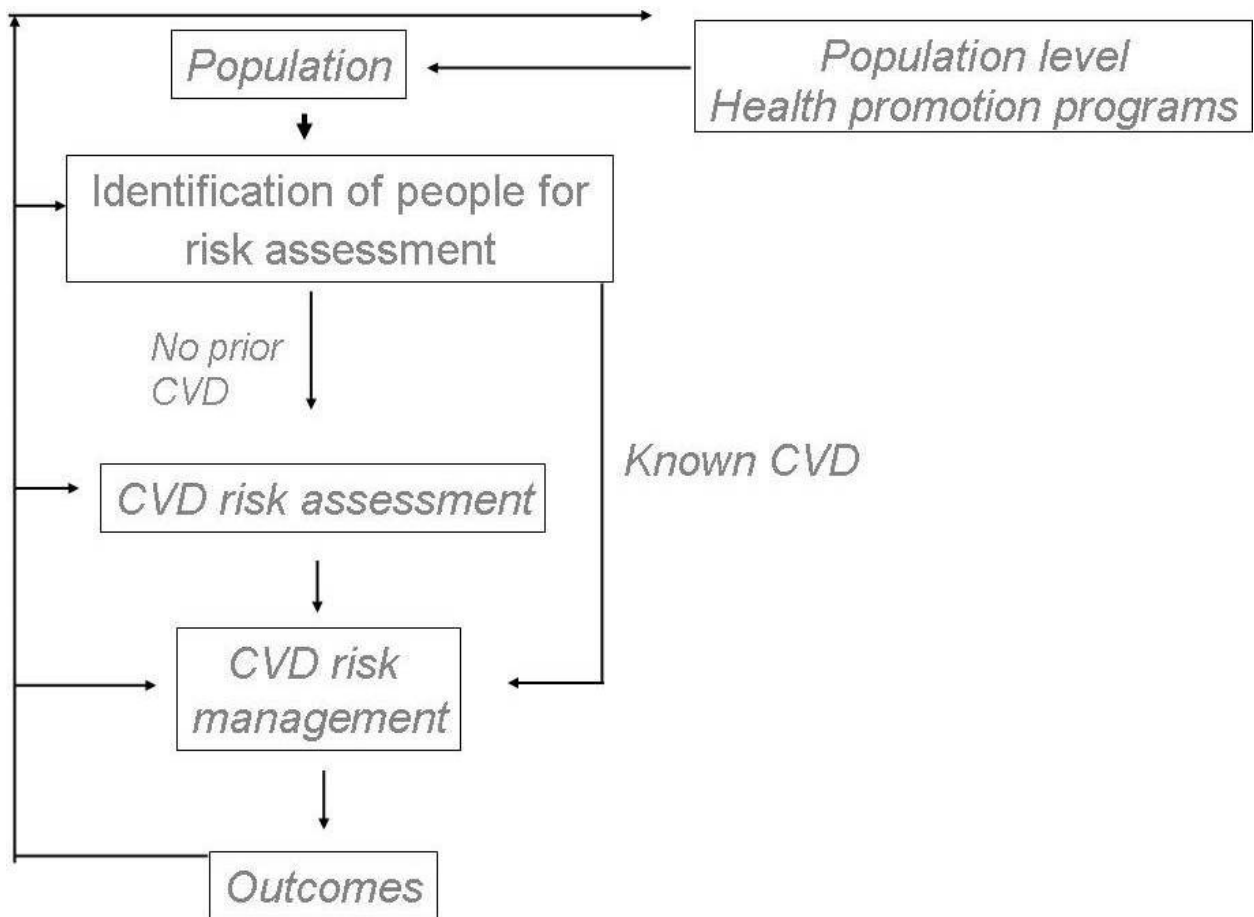


Cardiovascular Disease (CVD) Prevention Strategy



Developed by the Diabetes and Cardiovascular Disease Working Group

FINAL VERSION
MAY 2009

Cardiovascular Disease (CVD) Prevention Strategy

Cardiovascular diseases (including heart attacks, strokes and peripheral vascular disease) are a major treatable cause of morbidity and death in our community. Whilst there is much that can be done to prevent CVD there are important gaps in current CVD prevention in CMDHB. The aim of the CVD strategy is to help guide coordinated approaches to CVD prevention across the Counties Manukau population and the health continuum. The strategy promotes a universal or population approach closely aligned to a team based CVD risk assessment and management process (Appendix B).

Working group

The initial working group established by the Diabetes Cardiovascular Advisory Group (DCAG) consists of:

- Dr Andrew Kerr (Clinical Head of Cardiology)
- Dr Michael Wilson (GP and DCAG Leader)
- Andy McLachlan (CVD Nurse Specialist)
- Dr Gary Jackson (Manager Clinical Planning)
- Dr Jocelyn Tracey (Acting CCM Clinical Director)

The initial document has been reviewed and modified based on feedback from:

- Diabetes and CVD Advisory Group (DCAG)
- Dr Doone Winnard (on behalf of the CMDHB Maaori Health Team)
- Dr Maika Veikune (on behalf of the CMDHB Pacific Health Team)
- Dr Yah Moh (on behalf of TKOH PHO)
- Dr Gary Sinclair (CCM Clinical Director)
- Tracey Barron (Programme Manager Lets Beat Diabetes)
- Dr Tom Robinson (Lets Beats Diabetes)
- Dr Brandon Orr-Walker (Lets Beats Diabetes)
- Dr Sue Wells (School of Population Health)
- Sarah Tibby (Chronic Care Management Programme)
- Shirley Miller (Lets Beats Diabetes)

This paper has been discussed and endorsed by DCAG and at a community level by the Community Advisory Group (CAG), at a primary care level by the general managers of the PHO group (GPHO) and at secondary care level by the Middlemore Hospital Department of Medicine. Each CMDHB PHO was offered the opportunity to participate in the development of this document.

Purpose and Scope of the CVD Prevention Strategy

Purpose

To provide a reference framework to facilitate coordinated Cardiovascular Disease (CVD) prevention related activity in Counties Manukau across the District Health Board (DHB), Primary Health Organisations (PHOs), and secondary care.

A CVD prevention strategy will assist in the following:

- Inform the development of the CVD information technology implementation plan.
- Identify the gaps in current CVD prevention activity.
- Guide the development of new programmes, avoiding duplication and anticipating requirements to ensure appropriate linkages to other elements of the CVD strategy.
 - The key linkages are between population approaches, risk screening and both risk management and outcomes data analysis linking back into a quality improvement process to guide the modification of existing programmes.
- Assist and guide programme managers with decisions regarding prioritization and funding of programmes, including SIA proposals from PHOs that relate to CVD.

Scope

This strategy accepts that the evidenced based treatment/management of cardiovascular disease risk should be based on the NZ Guidelines Group document 'The assessment and management of cardiovascular risk' published in December 2003, which has been fully endorsed by DCAG. This document recognises that the assessment and management of CVD risk is an important priority for Maaori and Pacific health gain and reducing health inequalities, which is reiterated by this strategy.

