SPOTLIGHT ON HEALTH

TE TAPEKE
FAIR FUTURES IN AOTEAROA

ROYAL
SOCIETY
TE APĀRANGI

Royal Society Te Apārangi has convened a diverse, multidisciplinary panel[*] to examine issues of fairness, equality, and equity in Aotearoa New Zealand. The spirit with which the panel is approaching its work on fairness in Aotearoa is Te Tapeke, from ‘ka tapeke katoa te iwi’.[†] This concept of inclusion conveys the importance of valuing and including all people. The panel’s task is to identify and highlight some of the important choices New Zealanders face in determining how to shape te tapeke fair futures in this country.

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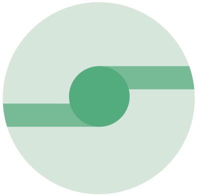
[*] royalsociety.org.nz/fair-futures [†] Joshua 4:11–13. ‘Including all people, without exception’.

TE TAPEKE

The inclusion, leaving no one out.

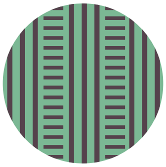
KORU

Two jointed koru spirals:
one depicts new beginnings, life and hope;
the other a point of balance, a state of harmony in life.



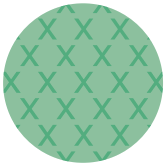
TUKUTUKU

Two contemporary tukutuku designs:



Mūmū

represents
alliance, your move,
my move.



Purupuru Whetū

the stars and
the great people
of our nation.

RĀRANGI UPOKO
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HE TĪMATANGA KŌRERO

INTRODUCTION

Fresh air and food, open spaces, and healthcare for all. Our island home of Aotearoa New Zealand holds the promise of a healthy and therefore content population. But access to health services in this country is a story of ongoing inequity (1). Although life expectancy has increased over the last 70 years for all population groups (2), persistent differences in access to quality healthcare services (1) mean that many people in disadvantaged groups live significantly shorter lives than others.

Te Tapeke Fair Futures panel invites New Zealanders to think about health and fairness by highlighting specific health issues that are prevalent at particular stages of life. This is a very selective range, and there are many other important health issues the panel is not able to cover in this spotlight.

This spotlight is one in a series of papers by Te Tapeke Fair Futures panel that considers a range of important public issues through a fairness lens.[1, 2]

HE AHA E HIRA TE TŌKEKE I ROTO I TE HAUORA?

WHY DOES FAIRNESS IN HEALTH MATTER?

The vision of Te Tapeke Fair Futures panel is a healthy population in Aotearoa where people are physically, mentally, and spiritually well, and have the opportunity to enjoy life and pursue their life plans (3). A just society would ensure equitable access to high-quality healthcare services so that people have the ability to be educated, to work, and to contribute to society in multiple ways.

Fairness in health is important because it has positive effects on New Zealand's society and economy. When inequities exist, some people suffer unjustly (4).

Many underlying causes of ill health lie beyond the control of individuals (5). Colonialism, racism, privilege, and bias are all factors that hinder various population groups from readily accessing high-quality health services that are provided in a culturally respectful way. The panel's vision of equity in health outcomes therefore recognises that some groups need different resourcing, interventions, and approaches for there to be equitable health outcomes (6).

[1] It is beyond the purpose, intention, and resources of the panel to provide a complete and comprehensive review of the policy and analysis in these areas in Aotearoa New Zealand.

[2] The panel acknowledges that Aotearoa New Zealand is, by many metrics, a desirable place to live and often a sought-after destination for immigrants.

TE TIRITI O WAITANGI ME TE HAUORA

TE TIRITI O WAITANGI AND HEALTH

Te Tiriti o Waitangi The Treaty of Waitangi is Aotearoa New Zealand's founding document, signed by the British Crown and Māori in 1840. The Māori translation of te Tiriti reaffirms Māori tino rangatiratanga sovereignty. It also promises Māori official protection, equal citizenship, and recognition of taonga treasures, which include waiora health (7). Tino rangatiratanga, particularly as it relates to waiora, encompasses the right to self-determine care and provide for communities. Te Tiriti is essential to any discussion about health equity for Māori in Aotearoa (1,7,8).

The special rights of Māori as Indigenous people are also reaffirmed by the United Nations' (UN) Declaration on the Rights of Indigenous Peoples (9), which New Zealand signed in 2010.

NGĀ TIKA TANGATA ME ĒTAHI ATU POU TARĀWAHO MŌ TE TŌKEKE

HUMAN RIGHTS AND OTHER FRAMEWORKS FOR FAIRNESS

New Zealand has special obligations to ensure the health and wellbeing of Pacific peoples, both those living in this country and in their Pacific nations of origin (particularly Niue, Tokelau, and the Cook Islands, given their special relationship to this country as part of the Realm of New Zealand).[3]

In this country and internationally, health is regarded as a human right, underpinned by the New Zealand Bill of Rights Act 1990 (11) and the 1948 UN Universal Declaration of Human Rights (12). New Zealand has committed to addressing equity and protecting the health rights of certain groups through these and other international conventions (13–15). Those groups include children (16) and disabled peoples (15).

Aotearoa has also signed up to the UN Sustainable Development Goals, several of which promote good health and wellbeing for everyone, and aim to reduce health inequities (17,18). New Zealand belongs to the World Health Organization, which in 2009 made reducing health inequities a priority for all its member states (19).

[3] The Realm of New Zealand consists of the entire area (or realm) in which the monarch of New Zealand functions as head of state. The Realm of New Zealand is a collection of states and territories united under its monarch. New Zealand is an independent and sovereign state. It has one Antarctic territorial claim (the Ross Dependency), one dependent territory (Tokelau), and two associated states (the Cook Islands and Niue) (10).

HE AHA TŌ TĀTAU MŌHIO KI TE HAUORA?

WHAT DO WE UNDERSTAND BY HEALTH?

For many peoples and cultures in Aotearoa, health has a broad meaning that goes beyond today's dominant Western focus on physical diseases and their medical treatment.

Te ao Māori view of health is multidimensional and integrates physical, mental, and spiritual wellbeing. It is wide in scope, inclusive of individuals, whānau family, and te taiao the natural environment. Contemporary models include Te Whare Tapa Whā – the four cornerstones of Māori health (20),[4] Te Wheke – the octopus and its tentacles symbolising the eight dimensions required for waiora total wellbeing (21),[5] and Te Pae Māhutonga – the Southern Cross constellation representing four keys to promoting health (22).[6] Although debated, these models represent an approach to health that recognises whanaungatanga reciprocal relationships as key to living well. Principles and practices of manaakitanga caring for and supporting others, and kaitiakitanga nurturing socio-environmental relationships are also central (23).

Pacific approaches to health prioritise community too, with balanced relationships (24), aiga family, alofa love and compassion, fa'aaloalo respect, fa'amaualalo humility, tautua service, and spirituality providing pathways to a healthy, resilient society (25,26).

As with other groups, disabled people have different views of what it means to be healthy. For some, being healthy means being independent. Others point to the importance of *inter*dependence – the importance that relationships play in health and wellbeing.

For everyone, what determines health also intersects with poverty, class, ethnicity, and gender – all of which can be associated with barriers to people accessing health services. They can also affect people's access to other necessities for good health, such as decent housing[7] and healthy food.

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[4] Taha tinana physical health, taha wairua spiritual health, taha whānau family health, and taha hinengaro mental health.

[5] Te whānau the family, waiora total wellbeing for the individual and family, wairuatanga spirituality, hinengaro the mind, taha tinana physical wellbeing, whanaungatanga extended family, mauri life force in people and objects, mana ake unique identity of individuals and family, hā a koro ma, a kui ma breath of life from forbears, and whatumanawa the open and healthy expression of emotion.

[6] Mauriora cultural identity, waiora physical environment, toiora healthy lifestyles, and te oranga participation in society. The two pointers are Ngā Manukura (community leadership) and Te Mana Whakahaere (autonomy).

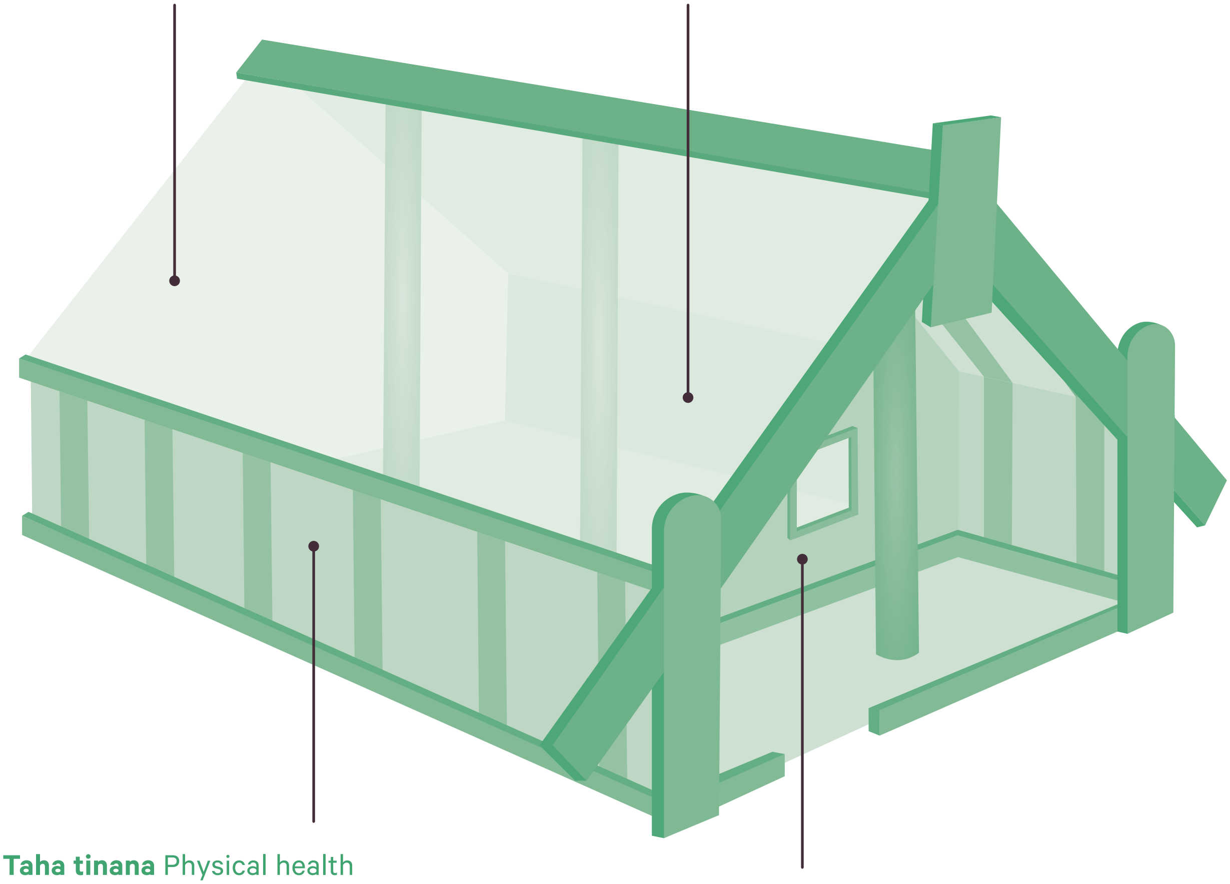
[7] See Te Tapeke Fair Futures' '*Spotlight on housing*'.

