

Targeting Diabetes and Cardiovascular Disease

Better Diabetes and Cardiovascular Services

Our target:

- An increased percentage of the eligible adult population will have had their CVD risk assessed in the last five years.
- An increased percentage of people with diabetes will attend free annual checks.
- An increased percentage of people with diabetes will have satisfactory or better diabetes management.

Better



**Diabetes and
Cardiovascular
Services**

Shorter
stays in



Emergency
Departments

Improved
access to



Elective Surgery

Shorter
waits for



Cancer Treatment

Increased



Immunisation

Better
help for



Smokers to Quit



Providing better diabetes and cardiovascular services



Better diabetes and cardiovascular services is a Government health target

Diabetes and cardiovascular disease (CVD) affect a growing number of New Zealanders each year and have a disproportionate effect on Māori, Pacific people and people of South Asian origin. These diseases affect New Zealanders' quality of life and life expectancy, and the impact is increasing with an ageing population and lifestyle changes.

Diabetes is defined by the body's inability to control blood glucose. It is a chronic condition, which can cause kidney failure, blindness, lower limb amputations and a higher risk of heart disease if not well managed. Diabetes is a major and increasing cause of disability and premature death.

Of the CVDs, coronary artery disease is the major cause of death, followed by stroke, which is the greatest cause of disability in older people.

In July 2009, the Government demonstrated its commitment to reducing the incidence and disease impact of diabetes and CVD by introducing a health target of 'Better Diabetes and Cardiovascular Services'.

The health target aims for the following:

- **An increased percentage of the eligible adult population will have had their CVD risk assessed in the last five years.**
- **An increased percentage of people with diabetes will attend free annual checks.**
- **An increased percentage of people with diabetes will have satisfactory or better diabetes management.**

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Why this is important

CVD is the leading cause of death in New Zealand and so has a large impact on the delivery of health services. It includes heart attacks and strokes, which are both substantially preventable with lifestyle advice and treatment for those at moderate or higher risk. About 16,000 people are admitted to hospital with a heart attack every year, and about 6,000 people will have a stroke.

Diabetes is important as a major and increasing cause of disability and premature death. It is also a good indicator of the responsiveness of a health service to people in most need. It's estimated that the number of people diagnosed with diabetes is nearing 200,000 (predominantly type 2 diabetes). There are also many thousands who have diabetes but have not yet had it diagnosed.

The sooner these conditions and their complications are detected and managed the better. That is why the Ministry of Health is supporting district health boards (DHBs) and general practitioners (GPs) to improve early detection and management of CVD and diabetes.

What is being done

In this publication, we look at how DHBs are working to achieve this health target and discuss the real gains that are being made thanks to the creativity, teamwork and dedication of those who provide health services and support in the community.

The link between diabetes and CVD

The relationship between diabetes and CVD has long been recognised, and for a significant proportion of people, the two conditions co-exist.

People with type 2 diabetes are two to four times more likely to suffer from CVD, and CVD is the leading cause of death in people with diabetes.



Better diabetes and cardiovascular services: the Ministry of Health's role



'For CVD, the good news is that we now know that more than 70 percent of eligible adults have had their CVD risk assessed and that this is trending very favourably up year on year.' – Dr Brandon Orr-Walker

Dr Brandon Orr-Walker, the Ministry of Health's National Clinical Director Diabetes, says there's a lot of focus on better identification of people who have or are at risk of diabetes and CVD. Dr Orr-Walker is also Clinical Head of Endocrinology and Diabetes at Middlemore Hospital.

He says CVD risk assessment and management and diabetes detection and management broadly overlap.

'The target is supported by the evidence-based guidelines, which are widely accepted and advise that CVD risk and diabetes should be linked. In that respect, New Zealand is ahead of much of the world.'

'Diabetes is a very significant disease, and its prevalence is rising at a rate that is exceeding population growth. People with diabetes have increased health care needs in both primary and secondary health services. As a group, they are far more likely to be hospitalised over the course of a year than a person without diabetes of a comparable age. So, diabetes is a very good lens for a whole health care response.'