The scope of the proposed CVD prevention strategy includes the following two major components:

A. Risk based prevention of Cardiovascular Disease

It is possible to identify and estimate an individual's risk of suffering a future CVD event. Recent Auckland Predict cohort data shows that 47% of all CVD new events occur in patients with prior CVD and a further 27% of the total in those without prior CVD who have at least intermediate risk (>10% 5-year CVD risk).¹

These groups will benefit from intensive evidence based lifestyle ± pharmacologic intervention to reduce CVD risk. CVD prevention in patients with diabetes is incorporated in the NZ Guidelines risk based approach.²

This document will address the following core components of risk based prevention of CVD:

- Cardiovascular risk assessment:
 - Who to assess for CVD risk
 - How to assess for CVD risk (this will also identify people with existing diabetes and those with impaired fasting glucose or impaired glucose tolerance)
- Providing CVD risk management programmes
- Identify education, training and support required for risk assessment and management programmes to be successful
- Outline important health system changes required to provide effective CVD risk assessment and management
- Linkages between primary and secondary care
- Describe targets for risk assessment and management of those identified at high risk of CVD
- Emphasise outcomes assessment to feedback to improve risk assessment and management (quality cycle).

¹ Broad et al. CSANZ presentation. 2007. Currently unpublished

² NZGG (2003). The Assessment and Management of CVD Risk.

B. Universal prevention of Cardiovascular Disease

Many people who ultimately go onto develop CVD will not be identified by approaches that focus solely on high risk. There are a number of interventions that reduce risk for CVD which have value for the wider community. Universal approaches may be undertaken at a population level through public health strategies as well as in primary care and secondary care.

At a population level the promotion of cardiovascular “resilience or protection” for a large number of people may be as significant as a larger reduction in risk for a smaller group of high risk individuals.

Changes in these lifestyle areas will not only reduce the risk of CVD, but other conditions that are strongly linked to CVD through the metabolic syndrome such as diabetes and gout, as well as many types of cancer. Universal approaches to prevent CVD aim to bring positive change in a number of key lifestyle areas including:

- Smoking cessation
- Healthy physical activity
- Healthy weight
- Healthy eating.

Important population level interventions currently in place include:

- *Lets Beat Diabetes*

Lets Beat Diabetes (LBD) is a district wide strategy aimed at long-term, sustainable change to prevent or delay the onset of type 2 diabetes, slow diabetes progression, and increase the quality of life for people with disease. The parts of LBD that focus on increasing physical activity, increasing healthy eating and working to make the urban design of Counties Manukau more amenable to increased physical activity are all population levels interventions currently in place that also reduce the risk of CVD. In addition, LBD is the route through which all of the national HEHA strategy work is undertaken within Counties Manukau.

Specific interventions include:

- *Swap to Win*

The Swap2Win Campaign is a community focused initiative that promotes healthy and active lifestyles within Counties Manukau. The Campaign works on two levels:

- Provides tips to support families to swap to healthier lifestyles.
- Highlights stories of people in the local community who are already supporting each other to swap to healthier lifestyles to inspire others to do the same.³

- *PHO health promotion initiatives e.g. Healthy Kai*

The Mangere Healthy Kai programme, based in the Mangere town centre, aims to increase the availability and consumption of healthy food choices. Each retailer sells ready to eat food that meets the criteria for Mangere Healthy Kai. Each shop displays colourful signage promoting their healthy kai items and the specifically developed 'hook' logo.⁴

- *Maaori Initiatives e.g. The Whaanau Ora Plan*

This Plan is a step in the process of changing the paradigm of Maaori Health in the Counties Manukau area from illness to informed wellness. This Plan creates a platform for Whaanau Ora. It encourages Whaanau to have greater expectations of the health system and other sectors.⁵

- *Pacific initiatives e.g. the "LotuMo'ui" Programme*

60 of the 100 or so Pacific churches in Counties Manukau have been working together with CMDHB (Pacific Health) since 2003. The focus of their activities has been on – Healthy Diet, Physical Activity and Smoke free and will run until 2010. This is our biggest Pacific Community Engagement Programme ever.⁶

³ <http://www.swap2win.co.nz/page/5-Home>

⁴ <http://www.moh.govt.nz/moh.nsf/238fd5fb4fd051844c256669006aed57/65655a4f5e1bc2b6cc256f4f00108c8a?OpenDocument>

⁵ http://www.cmdhb.org.nz/Counties/About_CMDHB/Planning/Maori-Health-Plan/WhanauOraPlan.pdf

⁶ Personal communication 7/12/2007. Maika Veikune (on behalf of the CMDHB Pacific Health Team)

- *Smoke free programme (e.g. The Quit Line)*

The Quit line offers free telephone support, resources and low cost nicotine patches or gum to New Zealand residents.⁷

- *Non Governmental Organisations (e.g. Heart Foundation, Diabetes Auckland)*

Diabetes NZ Auckland offers a range of useful services to support those affected by diabetes. Their philosophy is; whilst physicians can become experts in diabetes management, only people with diabetes can become experts in the conduct of their lives.⁸

Te Hotu Manawa Māori provide leadership, support, education and advocacy to empower Māori communities to improved health through good nutrition and participation in regular physical activity e.g. the Marae Auahi Kore programme which is designed to assist and support Marae to achieve Auahi Kore (smoke free) status.⁹

- *SPARC programmes e.g. Green Prescription*

Green Prescription increases physical activity levels and improves quality of life over 12 months, without evidence of adverse effects.

For every 10 Green Prescriptions written, one person achieved and sustained 150 minutes of moderate or vigorous leisure activity (using up an additional 1000 kcal) per week. This is associated with a 20 to 30% risk reduction in all cause mortality, compared with sedentary individuals. The Green Prescription initiative is quick, simple to use and sustainable in usual general practice.¹⁰

- *Auckland Regional Public Health Service (ARPHS)*

Auckland Regional Public Health Service's (ARPHS) 'Living in a Healthy Way' programmes are designed to raise awareness and educate families on the importance of health and wellbeing. Through the collaboration of primary healthcare organisations within the Auckland community, ARPHS programmes identify, support and promote positive and effective outcomes. Their programmes include: Oral Health; Reducing Family Violence; Workplace health; Asian Health; Refugee Health; Supporting Health Promotion in Primary Health Organisations.¹¹

⁷ <http://www.quit.org.nz/page/index.php>

⁸ <http://www.diabetes.org.nz/>

⁹ <http://www.tehotumanawa.org.nz/>

¹⁰ Elley et al. British Medical Journal (Volume 326, 12 April 2003).

¹¹ <http://www.arphs.govt.nz/>

This document will focus on those interventions undertaken in primary and secondary care, but recognizes the need for these to be linked to public health strategies. It is *essential* that all approaches support each other for maximum effect (appendix B).

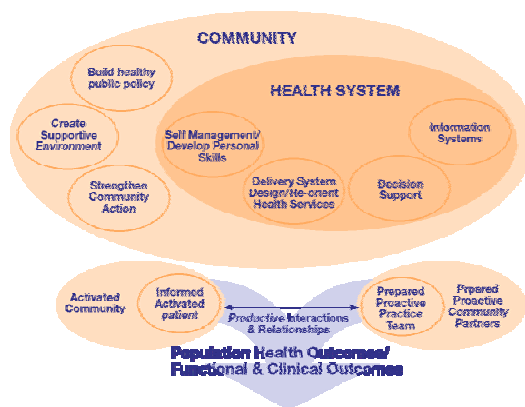
Exclusions to strategy document

The scope is the prevention of CVD and does not include other treatment of cardiovascular disease. The scope will not include the specific IT implementation plan/options for the CVD prevention strategy as these are to be covered in a separate document. It is intended that the principles outlined in this document will inform the IT plan.