Taha hinengaro Mental health

Inseparability of mind and body; expressing thoughts and feelings

Taha whanāu Extended family health

Wider social systems; belonging, sharing and caring



Taha tinana Physical health

Good physical health

Taha wairua Spiritual health

Unseen and unspoken energies; faith and spiritual awareness

Te Whare Tapa Whā reproduced by permission of Oxford University Press Australia from *Māori Health Development* © www.oup.com.au

HOROPAKI MŌ TE ĀHUATANGA HAUORA I AOTEAROA

CONTEXT FOR THE HEALTH SITUATION IN AOTEAROA

Aotearoa once prided itself on being a healthy country. ‘The death rate in New Zealand’, the *Report on the Statistics of New Zealand* for 1889 enthused, ‘contrasts very strikingly with those in other Australasian colonies and with European countries, and furnishes evidence of the great salubrity of the climate of the colony’ (27). Such enthusiasm was only possible by ignoring the circumstances of Māori. In the 1700s, prior to Cook’s visit, estimates suggest that Māori life expectancy was similar to that of ‘privileged 18th-century societies’ (28). After colonisation, however, the Māori population declined rapidly in the face of introduced diseases, warfare, eviction from ancestral lands, and the undermining of customary ways of life. From an estimated 90,000 in 1840, the population had declined to 42,000 by the 1890s. In contrast, the Pākehā population grew and experienced unparalleled good health. Climate may have been one factor supporting Pākehā health but it is more likely that healthy migrants, good nutrition, a well-dispersed population, and declining birth rates from the 1870s increased Pākehā longevity. These gains for Pākehā were facilitated by the appropriation of Māori lands and significant investment in Pākehā community development across New Zealand.

The Inspector of Native Schools, James Pope, believed Māori would thrive if they learned the hygiene practices of Pākehā, and published *Te ora mo te Maori* (published in English as *Health for the Maori*) in 1884. By the late 1890s, the population began to revive, perhaps in part through adopting Pope’s recommendations for coping with the changes that Europeans had brought to Māori living conditions, and the rise of immunity to introduced diseases. Young Māori leaders emerging from the boys’ high school Te Aute College, such as Āpirana Ngata and Rēweti Kōhere, drew on Pope’s *Health for the Maori* as their blueprint for improving the health of their communities (29). While rates of infant mortality and infectious diseases remained high, large families increasingly became the norm, though members often died young because of the ravages of diseases such as tuberculosis.

The 1938 Social Security Act attempted to introduce universal free healthcare services but was foiled by the opposition of doctors who did not want to become state employees and argued for the right to maintain private practice: hence a dual public-private system emerged. Opening 1961, the Southern Cross Medical Care Society, a non-profit insurer, offered private health insurance to those with cash to spare (30).

Left: Māori and Pākehā nurses work side by side at an East Coast typhoid fever camp in 1911. Heni Whangapirita (left) was from Ngāti Porou. The nurse on the right is probably Nurse McElligott.

Te Ara Encyclopedia of New Zealand. Appendix to the Journals of the House of Representatives, 1912, E-3. Creative Commons.

In 1946, the child benefit, paid directly to mothers, became universal for all families and was particularly important for Māori mothers who were likely to have larger families. Between 1945 and 1966, according to demographer Ian Pool, Māori infant mortality and deaths from infectious diseases declined significantly as Māori urbanised, found reasonably paid employment, and living standards improved (31).

In 1972, the Government introduced the Accident Compensation Act, and extended it in 1973, to provide universal medical coverage and compensation for injury by accident. In return, individuals lost the right to sue for damages. While this has led to good outcomes for accident victims, it has created unfairness in that those who become ill through no fault of their own receive less financial and rehabilitation assistance than those injured by accident (32).

Further injustice lies in the fact that those who can afford it can buy the protection of health insurance. This allows them ready access to private healthcare, for example, timely surgery rather than having to queue in the public health system. A survey conducted between 2011 and 2015 found that more than one-third of adults had health insurance (33).

Typically, individuals who buy health insurance have higher incomes, live in the main cities, and have good health. While private health insurance was owned by 39% of Asian adults and 37% of non-Māori, only 20% of Māori and Pacific adults had such coverage (33).

Significant gaps in health status between Māori, Pacific Island peoples, and Pākehā were exacerbated by economic policies from 1984 onwards, when successive governments encouraged health providers to adopt market models. By the 1990s, these largely saw an end to free primary healthcare. From 2017 to 2019, Māori life expectancy, at 77.1 years for women and 74.4 for men, was lower than for non-Māori, at 84.5 years for women and 81 for men (34) .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TE ROA O TE ORA E TŪMANAKOHIA ANA ME TE REREKĒTANGA

LIFE EXPECTANCY AND INEQUITY

The age profiles of the Māori and non-Māori population groups in New Zealand differ, with Māori having a much younger population profile than non-Māori (Figure 1).

FIGURE 1 Demographic information showing the age distribution of population groups from the 2018 New Zealand Census.

Given these varied population age profiles, the health needs of different ethnic groups are likely to differ substantially over the lifecycle. The panel's opinion is that this should be taken into account when considering health priorities for Aotearoa.

Health disparities are obvious when comparing the life expectancies of ethnic groups and men and women in the New Zealand population (Figure 2) (35). While women live longer than men, the cumulative effect of sexism leads to lower incomes and pension entitlements, which may increase the risk of poverty. The death of a male spouse may increase the risk of loneliness. A 2017 report suggested a 29% increase in the number of people with dementia over the years 2011 to 2016 and, because women live longer, they are more likely to suffer from dementia (36). In 2016, older people used 42% of health services while comprising 15% of the population (37).

Men's lives are much more likely than women's to be cut short prematurely through suicide. In 2016, 412 men died by suicide compared to 142 women (38). Young Māori men are particularly at risk (39).

Significant health inequities can be seen when looking at the life expectancies for Māori and Pacific peoples compared with the total population (Figure 2).

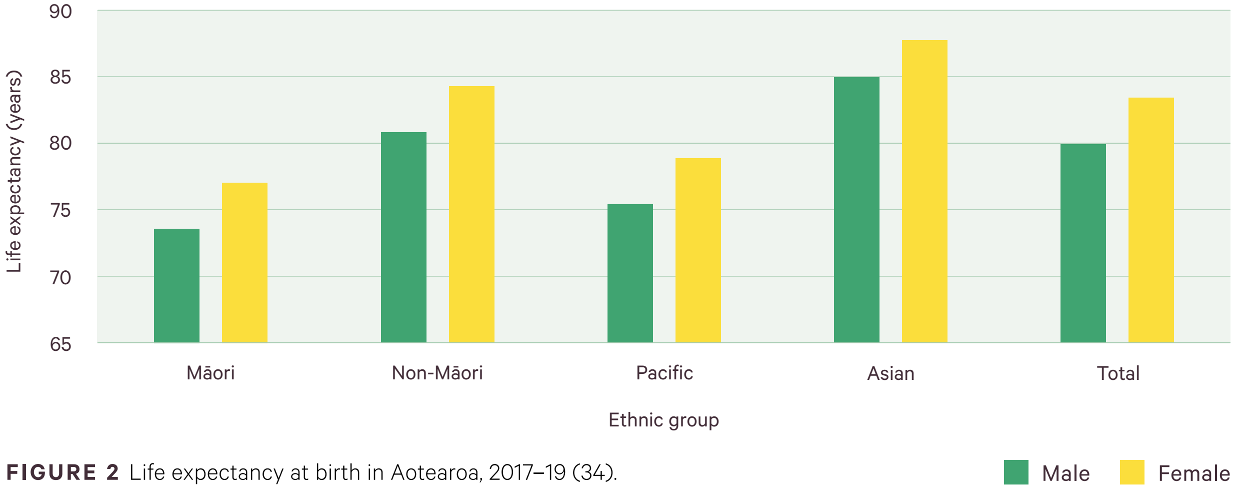


FIGURE 2 Life expectancy at birth in Aotearoa, 2017–19 (34).

What is driving the disparities?

'Some 53% of Māori deaths and 47.3% of deaths of Pacific peoples were attributed to potentially avoidable causes, such as cancers, heart disease, car crashes and suicide. For people who are not of Māori or Pacific ethnicity, the comparative figure is less than 25%'(40).

Comparable ethnic health disparities are seen in other developed countries with Indigenous populations, including Australia, Canada, and the United States (19). Colonisation has and continues to contribute to social and health inequities in Aotearoa (41,42).

Experts suggest that poor outcomes for Māori health are a legacy of breaches of te Tiriti, including the confiscation of land and other resources (7). These losses have led to social and economic inequities, a lack of political power, and intergenerational poverty. Colonisation and systemic racism have resulted in many Māori being marginalised and deprived of self-determination (7).

One way that racism can manifest in health is through 'inaction in the face of need' (7). Māori can also receive lower-quality care or treatment than non-Māori (6,43). Research on kidney disease treatment, for example, shows that death rates for patients on the wait list for a kidney are higher for Māori than non-Māori (44).

Attention is increasingly being drawn to evidence that the New Zealand health system prioritises non-Māori and does not recognise, nor adequately respond to, the complex healthcare needs and living situations of other groups (1).

Results from the New Zealand Health Survey show that Pacific peoples experience high rates of healthcare needs that are unmet, compared to the total New Zealand population (26). These include not being able to access health service providers because of cost and location. Communication barriers and culturally insensitive behaviour also affect how Pacific peoples experience care (26). Across ethnicities, Pacific peoples have the highest rates of multimorbidity – having more than one chronic health condition. Life expectancy for Pacific peoples is more than six years lower than that of non-Māori and non-Pacific peoples. This is primarily caused by long-term conditions that are often avoidable, including heart disease, diabetes, and cancer (26).

Disabled people can often have difficulty accessing healthcare. This is the result of both attitudes from healthcare professionals and physical barriers to health services, including timely information about what is available. Tāngata whaikaha Māori with disabilities have been shown to have less access to support services (45). Disabled people report that sometimes their disability is used to 'explain away' illnesses, resulting in a much-longer wait for diagnoses and treatment. The perspectives of disabled people made a significant contribution to how New Zealand responded to the Covid-19 pandemic. The use of the concept of the 'bubble' – 'a fragile yet beautiful structure that has to be nurtured and preserved' – to help people define their immediate circles, and describe self-isolation and quarantine, was first promulgated by Dr Tristram Ingham (Ngāti Kahungunu, Ngāti Porou) from the University of Otago (46).

Inequities in other areas of life also affect health, including employment, education, housing, and justice. For example, 24% of Pacific peoples report not having enough money to meet their everyday needs, while 40% live in homes that are always cold (26).