'In the last year, through collaboration with PHOs and DHBs, we've been able to refine our estimates. We now have a tool that can be consistently applied to give the health sector greater confidence that they can identify people who have or are at risk of diabetes. It's taken out the guess work and will ensure that diabetes patients are being given the best service possible – including a free comprehensive annual diabetes check.'

'For CVD, the good news is that we now know that more than 70 percent of eligible adults have had their CVD risk assessed and that this is trending very favourably up year on year.'

'However, we still need to get to large numbers of high-risk and disadvantaged people who have not had their CVD risk assessed, and there are a number of innovative programmes underway to reach those people.'

'The next big step is to make sure that, when people have been identified as being at risk from diabetes and CVD, they are being managed effectively and are making the necessary changes to reduce their risk.'

CASE STUDY: West Coast Local Diabetes Team

Proactive approach to diabetes improves access to services

A collaborative approach to diabetes management and services is paying off on the West Coast of the South Island.

A team of health professionals meets quarterly to assess the region's performance against the national health target and to pinpoint areas for improvement.

The Clinical Manager of the West Coast PHO, Helen Reriti, says local people with diabetes are undoubtedly benefiting and points to retinal screening as a good example.

'Diabetics are supposed to be screened every two years, but people were missing out because the service was not available on the West Coast,' she explains.

The solution? Contract a Nelson optometrist to travel from town to town, providing a mobile retinal screening clinic each quarter.

'About 100 people get screened each time,' says Mrs Reriti.

'It's about going to the people instead of expecting them to drive out of the region to access a screening service. We're aiming for

90 percent retinal screening for those who need it – we're currently sitting at 80 percent and climbing.'

The Local Diabetes Team has also organised information days and guest speakers, especially directed at children with diabetes, as well as other promotions aimed at educating and raising awareness.

Mrs Reriti attributes the group's success to its broad mix of representation across primary and secondary health care and to individual members' high level of engagement.

The Local Diabetes Team includes DHB representatives (a podiatrist, dietician and the DHB's clinical medical advisor), two clinical diabetes nurse specialists from Westport and Greymouth, a private practice nurse, Mrs Reriti from the PHO and a number of community representatives, including people with diabetes and the local diabetes service coordinator.

'Everyone's really committed to making a difference,' Mrs Reriti says.

'It's about going to the people instead of expecting them to drive out of the region to access a screening service.' – Helen Reriti

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Good quality advice helps with diabetes management

When Aucklander Richard Cooper was diagnosed with type 2 diabetes nearly a decade ago, he didn't know anything about the condition.

Mr Cooper weighed 188 kg and was a busy university student, getting by on pies and soft drinks.

These days he's 40 kg lighter, his diabetes is well controlled, and his blood sugar readings are normal. He bikes and swims regularly, and he makes an effort to eat healthily.

He says good quality advice and support from health professionals helped him make a number of successful lifestyle changes, resulting in better management of his diabetes.

He joined the diabetes programme at Counties Manukau DHB and began receiving regular free diabetes, medical, eye and foot checks, as well as subsidised medicines.

'As part of the programme I also talked to a

dietitian and received a lot of really useful information,' Mr Cooper recalls.

'And my diabetes nurse has been great. I was finding it hard to understand my doctor because he speaks so quickly, so the nurse arranged to meet me before appointments to go over the test results and help me prepare for what I wanted to ask the doctor.

'I learned a lot from the nurse. I learned how serious diabetes is and how it's not going to go away, but also how it is possible to live a normal life if you manage what you eat, etc.'

As a result of what Mr Cooper learned, he began to change his diet and started exercising regularly. Most of the changes, he says, were subtle, but they have made a real difference.

'The advice I've received over the years has been really good. It has helped me to manage my diabetes better.'

'As part of the programme, I talked to a dietitian and received a lot of really useful information.' – Richard Cooper



Inspiring men to get their heart checked

Māori and Pacific men at high risk of CVD are being inspired to get their hearts checked and take action if the diagnosis isn't good, through a community-driven programme that's developing its own momentum.