Given that this is a prevention strategy, it will not incorporate a case management model but is anticipated it would link with existing models such as CarePlus and CCM.

Approach to CVD prevention/protection using the Chronic Care Model

The prevention of the incidence and impact of cardiovascular disease requires a programme management approach similar to that described in the chronic care model. Whilst CMDHB have used a local version of this model for many years, contributors felt the version below which combines the McColl's Institutes chronic care model with the Ottawa Charter reflected the strategies endorsement of community as a major component of any system with an aim of successful protection from CVD.



Adapted by: Barbara Chan, Sylvia Robinson, Amanda White-Hughes, David White, Julie White & Barbara Robinson (2009)
 Adapted from Glasgow, R., Cobman, G., Wiggins, E., Murray, G., Galloway, L. (2007). Descriptive Chronic Care Model: A Review of the Literature. University of Glasgow, Glasgow, UK.
 Adapted from: World Health Organization, 2004, and World Health Organization, Health and Welfare Canada and Canadian Public Health Association. (1996). Ottawa Charter of Health Promotion.

Table 1: The components of the Chronic Care Model

<p>Community</p>	<p>Build healthy public policy e.g. Smoke free Legislation, influencing town planning to provide increased opportunities for active transport, influencing local authority pricing of public pools to encourage people to swim etc.</p> <p>Strengthen community action by supporting health promotion programmes that engage and work with communities to develop activities that improve cardiovascular resilience and protection.</p> <p>Creative supportive environment: Mobilise community resources to encourage active lifestyles, heart healthy food choices (e.g. the Healthy Kai project), Auahi Kore community events and environments (e.g. Auahi Kore Marae) and to meet the needs of patients e.g. encourage patients to participate in community programme that will assist them to manage their chronic condition more effectively.</p>
<p>Delivery system design/reorient health services</p>	<p>Create a culture and organization with mechanisms that promote high quality care, e.g. ensure visible clinical and management support for screening initiatives.</p> <ul style="list-style-type: none"> • Consider redefining roles in primary and secondary care, as well as develop care processes that support proactive approaches to screening and management. • Consider ways to address inequities in access and outcomes for Maaori and other population groups experiencing disparities • Integrate management and follow-up with initiatives led by community based organisations.
<p>Support self management</p>	<p>Empower and prepare patients to manage their health and health care, e.g. promote the use of effective and proven self management and self management support strategies.</p> <p>Recognise the importance of engaging whaanau/family and 'significant others' to support self management.</p>
<p>Decision support</p>	<p>Promote clinical care that is consistent with the scientific evidence, e.g. embed evidence based guidelines into electronic practice management systems.</p> <p>"Make the right thing the easiest thing to do".</p>
<p>Clinical information systems</p>	<p>Organize individual and population data to facilitate efficient and effective care, e.g. use of recall systems.</p>

Addressing Health Inequalities

Ethnic and socioeconomic status are key factors associated with increased risk of adverse health outcomes, including cardiovascular disease. Whilst cardiovascular disease rates have steadily declined in New Zealand over time, Maaori and Pacific peoples have not enjoyed a similar rate of decrease as the rest of the population. Consequently Maaori and Pacific peoples have a cardiovascular mortality rate between 2.5 and 4.2 times greater than the general population.¹²

In a yet to be published local study looking at 1000 patients admitted to the Middlemore Hospital CCU with an acute coronary syndrome, 44.6% of the patients lived in areas classified as most deprived (NZ Dep quintile 5). Patients from the most deprived areas are on average presenting 4 to 5 years younger than those from all the other less deprived quintiles. With increasing level of deprivation, patients are more likely to be smokers, be obese, have high triglyceride levels and have diabetes. The excess of smoking and obesity with deprivation is most pronounced in younger patients. Blood pressure, LDL and HDL levels did not vary with NZ Dep quintile. Patients from NZDep 1 to 3 were predominantly European/other where as there is more diverse ethnic backgrounds in the higher deprivation areas¹³.

The Ministry of Health strategy for reducing health inequalities identifies “funders and providers of health services, including District Health Boards, hospitals, non-government organisations and primary health care organizations” as being key players in helping to reduce such disparities¹⁴. Bearing this in mind, it is imperative that any strategy aimed at preventing cardiovascular disease must include a strong focus on reducing these health inequalities.

Link to other plans and strategies

This CVD strategy will link into the *CMDHB District Strategic Plan* and the *Primary Health Care* three year plan to reduce the incidence and impact of priority conditions, The *Whaanau Ora Plan* which has overarching Maaori Health priority areas of Lifestyle Risk factors, Chronic Disease, Tamariki and Rangatahi health, Kaumatua, Kuia and disability support services, Mental Health and Infrastructure development. The CVD strategy will also link closely with the *Tupu, Ola, Moui – Pacific Health and Disability Action plan*

¹² Decades of Disparity, Ethnic Mortality Trends in New Zealand. 1980–1999 MOH July 2003

¹³ Modifiable Cardiovascular Risk Factors in the Coronary Care Unit: Influence of Socioeconomic Status and Ethnicity. Kerr et al. Unpublished study

¹⁴ Reducing Inequalities in Health, MoH 2002

which is also aligned to the Six Outcomes Framework in the District Strategic Plan and the Primary Health Care Plan.

The CVD strategy will also link with Lets Beat Diabetes to specifically reduce health inequalities and increase physical activity and improved nutrition.

Screening for risk

Cardiovascular diseases are major causes of morbidity and mortality in Counties Manukau. In 2005 there were 7176 CVD-related discharges from Middlemore Hospital which represents 31,847 bed days¹⁵.

It is widely acknowledged (and confirmed by a recent local study¹⁶) that CVD risk is unrecognized and more needs to be done to firstly understand the size of the problem and secondly prevent people ending up with a cardiovascular event. It is estimated that there are 12,830 people in CMDHB with known CVD, and a further 21,833 people without prior CVD with greater than 15% 5 year risk of a cardiovascular event¹⁷. Based on recent studies, it is assumed that the majority of high risk patients without prior CVD are currently not identified and are also inadequately managed^{2,3}. Evidence supplied from the Bold Promise study shows that cardiovascular risk assessment rates increased from 4.7% to 53.5% over a 12 month screening period, demonstrating that identification rates can be significantly improved via implementation of simple practice system changes. A structured, systematic risk screening programme would not only ensure people post event are on the correct management but also that people pre event are recognised and receive care for their specific level of cardiovascular risk.

Implementation of a systematic/opportunistic cardiovascular risk assessment programme will not only increase the rate of detection of this disease (and likely will also detect other conditions linked to metabolic factors such as diabetes and gout), but also help facilitate improved management of those at high risk. Follow up could be reinforced through the introduction of a funded annual review programme similar to the one already in place for diabetes (Get Checked). It is anticipated that this will lead to a reduction in the morbidity and mortality for these diseases in Counties Manukau, therefore reducing the cost of acutely managing CVD and Diabetes. A proactive approach would also help to identify the disparity in disease rates amongst Maaori and Pacific Islanders in comparison to the

¹⁵ Statistics provided by Dean Papa CMDHB analyst - CM residents med-surg discharges 2004-6, Nov 2006.