The effects of the Covid-19 pandemic have made health disparities worse for many disadvantaged groups, opening the door to a conversation about what urgent actions need to be taken for the inequitable health situation in Aotearoa to improve.

While there may be unlimited demand for health services, there are clearly financial constraints on what can be provided. If equity is to be the key driver in the provision of health services, it may be that the distribution of dollars spent on health will have to be rethought.

NGĀ HURIHANGA O TE REREKĒTANGA
LIFECYCLES OF INEQUITY

In this paper, the panel has highlighted some particular health issues that are prevalent in different stages of the lifecycle. Through the presentation of data about specific health issues, we can see how inequities play out over a lifetime, affecting quality of life and – ultimately – how long some people live. As noted previously, there are many examples of different issues across the lifecycle, and some important issues are not reflected here.

Infants: immunisation

Immunisation is when a vaccine is administered, stimulating the body's immune system to build resistance to disease. The immunised person is then protected from becoming infected if they are exposed to the disease in the future. Globally, immunisation – particularly during childhood – is a mainstay of preventive public health strategies against infectious diseases. In New Zealand, children immunised under the National Immunisation Schedule are protected from contracting 12 debilitating or life-threatening illnesses, including diphtheria, whooping cough, hepatitis B, and measles. If illness is contracted, as no vaccine is 100% effective, the disease will tend to be less severe in those who have been vaccinated (47,48).

What is the situation in New Zealand?

Childhood immunisation rates have historically been low but have improved since the mid 2000s. The 2017–18 national target was for 95% of children to be fully immunised at each time point of eight months, two years, and five years. This has not been achieved, with national coverage for these age groups between mid-2016 and mid-2020 being around 88–93% (49). Although a considerable gap in immunisation rates between Māori and New Zealand European and Pacific children had closed substantially by 2015, this improvement has not been sustained. Immunisation rates for Māori have declined since about 2016, leading to a widening gap between Māori and other ethnic groups (Figure 3).

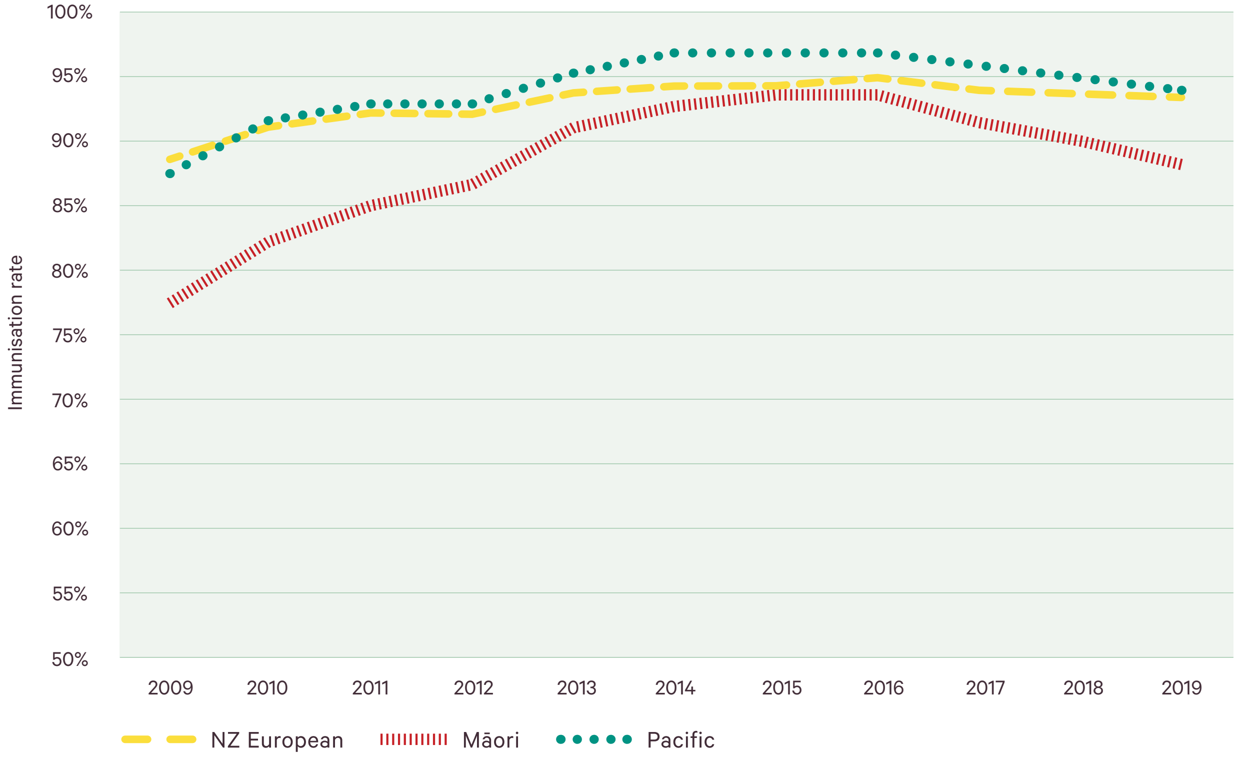


FIGURE 3 Percentage of 12-month-old children who had received all age-appropriate immunisations, 2009–19. Note: the y-axis has been truncated for easier visualisation of differences between ethnic groups. Data compiled from national and district health board (DHB) immunisation data (6).

An illustrative example of the importance of immunisation is provided by the 2019 measles outbreak, which saw New Zealand reach the second-highest rate of measles cases among the countries in the Western Pacific (50). Different demographic groups were affected differently: those more likely to be hospitalised were the very young and older people, Māori, Pacific, or Middle Eastern, Latin American, and African (MELAA) peoples (Figure 4).

A report on a subgroup of hospitalised patients has highlighted some of the devastating consequences of this measles outbreak (52). Although there were no deaths in New Zealand, three children developed encephalitis (brain inflammation), 65 people – 39 of whom were young children – developed pneumonia, and two women experienced late-stage miscarriages. The outbreak has been partly attributed to the historically low childhood immunisation rates dating back to the 1980s and 1990s, leading to large numbers of people being vulnerable to the highly contagious disease. In Sāmoa, the measles outbreak, likely introduced by a New Zealand visitor, was catastrophic, killing 83 people and infecting more than 5,500 (53,54).

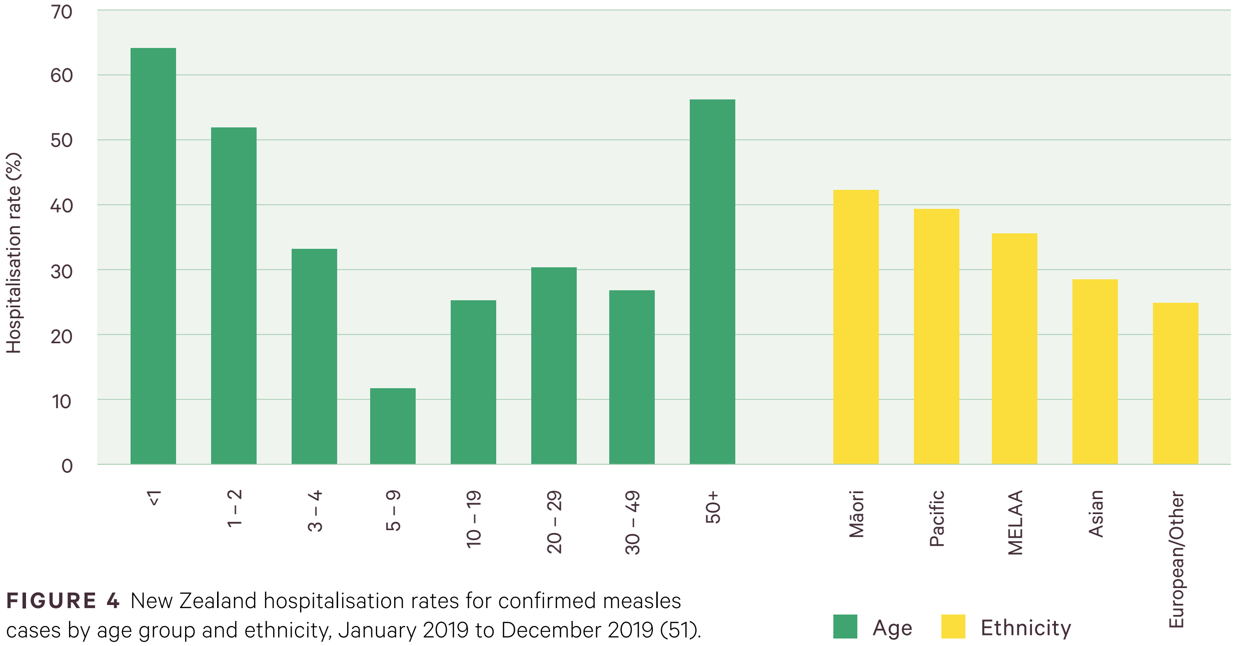


FIGURE 4 New Zealand hospitalisation rates for confirmed measles cases by age group and ethnicity, January 2019 to December 2019 (51).

What is driving the inequities?

A broad range of factors influence immunisation coverage – including community attitudes, which may be misled from anti-vaccination sources. Health professionals have an important advocacy role in parental decision-making, antenatal engagement with parents-to-be, parental attitudes, and access to healthcare services (55). More specific risk factors, which affect Māori children disproportionately, include household poverty, having a younger caregiver, being later-born among siblings, and moving house frequently (55). Although Pacific children are similarly vulnerable to these risk factors, they are achieving or even exceeding the 95% coverage target (Figure 3). This improvement is linked to government initiatives, including becoming more responsive to Pacific peoples' needs (56,57), and investment in approaches that empower Pacific peoples to manage their own communities' wellbeing (58).

What can help reduce the inequities?

Successes in both improving overall immunisation coverage and reducing the ethnic equity gap have been attributed to interventions that include health services in places and at times that suit the community of interest, partnerships with health workers who belong to the community of interest (57), and increased funding. It has been suggested that the reversal of these gains is simply because of a lack of sustained effort in these areas (59). Therefore, refocusing on the strategies that had already proved successful would be positive.

In 2020, a Ministry of Health Manatū Hauora initiative to reduce the disparities in Māori versus non-Māori influenza immunisation rates was successful. This was achieved by empowering iwi and Māori health providers, who set up pop-up clinics, organised door-to-door immunisation programmes, and proactively reached out to kaumātua and kuia elders (60).

Ages 5–14: rheumatic fever

Rheumatic fever is a condition that arises from an autoimmune reaction to bacterial infection in the throat ('strep throat'). Strep throat is a common ailment that usually does not progress to rheumatic fever except in some vulnerable at-risk groups, particularly children aged between 5 and 14. Rheumatic fever involves inflammation of connective tissues in the body, including the heart, joints, and brain. It can be prevented if diagnosed early enough and treated with common antibiotics.

