

Diabetes Action Plan 2022-2027

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Citation: Ministry of Health. [Year]. *[Title: Subtitle]*. Wellington: Ministry of Health.

Published in [Month] [Year] by the Ministry of Health
PO Box 5013, Wellington 6140, New Zealand

ISBN [Insert] (print)
ISBN [Insert] (online)
HP [Insert]



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Foreword

Placeholder: Foreword by Associate Minister Henare

Mihi

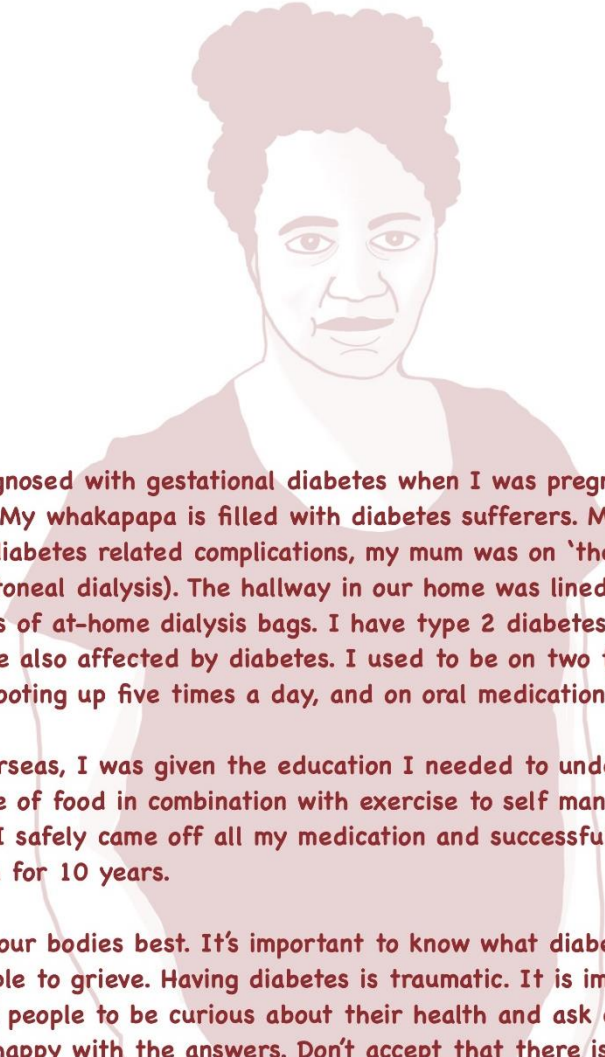
Our vision for the Diabetes Action Plan is an aspiration for improvement and change. *'Turning the tide on Diabetes... to achieve Pae Ora, Healthy Futures'* brings into focus the reality of an ever-moving horizon and aligns with the whakatauki from Whakamaua: *'Ko te pae tawhiti, whāia kia tata. Ko te pae tata, whakamaua kia tina. - Seek out the distant horizons, while cherishing those achievements at hand.'*

In seeking out the horizon of Pae ora, we are encouraged to be deliberate in our approach by nurturing and sustaining the goals at hand (ko te pae tata) while moving collectively towards the goals yet to be achieved (ko te pae tawhiti).

We would like to thank and acknowledge those that have contributed feedback and insights and have undertaken this waka journey with us so far. We have sought to capture your voice, lived experiences and wisdom in this document. The contribution of whānau, our workforce and organisations to making a difference for all people living with diabetes is very appreciated.

*He waka eke noa, kia eke panuku, kia eke Tangaroa.
We are in this waka together. Through all our efforts, we shall succeed.*

M.R., Māori, Gestational and Type 2 Diabetes.



I was diagnosed with gestational diabetes when I was pregnant with my daughter. My whakapapa is filled with diabetes sufferers. My grandmother endured diabetes related complications, my mum was on 'the bag' (peritoneal dialysis). The hallway in our home was lined on both sides with boxes of at-home dialysis bags. I have type 2 diabetes. My whānau whanui are also affected by diabetes. I used to be on two types of insulin, shooting up five times a day, and on oral medications too.

While overseas, I was given the education I needed to understand the importance of food in combination with exercise to self manage my diabetes. I safely came off all my medication and successfully managed my hauora for 10 years.

We know our bodies best. It's important to know what diabetes is and allow people to grieve. Having diabetes is traumatic. It is important to encourage people to be curious about their health and ask questions until they are happy with the answers. Don't accept that there is only one way to manage diabetes. It's all interconnected – we have our physical well-being, but also our wairua, whānau and hinengaro.

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Introduction

The number of people diagnosed with diabetes in Aotearoa New Zealand has increased by over a third in the last decade to almost 280,000. This increase is largely due to the growing prevalence of type 2 diabetes, which accounts for around nine out of ten diabetes cases. Growing levels of obesity are fuelling this increase which is predicted to reach between 390,000–430,000 people living with type 2 diabetes by 2040.

Māori, Pacific and Indian communities have seen the largest increase in diabetes over the last decade. However, it is Māori and Pacific communities that experience the greatest burden of diabetes-related complications and who experience the largest inequities in access to care.¹ This reflects wider socioeconomic inequities and the ongoing impacts of colonisation which affect the ability of communities to lead healthy lives and access timely, effective, and culturally safe healthcare.

A system-wide approach is required to address inequities, with action needed at all levels. Inequities are persistent across the diabetes care pathway, with Māori and Pacific people experiencing inequitable access to care at all stages of diabetes management, despite having more complex health needs.

There are significant opportunities to improve the delivery of equitable, culturally safe diabetes care. Aiming for equity in access, experience of care and outcomes. This includes addressing inequities in access to care among rural communities, people with disabilities and people experiencing mental illness. (Appendices 1 and 2 provide more information on diabetes in Aotearoa).

The Diabetes Action Plan sets out the priority actions for improving diabetes care in Aotearoa New Zealand over the next five years. It addresses the need for early identification and better management of pre-diabetes², type 1, type 2 and gestational³ diabetes. (Appendix 3 outlines the development process for the Diabetes Action Plan).

The Diabetes Action Plan focuses on intervening early to slow or prevent the development of diabetes and its complications in our priority groups of Māori, Pacific people, whānau experiencing socioeconomic inequities, and whānau with poorly controlled diabetes. Within these priority groups, early intervention, particularly among young adults and pregnant women, will improve whānau outcomes across the life-course and will help reduce the intergenerational impact of diabetes.

¹ Diabetes prevalence is high in Indian communities due to strong genetic predisposition and greater degrees of insulin resistance. However, access to healthcare is high in this group and levels of diabetes-related complications are low (see appendix 1 for more details)

² Pre-diabetes (or Impaired Glucose Tolerance) is defined as having a HbA1c of between 41 and 49mmol/mol. Whānau with pre-diabetes, particularly those at the upper end of this range, are at increased risk of developing type 2 diabetes.

³ Diabetes that is first detected in pregnancy and usually resolves following the birth of the baby. If untreated, it can lead to complications for mother and baby. See Appendix 1 for more details.

Addressing diabetes is a key focus area for government and has been highlighted as a priority in Whakamaua: Māori Health Action Plan 2020-2025 and Ola Manuia: Pacific Health and Wellbeing Action Plan 2020-2025. It is intended that the Diabetes Action Plan will guide and inform the future work programmes of the new health sector entities established under the Pae Ora (Healthy Futures) Bill.

The focus areas and key actions outlined in the action plan align with the key system shifts for the new health system: reinforcing Tiriti ō Waitangi principles, supporting people to stay well in communities, equitable access to high quality emergency and specialist care, strengthening digital services and technology, and ensuring we have a well-resourced workforce. A collaborative approach will ensure implementation of the action plan aligns with the priorities and values agreed by the Māori Health Authority, HealthNZ and the Public Health Agency.

The Diabetes Action Plan will be supported by the development of the Population and Public Health Strategy from 1 July 2022, when the new Public Health Agency will commence. This Strategy will focus on preventing diabetes and other non-communicable disease, as well as addressing communicable disease, harm and injury. It will incorporate a population health approach by focusing on Te Tiriti o Waitangi, improving outcomes for populations experiencing inequity and addressing the social, economic, commercial, cultural, environmental (including climate change) and other determinants of health and wellbeing.

The Population and Public Health Strategy will strengthen action to prevent diabetes, through addressing key risk factors, including obesity. The strategy will also support the implementation of the Diabetes Action Plan by ensuring our communities and environments enable whānau to effectively manage their health and wellbeing.

Vision

Turning the tide on diabetes...to achieve pae ora, healthy futures

Through early identification and effective support, we can slow, and for many whānau, reverse the progression of diabetes. This includes identification of pre-diabetes and early diagnosis of type 2 diabetes. For whānau with existing diabetes (type 1+2) we can better support them to minimise the impact of the condition on their health and wellbeing and reduce the likelihood of life-changing complications like amputation, blindness, or kidney failure.

The ocean, our moana is the theme underpinning this action plan. Whānau, communities and the health system must work together, using all our varied expertise, skills, and knowledge, to turn back the tide on diabetes.