¹⁶ Gary Sinclair, Andrew Kerr. The Bold Promise Project: a system change in primary care to support cardiovascular risk screening. NZMJ 17 November 2006, Vol 199 No 1245.

¹⁷ Wells S, Broad J, Jackson R. Estimated prevalence of cardiovascular disease and distribution of cardiovascular risk in New Zealanders: data for healthcare planners, funders and providers. NZMJ 2006; 119. URL

general population. This is very important as organisations need to ensure a more tailored management solution to be developed for these populations. Flow on benefits would include improvements in data collection and quality, enabling a clearer picture of the burden of disease in the community.

Cardiovascular and diabetes risk assessment and management are an important part of the continuum of care for people with chronic conditions. This strategy meets the need for early detection and prevention in line with the Chronic Care Management framework developed by Counties Manukau DHB.

The CMDHB Diabetes and Cardiovascular disease Advisory Group (DCAG) has also produced a paper outlining the essential components required for any diabetes/CVD risk screening and management programme to meet the requirements for public funding (through SIA, direct DHB funding or the PHO Performance Management Programme). This document is attached as Appendix A.

Approach to CVD risk screening using the Chronic Care Model

Delivery system redesign

The following aspects relating to design of delivery systems need to be considered.

Staff and training

System redesign should include support for development of practice delivery systems to allow for implementation of screening and management of those identified as high risk.

Resource is required to train doctors, nurses, community health workers and other medical providers to systematically risk assess and communicate results effectively to patients.

The National Heart Foundation has developed materials suitable to use for this training. Training is also required for Community health workers and others in the community who can support CVD screening and management across a variety of settings, including homes, work sites, and community organisations.

It is important however not to underestimate the resource that will be needed to manage those identified. A recent NZMJ article highlights the

significant increase in resource required when the additional 5% risk is added for Maaori/Pacific/Indian patients and those with a family history of premature CVD.¹⁸

Recognition that requirements may vary depending on demographics and education resources may require modification for some groups.

Definition of the population to be screened

The cohort of patients who would most benefit from a screening intervention for assessment and management of CVD risk is described in the New Zealand Guidelines Group publication on the Assessment and Management of Cardiovascular Risk, Dec. 2003⁷. Systems design would require mechanisms to identify this cohort within a primary care population.

Table 2. NZGG recommended age levels for initiating cardiovascular risk assessment.⁸

Target Group	Male	Female
Maaori, Pacific peoples and people from the Indian subcontinent	Age 35 years	Age 45 years
People with known cardiovascular risk factors including diabetes or at high risk of developing diabetes	Age 35 years	Age 45 years
Asymptomatic people, without known risk factors	Age 45 years	Age 55 years

Managing the population to be screened

The essential system components required to adequately manage those individuals identified with established CVD or at high risk are described in Appendix A and include:

- Electronic systems within patient management systems (PMS) to identify individuals who require screening.
- The system needs to identify patients with known CVD (who are considered clinically “high risk”), both to bypass the risk screening process and to direct them into CVD risk management programmes.

¹⁸ Wells et al. NZMJ. (2007). The impact of New Zealand CVD risk chart adjustments for family history and ethnicity on eligibility for treatment

- The system should have the capability to aggregate data on the eligible population demographics and risk data at a DHB level.
- The screening tool should have the capability to interact with the tools used for ongoing management of those at risk.
- Should consider the need for novel approaches to engage patient in CVD risk screening e.g. outreach CVD screening by pharmacists, nurse-led or whaanau based outreach screening and linkage/patient engagement to primary care.

Clinical information systems

The clinical information systems required to support the CVD strategy will require the following characteristics:

- Electronic tools based on the NZ 2003 guidelines with validated data input items, definitions and output terms, and a validated risk assessment algorithm.
- Be able to be updated as new evidence becomes available.
- Ideally have seamless linkage of data to CVD/DM electronic decision support to enable individualised management advice for high risk patients (one system would be desirable).
- Data integration with patient management systems (PMS).
- The ability to record risk assessment locally in PMS and send/share data with PHOs.
- Ideally have the functionality to send anonymised (encrypted) individual patient CVD risk assessment/management data to PHO/CMDHB/University of Auckland to allow population level programme analysis/development and outcome assessment.
- Facilitate exchange of CVD risk assessment management clinical information between primary and secondary care.
- Ideally risk assessment data from secondary care will integrate with primary care data to be included in population level reporting.
- Capability to report on both the numbers and proportion of eligible population screened, screening data, risk assessment results and management data.

Decision support

Electronic decision support systems have been shown to improve prescribing practices, reduce serious medication errors, enhance the delivery of preventative care standards, and improve adherence to recommended care standards. A systematic review identified four

independent predictors of effective decision support¹⁹. This strategy supports electronic decision support systems based on the clinical information principals (see above) and ideally incorporating the following characteristics:

1. The system generates decision support automatically as part of the normal clinical workflow i.e. is trigger activated.
2. The advice is delivered at the time and place of decision making i.e. in 'real time'.
3. The decision support is delivered electronically.
4. The support provided offers specific patient tailored recommendations rather than generic advice.

Self management support

Low to intermediate CVD risk (5year CVD risk <15%)

For those patients identified with low risk, practice teams will require the skills and opportunity to discuss the concept of CVD risk with patients, give them some understanding of the meaning of their risk level, and some indication of appropriate follow up e.g. attend GP clinic for a yearly blood pressure check or blood cholesterol test.

Patients should also be encouraged to self manage risk in line with the universal approaches to CVD prevention, essentially involving counselling and assisting patients with optimising behaviour that provides cardiovascular protection. Language is important; Health teams should consider promoting "cardiovascular resilience or protection" rather than just addressing risk.²⁰

This strategy recommends the following approaches, which need to be integrated holistically:

- Encouraging people to be smoke free
- Encouraging people to be as physically active as they can
- Encouraging healthy diets
- Encouraging, attaining or maintaining a healthy body weight.

While review of Maaori health data reinforces the huge importance of smoke free, these priorities need to sit alongside each other as opposed to being staggered or staged delivery approaches. It is the combination of these lifestyle changes that will make the most significant difference and makes

¹⁹ BMJ 2005;330:765:2 April

²⁰ Personal communication Doone Winnard 5/12/2007.

sense for a whaanau ora approach. So the messages and initiatives need to be delivered in a cohesive rather than fragmented way.

Patients with an intermediate risk of CVD (typically 5 year risk of CVD event between 10% -15%) may benefit from more intensive self management support strategies described in the next section on self management in high risk individuals. Some contributors to the strategy from primary care suggest that these patients should have the option of going onto a CCM/care + programme as annual review is probably insufficient especially in many high needs population to monitor and support meaningful lifestyle behaviour changes.²¹

A diabetes self management education (SME) programme was launched by CMDHB in November 2006 and is currently established in 5 PHOs. The intention is to extend this SME programme to cover all chronic conditions including CVD during 2008/09. This programme will provide additional resource to encourage behaviours that promote cardiovascular protection.

Community

This strategy endorses community involvement in the promotion of CVD risk assessment utilising the expertise role of the Community Health Worker (CHW) and supporting activities within the wider community supported by public health policy. As noted in other comments CHW's need support and adequate training and resource to fulfil this role. Commonly organisations tend to talk about how CHW's can help achieve organisational goals but don't necessarily include the community health workers in workforce development plans so they are equipped to do so.