Prevention is especially important because each recurrent episode increases the risk of developing rheumatic heart disease, where heart valves become permanently damaged and heart function is impeded (61). This places the person at increased risk of heart failure and premature death (62). To reduce the risk of rheumatic heart disease, those previously afflicted by recurrent bouts of rheumatic fever may require treatment involving regular antibiotics, possibly for life.

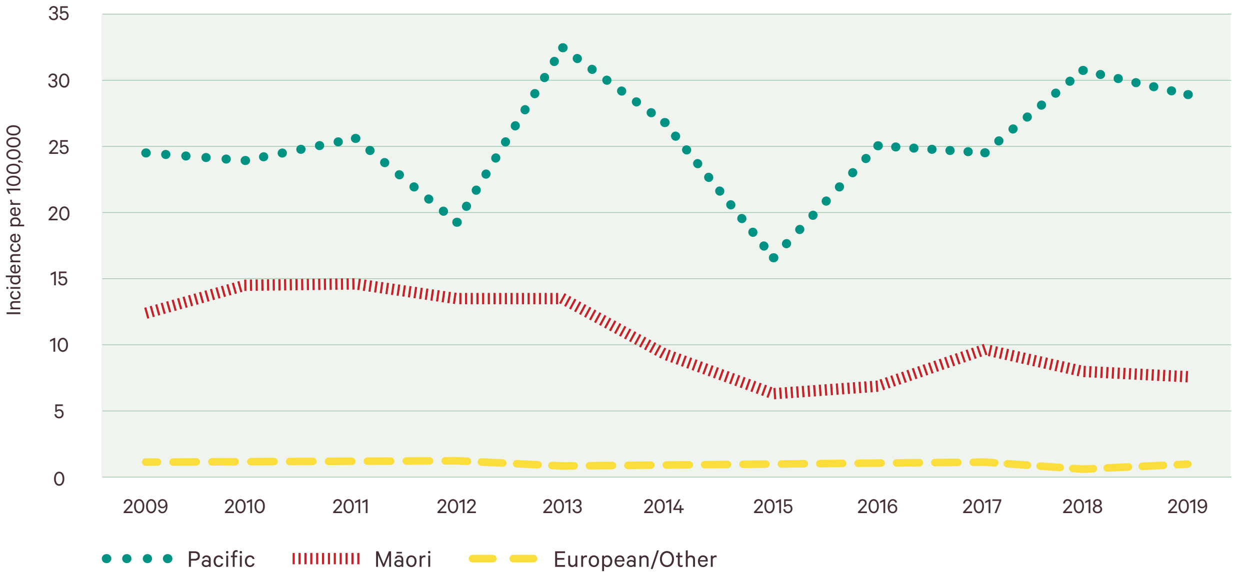


FIGURE 5 First-episode rheumatic-fever hospitalisation rate (per 100,000 total population) by ethnicity, 2009–19 (63).

What is the situation in New Zealand?

Rheumatic fever is considered a third-world disease. Globally, however, New Zealand stands out as having especially high rates compared to other high-income countries. Māori and Pacific peoples are disproportionately represented in the statistics (63). Figure 5 (previous page) shows the ethnic breakdown for hospitalisation rates for the first episode of rheumatic fever.

As is the case overseas, children aged 5 to 14 comprise an overwhelming majority of cases (Figure 6). But the rate of hospitalisation for rheumatic fever is 50 times higher in Pacific children than in New Zealand European children (26).

What is driving the disparities?

There is strong consensus that a key reason underlying ethnic differences in rheumatic fever rates is socio-economic disadvantage (Figure 7) (64). One specific risk factor is overcrowded housing conditions, where bed-sharing and frequent social contact are commonplace, and which enable bacterial infections to be easily transmitted. A second risk factor is poor-quality housing characterised by cold and damp, which impacts on respiratory health. A further factor

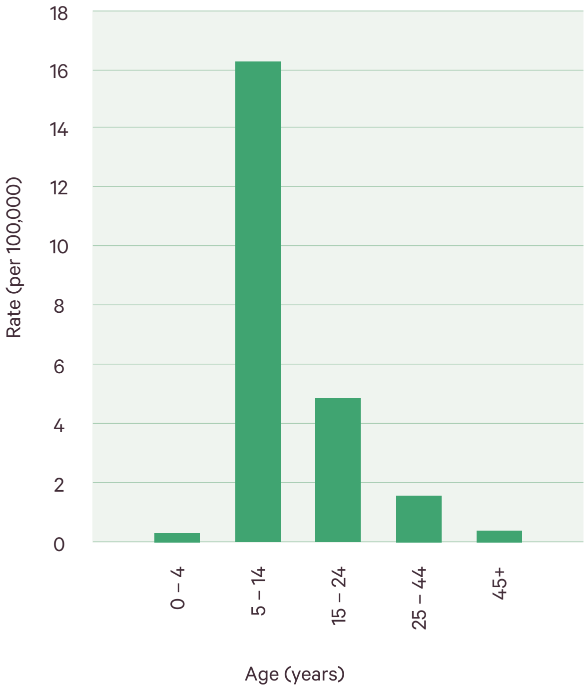


FIGURE 6 First-time admission to hospital for rheumatic fever by age group, 2019 (15).

is the current inability of health services to sufficiently meet the specific needs of Māori and Pacific patients. For example, patients are still being hospitalised for recurrent rheumatic fever, even though it can be effectively prevented by measures such as regular antibiotic injections. A study investigating the reasons for the ineffectiveness of such preventive measures has raised three related issues: the model of healthcare delivery is not aligned with the financial and housing situations of patients; patients and whānau experience bias, racism, and a lack of cultural-safety awareness from healthcare providers; and there is a gap in age-appropriate care for adolescents (65). It may also be the case that policies to prevent the overuse of antibiotics (to prevent diseases becoming resistant to antibiotics) have made health professionals reluctant to use antibiotics in general, without paying attention to the specific likelihood of rheumatic fever in at-risk communities (66).

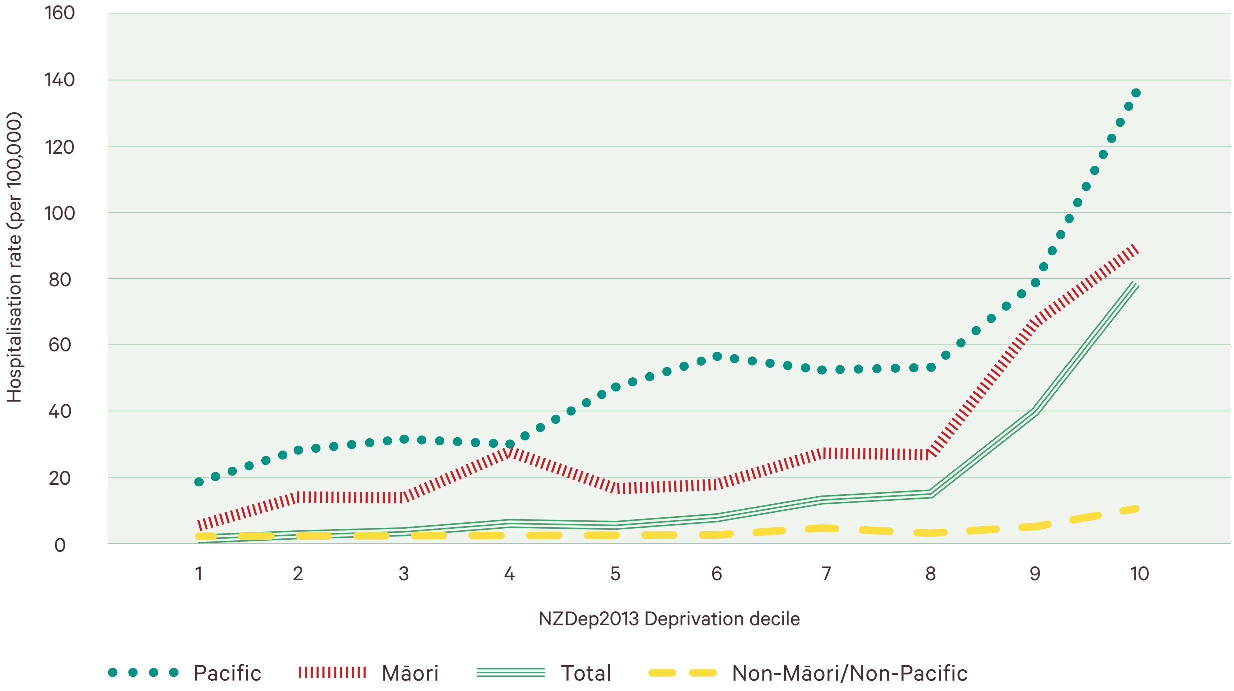


FIGURE 7 Association between rheumatic fever hospitalisation rate among 5 to 14-year-olds and deprivation decile of neighbourhood, average for 2010–14 (64).

What can help reduce the inequities?

In 2012, the Government named the reduction of rheumatic fever incidence as one of ten priorities to be achieved within the next five years. About $65 million was earmarked for the Ministry of Health's Rheumatic Fever Prevention Programme to be spent on new initiatives for reducing rheumatic fever rates. Figure 5 indicates that this target was not met. A key action that would decrease rheumatic fever rates in this country is increasing the accessibility of affordable, healthy housing. The effect of housing on health is discussed in Te Tapeke Fair Futures' '*Spotlight on Housing*' paper.

Several countries that have reduced rheumatic fever rates, such as Costa Rica and Cuba, have achieved this through comprehensive prevention programmes, together with education of the healthcare community and the wider population (67,68). However, because New Zealand has different social, cultural, and health infrastructure circumstances, it is unclear whether applying their strategies would be effective here.

Given the disproportionate rates of rheumatic fever experienced by Māori and Pacific peoples, research applying kaupapa Māori and Pacific methodologies, such as talanga and kakala, has provided more locally relevant ways into understanding this problem (69,70). In-depth examination of whānau experiences of the healthcare system has identified systemic failures, such as financial or mobility barriers to healthcare access, poor awareness of cultural needs among healthcare professionals, and poorly designed health promotion campaigns. On the other hand, those at lower risk were

An untreated sore throat can lead to Rheumatic Fever and heart damage. If your child has a sore throat take them to a free Sore Throat Clinic or see a doctor or nurse.

For more info visit:
health.govt.nz/rheumaticfever

Above: Print poster from Rheumatic Fever Awareness Campaigns (2014–2017). Copyright Health Promotion Agency.

whānau who received support and enjoyed good relationships with their healthcare professionals, who in turn communicated well with DHBs. One positive strategy is suggested by a study of Māori schoolchildren in the Bay of Plenty region. It found that having school-based sore-throat swabbing programmes led to treatment, resulting in much lower rates of rheumatic fever than in those children who had received standard general practitioner care (71).