This action plan has three strong currents running through it. The first is recognition that whānau⁴ are kaitiaki of their own health and wellbeing. Whānau should have access to the support and resources needed to enable them to effectively manage diabetes within their community. Whānau are central to the design and delivery of the Diabetes Action Plan, to ensure we are prioritising what matters most to them.

The second current is integration of care, so whānau are better supported to stay well. We need to take a more holistic approach to diabetes care which considers wider health, wellbeing and social needs and is increasingly community based. Integrated care will enable whānau to access wrap-around support, including specialist support to help prevent and manage complications. Integration of care will be supported through better data integration, enabling multidisciplinary team working and implementation of evidence-based models of care.

The third current, which underpins everything we do is equity. Whānau will be supported to access high quality, equitable and culturally responsive health care. This includes development of a strong, culturally competent and clinically safe workforce and increased access to Māori and Pacific-led care. Strong monitoring and accountability will support accelerated action on equity.

Research clearly shows which groups are most impacted by diabetes, so **the plan prioritises Māori, Pacific people, whānau experiencing socioeconomic inequities, and whānau with poorly controlled diabetes**. Prioritising these groups is an important step in addressing systemic inequities and the impact of colonisation.

⁴ This report uses the term whānau to refer to individuals with diabetes as well as their wider family and support networks.

Hamish, Tongan, Type 2 Diabetes



I was diagnosed with type 2 diabetes in 2012. By 2016 I had experienced how variable diabetes care can be in New Zealand.

I moved from Auckland to Blenheim in 2016. I had to prove that I had diabetes because there was an issue with transfer of medical notes. The practice wouldn't prescribe my diabetes medication. Fortunately I found a local pharmacy to give me an emergency supply.

Then my GP changed my medication quantities which led to several weeks of hypoglycaemia and hyperglycaemia before I convinced them to change it back.

Since my diagnosis I have also experienced cultural incompetency several times. One clinician said I should have been tested on the basis of my family demographic, and another recommended I identify as New Zealand European because I didn't look Pasifika.

The big difference I would seek is to be able to work with a health care provider and develop a plan for my diabetes, instead of being told that it was inevitable I will be on insulin and have health complications. I want to have my treatment centralised so if I ever move again, it doesn't feel like I am starting all over again with my care. I want to engage with a provider that is a one-stop shop, where I can try a variety of different things or trial changes and then have the results tracked for analysis.

Principles

The Diabetes Action Plan is developed in line with the following guiding principles which reflect our commitment to equity, enactment of our obligations to Te Tiriti o Waitangi and the development of a true partnership with Māori. These principles also help ensure that whānau with lived experience of diabetes, and our priority groups, are active participants in the development and implementation of the plan.

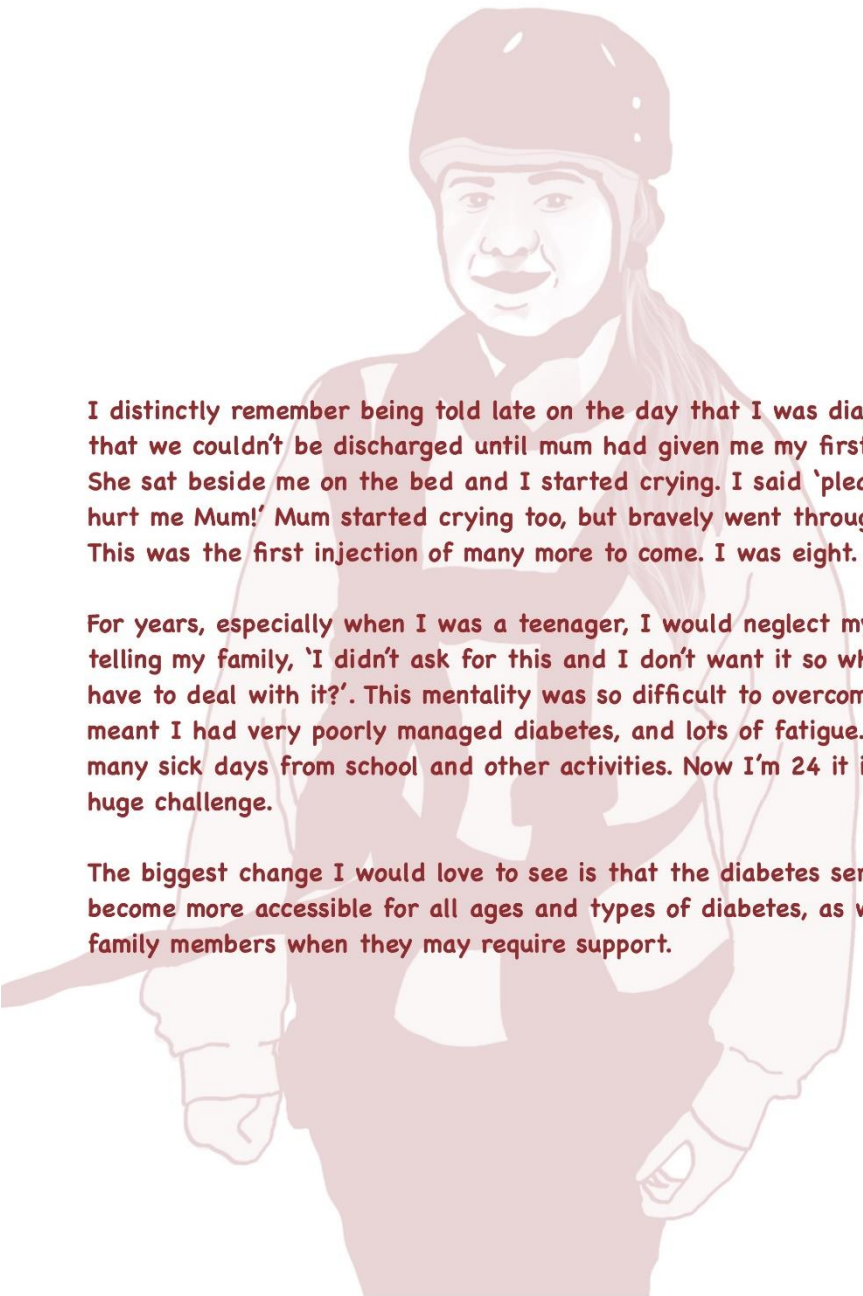
Te Tiriti o Waitangi	Under Te Tiriti o Waitangi (Te Tiriti) the Ministry of Health, as steward and kaitiaki of the health and disability system, has a responsibility to enable Māori to exercise their authority and enable the health system to achieve equity for Māori. Our work is guided by our commitment to uphold Te Tiriti principles, outlined in more detail on page 11.
Achieving health equity	People experience differences in health that are not only avoidable but unfair and unjust. Equity recognises that different people with different levels of advantage require different approaches and resources to get equitable health outcomes. The action plan takes a focus on achieving equity for our priority groups: Māori, Pacific peoples, whānau experiencing socioeconomic inequities and people with poorly controlled diabetes. Equity is considered in terms of equitable access, equitable opportunity, and equitable outcomes.
Informed by lived experience	Ongoing consumer participation and expertise are central to the success of the Diabetes Action Plan. Consumers will be involved in all stages of its development and implementation. This includes building a greater understanding of what works for different groups, in different contexts, and addressing the barriers and enablers to delivering whānau-centred care.
Evidence-informed	The action plan is informed by the national and international evidence base. It supports the use of research and evaluation to drive change, with a focus on strengthening the use of Kaupapa Māori and Pacific-led research.
Mana enhancing	All people are valued, acknowledged, respected, and celebrated for who they are. People work together in an environment of integrity, trust, and sincerity, in supporting others' physical, cultural, spiritual and emotional needs.

Te Tiriti o Waitangi

The following table outlines how Te Tiriti principles will be enacted through the implementation of the Diabetes Action Plan.

Principle	
<p>Tino rangatiratanga</p> <p>Providing for Māori self-determination and mana motuhake in the design, delivery, and monitoring of services.</p>	<p>Māori will determine how services are designed and delivered for Māori, with resource directed to Māori providers and communities to support this. Insights from whānau and the need to strengthen Māori self-determination will drive improvement across diabetes care.</p> <p>Access to data will enable monitoring, evaluation and informed decision making.</p>
<p>Partnership</p> <p>Working in partnership with Māori in the governance, design, delivery and monitoring of health and disability services.</p>	<p>There will be equal Māori representation at decision-making tables and in all governance arrangements. Partnerships with Māori providers and communities will be strengthened to ensure increased opportunities for shared learning and improvement.</p>
<p>Active protection</p> <p>Acting to the fullest extent practicable to achieve equitable outcomes for Māori. This includes ensuring that the Crown, its agents, and its Tiriti partner are well informed on the extent, and nature, of both Māori outcomes and efforts to achieve Māori equity.</p>	<p>Within the scope of the action plan, we have prioritised actions that support equitable outcomes for Māori. This includes the need to provide more comprehensive, culturally appropriate and holistic support for whānau living with or at risk of developing diabetes.</p> <p>The action plan will be supported by the development of the Population and Public Health Strategy.</p>
<p>Options</p> <p>Providing for and properly resourcing kaupapa Māori and whānau-centred services. The Crown is obliged to ensure that all services are provided in a culturally appropriate way that recognises and supports the delivery of Māori models of care.</p>	<p>The action plan supports the expansion of kaupapa Māori and whānau-centred models of care to support a more holistic approach to diabetes prevention and care. This includes recognition of the role of rongoā Māori in supporting whānau wellbeing.</p>
<p>Equity</p> <p>Equity means recognising that people have differences in outcomes that are not only avoidable but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes.</p>	<p>The action plan prioritises those who experience the greatest inequities in diabetes care and outcomes. We will accelerate progress in achieving equity through strengthened monitoring, evaluation, and accountability.</p>

Laura, Pākehā, Type 1 Diabetes.