CVD risk management programmes for high risk patients

Patients at "high risk" for cardiovascular disease include:

1. Patients with established cardiovascular disease, who are considered clinically to be at high risk (typically five year risk of CVD event >20%).
2. Patients without prior cardiovascular disease who are assessed at screening to have a five year risk of CVD event \geq 15%.

²¹ Personal communication Dr Yah Moh (TKOH) 5/12/2007.

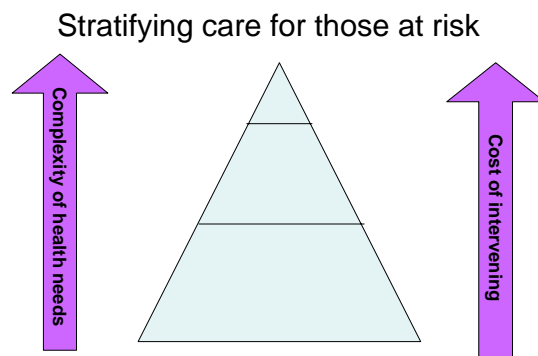
Requirements

All patients screened and identified as “high risk” and those identified with CVD should have:

- Access to CVD management advice based on the NZ CVD/DM Guidelines (2003) and subsequent authorised updates
- Self management support
- Ability to link in with community programme
- Priority given to continuing to ensure that cost is not a barrier to care for those who need it.

The strategy acknowledges that all patients at risk of CVD or with established CVD do not need the same level of support.

The level of patient need depends on both the degree of CVD risk and also the psycho-social situation of the patient.



Redesign of delivery system

In addition to delivery system redesign required for Risk Screening, CVD risk management requires focus on the following components of the health delivery system.

Leadership

A shared vision by key stake holders is vital for the implementation of this strategy and a requirement for:

- Successful project management and coordination.
- Shared leadership and commitment in the primary and secondary sectors.
- Alignment with organisational goals and ongoing funding.

- Defining of roles and responsibilities within the interdisciplinary team
- Determining governance structures.

Management programmes

Patients at “high risk” should have access via their clinician (primary or secondary) to a risk management programme that meets the requirements of the CCM model i.e. structured care programmes that reduce access barriers and support cultural safety with a focus on improving quality of life and disease outcomes. Priority should be given to ensuring cost is not a barrier to access.

Existing programmes include:

- CMDHB chronic care management programme for CVD or Diabetes (including FAMA/Care +) - intensive practice based management in primary care for patients with higher health needs.
- Annual CVD Management Review – “one off” annual assessment and management advice in primary care for “high risk” patients not eligible for the CCM or “Diabetes Get Checked”.
- Acute Predict – CVD risk management in secondary care following acute CVD events linking people back into their primary care provider.
- Cardiac rehabilitation/Heart Guide – a short term programme based in either secondary or primary care for those who have had a recent major CVD event.

Additional care packages will need to be developed for clients at lower levels of risk:

- Moderate risk 10-15% CVD risk (individual lifestyle advice)
- Patients with impaired glucose tolerance, impaired fasting glucose, metabolic syndrome or diabetes
- Programmes to meet the specific requirements of different ethnic or age/gender groups.

These packages of care will vary in intensity depending on the individual’s level of risk and likely benefits from intervention and need to recognise the importance of appropriate management of related co morbidities such as gout and mental health disorders.

Targets for risk assessment and management

The clinical targets for risk-based management are described in the NZGG publication “The Assessment and Management of Cardiovascular Risk” December 2003. This strategy endorses the current guidelines taking into account national (e.g. MOH) requirements and agreed local regional

standards. Targets apply across the region, with the aim of reducing ethnic and socioeconomic disparities.

Outcomes assessment, monitoring and evaluation of the strategy

A cardinal feature of all well designed clinical quality improvement interventions is that measurement is built into the clinical workflow. As such, outcome and process evaluation should be incorporated into all components of the cardiovascular disease prevention process.

This will involve collection of risk and risk management data for comparative reporting and benchmarking to facilitate educational opportunities for peer review and drive clinical quality improvement cycles.

Outcome and process evaluation data will also facilitate consumer feedback; enable assessment of population level outcomes (including self-management capacity of individuals, groups and the community as a whole) and reporting on Key Performance Indicators (KPI's) e.g. DHB, PHO, Performance Management Plan etc.

Primary care practice delivery systems

System redesign at the primary practice level will focus on:

- Strategies and tools required to take a population approach to CVD screening and management.
- Role definitions for each team member, development of nursing competencies, care pathways and standing orders and protocols
- Systems for inviting patients for initial assessments, organising blood tests prior to assessments.
- Strategies for optimizing opportunistic patient contacts for screening and management.
- Addressing work flow issues e.g. nurse appointments, space and time allocation for nurse clinics, recall systems for follow up and ongoing management.
- Ongoing Quality Improvement (QI) of programme at practice level including peer review.
- CHW support and development to promote understanding and support for CVD goals in the community.

Linkages between primary and secondary care

Prevention of cardiovascular disease through appropriate risk management for individual patients spans primary and secondary care. Integration of prevention activity across the sector will facilitate enrolment into prevention

initiatives, improve efficiency, improve patient outcomes and ensure district wide implementation.

Developing referral process between the sectors, ideally electronic would facilitate faster access and improved communication to improve patient outcomes. Developing initiatives that link secondary CVD prevention carried out by secondary care services through Acute PREDICT or via cardiac rehabilitation (Heart Guide) to provide a seamless journey for patients should be an important action point for both sectors to address.

Funding priorities

Further debate is required regarding funding priorities for these programmes.

Potential benefit is dependent on absolute risk. The greatest benefit is to be expected in patients with prior cardiovascular disease. The next level of benefit is in patients without prior CVD but with a five year CVD risk $\geq 15\%$.

This strategy supports the following approach to funding priorities:

1. All patients with established cardiovascular disease should as a minimum have an annual review with CVD risk management advice. Primary Care should have the option or be encouraged to enrol these patients in an intensive 1 year CCM programme.
2. Patients with 5 year CVD risk $\geq 15\%$ without established CVD should have as a minimum an annual review with risk management advice.
 - a. Primary Care should have the option or be encouraged to put high needs patients into an intensive programme e.g. CCM as a yearly review may not be enough to sufficiently monitor and promote cardiovascular protection in many high needs populations.
3. Ideally those patients with 5 year CVD risk between 10% - 15% should have annual review with risk management advice.

Funding and programme intensity should be dependent on need within each risk group and KPI's need to support focussed effort to target Maaori, Pacific and Quintile 5 patients and their families/whaanau.

Clinical information systems

These have been described in the section on Clinical Information Systems for Risk screening (see above). Additional reporting and programme management will require:

- The ability to respond to population data requests
- The ability to respond efficiently to MOH/DHB population reporting requirements e.g. "Get Checked" on a regular basis
- Verification of services provided for financial payments
- Reporting on volumes seen, types of patients, and clinical data for QI and evaluation purposes
- Provide both financial management and clinical exception reporting
- Integrate with CMDHB funding/reporting/recall requirement.

Primary and secondary care integration

An agreed common set of CVD data items should be used across primary and secondary care based on NZGG CVD/DM guidelines.

