New Zealand
HEALTH AND DISABILITY System Review
HAUORA MANAAKI ki Aotearoa Whānui

Background for the New Zealand Health and Disability System Review 2018

September 2018

Contents

List of Tables

List of Figures

Executive Summary

This document aims to give an overview of the New Zealand health and disability system. The document is descriptive in nature, and does not provide analysis about current issues or challenges. It includes information about:

- the history of the New Zealand public health and disability system
- the structure of the health and disability system
- the financing of health and disability services and expenditure within the system
- the health and disability status of New Zealanders
- health outcome measures
- some health and disability workforce statistics
- some information about the future environment, including population projections.

For reference a list of abbreviations, including has been included in Appendix 1 (page 98).

History

Over the 20th century, the New Zealand government gradually picked up financing of hospitals. In the 1930s, the government aimed to introduce a national health service that was both comprehensive and integrated. This was never fully achieved with general practitioners (GPs) retaining the right to charge co-payments in addition to subsidies from the government, and hospital specialists being able to practise privately.

Since the 1980s health and disability support services in New Zealand have undergone a number of changes. These have ranged from a 'purchaser/provider' market-oriented model introduced in 1993, to the more community-oriented model that is currently in place. The changes have altered the number of organisations responsible for funding and providing services and the role or function of these organisations. For example, the role of the government agency responsible for the health and disability system has changed over time moving from a Department of Public Health (1900) to Department of Health (1920) to the (current) Ministry of Health (1993) and incorporating disability support services in 1993. An overview of changes to the health and disability system from 1938 through to present day (2018) has been provided in pages 5 to 11.

For the health system, key changes include:

- the separation of funding and provision of services in the early 1990s with four Regional Health Authorities (RHAs) responsible for purchasing services (from both public and private providers) and 23 Crown Health Enterprises (CHEs) that ran hospitals and public health services as commercial entities
- in 1998, a single Health Funding Authority (HFA) was established (following amalgamation of RHAs) as the single purchaser of services. At this time CHEs became Health and Hospital Services (HHSs) and were no longer required to make a surplus
- the establishment of PHARMAC, the government's pharmaceutical purchasing agency, in 1993
- the *New Zealand Public Health and Disability Act 2000* which established 21 (now 20) majority locally elected DHBs, who are responsible for planning, and purchasing or providing services for their population
- the *Primary Health Care Strategy* in 2001, and subsequent establishment of primary health organisations (PHOs) to coordinate primary health care services for enrolled populations.
- the establishment of a National Health Board (NHB) in 2010 to advise the Minister of Health on the planning and funding of national health services, disestablished in 2016.

For the disability system, key changes include:

- the establishment of the accident compensation scheme in 1972 meaning that people whose impairment was caused by injury through accident were able to receive assistance on an individual entitlement basis
- the *Disabled Persons Community Welfare Act 1975* provided a statutory right to support for disabled people, who were not ACC claimants, to access services and help them stay in the community (this included respite care, home help, aids and appliances and vocational training). This legislation also required accessible buildings
- the shift of disability support services from the responsibility of Vote: Social Welfare to Vote: Health following Cabinet decision in 1992. This capped and ring-fenced disability support services (DSS). The DSS framework was introduced in 1994
- *Human Rights Act 1993* included disability as a prohibited ground of discrimination. The Government signed the United Nations Convention on the Rights of Persons with Disabilities in 2007. As a result of the country's input into the Convention and progress in other policy areas New Zealand awarded the international Roosevelt Prize in 2008
- *New Zealand Disability Strategy 2000 (Making a World of Difference — Whakanui Oranga)* was based on the social model of disability, which makes a distinction between impairments (which people have) and disability (which lies in their experience of barriers to participation in society)
- Office for Disability Issues established in 2002 as the focal point within government on disability issues.

Structure

The structure of the system is described with reference to the statutory framework as well as the roles of various organisations and entities from page 15. An overview of the current structure of the system has been included in Figure 2. This shows both funding and service provision at a high level.

Key actors in New Zealand's health and disability system are:

- **Central government** – who raise revenue through taxes, and allocates a proportion of this to health and disability services, predominantly through Vote Health.
- **Ministry of Health** – responsible for advising the Minister of Health and government on health and disability issues and in leading the system through planning, regulation and purchasing of health and disability support services.
- **Ministerial Advisory Committees** – responsible for advising the Minister of Health on areas within their scope, current committees include Capital Investment Committee and Health Workforce New Zealand.
- **District Health Boards** – 20 geographically determined crown entities governed by boards of elected and appointed member and charged with planning, funding and providing health services for their population.
- **Non-DHB crown entities** – these are crown entities with other responsibilities in the health and disability sector and include PHARMAC, Health Promotion Agency, New Zealand Blood Service, Health Research Council, Health Quality and Safety Commission New Zealand. The Health and Disability Commissioner is an independent crown entity.
- **Health and disability service providers** – both DHB owned and non-DHB providers (NGOs, individuals, Māori and Pacific providers and range of for-profit and non-profit entities) who provide a range of services in hospitals, residential facilities, and in the community.
- **Accident Compensation Corporation (ACC) –** provides no fault compensation for accident and injury.

Financing

New Zealand's health and disability system is predominately funded through a single-payer, tax-funded model. Public sector funding, which includes both funding through Vote Health and Vote Labour Market (ACC), accounts for approximately 80% of all health expenditure with the remainder coming from private insurance (5%) and out-of-pocket payments (15%) (OECD 2017).

Appropriations for Vote Health spending in the 2018/2019 Budget total $18.225 billion and represents around a fifth of government expenditure. Information about how funding flows through the system is depicted in Figure 7. The document also describes:

- decisions about funding from page 36
- funding for 2018/19 from page 37
- voluntary private insurance on page 41.

Service Coverage

Services are provided by public, private and non-government (NGO) sectors. Responsibility for service coverage is spread across DHBs and the Ministry of Health. Access to services is determined on a fair and reasonable basis, and subject to generally accepted clinical protocols. Priority for access should be granted on the basis of need, ability to benefit and/or an improved opportunity for independence for those with a disability. Eligibility criteria determines whether a person is eligible for publicly funded health and disability services (refer page 43). Further criteria applies to receive disability support services (refer page 43).

This document has attempted to summarise the services covered by public funding (from page 48).

Performance of the system

There are a number of ways to look at the performance of the health and disability system. Three components of performance have been used in this document:

- Population level – improved health and equity for all populations
- Individual level – improving quality, safety and experience of care for people and their whānau
- System level – getting the best value for publicly funded resources.

For reference, a list of key health statistics definitions has been included in Appendix 3 (page 101).

Population level

The New Zealand health and disability system is looking after most New Zealanders well, especially when acutely unwell or injured. New Zealanders are living longer and are living more years in good health (refer page 54). The overall health status of New Zealanders is improving but not everyone is enjoying equally good health. Inequities persist for many groups, particularly for Māori and Pacific peoples as shown in population health measures like infant mortality (page 54) and amenable mortality (page 55).

Like other developed countries, long-term conditions (such as cancer, cardiovascular disease and mental illness) contribute the most to ill health and death in New Zealand. In 2016, long-term conditions caused 87 percent of health loss in New Zealand while injuries were responsible for 9 percent and communicable diseases, nutritional deficiencies and neonatal disorders for 4 percent (IHME 2016). Cancer is New Zealand's largest contributor to health loss followed by cardiovascular disease (refer pages 58 and 59).

Individual level

Quality and safety of health and disability services is variable. For example, access to primary health care services remains an issues for many people due to cost and other barriers and ambulatory sensitive (avoidable) hospitalisations (ASH) show that Pacific people (in 00-04 and 45 to 64 age groups have the highest rates, followed by Māori and that the lowest are those in the 'other' group. However, measures of patient experience indicate high levels of satisfaction with the quality of services, high rates of satisfaction with general practitioners, and positive (though variable between DHBs) responses for inpatients. In terms of effectiveness, bowel cancer is used, from page 75, as an example to demonstrate large variation between DHBs and that New Zealand sits in the middle when compared to other OECD countries.

System level

New Zealand has consistently spent less, in total, on health care than most OECD countries. Compared with 30 other high-income countries, New Zealand spends a smaller share of national income on health care, and has a lower per-head expenditure. For the 2018/2019 financial year, government expenditure on health is expected to be just over $18 billion, or 21% of total government-budgeted expenditure ($81.7 billion).

Other measures of system performance included in this document are:

- DHB financial performance and productivity (page 80)
- Capital expenditure (page 81)
- Characteristics of the workforce (page 83).

The Future Environment

New Zealand faces a number of changes as it moves into the future. The New Zealand population is projected to grow by nearly a million people between 2018 and 2038 (4,864,600 people in 2018 to 5,769,800 people in 2038 – refer page 88). The composition of the population will change, with a greater proportion of people aged over 65 years. This is impacted by the baby boomer cohort moving into older age groups – baby boomers born in 1946 turned 65 in 2011, while those born in 1964 turn 65 in 2029. Regions of New Zealand will be differentially affected by population growth (ie, some areas that will continue to grow while others will decline) which will be impacted by population ageing (ie, some areas with high proportions of over 65s and more deaths than births). The population will be more ethnically diverse with proportions of Māori, Pacific and Asian populations growing more rapidly than the NZ European/Other population (refer page 90).

Beyond demographic change the burden of disease is likely to continue shifting (refer page 91). This indicates a continued trend of increasing long term conditions with leading causes of death continuing to be vascular – health attacks and strokes.

Other future trends described in the document (refer pages 92 to 93) include:

- globalisation
- changing technology
- climate change.

History – key changes to the New Zealand health and disability system

If health systems around the world seem to have been undergoing almost continuous reform over the past two decades, that is probably because they have. – Braithwaite et al 2016 p. 843

The New Zealand health system has experienced a number of structural and organisational changes that have shaped how health and disability services are funded, organised and delivered. Some of these changes are outlined in Table 1. This describes changes to health and disability services, as well as the establishment of and changes to the Accident Compensation Scheme. The changes that established DHBs occurred from 2000 onwards.

Table 1: Key changes to the health and disability system from 1938 to present[1]

Period	Key changes
Pre 1938 **Liberal Government 1890-1911** **Reform Government 1912-1928** **United Government 1928-1931** **United- Reform Coalition Government 1931-1935**	• From early days of European settlement in New Zealand, a mix of providers offered health care services – government, voluntary and for-profit sectors. Public hospitals and mental health institutions ("lunatic" asylums) were established. • *Friendly Society Act 1854* allowed for the establishment of friendly societies to provide funding to support members and their families during sickness, old age, or in widowhood. This money was raised through voluntary subscription of members and donations. • *Hospital and Charitable Institutions Act 1885* divided the country into 28 hospital districts, overseen by local hospital boards. • The *Public Health Act 1900* created a Department of Public Health, headed by a Chief Health Officer. The department took on broader functions merging with the Department of Hospitals and Charitable Aid in 1909. It was eventually renamed the Department of Health in 1920 reflecting the expanded responsibilities including: public health, hospitals, nursing, Māori health, child welfare, school health and dental health.

1938
First Labour Government 1935-1949
	• *Social Security Act 1938* outlined a vision of free health services for all New Zealanders, regardless of ability to pay. In practices, a dual system of funding emerged where:
	  • Mental health, maternity, and hospital services were fully funded through the government, however hospital specialists retained right to practice privately
	  • GPs retained the right to charge a fee over and above any subsidy for general practice consultations. General Medical Services (GMS) benefit system was established in 1941 following protracted negotiations with the medical profession, transforming what was meant to be free general practice services into a subsidised one.
	• The number of Friendly Societies reduced significantly following introduction of Social Security Act.

[1] This table is based on a number of sources including: Ashton (2005), Cumming (2014), Gauld (2009), Stace (2007) and information from Accident Compensation Corporation (ACC), Office for Disability Issues (ODI) and the Ministry of Health.

Period	Key changes
1949–1969 **First National Government 1938-1957** **Second Labour Government 1957-1960** **Second National Government 1960-1972**	• Growth in private hospitals was supported by loans and subsidies (private hospital loan scheme implemented in 1952). • Large psychiatric hospitals began closing through an increased emphasis on community care and a move to provide more of these services in general hospitals. • The Consultative Committee on Health Reform, known as Barrowclough Committee released a report in 1953. Some of the findings, including support for private hospitals was implemented through the *Hospitals Act 1957*. • The 1953 Aitken Report produced by the Consultative Committee on Intellectually Handicapped Children recommended that disabled and mentally ill people be housed in large 'mental deficiency colonies' containing several hundred people, and that current institutions be extended. In 1958, the Burns Report on the same topic of care for people with learning disabilities rejected this approach and instead called for small residential housing options in the community. Some NGOs (like IHC) set up day care centres, occupational groups and residential homes. • Voluntary private medical insurance became available (Southern Cross Medical Care Society established in 1961). • Replacement of eight hospital districts with two (1965). • Department of Health undertook a Review of Hospital and Related Services in New Zealand 1969.This made recommendations about hospital board amalgamation, the need for an integrated approach to service organisation, and the role of the department itself.

1970-1975
 	
Third Labour Government 1972-1975
	• Royal Commission on Social Security (1972) supported the existing system, although was limited in its scope in health related matters. Some recommendations, including an increase to the General Medical Subsidy, were implemented.
	• *Accident Compensation Act 1972* established a scheme based on the 1967 Woodhouse Report and covered all injuries to employees and injuries due to motor vehicle accidents. This established a principle of entitlement for disabled people, as those whose impairment was caused by injury through accident were now able to receive assistance on an individual entitlement basis.
	• In 1973, the ACC scheme was expanded to include those not already covered (students, people who are not working and visitors to New Zealand). Under the Act, ACC benefits included:
	  • Hospital and medical expenses
	  • Rehabilitation and transport costs
	  • Weekly compensation for injured workers
	  • One-off payments for permanent and mental injuries
	  • Funeral costs and one-off payments to families in cases of accidental death.
	• The Accident Compensation Commission was established in 1974 to manage the compensation schemes.
	• The *Disabled Persons Community Welfare Act 1975* gave disabled people, who were not ACC claimants, access to services to help them stay in the community (this included respite care, home help, aids and appliances and vocational training). This legislation also required accessible buildings.
	• A White Paper, *A Health Service for New Zealand* (1975) provided a template for reform with the Department of Health recast as the New Zealand Health Authority that would plan, supervise and coordinate the work of 14 regional health authorities.

1983–1990 **Third National Government 1975-1984**	• In the late 1970s, the Special Advisory Committee on Health Services Organisation was established. It suggested broadly the same proposals as the 1975 White Paper. These were piloted in Northland and Wellington leading to further implementations and the *Area Health Board Act 1983*. The Act did not make the development of area health boards compulsory. • Thirty local hospital boards were gradually replaced by 14 geographically based area health boards (AHBs) established to provide population-based public health services (e.g. health protection and health promotion) and hospital services.

Period	Key changes

1983–1990
 	
Fourth Labour Government 1984-1990
	• Features of Area Health Boards (AHBs) included:
	  • Governance by a locally-based and (mostly) locally elected board
	  • Funding by means of a population-based formula
	  • A reorientation away from curative services towards prevention
	  • Planning of services in consultation with key stakeholders
	  • A more strategic approach to health service delivery
	  • Including the use of national goals and targets.
	• Reviews of ACC by officials in 1986 (the Officials Committee report 1987), and Law Commission in 1988 recommended changes to ACC.
	• Health Benefits Review (1986).
	• Formation of Joint Taskforce of Treasury and Department of Health for Hospital and related services (1987).
	• The Cartwright Inquiry 1988 recommended the introduction of a patient code of rights, and a national, centrally coordinated screening programme for cervical cancer.

1991–1996
 	
Fourth National Government 1990-1996
	• ACC scheme was reviewed in 1990 in response to employers (who were demanding to stop paying for accidents their employees had outside of work) and concerns about costs. The review suggested that letting private companies provide insurance would create competition between them and ACC and reduce the total cost of the scheme. Those changes came into effect with the *Accident Rehabilitation and Compensation Insurance Act 1992*.
	• Area Health Boards replaced by Commissioners (1991)
	• User charges for pharmaceuticals and hospitals introduced in 1991. Hospital charges were removed in 1992.
	• In 1992, following Cabinet decision on "The New Deal: Support for Independence for People with Disabilities" the government realigned responsibilities for people with disabilities. This led to a number of changes:
	  • Between 1993 and 1995 most Department of Social Welfare disability-related programmes and services were gradually shifted into Vote: Health and included in the health services purchasing process. Within Vote: Health DSS was capped and ring-fenced.
	  • In 1994 the New Zealand Framework for Service Delivery (the DSS Framework) was put in place by RHAs under direction of the Ministry of Health. Under the DSS Framework, in order to access Ministry of Health funded support services, an individual had to first meet the Ministry's definition of disability, then have their needs assessed and undergo service coordination or planned allocation of services within available resources.
	• The New Zealand Health Information Service (NZHIS), reporting to the Minister of Health, was established in the early 1990's to develop the National Health Index (NHI). While some form of unique identifier was used in public hospitals through the 1970s, the fully centralised, specific NHI was established in 1992.
	• *Health and Disability Services Act 1993* introduced a 'quasi-market' model for the publicly financed health system, and the separation of ownership, purchasing and provision of health services. This resulted in a number of changes:
	  • The Department of Health became a policy-focused Ministry of Health.
	  • Four regionally based purchasing authorities (Regional Health Authorities or RHAs) became responsible for planning and purchasing all services for their populations. They purchased health and disability services from service providers, through formal contracts in an environment which encouraged competition.
	  • The provider arms of AHBs were transformed into 23 government-owned hospital and related services' providers (Crown Health Enterprises or CHEs) funded according to their outputs (patients treated). These were set up as limited liability companies, and expected, in principle, to earn a profit to be returned to the Crown.
	  • Legislation also provided for establishment of a National Advisory Committee on Core Health and Disability Support Services (Core Services Committee, later National Health Committee) to advise the Minister on the type and priority of services that should be publicly funded.

Period	Key changes
1991–1996 **Fourth National Government 1990-1996**	• In 1993, the Crown Company Monitoring Advisory Unit (a separate operational unit of the Treasury) was established to represent the government's interest as a shareholder in all Crown companies including CHEs. • PHARMAC (Pharmaceutical Management Agency of New Zealand) was set up in 1993 by the four RHAs to manage the Pharmaceutical Schedule on their behalf. • Human Rights Act 1993 included disability as a prohibited ground of discrimination. • Public Health Commission was established in 1993. It was disestablished in 1995 with the policy advisory function transferred to the National Health Committee, and purchasing function transferred to RHAs. • *Health and Disability Commissioner Act 1994* established the Health and Disability Commissioner. The code of patient rights was established within Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996 (see Appendix 4). • *Accident Rehabilitation and Compensation Insurance Amendment Act 1996* changed the scheme to: give more money to people with permanent injuries, set up a system to assess whether injured employees can return to work, and allowed ACC to buy health and rehabilitation services. • Booking system for elective surgery (including Clinical Priority Assessment Criteria or CPAC) introduced in 1996 to manage referral, assessment and access to publicly funded elective surgery. • Review of blood services in New Zealand (Carter-Marshall Report) in 1996 recommended the establishment of a national blood service.

1997–1999
 	
Fourth National (in-coalition) Government 1996-1999
	• In mid-1997, a Transitional Health Authority (THA) was created to oversee amalgamation of RHAs.
	• Following amendments to the *Health and Disability Services Act 1993:*
	  • The Health Funding Authority (HFA) became the single, national purchaser of services
	  • CHEs became known as Hospital and Health Services (HHSs), with not-for-profit status and a greater focus on collaboration between providers as opposed to competition (i.e. no longer required to make a surplus).
	• Following the Mason Report, the Mental Health Commission was established as a crown entity in 1998. Mental health funding was ring-fenced (for top three percent only).
	• *Health Amendment Act 1998,* an amendment to the Health Act 1956 established the New Zealand Blood Service.
	• *Accident Insurance Act 1998* replaces the 1992 Act allowing private insurance for work-related accidents.

2000 onwards
 	
Fifth Labour (in-coalition) Government 1999-2008
	• Introduction of the *New Zealand Public Health and Disability Act 2000*.
	  • This established 21 majority locally elected district health boards (DHBs) as local agencies accountable to the Minister of Health, but responsible for organising health care, and latterly, disability support for the populations in their districts. This ended the purchaser-provider split as DHBs hold funding for the services they provide while purchasing a proportion of their services from other providers.
	  • Some services became the responsibility of the Ministry of Health (e.g. population-based public health services; midwifery services; postnatal care delivered by the national child health organisation Plunket; and disability support services for those aged under 65 years)
	  • The government developed a number of strategies– particularly the *New Zealand Health Strategy* and the *New Zealand Disability Strategy* – to provide overall guidance to the system.
	  • Funding of DHBs by way of a needs based population based funding formula (PBFF).
	• *New Zealand Disability Strategy* 2000 (Making a World of Difference — Whakanui Oranga) was based on the social model of disability, which makes a distinction between impairments (which people have) and disability (which lies in their experience of barriers to participation in society).

Period	Key changes
2000 onwards **Fifth Labour (in-coalition) Government 1999-2008**	• The Primary Health Care Strategy 2001 established primary health organisations (PHOs) (from 2002) and a mixed funding model for primary health care – fee-for-service funding and a capitation funding model (2 formulae – Access and Interim). There grew to be 82 PHOs in 2009, this number through successive mergers, reduced to 31. • In 2000, ACC was restored as the sole provider of accident insurance for all injuries and stopped private insurance for employers after 30 June 2000. *Accident Compensation Act 2001* established the Accident Compensation Corporation (ACC) as a Crown entity. • *Health and Disability Services (Safety) Act* 2001 introduced. This legislation underpinned the certification of health and disability services and introduced a number of standards. • In 2002, the Office for Disability Issues was set up to provide a focus on disability across government and to lead the implementation and monitoring of the New Zealand Disability Strategy. • The Ministry of Health released the report *To Have an Ordinary Life* in 2003 (Kia Whai Oranga 'Noa') which spelt out how the social model of disability could improve the lives of people with learning disabilities. • *Health Practitioners Competence Assurance Act 2003* introduced. The principal purpose of protecting the health and safety of the public was emphasised and the Act included mechanisms to ensure that practitioners are competent and fit to practise their professions for the duration of their professional lives. • *Injury Prevention, Rehabilitation and Compensation Amendment Act 2005* changed how ACC calculated compensation for newly self-employed people and shareholder employees. It also replaced 'medical misadventure' with 'treatment injury', and covered all mental injuries from sexual violence that happened before 1999. • Very Low Cost Access (VLCA) scheme introduced into general practice for those typically serving high needs populations who agreed to keep their fees within specified thresholds. • In 2006, the last large institutional facility for disabled people, the Kimberley Centre in Levin, was closed. • New Zealand signed the United Nations Convention on the Rights of Disabled Persons at the United Nations on 30 March 2007, and ratified it on 26 September 2008. • Ten Health Targets were introduced in 2007/2008. • Social Services Committee Inquiry into the quality of care and service provision for people with disabilities in 2008. This was followed by a government response to the inquiry in 2009. • *Injury Prevention, Rehabilitation and Compensation Amendment Act (No. 2) 2008* made processes for applying easier, and made it easier for work-related gradual process diseases and infections, or mental trauma at work that develops to a mental injury to be covered.
2009 onwards **Fifth National (in-coalition) Government 2008-2017**	• In 2009, a Ministerial Committee on Disability Issues was created in response to the Social Service Committee Inquiry to provide leadership, coordination and accountability for implementing the New Zealand Disability Strategy and the United Nations Convention on the Rights of Persons with Disabilities. • Ministerial Review Group (MRG) for Health established in 2008. • *Meeting the Challenge: Enhancing Sustainability and the Consumer Experiences within the Current Legislative Framework for Health and Disability Services in New Zealand* report released by MRG in 2009 (known as the Horn Report). • National Health Board (NHB) was established as a business unit within the Ministry of Health in 2010. The NHB had subcommittees including Capital Investment Committee (CIC) – responsible for planning and prioritisation for capital investment in the sector, and National Health IT Board – responsible for strategic leadership on information systems across the sector.

Period	Key changes

2009 onwards
Fifth National (in-coalition) Government 2008-2017
	• Also part of National Health Board (NHB) were:
	  • Health Workforce New Zealand (HWNZ) – responsible for planning and development of the health and disability workforce
	  • National Screening Unit (NSU) – responsible for the development management and monitoring of nationally organised population-based screening.
	• A Shared Services agency was established to manage back-office functions across DHBs. The MRG report also recommended a wider role for PHARMAC in managing hospital medicines and medical devices.
	• Nine Better Sooner More Convenient (BSMC) Business Cases (sometimes called Alliances) were established following expressions of interest in late 2009. They were developed to deliver on the government's priorities around primary health care.
	• Otago and Southland DHBs merged in 2010 to form a new Southern DHB, reducing the number of DHBs to 20.
	• *Accident Compensation Amendment Act 2010* introduced. It renamed ACC's principal Act (now the Accident Compensation Act 2001), allowed information-sharing with Inland Revenue and created the motorcycle safety levy.
	• Health Quality & Safety Commission established December 2010.
	• Better Public Services (BPS) Targets announced in 2012.
	• Publication of Enabling Good Lives (2011) and adoption of Enabling Good Lives approach by the Ministerial Committee on Disability Issues (2012).
	• Mental Health Commission disestablished June 2012 with core functions transferred to the Office of the Health and Disability Commissioner.
	• Health Promotion Agency was established 1 July 2012 through merger of the Alcohol Advisory Council of New Zealand and the Health Sponsorship Council.
	• In 2013, the Ministry of Health began funding family carers in certain circumstances, following the Court of Appeal decision in *Atkinson and Others v Ministry of Health*.
	• In 2016, the Government revised the *New Zealand Disability Strategy* to enable New Zealand to better support disabled people to achieve their potential, and improve the lives of disabled New Zealanders and their families.
	• The *New Zealand Health Strategy* was refreshed in 2016. It was developed with the help of sector leaders, independent reports, extensive public consultation, and was informed by other government programmes and initiatives. It identified the high-level direction for the health system over the 10 years from 2016 to 2026 and identified five strategic themes for the changes that would take the system toward that future.
	• National Health Board disestablished in 2016 following an independent review as part of the development of the refreshed New Zealand Health Strategy. The NHBs functions including annual and regional funding, monitoring and planning of DHBs, and national service planning and funding were reabsorbed into the Ministry of Health.

2017 onwards **Sixth Labour (in-Coalition) Government 2017-present**	• Ministerial Advisory Group (MAG) for Health established in November 2017. • New Zealand Health and Disability System Review announced in May 2018.

Characteristics of the New Zealand health and disability system

New Zealand's health and disability system is complex. This is seen at a number of levels, including:

- the relationship between health and disability services
- the number and scope of the organisations involved and their role in the system
- the flow of funding from government to those who plan, purchase and provide services
- the various actors involved in providing health and disability support services

One way of describing the organisation of the system is shown in Figure 2, while Table 2 describes some of the high level characteristics of the New Zealand health and disability system. The remainder of the chapter explores the relationship between health and disability services.

Relationship between Health and Disability services

The relationship between universal health services and disability specific services is outlined in overlap between health and disability are outlined in Figure 1. This describes services that are funded by Ministry of Health, health Crown Entities, and ACC for the whole population including disabled people, and those that are unique to disabled people and are funded by Ministry of Health, DHBs, ACC, Ministry of Education, Ministry of Social Development, Ministry of Education and others).

Figure 1: Relationship between health and disability services in New Zealand

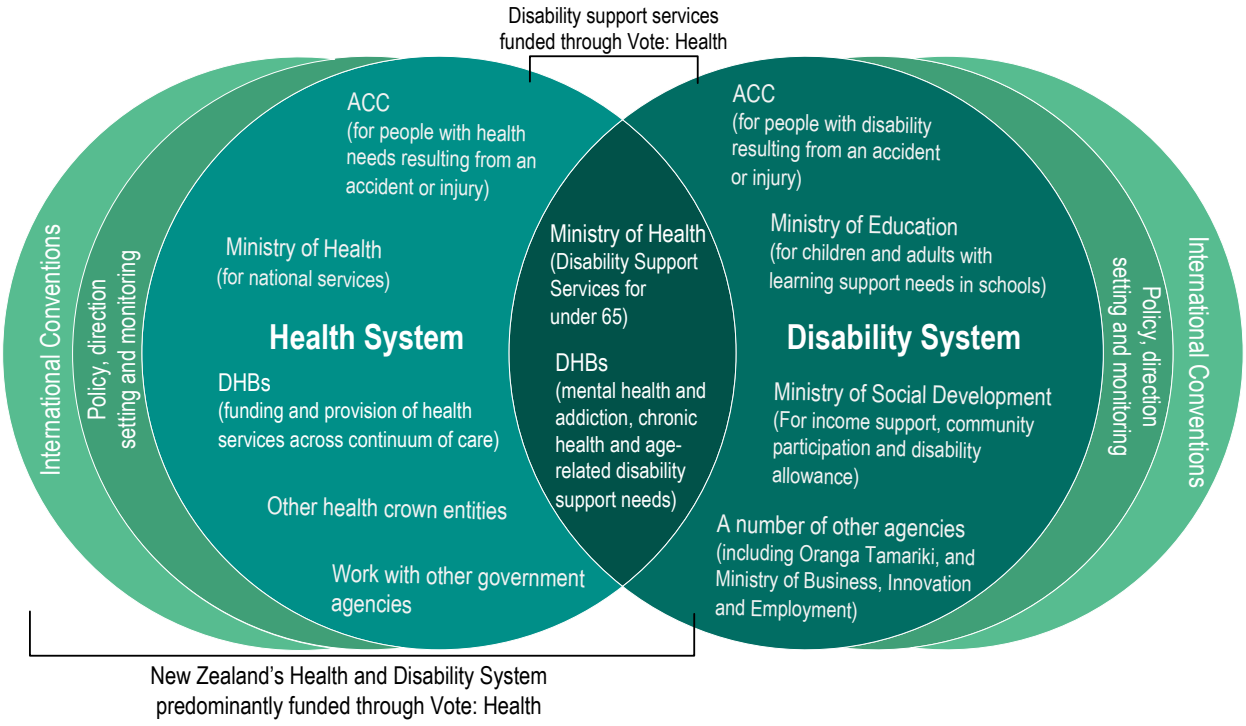


Figure 1 serves to demonstrate that the context for health services is different to disability services where there is variation across:

1. **Responsible Ministers**
   - Minister responsible for health and disability system is the Minister of Health. The responsibility for disability may be held by the Minister of Health or delegated to an Associate Minister of Health.
   - Minister responsible for disability is the Minister for Disability Issues.
   - Both Ministers have responsibilities under the New Zealand Public Health and Disability Act 2000. Further information about each Minister is provided on pages 18 and 19.
2. **Actors involved in policy and strategic direction**
   - For disability policy – Office for Disability Issues and Office for Seniors (both part of Ministry of Social Development), Human Rights Commission (Disability Rights Commissioner), Office of the Ombudsman, Health and Disability Commission, Children's Commission, Ministry of Health, Ministry of Education, Ministry of Business Innovation and Employment, ACC, and other agencies who provide disability services
   - For health policy – Ministry of Health, health Crown Agencies, ACC.
3. **Role of international conventions or rights based approaches.**
4. **Agencies involved in funding services**
   - Public funding of health services is predominantly through Vote: Health, the other source is ACC
   - Public funding of disability services is through a number of government agencies including Ministry of Health, DHBs, Ministry of Social Development, Ministry of Education, Ministry of Transport and ACC.

More information about disability across government is provided in Appendix 2 (refer page 101).

Figure 2: Overview of the New Zealand health and disability system

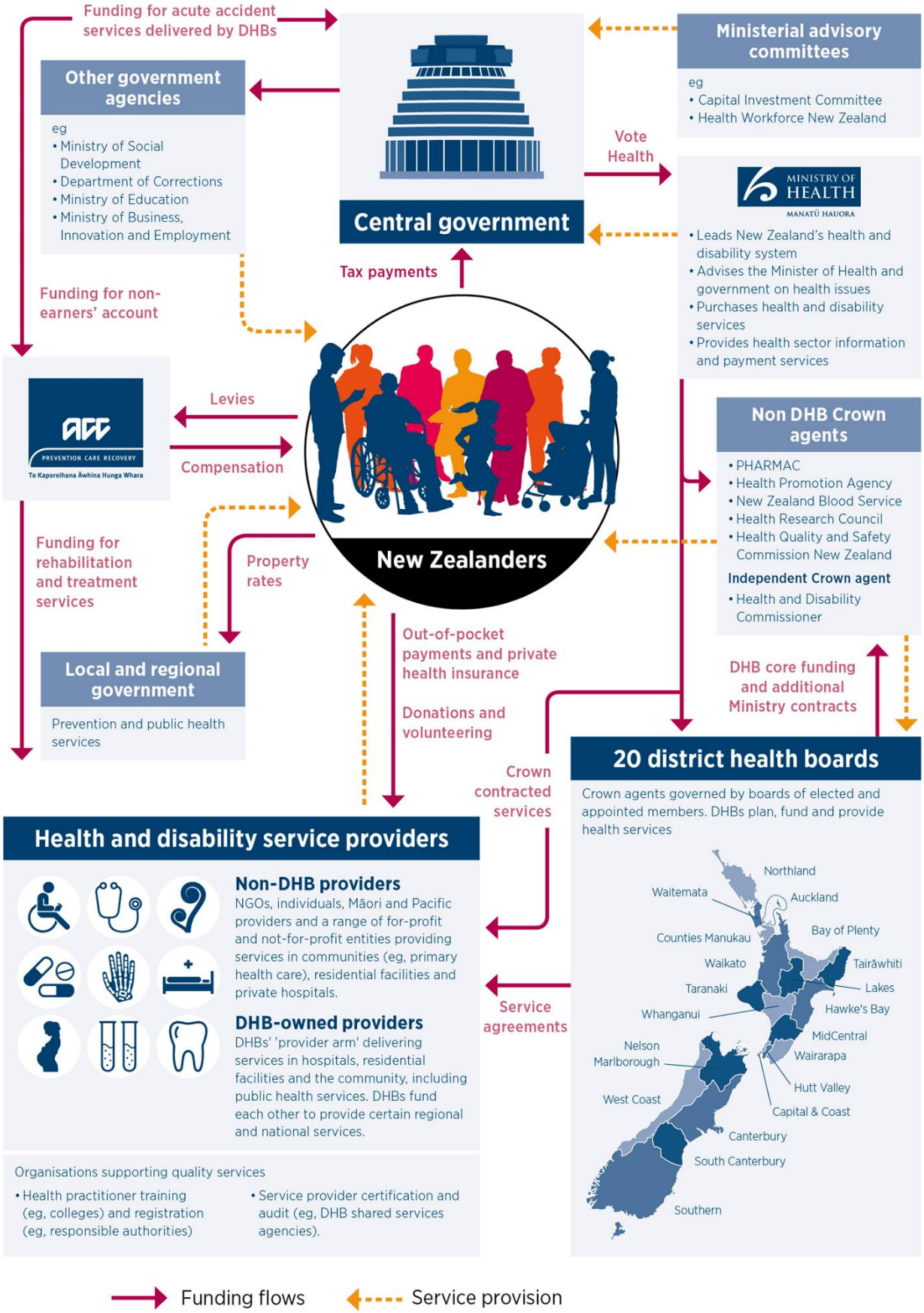


Table 2: Characteristics of the New Zealand health and disability system

Characteristic	Description

Government role	• A publicly funded national health care and disability support system. Responsibilities include:
	  • Policy decisions and budget allocations determined by government via Cabinet. Policy setting and advice provided by Ministry of Health.
	  • Responsibility for planning, purchasing and provision devolved to geographically defined district health boards (DHBs) which are Crown Entities accountable to boards with a mix of locally elected and appointed members.
	  • Significant national planning, purchasing, provision, regulation and monitoring remains centrally with the Ministry of Health. The Ministry of Health is the monitoring department for DHBs and other health crown entities. Regulation of workforce and training is responsibility of Ministry of Health in conjunction with responsible authorities.

Public system financing	• General tax revenue (income tax, other taxes and levies).
Social insurance role	• The Accident Compensation Corporation (ACC) scheme provides no-fault compensation for accidents and injuries paid for by a range of levies and government funding. • ACC cover helps pay for the costs of treatment, rehabilitation and support services, loss of income or financial help and injury prevention in the community.
Private insurance role	• Approximately 29% of the population have some form of private health insurance cover (OECD.Stat 2018).
Coverage	• Eligibility for services determined by eligibility direction (page 43). • Eligibility for disability support services mandated by Cabinet (page 43). • Hospital services are mostly free. • Out-of-pocket costs in some areas including general practice, and some diagnostics and pharmaceuticals, aged care, cervical screening. • ACC contribution for costs associated with treatment for accidents. • Oral health services are mostly free for under 18s. Most adult dentistry is privately funded

Ownership	• Hospitals – mix of public and private.
	• NGO sector – mixed ownership model:
	  • Mix of private for-profit and not-for-profit (eg, membership or trust) hospitals, rest homes, surgical and rehabilitation services etc.
	  • Primary health organisations have to have not-for-profit structure but may have for-profit associate companies.
	  • General practice may take different forms (owner-operator private businesses through to NGO).

Provision	• Mixed provision of health and disability services by public, private and non-government providers.

Payment	• DHBs:
	  • Global budgets through population based funding
	  • Cost of ACC acute services agreed through purchasing agreement with Ministry of Health for acute and other services provided by DHBs.
	  • Regulated payments and contracts.
	• General practice:
	  • Capitation (a prospective bundled payment)
	  • Fee-for-service (a set fee for each visit or service)
	  • Regulated payments (from ACC) as determined by the Accident Compensation (Cost of Treatment) Regulation 2003.
	• Other services:
	  • Mix of contracts and fee-for-service (a set fee for each visit or service).

Access to hospital and specialist services	• Patient access (outside of emergency departments) to specialty care, hospital care, and diagnostic tests controlled by general practitioners and others (the gatekeeping role).

Structure of the New Zealand Health and Disability System

The New Zealand health and disability system is often described as a mixed system due to the provision of services by a mix of public and private (both for-profit and non-for-profit) providers. Figure 2 provides an overview of how the system is structured.

The key players in the system (the Ministry of Health; Crown entities including DHBs; Primary Health Organisations, Non-government Organisations, Public Health Units, Local Authorities, Responsible Authorities, and other Government agencies) have been described in more detail in pages 18—31. The key players across government for Disability are described in more detail from page 101.

Statutory framework

The health and disability system's statutory framework comprises over 25 pieces of legislation. The most significant are the *New Zealand Public Health and Disability Act 2000*, Health Act 1956, Accident Compensation Act 2001, Crown Entities Act 2004 and *Public Finance Act 1989*.