I distinctly remember being told late on the day that I was diagnosed that we couldn't be discharged until mum had given me my first injection. She sat beside me on the bed and I started crying. I said 'please don't hurt me Mum!' Mum started crying too, but bravely went through with it. This was the first injection of many more to come. I was eight.

For years, especially when I was a teenager, I would neglect my diabetes, telling my family, 'I didn't ask for this and I don't want it so why should I have to deal with it?'. This mentality was so difficult to overcome. It meant I had very poorly managed diabetes, and lots of fatigue. This led to many sick days from school and other activities. Now I'm 24 it isn't such a huge challenge.

The biggest change I would love to see is that the diabetes services become more accessible for all ages and types of diabetes, as well as for family members when they may require support.

Diabetes Action Plan

Vision	Turning the tide on diabetes...to achieve pae ora, healthy futures							
Goals	Whānau are supported to stay well		Whānau are kaitiaki of their own health			Whānau receive high quality, equitable and safe care		
Focus areas	1. Whānau are supported to understand and reduce their risk of diabetes	2. Whānau have the information and support to help them reverse or manage their diabetes	3. Whānau have equitable access to medicines and technology	4. Integrated data supports equitable and responsive whānau care	5. Whānau receive wrap-around support to help prevent complications	6. Diabetes care is supported by strong leadership and accountability	7. Diabetes care is delivered by a strong, culturally competent and clinically safe workforce	8. Diabetes care is informed by a strong culturally responsive evidence base
Enablers	Māori - Crown Partnerships	Leadership and capability	Collaborative action			Workforce		Data & digital
Priority groups	Māori, Pacific, whānau experiencing socioeconomic inequities and those with poorly controlled diabetes							
Principles	Te Tiriti o Waitangi – Achieving health equity – Informed by lived experience – Evidence-informed – Mana enhancing							

Whānau are supported to stay well

Focus area 1: Whānau are supported to understand and reduce their risk of diabetes

Focus area 2: Whānau have the information and support to help them reverse or manage their diabetes

The earlier type 2 diabetes, or pre-diabetes is diagnosed, the greater the chance of reversing the condition. We can maximise this opportunity through increased awareness of diabetes and improved access to screening, particularly among younger people. Women who have had gestational diabetes should also be regularly screened, given their increased risk of developing type 2 diabetes.

Early access to comprehensive self-management support can then enable whānau to stay well. Whānau will be supported to have the knowledge, skills, and confidence to effectively manage their health and wellbeing. After being diagnosed with diabetes or pre-diabetes, whānau will have easy access to diabetes-specific education and self-management support. They will be supported to develop an individualised care plan and offered follow-up support to help maintain lifestyle changes.

This support will be delivered in a non-judgemental, whānau-centred manner, predominantly within communities. Community-led and supported wellbeing initiatives will also play an important role in supporting whānau to adopt and maintain healthy lifestyles. Our COVID-19 response has demonstrated the unique ability of Māori and Pacific providers to support community health and wellbeing, when mobilised and resourced to do so.

‘A family and community approach is key to all diabetes services. Collectively, not individualised, as Pacific peoples live, eat and rely on support of families, churches and community groups. It needs to create space to talanoa, explore and understand lived experiences and maintain their strong cultural backgrounds’ Soana Muimuiheata, Dietitian Consultant

Lifestyle changes can also be supported through better use of digital technology. Digital approaches need to be co-designed with communities, so they are user friendly, fit for purpose and achieve equitable outcomes. There are a number of promising digital initiatives in development, including OL@-OR@, a mHealth tool, co-designed and evaluated in partnership with Māori and Pacific communities.⁵

⁵ Mhurchu *et al.* A co-designed mHealth programme to support healthy lifestyles in Māori and Pasifika peoples in New Zealand (OL@-OR@): a cluster-randomised controlled trial *The Lancet Digital Health* 2019

Whānau will be supported to manage their diabetes, regardless of how long they have had the disease. This means improving referral pathways to self-management support for all whānau, including those who have been hospitalised due to their diabetes.

Best-practice training and delivery resources informed by mātauranga Māori and Pacific knowledge will help improve the quality and consistency of diabetes education and self-management support.

What about type 1 diabetes?

Leading a healthy lifestyle and effective self-management is just as important for people with type 1 diabetes. This includes following a healthy diet, regular physical activity, taking appropriate amounts of insulin and self-monitoring blood glucose levels throughout the day. Effective self-management helps improve glycaemic control and reduce the risk of acute complications such as hypoglycaemia and long-term micro and macrovascular complications.

Self-management support should be delivered as part of a broader package of care, supported by the specialist health care team. Addressing the psychological impact of managing a long-term condition is an important aspect of this support.

Young people with type 1 diabetes require additional support as they transition from paediatric to adult diabetes care. This includes self-management support tailored to their needs, covering a range of issues including mental health, alcohol and drug use, and contraception. Adolescence can be a difficult time in any person's life but coupled with a long-term condition it can be especially challenging. Access to an integrated multi-disciplinary team, which includes psychological support, is essential and has the potential to prevent longer-term complications.

Awhi, Māori, (Ngāpuhi, Te Mahurehure, Otatara ki Ngatiwhatua, Kaipara Waihoua) Type 2 Diabetes.



We all have diabetes in my whānau. My parents and I are diabetic and my siblings are pre-diabetic.

I went AWOL around my diabetes because I felt isolated and I didn't really understand what the diagnosis meant. When I was 19 I thought I was invincible, eating and drinking anything I wanted to. Now, years later, I'm insulin resistant and have chronic kidney disease. I'm preparing to go on dialysis with support from the renal and diabetes teams.

I've learnt with the right help, at the right time, I could have slowed all of these complications down

Whānau are supported to stay well

Focus area 1: Whānau are supported to understand and reduce their risk of diabetes

We will strengthen existing mechanisms to identify and support whānau with or at risk of developing diabetes.

Key actions

- Increase awareness of the risk of diabetes among young people and women with gestational diabetes, within our priority groups.
- Follow-up women with gestational diabetes at three months and annually thereafter.
- Increase opportunistic screening for type 2 diabetes among at-risk children and young people, in line with the Australasian Guidelines⁶
- Strengthen the national Cardiovascular Disease Risk Assessment and management programme (CVDRA) through national roll-out of the CVDRA calculation tool, improved risk management and increased access through community outreach.
- Support whānau to understand and reduce their risk of diabetes. This includes support to make lifestyle changes and awareness of the opportunity to reverse or delay the progression of diabetes.

Focus area 2: Whānau have the support, information, and resources to effectively manage their diabetes

Whānau will be able to access high-quality diabetes-specific education and lifestyle support at the time of diagnosis with ongoing support as needed. They will be able to choose the type of support they receive from a suite of available options, tailored to different communities and life stages.

Key actions

- Develop a central hub of self-management tools and resources for whānau with diabetes or pre-diabetes, including access to digital tools co-designed with priority groups.
- Develop content guides, evaluation tools and professional development opportunities to support the delivery of high-quality diabetes-specific education and self-management support.
- Deliver self-management support which meets the needs of priority groups. This means: more whānau-centred approaches co-designed with Māori and Pacific communities; more peer-led approaches and peer support networks; and increased support and resources for young people (with type 1 or type 2 diabetes), whānau with newly diagnosed diabetes, women with gestational diabetes, and young adults at high risk of developing serious complications.
- Increase access to community-led and supported wellbeing initiatives for priority groups, to build health literacy and provide ongoing support.

⁶ Screening, assessment and management of Type 2 Diabetes in children and adolescents: Australasian Paediatric Endocrine Group guidelines, 2020. https://www.nzssd.org.nz/assets/table-files/resources-73-resource_file.pdf

Whānau are kaitiaki of their own health

Focus area 3: Whānau have equitable access to medicines and technology

Focus area 4: Integrated data supports equitable and responsive whānau care

Focus area 5: Whānau receive wrap-around support to help prevent complications

Whānau will be supported to develop individualised care plans, shared across their health care team. These care plans should be developed in partnership with whānau, with an emphasis on self-management, so whānau are equipped to manage their condition and prevent the complications of diabetes. Improved access to comprehensive and culturally appropriate care planning, targeted to those who need it most, will support improved whānau outcomes and help prevent avoidable hospital admissions.

All whānau with diabetes should be proactively supported to optimise their diabetes management. In particular, a greater focus on supporting younger adults within our priority groups, will reduce their lifetime risk of complications. This includes targeted support to optimise management of HbA1c, blood pressure and microalbuminuria levels, and reduce the psychological impact of diabetes, as outlined in the Quality Standards for Diabetes Care 2020.