Electronic tools for risk assessment should deliver the same output (i.e. risk assessment and CVD management advice) across different locations including different practitioners in primary care and practitioners in secondary care.

Ideally, individual CVD/DM patient data and action/care plans should be available to clinicians caring for an individual patient at multiple locations.

Ideally the same electronic systems should be used across primary and secondary care.

Primary secondary integration should allow development of an appropriate interface with all CMDHB information systems e.g. Eclair data repository and patient management systems in primary care.

Decision support

Electronic Clinical Decision Support

An ECDS system which provides real-time individualised patient management advice and facilitates care planning is advised and should include the following characteristics:

- Integration with the CVD/DM risk screening tool

- Reliable and valid content/rules for CVD and DM across primary and secondary prevention
- Maintain data/programme integrity over time/follow up
- Quality control with data integrity from input (translation of evidence) to technology platform to output (management advice integrity)
- Data Security – confidentiality, access criteria
- Integration with PMS system.

Education / training for decision support

Resource is required to support nurses, doctors and other medical providers to use the electronic management advice in the context of each programme. Recognition that requirements may vary depending on demographics and education resources may need modification for some groups.

Interdisciplinary clinical and technical training of practitioners – nurses, doctors and allied health professionals should include:

- CV risk and diabetes guidelines 2003
- Electronic clinical decision support tools
- Chronic disease management
- Motivational interviewing
- Self management
- Smoking cessation
- Cultural competence.

IT support for the CVD strategy will be defined in a separate IT implementation plan.

Self management support

Patients at “high” risk for CVD should be enrolled in a management programme (see above) incorporating the principals of Wellness planning / Goal setting to:

- Assess and improve patient and whaanau knowledge around condition
- Assess and promote smoking cessation
- Support Healthy eating and weight control
- Promoting activity levels e.g. green prescription or other related PHO programme.
- Self Managing CVD (chest pain action plans, regular monitoring of BP, Lipids, managing medication and side effects, recognising psychological distress etc).

Community

This strategy endorses community involvement in the promotion of CVD risk management by:

- Utilising the expertise and role of suitable trained and supported Community Health Workers (CHW)
- Creating a registry of resources – communication etc
- Linkages with community programmes and support groups e.g. LotuMoui, green prescription, cardiac clubs, diabetes support groups etc
- Supporting activities within the wider community in line with public health policy.

Population level (Universal) health promotion

This document recognises the importance of strategies to promote healthy lifestyles at individual, whaanau/family and whole population levels. Universal approaches aim to reduce risk in the entire population, including those people at lower risk of developing CVD. Because they impact upon a large proportion of the population even small reductions in risk for individuals can be significant from a population health viewpoint.

In the large Auckland PREDICT cohort approximately 50% of first CVD events (26% of the total CVD events) in patients without prior CVD occurred in those stratified as low risk by the current risk prediction algorithm (<10% 5-y risk). To address CVD risk in these low risk patients the NZGG CVDDM guideline recommends that people with a CVD risk < 10% receive general lifestyle advice including:

- Encouraging people to be smoke free
- Encouraging people to be physically active
- Encouraging healthy eating patterns
- Encouraging attaining or maintaining a health body weight.

This strategy recommends these approaches for all people.

Smoke free

54% of Maaori and 23% of non-Maaori adults in CMDHB are current smokers. Brief interventions by doctors and smoking cessation

interventions by other health professionals are known to increase the chance of smoking cessation²².

'Systems First' is a Ministry of Health sponsored model for ensuring that the Health Service institute an organisation wide system for intervening in tobacco use. It is the basis of CMDHB's Smoke free Hospitals project and is also about to be instituted in three of our PHOs with the support of a regional PHO smoke free co-coordinator.

Systems First involves five steps:

1. Develop a strong smoke free policy to drive systematic action.
2. Design clear smoke free systems.
3. Provide ongoing education to staff on policy, systems, practices and training opportunities.
4. Implement brief smoke free interventions to all smoke-exposed patients in line with NZ Guidelines on Smoking Cessation.
5. Have dedicated responsibilities and services.

This strategy recommends that all health services should consider implementing Smoke free systems guided by the Systems First model. We note there is divergence between the NZGG CVDDM and Systems First in the frequency with which patients should be asked about smoking and physical activity levels. Specific targets and implementation strategies will need to be determined by discussion between relevant parties.

- All patients over the age of 14 should be asked their smoking status and this should be recorded in their clinical record.
- Smokers should be provided with an effective brief intervention.
- Smokers should be offered access to a smoking cessation programme e.g. the Quit Group or Aukati Kai Paipa if the provider does not provide a smoking cessation service.
- The importance of whaanau support for smoke free should be recognised and every effort made to reinforce and support the importance of auahi kore with whaanau.
- A quality system should be in place that monitors the services delivery of these services.

Physical activity

48% of the adult population in CMDHB does not get sufficient physical activity (30 minutes a day five or more days a week). The Green Prescription programme has been demonstrated to be a more effective

²² Nursing interventions for smoking cessation. Rice VH, Stead LF. Update of: Cochrane Database Syst Rev. 2000;(2):CD001188.

method of increasing people's levels of physical activity than standard care (Elley et al). However, in the recent LBD baseline survey only 12% of people who had seen a doctor in the last 12 months had been given a Green Prescription although 37% had been given physical activity advice (Please note some PHOs run their own activity programmes which many people wouldn't associate with the Green Prescription).

The Green Prescription programme is available to all CMDHB GPs and is also available by referral from Cardiac and Pulmonary Rehab, Whitiara, Mental Health Services, and from the Rheumatology service (current trial for gout patients).

CMDHB through LBD, is working with SPARC on the National Advisory Group for the Green Prescription Expansion and is ensuring that the model used across Auckland is appropriate for the population and encourages increased uptake and use by primary care with a possible extension of its availability to secondary care.

In addition, LBD has been successful in gaining a significant investment of funding into the region for Counties Manukau Active. This initiative is designed both to increase the level of physical activity within the population and to develop the physical activity workforce.

In primary care, all patients:

- Should be asked about their levels of physical activity and have their physical activity level documented.
- If they are not regularly physically active they should be offered physical activity advice and a referral to Green Rx or other assistance.
- Be followed up to provide support and advice.

In addition health services should support the physical activity messages being provided to the community through the Lets beat Diabetes campaign.

Healthy eating

Two out of every five deaths each year (approximately 11,000 annually) are due to nutrition-related risk factors such as high cholesterol (reflecting mainly saturated fat intake), high blood pressure (reflecting a range of factors most notably high sodium intake), overweight and obesity, and inadequate vegetable and fruit intake.²³ However, whilst there is sufficient evidence for the effectiveness of intensive counseling this is not the case for less intensive interventions. This strategy therefore can not recommend a systematic approach.

²³www.moh.govt.nz/moh.nsf/238fd5fb4fd051844c256669006aed57/dacf2bad5aa2d16bcc256f33000e1ddc?

However primary care should be able to:

- Assess a patient's eating patterns at a basic level and provide brief advice on healthy eating that is tailored to the patient's needs and aimed at a cardio-protective eating pattern (as per the CVD Guidelines).
- Provide brief healthy eating advice that is tailored to clinical problems such as diabetes, pre-diabetes, dyslipidaemia and hypertension.
- Be proactive in supporting the messages being promoted by Lets Beat Diabetes, and particularly its social marketing campaign.