New Zealand Public Health and Disability Act 2000

The New Zealand Public Health and Disability Act (NZPHD Act 2000) establishes the structure for public sector funding and the organisation of health and disability services. It mandates the New Zealand Health Strategy and New Zealand Disability Strategy, establishes DHBs and certain other health Crown entities, and sets out the duties and roles of key participants, including the Minister and ministerial advisory committees.

The objectives stated in Section 3(1)(a—d) are:

a) to achieve for New Zealanders—
    i. the improvement, promotion, and protection of their health
    ii. the promotion of the inclusion and participation in society and independence of people with disabilities
    iii. the best care or support for those in need of services
b) to reduce health disparities by improving the health outcomes of Maori and other population groups
c) to provide a community voice in matters relating to personal health services, public health services, and disability support services—
    i. by providing for elected board members of DHBs
    ii. by providing for board meetings and certain committee meetings to be open to the public
    iii. by providing for consultation on strategic planning
d) to facilitate access to, and the dissemination of information to deliver, appropriate, effective, and timely health services, public health services and programmes, both for the protection and the promotion of public health, and disability support services.

The act also states that the objectives are "to be pursued to the extent that they are reasonably achievable within the funding provided."

Health Act 1956

The Health Act sets out the roles and responsibilities of individuals to safeguard public health, including the Minister of Health, the Director of Public Health and designated officers for public health. It contains provisions for environmental health, infectious diseases, health emergencies and the National Cervical Screening Programme.

Accident Compensation Act 2001

The Accident Compensation Act (AC Act) sets up the crown entity to deliver New Zealand's accident compensation scheme, the Accident Compensation Corporation (ACC). The AC Act states that the purpose of the Scheme is to:

"…enhance the public good and reinforce the social contract represented by the first accident compensation scheme by providing for a fair and sustainable scheme for managing personal injury that has, as its overriding goals, minimising both the overall incidence of injury in the community, and the impact of injury on the community (including economic, social, and personal costs)…"

There are a number of regulations made under the Accident Compensation Act 2001.

Note**:** The ACC scheme is out of scope for the New Zealand Health and Disability System Review, although the relationship between the Health and Disability system and the ACC scheme is within scope.

Crown Entities Act 2004

The Crown Entities Act provides the statutory framework for the establishment, governance and operation of Crown entities. It clarifies accountability relationships and reporting requirements between Crown entities, their boards and members, monitoring departments, responsible Ministers on behalf of the Crown and Parliament.

Health Crown Entities include:

- 20 District Health Boards
- New Zealand Blood Service
- Health Quality & Safety Commission
- Health Research Council of New Zealand
- Health Promotion Agency
- Pharmaceutical Management Agency (PHARMAC)

Independent Crown Entities:

- Health and Disability Commissioner
- The Human Rights Commission
- The Children's Commission
- The Privacy Commission

Crown-entity subsidiary:

- NZ Health Partnerships.

Public Finance Act 1989

The Public Finance Act 1989 provides the legal framework for the financial management system of the Government. It controls the financial activity of the Government and the manner in which Parliament keeps a watch on the executive's expenditure of public money. It provides the basis for the appropriation and management of public resources. It prescribes the reporting requirements for the Crown, departments, and Crown entities.

International conventions

New Zealand is party to international conventions that relate to health and disability, including:

- World Health Organization Framework Convention on Tobacco Control
- International Health Regulations 2005
- Convention on the Rights of Persons with Disabilities (CRPD)
- Universal Periodic Review (UPR)
- Convention Against Torture (CAT)
- Convention of Rights of the Child (UNCROC)
- Convention of the Elimination of all Forms of Discrimination against Women (CEDAW)
- International Convention on the Elimination of All Forms of Racial Discrimination
- International Covenant on Economic, Social and Cultural Rights (ICESCR).
- Convention on the elimination of Racial Discrimination (ensuring access to health services without discrimination) and
- Declaration on the Rights of Indigenous People (which in addition to the highest attainable standard of physical and mental health includes the right to traditional medicines).

The Minister of Health

The Minister of Health has overall responsibility for the health and disability system, and setting the sector's direction, as described in Table 3. Some responsibilities may be delegated to one or more Associate Ministers of Health.

Table 3: Key Functions, Duties and Responsibilities of the Minister of Health

Characteristic	Description

Setting strategic direction	• The Minister is responsible for strategies that provide a framework for the health and disability system. A list of current strategies has been included in Appendix 5
	• Two strategies are required under the *NZPHD Act 2000*, and the Minister must annually report on progress to implement these strategies (section 16):
	  • New Zealand Health Strategy[2]
	  • New Zealand Disability Strategy.[3]
	• The Minister is also responsible for the strategic direction of the Ministry of Health. This is set using documents including the Statement of Strategic Intent.

Monitoring performance of DHBs and other health Crown entities	• Discharged through:
	  • Setting Crown entities' strategic direction and annual performance requirements (through annual Statement of Performance Expectations, meeting with Boards and Chairs, issuing annual Letters of Expectations)
	  • Active monitoring of health Crown entities, reviewing performance and operations, and asking the State Services Commissioner to act on issues.
	  • The Minister can appoint a monitor for Crown entities. The Ministry of Health currently monitors health Crown entities for the Minister.

Adjust Crown funding	• The Minister can adjust, subject to Cabinet consideration appropriations, fees and levies.

Appoint advisory committees	• The Minister can, under the *NZPHD Act 2000* establish Ministerial committees (section 11). Current advisory committees include, among others:
	  • Health Workforce New Zealand
	  • Capital Investment Committee
	  • Digital Advisory Board
	  • Cancer Control New Zealand
	  • Health and Disability Ethics Committees.
	• The Minister must, under the *NZPHD Act 2000* (section 16) establish a national advisory committee on health and disability support services ethics (the National Ethics Advisory Committee).
	• The Minister under the *Human Assisted Reproductive Technology Act 2004* may designate an Ethics Committee (ECART) and must establish an advisory committee (ACART).
	• The Minister under the *Medicines Act 1981*, may appoint advisory committees, and must appoint Medicines Classification Committee (MCC) and Medicines Review Committee (MRC).

Appointments	• The Minister recommends appointments and reappointments, including:
	  • Appointments to Boards of health Crown entities, including the Chair
	  • Appointments to Ministerial Committees and advisory committees
	  • Appointing district inspectors and Mental Health Review Tribunal.

Other powers	• To declare health emergencies under the *Health Act 1956* • To order inquiries into the funding or provision of services, the management of DHBs or other health Crown entities established under the NZPHD Act 2000, or act on a complaint or matter that has arisen. • Responsibilities under Mental Health (Compulsory Assessment and Treatment) Act 1992 to make decisions around extended leave from hospital, and eventual change of legal status, for special and restricted patients (exercised by Statutory Officer).

[2] Requirement of Minister under NZPHD Act 2000, Section 8(1)

[3] Requirement of Minister of the Crown responsible for disability issues under NZPHD Act 200, Part 2, Section 8(2)

The Minister for Disability Issues

The role of the Minister for Disability Issues is to advocate for disability issues and to establish and report on the New Zealand Disability Strategy. This is a whole-of-government advocacy role on behalf of disabled New Zealanders.

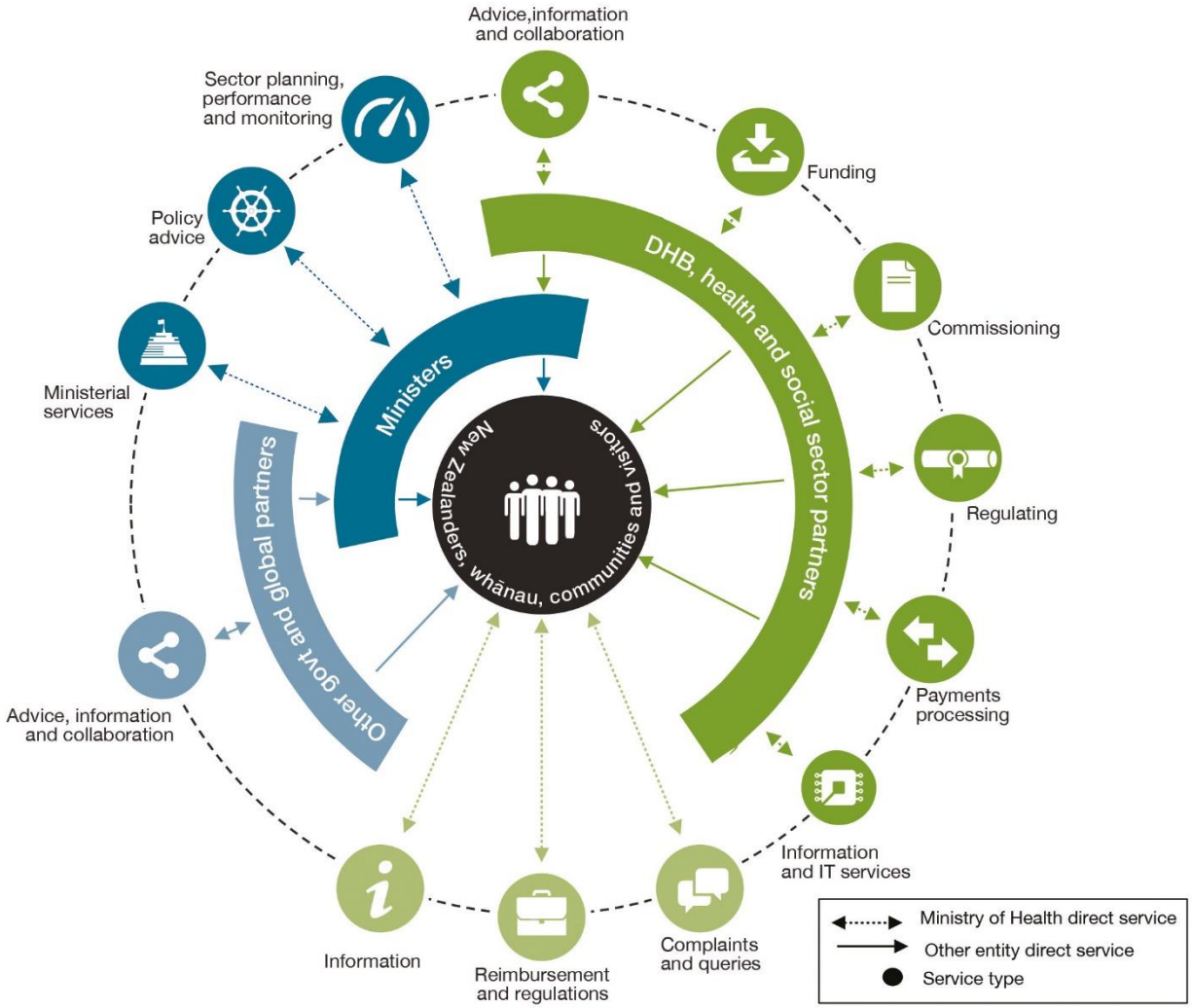
The specific duties of the Minister for Disability Issues are set out in legislation (New Zealand Public Health and Disability Act 2000, Part 2: Responsibilities of Minister, Section 8: Health and Disability Strategies). This focuses on the preparation of a strategy for disability support services - the New Zealand Disability Strategy. This provides the framework for the Government's overall direction for the disability sector and for improving disability support services. The legislation empowers the Minister to amend or replace that strategy at any time. It also requires the Minister to:

- consult any organisations and individuals that the Minister considers appropriate, before determining the New Zealand Disability Strategy
- report each year on progress in implementing the strategy, and
- make publicly available, and present to the House of Representatives, a copy of the strategy, or any amendment of it or replacement to it, and to report as soon as practicable after its determination or completion.

The Ministry of Health

The Ministry of Health is the primary advisory body to the government on health activities, although other government agencies also contribute. The Ministry of Health acts as the Minister of Health's principal advisor on health policy, playing an important role in supporting decision-making. At the same time, the Ministry of Health has a role within the health system as a funder, monitor, purchaser and regulator of health and disability services. Key characteristics of the Ministry of Health are described in Table 4 and key functions depicted in Figure 3.

Figure 3: Ministry of Health's services and the people who use them



Source: Ministry of Health, Statement of Strategic Intentions 2017 to 2021

The Ministry of Health is responsible for improving, promoting and protecting the health and wellbeing of New Zealanders through:

- stewardship and leadership of New Zealand's health and disability system
- policy advice to the Minister and the government on health and disability issues
- directly purchasing a range of national health and disability support services
- providing health sector information and payment services for the benefit of all New Zealanders
- discharging its responsibility as the monitoring department for DHBs and other health crown entities.

Departmental expenditure (DE) for the Ministry of Health is funded through Vote Health. A breakdown of DE for 2018/19 has been included in Table 15.

The Ministry recognises and respects the principles of the Treaty of Waitangi. The health and disability system engages the principles of the Treaty through:

- Partnership – working with iwi, hapū, whānau and Māori communities to develop strategies for improving Māori health and delivering appropriate health and disability services.
- Participation – involving Māori at all levels of the sector in decision-making, planning, development and delivery of health and disability services.
- Protection – working to ensure Māori have at least the same level of health as non-Māori and safeguarding Māori cultural concepts, values and practices.

In order to recognise and respect Treaty principles, and with a view to improving health outcomes for Māori, Part 3 of the *NZPHD Act 2000* provides mechanisms to enable Māori to contribute to decision-making on, and to participate in the delivery of, health and disability services.

Table 4: Key Characteristics of the Ministry of Health

Characteristic	Description
Accountable to	• The government through the Minister of Health.
Role	• Primary advisory body to the government on health and disability policy choices. • Monitors health Crown entities for the Minister of Health. • Administers a wide range of acts, regulations and other legislative instruments such as orders-in-council. • Funds and purchases a range of health and disability services.

Statutory positions	• Key personnel within the Ministry of Health have specific statutory powers and functions under various pieces of legislation, including:
	  • Director-General of Health[4] – under the *State Sector Act 1988*
	  • Director and Deputy Director of Mental Health – under the *Mental Health (Compulsory Assessment and Treatment) Act 1992*
	  • Director of Public Health – under the *Health Act 1956*
	  • Chief Financial Officer – under the *Public Finance Act 1989*.

Clinical leadership roles	• Chief Medical Officer • Chief Nursing Officer.

Funder, purchaser and regulator of national health and disability services	• These services include:
	  • public health interventions (eg, immunisation)
	  • disability support services
	  • elective services
	  • mental health services
	  • screening services (eg, cervical screening)
	  • maternity services
	  • ambulance services.

Provides Infrastructure Support	• The provision of national information systems. • A payments service to the health and disability sector. • National payment/contract model through sector services.

[4] The Director-General has a number of statutory powers and responsibilities under legislation including:

- powers relating to the appointment and direction of statutory public health officers, oversight of the public health functions of local government, and authorising the use of special powers for infectious disease control under the Health Act 1956
- certifying providers under the Health and Disability Services (Safety) Act 2001
- issuing guidelines under the Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003, and other Acts
- Being the Psychoactive Substances Regulatory Authority under the Psychoactive Substances Act 2013 (delegated to Medsafe).

The Ministry of Health administers 27 Acts (as of August 2018) and a number of regulations other instruments such as orders-in-council. Broadly, the Ministry of Health uses regulatory mechanisms across a number of domains. A description of these domains and examples have been included in Table 5.

Table 5: Areas of Regulation

System Design	People	Products	Services	System integrity
• How the system is structured • Key responsibilities, accountabilities, & powers • Emergency/public health response (e.g. pandemic, quarantine)	• Permissions for individuals to do things • Prevent people doing things • Control freedoms (with checks and balances)	• Medicines • Medical devices • Cells & tissues • Controlled Drugs	• Services safety • Drinking Water • Access	• Rights of health consumers and disability consumers • Resolution of complaints • Human Tissue • Human Assisted Reproduction • Ethical considerations
e.g. New Zealand Public Health and Disability Act 2000; Health Act 1956	e.g. Health Practitioners Competence Assurance Act 2003; Mental Health Compulsory Assessment and Treatment Act 1992	e.g. Medicines Act 1981; Pharmaceutical Schedule	e.g. Health and Disability Services (Safety) Act 2001; Health Act 1956; Human Assisted Reproductive Technology Act 2004; Eligibility direction	e.g. Health and Disability Commissioner Act 1994; Mental Health Compulsory Assessment and Treatment Act 1992; Human Tissue Act 2008

Health Crown entities – District Health Boards

Twenty District Health Boards (DHBs) have the responsibility of planning and funding health services for those in their geographical areas shown in Figure 4. The key characteristics of DHBs have been described in Table 7.

Figure 4: Map showing the geographical location of District Health Boards

In addition to planning and delivering services in their district, DHBs can do this regionally – these four regions are shown in Table 6.

Table 6: DHB regions

Region	DHBs included	
Northern	• Northland • Waitematā	• Auckland • Counties Manukau
Midland	• Waikato • Lakes • Bay of Plenty	• Tairāwhiti • Taranaki
Central	• Hawke's Bay • Whanganui • MidCentral	• Hutt Valley • Capital & Coast • Wairarapa
South Island	• Nelson Marlborough • West Coast • Canterbury	• South Canterbury • Southern

Each of these regions have shared services agencies. These allow DHBs to pool their resources to deliver common support services. These include:

- healthAlliance and Northern Regional Alliance (Northern region)
- HealthShare (Midland region)
- Technical Advisory Services (Central region)
- South Island Alliance (South Island region).

National collaboration on matters of shared interest is directed through DHB Shared Services, a division of Technical Advisory Services.

Table 7: Key Characteristics of DHBs

Characteristic	Description
Accountable to	• The government through the Minister of Health.
Established by	• The New Zealand Public Health and Disability Act 2000 section 19 • Crown Entities Act 2001.
DHB board appointment (up to 11 members)	• Seven members elected by the community every three years (concurrently with local government elections) • Up to four members are appointed by the Minister of Health under subsection 28(1)9a) of the *Crown Entities Act 2004*. • Both the chair and deputy chair of each board are appointed by the Minister of Health from among elected and appointed members. • The Minister of Health must endeavour to ensure that Māori membership of the board is proportional to the number of Māori in the DHBs resident population, and that there are at least two Māori members.
DHB board terms	• Members typically hold office for a three-year term. • Elected members can be re-elected indefinitely. • All appointed members can be reappointed to the DHB at the end of their term, up to a maximum of nine consecutive years.

DHB objectives	• The *NZPHD Act 2000* created DHBs and sets out their objectives (section 22), that include:
	  • improving, promoting and protecting the health of people and communities
	  • promoting the integration of health services, especially primary and secondary care services
	  • seeking the optimum arrangement for the most effective and efficient delivery of health services in order to meet local, regional and national needs
	  • promoting effective care or support of those in need of personal health services or disability support.

Provider arm	• Provides hospital services (the majority of public hospitals are owned and funded through DHBs) as well as some community and public health services. There are 73 licenced public hospitals in New Zealand. These are listed, by DHB area, in Appendix 6.
Funder arm	• Contracts with private and non-government providers in the provision of primary health care, community, disability and other services.
Accountability documents that guide planning and performance	• Annual Letter of Expectations • Enduring Letter of Expectations • Annual Plan • Regional Service Plan • Statement of Intent • Statement of Performance Expectations • Crown Funding Agreement • Operational Policy Framework • Service Coverage Schedule • Annual Report • Quality Accounts.

Performance	• Financial performance data each month
	• Non-financial performance reported throughout the year:
	  • Health Targets
	  • Quarterly Summaries
	  • District alliances
	  • System Level Measures (Appendix 8)

Committees	• Under the *NZPHD Act 2000* (sections 33-36), each DHB board must establish three advisory committees:
	  • Community and public health advisory committee (CPHAC) to advise on health improvement measures
	  • Disability support advisory committee (DSAC) to advise on disability issues
	  • Hospital advisory committee (HAC) to advise on matters relating to hospitals.
	• All three committees must provide for Māori representation on the committee.

Figure 5: Population and funding total and growth 2016/17 to 2018/19 by DHB

DHB	Population[1]	Funding 2018/19		Funding 2017/18		Funding 2016/17	
		Funding	Growth	Funding	Growth	Funding	Growth
Auckland	545,640	1,320,441,404	5.70%	1,248,941,205	4.36%	1,185,008,620	3.50%
Bay of Plenty	238,380	724,426,074	4.53%	691,896,386	3.67%	657,996,077	4.00%
Canterbury	567,870	1,415,800,233	3.30%	1,369,543,671	3.42%	1,303,033,791	2.00%
Capital and Coast	318,040	765,468,222	4.30%	733,781,035	3.00%	699,755,057	1.70%
Counties-Manukau	563,210	1,439,818,935	4.83%	1,368,709,343	3.12%	1,308,531,143	3.40%
Hawkes Bay	165,610	497,190,390	3.31%	480,885,840	3.25%	459,888,936	1.90%
Hutt	149,680	397,108,626	3.42%	383,573,704	2.55%	369,089,692	1.70%
Lakes	110,410	326,158,911	3.83%	312,816,685	4.92%	295,246,617	4.40%
MidCentral	178,820	511,655,201	3.78%	492,530,322	2.55%	477,859,744	2.80%
Nelson-Marlborough	150,770	437,785,441	4.90%	416,947,940	3.67%	399,272,564	1.70%
Northland	179,370	599,291,655	6.47%	561,924,498	4.98%	530,681,083	4.40%
South Canterbury	60,220	181,418,793	2.74%	176,367,063	2.97%	169,876,438	1.70%
Southern	329,890	876,321,930	3.79%	844,244,569	2.94%	811,546,521	2.90%
Tairawhiti	49,050	165,254,758	3.12%	160,239,372	3.99%	152,852,950	4.30%
Taranaki	120,050	345,172,155	3.08%	334,589,558	2.50%	322,661,688	1.70%
Waikato	419,890	1,197,658,853	4.35%	1,136,366,636	4.04%	1,082,121,984	4.20%
Wairarapa	44,905	140,016,931	3.78%	134,773,978	2.51%	129,776,335	1.70%
Waitemata	628,970	1,531,569,051	4.83%	1,460,305,314	4.46%	1,376,789,606	2.80%
West Coast	32,410	130,684,266	2.25%	127,800,271	2.51%	123,361,664	1.70%
Whanganui	64,550	225,114,979	3.24%	217,597,347	3.14%	208,745,594	1.70%
Total	**4,917,735**	**13,228,356,806**	**4.34%**	**12,653,834,738**	**3.61%**	**12,064,096,102**	**2.90%**

1 Based on Statistics New Zealand population projections for 2018/19

DHBs exist within a funding environment where:

- there is a mix of funding models (ie, capitation, fee-for-service, pay-for-performance and individualised funding), and a range of financial and non-financial incentives – the Ministry of Health also contracts directly with providers of some services, such as disability support and some maternity services
- a population-based funding formula determines the share of funding to be allocated to each DHB, based on the population living in the district – the formula includes adjustors for population age, sex, relative measures of deprivation status and ethnicity
- DHBs are responsible for making decisions on the mix, level and quality of health and disability services, within the parameters of national strategies and nationwide minimum service coverage and safety standards
- the Ministry of Health, as the Minister's agent, defines nationwide service coverage, safety standards and the operating environment – the Minister enters into funding agreements with DHBs and may exercise reserve powers in the case of repeated performance failure (ie, appointing a Crown monitor to, or dismissing, the DHB board)
- the Ministry of health maintains purchasing oversight of DHBs.

Health Crown entities – Others

Health Promotion Agency

The Health Promotion Agency (HPA) is a Crown agent established under the *New Zealand Public Health and Disability Act 2000 (section 57)*. HPA's role is to lead and support activities to promote health and wellbeing and encourage healthy lifestyles; prevent disease, illness and injury; enable environments that support health and wellbeing and healthy lifestyles; and reduce personal, social and economic harm.

This includes providing advice to government and others, and to undertake research, on the supply, consumption and misuse of alcohol.

HPA delivers evidence-based, innovative, high-quality and cost-effective health promotion programmes. These programmes give priority to people and communities that experience poorer health outcomes while ensuring that all New Zealanders can get information and tools that help them make positive changes for their health and wellbeing. HPA also works to improve the physical, social and policy environments around them.

The Health Promotion Agency is funded through Vote Health, the levy on alcohol produced or imported for sale in New Zealand, and a portion of the problem gambling levy.

Health Quality & Safety Commission

The Health Quality & Safety Commission (HQSC) was established in December 2010 as a crown entity under the *New Zealand Public Health and Disability Act 2000 (section 59A)*. Its objectives are to lead and coordinate work across the health and disability sector, for the purposes of monitoring and improving the quality and safety of health and disability support services. HQSC provides advice to the Minister on how quality and safety in health and disability support services may be improved.

HQSC is responsible for determining and reporting quality and safety indicators. HQSC has developed an Atlas of Healthcare variation, a tool that highlights variation by geographic areas in the provision of health services and outcomes through easy to use maps, graphs, tables and commentary. HQSC has also developed consumer experience surveys to inform improvement initiatives. HQSC publishes the annual Window of Quality Report.

HQSC also works in partnership with consumers and providers across the health sector to improve the quality and safety of health services. Providers and consumers are supported in using co-design methods. Improving the safety of services is a focus and HQSC leads improvement initiatives such as reducing falls, surgical site infections, patient deterioration, mental health and addiction (ie, reducing seclusion, primary care and aged-residential care). Serious adverse events are reported to HQSC and system learning is promoted.

HQSC also has a range of functions relating to mortality, including appointing and supporting mortality review committees.

HQSC's four priorities are:

- Improving consumer/whanau experience of care
- Improving health equity
- Reducing harm and mortality
- Reducing unwarranted variation in patterns of care.

Health Research Council of New Zealand

The HRC was established under the *Health Research Council Act 1990* and is responsible to the Minister of Health. It is largely funded from Vote Science and Innovation. A Memorandum of

Understanding governs the relationship; the Ministers of Health and Science and Innovation work closely together to provide direction and set expectations.

The Health Research Council of New Zealand (HRC) is the principal government funder of health research. It funds health research in four broad areas:

- health and wellbeing in New Zealand – keeping New Zealanders healthy and independent for longer
- improving outcomes for acute and chronic conditions – understanding, prevention, diagnosis and management of acute and chronic conditions
- New Zealand health delivery – improving service delivery
- rangahau hauora Māori – improving Māori health outcomes and quality of life.

New Zealand Blood Service

New Zealand Blood Service (NZBS) was created on 1 July 1998 to provide the people of New Zealand with safe, appropriate and timely access to blood and tissue products and related services to meet their health needs. NZBS is a crown entity under the *New Zealand Public Health and Disability Act 2000* (section 55). The New Zealand Blood Service is funded through the sale of blood products to DHBs.

The New Zealand Blood Service ensures the supply of safe blood and tissue products. It provides an integrated national blood transfusion process, from the collection of blood from volunteer donors to the provision of blood products within the hospital environment.

NZBS has four key areas:

- blood collection
- processing of blood donations
- accreditation testing of blood donations
- blood banking.

Pharmaceutical Management Agency

The Pharmaceutical Management Agency (PHARMAC) was created in 1993 to actively manage Government spending on medicines. PHARMAC was established as a stand-alone crown entity with an independent board under the *New Zealand Public Health and Disability Act 2000* (section 46).

PHARMAC has a legislative objective to secure for eligible people in need of pharmaceuticals, the best health outcomes that are reasonably achievable from pharmaceutical treatment and from within the amount of funding provided. PHARMAC manages the Pharmaceutical Schedule that applies consistently across New Zealand. PHARMAC also decides which medicines, therapeutic medical devices and related products are publicly funded, who can prescribe them and who can access them.

PHARMAC manages a fixed budget, called the Combined Pharmaceutical Budget, which is determined on an annual basis by the Minister of Health after receiving advice from PHARMAC and DHBs. PHARMAC has a unique business model which creates competition among the suppliers of pharmaceuticals. PHARMAC also has a large and expanding role in DHB hospitals. It makes decisions on which medicines may be used in hospitals, and negotiates national contracts for hospital medical devices. In response to government decisions PHARMAC is working towards managing fixed budgets for hospital medicines and medical devices.

Note: PHARMAC is out of scope for the New Zealand Health and Disability System Review, although the relationship between the Health and Disability system and PHARMAC is within scope.

Health and Disability Commissioner (an Independent Crown entity)

The Health and Disability Commissioner was established by the *Health and Disability Commissioner Act 1994*. The code of patient rights was established within Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996 (see Appendix 4).

The Office of the Health and Disability Commissioner (HDC) has the following objectives:

- promote the rights of consumers who use health and disability services
- help resolve problems between consumers and providers of health and disability services
- improve the quality of health care and disability services (whether public or private).

This includes making sure that consumer complaints are taken care of fairly and efficiently. The Commissioner also funds a national advocacy service to help consumers with complaints.

As of 1 July 2012, the Commissioner assumed the monitoring and advocacy functions previously delivered by the Mental Health Commission. A Mental Health Commissioner position, reporting to the Health and Disability Commissioner, was established to oversee the performance of these new functions.

NZ Health Partnerships (a Crown entity subsidiary)

NZ Health Partnerships was established as a Crown-entity subsidiary on 1 July 2015. It is owned, led and supported by New Zealand's 20 DHBs, with each DHB having an equal stake and equal voting rights. The DHBs interact with NZ Health Partnerships as co-creators, shareholders and customers.

NZ Health Partnerships are a company incorporated under the *Companies Act 1993*, controlled by the country's 20 District Health Boards and defined as a multi-parent Crown-entity subsidiary under the *Crown Entities Act 2004*.

NZ Health Partnerships operate under board, programme and service governance structures with strong DHB representation. Core operations centre on: DHB Procurement, Collective Insurance and Shared Banking, Food Services and the National Oracle Solution.

Other organisations

Primary Health Organisations

Primary health care is organised through 31 PHOs (South Canterbury DHB acts as its own PHO, and is sometimes referred to as the 32nd PHO). The characteristics of PHOs are described in Table 8, while a list of all PHOs by DHB area is provided in Appendix 7 (page 110). DHB and PHO boundaries/populations are not co-terminus. Five PHOs operate in more than one DHB area.

DHBs fund PHOs to ensure the provision of essential primary health care services to people enrolled with a PHO via a general practice, general practitioner (GP) or other contacted provider. A PHO provides primary health services either directly or through its provider members, primarily general practices, or other contracted providers.

These services are designed to improve and maintain the health of the enrolled PHO population, as well as having the responsibility for ensuring that services are provided in the community to restore people's health when they are unwell. The aim is to ensure primary health care services are better linked with other health services enabling a seamless continuum of care. PHOs receive a number of different funding streams from the Ministry of Health, DHBs, ACC, patients

and others. Some is based on the enrolled population and other characteristics (e.g. capitation funding) while other streams are based on the type of service provided (e.g. vaccinations).

Table 8: Characteristics of Primary Health Organisations

Characteristic	Description
Established by	• The Primary Health Care Strategy 2001.
Funded through	• District Health Boards • Ministry of Health • Others
National contract	• Primary Health Organisations Services Agreement (PHOSA) is a contract between DHBs and PHOs defining nationally consistent services. Some schedules to the agreement are locally defined • While the Ministry of Health is not party to the agreement they are party to negotiations in support of DHBs • The national negotiation forum for the contract is the PHO Services Agreement Amendment Protocol (PSAAP) group.
Accountable to	• DHBs under the Primary Health Organisations Services Agreement (PHOSA) • Minimum requirements for PHOs defined within this agreement.

Legal form	• Various legal forms are available to PHOs. The following are consistent with the Primary Health Care Strategy of being not-for-profit bodies:
	  • a non-profit company
	  • an incorporated society
	  • a trust.

Role under national agreement	• Implement the PHOSA • Manage their providers (general practices and others) to ensure the requirements of the PHOSA are met. This is done through a back-to-back agreement between PHOs and providers • Contribute to the annual planning cycle DHBs report on behalf of the Alliance (DHBs, PHOs and other alliance partners). PHOs sign the quarterly report to verify its contents.

District Alliances

District alliances are local leadership teams. They are clinically led groups that use a joint decision making approach to system integration and service planning. Membership includes the DHB of domicile and at minimum, all the PHOs providing health services to the population of that district. DHBs are expected to take the lead in progressing alliance-led activity.

All DHBs are expected to form an alliance that includes all the appropriate health system partners (primary, community and hospital) in their district (as per the PHOSA and the DHB Annual Plan requirements).

Form and function of alliances vary across the country with some being a meeting of the DHB of domicile and its PHOs only. Others have much broader alliance partners that include consumers, ambulance, pharmacy, midwives, Well Child Tamariki Ora providers, public health units etc.

National Ambulance Sector Office

The National Ambulance Sector Office is a joint office between the Accident Compensation Corporation and the Ministry. The Office's functions are to:

- progress the New Zealand Ambulance Service Strategy
- provide a single voice for the Crown on strategic and operational matters regarding emergency ambulance services
- manage and monitor funding and contracts from both agencies related to the delivery of emergency ambulance services.

Non-government organisations

The Ministry of Health and DHBs provide significant funding – in the order of $2–4 billion per year – to NGOs. Most NGOs are non-profit, and along with providing services to consumers they are a valuable source of expertise, intelligence and influence at a community level.

NGOs have a long, well-established record of contributing to health and disability service delivery in New Zealand. NGOs include a wide range of organisations that provide flexible, responsive and innovative frontline service delivery. Diverse services are offered in primary health care, mental health, personal health, and disability support services, and include kaupapa Māori services and Pacific health services. The Ministry of Health and NGOs have a formal relationship outlined in the Framework for Relations between the Ministry of Health and health and disability NGOs. To facilitate this relationship, there is an NGO Health & Disability Council and, within the Ministry, an NGO relationship management role

Public health units

Public health services are delivered by 13 DHB-owned public health units and a range of NGOs. DHB-based services and NGOs each deliver about half of these services. Public health units focus on environmental health (including drinking water safety), communicable disease control, tobacco and alcohol control, health promotion programmes, health status assessment and surveillance, and public health capacity development. Many of these services include a regulatory component performed by statutory officers appointed under various statutes, principally the Health Act 1956. The DHBs and population covered by the PHU, and the number of Full Time Equivalents (FTE) working at each PHU are shown in Figure 6.

Figure 6: Public Health Units, DHBs and size of population covered and Full-time equivalents as of 1 August 2018

Public Health Unit (PHU)	District Health Board (DHB) coverage	Population of coverage by DHB (based on Statistics NZ 2017 population projections for 2017/18)	PHU FTEs (as of 1 August 2018)
Auckland Regional Public Health Service	Auckland DHB, Counties Manukau DHB, Waitemata DHB	1,697,510	160.28
Community and Public Health	Canterbury DHB, South Canterbury DHB, West Coast DHB	649,360	84.75
Hauora Tairawhiti	Tairawhiti DHB	48,775	24.25
Hawkes Bay	Hawkes Bay DHB	164,610	10.85
MidCentral	MidCentral DHB	177,400	28.50
Nelson Marlborough	Nelson Marlborough DHB	149,550	25.86
Northland	Northland DHB	176,960	32.80
Regional Public Health	Hutt Valley DHB, Capital and Coast DHB, Wairarapa DHB	507,860	57.06
Southern	Southern DHB	326,280	42.40
Taranaki	Taranaki DHB	118,880	17.40
Toi Te Ora	Bay of Plenty DHB, Lakes DHB	343,590	36.36
Waikato	Waikato DHB	412,920	44.80
Whanganui	Whanganui DHB	64,305	7.75
Total		**4,838,000**	**573.06**

Local authorities

Local authorities were traditionally bound by the specific activities prescribed for them through statute. However, the *Local Government Act 2002* has allowed their role to increasingly encompass initiatives to promote community wellbeing. The nature of activities undertaken varies between regional councils and territorial authorities and depends on council resources and priorities.

Core local government activities that promote public health include resource management, the provision of drainage, sewerage works, drinking water, recreation facilities and areas, and refuse collection.

Responsible Authorities

The *Health Practitioners Competence Assurance Act 2003* covers 16 health professional authorities (listed in Table 9). Responsible authorities describe scopes of practice for their professions (these set the boundaries within which a practitioner can practise), prescribe necessary qualifications, register practitioners and issue annual practising certificates. They also set standards of competence. Responsible authorities, via professional conduct committees, can investigate individual practitioners' competence and conduct. Authorities are funded through professional levies.

Table 9: List of Responsible Authorities

Responsible Authorities		
• Chiropractic Board • Dental Council • Dietitians Board • Medical Council • Medical Radiation Technologists Board	• Medical Sciences Council • Midwifery Council • Nursing Council • Occupational Therapy Board • Optometrists and Dispensing Opticians Board	• Osteopathic Council • Pharmacy Council • Physiotherapy Board • Podiatrists Board • Psychologists Board • Psychotherapists Board.

Other Government agencies

Other Government agencies may purchase, fund, subsidise or provide health and disability services. Expenditure on these services, outside of Vote Health and ACC, is estimated at $487 million for the 2016/17 year (OECD).

Key agencies include ACC, New Zealand Police, Sport New Zealand, Department of Corrections, Oranga Tamariki Ministries of Social Development, Education, and Business, Innovation and Employment. Other government agencies also have an impact on the health and wellness of New Zealanders. Some have a more direct impact on health, through inter-sectoral initiatives, like the Rheumatic Fever Prevention programme that involved health, housing and education. There are also broader public policy decisions that can support or impact the health and wellness of the population, but are not health programmes or initiatives. For example housing, local government, education, and transport policy.

Detail about the major areas of government spending on health and disability services and support outside of Vote Health has been included in Appendix 9.

Accident Compensation Corporation

The Accident Compensation Corporation's (ACC) vision is to partner with New Zealanders to improve their quality of life by reducing the incidence and impact of injury. Under the accident compensation scheme (the Scheme) individuals forgo the right to sue for compensatory damages following injury, in exchange for comprehensive accident cover and entitlements.

The Scheme has three core functions: injury prevention, rehabilitation, and compensation, and is funded through levies, as well as general taxation for those not working (eg children and retirees).

Access to the Scheme is provided through a two-step test:

1. **Cover** – this considers whether a client has a condition which results from one of the causes covered under the Scheme. The Scheme is principally focused on *personal injury*, with comprehensive no-fault personal injury cover for everyone in New Zealand, including overseas visitors. (Other types of cover include: *treatment injury, work-related cover*, and *mental injury arising from sexual abuse*.)

   Where a client meets the cover test, their claim can be considered for eligibility for entitlements.

2. **Entitlements –** these include services such as treatment, social rehabilitation, and weekly compensation. ACC considers providing these for covered claims, and each entitlement has an eligibility test, reflecting a claimant's needs due to their covered condition, and their prior circumstances (eg, weekly compensation for loss of earnings is only available to claimants who were already in work).