Māori and Pacific peoples are less likely to be regularly taking diabetes medications, despite higher levels of need. Achieving equitable access to medicines, including the new diabetes medications, requires system-wide action. This includes addressing the financial and health literacy barriers around long-term medication use, improved monitoring of medicine access equity, continued professional development around optimum medication use and improved data integration to support proactive and opportunistic management of diabetes.⁷ The whole diabetes care team, including pharmacists and diabetes nurse specialists, play an important role in supporting medicine access equity.

Regular access to foot checks, retinal screening and oral health assessments, as part of the Diabetes Annual Review, supports whānau to identify and manage diabetes complications. Best practice guidance and standardised care pathways will ensure

⁷ PHARMAC, 2019. Achieving medicine access equity in Aotearoa New Zealand: Towards a theory of change

patients can access preventative care early. This should be supported by improved data integration and increased use of new technologies.

People with type 2 diabetes can be better supported to address the complexities of living with diabetes by having early access to a multidisciplinary team (MDT). This includes improved access to nutritional, psychological, social and kaiāwhina⁸ support, in addition to specialist medical, nursing and pharmacist support. This requires a coordinated, team-based approach to avoid duplication and the need for multiple appointments. The strengthening of primary and community care-based wellness teams will support this MDT approach.

Māori and Pacific-led models of care should be embedded into diabetes care across the motu, to provide more holistic and culturally responsive care (eg, Kimi Ora⁹ and Mana Tū.¹⁰). This will be achieved through sustainable funding, improved translation of research into practice, and culturally responsive evaluation. For example, one of the methods used in Te Ranga Ora learning collective is an economic case-study analysis to model the impact a Kaupapa Māori health service has had on whānau journeys.¹¹

Improved access to mental health and wellbeing support, including rongoā Māori, is needed, recognising the integral relationship between spiritual, mental, and physical health. The establishment of the Māori Health Authority provides a critical opportunity to strengthen the delivery of Kaupapa Māori models of care.

What about type 1 diabetes?

For people with type 1 diabetes, the use of continuous glucose monitoring and insulin pumps can offer significant improvements to both lifestyle and diabetes control. Increased access to glucose monitoring and insulin pumps will be particularly beneficial for young children and their whānau who could avoid the emotional trauma of finger pricking and injecting young children several times a day. Adolescents and young adults will also benefit from improved glucose monitoring and a reduced psychological burden of managing their condition.

Most people with type 1 diabetes are managed in secondary care which can require time off work and transport costs to attend multiple appointments, particularly for rural communities. A whānau-centred approach would see increased access to specialist care within communities and the use of integrated specialist appointments to reduce the burden of attending multiples appointments.

Some people with type 1 diabetes form trusting therapeutic relationships with their endocrinologist, but others see a different specialist every visit. The use of one-stop clinics, group appointments and virtual consultations can help increase access and reduce variability of care.

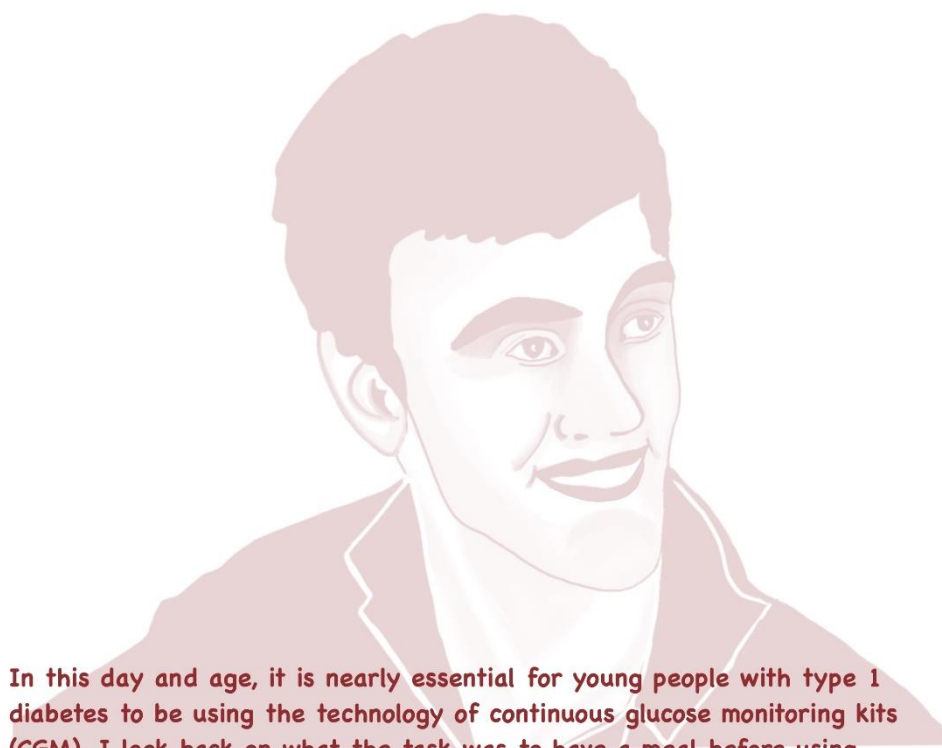
⁸ Kaiāwhina is the over-arching term to describe non-regulated roles in the health and disability sector, including health trainers, navigators, and health improvement practitioners.

⁹ He Pikinga Waiora Kimi Ora lifestyle programme: case study of a successful community-based Indigenous diabetes intervention (nzma.org.nz)

¹⁰ Māori and Pacific peoples' experiences of a Māori-led diabetes programme (nzma.org.nz)

¹¹ Counties Manukau Health in partnership with the Ministry of Health, unpublished

Matt, NZ European, Type 1 Diabetes.



In this day and age, it is nearly essential for young people with type 1 diabetes to be using the technology of continuous glucose monitoring kits (CGM). I look back on what the task was to have a meal before using these. Get the kits out, put the strip on, prick your finger, squeeze out blood, oops not enough blood, repeat. It was a debilitating task. By making testing so easy, CGM encourages people with diabetes to test more often, and take quick action when they have a reading. This gives you more agency in your own diabetes monitoring, resulting in better health outcomes.

As a 12-year-old boy I wasn't prepared to comprehend the news that I was diabetic, or ready to take on the challenge. During my diagnosis, I swept thoughts and feelings under the rug and moved on, but eventually it came back to haunt me. I would like to see greater access to mental health support for all ages with type 1 diabetes - because those of us with this say - 'it doesn't get any easier does it?'

Whānau are kaitiaki of their own health

Focus area 3: Whānau have equitable access to medicines and technology

We will focus on achieving medication access equity for Māori and Pacific people, by reducing barriers to long-term medication use. We will improve access to new technology which supports improved self-management, including insulin pumps and Continuous Glucose Monitoring.

Key actions

- Reduce the financial barriers that prevent priority groups from accessing healthcare.
- Expand the role of pharmacists and diabetes nurse specialists to help increase access to medications and technology, including prescribing and health literacy support.
- Use data to achieve medicine access equity, including identification of whānau who would benefit from access to preventive medication.
- Increase access to insulin pumps and real-time Continuous Glucose Monitoring devices, in-line with international best-practice

Focus area 4: Integrated data supports equitable and responsive whānau care

The new health system reforms will enable us to integrate and share patient data, to support improved whānau care

Key actions

- Integrate patient records across the health system to support improved patient care, quality improvement, monitoring, and accountability.
- Develop an IT solution to identify patients with type 1, type 2, and gestational diabetes at a local and national level, to support improved whānau care and timely access to screening.

Focus area 5: Whānau receive wrap-around support to reduce their risk of complications

We will ensure whānau with, or at high risk of developing diabetes related complications can access timely wrap-around support.

Key actions

- Develop best practice guidance and referral pathways for the prevention and management of renal, foot, retinal and oral complications, and in-hospital diabetes care.
- Provide more support for adolescents and young adults with type 1 diabetes, including access to psychology and improved transition and support into adult care.
- Increase access to integrated, whānau-centred care, including greater availability of Māori and Pacific-led approaches.

Whānau receive high-quality, equitable & culturally safe diabetes care

Focus area 6: Diabetes care is supported by strong leadership and accountability

Strong leadership and governance are needed at all levels of the health system to support greater collective impact. This must include strong Māori and Pacific leadership and representation to support the health system to uphold our obligations to Te Tiriti and address inequities.

Clinical leaders have a key role in driving quality improvement across multidisciplinary teams. DHBs have identified variability in the functioning and effectiveness of their local diabetes teams. This has made it difficult for clinical leaders to deliver the care they know whānau need. Local and regional diabetes teams need to be empowered and resourced to support ongoing quality improvement.

The Quality Standards for Diabetes Care 2020 outline what effective diabetes care looks like in Aotearoa New Zealand. A review in 2021 highlighted the need to strengthen the implementation of these Quality Standards. This will drive improved consistency in the quality of diabetes services across the country.

Strong leadership is underpinned by comprehensive, accessible information to support the delivery of quality care across the patient journey. Better information supports empowered decision-making, not just for clinicians and policy makers, but also for whānau.