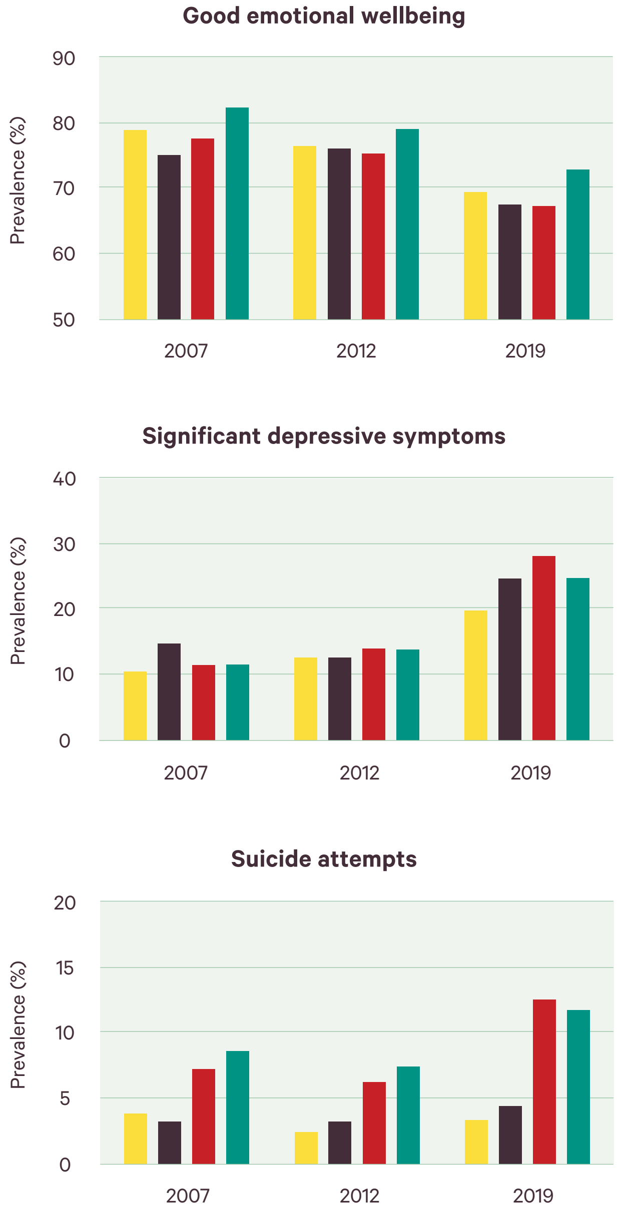
Young people (ages 12–22): mental health

Good mental health – that is, having optimal emotional and psychosocial wellbeing – equips people with the resilience to cope with stress and uncertainty. It gives individuals the ability to maintain good relationships, enabling them to lead balanced and productive lives and ultimately realise their full potential. There is a wide spectrum of mental distress from short-lived despair to lifelong serious disorders such as schizophrenia. Threats to emotional wellbeing can result in depressive symptoms, anxiety, or even addictive behaviours. These outcomes are in turn associated with other poor life outcomes such as limited education, lack of employment or stable housing, and arrest and imprisonment. In more extreme cases, self-harm results. In New Zealand, the annual cost of serious mental and addiction challenges is an estimated $12 billion (72). It is thought that 50% to 80% of New Zealanders will experience problems with mental health or addiction within their lifetime (73).

Left: Poster resource for Aunty Dee, a free online tool supporting Pasifika families and communities. Copyright LeVa and partners.

Although poor mental health (and mortality) afflicts both younger and older people, we focus here on young people because research shows that the onset of mental distress and most severe mental illness generally occurs between the ages of 16 and 24 (74). Young people are vulnerable while grappling with major biological transitions (for example, puberty and ongoing neurological development) and social transitions (shifts in identity and changing societal expectations across maturation from childhood to adolescence to young adulthood). Young people are more likely than those in older age groups to report symptoms of depression, anxiety, and psychological distress (75).

Surveys suggest that between one-third and one-half of 12 to 18-year-olds in New Zealand have intentionally harmed themselves at least once (75). New Zealand has a distressingly high teenage suicide rate compared to other Organisation for Economic Co-operation and Development (OECD) countries (76).


Good emotional wellbeing

Significant depressive symptoms

Suicide attempts

FIGURE 8 Trends in the prevalence of indicators of mental health among young people in New Zealand (77).

What is the situation in New Zealand?

While most New Zealand young people report good wellbeing, rates of poor mental health have become worse over the past two decades. Snapshot surveys of indicators of mental health have found that levels of self-rating of good emotional wellbeing have been decreasing, while reports of significant depressive symptoms and suicide attempts have been increasing (Figure 8) (77).

Closer examination of these data reveals stark ethnic and gender inequities. Māori and Pacific young people are at greater risk of attempting suicide compared to Pākehā and Asian young people across all surveyed time points (Figure 9). Rangatahi Māori youth are vastly over-represented with respect to death by suicide. From 2002 to 2016, the rate of death by suicide for rangatahi was nearly three times higher than that for non-Māori and non-Pacific young people (25.3 vs 9.1 per 100,000, respectively) (78). For New Zealand adolescents, suicide is the leading cause of death (79).

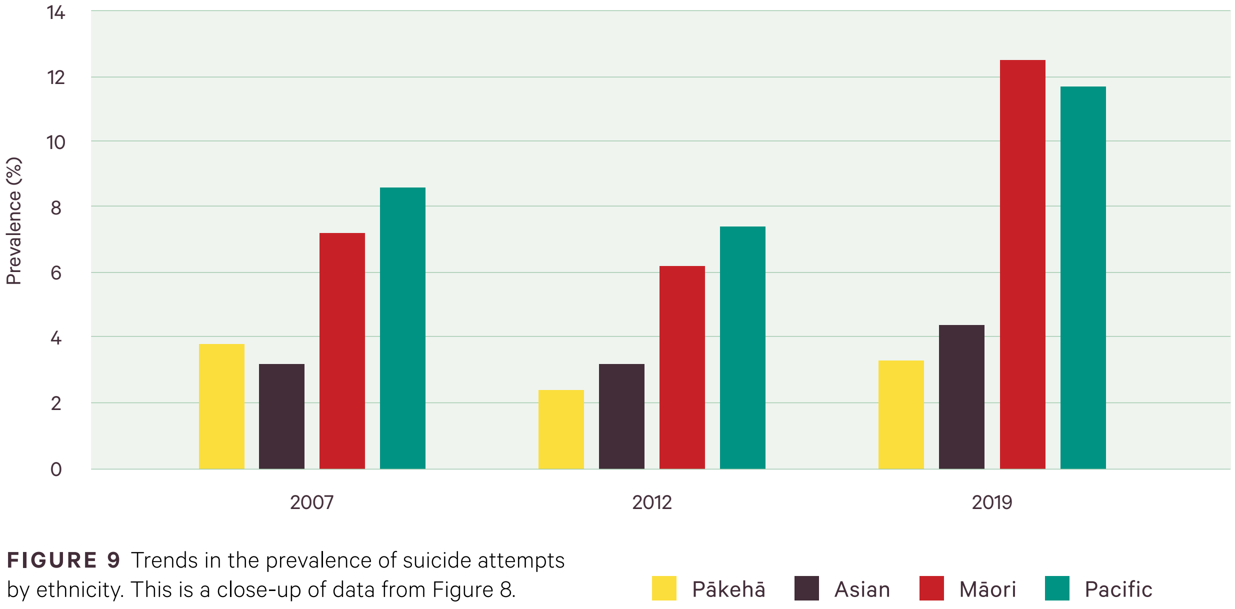


FIGURE 9 Trends in the prevalence of suicide attempts by ethnicity. This is a close-up of data from Figure 8.

Apart from the tragedy of suicide, young New Zealand women of all ethnicities surveyed reported worse outcomes on three particular measures of mental health (good emotional wellbeing, significant depressive symptoms, suicide attempts) compared to their male counterparts (Figure 10). New Zealand men, however, tend to be over-represented in other areas of mental health disorders, particularly schizophrenia, externalising disorders such as substance abuse and anti-social personality disorder, and as noted, suicide deaths (82).[8] New Zealand women are twice as likely to suffer from depression over their lifetime as men (75). They are also more likely to suffer from eating disorders, 2.9% as opposed to 0.5% for men (83). Lifetime prevalence of any eating disorder for Māori women was 4.4%, compared to Māori males (1.6%), and young women had the highest rates. Recent research suggests that Māori with eating disorders face significant barriers to accessing specialist mental health services (83).

What is driving the disparities?

The trend in declining mental health over the past two decades has also been observed in many other countries (84,85). This may be due to the increasing pressures faced by young people in today's particular societal context, especially the challenges posed by the pervasive digital environment and use of social media, as well as changing family, educational, economic, and social contexts. It seems that young women are suffering more anxiety in the current environment while young men might express their distress by drinking or substance abuse. Young men are over twice as likely as young women to die from suicide (86).

A survey of Māori youth and adult mental health found that Māori youth felt much less able to cope with daily stresses than other age groups, and that a lack of cultural connection may play a role (87). As many as 20% of Māori youth felt that cultural connection was important, but did not feel connected to their culture, suggesting an unmet need for cultural connectedness and reconnection. Indeed, the concepts of taha whānau family wellbeing and taha wairua spiritual health are key to Māori as well as Pacific health and wellbeing, yet are generally not taken into account by Western health models (88).

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[8] Among 15 to 19-year-olds in 2019–20, the suicide rate for men was 22.4 per 100,000 versus 15 per 100,000 for women (80). Gender differences of this magnitude or greater have generally been observed in this age group over the past decade (81).

What can help reduce the inequities?

The mental health of young people is clearly a highly systemic issue with interwoven biological, environmental, cultural, and social threads that must be addressed from many angles. Strong cultural identity is a protective factor for supporting Māori wellbeing, and guarding against intergenerational trauma (89). Based on this, numerous recommendations for closing the gaps have been made. At the broadest level, structural change involving the integration of Te Tiriti o Waitangi into all related areas of policy and practice has been called for (78) across the health system (73).

Similarly, Pacific-led models of care are required to support wellbeing for Pacific young people. Mental health initiatives should relate to core values for Pacific communities, including connections to culture, spirituality, family, and community (25).