‘One Heart Many Lives’ is an initiative of PHARMAC, the New Zealand Pharmaceutical Management Agency. PHARMAC's Manager, Access and Optimal Use; Māori Health, Marama Parore, says that the programme is a response to New Zealand's high rates of heart disease. The primary audience is Māori and Pacific Island men over 35 years of age in targeted geographic regions of high need in New Zealand.

‘The campaign began when we looked at data for how cholesterol-lowering statins medicines were being used, and we saw that Māori and Pacific men weren't getting these medicines at the same rates as other New Zealanders. We also knew that these men were dying 10 to 14 years earlier than Pākehā men,’ Ms Parore explains.

The One Heart Many Lives programme encourages men to:

- ‘get their hearts checked’ and seek help and medical management if needed
- improve awareness of heart disease and the likely outcomes if it is diagnosed and treated
- improve lifestyle habits as part of self management
- take long-term cholesterol lowering medication (and other heart medications) to help decrease the risk of heart disease.

‘Resources have been developed that can quickly be adapted for local use,’ explains Ms Parore.

‘The project also has its own website, which tells men's stories and offers useful guidance for health professionals, the men who are at risk and their whānau on how to get started.’

‘The key to the programme's success is that it is community-driven from the start.’ – Marama Parore

Ms Parore says the key to the programme's success is that it is community driven from the start.

‘We have to trust that individual communities know what will work for them. We give them the tools to get started, some social marketing guidance and community development expertise, and then the community takes over the project.

‘In Northland, they developed their own “Warrant of Fitness” card based on the risk of having a heart attack. The card uses traffic light colours; green stands for up to 10 percent risk of heart disease, amber is for 10 to 15 percent risk, and red is for greater than 20 percent risk,’ she explains.

Ms Parore says the ‘Warrant of Fitness’ card has translated health jargon into real language, with men in Northland asking each other “Bro, what's your colour?”

The ‘Bro Files’, another local initiative, is a magazine that tells the stories of Northland men who have committed themselves to supporting their community to overcome the legacy of heart disease.

Ms Parore says One Heart Many Lives is getting buy-in from community organisations and is growing its own momentum, with local heroes emerging in each region.

‘Finding local people and local heroes to tell their stories has proven really effective. These people carry the messages far more powerfully than we ever will. Simply by putting themselves forward, they have become the leaders and flag bearers for others to follow – and they are following.’

One Heart Many Lives has now shifted from a regional to a national focus, but the grassroots theme continues, with a presence at community days and festivals. Most recently, PHARMAC facilitated a Whanau Hauora Village concept at the five-day Te Matatini festival, which brought together a range of health agencies to offer health checks built around One Heart Many Lives heart checks.

Improving services provided by the DHB

In November 2009, the Ministry of Health's quarterly DHB performance reports ranked Whanganui DHB lowest out of all 21 DHBs for better diabetes and cardiovascular services.

Whanganui DHB Planning and Funding General Manager Tracey Schiebli describes the disappointing results as being a catalyst and motivator for the DHB, in partnership with Whanganui Regional PHO, to bring in changes that had already been planned.

'We knew our performance had been declining and we had decided to review our process to address this. We were doing well at getting people with diabetes in for their annual checks, but once we had them in the system and reviewed the progress of their condition, it became obvious more than clinical support was required.'

The review recommended that all patient data be stored in a single repository and analysed according to Ministry of Health criteria to realistically determine the number of people with diabetes in the region. Previously, inconsistent criteria had been used.

The DHB established a project to develop an improved service delivery model that would better meet the needs of patients with diabetes and other long-term/chronic illnesses, such as CVD.

'The new service model is based on the concept of Whānau Ora. This means we'll involve the

patient's whole family in supporting them in their journey. If someone is going to self-manage their own condition, it's important that those around them know and understand their needs and the lifestyle changes that person must undergo, so they can support them in that.