Focus area 7: Diabetes care is delivered by a strong, culturally competent and clinically safe workforce

The diabetes workforce comprises a large multidisciplinary team spanning the health continuum and service providers. Diabetes services need to be structured to provide care in a holistic, clinically safe, collaborative and coordinated way. This is challenging given the wide variation in capacity across the country and current workforce pressures due to COVID-19. There is a need to:

- grow and support ongoing development of the Māori and Pacific diabetes workforce
- reduce variation in access to endocrinologists, diabetes nurse specialists, podiatrists, and specialist diabetes dietitians across Aotearoa New Zealand¹²

¹² Diabetes Workforce Service Review, 2011, Ministry of Health

- increase capacity in primary and community care to focus more on prevention and earlier intervention, including access to psychology and social worker support
- strengthen the role of the wider diabetes workforce, including pharmacists and diabetes nurse specialists, to support medicine optimisation and medicine access equity
- strengthen the existing workforce through ongoing education and training in diabetes care, self-management education, health literacy and cultural competence.

Whānau living with diabetes have highlighted the need for health professionals to be more compassionate and supportive, with many feeling judged or unheard by their doctor. Healthcare providers must be able to provide mana-enhancing experiences where whānau feel safe, seen, heard and valued. This will help build trust and effective care partnerships.

'I don't need to hear negatives, I need support'

Focus area 8: Diabetes care is informed by a strong New Zealand evidence base

There are opportunities to strengthen the links between research, policy, and practice in Aotearoa New Zealand so our approach to diabetes prevention and management is informed by the latest evidence. Mātauranga Māori, Pacific ways of knowing and consumer voice will be strongly reflected in the New Zealand evidence base, with equity a key consideration across all interventions.

Improved knowledge translation, collating what works, and greater collaboration between communities, researchers, health professionals and policy advisors will support increased implementation of evidence-based care. An understanding of what works for our priority groups, in different contexts, and at different life-stages, will be essential for achieving equitable health outcomes.

Increased research into new technologies and digital tools will support whānau to self-manage their condition and access care closer to home, for example digital approaches to retinal and foot screening.

Rita, Cook Island Māori, Type 2 Diabetes.



I struggled mentally. I didn't know what was going on. It was all new. I isolated myself, I had mood swings all of the time and I couldn't understand the emotions I was going through.

The Manage Better Self-management Education Programme my GP recommended helped me balance everything in my life. I became the evening facilitator for the programme, running it from 2015 to 2017 as a volunteer. Then in 2017 I was offered an opportunity to work in the health care system and I thought - hell yes! It was like, this is me and this is where I need to be.

Now I lead the Self Management Programme because I have walked the talk. It's helping the community with a holistic approach. It's realising that it's not just the chronic illness that they have, but the ripple affects that it causes. It's the emotions that come with it, the spiritual feeling that comes with it, it's so much more. Instead of just targeting the pain we look at the person as a whole.

Whānau receive high-quality, equitable and culturally safe diabetes care

Focus area 6: Diabetes care is supported by strong leadership and accountability

We will strengthen diabetes leadership and accountability with a focus on prevention, equity, and implementing the National Diabetes Quality Standards 2020. We will identify and remove barriers to improving diabetes care in Aotearoa.

Key actions

- Build relationships and networks with Māori and Pacific organisations, non-governmental organisations (NGOs) and consumer groups to support a more collaborative approach to the prevention and management of diabetes and other long-term conditions.
- Strengthen implementation of the Diabetes Quality Standards, through improved oversight, transparent reporting, and a refresh of the 2014 Diabetes Quality Standards Toolkit.
- Strengthen national, regional, and local diabetes leadership networks to enable ongoing quality improvement and oversight. This should include the development of Māori and Pacific diabetes leadership networks.

Focus area 7: Diabetes care is delivered by a strong, culturally competent and clinically safe workforce

We will strengthen the capacity and capability of the diabetes workforce to meet growing demand. This includes upskilling our workforce to deliver culturally responsive and safe diabetes care.

Key actions

- Strengthen the specialist diabetes workforce, to improve access and support locality-based care.
- Increase the primary and community-based diabetes workforce, including access to kaiāwhina, nutrition, social and psychological support.
- Up-skill the diabetes workforce in health literacy, cultural safety, and effective diabetes care.
- Support growth and development of the Māori and Pacific diabetes workforce.

Focus area 8: Diabetes care is informed by a strong, culturally responsive evidence base

We will strengthen how research, innovation and evaluation is used to inform diabetes policy and practice.

Key actions

- Develop, collate, and share the evidence base on effective and culturally responsive approaches to diabetes prevention and care.
- Support research and innovation into new technologies and digital tools.
- Strengthen the consistent use of evaluation across diabetes interventions, with a stronger focus on measuring equity impact.

Measuring our impact

A set of high-level measures will be collected and reported on nationally to help monitor progress against the action plan goals and whānau outcomes. **All measures will be reported by ethnicity and socio-economic status to monitor progress in achieving equity.** These high-level measures need to be complimented by more detailed local improvement measures (appendix 3) and qualitative insights.

Note: these measures are still in development, with further work underway to refine and agree exact definitions.

Goal	Focus Area	How will we know we are making a difference? (draft measures)
Whānau are supported to stay well	1. Whānau are supported to understand and reduce their risk of diabetes	Incidence and prevalence of diabetes
		% of people who have accessed self-management education within 6 months of being diagnosed with diabetes or pre-diabetes
	2. Whānau have the information and support to help them prevent or manage diabetes	% of people with diabetes who have good HbA1c control
		% of people with diabetes who have good blood pressure control
Whānau are kaitiaki of their own health	3. Whānau have equitable access to medicines and technology	% of eligible people who are regularly dispensed medicine to treat type 2 diabetes <i>*PHARMAC medicines equity measure</i>
	4. Integrated data supports equitable and responsive whānau care	% of people with diabetes who have had a foot check in the last year
	5. Whānau receive wrap-around support to help prevent complications	Rate of preventable hospital admissions among people with diabetes <i>*Health System Indicator</i>
		Rate of diabetes-related complications (limb amputations and renal failure) <i>*Whakamaua measure</i>
Whānau receive high quality, equitable care	6. Diabetes care is supported by strong leadership and accountability	% of people with type 1 diabetes who have access to real-time CGM or an insulin pump
	7: Diabetes care is delivered by a strong, culturally competent and clinically safe workforce	No. of Māori or Pacific peoples needed to start on medicines to treat type 2 diabetes each year to achieve equity <i>*PHARMAC medicines equity measure</i>
	8. Diabetes care is informed by a strong culturally responsive evidence base	% of people with diabetes reporting that their individual and/or cultural needs were met <i>*Primary Care Patient Experience Survey measure</i>

Enablers

The enablers below will facilitate the Diabetes Action Plan to be successfully implemented.

Māori-Crown partnerships

Building and strengthening meaningful Māori-Crown relationships is integral to the design and implementation of equitable diabetes care.

Being whānau-centred and community based requires supporting Māori tino rangatiratanga and mana motuhake for the delivery of diabetes care across Aotearoa New Zealand. Iwi partners and Māori-led organisations are in a position to accelerate the spread of Kaupapa Māori and whānau-centred services and to strengthen accountability to Māori; ensuring services are tailored to meet the specific needs of their communities.

Māori will be equal partners in decision making at a local, regional and national level. This includes the important role of Iwi-Māori partnership boards in shaping the development of locality plans and in agreeing priorities with the Māori Health Authority and HealthNZ.

These essential partnerships will underpin our commitments to Te Tiriti and Whakamaua: the Māori Health Action Plan 2020-2025. To be successful, Māori-led organisations must be supported by adequate access to resources, data and expertise.

Leadership and capability

The pressing need to address inequities around diabetes care means this action plan needs to be prioritised and implemented, across the health system. This will require strong leadership and partnerships across the new health entities. Implementation of the Diabetes Action Plan must be driven by strong Māori and Pacific leadership, to meet the needs of our priority groups and to drive a focus on equity.

Strong strategic, clinical, cultural and operational leadership and capability is integral to ensure the successful implementation of this Action Plan. This must be supported through cross sector, multi-disciplinary networks empowered to operate at national, regional, and local levels.

These networks should include robust Māori, Pacific and consumer representation and should be guided by mātauranga Māori, Pacific ways of knowing, international best practice, and the knowledge of those with lived experience of diabetes.

With a focus on continuous improvement the local diabetes teams, regional and national networks must have access to accurate and timely diabetes data across the health system. This will enable equity-based and evidence-informed decisions to be made, investment and activities prioritised, and achievements monitored and reported on in a more transparent manner.

Collaborative action

Collaboration and strong partnerships at all levels of the Health and Disability System are essential to support the vision of the action plan. This includes:

- collaboration between whānau and their healthcare team
- collaboration between primary and secondary care
- cross-sector collaboration between health, allied health and social care providers
- collaboration between the Māori Health Authority, Health New Zealand, the Ministry of Health, Public Health Agency and other health agencies including PHARMAC and the Health Quality & Safety Commission.