To provide rehabilitation entitlements, ACC's purchases health and disability services, including:

- acute and other services that are provided by DHBs when injuries require acute inpatient admissions or treatment at emergency or outpatient departments (through the Public Health Acute Services Agreement)
- non-acute services like rehabilitation and elective surgery, which ACC purchases directly from service providers (largely through contracts or regulated payment rates).

In addition, the Ministry of Health and ACC:

- Jointly fund and govern the National Ambulance Sector Office, which overseas emergency ambulance services (both road and air ambulance).
- Jointly fund the Major Trauma National Clinical Network. This Network oversees and gives clinical leadership to major trauma services in New Zealand to help them deliver services in a planned and consistent way. The Network has developed and implemented the New Zealand Major Trauma Registry (NZMTR), a national major trauma database.
- Jointly fund the National Telehealth Service, which provides free, 24-hour health and injury advice.
- Collaborate around injury prevention and the implementation of the joint programme of work to improve falls and fracture services in New Zealand and initiatives to reduce treatment injuries.

Employment relations

DHB chief executives have the authority to enter into collective or individual employment agreements covering DHB employees. Chief executives' decisions on pay-setting aim to balance labour market drivers (including recruitment and retention) and revenue/funding constraints. Collective bargaining is the primary means of setting pay and conditions in DHBs.

In 2017, 13 national or near-national multi-employer collective agreements (MECA) cover approximately 65 percent of all DHB employees, while seven regional multi-employer collective agreements cover a further 20 percent. The balance of DHB employees covered by local collective or individual employment agreements. In addition, there were three collective agreements with the NZBS.

Union density (ie, membership as a proportion of the workforce), in 2017 was very high in DHBs, at around 70 percent. The unions representing DHB employees include a mix of health

sector-specific (typically occupational) unions and general unions. There is some overlapping coverage where two or more unions separately represent the same occupational group.

Role of the Ministry in employment relations

Under the New Zealand Public Health and Disability Act 2000, DHB chief executives must consult with the Director-General of Health before finalising the terms and conditions of a collective agreement. These obligations are explained further by specific Ministry guidelines, the Operational Policy Framework and the Government Expectations for Pay and Employment Conditions in the State Sector.

The Ministry's key roles in health sector employment relations activity are to:

- monitor local, regional and national bargaining
- liaise with and provide information, advice and feedback to the Minister and the Minister of State Services, other government agencies and DHBs
- advise and report to Cabinet, if required.

Health Sector Relationship Agreement

A tripartite Health Sector Relationship Agreement between the Minister and the Ministry, the DHBs, and the Combined Trade Unions and their major health affiliates (ie, the New Zealand Nurses Organisation, Association of Salaried Medical Specialists, Public Service Association and Service and Food Workers' Union) was signed in 2008. The Agreement reflects a commitment to constructive engagement and provides a framework and work programme that aim to assist in improving productivity, efficiency and effectiveness in health service delivery, while acknowledging resource constraints

Financing

New Zealand's health and disability system is predominately funded through a single-payer, tax-funded model. Public sector funding, which includes both funding through Vote Health and Vote Labour Market (ACC), accounts for approximately 80% of all health expenditure. The other main contributors are private insurance (5%) and out-of-pocket payments (15%) (OECD 2017). The sources of revenue have been outlined in Table 10, with the flow of funding from government, including ACC, depicted in Figure 7.

Figure 7: Health and Disability System - Funding flows

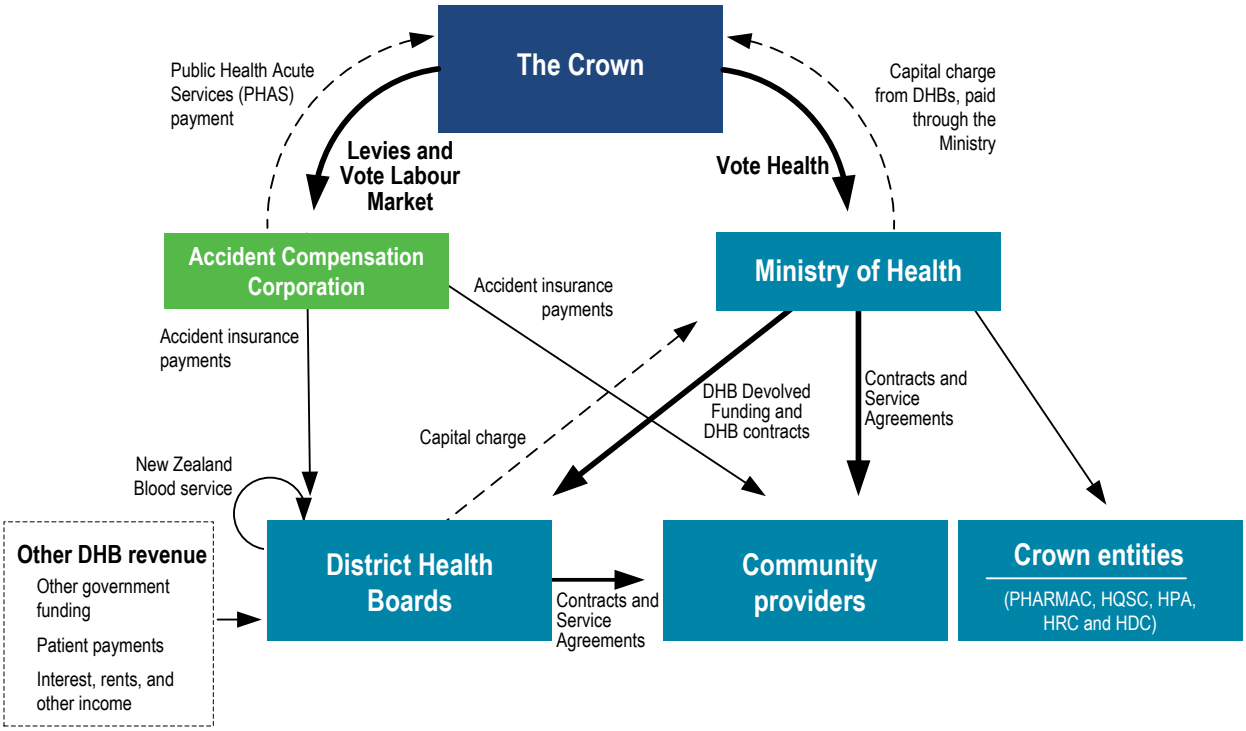


Table 10: Description of revenue sources

Type/Approach	Description
Government funding	• Budget allocations out of the overall government revenue from general taxation (income and company tax, GST, direct charges, fines). Decisions made by Cabinet.
Social Health Insurance	• Usually financed out of social contributions payable by employees and employers (ACC is an example of this with work and earners' levies).
Private Health Insurance	• Voluntary prepayments of regular premium payments as part of an insurance contract or scheme.

Out-of-pocket payments	• Payments made by a person or households' own revenue.
	• Out-of-pocket payments are often referred to as:
	  ◦ co-payments, part-charge or patient contribution (where the out-of-pocket payment is for a service that receives partial subsidy from the government)
	  ◦ direct charge/payment (where the payment wholly covers the cost of the service)
	  ◦ patient fees.
	• A third party may pay the out-of-pocket contribution on behalf of the person.

Table 11: Expenditure on health and disability services, by major System of Health Accounts Financing categories (interim figures provided by Ministry of Health to the OECD June 2018)[5]

	Government schemes			ACC	Voluntary Health Care Payment Schemes		Private households out-of-pocket exp.				
	All figures in $m										
Financial year	Ministry of Health	Other Ministries	State/regional/local government	Compulsory contributory health insurance schemes (ie ACC)	Voluntary health insurance schemes	Non-Profit Institutions Serving Households (NPISH) financing schemes	Out-of-pocket excluding cost-sharing	Cost-sharing with government schemes and compulsory contributory health insurance schemes	Cost-sharing with voluntary insurance schemes	Rest of the world Financing Schemes (non-residents)	**Total expenditure $m**
2007/08	11,838	379	93	1,663	791	230	1,392	755	140		**17,281**
2008/09	12,835	400	56	1,863	866	364	1,384	786	140		**18,694**
2009/10	13,685	395	67	1,686	932	408	1,376	816	140		**19,506**
2010/11	14,321	421	60	1,600	946	478	1,449	865	140		**20,280**
2011/12	14,832	424	41	1,601	999	520	1,521	914	140		**20,991**
2012/13	15,272	430	29	1,712	1,080	571	1,593	963	140		**21,790**
2013/14	15,782	441	23	1,906	1,134	597	1,790	1,002	140		**22,815**
2014/15	16,121	453	18	2,133	1,189	623	1,988	1,040	140		**23,704**
2015/16	16,959	464	14	2,285	1,297	651	2,185	1,079	140		**25,076**
2016/17	17,556	476	11	2,449	1,363	681	2,292	1,108	140		**26,076**

[5] These figures are nominal, and GST inclusive, as required for the OECD System of Health Accounts (SHA). The Ministry of Health expect to have updated figures, consistent with the new version of the SHA, by the end of August 2018. This will have a particular impact on the figures for private insurance-financed care and for cost-sharing. Figures for Other Ministries, local government and Non-Profit financing are based on past information collection (to 2011), extrapolated forward.

Decisions about health and disability funding

The government (via Cabinet agreement) determines the allocation of funding for the health and disability system (through Vote Health). The Ministry of Health allocates around three-quarters of the public funds it manages through Vote Health to DHBs, who use this funding to plan, purchase and provide health services, including public hospitals and the majority of public health services, within their areas.

DHBs

DHB funding is allocated using the Population Based Funding Formula (PBFF) described in Table 12. DHBs will also receive top sliced funding (e.g. national services, new funding) and may receive transitional funding (where DHBs are funded above their PBFF share to ensure a minimum level of growth).

Table 12: Description of Population Based Funding Formula

Population based funding formula (PBFF)

• The Population-Based Funding Formula (PBFF) is a technical tool used to equitably distribute the bulk of district health board funding according to the needs of each DHB's population.
• A DHB's share of funding is determined by the demographics of their population including:
  ◦ Age
  ◦ Gender
  ◦ Socio-economic status (currently NZDep13)
  ◦ Ethnicity (Māori, Pacific, or Other).
• There are also a number of adjustors for:
  ◦ Unmet Need
  ◦ Rurality
  ◦ Bad debts
  ◦ Cost of treatment of eligible overseas visitors
  ◦ Cost of treatment for new refugees.

In general, DHBs have flexibility in the allocation of funding to specific services, and over service volumes, to reflect the needs of their populations. However, with regard to mental health services, DHBs have ring-fenced spending targets for this client group.

The Service Coverage Schedule (a schedule to the Crown Funding Agreement) outlines the national minimum range and standard of health and disability services to be publicly funded, and DHBs are required to ensure their populations have access to all these services. DHBs may provide the services directly or contract with third parties. A DHB may also purchase certain specified services for their population from another DHB using a system known as 'inter-district flows'. Where these services are provided by another DHB, a national agreed price is generally used or DHBs may agree on local arrangements between themselves. A nationwide service framework is in place to ensure an appropriate degree of national consistency as directed by the agreed policy settings for specific services.

DHBs pay an additional lump sum to the tertiary hospitals to compensate them for the higher costs of maintaining specialist tertiary capability and access. The national prices for inter-district flows and the tertiary adjuster are calculated annually in a joint project between the Ministry and DHBs.

Ministry of Health

Most of the remaining public funding provided to the Ministry (approximately 19 percent) is used to fund important national services, such as disability support services, public health services, specific screening programmes, mental health services, elective services, Well Child and primary maternity services, Māori health services and postgraduate clinical education and training. Some of these services are price and volume sensitive, while others are contracted funding to meet policy objectives – these are described in Table 13.

Table 13: Different types of non-devolved services

Service type	Description
Services that are price and volume sensitive expenses	• Services that are funded based on price and volume e.g. DSS, maternity, electives, screening services, primary health care strategy, National Emergency Services etc.
Contracted funding	• Contracted funding to meet policy objectives e.g. Public health services, National Mental Health Services, Health Promotion Agency, health promotion, immunisations. • Contracted funding to meet policy objectives that are met by other agencies e.g. Health Promotion Agency, HQSC, PHARMAC • Contracted funding for workforce and provider development
Ring fenced (levy) funded	• Services that are funded directly from a levy e.g. problem gambling

Figure 8: Approximate split of non-devolved funding

DHBs	NGOs	Crown entities and other government organisations
41%	56%	3%

Vote Health funding for 2018/19

Appropriations for Vote Health[6] spending in the 2018/2019 Budget total $18.225 billion. It is a significant investment for the Crown, typically representing a fifth of government expenditure. A breakdown of Departmental Operating Expenditure (DE Opex), Non-departmental Expenditure (NDE), and Capital Expenditure (Capex) is outlined in Table 14.

Table 14: Total Vote Health Funding for 2018/19 ($M)

Total 2018/19 Vote Health funding $M		% total spend
DE Opex (Table 15)	207	1%
NDE Non-Devolved Opex (Table 16)	3,529	19%
DHB devolved funding (Table 17)	13,236	73%
Total Opex	**16,972**	**93%**
DE Capital	9	0%
NDE Capital (Table 18)	1,105	6%
DHB Deficit Support	139	1%
Total Capex	**1,253**	**7%**
Total Annual and Multi Year Appropriation Expenses	**18,225**	**100%**

[6] Further information about Vote Health funding can be found in the estimates of appropriations (the estimates) for 2018/19 at https://treasury.govt.nz/publications/estimates/vote-health-health-sector-estimates-2018-2019.

Table 15: Departmental Expenditure (DE) - Operating Expenditure (OPEX) for 2018/19

DE OPEX $M		% total spend
Health Sector Information Systems	56	27%
Managing the Purchase of Services	42	20%
Payment Services	17	8%
Regulatory and Enforcement Services	24	12%
Sector Planning and Performance	47	23%
Ministerial Servicing	5	2%
Policy Advice	16	8%
Total DE Opex	**207**	**100%**

Table 16: Non-Departmental Expenditure (NDE) Non-Devolved Operating Expenditure (OPEX) for 2018/19

NDE Non-Devolved OPEX $M		% total spend
Price and Volume Sensitive Appropriations		
National Disability Support Services	1,269	36%
National Elective Services	364	10%
National Maternity Services	181	5%
Supporting Equitable Pay for Care and Support Workers	348	10%
Primary Health Care Strategy	266	8%
Total Price and Volume sensitive	**2,428**	**69%**
Contracted funding to meet Government priorities		
National Maori Health Services	7	0%
National Mental Health Services	68	2%
National Personal Health Services	78	2%
National Child Health Services	89	3%
Total contracted funding to meet Government priorities	**242**	**7%**
Contracted funding to meet other policy objectives		
Monitoring and Protecting Health and Disability Consumer Interests	30	1%
National Contracted Services - Other	29	1%
National Emergency Services	130	4%
National Health Information Systems	8	0%
Public Health Service Purchasing	423	12%
Total contracted funding to meet other policy objectives	**619**	**18%**
Workforce and provider development		
Health Workforce Training and Development	187	5%
Provider Development	24	1%
Total Workforce and provider development	**211**	**6%**

NDE Non-Devolved OPEX $M		% total spend
Ring Fenced (levy) and Time limited funding		
Problem Gambling Services	21	1%
Auckland Health Projects Integrated Investment Plan	1	0%
Health Sector Projects Operating Expenses	4	0%
Total Ring Fenced (levy) and Time limited funding	**25**	**1%**
Expenses incurred to meet International and Legal obligations		
International Health Organisations	2	0%
Legal Expenses	1	0%
Total Expenses to meet International and Crown Legal obligations	**3**	**0%**
Total NDE Opex	**3,529**	**100%**

Table 17: Health and Disability Support Services - DHB Devolved Funding for 2018/19

Health and Disability Support Services - DHB devolved funding $M		% total spend
Auckland DHB	1,320	10%
Bay of Plenty DHB	724	5%
Canterbury DHB	1,421	11%
Capital and Coast DHB	765	6%
Counties-Manukau DHB	1,440	11%
Hawkes Bay DHB	497	4%
Hutt DHB	397	3%
Lakes DHB	326	2%
MidCentral DHB	512	4%
Nelson-Marlborough DHB	438	3%
Northland DHB	599	5%
South Canterbury DHB	181	1%
Southern DHB	876	7%
Tairawhiti DHB	165	1%
Taranaki DHB	345	3%
Waikato DHB	1,198	9%
Wairarapa DHB	140	1%
Waitemata DHB	1,532	12%
West Coast DHB	133	1%
Whanganui DHB	225	2%
Total Devolved DHB	**13,236**	**100%**

Table 18: Non-Departmental Expenditure (NDE) Capital Expenditure (CAPEX) for 2018/19

NDE CAPEX $M		% total spend
Equity for Capital Projects for DHBs and Health Sector Crown Agencies	967	79%
Equity Support for DHB Deficits	139	11%
Health Sector Projects	123	10%
Total NDE Capex	**1,230**	**100%**

Health Expenditure in 2016/17

This section provides a breakdown of health expenditure in the 2016/17 financial year (2016/17 has been used because it is both recent and has final financial results). A breakdown of the publicly and privately funded expenditure on various health and disability goods and services is shown in Figure 9. It demonstrates that a significant portion of publicly funded expenditure is on medical and surgical services. Private expenditure is a significant proportion of aged care, pharmaceuticals and medicines, primary health care, and – particularly – in oral health. This expenditure can be categorised by whether services were delivered by DHBs, by community providers, or by the Ministry of Health or other Crown entities (see Figure 10). Most medical, surgical, mental health, and maternity services are delivered by DHBs. Most other services are delivered by providers in the community.

Figure 9: Estimated Public and Private Expenditure for 2016/17

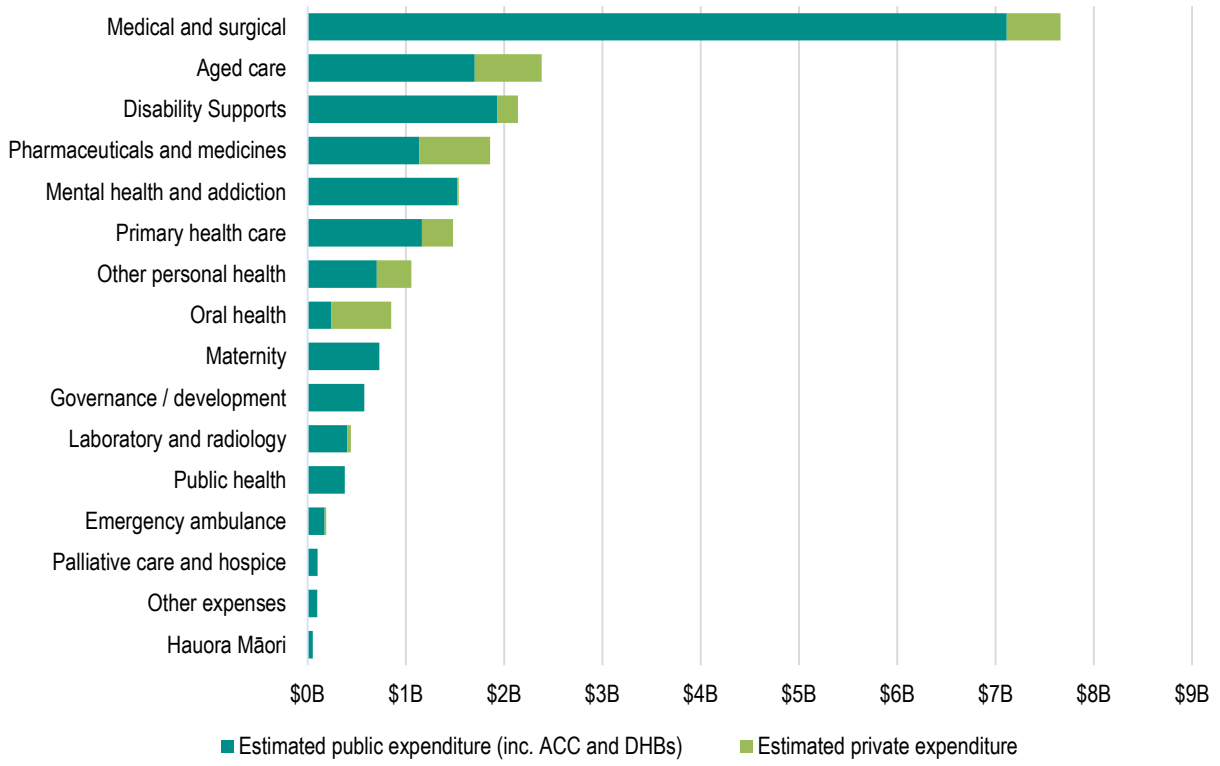
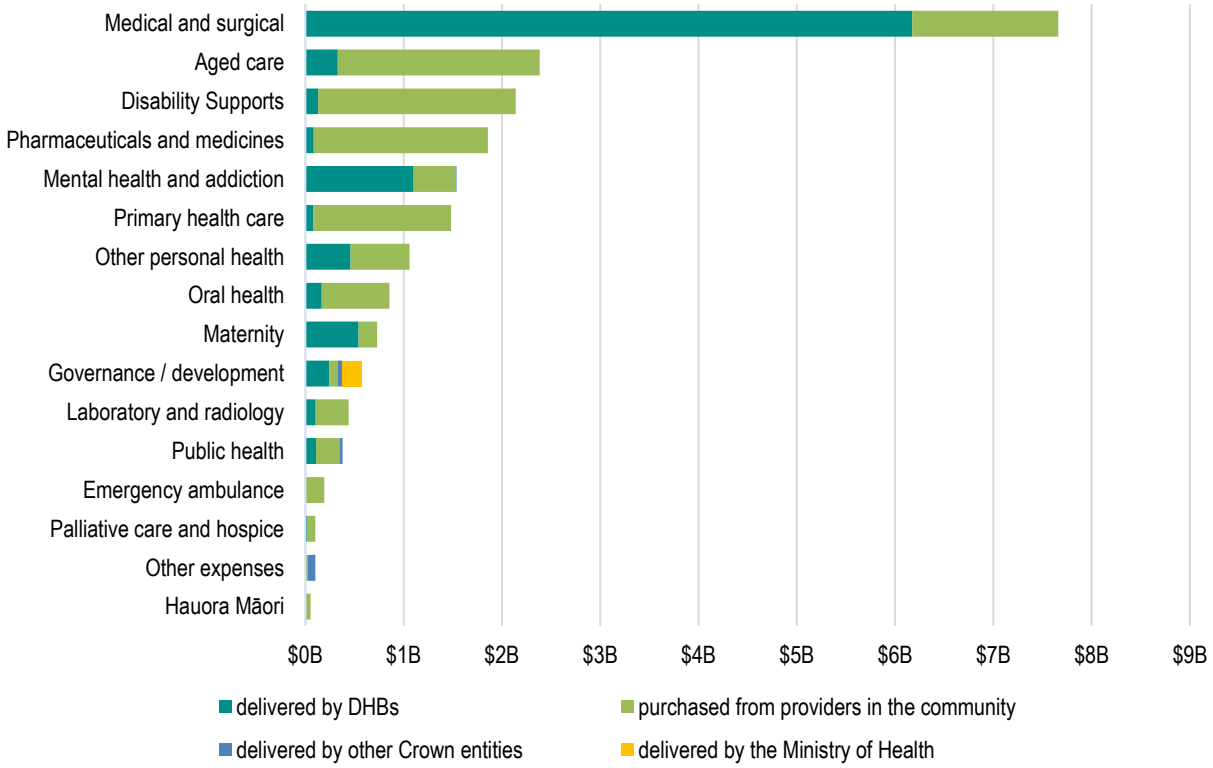


Figure 10: The setting for health and disability services delivery in 2016/17



Out of pocket charges (cost sharing/co-payments)

Out-of-pocket payments (payment at time of care) are still required in some areas – for example primary health care settings (general practice team visits) and when filling prescriptions.

Voluntary Private Health Insurance

Private Health Insurance accounts for approximately 5% of New Zealand's health expenditure (OECD 2017). According to OECD data, private health insurance has declined over time – from approximately 34.1% in 2000 to approximately 29% in 2016 (OECD.Stat 2018).

Who has private health insurance?

The Ministry of Health surveyed private health insurance coverage as part of the New Zealand Health Survey 2011 – 2015 (Ministry of Health, 2016). The survey, which confirmed that the rate of private health insurance cover is decreasing, found:

- 35 percent of adults had private health insurance cover, with the highest rates in the 35 – 64 age group (41 percent) and the lowest rates for those aged 75 years and over (16 percent)
- Māori and Pacific adults were less likely to have private health insurance (20 percent compared to 39 percent for Asian adults and 37 percent for New Zealand Europeans)
- adults with high income and better health were more likely to have cover (60 percent of adults had an annual household income of over $100,000)
- adults who live in larger city DHB catchments were more likely to have private health insurance cover than people living in regional and more socio-economically deprived districts (for example, 45 percent coverage for people living within Auckland District Health Board (DHB) boundaries compared to 15 percent in Tairawhiti DHB)
- most adults pay for their own private health insurance
- more than 25 percent of children are covered by private health insurance.

The market

There is no government regulation on private health insurance in New Zealand. This means that insurance may be taken out for services that are covered by the publicly funded system. Three uses of private health insurance are described in Table 19.

Table 19: Uses or function of Voluntary Private Insurance in New Zealand

Use	Description
Duplication	• Insurance to duplicate coverage provided by publicly funded health and disability system while also offering access to different providers (eg, private hospitals) or levels of service (eg, faster access to care).
Complementary	• Insurance to complement the coverage of the system by covering all or part of additional costs (eg, co-payments)
Supplementary	• Insurance to supplement the coverage of the system by covering additional services that are not subsidised by the government (eg, dental, optometry).

Unlike other countries most health insurance in New Zealand is sold to individuals, although employers are encouraged to offer insurance to their employees (Cumming 2014).

According to the Health Funds Association of New Zealand there are three main types of health insurance in New Zealand, which are outlined in Table 20.

Table 20: Three main types of health insurance in New Zealand

Type	Description
Comprehensive	• Comprehensive health insurance products provide cover for both major surgery and day-to-day medical expenses.
Major medical	• Major medical policies typically provide cover for elective surgery, major treatments and the cost of specialist visits, but do not cover day-to-day medical expenses.
Minor medical	• Minor medical insurance products provide cover for day-to-day medical treatments, but provide little or no cover for more significant major surgery or treatment costs.

Source: Health Funds Association of New Zealand, 2018

External sources of funds

Not-for-profit organisations or NGOs are also a source of health expenditure. This includes organisations who provider health and disability related services funded through:

- their own fundraising
- contracts or other funding from Government (including Ministry of Health, DHBs, other central and local government and agencies).

Service coverage

New Zealand's health and disability system aims to provide access to a broad range of health and disability services for those eligible.

Eligibility

Eligibility for publicly funded services and disability support services are described below. Access to services is determined on a fair and reasonable basis, and subject to generally accepted clinical protocols. Priority for access should be granted on the basis of need, ability to benefit and/or an improved opportunity for independence for those with a disability.

Eligibility for publicly funded services

Those eligible for publicly funded services are defined within the *Health and Disability Services Eligibility Direction 2011*. Those eligible include:

- New Zealand permanent residents
- New Zealand citizens (including those from the Cook Islands, Niue or Tokelau)
- Australian citizens or permanent residents who have lived, or intend to live, in New Zealand for two years or more
- Work visa holders eligible to be in New Zealand for two years or more
- People aged 17 years or younger, in the care and control of an eligible parent, legal guardian, adopting parent or person applying to be their legal guardian
- Interim visa holders
- New Zealand Aid Programme students receiving Official Development Assistance (ODA) funding
- Commonwealth scholarship students
- Foreign language teaching assistants
- Refugees and protected persons, applicants and appeallants for refugee and protection status, and victims of people trafficking offences.

People who do not fit this criteria may be eligible for a limited range of services in certain situations. For example people needing treatment for personal injuries can be covered by ACC, regardless of their residential status. Eligibility provides the right to be considered for publicly funded health or disability services (ie, free or subsidised). This is not an entitlement for any particular service. In relation to most services individual levels of access are determined clinically, and are based on principles of levels of need and ability to benefit

Eligibility for disability support services (DSS)

'DSS eligibility' is not defined in legislation. Eligibility was mandated by Cabinet in 1994 [CAB (94) M 3/5(1a) refers], as follows:

> *"A person with a disability is a person who has been identified as having a physical, psychiatric, intellectual, sensory, or age-related disability (or a combination of these), which is likely to continue for a minimum of six months and result in the reduction of independent function to the extent that ongoing support is required.*
>
> *Where a person has a disability which is the result of a personal injury by accident which occurred on or after 1 April 1974, it should be determined whether they are eligible for cover under the Accident Rehabilitation and Compensation Insurance Act.*

Where a person's level of independent function is reduced by a condition which requires ongoing supervision from a health professional (eg, in the case of renal dialysis), that person is considered to have a personal health need rather than a disability.

Where a person has both a disability and a personal health need, the services provided to address those needs are disability support services and personal health services respectively".

People identified as having a physical, psychiatric, intellectual, sensory or age-related disability (or combination of these) fell under the 1994 definition.

Since the 1994 definition, the responsibility and funding for psychiatric and age related disability has devolved to DHBs, in 2001 and 2003 respectively. There has been further clarification of responsibility and funding for people with Long Term Support needs resulting from Chronic Health Conditions and people diagnosed with Autism Spectrum Disorder.

Responsibility and funding for people with physical, intellectual and sensory disability remain with the Ministry of Health.

Figure 11 shows a range of services, organisations and health care workers across the health and disability sector.

Complexity in service coverage

Table 21 outlines selected examples of services covered by the publicly funded health and disability system, and the basis for availability. This shows that there is a mix of funding and coverage arrangements. This is not a complete list.

In general, all public hospital services are free to those eligible for publicly funded services. People may incur out-of-pocket costs in some areas where partial subsidies apply. This includes co-payments for general practice, and some diagnostics and pharmaceuticals. Some areas like adult optometry, adult community dental and other allied health services are entirely outside of the scope of public funding. Some services (e.g. community physiotherapy and osteopathy) are outside the scope of the health and disability system funding but are covered by ACC for injury.

National Travel Assistance (NTA) can subsidise the cost of travel, accommodation and support person costs for people who need to travel long distances, or frequently see a specialist.

People may be eligible to receive additional benefits through Ministry of Social Development towards the cost of health care – for example disability allowance. In addition access to the ACC scheme may impact on the cost and access to services.

Services that are covered

DHBs are responsible for making decisions on the mix, level and quality of health and disability services funded to meet the need of their resident populations within overarching national minimum service coverage requirements that form part of their Crown Funding Agreements.

Table 22 describes the services provided by the publicly funded health and disability system. It broadly describes:

- Who the services are funded through (ie, DHBs, Ministry of Health)
- Services provided by (ie, organisation and professional group)
- How New Zealanders access these services
- The population or services covered by public funding
- Level of private contribution required.

This table does not include:

- Promotion, advocacy, advisory or administration activities.

Subsidies

There are a number of reasons that the cost of health and disability services may be reduced. Some of the ways in which eligibility for lower costs are determined include:

- If a person holds a health entitlement card – a Community Services Card (CSC) or Prescription Subsidy Card (PSU)
- If a person meets the criteria of a scheme or initiative – eg, enrolment in a Very Low Cost Access (VLCA) practice entitles individuals to low cost general practice visits
- If a person belongs to a particular group – eg, age group, gender, ethnic group, for whom services are subsidised
- If a person has a certain health conditions – eg, number of long-term condition as criteria for CarePlus and some health conditions are basis for free immunisations.

Figure 11: Examples of the range of services, organisations and health care workers across the health and disability system as at August 2018

Table 21: Category and basis of availability of publicly funded services (selected examples)

	Free for	Partially subsidised for	Access to fully or partial subsidy based on	Not covered
General practice visits	Most Children Under 13 (under 14s from Dec 2018)	All except those not enrolled with a PHO, higher subsidises for some groups	Income, frequency of visits, health status (e.g. long term conditions)	Adults not enrolled with a PHO who do not have a CSC
Medicines / Prescriptions	Most Children Under 13 (under 14s from Dec 2018); inpatients; those with a Prescription Subsidy Card (PSC)	Items on the pharmaceutical schedule ($5 co-payment per item)	Type of prescriber, number of prescription items (20 items in pharmaceutical year as eligibility for PSC), whether medicine is included on pharmaceutical schedule	Prescriptions for a non-schedule or partially subsidised medicine
Emergency ambulance services	ACC patients within 24 hours and Wellington area patients	All other emergency situations	Type, timing and location of emergency	
Maternity services	All women	Fully funded	Pregnancy	Access to specialist care where not indicated by risk factors
Oral health services/dental services	Free basic oral health services for under 18s; hospital dental services (all ages) in specified circumstances	Emergency dental care for relief of pain and treatment of infection for low-income adults (with CSC)	Income (CSC)	Orthodontic treatment (all ages) Most adult dental care
Optometry/Vision Services	Nobody	Children and young people under 15 (spectacle subsidy) with CSC or High Use Health Card People who are blind or have reduced vision (under DSS)	Parent/guardian or child has a CSC, child has a high use health card, clinical guidelines	Most child and adult optometry
Counselling services	People accessing services in a hospital setting; youth mental health (12-19 years)	Victims of sexual abuse can received subsidized counselling in community setting	Where care is provided and the cause of the health need	Patients with mental health concerns seeking counselling in the community
Long-term residential care for age-related disability	People over 65 with minimal assets/income in rest homes and private hospitals	People aged 65+ with rest home or private hospital costs above a certain threshold	Need for residential care, income and assets for those aged 65+	Care provided at home by family members
Disability support services	Fully funded for a range of disability support services including home and community support, respite and carer support, community residential services, equipment and modification services, hearing and vision services, supported living, behaviour support services, rehabilitation services		Need, type of setting in which care is delivered	Persons not eligible for Disability Support Services
Elective surgery	Everyone	Fully funded	Medical need and ability to benefit	Low-benefit procedures

Table 22: Description of service provision in New Zealand (alphabetical)

	Funded through	Services provided by	Access through	Population or services covered by public funding	Level of private contribution
Aged Residential Care	DHBs	• Private and NGO providers (under age-related residential care agreement) • Four levels of care: – rest home care – continuing care (hospital) – dementia care – specialised hospital care (psychogeriatric care)	• Referral to Needs Assessment Service Coordination (NASC) organisation (self-referral or by someone else) • Referral to service provider by a Needs Assessment Service Coordination (NASC) organisation	• Those over 65 with minimal assets or income dependent on need	• Private costs apply dependent on assets and income
Alcohol and Other Drug Harm Prevention	MoH and DHB	• NGOs • PHOs • DHBs	• Referral or self-referral • NZ Drug Foundation website • Fetal Alcohol Spectrum Disorder networks • Community Alcohol and Drug services (CADS) • Community Action on Youth and Drugs (CAYAD)	• All those eligible for publicly-funded services • Priority population including young people, families and whānau	
Chaplaincy Services	MoH	• The Interchurch Council for Hospital Chaplaincy	• Provide a core national Ecumenical Healthcare Chaplaincy Service in DHB hospitals	• All patients in hospitals as part of the multidisciplinary health care team in hospital	
Disability Support Services	MoH	• Community providers and NGOs with various contracts	• Referral to service provider by a Needs Assessment Service Coordination (NASC) organisation	• Under 65s who meet eligibility criteria for DSS (approx. 30,000) • Equipment and modifications for all age groups	• Private costs apply for those who do not meet the eligibility criteria for DSS
Emergency Departments	DHBs	• Public hospitals with an emergency department	• Referral from primary health care provider, ambulance service or self-referral	• All those eligible for publicly-funded services (ACC pays for accident-related)	
Elective surgery	DHBs	• DHBs • Private Hospitals (may be contracted by DHBs for procedures)	• Referral from GP or primary health care provider and assessment by specialist determines need and priority of treatment	• Determined by Clinical Priority Assessment Criteria (CPAC)	• Full cost of treatment where people chose to undergo surgery privately
Emergency Ambulance Services	MoH and ACC	• Paramedics • St Johns Ambulance • Wellington Free Ambulance • PRIME practitioners (Primary Response in Medical Emergencies) • Emergency Air Ambulance providers	• In response to medical emergencies and accidents • Inter-hospital transfer (IHT) missions within 24 hours for accident-related or 3 hours for medical-related missions	• All those eligible for publicly-funded services (ACC pays for accident-related)	• Co-payment may be required in some instances (dependent on provider)

	Funded through	Services provided by	Access through	Population or services covered by public funding	Level of private contribution
Family Planning (Primary Health Sexual and Reproductive Services)	MoH	• NZ Family Planning Association Incorporated	• Reproductive health and pregnancy services • STI services via assessments, diagnosis and treatment of STIs • School linked clinics • Referral to service provider or self-referral	• All those eligible for publicly-funded services • Eligible people who are sexually active and are seeking advice on sexual and reproductive health • Known high risk population inc youth, Māori and Pacific people	
Hepatitis B	MoH, MSD and MoE	• Hepatitis Foundation of NZ	• Follow-up services to ensure they receive regular hepatitis serology and liver function tests • Timely referral for further diagnosis and therapeutic therapies in addition to lifestyle and dietary advice	• All those eligible for publicly-funded services	
HIV	MoH	• The NZ Aids Foundation Charitable Trust	• Screening targeted to specific populations of highest risk • Referral to service provider or self-referral	• All those eligible for publicly-funded services	
Home Community Support	MoH, DHBs, ACC	• Community Providers	• Referral to Needs Assessment Service Coordination (NASC) organisation (self-referral or by someone else) • Referral to service provider by a NASC organisation		• Home support providers may be paid for privately
Immunisation	MoH (National Immunisation Register determined by PHARMAC)	• General Practices • Pharmacists • Midwives • Other trained health professionals who are authorised vaccinators	• First point of contact	• Funded/free vaccinations timed for different life stages • Funded vaccines for special groups	• Co-payments for unfunded vaccinations
Maternity services	MoH	• Primary maternity services: – Lead Maternity Carer (LMC), under Section 88 notice – DHB maternity providers – Specialist doctors (obstetrician) – General practitioner (with diploma in obstetrics or equivalent) • Secondary and tertiary maternity facilities, inpatient postnatal care	• Self-referral – individual choice of provider • Referral by registered health practitioner	• All eligible women and their newborn babies	• Only where women engage services of a private obstetrician or are not eligible for publicly funded services