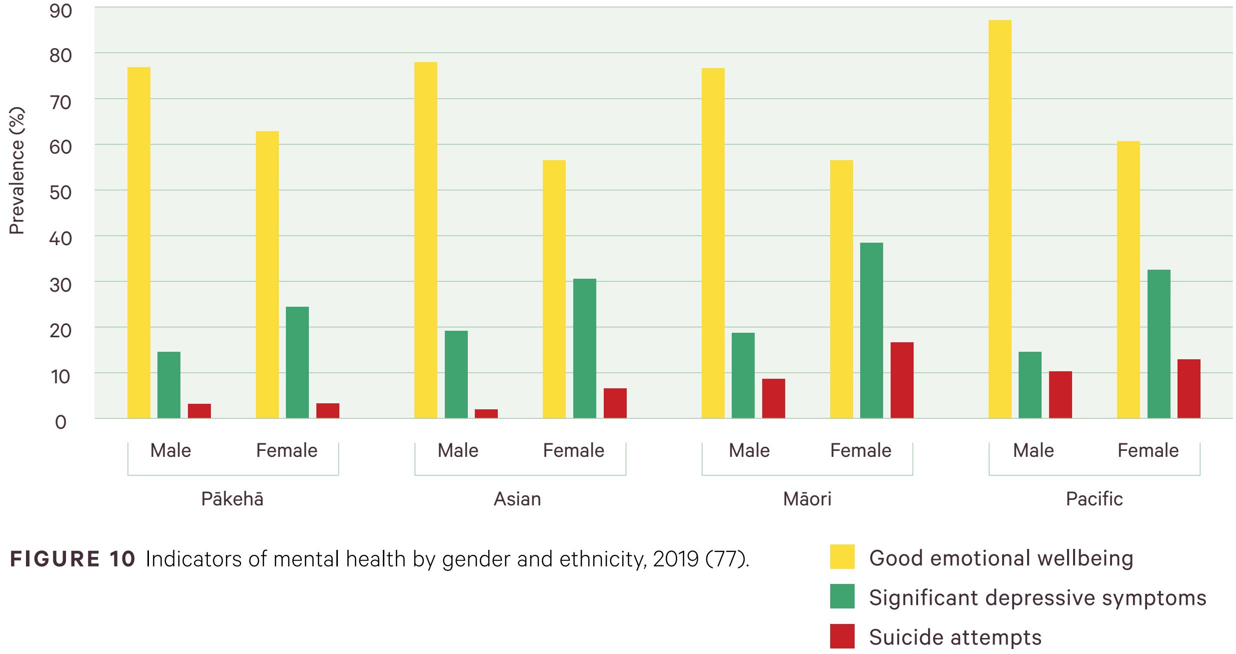

FIGURE 10 Indicators of mental health by gender and ethnicity, 2019 (77).

For women, some of the gender-specific risks to mental health include socio-economic disadvantage, and the burden of household and caretaking roles (90). Identifying ways to reduce the gender disparity in mental health therefore first requires a deep understanding of its drivers within the local context. While more research in this area is urgently needed, it is clear that mitigating strategies will – as is the case with addressing ethnic inequities – require a whole-system approach.

Those who grow up in poverty and experience adverse childhood experiences, such as family or sexual violence, have a higher probability of both poor physical and mental health. Initiatives to reduce child poverty and promote cultural and community connection will help children achieve better outcomes (75). Restricting access to alcohol and other drugs helps prevent depression. Digital interventions, for example, online cognitive behavioural therapy, may prove useful for young people (75).

Young people living in lower socio-economic areas may have difficulties accessing services that are young-people focused. Visiting clinical psychologists and drop-in clinics in lower decile schools can normalise seeking help for mental health issues and smooth the way to accessing specialist services (91). The 'Youth One Stop Shop' model has shown success in attracting young people who need physical and mental healthcare (75). The 'I Am Hope' campaign aims to connect young people with counsellors with the minimum of waiting time (92).

Education to reduce stigma relating to mental illness can be very successful as shown by the 'Like Minds, Like Mine' campaign (93). Initiatives such as 'Positive Behaviour 4 Learning' can create better school experiences by emphasising good home and school environments and relationships (75). Digital interventions are particularly important in reaching young people, who have grown up in the digital age. These include thelowdown.co.nz, sparx.org.nz, and auntydee.org.nz.

Most importantly, young people need to see hope in their futures. Mentoring for employment opportunities, opportunities to build resilience in safe contexts, and early intervention with regard to drug and alcohol issues can affect young peoples' futures. Offering examples of ways in which youth can have an impact on wider social issues, such as climate change, may increase hope for the future.

Adults: cancer

There are many types of cancer, impacting different communities and men and women differently. Death rates from cancer are significantly higher for Pacific compared to non-Māori, non-Pacific peoples (26). Māori are twice as likely to die from any cancer than non-Māori (94). Screening programmes are an important preventive measure for some types of cancer. Here, we focus on two types of cancer: bowel and cervical, where screening programmes have been established.

Bowel cancer

Amongst Māori, colorectal cancer is the fourth-highest cause of death from cancer in New Zealand after breast, lung, and prostate cancer. Colorectal is the third highest cause of death from cancer amongst non-Māori, behind breast and prostate cancer (95). Risk factors for bowel cancer include being older than 50 years, family history of the disease, having inflammatory bowel disease, and having a diet high in fat or red meat. Bowel cancer tends to develop slowly, starting as a small growth (polyp) in the bowel and potentially taking many years before it grows and spreads to the rest of the body. Regular screening of the bowel therefore helps detect not only precancerous polyps for proactive removal, but also cancers in the earlier stages when they are easier to treat (96). A National Bowel Screening Programme is being rolled out across the country, offering free biennial screening to those aged 60 to 74 years.[9]

What is the situation in New Zealand?

New Zealand has one of the highest rates of bowel cancer in the world. In 2017, 3,085 people were diagnosed with this cancer and a further 1,229 people died from it (98). The incidence of bowel cancer among Māori is lower than for non-Māori (99). However, this masks several substantial disparities that become evident from a deep dive into the data.

Bowel cancer, also commonly known as colon or colorectal cancer, has a different profile in Māori and non-Māori populations. A study on cancer cases from 2007 to 2016 found that Māori with bowel cancer were 46% more likely to die than non-Māori patients, and had poorer survival prognoses over a five-year period (100). Poorer survival rates were seen for Māori at all deprivation levels except for the least deprived. Risk of mortality after diagnosis was higher for Māori than non-Māori irrespective of how far the cancer had progressed (100).

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[9] For a discussion of the rationale behind this age grouping, see (97).

A separate study of bowel cancer patients, from 2007 to 2008, further noted that Pacific patients had the lowest post-diagnosis survival rates of Māori, non-Māori, and non-Pacific peoples (101). Pacific patients aged 75 years and older also experienced the greatest mortality risk compared to other ethnic groups (102).

What is driving the disparities?

The observation that Māori have poorer survival following bowel cancer diagnosis has also been made for 22 of 23 other cancers that are the highest contributors to Māori cancer mortality (100). This strongly suggests that the drivers of disparities are not specific to bowel cancer. Rather, as recently framed by leaders from across the cancer sector, they likely involve a range of patient- and system-level factors, for example, patients with more than one health issue, combined with system-level problems of access to affordable treatment, through to upstream factors such as colonialism and institutionalised racism (94).

The inequities experienced by Pacific peoples may be due in part to disparities in treatment received. An analysis of colorectal cancer diagnoses in 2016 showed that Pacific peoples were the least likely to be receiving chemotherapy, but the reasons for this disparity were unclear as it could not be explained by gender, age, extent and grade of the cancer, or level of socio-economic deprivation (103).

What can help reduce the inequities?

While cancer mortality inequities have their roots in the upstream determinants noted above, focusing on downstream patient and health system level factors can still assist with reducing inequities (94). In working towards this goal, the emphasis must be placed on the system, not the individual, and consequently a multi-pronged approach is likely required. The National Bowel Cancer Working Group, established to advise the Ministry of Health Manatū Hauora on bowel cancer screening, diagnosis, and treatment, released a Māori Equity Statement in 2017 calling for standardisation of cancer care (104). They have noted the duty of clinicians to recognise the ways in which Māori are underserved by the health system. There is evidence of delays in diagnosis, lower referral rates and longer waiting times for chemotherapy, and under-treatment of health issues that occur at the same time (104).

Although the National Bowel Screening Programme was established specifically to lower New Zealand's high bowel cancer rates, there have been criticisms that its design is making Māori health inequities worse (105,106). This is because the programme does not take into account that – in comparison to non-Māori – a greater percentage of bowel cancers in Māori occur before the age of 60 years (107), because of the younger age profile of the Māori population compared to non-Māori. It is possible that lowering the minimum screening age to 50 for Māori might make the programme more equitable, as it will focus on the ages with the greatest proportion of Māori bowel cancer burden. The National Screening Unit acknowledges that the current screening programme 'delivers fewer health gains for Māori because of their lower life expectancy but is currently focused on increasing participation by Māori and Pacific people to ensure cancers are detected and treated early' (97). However, in a kaupapa-Māori epidemiological approach, a screening age range beginning at 50 for Māori is suggested as one of the tools government can use to ensure it meets its responsibilities to Te Tiriti o Waitangi (107).

While greater access to screening will likely also benefit Pacific peoples, there is currently a notable lack of information related to outcomes for Pacific bowel cancer patients (101). First, there needs to be a focus on further research to better understand bowel-cancer outcomes specifically among Pacific peoples, before effective measures to reduce inequities for this at-risk group can be developed.

Cervical cancer

Cervical cancer refers to cancer of the cervix, located at the lowest part of the uterus. It is caused by certain types of human papillomavirus (HPV), a very common sexually transmitted virus. Although most HPV infections clear by themselves, they can occasionally cause cells to grow abnormally, which if left untreated, can lead to cancer. Cervical cancer takes years to develop and is easily treated if detected early. Measures that help protect against cervical cancer include immunisation against HPV, particularly during the pre-teen/teenage years, and undergoing regular cervical screening in adulthood. These measures are especially important because abnormal cervical cell growth itself usually does not cause any symptoms, but the risk of mortality is greatly increased the longer the patient's abnormal cell growth is undetected (108). In New Zealand, a National Cervical Screening Programme was established in 1990 to encourage women aged 20 to 69 years to undergo preventive screening. Free HPV immunisation also became available for girls in 2008, and for boys in 2017.

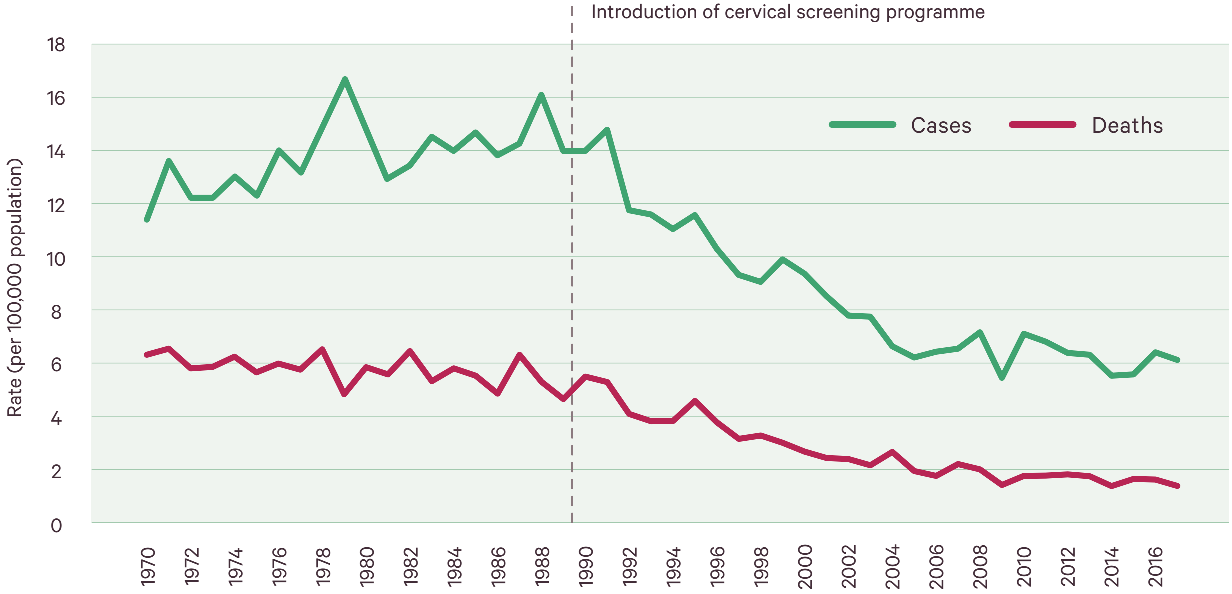

FIGURE 11 Age standardised rates of cervical cancer cases and deaths among New Zealand women, 1970–2017 (98).