By forging better links across agencies and communities, stronger collaboration and partnerships can tackle what is not solely a health issue. While the delivery of health interventions for diabetes continues to be very important, cross-sector and holistic approaches can support people with or at risk of developing diabetes to make healthy lifestyle choices.

The Ministry of Health will have ongoing engagement with government and non-government agencies and key clinical and non-clinical networks to support diabetes prevention and management.

Workforce

The Health and Disability System reforms promote a new model of care based on trust and integration with coordination of services within a locality.

Whānau want trusted relationships with their healthcare team, requiring continuity of care, cultural safety, cultural responsiveness, mana enhancing interactions, and adequate time to build whakawhanaungatanga.

The workforce will need to accommodate the increased emphasis on:

- whānau involvement in care
- self-management
- peer led support
- multi-disciplinary team-based care.

This will require upskilling the health care workforce not only in clinical management but in cultural safety and communication skills.

Having a diverse workforce that reflects the ethnicities of the communities being served is a priority. Attention needs to be given to strategies to grow, recruit and retain Māori and Pacific workforce.

Data and digital

The COVID-19 pandemic meant health care providers moved quickly into the digital space. Self-management education for whānau is now available in multiple formats including virtually, using toolkits and telehealth. Resources and other supports are available in multiple media, but further work is required to make these resources more culturally-appropriate and accessible to our priority groups.

Sharing data across healthcare providers allows more streamlined whānau care. Access to comprehensive patient data is essential to support improved clinical outcomes. With good quality data it is possible to ensure care is directed to those who need it most. This includes the ability to identify whānau who would benefit from the new diabetes medications and whānau who are overdue for screening or a review of their care plan.

Good quality data has the potential to drive quality improvement and change at both a local and national level. The ability to access (anonymised) information on people with type 1, type 2 and gestational diabetes at a national level is vital to enable monitoring against the Quality Standards for Diabetes Care and to measure progress on equity. Development of national performance measures, supported by local quality improvement measures, will drive ongoing quality improvement and allow evidence-informed and equity-based decision making.

Next steps

The Diabetes Action Plan will be delivered in a phased way over the next five years, 2022-2027. The Ministry of Health will work with the Māori Health Authority, HealthNZ, key stakeholders and networks to prioritise the activities for delivery and to develop an implementation plan. The implementation plan will be a living document reviewed at regular intervals.

A national diabetes leadership group (or groups) will be established with responsibility for overseeing implementation of the Diabetes Action Plan and monitoring its impact. The oversight group(s) will include equal Māori representation and strong Pacific and consumer representation. This will ensure implementation of the action plan prioritises and is accountable to our priority groups.

Ngā Kupu Whakamutunga - Final Words

To be added

Appendix 1: Diabetes Definitions

	Type 1 diabetes	Type 2 diabetes	Gestational diabetes
Prevalence	Around 5-8% of cases	90-95% of cases	Estimated to affect 5-7% of pregnancies
Overview	An autoimmune condition in which the immune system destroys the cells in the pancreas that produce insulin	A metabolic condition in which the body progressively becomes resistant to insulin and/or fails to produce insulin	A metabolic condition triggered by pregnancy hormones where the body becomes resistant to insulin and/or fails to produce insulin
Prevention	No known way of preventing, potential cures are at the experimental stage	Genetic predisposition but good nutrition, exercise and weight management can prevent or reverse development Early identification of pre-diabetes can support preventative action	Genetic predisposition but weight management prior to pregnancy can reduce risk
Onset	Usually develops in childhood or adolescence	Usually develops in adulthood, but increasingly being diagnosed in children and young people	Only present during pregnancy
Lifestyle	Unrelated to lifestyle	Usually associated with poor nutrition, physical inactivity, and excess body weight	Usually associated with poor nutrition, physical inactivity, and excess body weight
Self-management	Requires daily, often multiple insulin injections or a continuous delivery of insulin with a pump Close attention to blood glucose levels and diet, benefitting from dietitian input Healthy lifestyle choices contribute to effective management Routine screening for renal, retinal and oral health complications, together with good foot care, is recommended	Good weight control, nutrition, and monitoring of blood glucose levels As the condition progresses people may need oral medication and insulin therapy Routine screening for renal, retinal and oral health complications, together with good foot care is recommended	Good nutrition and tight monitoring of blood glucose levels are essential to reduce the risk of pregnancy complications Insulin therapy may be needed Screening for diabetes post-natally and annually thereafter
Complications	Blindness and nerve damage Heart disease, kidney, stroke, periodontal disease Amputation of a toe, foot, or lower leg Chronic kidney disease and renal failure requiring dialysis or kidney transplant Reduced life expectancy and lowered quality of life		Risk of pre-eclampsia, caesarean section, stillbirth, birth trauma, large birth weight, neonatal hypoglycaemia, and other pregnancy complications Increased risk of developing diabetes post-natally

Appendix 2: Diabetes in Aotearoa New Zealand

The number of people diagnosed with diabetes in Aotearoa New Zealand has increased by over a third in the last decade to almost 280,000. This means that in our team of 5 million, one in every eighteen people has diabetes.

This increase is largely due to the growing prevalence of type 2 diabetes, which accounts for around 9 out of 10 diabetes cases. Growing levels of obesity are fuelling this increase which is predicted to reach between 390,000–430,000 people living with type 2 diabetes by 2040, one in every twelve people.¹³ The remaining 10% of diabetes cases are predominantly type 1, gestational diabetes, and a small number of more rare forms of diabetes.

Inequities in diabetes are growing

Māori, Pacific and Indian communities are disproportionately impacted by diabetes, and have seen the largest increase in diabetes prevalence over the last decade. The diabetes rate per 1000 people is four times higher in Pacific peoples, over three times higher in Indian and over twice as high for Māori, compared to NZ European. Genetics explain some of this difference, particularly for Indian people.¹⁴ However, this increase is largely being fuelled by socioeconomic deprivation and poor food environments, which adversely impact on health behaviours (Figure 1).

Māori and Pacific people with diabetes are more likely to experience poor glycaemic control, a greater burden of complications and reduced life expectancy, compared to other ethnic groups. While rates of diabetes are high in Indian people, they are less likely to experience diabetes-related complications compared with Māori and Pacific peoples. This is likely to reflect high rates of medication use and good access to healthcare among Asian communities (Figure 5).

The increase in diabetes among younger people is particularly alarming. Young Māori, Pacific and Indian people aged 15-19 years have seen a 50% increase in diabetes

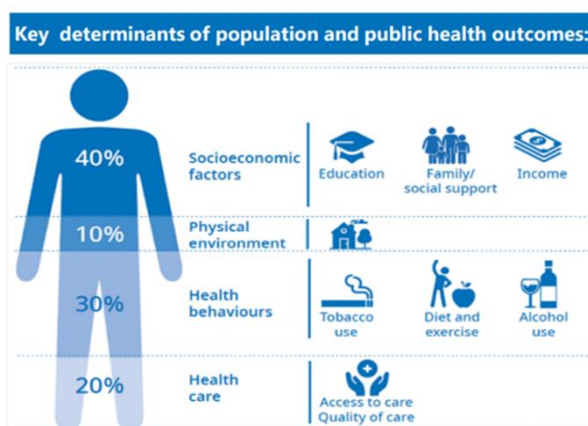


Figure 1

¹³ The Economic and Social Cost of Type 2 Diabetes. PWC, 2021

¹⁴ Ramachandran A, Snehalatha C, Shetty AS, Nanditha A. Trends in prevalence of diabetes in Asian countries. *World J Diabetes*. 2012;3(6):110-117. doi:10.4239/wjd.v3.i6.110

diagnoses over the last decade. While diagnoses among Māori and Pacific young people aged 20 to 24 have almost doubled (93% and 85% increase respectively), (Figure 2)**Error! Reference source not found..**

Young people with type 2 diabetes have a much shorter life expectancy than their peers with type 1 diabetes, due to the aggressive nature of their disease and associated comorbidities.¹⁵