	Funded through	Services provided by	Access through	Population or services covered by public funding	Level of private contribution
Mental Health	MoH and DHBs	• DHBs • General Practice (Primary Mental Health) • School Based Health Services • Private providers • NGOs	• Referral from any source, including self-referral	• Expectation that specialist services provided to 3 percent of the population	• Full cost of services where people chose to see a private or community providers of mental health services • Co-payments may apply where access to services is via general practice
National Telehealth Service	MoH	• Homecare Medical provides integrated national telehealth service that includes: – Healthline (Health advice) – Quitline (Stop smoking support) – Alcohol Drug Helpline – Mental health, depression and anxiety counselling support – Gambling helpline – National Poisons Centre – Ambulance secondary triage	• Self-referral to phone or online services (text, email, web chat, and social media)	• Universal service	
Needle Exchange Services	MoH	• NGOs	• Mix of generic and targeted services that meet local need • Referral through specialist and other healthcare settings	• People who engage in injecting and skin piercing behaviours • Provide education and advice to people who inject and pierce, including promoting harm reduction practices and safe injection techniques • Facilitate the safe disposal of injecting equipment	
Oral health	DHBs	• Community Oral Health Service (COHS) - DHB provider arm service mainly for pre-school and primary school children up to school year 8 (12-13 years of age) • Contracted dental services (under the nationally standardised Combined Dental Agreement) for adolescents under 18 years, and for children referred from the COHS • Contracted services for emergency dental care for low-income adults • Public hospital dental services	• Universal service with regular recall for COHS and contracted dental services for adolescents under 18 • Self-referral or referral from other primary care services for emergency dental care for low-income adults. • Referral from other hospital departments (for hospital inpatients) from disability support services or primary care services (for special needs patients) for public hospital dental services	• Universal oral health services for eligible children and adolescents • Emergency dental treatment for low income adults (with CSC cards) • Dental services for hospital inpatients in specified clinical circumstances, and for special needs patients • Note: WINZ provides grants up to $300 per annum for urgent dental care for low-income adults	• Full cost of treatment of orthodontic treatment (all ages) • Full cost of treatment for most adult dental care

	Funded through	Services provided by	Access through	Population or services covered by public funding	Level of private contribution
Pharmaceuticals / Medicines	DHBs (decisions about which to fund determined by PHARMAC)	• Community Pharmacies (via Community Pharmacy Service Agreement) • Hospital Pharmacies	• Self-referral for advice to community pharmacies • Access to medicines determined by authorised prescribers	• All those eligible for publicly-funded services • Cap on $5 co-payment after 20 items (Pharmaceutical Subsidy Card)	• Co-payment of $5 for each item • Additional fees for items that are partially subsidised or not subsidised
Primary Health Care	MoH and DHBs	• PHOs • General Practices • Nurse-led services • Community providers • Māori and Pacific Providers	• Self-referral – individual choice of provider • Some services via referral	• All those enrolled with PHO (currently 93% of the population as of July 2018) • Some services are free (e.g. zero fees for under-13s) while others require co-payment	• Co-payments vary across services • Full cost of service will apply where not enrolled or for non-ACC visits to Accident and Medical Centres • Some are capped (like Very Low Cost Access practices)
Problem Gambling	MoH	• NGOs • DHB	• Mixed Intervention services: short motivational interviews; counselling sessions; therapeutic group work; and follow-up services • Effective screening environments	• General population particularly those that gamble • Priority populations: Māori, Pacific and Asian people	
Public Health	MoH and DHBs	• Ministry of Health • DHBs • Public Health Units • NGOs	• Varies across services: – Health assessment and surveillance – Health promotion – Health protection • Preventative interventions	• Universal availability • Information, programmes and interventions may be targeted at different population groups	
Radiology, diagnostics and testing	DHB	• Community Laboratory providers • Community diagnostics and testing providers • Community radiology and imaging providers	• Referral from primary or specialist care • Criteria for access varies across radiology, diagnostics and testing	• All those eligible for publicly-funded services • Some diagnostic imaging services may not be covered as they fall under another agreement	• Co-payments may apply for some services
Refugee Migrant Health Services	DHB	• DHBs • Christchurch Resettlement Services Incorporated	• Onshore refugee health screening delivered in resettlement regions • Refugee community services to facilitate the utilisation of community, primary and secondary health care services by refugee peoples • Refugee Health Promotion – offers clinical mental health services	• All quota refugees • Screening and related services (such as immunisations and transition service)	

	Funded through	Services provided by	Access through	Population or services covered by public funding	Level of private contribution
Rheumatic Fever	DHBs	• DHBs inc Māori and Pacific teams • Local iwi • Community/church groups	• Sore throat management – ensuring access to timely and effective free treatment of GAS throat infections • Awareness raising: increasing awareness of rheumatic fever prevention for high risk populations	• The high-risk population include Māori and Pacific children and young people (aged 4–19 years) as they have the highest rates of rheumatic fever	
Screening	MoH	• The National Screening Unit. Programmes include: – BreastScreen Aotearoa – National Cervical Screening Programme – National Bowel Screening Programme – Newborn Metabolic Screening Programme – Antenatal HIV Screening Programme – Universal Newborn Hearing Screening Programme	• Universal service with regular recall (e.g. cervical screening) • Age specific and determined through PHO enrolment (e.g. BreastScreen and National Bowel Screening) • Through LMC, GP or obstetrician (HIV screening during pregnancy, and newborn screening once baby is born)	• Women aged 45 to 69 eligible for a free mammogram every 2 years • Universal cervical screening for women • Bowel cancer screening for men and women aged 60 to 74 years • Universal service for newborn babies and pregnant women	• Where general practice co-payment may be required (e.g. to access cervical screening)
Specialist medical and surgical services	DHBs	• Specialists in a range of settings (e.g. outpatient clinics, hospitals) • Publicly funded hospitals • High-cost, highly specialised services provided nationally (e.g. Starship)	• Referral from general practice, midwives, community providers, emergency departments and specialists • Access to the service managed based on acuteness of need and capacity to benefit	• All those eligible for publicly-funded services	• Full cost of services where people chose to see a private specialist
Stop Smoking Services	MoH, DHBs, PHOs	• Community Based Stop Smoking Services (16 providers and service regions)	• PHOs progress toward patients who smoke • national stop smoking service that provides a range of evidence based stop smoking support to consumers	• All those eligible for publicly-funded services prioritising: Maori & Pacific population and pregnant women of any ethnicity who smoke	
Well Child Tamariki Ora Programme	MoH	• Plunket • Māori Well Child Tamariki Ora Providers • Pacific Well Child Tamariki Ora Providers • General practice team • Public health service	• Lead Maternity Carer or self-referral	• Free for all New Zealand children from birth (around 6 weeks) to five years	

Performance the New Zealand health and disability system

> *…New Zealand [has a] health care system that performs anywhere from poorly to superbly depending on which of the many indicators one looks at. Health system performance measurement is complex and it is often difficult to get a clear picture of performance across an entire system. –Robin Gauld (2013, p 68).*

This chapter uses the HQSC's Triple Aim as a framework to describe the current performance of the New Zealand health and disability system. This is one way of approaching the performance story of the system. The framework describes an approach to optimising health system performance through simultaneously pursuing:

- improved health and equity[7] for all populations (population level)
- individual quality, safety and experience of care (individual level)
- better value for public health system resources (system level).

Workforce satisfaction is now routinely included in the framework (referred to as the Quadruple aim) as burnout among members of the healthcare workforce threatens patient care (Bodenheimer & Sinsky 2014). For the purpose of this report, workforce satisfaction is included in the individual level section.

Where possible and relevant, this section provides the most recent data that is available including:

- international comparisons across indicators
- national and subnational indicators
- trends over time.

Information about System level measures has been included in provided in Appendix 8.

Population level: Improved health and equity for all populations

New Zealand performs relatively well on population health indicators, with performance continuing to improve over time. Although some important health gains have been made over the past two decades in areas such as life expectancy, health expectancy, amenable mortality and the overall rate of health loss, New Zealand has a mixed scorecard of performance relative to other OECD countries. Inequities also continue to persist, with notably poorer health outcomes for Māori, Pacific people and those living in areas of increased deprivation.

Performance within this domain is divided into two sections:

1. high-level indicators of overall **population health outcomes**, including how New Zealand compares with other OECD countries, and
2. **health loss** in New Zealand, including a focus on key conditions that contribute to total health loss.

Some of the considerations for equity include gender, age, ethnicity, socioeconomic deprivation and geographic location. Note that data on each of these points has not been readily available.

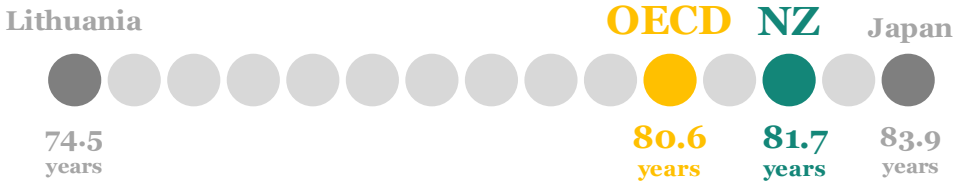
[7] The World Health Organisation defines equity as the absence of avoidable or remediable differences among populations or groups defined socially, economically, demographically, or geographically.

Population health outcomes

Life expectancy and health expectancy

Life expectancy (how many years we live) and health expectancy (how many years we live in good health) at birth are indicators of overall health outcomes. On average, New Zealanders are living longer and spending more time in good health. In 2015, life expectancy at birth in New Zealand (81.7 years) was above the OECD average (80.6 years) and 2.2 years lower than the country with the highest life expectancy at birth (Japan, 83.9 years), as shown in Figure 12.

Figure 12: Life expectancy at birth

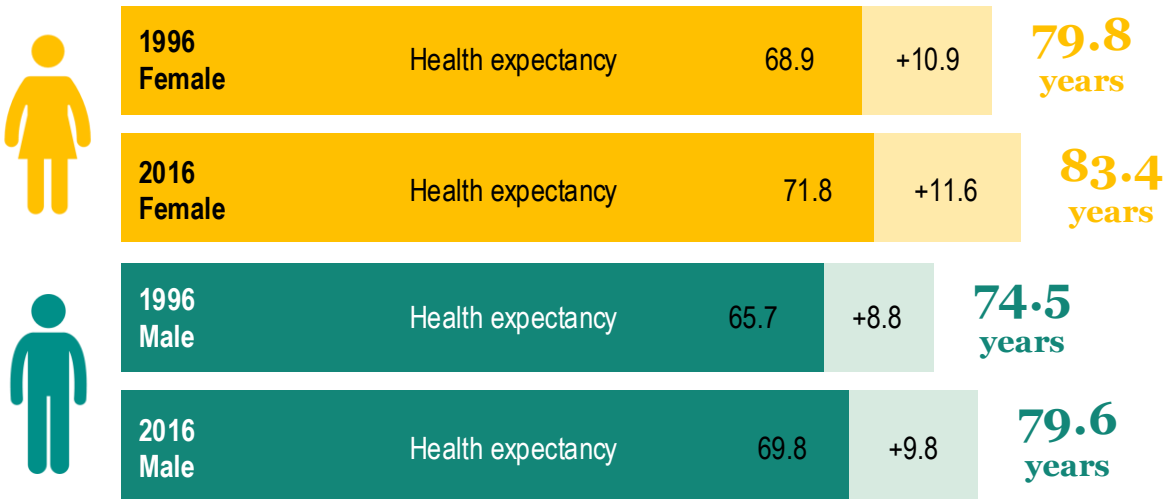


Source: OECD 2017

Although life expectancy has increased for all groups, inequities remain. For example, Māori males born from 2012-2014 had a life expectancy at birth that was 7.3 years below that of non-Māori males. For Māori females in this age group, life expectancy was 6.8 years below that for non-Māori females (Statistics New Zealand 2015).

Health expectancy at birth has also increased which means New Zealanders are living more years in good health compared to twenty years ago, as shown in Figure 13. However, life expectancy has increased at a faster rate than health expectancy, meaning New Zealanders are also spending increasing time in poor health. On average this equates to a decade spent in poor health (9.8 years for males, and 11.6 years for females).

Figure 13: Life expectancy and health expectancy at birth, by sex, 1996 and 2016



Source: IHME 2016

Infant mortality

Infant mortality is an important measure of health system delivery and wider societal influences on health. The overall rate of infant mortality decreased from 7.3 deaths per 1,000 live births in 1996 to 5.7 deaths per 1,000 live births in 2014 (Ministry of Health 2017). While this is a notable reduction, New Zealand continues to have an infant mortality rate that is higher than the OECD average (3.9 deaths per 1,000 live births in 2015).

Infant mortality rates also reflect significant inequities. As shown in Table 23, infant mortality rates for Māori (7.2) and Pacific (7.1) were around 1.5 times higher than the rate for European or

Other (4.6). Infant mortality in the most deprived demographic areas (9.1 per 1,000 live births) was nearly three times the rate in the least deprived areas (3.2 per 1,000 live births), and babies of young women under 20 years of age had the highest infant mortality rates of all groups at 12.3 per 1,000 live births (Ministry of Health 2017).

Table 23: Infant mortality rates for 1996 and 2014, for total population and ethnic group

Category	1996	2014
Total	7.3	5.7
Ethnic group		
Māori	11.5	7.2
Pacific peoples	7.2	7.1
Asian	4.4	5.0
European or Other	5.5	4.6
Maternal age group (years)		
<20	10.7	12.3
20–24	10.2	7.3
25–29	6.2	5.1
30–34	5.2	4.5
35–39	6.2	4.5
≥40	11.6	4.8
Deprivation quintile		
1 (least deprived)	4.1	3.2
2	6.6	3.9
3	5.3	4.9
4	8.0	5.4
5 (most deprived)	9.7	9.1

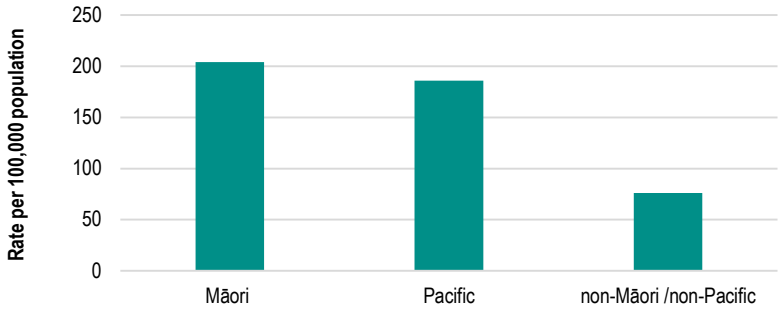
Source: Ministry of Health 2017
Note: Rate is expressed as per 1000 live births.

Amenable mortality

Amenable mortality is defined as premature deaths that could potentially be avoided, given effective and timely use of health services. New Zealand's rate of amenable mortality (93 deaths per 100,000 population) compares favourably with 28 European countries which averaged 119 deaths per 100,000 population in 2013 (OECD 2016, National Services Framework Library, Ministry of Health).

However, the national amenable mortality rate hides significant ethnic inequities, demonstrated in Figure 14. The amenable mortality rates for Māori (196.8 deaths per 100,000) and Pacific people (186.4 deaths per 100,000) were both more than twice the rate of amenable mortality for the non-Māori, non-Pacific population (75.6 deaths per 100,000) in 2014.

Figure 14: Amenable mortality 0-74 years rate per 100,000 population, 2014



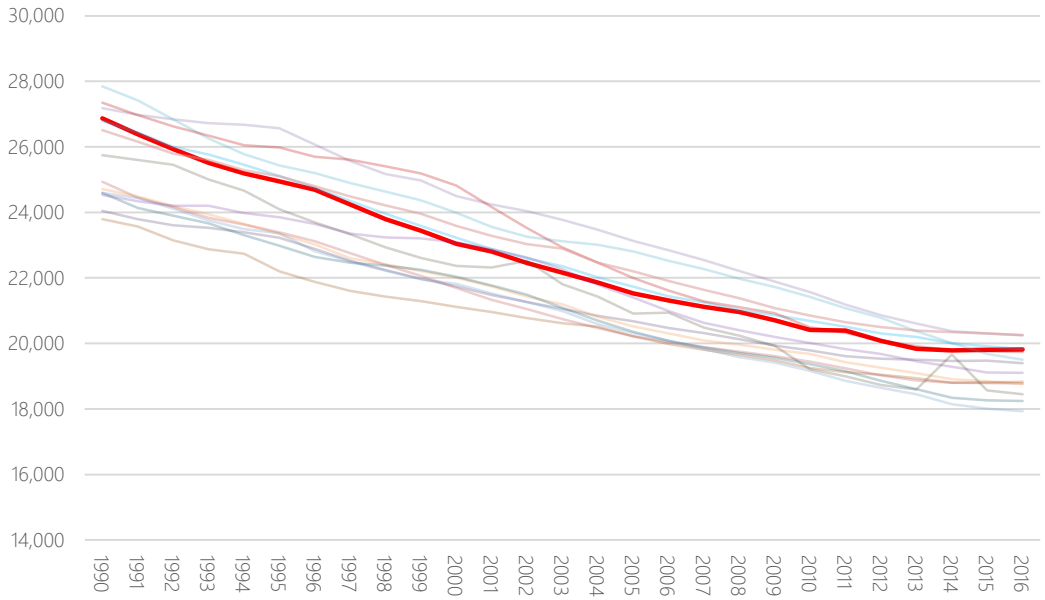
Source: Ministry of Health, Mortality Collection

Health loss

New Zealand rates well against other high-income countries in terms of the amount of health lost (the number of years of life lost prematurely plus the number of years spent in less than full health, adjusted for severity). Over the past 26 years, New Zealand's rate of health loss has declined more quickly than in other high-income countries. This is a major achievement for the health and wider social sector. This decrease is depicted with a red line in Figure 15.

However, the decrease in the rate of health loss is showing signs of slowing, while the total number of disability adjusted life years (DALYs) has been slowly increasing, reflecting a growing and ageing population.

Figure 15: Age-standardised disability adjusted life year rate per 100,000 population 1990-2016

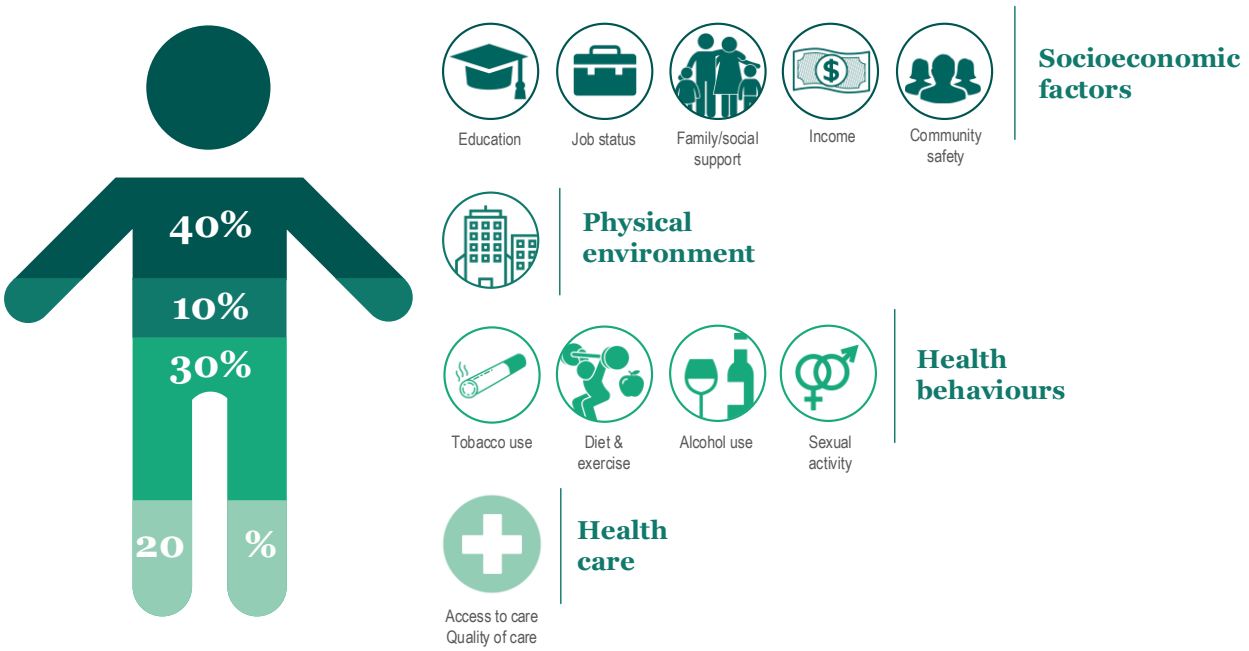


Source: IHME 2016

Risk factors contributing to health loss

A wide range of factors contribute to a healthy population. When most people think of health care, they tend to think of clinical and medical care. Yet this only accounts for 20% of a person's health and well-being. The other 80% includes the physical environment, social and economic factors, and health behaviours that drive health, as depicted in Figure 16.

Figure 16: Factors that influence our health and wellbeing



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

The Global Burden of Disease (GBD) study provides insights into the key risk factors that have contributed most to ill health and mortality in New Zealand over the past 25 years. The five leading risk factors in 2016 were:

- Being overweight (high BMI)
- Dietary risks
- Tobacco
- High blood pressure
- Alcohol and drug use.

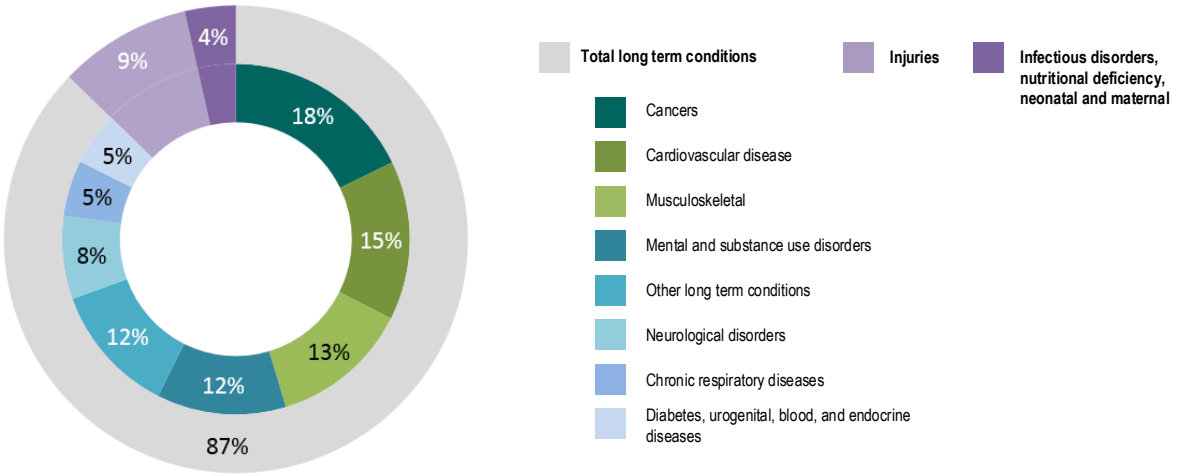
Around a third of health loss, measured by disability-adjusted life years (DALYs)[8], can be avoided by addressing modifiable risk factors, such as obesity and smoking (IHME 2016).

Conditions contributing to health loss

Like other developed countries, long-term conditions (such as cancer, cardiovascular disease, diabetes and mental illness) contribute most to ill health and mortality in New Zealand (IHME 2016). Figure 17 shows that in 2016, long-term physical and mental health conditions caused 87 percent of health loss in New Zealand, while injuries were responsible for 9 percent and communicable diseases, nutritional deficiencies and neonatal disorders for 4 percent.

[8] One DALY represents the loss of one year lived in full health. DALYs integrate health losses from premature mortality and years lived with disability (adjusted for severity)

Figure 17: Leading causes of health loss in the New Zealand population (% of total DALYs) 2016



Source: IHME 2016

Cancer

Cancer is New Zealand's biggest contributor to health loss, accounting for nearly one fifth of all health loss. Each year around 23,000 people (one in 210) are diagnosed with cancer, and around 10,000 die from cancer. New Zealand's leading cancer registrations and cancer mortality are set out in Table 24.

Table 24: Leading cancer registrations (2016) and mortality (2014) in New Zealand

Registrations		Mortality	
Breast	3,315	Lung	1,656
Bowel	3,081	Bowel	1,252
Prostate	3,068	Prostate	647
Melanoma	2,424	Breast	641
Lung	2,177	Pancreatic	463

Source: Ministry of Health – New cancer registrations 2015; Ministry of Health Mortality 2015 data tables

Overall, cancer impact per capita has declined steadily over time when age-adjusted, from 4095 DALYs per 100,000 population in 1990 to 3073 DALYs per 100,000 in 2016. This indicates overall cancer performance (prevention, detection and treatment) is continually improving. However, New Zealanders are living longer and the total impact (not age-adjusted) is rising.

Performance varies between countries across different cancer categories. New Zealand has relatively better performance on lung cancer and relatively poorer performance on bowel cancer and malignant skin melanoma cancer (IHME 2016). While New Zealand's lung cancer performance is better than in many countries, reflecting prevention through tobacco control, lung cancer is our largest cause of cancer death.

There are significant ethnic disparities for both cancer diagnoses and cancer deaths. Māori females were 1.4 times, and Māori males 1.2 times, more likely than non-Māori females and males respectively to have been diagnosed with cancer in 2015 (Ministry of Health 2017). In 2015, Māori had an age-standardised cancer mortality rate of 200.7 per 100,000, which was 1.7 times the rate for non-Māori (115.3 per 100,000) (Ministry of Health 2018).

Mental health service users, people with multiple health conditions and Pacific people also have poorer survival from cancer. These inequities in outcomes come from disparities that build up for these groups at each stage of the cancer pathway.

Cardiovascular disease

Cardiovascular disease accounts for 15 percent of health loss in New Zealand (IHME 2016). In 2015, 5,017 New Zealanders died from ischaemic heart disease and 2,467 from cerebrovascular disease (stroke).

Between 2000 and 2016, the age-standardised rate of health loss due to ischaemic heart disease fell by 42.5 percent in relative terms and the rate due to cerebrovascular disease fell by 31.4 percent. Despite these improvements, cardiovascular and cerebrovascular disease remain among the leading causes of health loss and mortality in New Zealand.

Stroke mortality rates have decreased across all ethnicities. However, stroke incidence rates increased for Māori and Pacific peoples (New Zealand European change from an age-standardised 153 per 100,000 people per year in 1981 to 122 in 2012, Māori 134 to 156, Pacific 147 to 197). Inequities also exist in the age people are having strokes (Table 25). For all groups the average age of onset had increased since 1991-1992, with the biggest increase being 4.6 years for Māori (Feigin et al. 2015).

Table 25: Average age of stroke, by ethnicity, 2012

	Māori	Pacific	NZ European
Age when stroke occurred	59.6 years	61.6 years	75.3 years

Source: Feigin et al. 2015

Mental health

Mental health and substance use disorders account for 12 percent of health loss in New Zealand (IHME 2016). One in five New Zealand adults (19.9% or an estimated 764,000 adults) indicated in the 2016/17 New Zealand Health Survey that they had a mood and/or anxiety disorder at some point in their lives. Rates were higher for females compared with males and for people living in the most socioeconomically deprived areas. Rates were similar for Māori and non-Māori with lower rates for Pacific people and Asian people.

Psychological distress (which if left unchecked can develop into more serious forms of mental illness) affected around seven percent of New Zealand adults and showed inequities in age, ethnicity and socioeconomic status, as described in Table 26.

Table 26: Mood or Anxiety disorder at some point in their lives

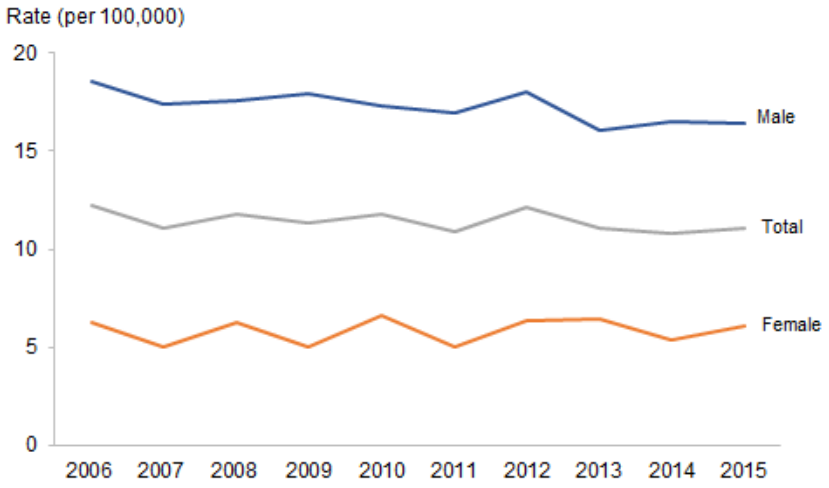
Age	Ethnicity	Socio-economic
The rates were higher for young adults than for older adults. Of adults aged 15–24 years, 11.8% reported experiencing psychological distress, compared with 4.3% of adults aged 75 years and over.	Rates of psychological distress were higher for Māori and Pacific adults, in particular for females (14.2% of Māori women and 17.2% of Pacific women).	Adults living in the most socioeconomically deprived areas reported higher rates of psychological distress (11.5%) than those living in the least deprived areas (4.8%).

Source: New Zealand Health Survey 2016/17

New Zealand is near the middle of the pack for overall suicide rates, but youth suicide rates are the worst in the OECD (OECD 2017).

The rate of suicide is highest amongst males (shown in Figure 18) and Māori (shown in Figure 19). In 2015, 527 people died by suicide in New Zealand, which equates to an age-standardised rate of 11.1 per 100,000. There were 384 male suicides (16.4 per 100,000) and 143 female suicides (6.1 per 100,000) in 2015, a rate that is 2.7 times higher for males than females.

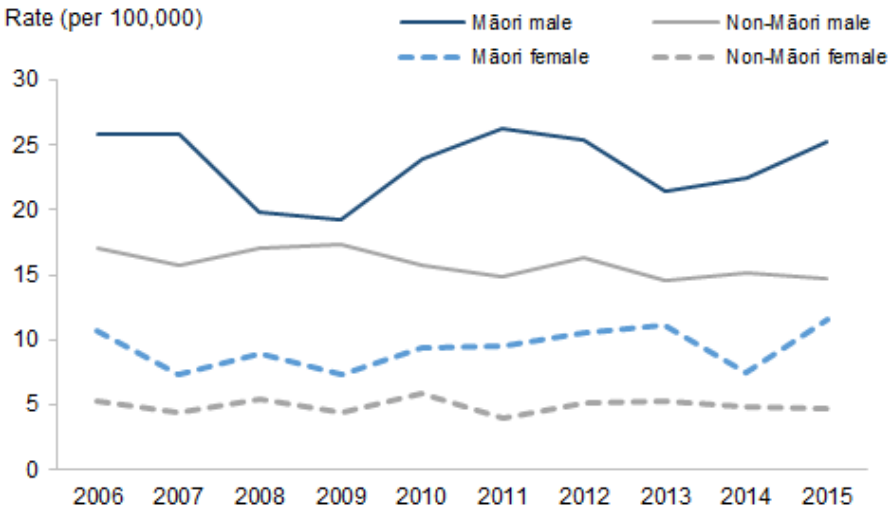
Figure 18: Age-standardised suicide rates, by sex, 2006-2015



Source: New Zealand Mortality Collection

The rate of suicide among Māori was also higher than among non-Māori for both males and females. The Māori male suicide rate of 25.3 per 100,000 was 1.7 times that of non-Māori, and the Māori female rate of 11.5 per 100,000 was 2.4 times that of non-Māori females.

Figure 19: Age-standardised suicide rates, for Māori and non-Māori, by sex, 2006-2015

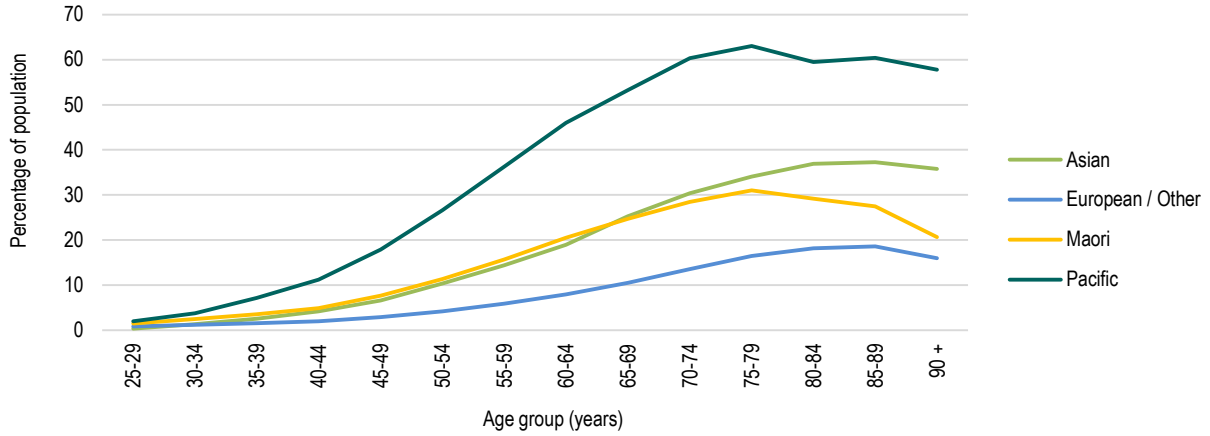


Source: New Zealand Mortality Collection

Diabetes

Diabetes, urogenital, blood and endocrine disorders account for 5% of all health loss in New Zealand. The prevalence of diabetes in New Zealand is increasing. Nearly a quarter of a million New Zealanders (246,000) aged 20-79 years are affected with diabetes, up from 137,000 people in 2005. Being overweight or obese is a major risk factor, based on New Zealand's high obesity rate, a relatively high diabetes prevalence can be expected. New Zealand's diabetes prevalence (7.3%) is higher than Australia (5.1%) and the United Kingdom (4.7%) with the same pattern for adult obesity in these two countries (27.9% and 26.9% respectively compared to 31.6% in New Zealand).

Figure 20: Estimates percentage of New Zealand's adult population living with diabetes by ethnicity, average over 2013-15



Source: Virtual Diabetes Register, Ministry of Health

As Figure 20 shows, the prevalence of diabetes in New Zealand increases with age and varies by ethnicity. Overall, 20 percent of Pacific adults live with diabetes, compared with 10 percent of Māori, 8 percent of Asian and 6 percent of European or Other adults. Rates of diabetes vary widely within the Asian ethnic grouping; notably, rates for people of Indian ethnicity are similar to those of Pacific peoples.

On average, New Zealanders with diabetes live four to five fewer years than people without diabetes. People living with diabetes are more likely to suffer from cardiovascular disease, blindness, foot and leg amputation, kidney failure, dementia, depression and anxiety, all of which can contribute to premature death. Diabetes is also associated with high risks of certain types of cancer.

Disability

Disabled New Zealanders have, on average, higher health risks and poorer life outcomes compared with non-disabled people. Particular groups of disabled people face greater health inequalities, compounded by barriers to accessing healthcare and wider support.

There are gaps in our knowledge and data collected which specifically shows the health outcomes for people with disabilities. Disabled people are less likely to rate themselves as having good health outcomes – the General Social Survey 2016 showed that 50.1% of disabled adults aged over 15 years rated their health as excellent, very good or good compared to 89.1% of non-disabled adults as shown in Table 27.

Table 27: Self-rated general health status from General Social Survey for April 2016-April 2017

Rating	Disabled	Not disabled	Total Population
Excellent	3.2	20.8	19.2
Very good	17.3	41.0	38.9
Good	29.6	27.3	27.5
Fair/poor	49.9	11.0	14.4

Source: Statistics New Zealand 2017

Disability rates in New Zealand are based on self-reported data through the Disability Survey (Statistics NZ). In 2013, nearly a quarter of New Zealanders (1.1 million people) reported having a disability, defined as having some sort of long-lasting (six months or longer) impairment limiting their ability to carry out day-to-day activities.

People living with disability often experience poor social and economic outcomes. The New Zealand Disability Survey found that, compared to non-disabled people, disabled people (Statistics New Zealand, 2014):

- had lower levels of employment
- were less likely to hold formal educational qualifications
- were more likely to experience discrimination
- were more likely to feel lonely
- were less likely to participate in popular leisure activities such as visiting friends, going to cafés and going on holiday
- were less likely to be satisfied with their lives.

The proportion of the population living with a disability has increased from 20% in 2001 to 24% in 2013 – an aging population contributes to this, as well as other factors such as changes in public perceptions and willingness to self-identify as having a disability.

Disability rates vary by gender and ethnicity, for example a higher proportion of men experience hearing impairments and a higher proportion of women experience physical impairments. Disability rates for Māori (27%) are higher than other population groups such as European (25%), Pacific (19%) and Asian (13%), despite having a younger age profile than the total population.

The 2013 Disability Survey found that the leading areas of impairment in the population were physical limitations, sensory (hearing/vision), mental (psychological/psychiatric/psychosocial) and intellectual disability as shown in Table 28. Over half of all disabled people (53%) had more than one disability.

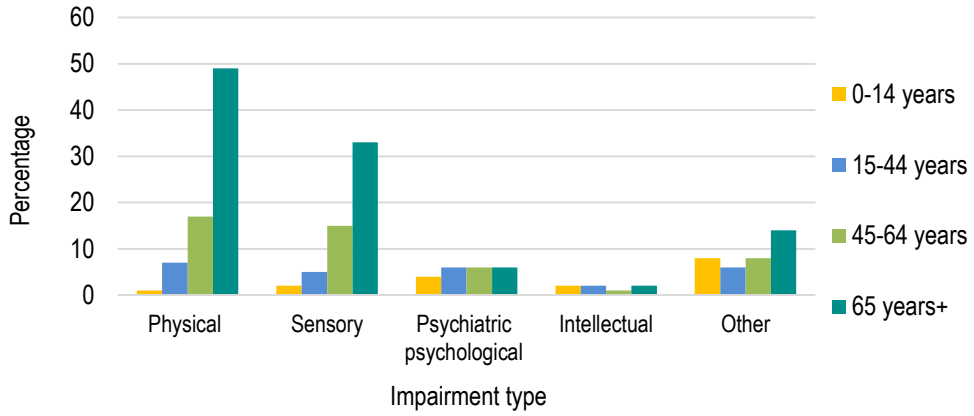
Table 28: Self-reported impairment

Physical	Sensory	Mental	Intellectual	Other
14%	11%	5%	2%	8%

Source: Statistics New Zealand 2014

The survey also identified that the most common type of impairment for children in New Zealand was a learning difficulty, affecting 6 percent of the total child population. The most common cause of disability for children was a condition that existed at birth (49%). For adults, physical limitations were the most commonly reported type of impairment (with disease or illness the most common cause of physical impairment). The rates of impairment by type and age group are shown in Figure 21.