Healthy weight

23% of people in CMDHB are obese and a further 35% are overweight. Being obese is an important risk factor for CVD, diabetes and gout. Effective interventions are again usually intensive and such interventions are not available in CMDHB for people who do not have disease or are not high risk. This strategy therefore does not recommend a systematic approach.

Primary care should be able to:

- Ensure that patients are screened for overweight and obesity by recording a BMI
- Assess a patient's eating patterns at a basic level and provide brief advice on healthy eating that is tailored to reducing weight
- Be proactive in supporting the messages being promoted by Lets Beat Diabetes, and particularly its social marketing campaign.

For both healthy eating and healthy weight PHOs may wish to develop their own programmes that go beyond this low level approach e.g. Counterweight. This is a programme which equips general practitioners and practice nurses to be able to produce evidence-based approaches to weight management. It uses a structured approach to care and an interactive model of communication which is critical to empowering patients. It was developed and piloted in 80 UK general practices between 2000-2005.²⁴

²⁴ The Counterweight Project Team. Obesity impacts on general practice appointments. *Obesity Research* Aug 2005; 13: No.8. 1442-1449

Education and Training

The effective implementation of this strategy is dependent upon clinical and other staff in hospitals and primary care having the requisite skills to provide the interventions. Adequate education support and training is crucial. There are a number of areas where skills may be needed to be increased through in service training. Most of these areas of training have application to both a high risk and a universal approach.

Skills	Components and Possible Resources
Understanding CVD Risk and Diabetes Guidelines/ Evidenced based practice.	<ul style="list-style-type: none"> • Population Health approaches • CVD risk assessment guidelines • Diabetes guidelines • Medication resources
Practice systems for implementing strategy	<ul style="list-style-type: none"> • Heart Foundation resource "Change of Heart"
Using information technology e.g. Electronic clinical decision support tools	<ul style="list-style-type: none"> • Best use of tools • Lifestyle screening tools • CV risk assessment tools • Management tools • Consistent data recording • Use of data for quality improvement
Effective Brief Intervention	<ul style="list-style-type: none"> • FRAMES (a brief intervention tool) • Motivational interviewing • Screening and Effective Brief Intervention
Self management	<ul style="list-style-type: none"> • Health Promotion • Flinders training • Problem solving • Goal setting
Cultural competence	<ul style="list-style-type: none"> • Maaori competency • Pacific competency • Asian competency • Increasing uptake in these groups
Smoke free	<ul style="list-style-type: none"> • Systems First • Recording status • Smoking EBI • Smoking Cessation Guidelines • Cessation providers

Physical activity	<ul style="list-style-type: none"> • Safety • Recording status • Prescribing exercise • Green Prescriptions
Healthy eating advice	<ul style="list-style-type: none"> • Brief dietary assessment • Identifying specific goals and strategies • Cardio-protective diet • Cultural differences in diet
Specific nutrition advice	<ul style="list-style-type: none"> • Weight loss • Diabetes • Lipid reduction • Gout flare up prevention (dietary links)
Chronic disease management	<ul style="list-style-type: none"> • Team approach • Relationship building • Wellness plan • Structured evidenced based approach with follow up
Community resources	<ul style="list-style-type: none"> • Nutrition advice and support • Physical activity resources • Smoking cessation providers • Self management programmes and support groups

Resources for Education

Design of education/training programmes needs to take into account:

- Limited time available for training and costs of attending education sessions
- Competition for training time with other CME/CNE
- Different training needs between team members (team defined broadly to include those working in the community)
- Different training/education needs between individuals
- The need to reach a common minimum standard
- The need for ongoing as well as initial skill development
- Maintenance of Professional Standards requirements
- Knowledge and skills need to be specific to real work practices and needs
- Relevant to time available in practice to implement learning
- Needs to be based upon currently available resources (teaching resources, patient information, pharmaceuticals, community resources, community campaigns such as LBD)

- Available DHB, PHO and other resources to provide training
- Needs to be consistent in approach between hospitals, PHOs and other providers.

Development of training

Training packages needs to be developed by CMDHB in conjunction with secondary care and PHOs.

Realistic funding needs to be identified to support this process.

Recommendation

That CMDHB accepts this paper as the CVD Prevention Strategy for Counties Manukau and it has been endorsed by the appropriate forums including Chronic Care Management Advisory Group (CCMAG), CCM Steering Group, GPHO, Clinical Advisory Group (CAG) and CPHAC.

Appendix A

CMDHB guideline for implementing the NZGG guidelines on diabetes and cardiovascular risk screening in primary care

Background

Cardiovascular disease accounts for 40% of all deaths in NZ and cerebrovascular disease for a further 10%. Approximately 50% of these deaths occur in individuals who are asymptomatic, but can be identified as “high risk” and would therefore be a target of intense intervention²⁵.

Undiagnosed diabetes is common and is not generally characterised by recognised symptoms. It is thought that, approximately one third to half of all people with diabetes remains undiagnosed.²⁶ 4.3% of NZ adults have diagnosed diabetes with rates amongst Maaori, Pacific and Asian adults being twice this.²⁷ Diabetes may be present four to seven years before diagnosis and some degree of impaired glucose metabolism may be present for up to 12 years before diabetes is diagnosed.²⁸ It is estimated that 8.5% of deaths in NZ are attributable to diabetes.²⁹

The NZ Guidelines Group published ‘the assessment and management of cardiovascular risk’ in 2003. Those guidelines provide advice on which groups to screen, how to screen, the assessment of screening results, and recommended follow-up action. They have been widely endorsed by professional and consumer groups. Although the guidelines focus on assessing CV risk, such assessment involves screening for undiagnosed diabetes.

Screening for CV risk and diabetes is accepted normal good practice in primary care, although there is good evidence that the NZGG guidelines are not being implemented in primary care¹². As a result, the Diabetes and Cardiovascular Advisory Group (DCAG) as the leadership hub for the Primary Care Action Area of Let’s Beat Diabetes, was asked to provide guidance on screening for diabetes within Counties Manukau.

During 2006, DCAG developed a series of position papers on what an ideal screening programme should include. This supported current NZ Guidelines. DCAG also commissioned Jocelyn Tracey (PHocus on Health) to review evidence and provide recommendations on the most cost-effective interventions that could be implemented in CMDHB to systematise and

²⁵ PHocus on Health: Implementing diabetes and cardiovascular risk screening in primary care. Report to CMDHB May 2006.

²⁶ Engelgau MM, Narayan KM, Herman WH. Screening for type 2 diabetes. *Diabetes Care* 2000;23(10):1563-80.

²⁷ Ministry of Health. A portrait of health: key results of the 2002/03 New Zealand Health Survey. Wellington: Ministry of Health; 2004.

²⁸ Kenealy T, Arroll B, Muller P. Screening for Undiagnosed Diabetes: Whom, Where, When and How. In: Ganz M, editor. *Prevention of Type 2 Diabetes*: Wiley; 2005.

²⁹ Public Health Intelligence. Looking upstream: causes of death cross-classified by risk and condition New Zealand 1997. Wellington: Ministry of Health; 2004.

increase CV risk and diabetes screening in CMDHB¹⁰. She was also asked to recommend how groups who are at high risk of CV disease or diabetes can be managed once they have been identified by the screening.