'One of the key enablers is building on what we have in place as population health information. "Dr Info and Dashboard" information software allows general practice teams to view individual and enrolled population results and enables the PHO to monitor its own performance,' Ms Schiebli explains.

'Each practice is regularly given an electronic rating based on their number of patients and the overall progress of patients' conditions. This has brought in a new awareness for everyone involved and offers tangible ways for individuals and practices to lift their performance levels.'

And so far it appears to be paying off. The latest quarterly DHB performance report (November 2010) ranked Whanganui DHB fifth in the country – a dramatic improvement in just one year.

'We're thrilled at the difference because it reflects the hard work so many have put in to increase our performance against the national targets. It's also a great result for our patients,' Ms Schiebli says.

'And we're confident things will continue to improve as full implementation of the new service model gets under way this year.'

'We're confident things will continue to improve as full implementation of the new service model gets under way this year.' – Tracey Schiebli



CASE STUDY: A Collaborative Approach

Improving diabetes data collection and quality

Major improvements have been made in the past year or so to improve the collection and quality of data about the number of people in New Zealand who have or are at risk of diabetes.

Dr Brandon Orr-Walker, National Clinical Director Diabetes, says previously there had been problems matching data to get an accurate picture of diabetes risk and management.

‘By redefining and strengthening the way we collect data on things like prescriptions, lab tests and hospital records, and improving our cross-matching on medications and treatments, we’ve been able to make the whole process more precise.

‘PHOs who helped us with this process have told us their data matching rates are now more than 95 percent accurate and they have ‘found’ some patients they didn’t previously know about, who they are now able to look after better.

‘PHOs can trust the data now, and they all want to use it to improve the way they look after patients.’

‘Get Checked’ programme

The ‘Get Checked’ programme ensures that every New Zealander with diabetes can have a free annual check-up with their GP or GP practice nurse. The programme aims to:

- systematically screen for the risk factors and complications of diabetes to promote early detection and intervention
- agree on an updated treatment plan for each person with diabetes
- prescribe treatment and refer patients for specialist or other care if appropriate.

The programme also collects data, which enables improvements to diabetes services.



*‘PHOs can trust the data now, and they all want to use it to improve the way they look after patients.’
– Dr Brandon Orr-Walker*

Using national guidelines to assess CVD risk

Professor Norman Sharpe, Medical Director of the National Heart Foundation of New Zealand and clinical leader of the cardiac work of the Diabetes and Cardiovascular Disease Quality Improvement Plan, says New Zealand has led the way in the approach to assessing CVD risk that has been taken in recent years.

‘We’re not just measuring single risk factors like blood pressure and cholesterol, but adding them all together into one measure of an individual’s absolute risk.’

In 2009 Professor Sharpe led the multidisciplinary team that revised the New Zealand Cardiovascular Guidelines Handbook: A Summary Resource for Primary Care Practitioners. The handbook is an important evidence-based ready reference tool for health practitioners to provide the best care for their patients. It summarises the latest evidence and consensus on best practice for CVD risk assessment and diabetes screening, and for CVD risk factor management in New Zealand.

Professor Sharpe says an important change in the revised handbook was that it recommends that all CVD treatment decisions should be based on an individual’s five-year absolute cardiovascular risk (the likelihood of a cardiovascular event over five years).

Professor Sharpe says assessing an individual’s absolute risk is important. ‘By knowing the absolute risk, decisions can be made on prevention and treatment of CVD, such as appropriate lifestyle changes, medication, and diabetes care. The overall goal is to reduce five-year cardiovascular risk to less than 15 percent.’

‘Someone could have no symptoms and feel fine, but because their absolute risk is nudging up, it’s important that their health practitioner discusses with them making some lifestyle change and perhaps introducing medication.’

CVD risk assessment and diabetes screening criteria have been revised in the light of current evidence and with practical consideration of how primary care functions.

‘Treatment targets have been revised and, in general, reflect a more aggressive approach to the reduction of CVD absolute risk for individuals, and to reassessing risk at regular intervals.’