Figure 21: Rates of impairment by type, and age group, 2013



'Other' includes impaired speaking, learning, and developmental delay for children aged 0-14 years, and includes impaired speaking, learning and remembering for adults aged 15+ years.
Source: Statistics New Zealand 2014

Individual level: Improving quality, safety and experience of care for people and their whānau

Health care quality is the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes. There are two main drivers for the focus on quality and quality improvement:

- **Avoiding/reducing variation in standards of health care delivery**
  Even when health systems are well developed and organised, there is evidence that quality remains a serious concern. There can be wide variations in standards of health care delivery within and between health care systems with expected outcomes not reliably achieved.
- **Maximising the value of increased investment in health care**
  Where health systems need to optimise resource use and expand population coverage, the process of improvement and scaling up needs to be based on sound local strategies for quality so that the best possible results are achieved from new investment (World Health Organization 2006).

The World Health Organisation (2006) identifies six dimensions to describe quality in health care outlined in Table 29

Table 29: Dimensions of quality in health care

Dimension	Description
Accessible	• delivering health care that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need
Acceptable/patient-centred	• delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities
Safe	• delivering health care which minimises risks and harm to service users
Effective	• delivering health care that is adherent to an evidence base and results in improved health outcomes for individuals and communities, based on need
Equitable	• delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status
Efficient	• delivering health care in a way that maximizes resource use and avoids waste.

Source: World Health Organisation 2006

This section will consider the quality of health care at the level of the user. Efficiency of health care is included in the following section: 'System: getting the best value for health system resources' on page 78.

Access to health care

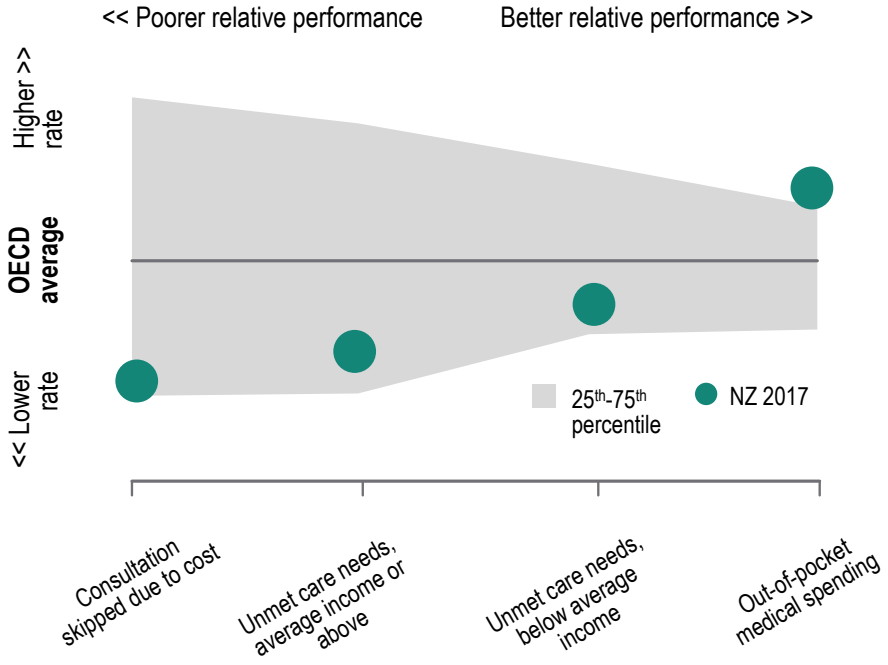
Access to health services describes the extent to which people use health services in a timely and appropriate manner. This could be for diagnosis, treatment in response to illness, or participation in public health initiatives such as screening or vaccinations.

Barriers to access

When compared to other developed nations across measurements of access to health services, New Zealand's health system performs slightly below average for affordability of services. Out-

of-pocket costs for health services in New Zealand are less than the OECD average. The cost of accessing health care appears to be a larger barrier to access for New Zealanders compared to other OECD countries, shown in Table 30.

Figure 22: Access to health care, selected OECD indicators 2017



Source: OECD health at a glance 2017

In the 2016/17 New Zealand Health Survey, 28 percent of adults reported one or more types of unmet need for primary health care in the last 12 months due to barriers such as cost, transport, and availability of appointments. This was higher for Māori and Pacific, with 37.5 percent and 30.7 percent respectively experiencing one or more types of unmet need for primary health care in the last 12 months (compared with 28.2 percent for European/other, and 21.4 percent for Asian).

Table 30: Barriers to primary health care access for adults (15+ years) and children (0-14 years) in 2016/17

Indicator	% of 15+ year olds	% of children (0-14 years)
Unable to get an appointment within 24 hours	**18.4%** (660,000 adults)	**15.8%** (144,000 children)
Unmet need for GP due to cost*	**14.3%** (547,000 adults)	**3.0%** (28,000 children)
Unmet need for GP due to lack of transport	**3.2%** (124,000 adults)	**2.6%** (24,000 children)
Unmet need for after-hours due to cost	**6.6%** (251,000 adults)	**2.6%** (24,000 children)
Unmet need for after-hours due to lack of transport	**1.3%** (51,000 adults)	**0.8%** (7,000 children)
Unfilled prescription due to cost*	**7.0%** (268,000 adults)	**3.9%** (37,000 children)
Unmet need for GP due to lack of childcare	N/A	**1.9%** (17,000 children)
One or more types of unmet need for primary health care	**28.1%** (1,077,000 adults)	**20.3%** (188,000 children)

Source: New Zealand Health Survey 2016/17

Note: Because some people experience more than one type of unmet need the sum of the individual indicators is higher than the result for the composite indicator.

Similar to overall rates of barriers to access for primary health care, Māori, Pacific, and those living in the most socioeconomically deprived areas cite cost as a larger barrier to access (22.2 percent, 17.8 percent and 20 percent respectively) than European/other (13.9 percent).

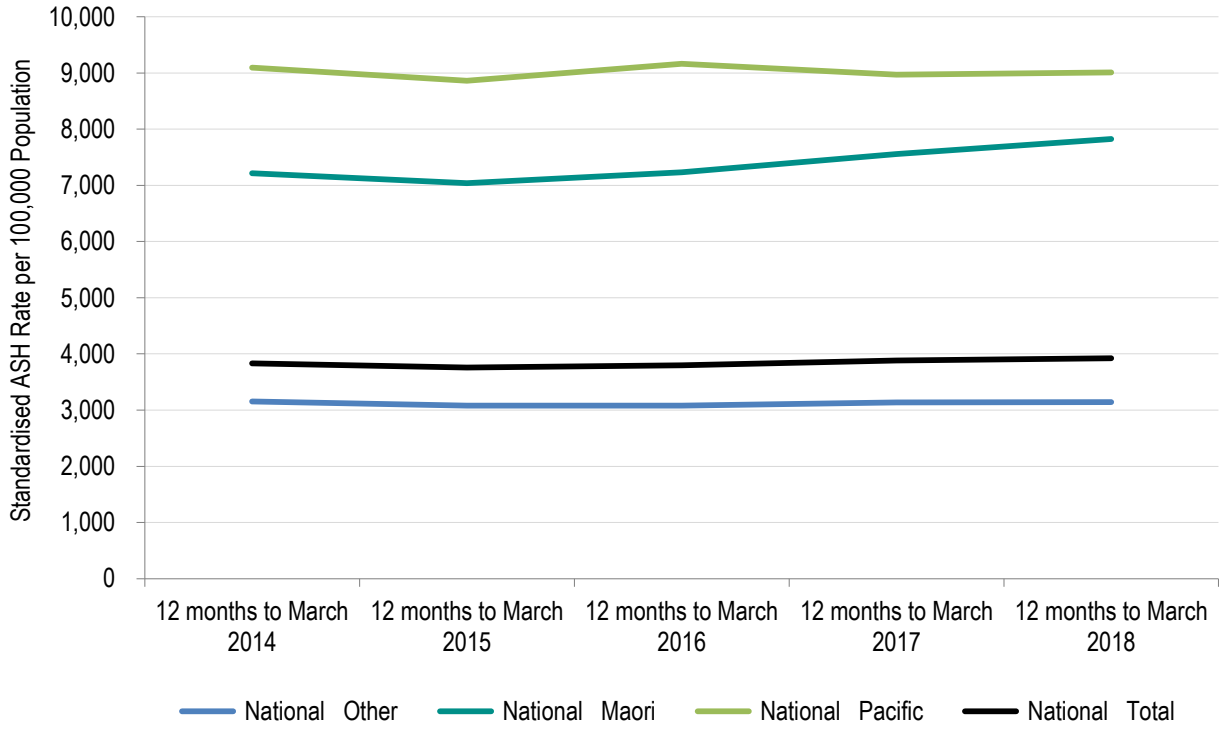
Ambulatory Sensitive Hospitalisations

The term 'ambulatory sensitive hospitalisations' (ASH) refers to mostly acute hospital admissions for conditions that are preventable, or that could have been treated earlier in primary health care.

ASH rates are often used as proxy markers for primary health care access; high admission rates may suggest difficulty in accessing care in a timely fashion, poor care coordination or failures in continuity of care.

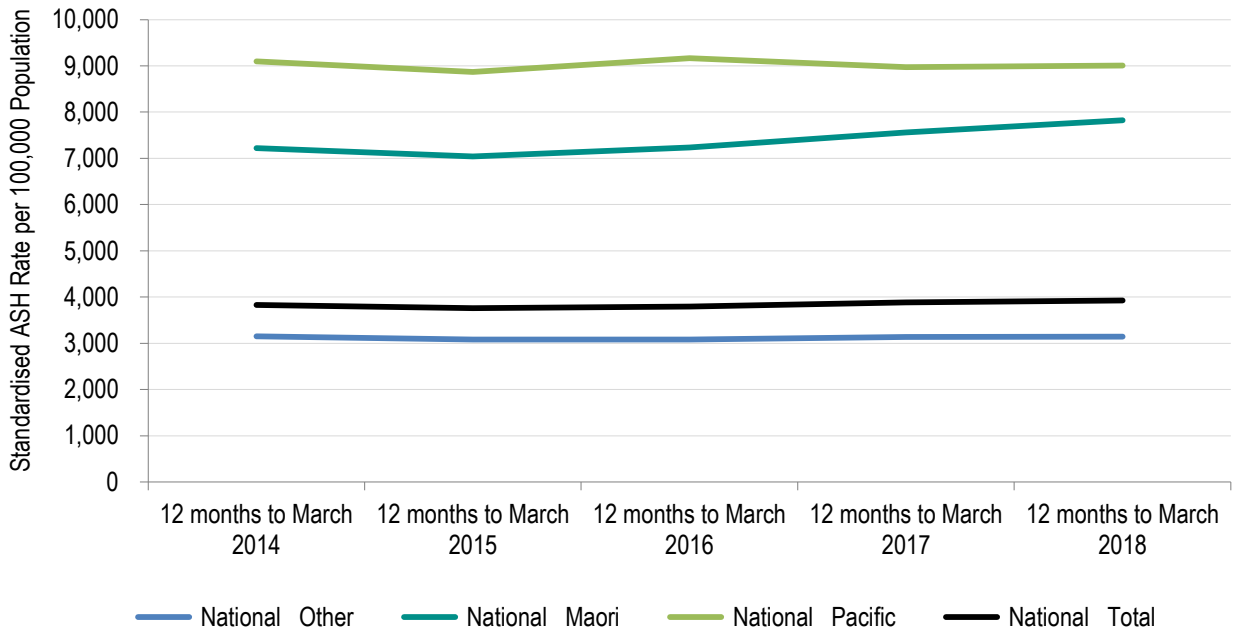
Figure 23 shows the trend over time from 2014 to 2018 in ASH rates for the 0–4 age group. It illustrates that the rates are the highest for Pacific preschoolers, followed by Māori, and that the lowest are in the 'other' group. Figure 24 shows the same trend for the 45 to 65 age group.

Figure 23: Non-standardised ASH rate, National, 00 to 04 age group, All conditions, 5 years to end March 2018



Source: National Service Framework Library

Figure 24: Non-standardised ASH Rate, National, 45 to 64 age group, All conditions, 5 years to end March 2018

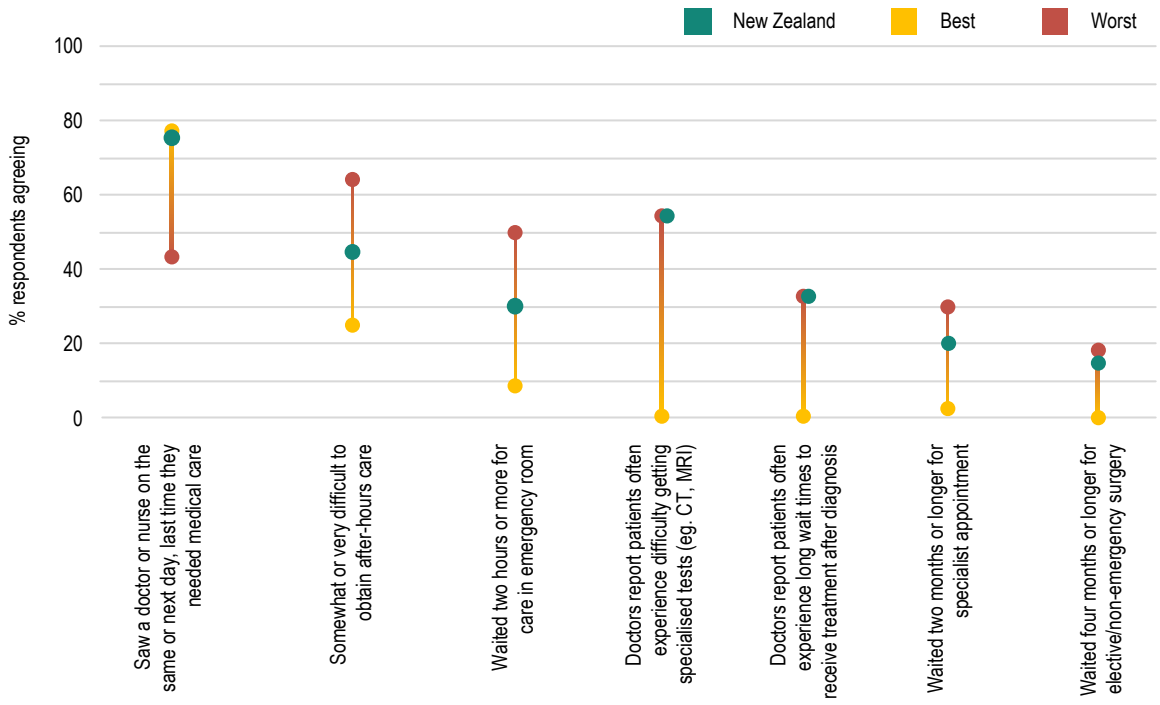


Source: National Service Framework Library

International comparisons

While over 18% of New Zealand adults reporting being unable to get an appointment within 24 hours, New Zealand performs relatively well on measures of timeliness for primary and after hours care. However, performance is noticeably poorer for measures of timeliness regarding care in emergency rooms, access to specialised care (e.g. CT, MRI), treatment after diagnosis, specialist appointments, and elective surgeries (Commonwealth Fund 2017).

Figure 25: Timeliness indicators for access to health care, compared with 10 other similar countries



Source: Commonwealth Fund, 2017

Experience of health care

Patient experience of care is a good indicator of the quality of health services. Better experience, stronger partnerships with consumers, and patient and family-centred care have been linked to improved health, clinical, financial, service and satisfaction outcomes (Australian Commission on Safety and Quality in Health Care 2011; Balik, Conway, Zipperer, & Watson 2011).

The State Services Commission (SSC) administers a nationwide survey, Kiwis Count, assessing New Zealanders' experience with public services, how they have been treated and how they rate the quality of the services they have used. Satisfaction scores for those receiving six specific health services are shown in Table 31, reflecting an increase in overall satisfaction over the last decade. For example, for those who have stayed in a public hospital the overall quality score was 74 in 2017, up from 68 in 2007.

Table 31: Kiwis Count health service quality scores

Service	2007	2009	2012	2013	2015	2017
Received outpatient services from a public hospital (includes Accident and Emergency)	69	68	73	74	75	72
Stayed in a public hospital	68	71	73	75	76	74
Used an 0800 number for health information	67	70	70	77	79	73
Obtained family services or counselling (retired)	68	65	73	-	-	-
Taken a child in your care to see a doctor/GP (new)	-	-	-	-	-	75
Received help for mental health or substance abuse problems from a doctor or nurse at your local medical centre (new)	-	-	-	-	-	64
Overall	68	69	72	75	76	73

Source: State Services Commission, 2018

Satisfaction with primary health care

Although rates of satisfaction with primary health care are reasonably high (Table 32), over the last six years there has been a slight yet constant decline, primarily influenced by the experience of European/other respondents. In particular, trust and confidence with GPs has reduced by 4.7% between 2011/12 and 2016/17.

Table 32: Satisfaction with General Practitioner

Indicator	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	Change
Definite confidence and trust in GP	**84.2**	**81.3**	**80.4**	**80.0**	**79.2**	**79.5**	▼
European/other	85.4	82.3	81.0	81.2	80.8	80.5	▼
Māori	80.7	76.3	75.7	74.4	74.6	77.3	≈
Pacific	78.9	77.2	80.1	75.8	74.8	71.6	▼
Asian	78.7	78.1	79.5	75.1	70.5	75.3	≈
GP good at explaining health conditions and treatments	**93.0**	**90.9**	**91.6**	**91.8**	**90.4**	**90.8**	▼
European/other	93.7	91.4	92.3	92.2	91.2	91.1	▼
Māori	89.7	87.7	88.4	87.9	86.5	87.4	≈
Pacific	90.1	90.3	92.4	89.2	88.4	91.8	≈
Asian	92.6	87.8	89.3	90.0	87.0	89.4	≈
GP good at involving patient in decisions	**90.1**	**89.0**	**89.2**	**89.8**	**87.3**	**88.7**	≈
European/other	90.7	90.0	89.7	90.3	88.3	89.2	▼
Māori	85.3	85.5	86.8	85.0	83.8	85.5	≈
Pacific	87.5	85.5	86.5	85.4	86.4	90.4	≈
Asian	88.7	85.0	89.3	88.8	80.8	85.2	≈

Source: New Zealand Health Survey 2016/17

Results for different ethnic and age groups reveal disparities in satisfaction. The Health Quality & Safety Commission's primary care patient experience survey shows that when compared with European respondents, Māori, Pacific, Asian and Other respondents report a worse experience of coordination of care, quality of communication and meeting of physical and emotional needs.

Table 33: Number of questions where respondents from Māori, Pacific, Asian and Other ethnic groups gave significantly different responses from Europeans

Ethnic group	# of significantly different responses about coordination of care		# of significantly different responses about experience of care	
	More positive	Less positive	More positive	Less positive
Māori	0 / 13	3 / 13	0 / 20	8 / 20
Pacific	1 / 13	1 / 13	1 / 20	5 / 20
Asian	0 / 13	0 / 13	0 / 20	5 / 20
Other	0 / 13	7 / 13	0 / 20	5 / 20

Source: HQSC primary care patient experience survey, November 2017

This disparity is more pronounced between age groups. People below 65 years of age, (especially between the ages of 25-44) reported poorer coordination of care and experience of care than those over 65 years

Table 34: Number of questions where different age groups gave significantly different responses than the overall rate

Age group	# of significantly different responses about coordination of care		# of significantly different responses about experience of care	
	More positive	Less positive	More positive	Less positive
15-24	0 / 13	8 / 13	0 / 20	15 / 20
25-44	0 / 13	13 / 13	0 / 20	17 / 20
45-64	0 / 13	5 / 13	0 / 20	4 / 20
65-74	12 / 13	0 / 13	18 / 20	0 / 20
75-84	10 / 13	0 / 13	14 / 20	1 / 20
85+	7 / 13	0 / 13	8 / 20	0 / 20

Source: HQSC primary care patient experience survey, November 2017

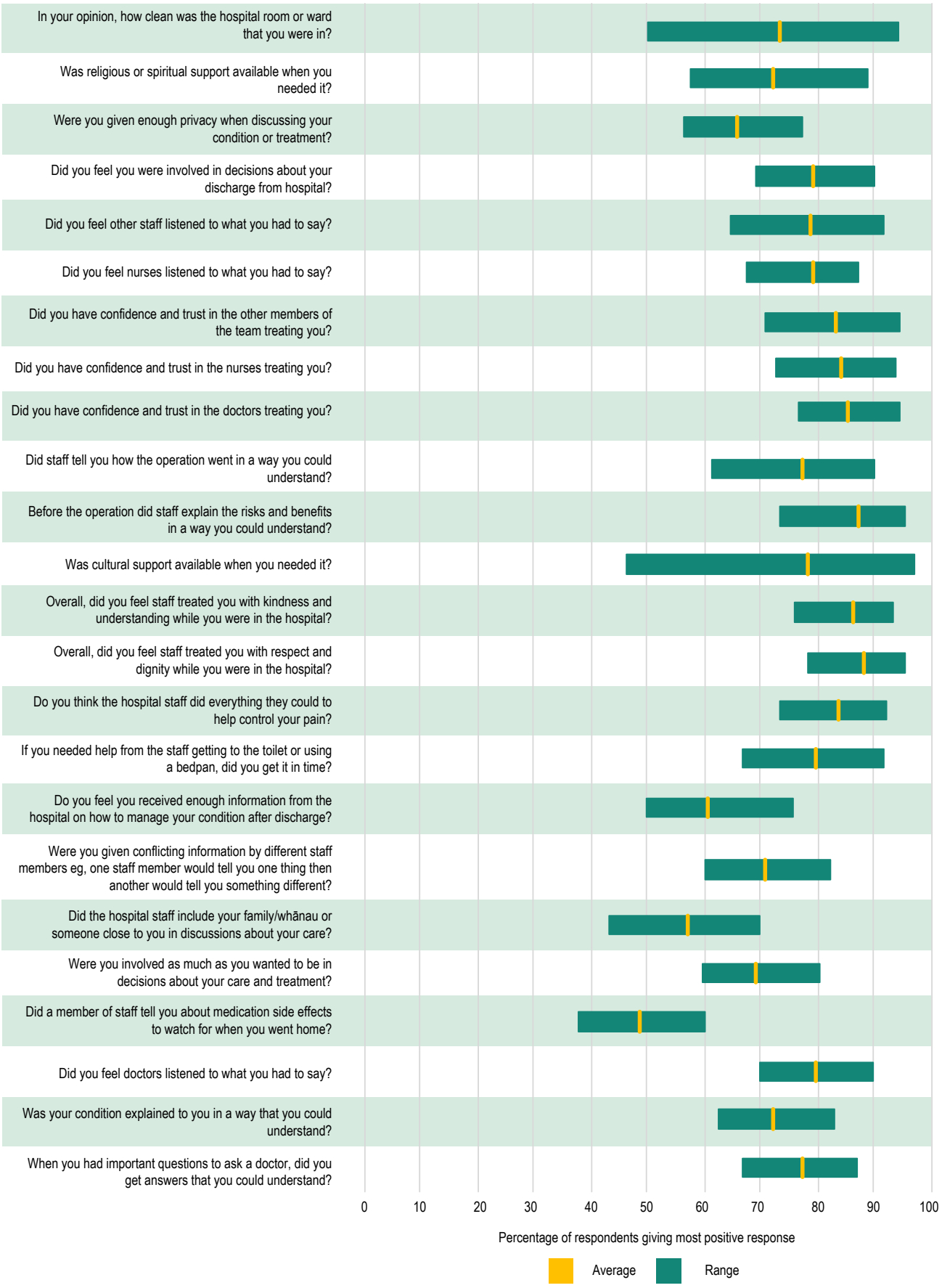
Satisfaction with secondary care

Results for the impatient experience survey have been consistent over the three and a half years the survey has been in place. Both high[9] and low[10] scoring areas have not shifted. Over that time, however, the variation between the best and worst scoring DHBs has been wide, suggesting improvement is possible in at least some parts of the country. This variation is shown in Figure 26.

[9] Such as being treated with respect and dignity while in hospital, staff explaining the risks and benefits of an operation in a way that a patient can understand, and staff treating patients kindly and with understanding

[10] Such as communication about medication, how patients can manage their condition when they leave hospital, and how families/whānau or someone close is involved in discussions about the patient's care

Figure 26: Variation of respondents giving the most positive response between DHBs, inpatients experience survey, average August 2014 to November 2017

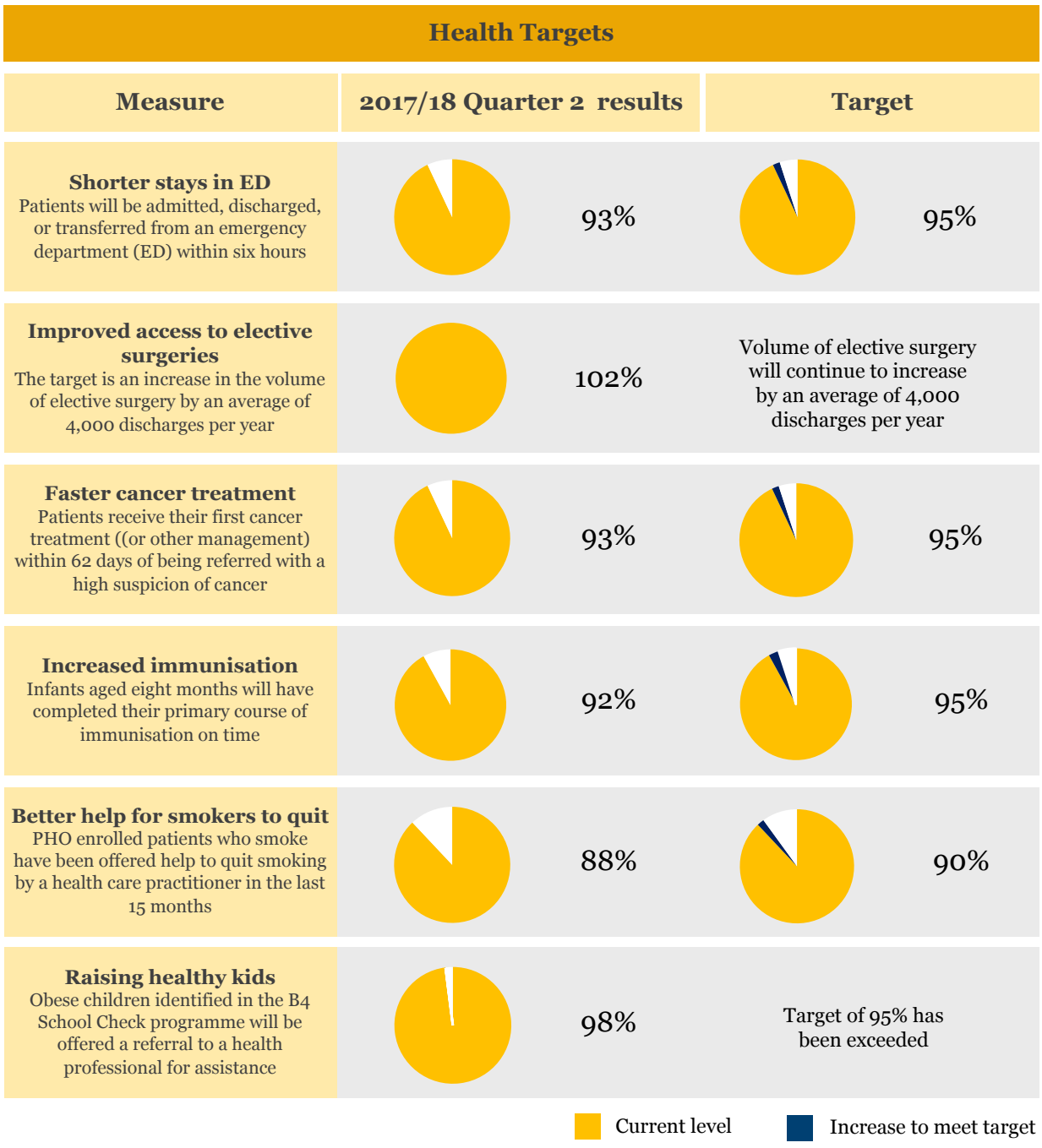


Source: HQSC A window on the quality of New Zealand's health care, 2018

Health targets

Health targets are a set of national performance measures that reflect significant public and government priorities. They provide a focus for action and measure how health outputs are improving for New Zealanders. Three of the six health targets for 2017/18 focused on patient access, and three on prevention.

Figure 27: Current performance against health targets



Source: Ministry of Health, 2018

Workforce satisfaction

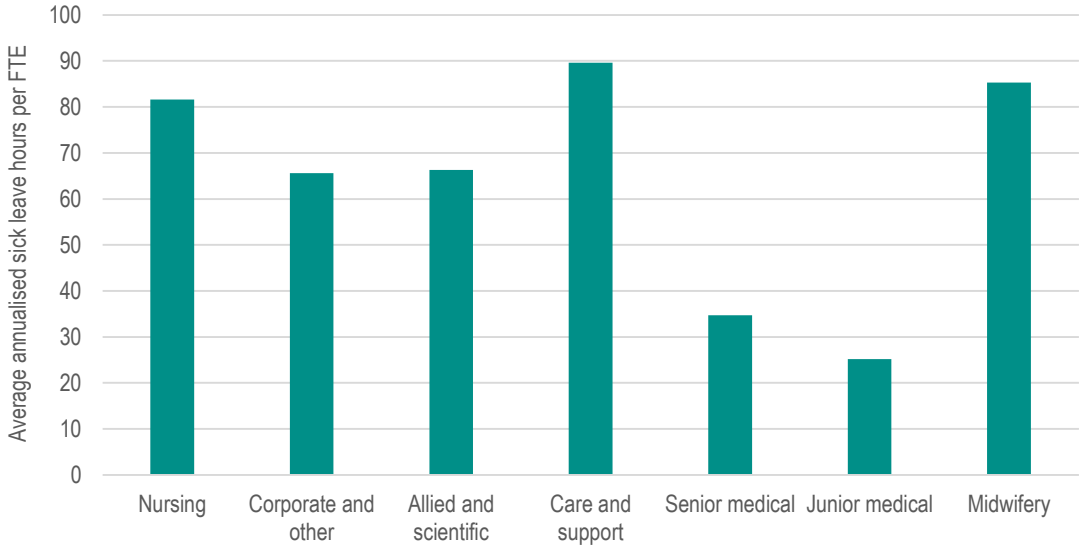
The health and wellbeing of the health sector workforce is a key factor in the delivery of safe, effective services. Research from the United Kingdom has shown associations between staff unhappiness and negative experiences and reduced patient satisfaction, reflecting the importance of provider satisfaction to the overall experience of health care (NHS England 2018).

While the size of New Zealand's health workforce continues to increase annually, health workforce unions membership surveys indicate concern about staff shortages, staff health and wellbeing, declining morale (New Zealand Nurses Organisation 2017; Association of Salaried Medical Specialists, 2017), and high levels of stress and depression (Dixon et al. 2016) within their workforce groups.

Sick leave patterns

Sick leave patterns are used as an indicator of the wellbeing of the workforce. In 2017, care and support workers took the most hours of sick leave, at 89.6 hours on average per FTE for the year, followed by midwives (85.3 hours per FTE) and nurses (81.6 hours per FTE). These levels of sick leave are comparable with those seen in the United Kingdom's National Health Services. Rates of sick leave taken by junior and senior medical staff in 2017 (25.2 hours and 34.7 hours respectively) are low compared with the rest of the workforce.

Figure 28: Average annualised sick leave hours per FTE by occupational group, 2017



Source: TAS 2017; District Health Board Employed Workforce Quarterly Report to 31 December 2017

Bullying

Rates of bullying are also an indicator of how the health workforce is functioning. In a survey conducted by the New Zealand Association of Salaried Medical Specialists in 2017, nearly half (49.9%) of all senior medical staff experienced workplace bullying to some degree. More than a third (37.2%) self-reported as being bullied, and more than two thirds (67.5%) reported witnessing bulling of colleagues (Association of Salaried Medical Specialists 2017). The prevalence of bullying amongst New Zealand's senior doctors is higher than comparable international health workforces (Bentley et al 2009).

Bentley et al (2009) found that the frequency of all measures of bullying is strongly associated with high workplace demands, and low peer and non-clinical managerial support.

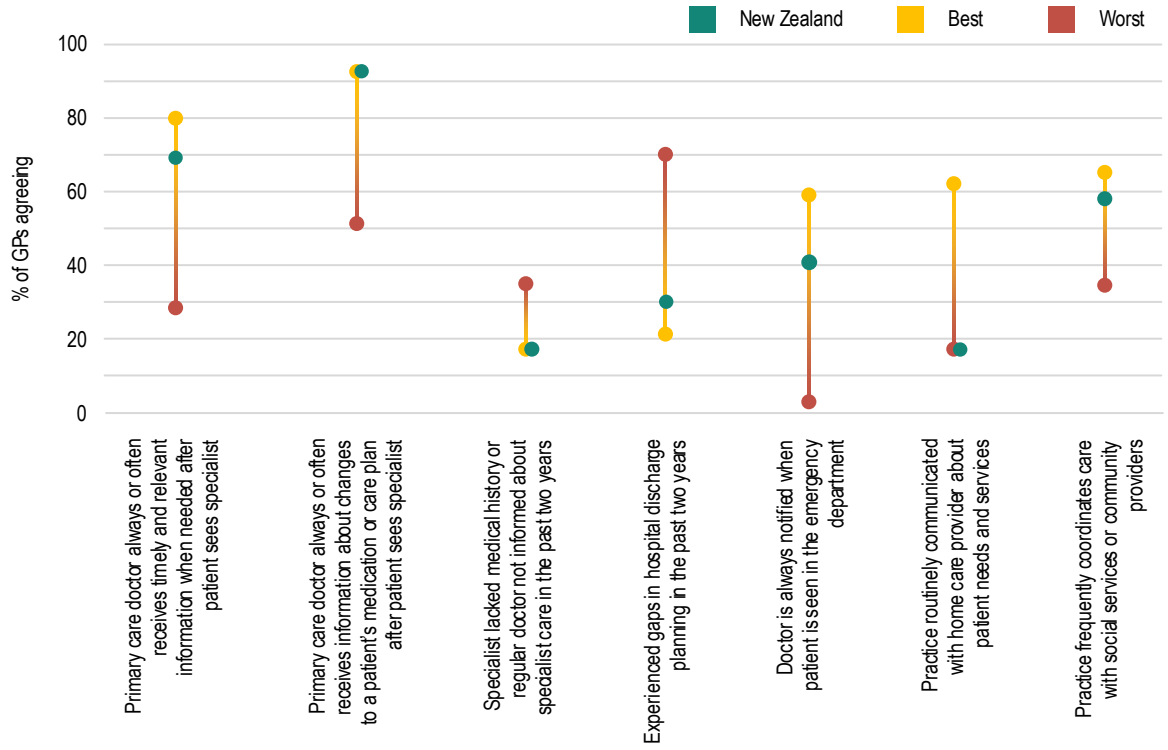
Effectiveness of care

A high-quality health system will provide the most effective treatment at the right time and in the right place, organised around the patient and their condition. This can be assessed by measuring how well different services are organised around the patient, and whether or not the right treatments are provided for individual conditions.

Care organised around the patient

In 2015, the Commonwealth Fund assessed the performance of 11 similar countries on a range of health system measures. New Zealand was identified as the top performer on average across the six indicators for 'coordinated care', but with room for improvement. New Zealand's position across the six indicators in comparison to the best and worst performers is shown in Figure 29.

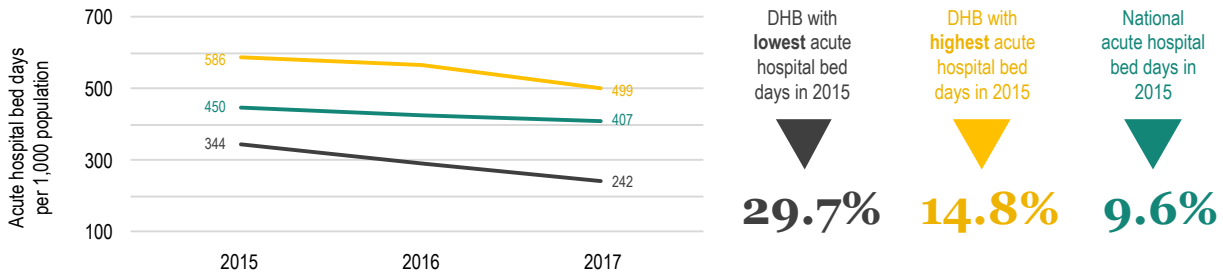
Figure 29: GP responses to queries about coordination of patient care across 11 countries, 2015



Source: *Mirror, Mirror 2017*, Commonwealth Fund

The consequences of better coordination should be reduced acute hospital bed days, emergencies avoided and people being able to leave hospital more quickly because follow-up care is in place. The System Level Measures Framework (described in Appendix 8) has incentivised the implementation of multiple quality improvement programmes around the country designed to reduce acute hospital bed days. Improvements are evident but inconsistent. The impact on acute hospital bed days is shown in Figure 30

Figure 30: Acute hospital bed days per 1,000 population, national and highest and lowest DHBs, 2015-2017



Source: HQSC 2018

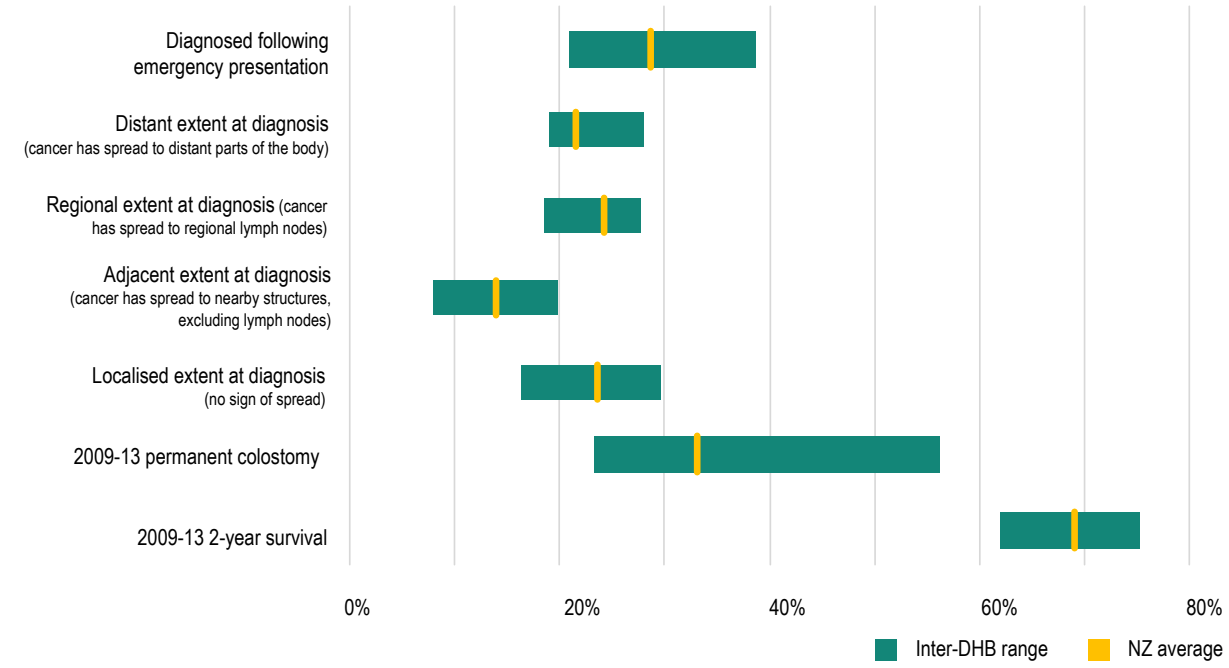
Providing the right treatment

Looking at specific services in detail allows us to measure how widely best practice in the treatment of diseases has been adopted in New Zealand. For this report, bowel cancer is used as an example.