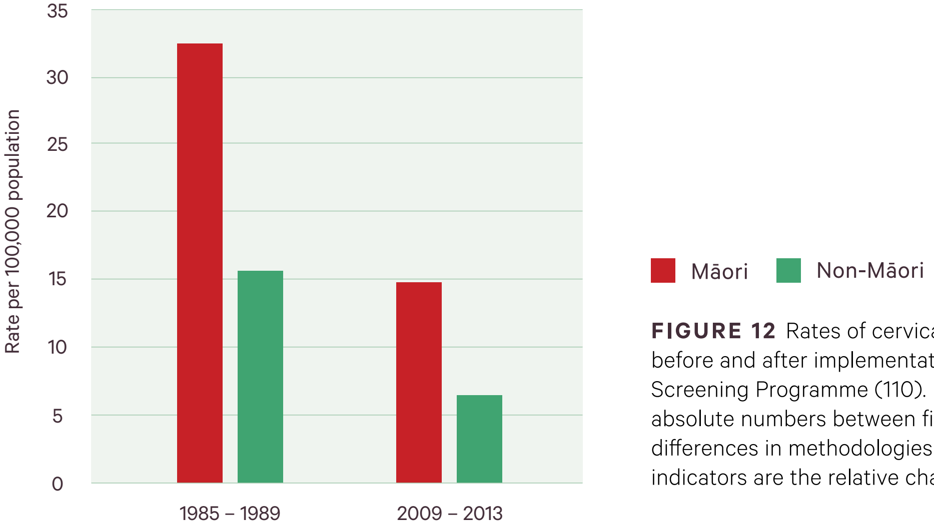

FIGURE 12 Rates of cervical cancer cases by ethnicity before and after implementation of the National Cervical Screening Programme (110). Note that discrepancies in absolute numbers between figures can be attributed to differences in methodologies across studies – the relevant indicators are the relative changes over time.

What is the situation in New Zealand?

In 2017, 169 New Zealand women were diagnosed with cervical cancer and 45 women died from it. This represents a marked improvement from the decades prior to the introduction of the national screening programme. The programme has been effective in reducing cervical cancer among New Zealand women (109), with rates of cervical cancer cases and deaths having decreased considerably since the early 1990s (Figure 11).

Despite the success of the programme, a deeper dive into the data shows that ethnic disparities that existed prior to the programme's establishment still remain (Figure 12).

Nevertheless, the disparity is decreasing, and between 1996 and 2016–17 Māori women experienced a faster decline in both cervical cancer cases and deaths compared to European and other women (Figure 13, next page) (111).

Between 1981 and 2004, there was a 64% decrease in the incidence of cervical cancer among Pacific women (112), and while more recent data suggest that this trend has been maintained, mortality rates still remain high compared to European and other women (Figure 13, lower panel).

What is driving the disparities?

The national screening programme appears to have mitigated some of the factors driving the disparities in cervical cancer outcomes, but delayed diagnosis continues to be a crucial problem. There are significant differences in screening coverage. In the three years prior to June 2018, the population screening coverage was 62% for Māori women, 69% for Pacific women, and 78% for European and other women (113). A consequence of lower screening rates is cancer being detected at

Right: A National Cervical Screening Programme poster from 2010 designed for Pacific women. One part of much wider campaigns to encourage women to have regular cervical screening. Reproduced with permission of Ministry of Health – Manatū Hauora.

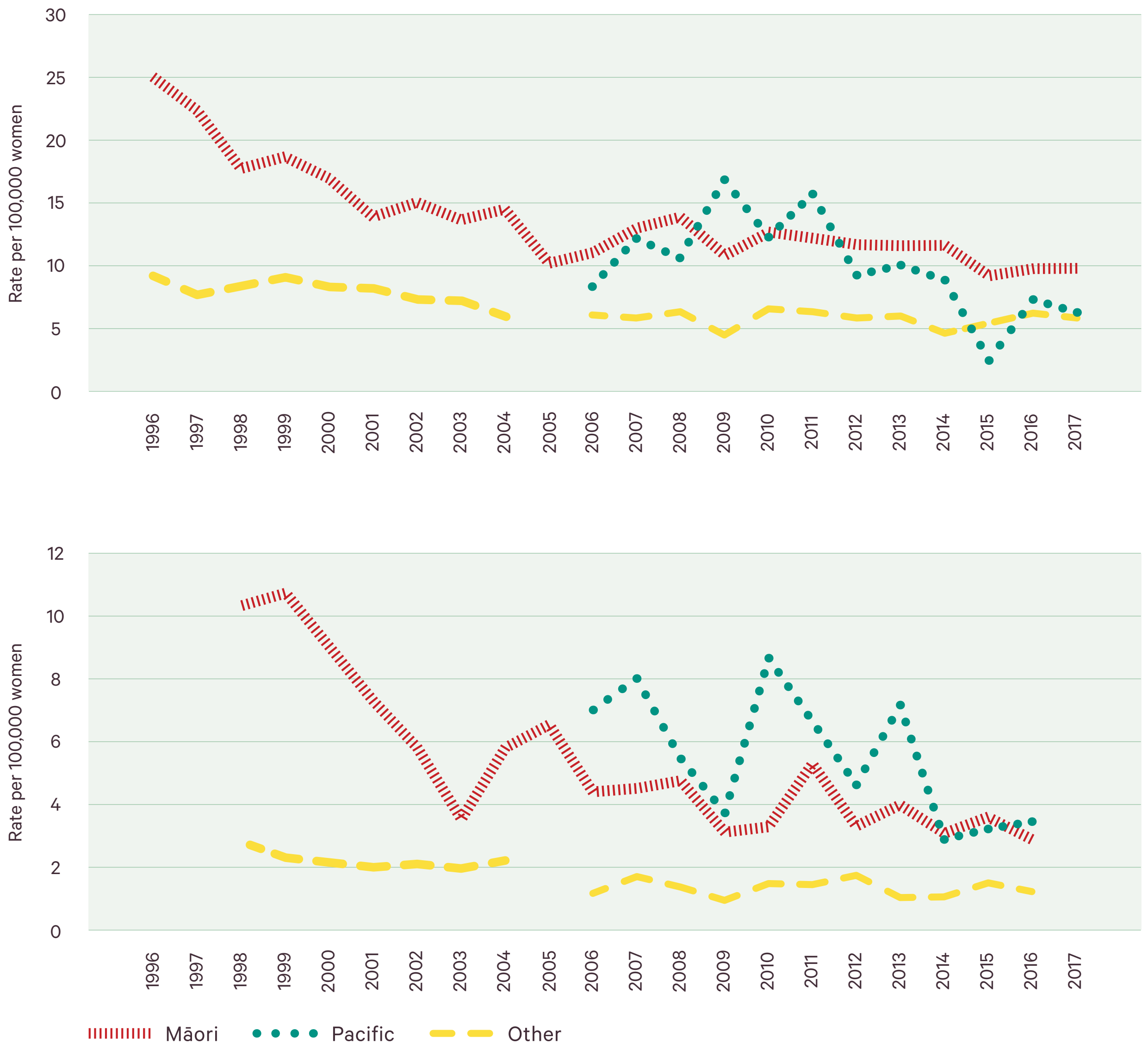

FIGURE 13 Rates of cervical cancer cases (upper panel) and deaths (lower panel) by ethnicity, 1996–98 to 2016–17 (111).

a later stage, and this appears to account for most of the persisting survival disparity (114). Healthcare accessibility appears to play only a small role – travel time to a patient's nearest healthcare provider or cancer centre was only very weakly associated with screening uptake, stage at diagnosis, or survival (115). Reassuringly, no differences in post-diagnosis treatment have been found (116).

What can help reduce the inequities?

Good screening coverage of cervical cancer leads to earlier diagnosis and therefore greater chance of survival. Healthcare providers have provided important insights from the grassroots level on some of the factors thought to have contributed to the screening programme's success in reducing inequitable outcomes in cervical cancer (117). These include national advertising campaigns raising awareness of cervical cancer, standardisation of treatment, care provided to Māori by Māori, and improved access to care. It is therefore likely that continued support of these measures will maintain the improvements gained. Māori-led grassroots campaigns that encourage women to have smear tests, such as Smear Your Mea, also play a vital role in raising awareness (118). Nonetheless, given that the three-year screening coverage for Māori women in 2018 was 62%, and that of Pacific women was 69% (with younger women even more poorly represented in both groups) (113), there are considerable improvements to be made to achieve the target screening participation rate of 80%. Very limited research is available on the factors that encourage or discourage Pacific women in accessing cervical screening services (119). The barriers that have been identified for Pacific women include cultural beliefs, fear, incurring indirect costs when undergoing screening, and poor healthcare experience, while the proactive use of culturally tailored resources and educational sessions may help to lower some of the barriers.

A modelling study has suggested that human papillomavirus (HPV) vaccination and five-yearly primary HPV screening in New Zealand may further reduce (but not completely eliminate) the cervical-cancer screening gap (120). A Parliamentary Review Committee report on the screening programme has also suggested that further reductions in disparities could be achieved by removing barriers to accessing screening, establishing a national recruitment strategy, and ensuring timely follow-up for Māori women (121). The new possibility of self-testing is likely to remove barriers. Research in 2021 showed that offering an HPV self-test to under-screened Māori women increased the uptake of screening (122).

Importantly, all measures should be undertaken in collaboration with the Māori Monitoring and Equity Group and the National Kaitiaki Group, two Māori health groups specifically established to oversee the screening process.

Older people: oral health

Oral health – the health of our teeth, gums, and mouth – plays an essential role in a person's overall health and wellbeing throughout their life. Yet, in New Zealand, only young people under 18 are entitled to free basic oral healthcare. Poor oral health, including dental caries (tooth decay) and periodontal disease, is an important public health issue. For instance, dental caries is one of the most prevalent chronic diseases in New Zealand, is expensive to treat, and can have significant and long-lasting impacts on quality of life. Dental-related infections and tooth loss not only cause pain but also interfere with everyday activities such as chewing, speaking, and sleeping. There are longer-term consequences: in adults, poor oral health is also linked to other chronic conditions, such as diabetes (123), while in children, it impacts on school performance and psychosocial wellbeing (124). Oral health problems are, however, largely preventable through good oral hygiene practices, regular dental check-ups, a wise dietary, and a diet low in sugars. If an older person has poor oral health, it is often the cumulative result of deprivation over a lifetime.