Figure 2

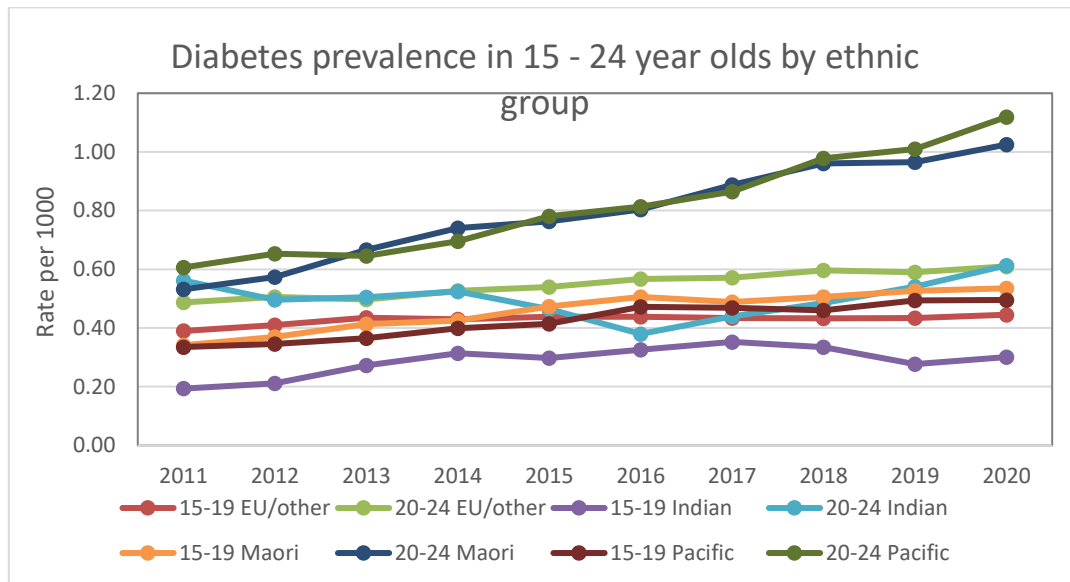
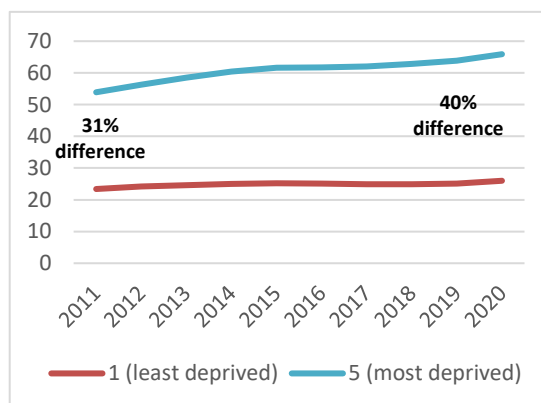


Figure 3

Diabetes rates are highest among people living in the most socioeconomically deprived areas in New Zealand (66 per 1,000 in the most deprived areas compared with 26 per 1,000 in the least deprived areas). Worryingly, this gap has grown by almost a third over the last decade (Figure 3).



Diabetes affects the whole whānau

Diabetes is an intergenerational issue affecting multiple whānau members. This includes increasing numbers of women experiencing diabetes during pregnancy (gestational diabetes). The Growing Up in New Zealand Study estimates that 6.2% of

¹⁵ Narasimhan S, Weinstock RS. 2014. Youth-onset type 2 diabetes mellitus: lessons learned from the TODAY study. *Mayo Clinic proceedings*. <https://doi.org/10.1016/j.mayocp.2014.01.009>

pregnant women experience gestational diabetes, with a further 1% diagnosed with pre-existing type 1, type 2, or impaired glucose tolerance.¹⁶

Uncontrolled gestational diabetes is associated with poor outcomes for both mother and baby. This includes increased risk of caesarean section, pre-eclampsia, postpartum haemorrhage, gestational hypertension, pre-term birth, large-for-gestational-age birth weight, congenital anomalies, stillbirth, injury during birth, neonatal death, and neonatal admission to an intensive care unit. Gestational diabetes is also associated with an increased risk of both the mother and child developing type 2 diabetes in the future.

Diabetes is not the only condition whānau have to manage, with multi-morbidity increasingly common. Among 15-64-year-olds with diabetes, 68% have at least one other comorbidity compared to only 19% of those without diabetes. The average number of co-morbidities increases with age and is highest among Māori and Pacific peoples (Figure 4) and people living in the most socioeconomically deprived neighbourhoods.

Common co-morbidities for people living with type 2 diabetes include cardiovascular disease, chronic kidney disease and gout, highlighting the need to address the shared risk factors for these conditions (eg, a lack of physical activity, inadequate nutrition, alcohol, and smoking).

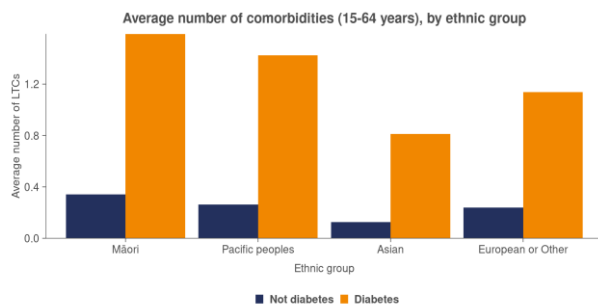


Figure 4

Diabetes places a huge burden on whānau, not just in managing the condition and its related complications, but also the impact diabetes has on the ability of whānau to work, learn, look after tamariki, and participate in their community. Living with the daily challenge of managing diabetes has an impact on whānau mental health. People living with type 1 or type 2 diabetes are at increased risk of experiencing depression, anxiety, and eating disorders, with depression rates twice as high as the general population.¹⁷ The mental health impact of diabetes is a key consideration for disease management, impacting on adherence to treatment and ability to make and sustain lifestyle changes.

Diabetes and its complications are also a major cause of disability. Diabetes is a key cause of cardiovascular disease, blindness, kidney failure and lower limb amputation. Conversely, disabilities that lead to physical inactivity may increase the risk of a person developing diabetes.¹⁸

¹⁶ Lawrence RL, Wall CR, Bloomfield FH. 2019. Prevalence of gestational diabetes according to commonly used data sources: an observational study. BMC Pregnancy Childbirth. DOI:10.1186/s12884-019-2521-2 Note the GUINZ study covers 3 DHBs: Counties Manukau, Auckland and Waikato

¹⁷ The Mental Health Comorbidities of Diabetes (nih.gov)

¹⁸ Diabetes and disability: impairments, activity limitations, participation restrictions and comorbidities (full publication; 20 September 2013)(AIHW)

Diabetes is causing significant health loss

Cardiovascular diseases (including diabetes) accounts for 17% of health loss in New Zealand, while high blood glucose (including diabetes and pre-diabetes) accounts for 6%.¹⁹ This includes health loss from both disability and premature mortality.

People with diabetes are much more likely to attend an emergency department or be admitted to hospital than those without diabetes. The reason for their visit may be due to their diabetes and related complications or because of other comorbidities, including cardiovascular disease, stroke and cellulitis. The total number of hospital admissions primarily due to diabetes has increased from 6,130 admissions in 2014/15 to 7,325 admissions in 2020/21.²⁰ Hospital admission rates for diabetes are highest for Māori (39 per 1000) compared to 24 for European/Other, 21 for Pacific people, and 8 for Indian people.

Rates of hospitalisation for diabetic ketoacidosis and hypoglycaemia have remained stable in recent years. However, those aged 0–24 face higher admission rates than other age groups.²¹ Hospitalisations for diabetic ketoacidosis and hypoglycaemia are significantly higher for Māori, in all age groups.

Between 2011 and 2020, the rate of diabetes-related amputation procedures per 1,000 people with diabetes increased for all ethnicity groups apart from Indian people, for whom the rate reduced by 23%.²² In 2020 Māori faced the highest rate of diabetes-related amputations (6.5 per 1,000 people with diabetes), an increase of 23% since 2011. The total number of amputations has continued to increase since 2011, while the rate of major amputations has remained static.

People with diabetes accounted for 46% of people receiving renal replacement therapy (RRT) between 2015 and 2019. However, this was much higher for Māori and Pacific people, where diabetes accounts for 67% of renal failure, compared to 27% of non-Māori and non-Pacific patients.²³ In 2020, 327 people with diabetes were initiated on renal replacement therapy (RRT), a 60% increase since 2011. The largest increase has been seen among Pacific peoples.

Having diabetes increases your risk of periodontal (gum) disease and other oral health problems. People with a high HbA1c are at particular risk and in turn, having gum disease may impact on HbA1c control.²⁴ The lack of awareness of the link between diabetes and oral health, as well as the disconnect between primary care and dental services limits our ability to measure the impact of oral health problems in people with diabetes.

¹⁹ Ministry of Health. 2016. *Health Loss in New Zealand 1990 – 2013: A Report from the New Zealand Burden of Diseases, Injuries and Risk Factor Studies*. Wellington: Ministry of Health.

²⁰ Ministry of Health, National Minimum Dataset (NMDS), Virtual Diabetes Register (VDR) Dec 2014–2020 (v687)

²¹ Health Quality & Safety Commission. *Atlas of Healthcare Variation*

²² Ministry of Health, National Minimum Dataset (NMDS), Virtual Diabetes Register (VDR) Dec 2011–2020 (v687)

²³ ANZDATA 43rd Annual Report 2019

²⁴ Diabetes & Oral Health | National Institute of Dental and Craniofacial Research (nih.gov)

The mortality rate among people with diabetes has remained relatively stable from 2011–2020.²⁵ Age-standardised mortality rates are highest among Māori (10.3 per 1000 people with diabetes per year), followed by Pacific people (6.4), European/Other (5.6) and Indian (3.8).

Diabetes care in Aotearoa New Zealand

The increasing burden of diabetes and growing complexity is putting pressure on diabetes services. This has been further challenged by the impact of COVID-19 on primary and secondary care services. Access to specialist support is currently variable and primary care services have limited capacity to be able to provide the comprehensive support whānau need to effectively manage their condition and associated complications.

Ethnic disparities in diabetes outcomes have not changed in 25 years, with Māori having the poorest outcomes, even after differences in age, sex, socio-economic status, obesity, and smoking status are taken into account.²⁶ Inequities are persistent across the diabetes care pathway, with Māori and Pacific people experiencing inequitable access to care at all stages of diabetes management, despite having more complex health needs (Figure 5).