‘Most primary care practitioners in New Zealand now think and practise in this way, and have a systematic approach to bringing people in to check their risk levels in the same way that patients are called in for a mammogram or cervical screening.’

‘We’re also looking at better ways to support people through primary care to make the necessary changes and receive the necessary treatments in order to lower their level of risk.’

Professor Sharpe says guidelines are evidence-based recommendations to guide clinical decision making. ‘They don’t replace clinical experience and judgement.’

A multifaceted programme was designed to distribute the handbook and related resources and promote key messages to healthcare workers and member of communities at greatest risk of CVD. Successful implementation activities included:

- 19,500 copies of the handbook were distributed to health practitioners around New Zealand including GPs, practice nurses, pharmacists, Māori and Pacific health providers, stroke and cardiac care workers.
- a popular website with access to the handbook resources, video clips and frequently asked questions was set up, and received over 9000 hits
- more than 800 health practitioners attended special education sessions on the handbook.

‘All CVD treatment decisions should be based on an individual’s five-year absolute cardiovascular risk.’

– Professor Norman Sharpe





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CASE STUDY: National Heart Foundation of New Zealand

‘Know your numbers’ heart forecast online tool

A new online tool is helping people understand the real risk of heart disease and encouraging them to visit their GP or GP practice nurse for a CVD risk assessment.

The Heart Age Forecast (found at www.knowyournumbers.co.nz) is the first of its kind and will calculate a person's current and future risk of heart disease or stroke, providing them with a tailored heart health plan to put them on a path to a healthier lifestyle.

The tool, developed by the National Heart Foundation of New Zealand and The University of Auckland, calculates a person's current and future heart risk, using blood pressure and cholesterol ratio. In conjunction with a person's

‘Our hope is that once people better understand some of the key factors involved in their heart health, they will be motivated to take better care of their heart, including having their CVD risk assessed.’ – Professor Norman Sharpe

heart story – including age, ethnicity, smoking and family history – these offer a striking insight into a person's health and the effect lifestyle choices are having on their body.

To help people take control of their own health, the website provides a six-week, individually tailored heart plan. The weekly plan includes tips and information to help people remove harmful lifestyle choices and start making new, healthier ones.

The Heart Foundation Medical Director, Professor Norman Sharpe, says that while people don't have to know their blood pressure or cholesterol levels to use the forecast tool, a more accurate assessment is given if people know these numbers, and the tool prompts people to visit their GP to find out what their numbers are.

‘Our hope is that once people better understand some of the key factors involved in their heart health, they will be motivated to take better care of their heart, including having their CVD risk assessed.’



The last word –

Kevin Woods, Director-General of Health



As incoming Director-General of Health I'm delighted to see the way clinicians around the country are working together to improve the care provided to New Zealanders in a number of key health target areas.

The process of changing the way we work to improve quality and efficiency in a tight fiscal environment challenges the ingenuity and creativity of health professionals. It's clearly paying dividends, with various initiatives making a positive difference to improve DHBs' performance against the health targets.

The innovations and stories featured in this publication are part of an integrated health care system that continues to deliver results for patients.

There are significant challenges, and no 'one size fits all' solutions, which is why it's so heartening to read about how local health communities are working collaboratively to deliver good health and independence outcomes for New Zealanders.

Health targets provide a clear and specific focus for action.

People in New Zealand have high expectations that they will have good access to health care services when they need them. This is as it should be – which is why it's so important that we continue to evaluate performance and report on our progress.

While substantial success has been achieved, I look forward to working with you to see continued improvements that will benefit all New Zealanders.

Additional information

More information on health targets can be found at www.govt.nz/healthtargets

More information on CVD and diabetes can be found at www.moh.govt.nz/moh.nsf/indexmh/cardiovascularisease and www.moh.govt.nz/diabetes respectively.

Clinicians and those involved with the target can access further resources and tools relating to the target on the Health Improvement and Innovation Resource Centre website: www.HIIRC.org.nz