What is the situation in New Zealand?

Older adults who receive home-based care or who are resident in aged-care facilities represent some of the most vulnerable people and tend to have wider oral health needs. A New Zealand-wide survey of these adults in 2012 found that more than half had lost all of their teeth, and of the remaining adults with natural teeth, a large proportion had untreated decay. Just one-third had teeth in a condition that was considered 'functional' (125). Most adults did not undergo routine dental check-ups, and there was a clear gap between their dental needs and care received. Māori and Pacific older adults were also at greater risk of poor oral health. Among the aged-care facility residents, those with severely impaired cognitive function had more oral debris and one-and-a-half times more untreated decay than non-cognitively impaired residents (126).

The last comprehensive, nationally representative survey on the status of oral health among New Zealanders was conducted in 2009 (127). It found that

oral health had greatly improved over the preceding two to three decades, but marked disparities were still experienced by several groups, including Māori, Pacific peoples, and those living in areas of high deprivation or lacking water fluoridation.

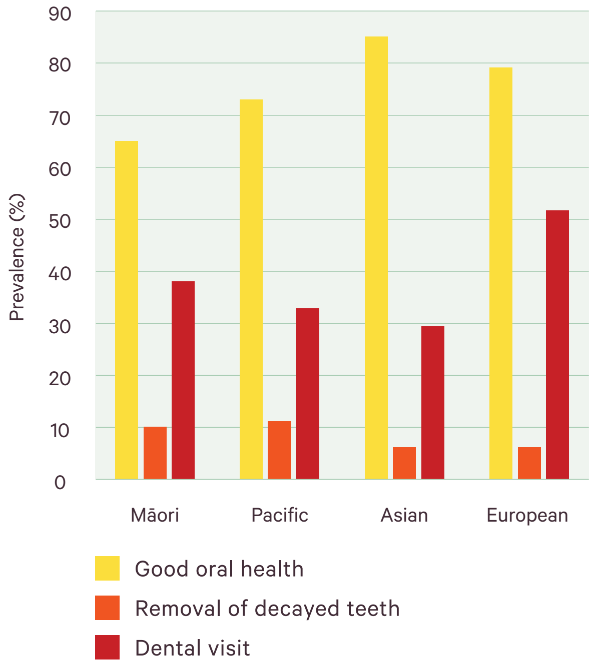

FIGURE 14 Prevalence among adults aged over 15 years of self-reported good or excellent oral health, having had one or more teeth removed in the past 12 months due to dental problems, and having had a dental visit in the past 12 months. Data are for the period 2018–19 (128).

The ethnic inequities are also seen in more recent New Zealand Health Survey data. Māori and Pacific adults scored lower on assessments of oral health, were more likely to have had a decayed tooth extracted recently, and less likely to have visited the dentist over the past year (Figure 14).

What is driving the disparities?

In 2016, the number of people in New Zealand aged 65 or older was about 711,200, or 12% of the population. This number is expected to double by 2046 to comprise 23% of the population (129). At the same time, older adults are retaining more of their own teeth, many of which will be filled or restored, making them more susceptible to oral disease. As a result, there will be a growing number of older adults requiring preventive and restorative care to maintain oral health. Older adults tend to be over-represented in certain oral health conditions such as chronic dry mouth and incremental tooth loss, indicating the importance of regarding this population as a separate target group in improving oral health-related quality of life (130).

The cost of dental care can be an issue for older adults who have a fixed income after retirement. In this age group, there can also be a perception of dental care as not being a regular requirement but something to access during a dental emergency. Cognitive and mobility issues may be a barrier to accessing dental care (131).

An international study on the impact of socio-economic differences on oral health and dental disease found that New Zealand had the highest education and income inequalities in relation to oral health outcomes compared to Australia, Canada, and the United States (132). Dental care in New Zealand is free only for children up to 18 years of age, suggesting that the disparities observed may be explained by the lack of a public dental healthcare system for low-income adults, as is available in the other three countries. This may therefore disproportionately affect Māori and Pacific peoples.

In support of the importance of access to funded or subsidised dental care after adolescence, a long running cohort study in Dunedin has found that regular dental visits decreased from late adolescence, with further decreases seen as the participants became older (133). The study team also noted that regular dental visits into middle age were associated with better oral health; participants with a history of not accessing dental services had four times more decayed tooth surfaces than participants who had regular dental check-ups.

What can help reduce the inequities?

New Zealand's ageing population highlights the increasing importance of the development of public policy initiatives specifically focused on older adults, such as the integration of oral healthcare into other health policies relating to older adults, and measures to screen, educate, and treat especially vulnerable aged-care residents (125,134). Furthermore, given that many older adults are on relatively low fixed incomes, policies that promote affordable and accessible oral healthcare will lower barriers to maintaining good oral health.

Indigenous inequities in oral health are broadly indicative of social injustice, because oral health is dependent on financial status, access to health services, and the experience of lifelong inequities (135). Therefore, policies and strategies that target the social determinants of health would help to reduce oral (and other) health inequities overall.

KUPU WHAKATEPE
CONCLUSION

'Equity *means* something. It is about who will be left on our paepae, in our homes and in our communities' (136).

Fairness in health is often confused with making sure everyone has the same – that is, equal access to the same health services. However, the drivers and outcomes of the health issues described in this paper suggest that achieving equity or fairness in health requires a different response.

The lifecycle overview has revealed an imbalance between the needs of different groups, such as those of the young and those of older people. A just society would ensure a balance by providing healthcare that is affordable, accessible, and appropriate across all age groups and communities.

Ensuring the health needs of all groups are met could mean, for example, changes in health policies, different screening ages for different ethnicities, and changes to where resources are directed.

For healthcare to be delivered successfully, Māori need to be central to decision-making processes, and obligations to Te Tiriti o Waitangi must be recognised (136). Pacific peoples must also be closely consulted with to ensure equity.

Bridging the gaps in health equity also requires reframing how we think about health and disease prevention. In order to honour te Tiriti, tikanga Māori must become embedded in our health system. In te ao Māori, and likewise in Pacific cultures, health – as discussed earlier – includes spiritual, social, and cultural wellbeing, and is closely connected to balanced relationships and the natural environment (23). It is the panel's opinion that the health of all New Zealanders would benefit if these cultural values were integrated into public health services. Consequently, equity requires greater representation of Māori and Pacific peoples in our healthcare workforce – patients should be able to expect to be treated by people they relate to culturally.

In addition, for fair health outcomes, all patients should have access to culturally safe care from clinicians who have addressed their own biases and prejudices (137).

To improve equity, different communities must be empowered to both define and realise their priorities for health. Tā Sir Mason Durie and other experts have identified this as being the only way Māori health can 'truly develop' (1). In 2021, the Government announced a new Māori Health Authority to ensure Māori self-determination in the provision of health services (138).

Community self-empowerment enabled Pacific peoples to transform Pacific infant immunisation rates. Collective action in response to expert guidance was key to New Zealand's reaction to the Covid-19 pandemic, and Pacific and Māori health providers and communities modelled how to successfully prevent the spread of the disease. These efforts included delivering messages about isolation protocols through respected leaders, Pacific-language radio stations, and social media, and Pacific-led mobile healthcare units and testing stations (24).[10] Kaupapa Māori-led responses informed by scientific expertise, such as marae lockdowns and checkpoints at iwi borders, likewise helped protect the whole population. Covid-19 has created the opportunity to change the health systems that disadvantage Māori, Pacific peoples, and others, and it is clear that self-empowered communities should be integral to any health system. Altogether, New Zealand's Covid-19 response since 2020 has been successful in preventing large numbers of deaths.

This highlights the importance of nationwide collaborative efforts, supported by timely, robust communication and financial resourcing. The Covid-19 response shows that it is possible to rapidly adjust the health system to secure health and collective wellbeing. Aotearoa, with its foundational te Tiriti partnership, cultural diversity, political stability, and small size is in a unique position to learn from the past and present and shape a fairer future in health for all.

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[10] This resulted in Pacific peoples having the lowest rates of Covid-19 and the highest rates of testing by ethnicity (24).

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HE RĀRANGI PUKAPUKA
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KUPUTAKA
GLOSSARY

aiga
family

alofa
love and compassion

fa‘aaloalo
respect

fa‘amaualalo
humility

hā a koro ma, a kui ma
breath of life from forbearers

he aha e hira te tōkeke i roto i te hauora?
why does fairness in health matter?

he aha tō tātau mōhio ki te hauora?
what do we understand by health?

he rārangi pukapuka
references

he tīmatanga kōrero
introduction

horopaki mō te āhuatanga hauora i Aotearoa
context for the health situation in Aotearoa

kaiāwhina
contributor

kaitiakitanga
nurturing socio-environmental relationships

kakala
methodology for Pacific health

kaumātua/kuia
elders

kaupapa
topic, policy, matter for discussion,
floor, stage, platform, layer

koru
fold, loop, coil, curled shoot, spiral motif

kupu whakatepe
closing words, conclusion

mana ake
unique identity of individuals and family

manaakitanga
caring for and supporting others

mauri
life force in people and objects

mauriora
cultural identity

mūmū
a chequerboard tukutuku pattern

ngā hurihanga o te rerekētanga
lifecycles of inequity

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ngā manukura
community leadership

ngā mihi
thanks, acknowledgments

ngā tika tangata me ētahi atu pou tarāwaho mō te tōkeke
Human rights and other frameworks
for fairness

paepae
orators' bench

purupuru whetū
a tukutuku pattern

rangatahi
youth

rārangi upoko
contents

taha hinengaro
mental health

taha tinana
physical health

taha wairua
spiritual health

taha whānau
family health

talanga	methodology for Pacific health
taonga	treasures
tāngata whaikaha	Māori with disabilities
tautua	service
te ao Māori	Māori world view
te mana whakahaere	autonomy
te oranga	participation in society
Te Pae Māhutonga	the Southern Cross constellation representing four keys to promoting health
te roa o te ora e tūmanakohia ana me te rerekētanga	life expectancy and inequity
te taiao	the natural environment
te tapeke	the inclusion, or leaving no one out (from 'ka tapeke katoa te iwi' including all of the people)
Te Tiriti o Waitangi	Māori version of the Treaty of Waitangi
Te Whare Tapa Whā	the four cornerstones of Māori health
Te Wheke	the octopus (model for Māori health)
tino rangatiratanga	political independence
toiora	healthy lifestyles
tukutuku	ornamental latticework used in the walls of meeting houses
waiora	health, total wellbeing for the individual and family
wairuatanga	spirituality
whakapā mai	connect with us
whānau	family
whanaungatanga	extended family, reciprocal relationships
whatumanawa	the open and healthy expression of emotion

WHAKAPĀ MAI
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