all possible options for treatment and recovery and make associated risks and benefits clear.

Active protection

Services can identify Māori individuals at risk of health complications potentially resulting in ICU treatment. Services must engage with Māori individuals to ensure they are supported with the resources/services required to actively protect and prevent them from requiring ICU care. This requires partnership, planning and coordination between community, primary and secondary care.

Partnership

Services must partner with Māori in the design, delivery and monitoring of ICU services and resource allocation. At a DHB level, this could be enacted through existing Māori/iwi partnership arrangements, supplemented with relevant Māori subject matter expertise where required.

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