As shown in Figure 31, there is large variation between DHBs including:

- when bowel cancer is identified
- where bowel cancer is identified
- outcomes for patients.

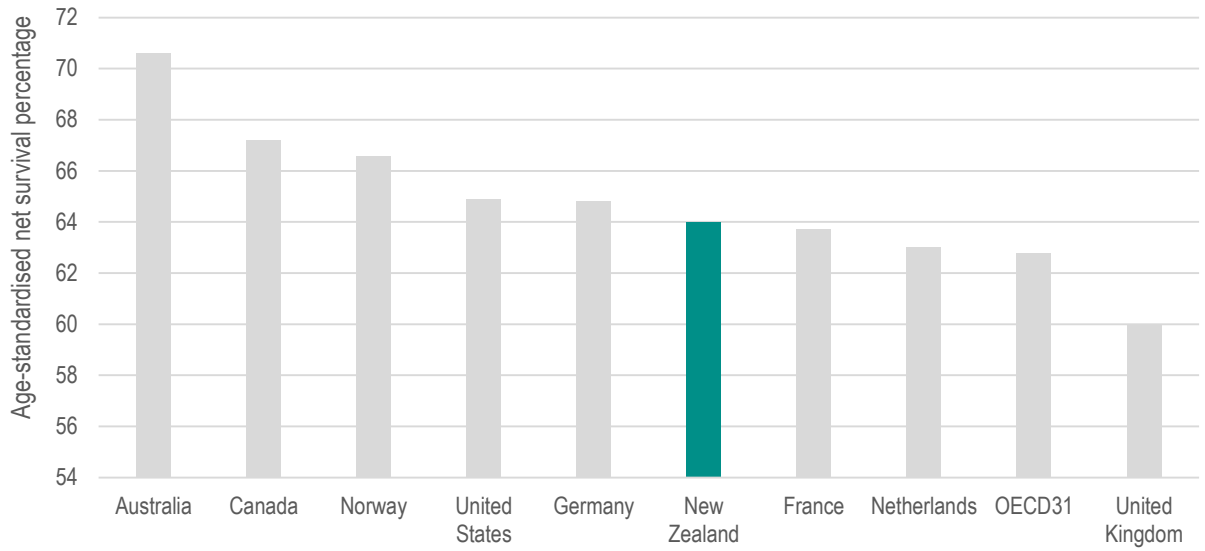
Figure 31: Inter-DHB ranges in the percentage of people with a diagnosis of bowel cancer by diagnosis location and extent and outcomes, 2009-13



Source: HQSC 2018

As shown in Figure 32, the five-year survival rate for colon cancer sits in the middle. However, New Zealand's rate is a long way behind that of Australia.

Figure 32: Colon cancer five-year net survival, OECD average and selected countries, 2010-2014



Source: OECD data 2017

Most conditions would show a similar pattern. In general, patients in New Zealand receive the right treatment, and New Zealand's record is broadly in line with similar countries. The degree of variation between regions in New Zealand, however, shows that the right treatment is not universal, and some services are less likely to provide the right care and get good outcomes. The HQSC has produced an Atlas of Healthcare Variation that covers around 20 different diseases and patient groups and shows a consistent pattern of variation that is not explained by patient needs and preferences. No DHB is uniformly providing the best care or worst care across all patient groups (Health Quality & Safety Commission 2018).

Safety of care

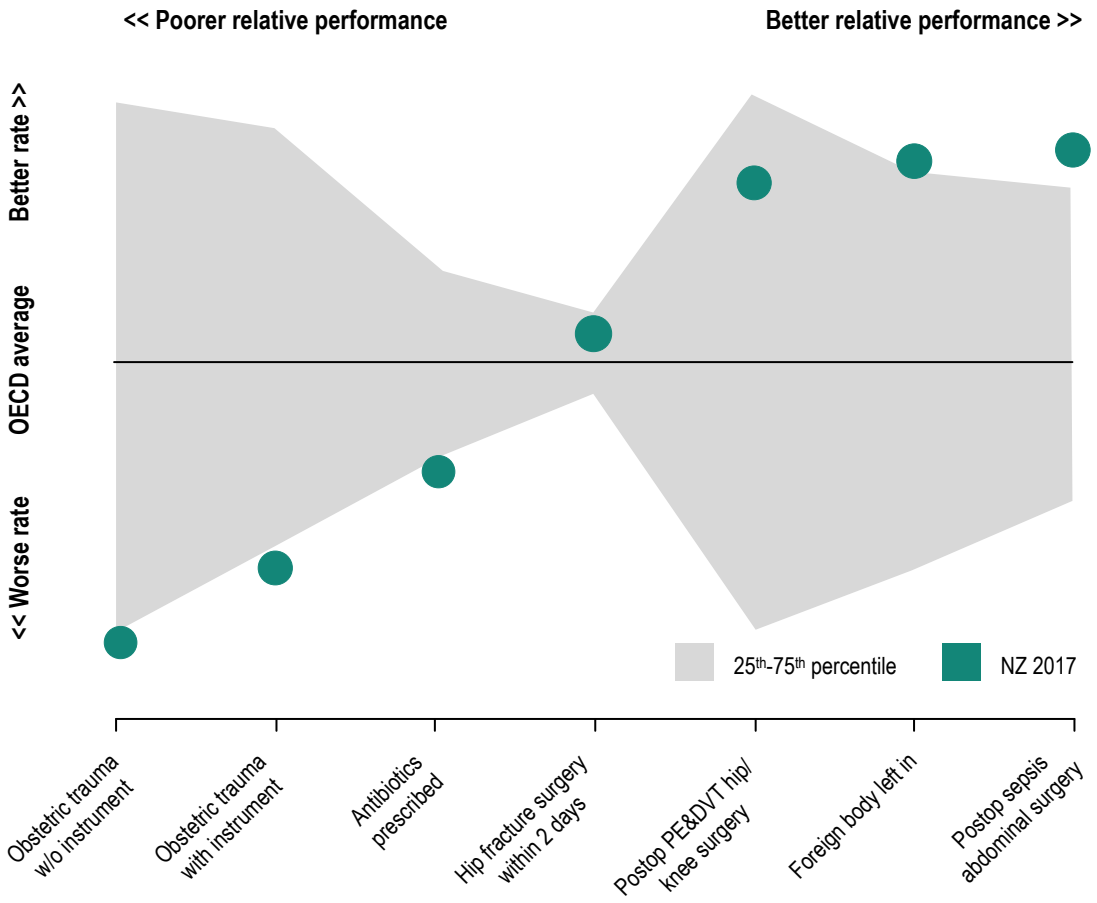
Patient safety practices are those that reduce the risk of adverse events related to exposure to medical care (Mitchell 2008). While some complications arising from health care are unavoidable or difficult to prevent, many are preventable through appropriate clinical practice.

HQSC monitors and reports on patient safety, supporting clinicians to follow best practice and to be leaders of quality and safety improvement. Due to quality improvement approaches championed by the HQSC in areas such as falls prevention, surgical site infections for hip and knee operations, deep vein thrombosis and pulmonary embolism, New Zealand tends to perform well in areas of specific harm (Health Quality & Safety Commission, 2018).

When a national quality improvement programme is in place, New Zealand generally sees consistent reductions in patient harm as the practice becomes embedded. For example, the reducing harm from falls programme, introduced in 2012, has seen a reduction in rates for falls in hospital resulting in a fractured hip, referred to as a fractured neck of femur (FNOF). FNOF reduced by 30-40% in 2014 (from a rate of 12 FNOFs per 100,000 over 2010-2014 to 8 FNOFs per 100,000 from 2014 onwards) and have stayed low (Jones et al 2016).

Internationally, New Zealand performs relatively well on a range of safety measures (Figure 33). In particular, complications as a result of invasive surgery tend to be well managed, with New Zealand having significantly lower rates of postop sepsis from abdominal surgery, foreign bodies being left in, postop pulmonary embolism and deep vein thrombosis after hip or knee surgery, and high than average rates of hip fracture surgery within 2 days of admission to hospital. However, New Zealand also has higher rates of obstetric trauma than other OECD countries.

Figure 33: New Zealand's relative performance, selected safety measures, OECD indicators 2017



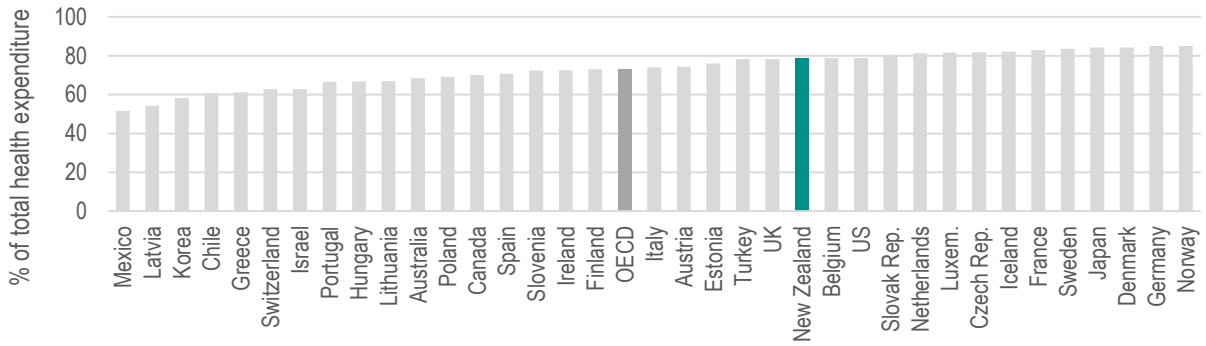
Source: OECD Health at a Glance 2017

System: getting the best value for public health system resources

Expenditure trends

For the 2018/2019 financial year, government expenditure on health is expected to be just over $18 billion, or 21% of total government-budgeted expenditure ($81.7 billion). As shown in Figure 34, this is above the OECD average.

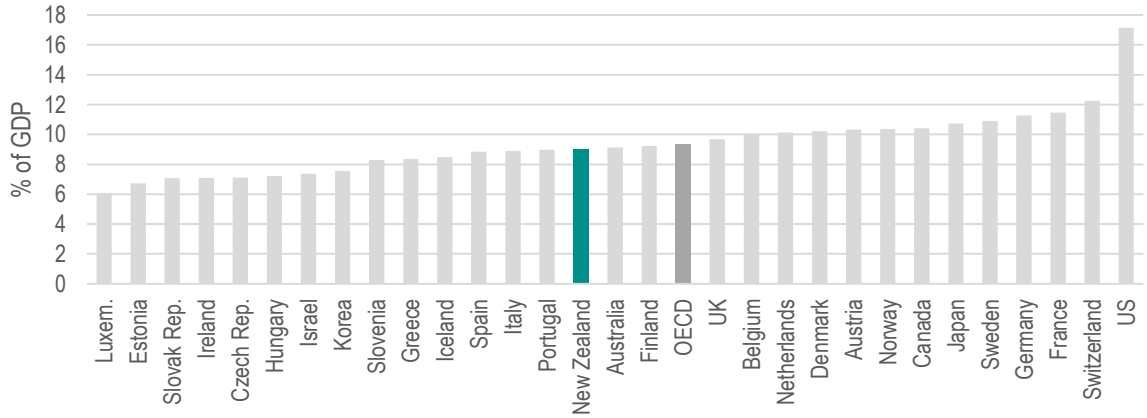
Figure 34: Public sector expenditure on health, as percentage of total health expenditure, 2017



Source: OECD data 2017

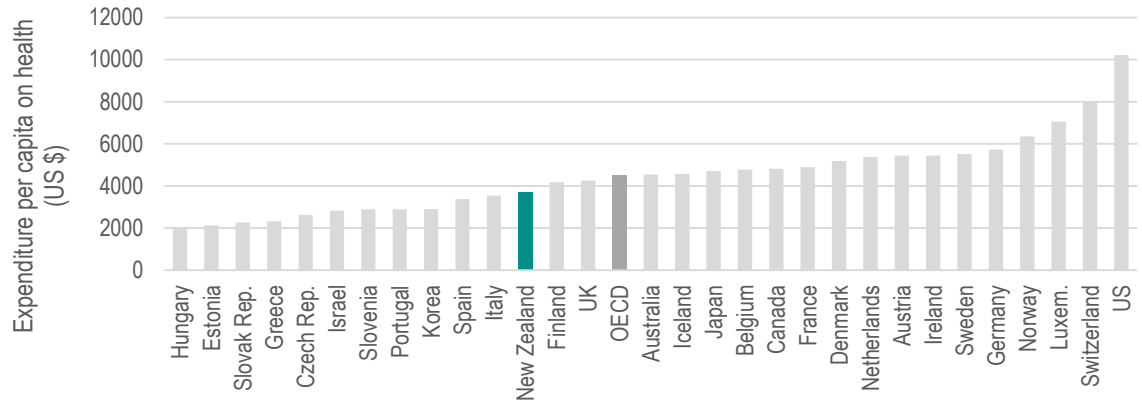
New Zealand has consistently spent less, in total, on health care than most OECD countries. Compared with 30 other high-income countries, New Zealand spends a smaller share of national income on health care, and has a lower per-head expenditure (refer to Figure 35 and Figure 36). For comparison, matching the Australian share of national income spent on health would add US$700 million to New Zealand's health expenditure (Health Quality & Safety Commission, 2018).

Figure 35: Expenditure on health care as percentage of GDP, 2017



Source: OECD data 2017

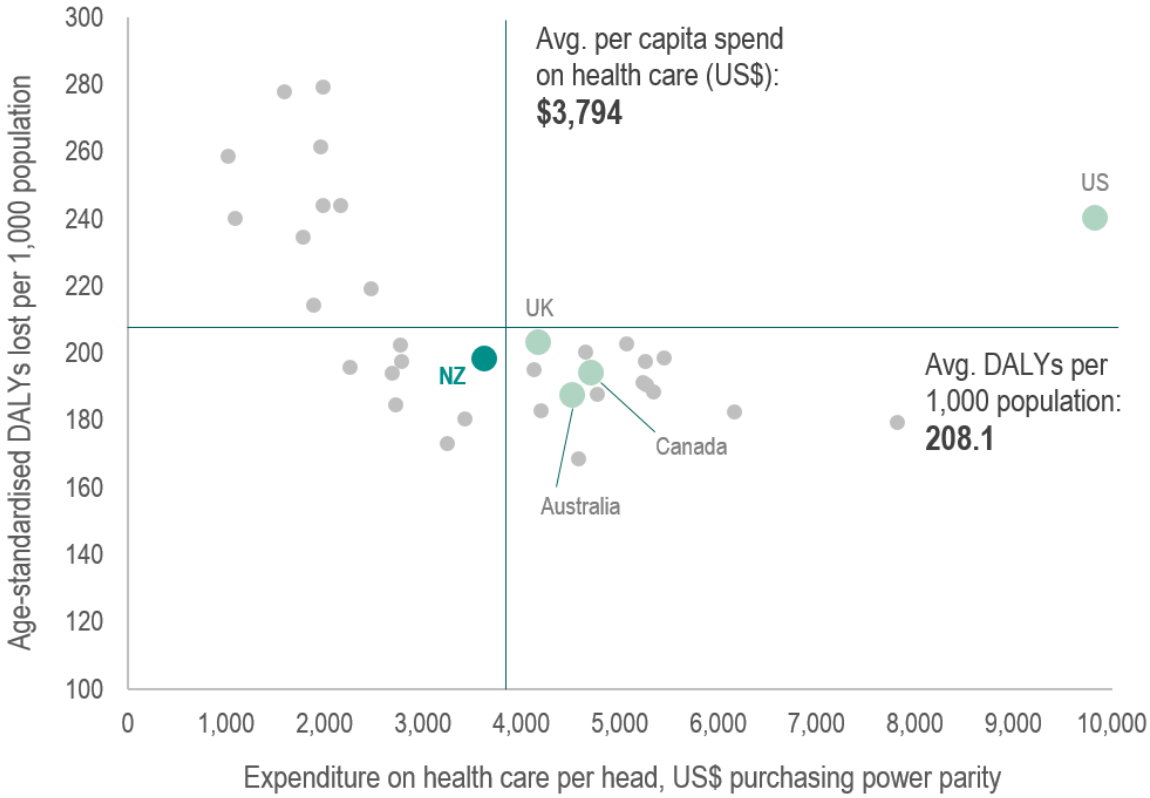
Figure 36: Expenditure on health care per head, US$ purchasing power parity (PPP), by OECD country, 2017



Source: OECD data 2017

New Zealand remains in the low-cost, low-DALY quadrant of 30 high-income countries shown in Figure 37. This may be interpreted in two ways: either New Zealand is performing as well as similar nations despite spending less money, or it is failing to achieve better health outcomes by not spending more on its health services (Health Quality & Safety Commission 2018).

Figure 37: Expenditure on health care per head, US$ purchasing power parity (PPP), 2016, versus age-standardised DALYs lost per 1,000 population, 2016, high-income countries



Source: OECD and University of Washington, 2016

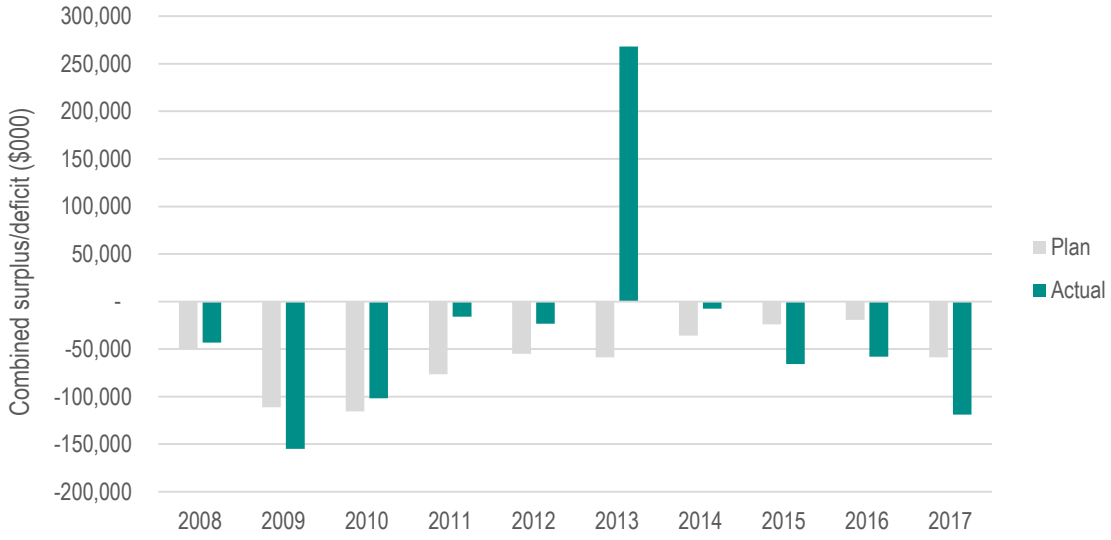
In line with global trends, health expenditure in New Zealand is expected to continue to grow. Factors driving growth in long-term health spending include population change (growth and ageing), income and technology driven demand, and rising unit costs. Historically, population ageing has made a much smaller contribution to health expenditure growth in New Zealand than have 'non-demographic' factors such as increases in input prices and changes in medical technology. Population change is likely to have a greater impact on health expenditure growth

from the 2020s, but non-demographic factors will continue to be the major driver of increases in health expenditure (Bryant, Cheung, McHugh, & Sonerson 2005).

DHB financial performance and productivity

Between 2009 and 2014 there was a steady increase in overall financial performance for the health and disability system, with DHBs achieving a better deficit position than planned. However, since 2015, financial performance has deteriorated. Note that the outlier surplus in 2013 is due to one-off contributions to Canterbury DHB for costs associated with the rebuild.

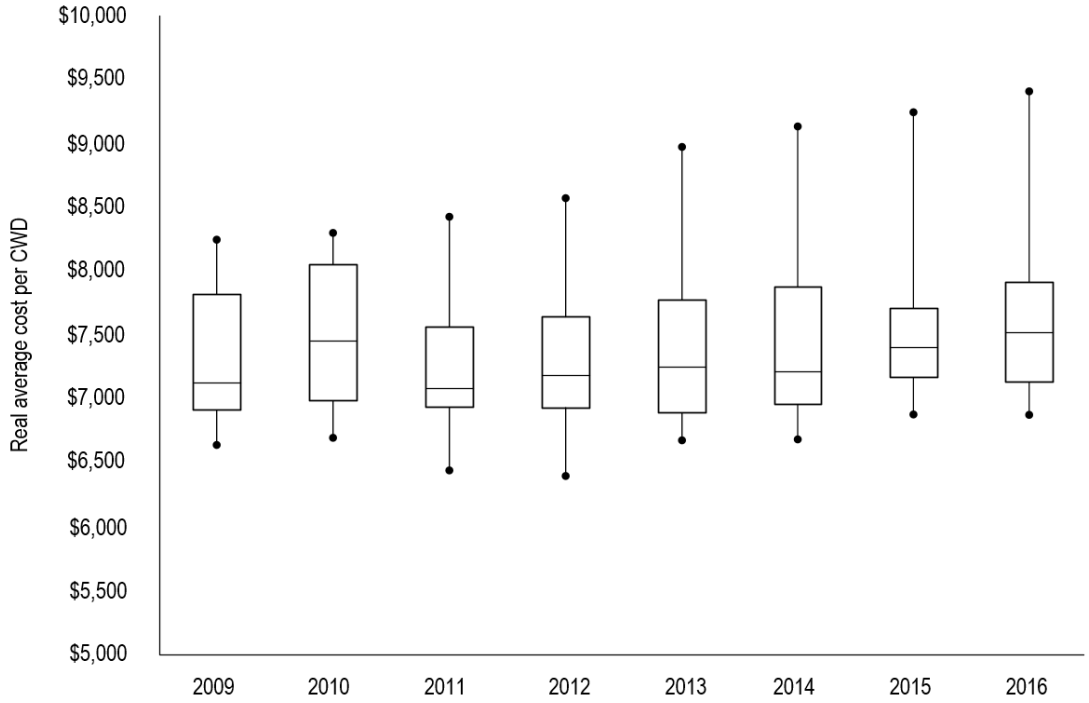
Figure 38: Combined DHB surplus/deficit, actual versus plan, 2008–2017



Source: Ministry of Health 2017

In spite of variation in overall financial performance, DHB productivity has remained relatively constant. Productivity measures such as trends in case weighted discharges (CWDs) indicate whether increased spending improves services to patients. A 2017 Treasury report assessing the financial performance of DHBs over the 2009-2016 period found that DHB hospital productivity has remained relatively constant, with activity (CWDs) increasing in line with rising funding. CWDs, which assign greater weight to more complex procedures, provide a standardised measure of DHB hospital inpatient activity that can be compared against the total cost of production. Over the 2009-2016 period there was a 19% real increase in the cost of production which was matched by an 18% increase in case weighted discharges. However, there was a large degree of variation in productivity between DHBs, with the highest cost-per-CWD about 25% above the median in 2016 (The Treasury 2017).

Figure 39: Distribution of real average cost per CWD across DHBs



Source: The Treasury 2017

Note: The median DHB's performance is shown by the middle line within the box. The box represents the distribution of the nine middle performing DHBs and the bars the distribution of the five top- and five bottom-performing DHBs.

Capital

To enable the delivery of good quality service to New Zealanders, the health and disability system must maintain capital assets that are of sufficient standard and are fit for purpose.

DHBs collectively manage around $6.5 billion worth of property, plant and equipment, the majority of which are hospitals. These have a gross floor area in excess of 2 million square meters, comprising hundreds of individual buildings.

Decision-making for DHB investments

DHB boards are able to approve capital investments (funded from baseline) if the investments are less than $10 million in value. However, in situations where investments exceed $10 million, joint Ministers of Health and Finance, under delegation from Cabinet, approve business cases for new Crown funding.

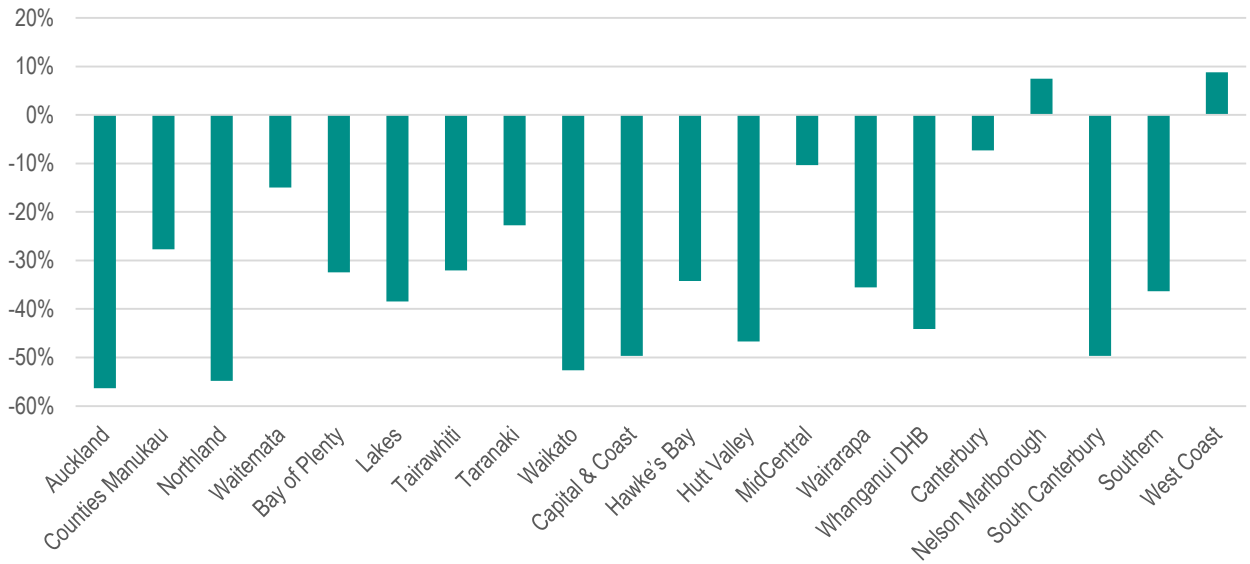
- Advice is provided from the Ministry of Health, the Treasury, and the independent Capital Investment Committee.
- New Crown funding is allocated from non-departmental capital appropriations – the Health Capital Envelope – for which funding is sought annually through the Budget process.
- If the amount of new Crown funding required for a major investment exceeds the Health Capital Envelope (e.g. Dunedin hospital), approval from Cabinet must be sought.

Decision-making for Ministry of Health investments

Ministry of Health investments are primarily in information technology that provide national level data infrastructure and support national services. Major projects require Cabinet approval and funding. The Treasury and other Central Agencies provide advice to Ministers and Cabinet on the quality of investment proposals and monitor the progress of major investments.

DHB capital expenditure as at April 2018 was $176 million below budgeted levels with actual expenditure of $296 million (against budgeted expenditure of $472 million) (Ministry of Health 2018). Historically, the sector has tended to be below budgeted capital expenditure levels due to delays in the commencement of projects. This is reinforced in Figure 40, showing the variance in capital expenditure from plan for the 2016/17 financial year.

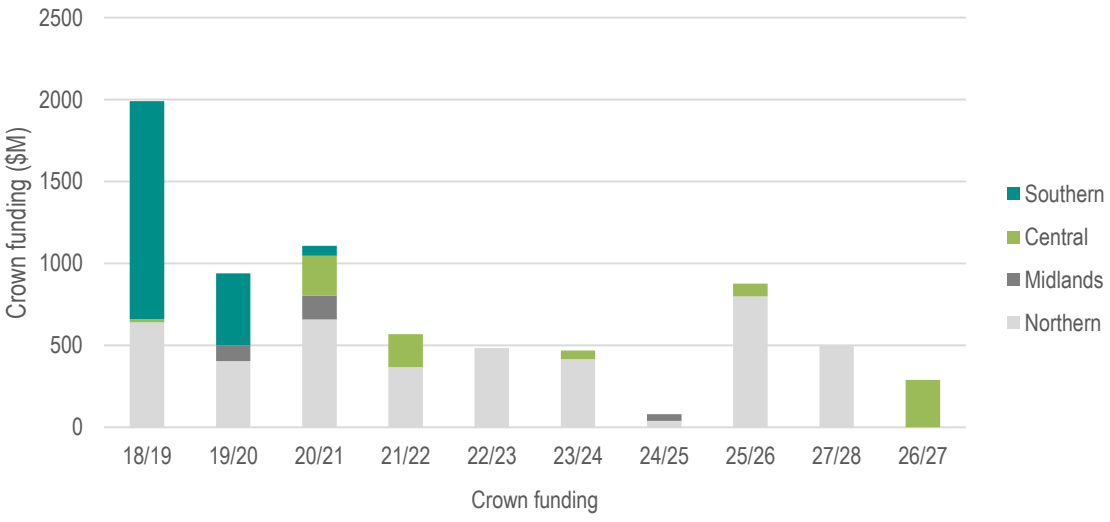
Figure 40: Capital expenditure (Capex) variance from plan, 2016/17



Source: Ministry of Health

Figure 41 shows capital intentions over the next ten years that require Crown funding (as signalled by DHBs). The levels of investment required would exceed available funding in the Health Capital Envelope, and associated resources (for business case development, design and construction).

Figure 41: Yearly profile of projects signalled as requiring Crown funding



Source: Ministry of Health

Workforce

The New Zealand health workforce plays a critical role in improving access to care, addressing health inequalities, managing cost pressures and improving system performance. The health workforce comprises around 150,000 people, of which roughly half are employed by DHBs. Some professions – such as general practitioners, chiropractors, osteopaths, psychotherapists and dentists – work mostly in private practice.

The regulated workforce

The *Health Practitioners Competence Assurance Act 2003* regulates doctors, dentists, nurses, midwives and a number of allied health (including allied health science and technical) professions, which are together referred to as the regulated workforce. Practitioners must be registered with their relevant regulatory body (listed in Table 9). These bodies issue annual practising certificates, determine appropriate qualifications, consider complaints and take disciplinary action. Approximately 103,000 health professionals are regulated under the *Health Practitioners Competence Assurance Act 2003*.

The non-regulated (kaiāwhina) workforce

A wide and varied range of non-regulated workers are collectively referred to as kaiāwhina. Kaiāwhina are monitored and regulated through industry standards, health and safety legislation and employment agreements. They include people working:

- in health-related corporate and administrative positions
- in drug and alcohol addiction support roles
- as aged or disabled carers in residential facilities
- as support workers for older, disabled or injured people living in their own homes.

Table 35 sets out the size of each respective health workforce. The size, composition and distribution of the kaiāwhina workforce, the non-regulated allied health workforce (such as counsellors and audiologists), paramedics, medical technicians and health and welfare support workforces are currently much more difficult to determine due to unavailability of data.

Table 35: Headcount for professional areas of the health workforce

Professional area	Headcount
Nursing	55,289
Medical	15,761
Physiotherapy	4,906
Pharmacy	3,577
Medical laboratory science	3,323
Midwifery	3,023
Medical radiation technology	3,002
Psychology	2,640
Dentistry and dental therapy, hygiene or technology	4,458

Professional area	Headcount
Occupational therapy	2,294
Optometry and optical dispensing	856
Anaesthetic technology	708
Dietetics	660
Chiropractic	580
Psychotherapy	512
Osteopathy	432
Podiatry	399
Care and support workforce	~55,000

Source: These numbers, other than those for care and support workers, are based on the relevant responsible authority's workforce report for 2017. Care and support workforce numbers are an estimate from the Ministry of Health Regulatory Impact Statement for the Negotiated Settlement for Care and Support Workers (2017)

While there is no optimal doctor/nurse ratio internationally, New Zealand has slightly less doctors and nurses per 1,000 population than the OECD average (OECD Data 2018), as shown in Figure 42 and Figure 43 .

Figure 42: Number of doctors per 1,000 people (2017 data or latest available)

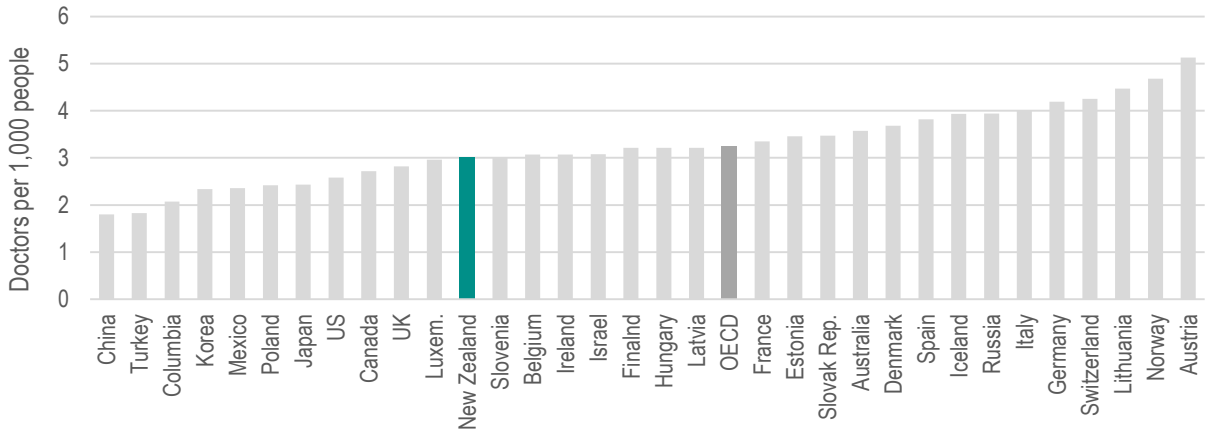
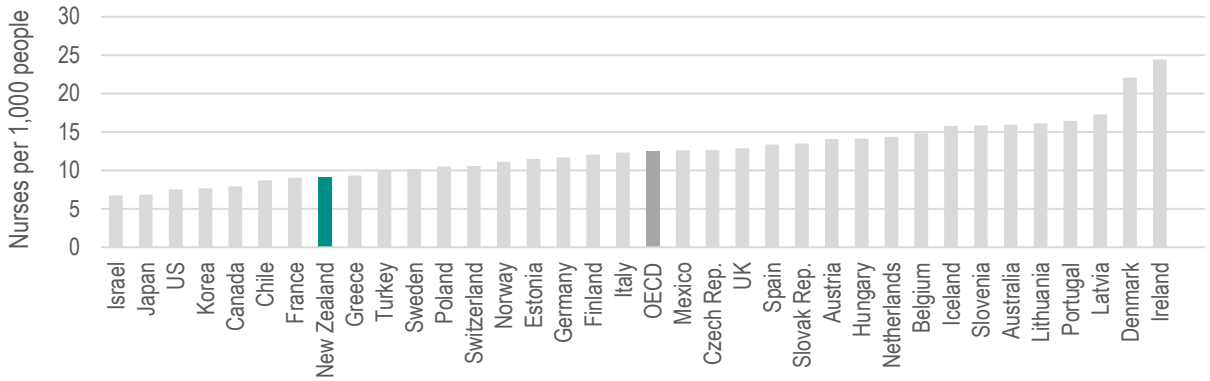


Figure 43: Number of nurses per 1,000 people (2017 data or latest available)



Source: OECD data

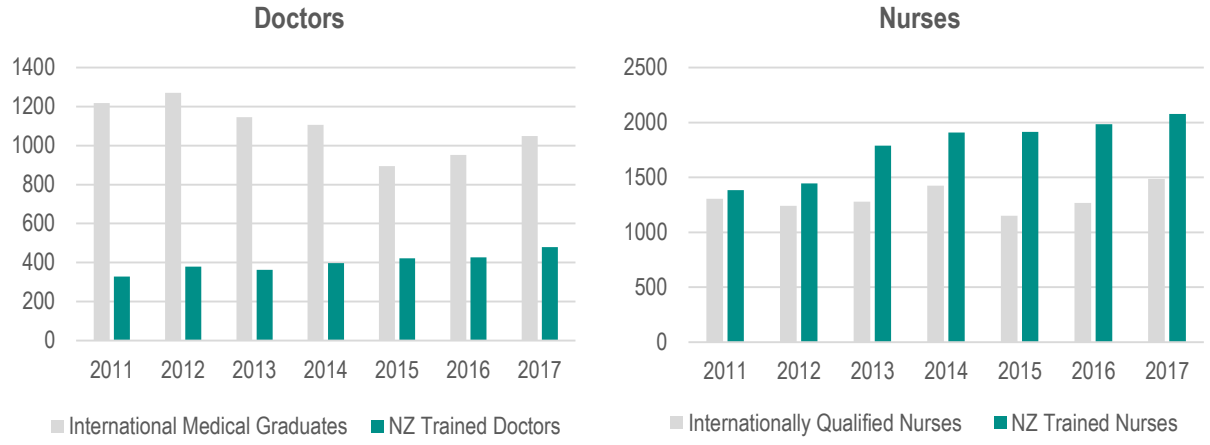
Characteristics of the workforce

International Workforce

International or overseas-qualified doctors (International Medical Graduates) and nurses (Internationally Qualified Nurses) make up a significant portion of the New Zealand health workforce. They are an important and valued part of the health system, bringing knowledge, experience and cultural diversity. OECD data shows that New Zealand's reliance on internationally trained doctors and nurses is high; 42.4% of doctors in NZ are overseas trained (second highest in OECD), and 26% of nurses are overseas trained (highest in OECD) (OECD 2018).

The number of New Zealand trained doctors and nurses registering has steadily increased over the last six years by on average 7% each year. Overseas trained doctors and nurses registering in New Zealand has fluctuated over time, but is showing signs of consistent increase since 2015. As can be seen by Figure 44, registrations for NZ trained nurses exceeds internationally qualified nurses. However, there is at least two times as many registrations for international medical graduates in any given year than registrations for New Zealand trained doctors.

Figure 44: Registrations for International Medical Graduates (overseas-trained doctors) and Internationally Qualified Nurses versus New Zealand graduates, 2011-2017



Source: Data on doctor registrations from 2011-2017 Medical Council of New Zealand annual reports. Data on nurse registrations from 2011-2017 New Zealand Nursing Council annual reports.