Figure 5

Diabetes Management	Māori	Pacific	Asian	NZ European
Unable to visit GP due to lack of transport	6%	5%	2%	2%
Unfilled prescription due to cost	7%	7%	2%	3%
HbA1c is not regularly monitored	18%	14%	10%	12%
Not regularly monitored for renal disease (eGFR)	20%	15%	13%	14%
Admitted for diabetic ketoacidosis	0.7%	0.2%	0.1%	0.4%

Source: New Zealand Health Survey, 2019 and HQSC Atlas of Health Care Variation, Diabetes Atlas 2020

What about type 1 Diabetes?

Globally, around 5 to 10 percent of all people with diabetes have type 1 diabetes (Atkinson et al 2014). The incidence of type 1 diabetes is increasing both worldwide and in New Zealand.²⁷ It is difficult to get an accurate ethnic breakdown of type 1 diabetes in Aotearoa New Zealand, however, data on people with diabetes who have

²⁵ Ministry of Health, Virtual Diabetes Register (VDR) Dec 2011–2020 (v687), Mortality Collection

²⁶ Jansen, R., et al. 2020. Ethnic inequity in diabetes outcomes-inaction in the face of need. *The New Zealand Medical Journal* Nov 20;133(1525):8-10

²⁷ Chepulis, L., et al. 2021. Glycaemic control across the lifespan in a cohort of New Zealand patients with type 1 diabetes mellitus. *Internal medicine journal* 51(5): 725-731 DOI: <https://dx.doi.org/10.1111/imj.14816>

been admitted to hospital shows that almost 10 percent of Māori who have been hospitalised with diabetes, have type 1 diabetes.

Type 1 diabetes is often diagnosed in childhood or adolescence but can be diagnosed at any age. Whānau are often closely involved in the care of their loved one with diabetes. Young people with type 1 diabetes must be supported to live well with their condition through childhood, adolescence, and throughout adulthood. Transition stages, such as emerging adulthood, are often linked to poorer self-management and greater diabetes distress.

Strict glycaemic control is vital to minimise the risk of progression of diabetes-related complications and premature mortality. Glycaemic control has been shown to be influenced by social determinants of health, socioeconomic deprivation, and ethnicity, with Māori at greatest risk of poor glycaemic control.²⁸ People with type 1 diabetes are also at a much higher risk of cardiovascular events.²⁹

Youth and young adults with type 1 diabetes can also experience significant psychological distress including disordered eating and diabetes-related distress, which are more prevalent in Māori.³⁰ Having a child with type 1 diabetes can also have a considerable impact on family life due to disrupted routines, and the stress, time, energy, and organisation that is required of family members to support their loved ones.³¹

Adults with type 1 diabetes usually have a longer duration and burden of disease due to being diagnosed many years earlier. Adults may also experience significant diabetes distress as they juggle the competing demands of life, work, family, and self-care behaviours necessary to effectively manage their diabetes. Additionally, diabetes distress has been found to be common in partners of people with type 1 diabetes, especially associated with hypoglycaemia.³² It is important to recognise and address the specific needs of people with type 1 diabetes.

For young people, type 1 diabetes is more common in European than Māori or Pacific communities. However, there is evidence that the incidence of type 1 diabetes is increasing more rapidly for Māori and Pacific children.³³

²⁸ Chepulis, L., et al. 2021. Glycaemic control across the lifespan in a cohort of New Zealand patients with type 1 diabetes mellitus. *Internal medicine journal* 51(5): 725-731 DOI: <https://dx.doi.org/10.1111/imj.14816>

²⁹ Atkinson, M. A., Eisenbarth, G. S., & Michels, A. W. 2014. Type 1 diabetes. *Lancet (London, England)*, 383(9911), 69–82. [https://doi.org/10.1016/S0140-6736\(13\)60591-7](https://doi.org/10.1016/S0140-6736(13)60591-7)

³⁰ McClintock JM, Blackmore T, Chepulis LM, et al. 2021. The psychological profile of youth and young adults with type 1 diabetes in New Zealand. *Pediatric diabetes*. DOI: <https://dx.doi.org/10.1111/pedi.13289>

³¹ Symons J, Crawford R, Isaac D, Thompson S. 2015. The whole day revolves around it: Families' experiences of living with a child with Type 1 diabetes - A descriptive study. *Neonatal, Paediatric and Child Health Nursing*.

³² Polonsky WH, Fisher L, Hessler D, Johnson N. 2016. Emotional Distress in the Partners of Type 1 Diabetes Adults: Worries About Hypoglycemia and Other Key Concerns. *Diabetes Technology & Therapeutics*. DOI: 10.1089/dia.2015.0451

³³ Flint SA, Gunn AJ, Hofman PL, et al. 2021. Evidence of a plateau in the incidence of type 1 diabetes in children 0-4 years of age from a regional pediatric diabetes center; Auckland, New Zealand: 1977-2019. *Pediatric diabetes*. DOI: <https://doi.org/10.1111/pedi.13236>

Appendix 3:

Development process

The development of the Diabetes Action Plan has been informed by significant stakeholder engagement and desktop research over the last nine months. This has included:

- Meetings with 16 DHB Diabetes teams to discuss future direction, successes, challenges and concerns. DHBs were also asked to submit progress reports against the Quality Standards for Diabetes Care which highlighted areas for strengthened focus.
- Establishment of a Diabetes Action Plan Expert Advisory group, with representation from NZSSD, Diabetes NZ, PHARMAC, diabetes specialists, primary care and consumers. The group has robust Māori and Pacific representation and is co-chaired by a Māori clinician.
- Establishment of an internal Ministry of Health working group with representation from the Māori Health Directorate and Pacific Health Team.
- A national diabetes hui held in August 2021 where 40+ attendees, including endocrinologists; GPs; nurses; consumers; academics; Māori & Pacific providers and NGOs came together to discuss their vision for diabetes in care in Aotearoa New Zealand.
- Desktop research to identify consumer insights from other hui and talanoa undertaken by the Ministry of Health, to undertake a Tiriti analysis of the report development process, and to review the diabetes evidence base.
- A series of consumer hui undertaken in partnership with Health Navigator and Tamaki Health.
- Peer review of earlier drafts by Māori and Pacific health experts and those involved in the establishment of the new Health System entities.
- Stakeholder review process and stakeholder hui.

Appendix 4: Local improvement measures

There is a need to strengthen the use of data to support quality improvement in diabetes care. This will require better integration of data to enable improved monitoring of key measures. The following table outlines proposed high-level performance measures which would be reported at a national level. Ideally these would be complimented by locally reported improvement measures (suggestions are included in table below). This approach aims to minimise the reporting burden on localities and enable local determination of priorities, while also providing guidance to support strengthened local and national diabetes reporting.

Note: these measures are still in development, with further work underway to refine and agree exact definitions.

	Whānau Outcomes	High-level performance measures	Local improvement measures
Whānau are supported to stay well	1. Whānau are supported to understand and reduce their risk of diabetes	Incidence and prevalence of diabetes (split by type 1, type 2 where possible)	% of people with pre-diabetes who have had an annual HbA1c screen
		% people who have accessed self-management education within 6 months of being diagnosed with diabetes or pre-diabetes	% of people with diabetes who have a positive PHQ-2 score at their Diabetes Annual Review
	2. Whānau have the information and support to help them prevent or manage diabetes	% of people with diabetes who have good HbA1c control	% of women with gestational diabetes who are screened at 3 months postpartum and then yearly
	% of people with diabetes who have good blood pressure control		
Whānau are kaitiaki of their own health	3. Whānau have equitable access to medicines and technology	% of people who are regularly dispensed medicine to treat type 2 diabetes *PHARMAC medicines equity measure	% of people with diabetes who have had a Diabetes Annual Review in the last year
		% of people with diabetes who have had a foot check in the last year	% of people with diabetes who have had retinal photo screening in the last 3 years
	4. Integrated data supports equitable and responsive whānau care	Rate of preventable hospital admissions among people with diabetes *Health System Indicator	% of people with diabetes who have microalbuminuria

	5. Whānau receive wrap-around support to help prevent complications	% of people experiencing diabetes-related complications (limb amputations and renal failure) <i>*Whakamaua measure</i>	% of 15–40-year-olds identified as at risk of developing major complications, who have received intensive management in the last year
Whānau receive high quality, equitable care	6. Diabetes care is supported by strong leadership and accountability	% of people with type 1 diabetes who have access to real-time CGM or an insulin pump	No. and % of Māori and Pacific people in the diabetes workforce
	7: Diabetes care is delivered by a strong, culturally competent workforce	No. of Māori or Pacific peoples needed to start on medicines to treat type 2 diabetes each year to achieve equity <i>*PHARMAC medicines equity measure</i>	No. of Māori providers resourced to provide diabetes services
	8. Diabetes care is informed by a strong culturally responsive evidence base	% of people with diabetes reporting that their individual and/or cultural needs were met <i>*Primary care patient experience survey measure</i>	

Note: measures in blue are outcome measures, the remainder are process measures.