Some care settings rely more heavily on internationally-trained health professionals than others. For example, in the aged residential care sector, about 44 percent of nurses are internationally qualified compared with 26 percent for all other settings (Health Workforce New Zealand 2017).

Ethnic diversity

Ethnic representation is an ongoing issue for the New Zealand workforce. Māori and Pacific practitioners are significantly under-represented, particularly in the medical, allied health and nursing professions.

Māori comprise 15.3% of the population (Statistics NZ), but in spite of increasing numbers of Māori entering health professions, only 3% of doctors, 7% of nurses, 2% of pharmacists and 10% of midwives are Māori (Ministry of Health, 2018).

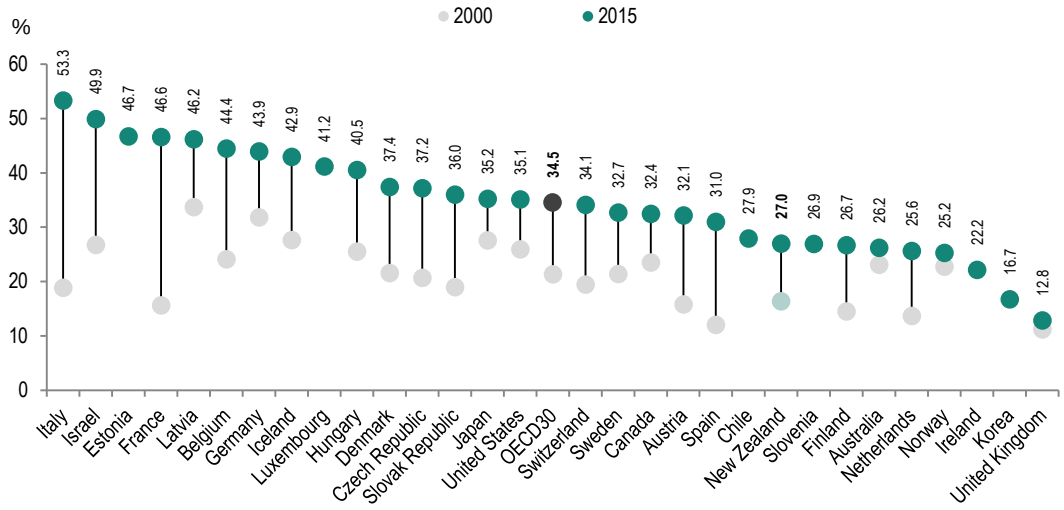
Similarly, Pacific people comprise 7.4% (Statistics NZ) of the population, yet only 2% of doctors (Medical Council of New Zealand, 2016) and 4% of nurses (The Nursing Council of New Zealand 2018) are of Pacific descent.

Ageing

The medical workforce is also ageing. A little over 40.1% of doctors were aged 50 or over in 2015, up from 35.3% in 2009. Six years ago the largest group of doctors was aged between 45 and 49. Since 2011 the largest group has been 50-54 year olds (Medical Council of New Zealand, 2016).

However, an ageing medical workforce is an international trend (see Figure 45), and New Zealand is better placed than many other OECD countries in terms of the number of doctors in the workforce aged 55 years and over.

Figure 45: Share of doctors aged 55 years or over, 2000 and 2015 (or nearest year)



Source: OECD data 2018

As the health workforce continues to age, some specialties and geographic areas will experience skills shortages. Sufficient numbers of new entrants will be required to ensure sustainability of the workforce. This also means addressing high drop-out rates for training in some professions, such as midwifery.

Recruitment and attrition of workforce

Virtually all OECD countries exercise some form of control over medical school intakes, often by limiting the number of available training places. Maintaining or increasing the number of doctors requires either investment in training new doctors or recruiting trained physicians from abroad. As it takes about ten years to train a doctor, any current shortages can be met only by recruiting qualified doctors from abroad, unless there are unemployed doctors at home. (OECD Data 2018).

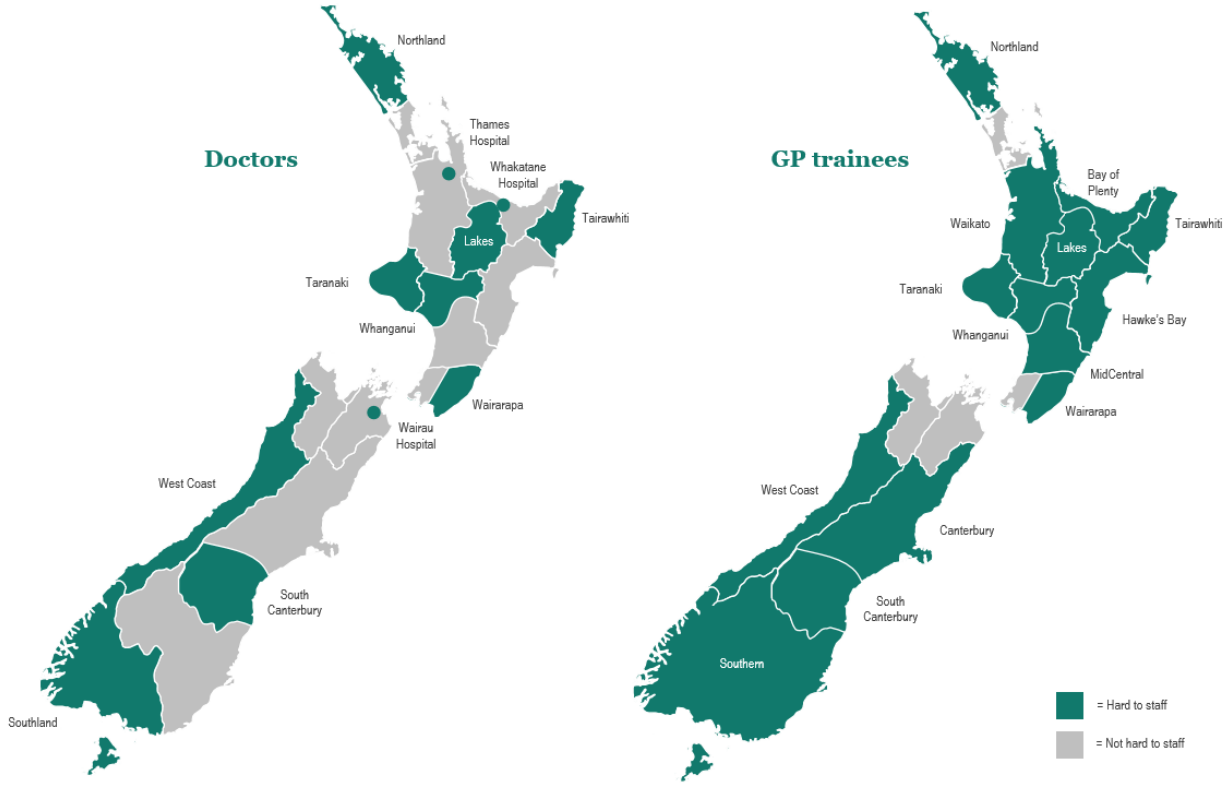
New Zealand currently funds 539 Medical training places. However, in 2016/17 a total of 245 New Zealand Medical Graduates in their Resident Medical Officer period exited the medical workforce (Ministry of Health 2018).

Health professional attrition is common in New Zealand with serious impacts on the sustainability and productivity of the health workforce. Approximately 28% of international medical graduates and 12% of New Zealand medical graduates no longer practice in New Zealand after five years (Ministry of Health, 2018). This represents a loss of prior Crown investment in training (for the New Zealand trained medical graduates) but also places greater pressure on other practitioners to manage workloads. As stated earlier, workload is often cited as a major factor impacting upon health employee satisfaction and retention (Health Quality & Safety Commission 2018).

Distribution of workforce

Geographic maldistribution of the workforce is a major challenge, particularly for primary care and rural and provincial hospitals, which can struggle to recruit and retain the specialists they need. In general, job applicants and trainees tend to favour large cities, particularly Auckland, as shown in Figure 46 (Health Workforce New Zealand 2015).

Figure 46: Hard -to-staff communities for doctors (left) and GP trainees (right) on the 2015 Voluntary Bonding Scheme



Source: Health of the Health Workforce 2015

The distribution of the workforce between specialties is also challenging. Vulnerable workforces include:

- Most surgical-related specialties (anaesthesia, orthopaedic surgery, ophthalmology, otorhinolaryngology, plastic surgery, vascular surgery, urology, cardiothoracic surgery)
- Midwifery
- Sonography and radiology
- Palliative care
- Dermatology
- Radiation oncology
- Public health
- Mental health services and psychiatry
- Pathology (Ministry of Health, 2018).

With the introduction of new roles, technologies and changing models of care, nearly all medical specialties are dealing with adjustments to the scope of their work. In addition, the government's approach to dealing with changing disease patterns (such as increased chronic diseases, obesity and diabetes, mental health disorders, and age-related diseases) affects the need for particular types of specialists (Health Workforce New Zealand 2015).

The Voluntary Bonding Scheme (run by Health Workforce New Zealand) provides payments to eligible health professionals who agree to work in hard-to staff professions, communities and/or specialities. Health Workforce New Zealand makes at least 350 places available on the scheme each year across the eligible health professions (Ministry of Health 2018).

The Future Environment

The growth we have come to take for granted was never going to be infinite and…as population ageing unfolds it will be necessary to revisit and revise almost every rule, policy and practice related to population – which means just about everything. Failing to understand these unfolding dynamics and seeking to hold back the tide will be counterproductive. – Natalie Jackson, 2016

Changing demographics

New Zealand faces a demographic shift – this is marked by differential growth attributable to natural increase and hypermobility as well as age structure changes (Jackson 2016).

The total population continues to grow

The New Zealand population continues to increase, with average growth per year of 1.4 percent between 1948 and 2016. Over the last 18 years the population has grown by over 1 million people (3,855,900 in March 2000 to 4,871,300 in March 2018). By 2028 the population is projected to be over 5 million (forecast to be 5,389,700) (Statistics New Zealand 2016). Population projections through to 2068 are shown in Table 36.

Table 36: National population projections, by age and sex, 2016(base)-2068

Year	National population projections, 50th percentile
2016	4,693,000
2018	4,864,600
2023	5,157,900
2028	5,389,700
2033	5,595,000
2038	5,769,800
2043	5,923,100
2048	6,060,500
2053	6,184,600
2058	6,299,600
2063	6,409,400
2068	6,515,800

Source: Statistics New Zealand

New Zealand differs from many other ageing populations in that the population has grown at just over 1% per annum (Jackson 2016). Further birth rates/fertility rates remain above or close to replacement level, unlike other countries that are below replacement (Jackson 2016). Current projections suggest around a 1 in 4 chance that the population will be declining by the 2060s (Statistics New Zealand 2016).

Growth in New Zealand has been attributable to both a natural increase in population (more births than deaths) and migration. Natural increase has accounted for 58% of growth over the last two decades (Jackson 2016). Even a trebling of immigration rates (which are currently around 1.9%) would have little impact on structural ageing (Spoonley 2016). The impact of immigration varies across the country, with 40% of Auckland growth attributable to immigration (Spoonley 2016). This includes New Zealand citizens returning home, as well as key origin countries like India, China, Philippines and the United Kingdom (Spoonley 2016).

The number of older people will continue to increase

Under the Statistics New Zealand medium variant projections, in 2028, the proportion of over 65 years and over 85 years are projected to be around 18.2% of the population (Statistics New Zealand, 2016). In 2043 numbers ages 65 years and over are forecast to be greater in 2043 than in 2013 in all Territorial Authorities (TA) of New Zealand (Statistics New Zealand 2017).

The age structure will continue to change

Looking at national averages, New Zealand has a younger age structure than many of its OECD counterparts. Significant changes are likely to occur to the age structure of the New Zealand population. Structural ageing is driven by low fertility rates (people having fewer children), and people living longer (greater number of older people). However, fertility rates are not yet particularly low in New Zealand (Jackson & Cameron 2017).

At a national level structural ageing will continue due to the impact of the boomer cohorts moving into older age groups (Jackson & Cameron 2017). Baby boomers born in 1946 turned 65 in 2011, while those born in 1964 turn 65 in 2029.

The median age of the population increased from 25.6 years in 1970 to 37.1 in 2016, and is likely to hit 30 in the early 2030s (Statistics New Zealand, 2016). At the sub-national level, structural ageing is driven by age-selective migration (Jackson & Cameron 2017).

Age-selective migration:

- removes young people, particularly those of reproductive age, from the majority of TA and township populations (rural de-population)
- adds older retiree-age migrants (Jackson & Cameron 2017).

More areas will experience population decline

By world standards New Zealand is highly urbanised with 86% of our population residing in urban areas, and 14% in rural areas (Statistics New Zealand 2017a). This will continue to be the case with more of the population moving to urban centres like Auckland, Wellington and Christchurch (Spoonley 2016). The latest projections for Auckland indicate a population growing from 1.6 million in 2016 to 1.9–2.1 million in 2028 (Statistics New Zealand 2017).

Table 37: Population projections for area unit (Urban and Rural) 2013 to 2043

Area	2013	2018	2038	2043	Change
Urban	86%	86%	87%	87%	▲
Rural	14%	14%	13%	13%	▼

Source: Statistics New Zealand 2017a

Towns with high proportions of people over 65 are increasing. For example instead of the 10-15% of the population as one might expect around 25-30% of the population in Thames are over 65 (Spoonley 2016). The median age of many towns are increasing including Tauranga, Whangarei, Lower Hutt, New Plymouth, Hastings, Napier and Rotorua (Spoonley 2016). Some areas are attractive locations for retirement, while the other component of structural ageing relates to migration of young people.

For those areas of New Zealand where there are more over 65s than children, there will be a shift from natural increase (more births than deaths) to natural decline (more deaths than births) (Jackson & Cameron 2017). For example the three TAs with the highest elderly:child ratios – Thames-Coromandel, Kapiti Coast and Horowhenua, are currently experiencing sustained natural decrease and are unlikely to return to natural growth in the future (Jackson & Cameron 2017). The number of TAs that are likely to experience natural decline is likely to increase slowly to around 2028 (11%, n = 11) and then accelerate to around 64% of TAs (N = 43) by 2043 (Jackson & Cameron 2017).

The population will be more diverse

The population will be more ethnically diverse with proportions of Maori, Pacific and Asian populations continuing to grow more rapidly than NZ European/Other population. This is attributable to both high levels of natural increase (more births than deaths) and migration for other ethnic groups. Projections for 2028 are shown in Table 38.

Table 38: Population projections for ethnicity 2018 and 2028

Ethnicity	Percentage in 2013	Projected percentage in 2018	Projected percentage in 2028	Change
European or other (including New Zealand European)	75%	72%	66%	▼
Māori	16%	16%	18%	▲
Asian	12%	15%	22%	▲
Pacific	8%	8%	10%	▲
Middle Eastern/Latin American/African	1%	2%	3%	▲

Source: Statistics New Zealand 2017b

Population change will continue to impact the labour market

Work force ageing is a factor for many industries and "most professional occupations already have substantially fewer people employed at entry age (15-29 years) than those in the 'retirement zone' (55+ years)" (Jackson 2016). This is called the entry: exit ratio which in 2013 was 9:10 (that is 9 people aged 15-29 for every 10 at 55+), compared to 27:10 in 1996 (Jackson 2016).

Hospitals and nursing homes for example have a ratio of 5:10 in 2013. Not only will technological and industrial change see the decline/demise of many jobs, but there will be increased demand in some areas for which there will not be capacity to physically or fiscally meet this with the supply (Jackson 2016). The community care services workforce has doubled since 1996 from seventeenth largest to sixth largest in 2013, other health services have risen from twenty-seventh to sixth, and medical and dental services have risen from thirty-seventh to twenty-seventh in the same time period (Jackson 2016).

Immigration has brought in skilled labour with a particular boost for the dairy sector, elder care, and IT, as well as hospitality and retail (Spoonley 2016). This increased in overseas skilled labour serves to stimulate economic activity and growth (Spoonley 2016). However, given than the countries that our migrants come from are also ageing, competition for migrants will (Jackson 2016).

However, projected workforce shortages are unlikely to be resolved by major increases in labour force participation at older ages – NZ already has the second-highest employment rates for 50-64 and fourth-highest at 65-69 years – both having trebled since 1996 (Jackson 2016). Outside of Auckland, New Zealand faces a demographically tight labour market that will persist until mid-2020s when the echo cohort (baby boomers grandchildren) will enter the workforce (Jackson 2016).

Changing burden of disease

Patterns of disease across the New Zealand population and worldwide have been shifting. Broadly this has seen a shift with lower incidence of communicable diseases, and an increase in non-communicable diseases and long-term conditions (LTCs) like diabetes and heart disease. The global burden of disease study run by the Institute for Health Metrics and Evaluation (IHME) shows the change in what causes the most premature death in New Zealand (shown in Table 39) and the most disability (shown in Table 40).

Table 39: Leading causes of premature death in New Zealand (2005 and 2016)

2005 Ranking		2016 Ranking	
1	Ischemic heart disease	1	Ischemic heart disease
2	Lung cancer	2	Lung cancer
3	Cerebrovascular disease	3	Cerebrovascular disease
4	Self-harm	4	Colorectal cancer
5	COPD	5	COPD
6	Colorectal cancer	6	Self-harm
7	Road injuries	7	Alzheimer Disease
8	Alzheimer Disease	8	Breast Cancer
9	Breast Cancer	9	Road injuries
10	Congenital defects	10	Chronic kidney disease
13	Chronic kidney disease	11	Congenital defects

Source: IHME 2017

Table 40: Top 10 causes of years lived with disability (YLDs) - 2005 and 2016 and percentage change

2005 Ranking		2016 Ranking		Percentage Change 2005-2016
1	Low back & neck pain	1	Low back & neck pain	15.2%
2	Skin diseases	2	Skin diseases	10.5%
3	Depressive disorders	3	Sense organ diseases	24.6%
4	Migraine	4	Depressive disorders	8.7%
5	Sense organ diseases	5	Migraine	7.3%
6	Anxiety disorders	6	Anxiety disorders	2.9%
7	Asthma	7	Other musculoskeletal	26.4%

2005 Ranking		2016 Ranking		Percentage Change 2005-2016
8	Other musculoskeletal	8	Asthma	-0.2%
9	Oral disorders	9	Oral disorders	23.8%
10	Falls	10	Falls	25.9%

Source: IHME 2017

WHO data on the burden of disease (Table 41) shows a shift between 2015 and 2030 with a decrease in road injury and lower respiratory infections and an increase in cancer and non-communicable diseases like Diabetes and Heart Disease. Leading causes of death will continue to be vascular – heart attacks and strokes.

Table 41: Western Pacific Region burden of disease projections for 2015 and 2030

2015 Ranking		Deaths (000s)	% deaths	2030 Projected Ranking		Deaths (000s)	% deaths
1	Stroke	2545	19.8	1	Stroke	3022	18.7
2	Ischaemic heart disease	1838	14.3	2	Ischaemic heart disease	2247	13.9
3	Chronic obstructive pulmonary disease	1009	7.8	3	Chronic obstructive pulmonary disease	1363	8.4
4	Trachea, bronchus, lung cancers	725	5.6	4	Trachea, bronchus, lung cancers	1188	7.3
5	Liver cancer	533	4.1	5	Liver cancer	738	4.6
6	Lower respiratory infections	469	3.6	6	Stomach cancer	659	4.1
7	Stomach cancer	458	3.6	7	Lower respiratory infections	641	4.0
8	Road injury	377	2.9	8	Diabetes mellitus	394	2.4
9	Diabetes mellitus	292	2.3	9	Oesophagus cancer	352	2.2
10	Hypertensive heart disease	282	2.2	10	Colon and rectum cancers	347	2.1
11	Oesophagus cancer	243	1.9	11	Hypertensive heart disease	324	2.0
12	Colon and rectum cancers	230	1.8	12	Road injury	287	1.8
13	Self-harm	189	1.5	13	Self-harm	218	1.3
14	Kidney diseases	160	1.2	14	Kidney diseases	216	1.3
15	Cirrhosis of the liver	146	1.1	15	Falls	170	1.1
16	Falls	132	1.0	16	Cirrhosis of the liver	170	1.0
17	Alzheimer's disease and other dementias	108	0.8	17	Alzheimer's disease and other dementias	169	1.0
18	HIV/AIDS	104	0.8	18	Pancreas cancer	137	0.9
19	Tuberculosis	100	0.8	19	Breast cancer	112	0.7
20	Pancreas cancer	97	0.8	20	Leukaemia	96	0.6

Source: WHO Projections of mortality and burden of disease, 2002-2030

Other trends

The broader economic and socio-political challenges will also impact on what 2030 or 2040 will be like for the health and wellness of New Zealanders. Put together, the challenges described in this section may change New Zealanders expectations of a publicly funded health and disability system.

Beyond the changing demographic makeup of the New Zealand population, there are a number of trends and challenges that will impact the way New Zealanders live their lives, and influence the context within which the health and disability system operates. Three of these are outlined briefly.

Globalisation

The role of globalisation and agglomeration has had an impact on New Zealand with jobs and capital being concentrated in major urban centres. Globalisation has allowed New Zealanders to engage in new ways – both through the exchange of products and services, but also the opportunities to produce for global markets, and increased mobility.

Technology

Technological advancements have changed the way that problems are approached and services are delivered across the world. Digital technologies are rapidly transforming the nature of health care delivery and changing the way people manage their health and wellbeing. The rate of change and emergence of new business models that leverage disruptive technologies in new ways makes it difficult to predict what digital technologies will have an impact, how and when. Some of these technological trends include:

- Wearables and implantable technology that are capable of tracking medically useful information (e.g. fitness trackers)
- Computing, communications and storage – the size and cost of computing technologies will continue to decrease. This will lead to ubiquitous computing power available in nearly unlimited storage capacity all in your pocket. (World Economic Forum, 2015)
- Sensors will be smaller, cheaper and smarter and will become more common in homes, clothes and accessories, cities, transport, energy networks and manufacturing (World Economic Forum, 2015)
- Artificial Intelligence/Machine Learning and big data
- 3D printing technology
- Precision medicine and genomics
- Virtual reality and augmented reality technologies.

Climate change

Climate change is having, and will continue to have, significant impacts on people, the environment, and the economy. New Zealand has committed to reducing net emissions by 30 percent below 2005 levels by 2030, and the Government has announced that it will develop a new emissions target for 2050. Broadly, climate change is likely to impact:

- Biodiversity
- Eco systems and food systems
- Global temperatures
- Weather – more flooding in Winter, and droughts in Summer
- Human health.

The Ministry for the Environment has outlined a number of implications for New Zealand's environment due to climate change (Ministry for the Environment 2017). For New Zealand, climate change is already having an impact and is expected to continue to have an impact (forecast through to end of the century) including:

- Higher temperatures (greatest warming in the northeast)
- Rising sea levels
- More frequent extreme weather events (droughts in the east and floods)
- Changes in rainfall patterns (increased summer rainfall to the north and east of North Island, and increased winter rainfall in many parts of the South Island).

Reference List

Accident Compensation Corporation (2018, 31 July). Our History. Retrieved from Accident Compensation Corporation: https://www.acc.co.nz/about-us/who-we-are/our-history/

Al Nuhait, M., Al Harbia, K., Bustami, R., Alharbi, S., Masud, N., Albekairy, A., & Almodaimegh, H. (2017). Sickness presenteeism among health care providers in an academic tertiary care center in Riyadh. Journal of infection and Public Health, 10(6), 711-15.

Ashton, T., Mays, N., and Devlin, N. (2005). Continuity through change: The rhetoric and reality of health reform in New Zealand. Social Science & Medicine, 61(2):253-262. doi:10.1016/j.socscimed.2004.07.004

Association of Salaried Medical Specialists. (2017). Briefing to the Minister of Heatlh, October 2017. Retrieved July 12, 2018, from Assocition of Salaried Medical Specialists: www.asms.org.nz/wp-content/uploads/2017/11/BIM-2017_168920.6.pdf

Association of Salaried Medical Specialists. (2017). Bullying in the New Zealand senior medical workforce: prevalence, correlates and consequences. Health Dialogue(14). Association of Salaried Medical Specialists. Retrieved July 12, 2018, from https://www.nzdoctor.co.nz/sites/default/files/2017-11/ASMS%20Health%20Dialogue%20Bullying%20WEB.pdf

Australian Commission on Safety and Quality in Health Care. (2011). Patient centred care: Improving quality and safety through partnerships with patients and consumers. Sydney: ACSQHC.

Balik, B., Conway, J., Zipperer, L., & Watson, J. (2011). Achieving an exceptional patient and family experience of inpatient hospital care. Cambridge, Massachusetts: Institute for Healthcare Improvement.

Bentley, T., Catley, B., Cooper-Thomas, H., Gardner, D., O'Driscoll, M., & Trenberth, L. (2009). Understanding stress and bullying in New Zealand workplaces: Final report to OH&S steering committee. Retrieved from http://www.massey.ac.nz/massey/fms/Massey%20News/2010/04/docs/Bentley-et-al-report.pdf

Bodenheimer, T., & Sinsky, C. (2014). From triple aim to quadruple aim: care of the patient requires care of the provider. Ann Fam Med, 12(6), 573-576.

Bryant, J., Cheung, J., McHugh, M., & Sonerson, A. (2005). Population ageing and government health expenditure. Wellington: The Treasury.

Braithwaite, J., Matsuyama, Y., Mannion, R., Johnson, J., Bates, D. W., & Hughes, C. (2016). How to do better health reform: a snapshot of change and improvement initiatives in the health systems of 30 countries. International Journal for Quality in Health Care, 28(6), 843-846.

Cumming, J., McDonald, J., Barr, C., Martin, G., Gerring, Z., and Daube, J. (2014). New Zealand health system review. Health Systems in Transition, Vol.4 No. 2. World Health Organization. ISBN: 978 92 9061 650 4.

Dixon, L., Guililand, K., Pallant, J., Sidebotham, M., Fenwick, J., McAra-Couper, J., & Gilkinson, A. (2016). The emotional wellbeing of New Zealand midwives: Comparing responses for midwives in caseloading and shift work settings. New Zealand College of Midwives Journal (53), 5-14.

Doyle, C., Lennox, L., & Bell, D. (2013). A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open, 3*(1). doi:10.1136/bmjopen-2012-001570

Gauld, R. (2012). New Zealand's post-2008 health system reforms: Toward re-centralization of organizational arrangements. Health Policy, 106(2):110-113. doi:10.1016/j.healthpol.2012.03.018.

Harper, S. (2016). *How population change will transform our world*. Oxford University Press.

Health Funds Association of New Zealand (2018) *What type of health insurance?* Retrieved from: https://docs.wixstatic.com/ugd/606d2f_21f27638f138408ea7a72b1ced960d4d.pdf

Health Quality & Safety Commission. (2018). A window on the quality of New Zealand's health care. Wellington: HQSC.

Health Workforce New Zealand. (2015). *Health of the Health Workforce 2015*. Wellington: Ministry of Health.

Health Workforce New Zealand. (2017). Health workforce challenges and opportunities - Briefing to the incoming Minister. Wellington: Ministry of Health.

IHME. (2016). *Global Burden of Disease Study 2016 (GBD 2016) Results*. Seattle, WA: Institute for Health Metrics and Evaluation.

Jackson, N., & Cameron, M. P. (2017). The Unavoidable Nature of Population Ageing and the Ageing-Driven End of Growth–an Update for New Zealand. Journal of Population Ageing, 1-26. https://doi-org.ezproxy.auckland.ac.nz/10.1007/s12062-017-9180-8

Jackson, N. O. (2016). Irresistible forces. Facing up to demographic change. Chapter 2. In Spoonley (Ed.), *Rebooting the Regions. Why low or zero growth needn't mean the end of prosperity* (pp. 43–75). Albany: Massey University Press.

Jones, S., Blake, S., Hamblin, R., Petagna, C., Shuker, C., & Merry, A. (2016). Reducing harm from falls. New Zealand Medical Journal, 129(1446), 89-103.

Medical Council of New Zealand. (2016). *The New Zealand Medical Workforce in 2013 and 2014*. Medical Council of New Zealand.

Ministry for the Environment (2017) http://www.mfe.govt.nz/climate-change/how-climate-change-affects-nz/climate-change-impacts

Ministry of Health. (2016). Private Health Insurance Coverage 2011–15: New Zealand Health Survey. Wellington: Ministry of Health.

Ministry of Health. (2017). Fetal and Infant Deaths 2014. Wellington: Ministry of Health. Retrieved from www.health.govt.nz/publication/fetal-and-infant-deaths-2014

Ministry of Health. (2017). New Cancer Registrations 2015. Wellington: Ministry of Health.

Ministry of Health. (2018). Current health workforce issues: risks and opportunities. Wellington.

Ministry of Health. (2018, July 20). District health board sector financial performance for year to date 30 April 2018. Retrieved from: https://www.health.govt.nz/new-zealand-health-system/key-health-sector-organisations-and-people/district-health-boards/accountability-and-funding/summary-financial-reports/dhb-sector-financial-reports-2017-18

Ministry of Health. (2018). District Health Board Sector Financial Performance for year to date 30 April 2018. Wellington: Ministry of Health.

Ministry of Health. (2018). Mortality 2015 data tables (Provisional). Retrieved August 1, 2018, from Ministry of Health: www.health.govt.nz/publication/mortality-2015-data-tables

Ministry of Health. (2018, July 20). Voluntary Bonding Scheme. Retrieved from https://www.health.govt.nz/our-work/health-workforce/voluntary-bonding-scheme

Mitchell, P. H. (2008). Defining patient safety and quality care. In R. G. Hughes, Patient safety and quality: An evidence-based handbook for nurses. Rockville, US: Agency for Healthcare Research and Quality. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK2681/

New Zealand Nurses Organisation. (2017). NZNO Research Employment Survey 2017: Our Nursing Workforce: Resilience in adversity. Retrieved July 12, 2018, from: www.nzno.org.nz/Portals/0/publications/Research%20report%20-%20Employment%20Survey,%202017.pdf

NHS England. (2018). Links between NHS Staff Experience and Patient Satisfaction: Analysis of surveys from 2014 and 2015. Retrieved from: www.england.nhs.uk/wp-content/uploads/2018/02/links-between-nhs-staff-experience-and-patient-satisfaction-1.pdf

OECD. (2017). CO4.4: Teenage suicides (15-19 years old). Retrieved from OECD: https://www.oecd.org/els/family/CO_4_4_Teenage-Suicide.pdf

OECD. (2017). *Health at a Glance 2017: OECD Indicators*. Paris: OECD Publishing. Retrieved from http://dx.doi.org/10.1787/health_glance-2017-en

OECD Data. (2018, July 19). *Medical graduates*. Retrieved from OECD Data: https://data.oecd.org/healthres/medical-graduates.htm#indicator-chart

OECD.Stat. (2018, July 9). *Health Workforce Migration*. Retrieved from OECD.Stat: https://stats.oecd.org/Index.aspx?DataSetCode=HEALTH_WFMI

OECD.Stat. (2018, August 1). *Social Protection: Private health insurance* Retrieved from OECD.Stat: https://stats.oecd.org/Index.aspx?DataSetCode=SHA

Office for Disability Issues (2018, 31 July). History of disability in New Zealand. Retrieved from: https://www.odi.govt.nz/home/about-disability/history-of-disability-in-new-zealand/

Spoonley, P. (Ed.). (2016). *Rebooting the Regions: Why Low Or Zero Growth Needn't Mean the End of Prosperity*. Massey University Press.

Stace, H. (2007). The long unfinished journey towards human rights for disabled people in Aotearoa New Zealand. Human Rights Research Journal, 5: 1–13

State Services Commission. (2017). *Kiwis Count: New Zealanders' satisfaction with public services*. Wellington: New Zealand Government.

Statistics New Zealand. (2017). *Subnational Population Projections: 2013(base)–2043 update*. Wellington. Statistics New Zealand. Retrieved from: http://archive.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationProjections_HOTP2013base-2043/Commentary.aspx

Statistics New Zealand. (2015, May 8). New Zealand Period Life Tables: 2012-14 - Media Release. Retrieved August 1, 2018, from Stats NZ: http://archive.stats.govt.nz/browse_for_stats/health/life_expectancy/NZLifeTables_MR12-14.aspx

Statistics New Zealand. (2016). *National Population Projections: 2016(base)–2068*. Wellington. Statistics New Zealand. Retrieved from: http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7542&_ga=2.74029713.2057973658.1530600744-1982999852.1497837281#

Statistics New Zealand. (2017). *Wellbeing statistics: 2016 – Tables*. Wellington. Statistics New Zealand. Retrieved from: https://www.stats.govt.nz/assets/Uploads/Well-being-statistics/Well-being-statistics-2016/Download-data/gss16-well-being-measures-tables.xlsx

Statistics New Zealand. (2017a). *Urban area unit population projections: 2013(base)–2043 update*. Wellington. Statistics New Zealand. Retrieved from: https://www.stats.govt.nz/information-releases/urban-area-unit-population-projections-2013base2043-update-nz-stat-tables

Statistics New Zealand. (2017b). *National Ethnic Population Projections: 2013(base)–2038*. Wellington. Statistics New Zealand. Retrieved from: http://archive.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationProjections_HOTP2013base-2043/Commentary.aspx

The Nursing Council of New Zealand. (2018). *The New Zealand Nursing Workforce: A profile* of nurse practitioners, registered nurses and enrolled nurses 2016-2017. Wellington: The Nursing Council of New Zealand.

The Treasury. (2017). District Health Board Financial Performance to 2016 and 2017 Plans. Wellington: The Treasury.

World Health Organization. (2000). The world health report 2000: Health systems: Improving performance. World Health Organization.

World Health Organization. (2006). Quality of care: a process for making strategic choices in health systems. Geneva: World Health Organization.

Appendices

Appendix 1: List of Abbreviations

A&E	Accident and Emergency
ACART	Advisory Committee on Assisted Reproductive Technologies
ACC	Accident Compensation Corporation
AP	Annual Plan
ARC	Aged Residential Care
ARRCA	Age-Related Residential Care Agreement
ASMS	Association of Salaried Medical Specialists
BPS	Better Public Services
BSA	BreastScreen Aotearoa
BSMC	Better Sooner More Convenient
CAMHS	Child and youth mental health and addiction services
CARM	Centre for Adverse Reactions Monitoring
CFA	Crown Funding Agreement
CFO	Chief Financial Officer
CIC	Capital Investment Committee
CPHAC	Community and Public Health Advisory Committee
CPSA	Community Pharmacy Services Agreement
CRPD	Convention on the Rights of Persons with Disabilities (UN Convention)
CSC	Community Services Card
CYMRC	Child and Youth Mortality Review Committee
DHB/s	District Health Board/s
DSAC	Disability Support Advisory Committee
DSS	Disability Support Services
EAAS	Emergency Air Ambulance Services
EAS	Emergency Ambulance Services
ECART	Ethics Committee on Assisted Reproductive Technologies
ED	Emergency Department
ERAS	Emergency Road Ambulance Services
FSANZ	Food Standards Australia New Zealand
FVDRC	Family Violence Death Review Committee
GP	General Practitioner
GMS	General Medical Subsidy
HAC	Hospital Advisory Committee
HART Act	Human Assisted Reproductive Technology Act 2004
HDECs	Regional Health and Disability Ethics Committees

HIA	Health Impact Assessment
HOP	Health of Older People
HPA	Health Promotion Agency
HPCA Act	Health Practitioners Competence Assurance Act 2003
HPDT	Health Practitioners Disciplinary Tribunal
HRC	Health Research Council of New Zealand
HWNZ	Health Workforce New Zealand
HQSC	Health Quality Safety Commission
IDFs	Inter-district Flows
IMMP	Intensive Medicines Monitoring Programme
KPI	Key Performance Indicator (Framework)
LMC	Lead Maternity Carer
MAAC	Medicines Assessment Advisory Committee
MARC	Medicines Adverse Reactions Committee
MCC	Medicines Classification Committee
MCNZ	Medical Council of New Zealand
MECA	Multi Employer Collective Agreement
Medsafe	New Zealand Medicines and Medical Devices Safety Authority
NASC	Needs Assessment Service Co-ordination
NASO	National Ambulance Sector Office
NBSP	National Bowel Screening Programme
NCSP	National Cervical Screening Programme
NCSR	National Cancer Screening Register
NEAC	National Ethics Advisory Committee
NGO	Non-governmental Organisation
NMSP	Newborn Metabolic Screening Programme
NSAC	National Screening Advisory Committee
NSFL	Nationwide Service Framework Library
NSU	National Screening Unit
NTS	National Telehealth Service
NZBS	New Zealand Blood Service
NZCR	Mortality Cancer Registry
NZMA	New Zealand Medical Association
NZNO	New Zealand Nurses Organisation
NZPHD Act	New Zealand Public Health and Disability Act 2000
OECD	Organisation for Economic Co-operation and Development
OPF	Operating Policy Framework
PBFF	Population Based Funding Formula
PHARMAC	Pharmaceutical Management Agency
PHCS	Primary Health Care Strategy 2001
PHO	Primary Health Organisation

PHOSA	Primary Health Organisation Services Agreement
PHU	Public Health Unit
PMMRC	Perinatal and Maternal Mortality Review Committee
POMRC	Perioperative Mortality Review Committee
PRIME	Primary Response in Medical Emergencies Service
PSAAP	PHO Services Agreement Amendment Protocol
PSC	Prescription Subsidy Card
PTAC	Pharmacology and Therapeutics Advisory Committee
RANZCP	Royal Australian and New Zealand College of Psychiatrists
RFP	Request for Proposal
RNZCGP	Royal New Zealand College of General Practitioners
SCS	Service Coverage Schedule
SIA	Services to Improve Access
SLMs	System Level Measures Framework
SUMRC	Suicide Mortality Review Committee
TAS	Technical Advisory Services Limited
WAI2575	Waitangi Tribunal Health Services and Outcomes Kaupapa Inquiry
WHO	World Health Organization

Appendix 2: Disability across government

Disability is a broad term and includes people who have long-term physical, mental, intellectual, learning, social, injury-related, age-related or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others. There is no one definition of disability.

There is a distinction between impairment and disability – causes of impairment vary greatly and can arise from birth, injury, a health condition or naturally through ageing. The Government's approach to disability is underpinned by the social model of disability, which distinguishes between impairments and disabilities:

- **Impairments** are any long-term loss or abnormality of psychological, physiological, or anatomical structure or function.

Disability is not just a health issue; it is complex and can change over time, and reflects the interaction between a person's circumstance (impairment or condition) and the society in which they live in.

Minister for Disability Issues

The Minister for Disability Issues leads and advocates across government on behalf of disabled New Zealanders. This includes leadership in a number of cross-agency spaces including:

- disability support and services (of which some are funded through Vote Health is one)
- employment
- housing
- schooling
- health services (which are predominantly funded through Vote Health)
- transport
- protection of rights and interests.

The Minister for Disability Issues is responsible for the New Zealand Disability Strategy (the primary vehicle for implementing the strategy is the Disability Action Plan) and the New Zealand Sign Language Act.

The Minister for Disability Issues is supported by the **Office for Disability Issues** (ODI), which sits within the Ministry of Social Development. ODI also lead the co-ordination of New Zealand reports for the United Nations Convention of the Rights of People with Disabilities (CRPD). More information about the Minister for Disability Issues is included on page 19.

Ministerial Leadership Group on Disability Issues

The Ministerial Leadership Group on Disability Issues provides leadership, accountability, and coordination across government on disability issues. It sets priorities for, and monitors, the implementation of the CRPD and the Disability Strategy.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD)

The CRPD is an international human rights treaty that protects the rights and dignity of persons with disabilities. It is focused on the human rights of disabled people and on removing barriers that prevent disabled people from participating fully in society.

Parties to the CRPD are required to promote, protect, and ensure the full enjoyment of human rights by disabled people and ensure they enjoy full equality under the law. One of the obligations of the CRPD is to consult closely with and actively involve disabled people, including

children with disabilities, through their representative organisations in the development and implementation of legislation and policies to implement the Convention. This also includes other decision-making processes concerning issues relating to disabled people.

New Zealand ratified the CRPD in September 2008 and must report on its progressive implementation to the United Nations every four years. New Zealand's first report was submitted in 2011 and was examined in September 2014. A second report is to be submitted to the United Nations in 2018.

Independent Monitoring Mechanism

Accountability for implementation of the convention is reinforced through an Independent Monitoring Mechanism (IMM). This involves the Human Rights Commission, the Office of the Ombudsmen, and the Convention Coalition (also known as the Disabled People's Organisations Coalition or DPO Coalition) [11] as independent monitors of government's implementation of the Convention.

Disability within Vote: Health

In Vote Health, disability support services support a person who has a physical, psychiatric, intellectual, sensory or age-related disability, or a combination of these, where the disability is likely to continue for a minimum of six months and results in a reduction of independent function to the extent that ongoing support is needed.

The Ministry of Health provides strategic disability policy advice and, policy advice on Disability Support Services (DSS) for all disabled people.

The funding and delivery of disability related services is split between the Ministry and DHBs (some is centralised, some is devolved to local decision makers). Funding responsibilities for disability are split between the Ministry of Health and DHBs:

- The Ministry of Health is responsible for providing Disability Support Services (DSS) to a group of people with certain long-term disabilities primarily under the age of 65 with a physical, intellectual or sensory disability (see full description of eligible group below), and for environmental modification and equipment services for people of all ages.
- DHBs are responsible for the provision of general and specialist health services that disabled people need access to on an equal basis. DHBs also provide support for people with chronic health conditions, people with a personal health need, age related conditions, and people with mental health conditions.

People with disabilities may miss out on health or disability services where there is discrimination or other barriers to access or services are not appropriate to their needs (e.g. inaccessible communication or information). The Ministry of Health is aware that health services may not always meet the needs of people with disabilities and outcomes show that health outcomes for disabilities are worse compared to the population without a disability.

[11] The Convention Coalition is a group of national Disabled People's Organisations (DPO Coalition) and consists of the Association of Blind Citizens of New Zealand, Balance New Zealand, Deaf Aotearoa New Zealand, Deafblind (NZ) Inc, Disabled Persons Assembly (New Zealand) Inc, Ngāti Kāpo o Aotearoa Inc, Ngā Hau E Whā and People First New Zealand Inc – Nga Tangata Tuahtahi.

Appendix 3: Key health statistics definitions

Amenable mortality

Premature deaths (under the age of 75 years) that could potentially be avoided, given effective and timely use of health services. Amenable mortality consists of early deaths from causes (diseases or injuries) for which effective health care interventions exist and are available to New Zealanders.

Ambulatory sensitive hospitalisations - ASH

Mostly acute hospital admissions for conditions that are potentially preventable or that could have been treated earlier in primary care. The Ministry of Health currently reports ASH rates for two age groups: 0-4 year and 45-64 years.

Quality-Adjusted Life Year - QALYs

A measure of disease burden. The QALY is a measure of the value of health states. It assumes that health is a function of length of life and quality of life, and combines these values into a single index number. One QALY equates to one year in perfect health, 0 QALYs means to be dead.

Disability-adjusted life years - DALYs

Health loss in the population. One DALY represents the loss of one year lived in full health. DALYs include health losses from premature mortality and years lived with a disability based on severity. This measure is widely used by the Global Burden of Disease study and allows us to estimate the total number of years lost due to specific causes and risk factors.

Life expectancy

The number of years, on average, a person in a given population can expect to live at any given age. Life expectancy at birth is the most commonly used metric, which refers to the number of years a person can expect to live, based on population mortality rates at each age in a given year/period.

Healthy life expectancy

Also known as 'health-adjusted life expectancy' (HALE) and 'health expectancy'. Unlike life expectancy, HALE takes into account mortality and non-fatal outcomes (eg injury, disease). It covers how long, on average, a person in a given population can expect to live in full health. This is the Global Burden of Disease definition. Other health expectancy measures exist, which account for a much narrower set of non-fatal outcomes.

Prevalence

The number of individuals in a particular population who have a condition at a specific period of time (in epidemiology typically a disease, health condition or a risk factor such as smoking). This can also be expressed as a rate.

Incidence

The number of individuals who develop a specific disease or experience a specific health-related event during a particular time period (such as a month or year), only includes new cases. This can also be expressed as a rate.

Morbidity

Ill health, where comorbidity is the co-occurrence of conditions in the same individual.

Risk factor

Any potentially modifiable cause of a disease or an injury.

Age-standardised rate

A weighted average of the age-specific rates, resulting in a single age-independent rate. This allows for making more meaningful comparisons between groups, as differences in the populations' age-structure have been accounted for.

Adjusted Rate Ratio

Comparisons of rates between population groups, adjusted for differences in demographic factors between the groups that may be influencing (confounding) the comparison. A value of 1 indicates no difference between the two groups, a value higher than 1 shows that the proportion is higher for the group of interest than for the reference group, and a value of lower than 1 shows that the proportion is lower for the group of interest.

Confidence interval

Sampling error associated with the statistics, the uncertainty due to selecting a sample to estimate values for the entire population. A 95 percent confidence interval for a statistic is often used. This means that under a hypothetical scenario where selecting the sample could be repeated many times, 95 percent of the confidence intervals constructed in this way would contain the true population value.

Statistically significant

The likelihood that a relationship between two or more variables is caused by something other than chance. A statistically significant result (usually a difference) is a result that is not attributed to chance.

Ethnicity

Questions used for the collection of ethnicity data allow people to record more than one ethnicity. As such, classifying people into ethnic groups may be done in a number of ways to take account of multiple ethnicities. The two main methods of presenting ethnicity data are: prioritised ethnic groups and total response ethnic groups.

Prioritised ethnicity

> Prioritised ethnic groups involve each person being allocated to a single ethnic group, based on the ethnicities they have identified with, in the prioritised order of Māori, Pacific, Asian and European/Other. For example, if someone identifies as being Chinese and Māori, under the prioritised ethnic group method, they are classified as Māori for the

purpose of analysis. The group of prioritised European/Other effectively refers to non-Māori, non-Pacific, non-Asian people.

Total response ethnicity

Total response ethnic groups involve each person being allocated to all ethnic groups that they have identified with. This can result in overlap, where people can appear in more than one group. For example, if someone identifies as being Chinese and Māori, under the total response ethnic group method, they are classified as both Asian and Māori for the purpose of analysis; in other words, they will appear in the rates for both the Māori population and the Asian population. The total European/Other group includes all people who identified with these ethnic groups.

Appendix 4: Code of Health and Disability Services Consumers' Rights

The Code of Health and Disability Services Consumers' Rights provides the following 10 rights:

Right	Description
Right 1	The right to be treated with respect.
Right 2	The right to freedom from discrimination, coercion, harassment, and exploitation.
Right 3	The right to dignity and independence.
Right 4	The right to services of an appropriate standard.
Right 5	The right to effective communication.
Right 6	The right to be fully informed.
Right 7	The right to make an informed choice and give informed consent.
Right 8	The right to support.
Right 9	Rights in respect of teaching or research.
Right 10	The right to complain.

This is a summary of the code of rights. The full code is stated within the Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996.

Appendix 5: List of current strategies

Strategy	Year	Description
New Zealand Health Strategy	2016	The Minister must determine a strategy for health services: the New Zealand Health Strategy (under the New Zealand Public Health and Disability Act). The Minister must report each year on progress in implementing the Strategy. If the Strategy is reviewed, the Act requires consultation with appropriate organisations and individuals.
New Zealand Disability Strategy 2016 – 2026	2016	The Minister for Disability Issues must determine a strategy for disability services: the New Zealand Disability Strategy (under the New Zealand Public Health and Disability Act). This Minister must report each year on progress in implementing the Strategy. If the Strategy is reviewed, the Act requires consultation with appropriate organisations and individuals.
He Korowai Oranga: Māori Health Strategy	2014	He Korowai Oranga: Māori Health Strategy sets the overarching framework to guide the Government and the health and disability sector to achieve the best health outcomes for Māori. He Korowai Oranga means 'the cloak of wellness'. The Strategy was refreshed in June 2014, expanding the aim of He Korowai Oranga from whānau ora to pae ora – healthy futures.
Primary Health Care Strategy	2001	The Primary Health Care Strategy was developed in 2001 to provide a clear direction for the future development of primary health care in New Zealand. Although now somewhat dated, it remains a useful document that outlines the specific contributions primary health care makes to improving health outcomes.
Healthy Ageing Strategy	2016	The Healthy Ageing Strategy was published in 2016 and presents the strategic direction for change and a set of actions to improve the health of older people, into and throughout their later years. The Strategy refreshed and replaced the Health of Older People Strategy (2002) and aligned it with the New Zealand Health Strategy.
'Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2014-2018	2014	'Ala Mo'ui has been developed to facilitate the delivery of high-quality health services that meet the needs of Pacific peoples. It sets out the strategic direction to address health needs of Pacific peoples and stipulates actions, which will be delivered from 2014 to 2018. This edition builds on the successes of the former plan from 2010-2014. The Ministry publishes reports on implementation progress periodically.
Other strategies in the health sector		There are a number of additional health strategies that guide specific areas of work in the health sector, including: • National Drug Policy 2015-2020 • New Zealand Suicide Prevention Strategy 2006-2016 • Health Information Strategy 2005 • Transforming Respite: Disability Support Services Respite Strategy 2017 to 2022 • Where I Live; How I Live – Disability Support Services Community Residential Support Services Strategy 2018 to 2020 • Increasing Deceased Organ Donation and Transplantation: A National Strategy • The New Zealand Cancer Control Strategy • Strategy to Prevent and Minimise Gambling Harm 2016/17 to 2018/19 • National Radiation Oncology Plan 2017 to 2021 • Implementing Medicines New Zealand 2015 to 2020 • Faiva Ora 2016–2021 National Pasifika Disability Plan • Whaia Te Ao Mārama: The Māori Disability Action Plan • Pharmacy Action Plan 2016 to 2020 Further strategies and action plans can be located on the Ministry of Health website.

Appendix 6: List of Licensed Public hospitals in New Zealand, by DHB area, and count of public and private hospitals

DHB (by Cross Boundary Area)	Public Hospital (Licensed Facility Name)	Public Hospitals	Private Hospitals	Public Proportion
Auckland	Auckland City Hospital Greenlane Clinical Centre Mason Clinic Buchanan Rehabilitation Centre, Pitman House and Rehab Plus	4	11	27%
Bay of Plenty	Opotiki Health Care Centre Tauranga Hospital Whakatane Hospital	3	4	43%
Canterbury DHB	Ashburton Hospital Burwood Hospital Chatham Island Health Centre Christchurch Hospital Darfield Hospital Ellesmere Hospital Hillmorton Hospital Kaikōura Hospital Lincoln Maternity Hospital Oxford Hospital Rangiora Hospital The Princess Margaret Hospital Tuarangi Home Waikari Hospital	14	3	82%
Capital and Coast	Kāpiti Health Centre Kenepuru Hospital Wellington Hospital	3	4	43%
Counties Manukau	Auckland Spinal Rehabilitation and Tamaki Oranga Botany Downs Hospital Franklin Memorial Hospital Manukau Surgery Centre Middlemore Hospital Papakura Obstetric Hospital Pukekohe Hospital	7	2	78%
Hawkes Bay	Central Hawke's Bay Health Centre Hawke's Bay Hospital Wairoa Hospital & Health Centre	3	2	60%
Hutt	Hutt Valley Hospital	1	3	25%
Lakes	Rotorua Hospital Taupo Hospital	2	1	67%
Mid Central	Horowhenua Health Centre Palmerston North Hospital	2	5	29%
Nelson Marlborough	Alexandra Hospital	7	4	64%

DHB (by Cross Boundary Area)	Public Hospital (Licensed Facility Name)	Public Hospitals	Private Hospitals	Public Proportion
	Mental Health Admissions Unit Murchison Hospital and Health Centre Nelson Hospital Nelson Bays Maternity Unit (Te Whare Whanau) Tipahi Street Mental Health Wairau Hospital			
Northland	Bay of Islands Hospital Dargaville Hospital Kaitaia Hospital Whangarei Hospital	4	2	67%
South Canterbury	Timaru Hospital	1	2	33%
Southern	Dunedin Hospital Lakes District Hospital Southland Hospital Wakari Hospital	4	12	25%
Tairawhiti	Gisborne Hospital	1	1	50%
Taranaki	Hawera Hospital Taranaki Base Hospital	2	2	50%
Waikato	Matariki Hospital Rhoda Read Hospital Taumarunui Community Hospital Te Kuiti Community Hospital Thames Hospital Tokoroa Hospital Waikato Hospital	7	8	47%
Wairarapa	Wairarapa Hospital	1	1	50%
Waitemata	North Shore Hospital Waitakere Hospital Wilson Centre	3	8	27%
West Coast	Buller Health Grey Base Hospital Reefton Health Services	3	0	100%
Whanganui	Whanganui Hospital	1	3	25%
Total		73	78	48%

Note: This information has been collated using the list of licensed hospitals.

Appendix 7: PHOs by DHB area

DHB (by Cross Boundary Area)	PHO Name	Enrolled Population	Number of Practices	VLCA Practices
Auckland	Alliance Health Plus Trust	34,690	14	12
	Auckland PHO Limited	63,893	25	9
	National Hauora Coalition Limited	57,734	12	12
	Procare Networks Limited	382,832	91	21
Bay of Plenty	Eastern Bay Primary Health Alliance	27,715	9	8
	Nga Mataapuna Oranga Limited	11,818	2	2
	Western Bay of Plenty Primary Health Organisation Limited	186,114	29	4
Canterbury DHB	Christchurch PHO Limited	36,428	6	2
	Pegasus Health (Charitable) Limited	439,208	91	6
	Rural Canterbury PHO	47,760	17	0
Capital and Coast	Cosine Primary Care Network Trust	14,659	1	0
	Ora Toa PHO Limited	18,269	5	5
	Tu Ora Compass Health Capital and Coast	273,682	53	7
Counties Manukau	Alliance Health Plus Trust	70,840	19	12
	East Health Trust	96,884	21	3
	National Hauora Coalition Limited	20,653	8	7
	Procare Networks Limited	200,257	42	21
	Total Healthcare Charitable Trust	111,687	9	8
Hawkes Bay	Health Hawke's Bay Limited	160,751	26	8
Hutt	Cosine Primary Care Network Trust	19,435	1	0
	Te Awakairangi Health Network	120,101	20	6
Lakes	Midlands Health Network - Lakes	38,218	5	5
	Rotorua Area Primary Health Services Limited	72,285	15	8
Mid Central	Central Primary Health Organisation	159,935	32	3
Nelson Marlborough	Kimi Hauora Wairau (Marlborough PHO Trust)	43,992	9	0
	Nelson Bays Primary Health	101,727	21	2
Northland	Manaia Health PHO Limited	101,184	25	16
	Te Tai Tokerau PHO Ltd	65,503	14	12
South Canterbury	South Canterbury Primary and Community	57,675	24	0
Southern	WellSouth Primary Health Network	302,544	83	5
Tairawhiti	Midlands Health Network - Tairawhiti	38,890	5	5
	Ngati Porou Hauora Charitable Trust	9,140	6	6
Taranaki	Midlands Health Network - Taranaki	110,930	29	6
Waikato	Hauraki PHO	150,420	29	18
	Midlands Health Network - Waikato	237,785	45	16
	National Hauora Coalition Limited	5,578	4	3
Wairarapa	Tu Ora Compass Health Wairarapa	44,737	7	1
Waitemata	Comprehensive Care PHO Limited	266,344	52	9
	Procare Networks Limited	261,518	44	12
West Coast	West Coast PHO	29,855	7	6
Whanganui	National Hauora Coalition Limited	7,091	4	0
	Whanganui Regional PHO	58,517	27	5
Total		**4,559,278**	**988**	**291**

Appendix 8: System Level Measures

Information about DHB performance is collected through a series of measures, targets and output requirements. These requirements set expectations for health outcomes, standards of care, collaboration between the sector, and include a mix of universal and targeted measures. The main performance metrics for DHBs are System Level Measures (SLMs), health targets, and output measures in annual plans.

The System Level Measures Framework, introduced in 2016, aims to improve outcomes for people by supporting DHBs to work with system partners (primary, community and hospital) towards achieving specific quality improvement measures. The SLMs have strong sector buy-in as they were co-designed with the sector and provide a foundation for continuous quality improvement and system integration.

There are currently six SLMs which focus on children, youth and reducing equity gaps for Māori and other population groups that consistently experience poor health outcomes. They are supported by contributory measures that are chosen locally based on the needs and priorities of communities and local health services.

The six SLMs are:

- Ambulatory Sensitive Hospitalisation (ASH) rates for 0–4 year olds (keeping children out of hospital)
- acute hospital bed days per capita (using health resources effectively)
- patient experience of care (person-centred care)
- amenable mortality rates (prevention and early detection)
- babies living in smoke-free homes (a healthy start)
- youth access to and utilisation of youth appropriate health services (youth are healthy, safe and supported).

The SLM framework reflects the health system as a whole, encourages primary and secondary providers to work towards the same end, and incorporates the needs and priorities of local communities. The diagram below demonstrates how this operates in practice.

Figure 47: How SLMs work, using ASH rates as an example

1 System level measure

ASH rates in 0-4 year olds: Reduce hospital admission rates for conditions avoidable through prevention or management in primary care

2 Analyse local district data; identify main contributors to ASH rates

- Use Ministry of Health Roundtable data to identify the % of avoidable hospital admissions of children 0-4 in district alliance
- Break down by ethnicity and deprivation level to identify equity gaps
- Look at most common conditions in children: respiratory illness, gastroenteritis, dental conditions and cellulitis

3 Identify improvement milestone for ASH

ASH improvement milestone: ASH rates for Māori and Pacific children fall by 2% by xx date

4 Identify activities and providers that will impact the milestone

To impact the milestone with focus on Māori and Pacific families:

- Introduce healthy homes initiative through NGO or Public Health Unit
- Undertake promotion of B4 School Checks to Māori and Pacific families, with aim of 90% of children receiving a B4 School Check by xx date
- Launch smokefree homes campaign focusing on Māori and Pacific families
- Comprehensive diagnosis and treatment of asthma in primary and community care including general practice, pharmacies and ambulance

5 Select most relevant contributory measures

See the ASH contributory measures on the Health Quality Measures website. Most relevant include:

- Hospital admissions for children aged five with a primary diagnosis of asthma
- Four-year-old children who have received a B4 School Check
- Four-year-old children living in smokefree homes

6 Develop and submit improvement plan to Minister with signatures of alliance partners

ASH rates in 0-4 year olds		
Improvement milestone	**Actions/activities**	**Contributory measures**
ASH rates for Māori and Pacific children fall 2% by xx date	Introduce health homes initiative though NGO or public health unit Comprehensive diagnosis and treatment of asthma in primary and community care	Hospital admissions for children aged five years with a primary diagnosis of asthma
	Undertake promotion of B4 School Checks to Māori and Pacific families, with aim of 90% of children receiving a B4 School Check by xx date	Four-year-old children who have received a B4 School Check
	Smokefree homes campaign launched, focusing on Māori and Pacific families	Four-year-old children living in smokefree homes

Appendix 9: Government agencies purchasing or providing health and health-related services outside Vote Health

Many government agencies purchase, fund or subsidise health services and disability supports. Expenditure on these services, outside of Vote Health and ACC, is estimated at $487 million for the 2016/17 year (OECD).

This expenditure, is low in comparison with out-of-pocket payments for such services. Out-of-pocket payments account for the bulk of non-government spending (services paid for via health insurance account for the smaller portion of non-government spending).

In addition to health services and disability supports for individuals, many government agencies purchase public health and safety services and other services that improve health and wellbeing.

The tables that follow detail the major areas of government spending on health and disability services and support outside of Vote Health. They have been grouped into

1. health services and disability / long term condition support
2. public health and safety
3. determinants of health.

The funding amounts in the tables are indicative, and the content incomplete, especially in table 3. In some areas it is not possible to separate health-related activities from non health-related activities. In others health spending may not be collated by the relevant agencies, or has not been sought from all relevant agencies, particularly non-national entities such as territorial authorities. The funding amounts are provided as examples of spending on particular activities. Taken together, they will in most cases substantially under-count the public spending in table 2 and 3 areas.

All figures are budgeted (rather than actual) amounts for the 2016/17 financial year unless otherwise stated.

Not included in these tables:

- Activities only involving the health sector, such as public hospitals
- Medical schools and other pre-employment training for medical workers
- Health and safety spending within government agencies which only relates to their own staff, visitors and clients
- Health research (although some is probably included in wider programmes listed here)
- Watchdog functions, such as Health and Disability Commissioner, Human Rights Commission, Children's Commissioner, Waitangi Tribunal
- Policy advice. Note that the Ministry of Health provides advice on health matters to numerous other agencies, and other agencies provide policy advice to the government and the Ministry of Health on health-related matters involving their work (for example Corrections on prisoner healthcare).

Table 42: Cross government activities – Health services and disability/long-term condition support

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Injury-related treatment and rehabilitation	• Accident Compensation Corporation (ACC) • Ministry of Health (MoH)	Funding • ACC and MoH have a purchasing agreement for Public Health Acute and other services from District Health Boards (DHBs) Provision • Treatment and rehabilitation is provided by a mix of private and public healthcare providers	• Total ACC funding $2,449 million • In 2009/10 ACC's expenditure on health, including income compensation, was 95 percent of its total spending	• MBIE provides policy advice to Minister for ACC
General mental health (including suicide prevention)	• MoH • DHBs • ACC • Ministry of Social Development (MSD) • Te Puni Kōkiri (TPK) • Ministry of Education (MoE) • Police • Oranga Tamariki	Funding • Vote Health funds most mental health care, which is delivered by DHBs and private providers (GPs, private counsellors etc.) Some care is partly or fully funded by patients or employers • ACC funds treatment for mental injury and trauma • MSD funds some counselling and rehabilitation • MoE funds school counsellors Provision • Police are often first responders to mental health crisis and receive training to deal with this Other • MoH leads NZ suicide prevention strategy, which also involves MoE, TPK, various NGOs • MoH working with other agencies to implement Government's Psychosocial Recovery Strategy and Action Plan for earthquake recovery See also • Lots of mental health care in prisons and general justice system, see Justice sector health care, page 117 • Close connections with work on family and sexual violence, see below under public health and safety • Healthcare in schools, which includes some mental health services	• MSD spent $16.9m on counselling and rehabilitation, plus $281k on the mental health and employment social bond pilot • TPK's Rangitahi Māori suicide prevention programme: $1.7m • MoE mental health systems development: $420k	

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Emergency Ambulance Services	• ACC • MoH • DHBs	Funding • Joint funding of National Ambulance Sector Office by ACC and MoH • Road ambulances are mostly funded by ACC and MoH (see right). St John New Zealand (St John) charges users $98 per call-out, except accident-related call-outs, which are paid for by ACC. • Air ambulance organisations receive funding for search and rescue (from Police and NZ Rescue Coordinating Centre); hospital transfers (DHBs), fire services (NZ Fire Service); and from commercial clients Provision • St John provides road ambulance services everywhere except Wellington, where it is provided by Wellington Free Ambulance • Air ambulances provided mostly by dedicated trusts, but in some areas by private aviation companies.	• Road ambulance services funded by ACC (40 percent) and MoH (approx. 42 percent). The rest is mostly funded by donations and fees • Air ambulances funded by ACC and MoH on an hourly or per service basis, jointly funding less than 50 percent of costs. Joint funding in 2013/14 was $19.5m • Ambulance Communications Centres joint funded by MoH (64 percent) and ACC (36 percent)	
Justice sector health services	• Department of Corrections (Corrections) • MoH • Regional Forensic Mental Health Services • Ministry of Justice (MoJ) • Police	Funding and provision • Corrections funds and provides primary health care to their prisoners, including drug and alcohol services • Secondary and tertiary health care for prisoners, and assistance for disabled prisoners, are funded and provided by the local DHB • Prisoners with serious mental health needs are managed in partnership with DHBs' Regional Forensic Mental Health Services (funded by Vote Health) Provision • Corrections has 14 Intervention and Support Units for prisoners at risk of suicide or self-harm • Corrections assesses prisoners' mental and physical health needs when they arrive in prison • Courts (MoJ) use health practitioners for assessments See also • General mental health care, page 116	• Corrections have 480 health staff • Total health spending at Corrections approx. $57.8m in 2011/12, but they have recently been voted more money for mental health • Vote Police 2017 included $500k for Mental Health Prevention Team	

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments

Disability and chronic condition support	• MSD
	• MoH
	• ACC
	• MoE
	• Lottery Grants
	• Local authorities
		Funding
		• MSD disability funding for devices, aids, etc.
		• MSD funds the Supported Living Payment – a benefit for people unable to work 15 hours or more a week due to a health condition or disability, or caregivers of people requiring high levels of care
		• ACC funds most services for people disabled as a result of accident
		• MoH funds or part funds some disability support services for disabilities not covered by ACC, including residential care, respite care, subsidies for hearing aids, home help, retirement homes, behaviour support services, etc.
		• Ministry for Education funds special education services and assistance for students with disabilities and/or high health needs
		• Lottery Grants Board provides funds for disabled individuals to buy equipment, retrofitting etc. not covered by other funding
		Provision
		• MSD provides assistance for disabled people to participate in the workforce
		• Local authorities work on accessibility, eg Accessible Christchurch
		• Other
		• MSD administers the Office for Disability Issues, which provides advice to other government agencies on disability issues, and supports the Minister for Disability Issues. They also support the NZ Sign Language Board and Fund. But MoH provides policy advice on disability support services
		See also
		Veteran's health, page 119
		Healthcare in schools, page 119
			• In December 2016 there were 93,433 people getting Supported Living payments
			• MoH Disability Support Services budget is $1.2 billion, of which:
			  • 45 percent residential care
			  • 23 percent community care
			  • 11 percent environmental support
			  • 7 percent high and complex needs
			  • 14 percent other
			• In 2009/10 ACC spent $91.4m on admin and provision of social services to assist in living with disease and impairment
			• Lottery Grants Board funding of $4.8m to individuals with disabilities
			• MSD: $4m for Promoting Positive Outcomes for Disabled People
			• MSD: $380m for Disability Assistance
			• MoE: $1.2m for support for students with high health needs	

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Healthcare in schools	• MoE • MoH	Funding • Funding for school nurses, etc. split between Ministries of Health and Education • Some schools fund additional services through donations or other funding • Some work on various health issues such as rheumatic fever, suicide prevention, etc., is funded by the MoH See also • Disability and chronic condition support, page 118 • General mental health care, page 116		• Significant amounts of informal counselling and other healthcare work are performed by teachers • Most health education included as general teaching load
Veterans' health	• New Zealand Defence Force (NZDF) •	Funding • NZDF pays for assessment, treatment, and rehabilitation (mental and physical health) for Vietnam veterans and their families and under the Veterans Support Act. Health services for Vietnam veterans' families mostly relates to congenital conditions in children and grandchildren of veterans who were exposed to Agent Orange and other toxins • NZDF funds support services for elderly and/or disabled veterans as part of Veterans Independence programme	• Medical aid for Vietnam veterans and under Veterans Support Act: combined total approx. $14m • Veterans Independence programme: $9m	• MSD administers Veterans' Pensions • Veterans' Affairs is part of NZDF
Defence personnel health	• NZDF	Funding • NZDF funds health care for servicemen and women, and their families serving overseas (including non-operational duty). • NZDF funds dental care in NZ and overseas Provision • NZDF provides some care, particularly for people on operational duty	• In 2009/10 Defence healthcare spending was estimated at $36.5m	

Table 43: Cross government activities – Public health and safety

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Three waters (drinking, sewage, stormwater) + disposal of hazardous and general waste + general environmental	• MoH • Territorial authorities • DHBs • Worksafe NZ • Ministry of Civil Defence & Emergency Management (MCDEM) • Ministry for the Environment (MfE)	Funding • Waste disposal sometimes part or full user-pays (tip fees, council rubbish bag charges, etc.), especially for commercial operators • MfE provides some funding for river clean-up projects, waste minimisation, and other projects Funding and provision • Drinking water suppliers are usually owned and funded by local authorities and are responsible for monitoring water supply safety from abstraction to the destination property, and responding to contamination • Local authorities usually own and fund all three-waters infrastructure in their areas • Regional councils manage source catchments out of their general funding • Waste disposal is provided and funded by local authorities • Territorial authorities monitor and enforce most aspects of environmental health regulation. Funding is a mix of their general funds, fines and user pays • MCDEM assists with repair and rebuild of water and waste infrastructure Other • Public Health Units (part of DHBs, funded by Vote Health) ensure drinking water quality and investigate waterborne disease outbreaks • Water supply systems overseen by MoH • Worksafe has some oversight of disposal of hazardous waste (asbestos etc) • MCDEM oversees emergency planning and recovery and assists with repair and rebuild of water and waste infrastructure • MfE provides direction on environmental matters	• Local Government New Zealand (LGNZ) estimates that 16 percent of council spending is water supply and waste water, and 4 percent is solid waste / refuse • Christchurch City Council (CCC) spent $36.5m (4 percent of spending) on stormwater drainage, $105.5m (10 percent) wastewater systems, $63.9m (6 percent) water supply, $49.6m (5 percent) refuse disposal and $67.7m (6 percent) parks, heritage and coastal environment • MfE administers major contestable environmental funds, including the Freshwater Improvement Fund ($100m over 10 years), the Community Environment Fund ($1.6m over 3 years), and the Contaminated Sites Remediation Fund ($2.6m per year) • MCDEM funds 60 percent of three-waters repairs and rebuilds after disasters • Additional $2.4m from MCDEM to Kaikōura District Council for three waters repairs • MCDEM providing $2.6m to Hurunui and Kaikōura districts for hazardous waste disposal and repairs to waste infrastructure	• CCC parks, heritage and coastal environment spending also counted under sport and recreation, page 10 • Environmental fund spending has variable connection to health – for example river clean-up fund spending may have a high connection to human health if the river is currently unsafe for swimming, or a low connection if it is safe for swimming but infested with pest species

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Family and sexual violence, child neglect, vulnerable children, etc.	• MoH • Police • Oranga Tamariki • MSD • MoJ • Corrections • ACC • DHBs	Funding and provision • Partnership between ACC and MoH to fund and manage Power to Protect programme (preventing assaults on children) • ACC funds treatment for mental injury and trauma, for example as a result of sexual assault, as well as physical health care needs as a result of assault • Justice system agencies (Police, MoJ, Corrections) are funded out of their general budgets to protect victims and try to rehabilitate offenders, including with counselling and behaviour therapy Other • MoH is part of the Ministerial Group on Family Violence and Sexual Violence work programme • See also General mental health, page 116	• Vote Oranga Tamariki 2018/19 included $268m for early and intensive intervention (not all of this involves child abuse and neglect) • In 2016 Police investigated 118,910 incidents of family violence	
Food safety	• MPI • City and District Councils	Funding and provision • City and district councils oversee food safety (restaurants etc) in their areas. Funded or part funded by user fees Other • MPI oversees education, food safety codes and standards, recalls, labelling etc.	• MPI's food safety section has $113.7m of dedicated funding. This does not include things shared with the rest of MPI (rent, support services etc.) • Food suppliers pay fees for food safety certification (not clear if this covers all the costs to MPI / the council)	
Workplace health and safety	• Worksafe • ACC	Funding • ACC provides subsidies for equipment and training Other • Worksafe oversees health and safety regulation and provides leadership • ACC works with employers to improve workplace health and safety, through advice and subsidies	• Worksafe total budget: $95.5m including $2m from ACC	• All organisations have health and safety functions for their own staff + contractors, visitors, clients.

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Alcohol	• District Licensing Committees • MoH • DHBs • City and District Councils • Licensing trusts • ALAC	Funding • The Sale and Supply of Alcohol Act 2012 aims to ensure liquor licensing costs are met by the alcohol industry (user pays) rather than ratepayers Other • Territorial authorities create local alcohol policies which set limits on trading hours, location and density of licensed premises, and other conditions • Territorial authorities can also create alcohol free zones banning public drinking in particular areas • District Licensing Committees are independent bodies administered by councils. They decide applications for liquor licenses		
Border control	• New Zealand Customs Service • Ministry for Primary Industries (MPI) – Biosecurity section • Immigration New Zealand • MoH • Regional Health Authorities • MedSafe	Funding and provision • Customs Service controls imports, including drugs, alcohol, tobacco, other hazardous substances and dangerous items, out of their own funding • Immigration NZ checks the health status of people applying to immigrate. Applicants pay for medical checks and documentation, Immigration NZ pays for its own work • Regional health authorities work with other border agencies on border health issues including screening and quarantine; each paying out of their own funding Other • MoH leads policy work on border health protection planning and policy, paid for out of Vote Health • MedSafe has oversight over what medications can be brought into NZ	• MPI total biosecurity spending is $213.9m, but this is largely focused on animal health and environmental threats • It is not possible to separate out health-related Customs Service activity from their general activity	

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Road safety	• Police • NZ Transport Authority (NZTA) • Ministry of Transport • ACC • Territorial authorities • Local government transport agencies	Funding and provision • Police are funded to enforce road safety laws and regulations, detect road safety violations through breath testing and other investigation, and provide some education • NZTA is funded to provide public education (awareness campaigns etc.) and is responsible for the funding, building and maintaining the state highway network, including safety aspects • Territorial authorities are responsible for funding, building and maintaining roads that are not part of the state highway network, including safety aspects • ACC and local government transport agencies (eg Auckland Transport) fund and provide some public education	• Police spend $323 (19 percent of Vote Police) on their Road Safety Programme • It is not possible to separate work on improving the safety of roads from general upgrading road work	

Table 44: Cross government activities – Determinants of Health

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
Whānau Ora	• TPK • Ministry for Pacific Peoples • 3 Whānau Ora commissioning agencies • MoH • DHBs • Numerous other government agencies and non-government organisations	Funding and provision • Whānau set their own goals (which may or may not be health-related), and the help they need to achieve this is funded or part funded via the commissioning agencies with TPK as the parent body. Provision is a mix of public, private and NGO services • DHBs are required to support Whānau Ora across priority health areas (mental health, asthma, oral health, obesity, tobacco), and use their own funding to do so Other • The Whānau Ora partnership group provides strategic leadership. Made up of six iwi representatives and the Ministers of Finance, Education, Health, Social Development and Economic Development	• Total Whānau Ora outcomes commissioning budget: $71.3m. Also $7.8 in Whānau Ora administration at TPK • MoH provides some funding for Whānau Ora	• The point of Whānau Ora is to address whānau issues holistically rather than in silos, so it is not possible to separate out funding for health and non-health goals • In some cases whānau plans will involve health services, but more often they involve determinants of health (smoking, diet, exercise etc.)
Sport, exercise, and outdoor recreation	• Sport NZ (formerly SPARC) • Lottery Grants Board • TPK • MoH • Local government • MoE •	Funding and provision • Physical education, school sports etc. funded through general education funding + fees, donations, sponsorship, etc. and provided mostly by schools Other • Sport NZ encourages people to participate in sport and physical recreation at all levels (and also supports high level athletes)	• Sport NZ receives $54m a year from Lottery Grants Board + another $2m for water safety • $7m from Lottery Grants Board for outdoor safety • Many sports clubs, outdoor rec groups etc. receive funding from Lottery Grants Board • TPK has $3.5m for its Moving the Māori Nation sport and culture programme • Councils fund sports fields etc. – LGNZ estimates 7 percent of council spending is on recreation and sport. CCC spent $67.7m on parks, heritage and coastal environment (6 percent of total spending)	• Search and Rescue often rescues people engaged in outdoor recreation (trampers, mountaineers, hunters, etc.) – this is run by volunteer organisation Search and Rescue, with support from Police, Maritime NZ and others
Healthy housing	• Housing NZ • MoH	Funding and provision	• MSD provides emergency housing grants: approx. $40-50m per year.	• No clear boundary between health and non-

Service area / topic	Agencies	Role	Funding amounts (examples)	Other comments
	• MBIE • TPK • City and District Councils • Other social housing providers • MSD • Energy Efficiency and Conservation Authority (EECA)	• Housing NZ owns approx. 63,000 state houses with approx. 184,000 tenants. Housing NZ are responsible for upkeep of their properties, but MSD is responsible for applications, etc. • In 2016/17 Housing NZ had 113,963 urgent health and safety requests, dealt with out of general budget • Building inspections conducted by councils, on a user-pays basis Funding • EECA provides 2/3 grants for insulation and ground moisture barriers for homeowners and landlords. The landlord grants ended in June 2018 Provision • There are 71 registered Community Housing Providers, including NGOs, iwi, etc. This does not include councils, most of which also provide social housing, especially for elderly Other • MBIE oversees housing standards • Housing NZ has a target to reduce avoidable hospitalisations for children	• Housing NZ spent $24.9m on making homes warm and dry, $4m on driveway safety, plus other repairs or improvements which can be health related, such as re-roofing. It also spent $52m on meth testing and decontamination • EECA home insulation programme: $12m • MoH has $4.5m per annum for the Healthy Homes Initiative • Vote Housing includes $791k for Social Housing provider development • TPK has $23m non-departmental funding for Māori Housing Network and other housing work, including repairs, education, capability improvements, increasing supply, etc.	health housing spending, since good housing is necessary for good health, but not all housing spending specifically relates to healthy housing • Wider state spending on housing sector (eg $1b Housing Infrastructure Fund) not included, although increasing housing stock should improve health by reducing overcrowding