These guidelines reflect DCAG's consideration of that report and subsequent consultation with GPHO and CMDHB management. They are intended to be used by PHOs who may be considering SIA applications around CV risk and diabetes screening. They should also be used by CMDHB programme managers for considering such SIA applications.

As at June 2007, two PHOs have submitted SIA applications for developing screening programmes for diabetes and cardiovascular. These plans have been approved. It is proposed that those two PHOs adopt these guidelines as a pilot risk screening programme and DCAG monitors their progress over the next 12-18 months. This monitoring is really important, and from a Maaori and Pacific health perspective organisations need to ensure high need patients are being screened and managed at an appropriate rate and if not look at what the barriers are and how those can be addressed. Rollout across Counties Manukau will be considered at a later date, based on the outcome of those pilots.

Required components for a screening service

1. What should we be screening for?

- Cardiovascular risk and undiagnosed diabetes

Currently there are well established guidelines for both CVD risk assessment and for subsequent management of the various levels of risk³⁰. There is also strong evidence (local and international) to justify targeted screening for cardiovascular risk. It is therefore appropriate to screen for those at risk of CVD. Those guidelines also found that targeted screening for diabetes, followed by appropriate lipid-modifying treatment, as part of a cardiovascular risk assessment is likely to be even more cost-effective. The Ministry of Health's *Diabetes Toolkit* concludes that opportunistic screening (i.e. when a patient attends for another reason) in primary care of those with risk factors has the potential to provide an effective system for earlier detection of diabetes³¹. Hence screening for diabetes should be considered within the wider context of screening for cardiovascular risk.

It is also noteworthy that any likely screening programme will probably identify, in addition to those who have established CV disease, approximately 15% of people as having high CV risk (>15% 5 year risk) but only 1.5 to 5% of people as having undiagnosed diabetes.

³⁰ New Zealand Guidelines Group. The Assessment and Management of Cardiovascular Risk. Wellington: New Zealand Guidelines Group, 2003.

³¹ New Zealand Guidelines Group. Management of Type 2 Diabetes. Wellington: New Zealand Guidelines Group, 2003.

In summary, while the potential benefits of CV risk screening may be greater than for diabetes, it is appropriate to screen for both as part of the same programme.

2. Who should be screened?

- Those groups outlined in the NZ Guidelines '*The assessment and management of cardiovascular risk*'

DCAG considered whether we should also be looking at groups outside those recommended by the NZGG acknowledging that risk groups for undiagnosed diabetes are different from those who are at risk of CV disease. It was agreed to use the group identified in the guidelines (as outlined in Table 1) in the first instance but to continue to gather information (e.g. assess results from various NZ studies) on which additional groups may benefit from diabetes screening.

Table 1: NZGG recommended age levels for initiating cardiovascular risk assessment²

Target Group	Male	Female
Maaori, Pacific peoples and people from the Indian subcontinent	Age 35 years	Age 45 years
People with known cardiovascular risk factors or at high risk of developing diabetes	Age 35 years	Age 45 years
Asymptomatic people, without known risk factors	Age 45 years	Age 55 years

3. Who should do the screening?

- General Practitioners and Practice Nurses & other primary health care nurses.
- Receptionist/clerical staff also have a role in the screening process (PMS systems, alerting patients, support).

4. What tests should be done?

- BP, fasting glucose, fasting lipids and uric acid level (prerequisite that patient has been asked about relevant family history of CVD and smoking status).
- A non-fasting glucose and lipids may be used as a second best choice when the patient has failed to obtain a fasting blood test and is seen again or, on initial consultation if either the clinician or the patient believes it is unlikely a fasting test can be obtained.

There are well defined screening tests and diagnostic criteria for making a diagnosis of diabetes, and then for subsequent management³². Current recommendations for screening with a fasting glucose followed by an Oral Glucose Tolerance Test (OGTT) where necessary are likely to result in 80% of people with undiagnosed diabetes who are initially screened being diagnosed and 21% of people requiring the follow up more complex OGTT.

Impaired Glucose Tolerance and Impaired Fasting Glycaemia (together defined as pre-diabetes) will also be diagnosed with OGTT. Although these groups are at increased risk of both diabetes and CV disease, apart from the recommendation that annual screening for diabetes be done in these patients, there are no NZ endorsed or developed evidence based guidelines for the management of pre-diabetes. Be that as it may, management of lipids, blood pressure, weight reduction, smoking cessation, and increased exercise will reduce the risk of CVD in this group.³³

5. How should screening occur?

Opportunistic screening to be strongly encouraged as best practice in all practices:

- A system for flagging clinical notes of all patients who qualify for screening is required to facilitate any opportunistic screening programme (initially using age, gender and ethnicity but adding other parameters as they are available). The patient flags need to be updated regularly.
- In some patients, screening may need to be a two step process where there is no recent (last 6 months) record of glucose and lipid levels. In such cases, the clinical information may be collected at the time of arranging blood tests and then assessing risk and communication with the patient (telephone or consultation depending on risk).

Systematic recall (including recall) to be encouraged in all practices:

- Experience shows that this may help to achieve better results
- May be targeted at 'hard to reach' groups
- Practice actively invite patients who are flagged
- This allows for the possibility of a one step risk assessment process – send lab form to be completed prior to consultation
- Systematic recall may be merged with normal practice recall system as well as include "one-off" targeted recall programmes.

Recall

- After risk assessment all people should be entered on a recall system as per the guidelines.

³² New Zealand Guidelines Group. Management of Type 2 Diabetes. Wellington: New Zealand Guidelines Group, 2003.

³³ New Zealand Guidelines Group. The Assessment and Management of Cardiovascular Risk. Wellington: New Zealand Guidelines Group, 2003.

- Action at recall may be either systematic recall as above or flagging for further opportunistic screening depending upon risk status and practice/PHO policy.

Quality

- The screening tool used for assessment of cardiovascular risk must be a validated tool complying with the algorithm outlined in the NZGG for the assessment and management of cardiovascular risk.
- The screening intervention should include the capability to report on screening rates (taking an enrolled population approach) for PHOs and practices. These reports should be included in the PHOs' existing clinical governance systems (e.g. peer groups).
- All practice staff should be trained in the screening systems.

Timeframes

- Any screening system should aim to screen all eligible patients over a five year timeframe or quicker if possible (but some people at increased risk will need more frequent screening).

Promoting health

- Risk screening consultations should be used as an opportunity to promote smoking cessation, physical activity and healthy eating independent of the patient's calculated risk. Where appropriate, physical activity and healthy eating messages should be consistent with, and build-on, the LBD social marketing messages which patients may have seen/heard in the wider community (note: practices will be kept informed of these through their respective PHOs).

Management of those at risk of CVD or diabetes

One of the ethical requirements of any screening programme is that there is an accepted and effective management for those identified through screening. Simply screening for CVD risk or pre-diabetes without a follow up intervention is unlikely to show long term changes in health outcomes.

Who should be followed up?

- All people screened need to have their results and their implications discussed, either as part of a consultation or at least by telephone.
- People with established cardiovascular disease and those with a cardiovascular risk of 15% or more need at least annual review. Ideally this should be through a systematic structured care programme similar to the Diabetes Annual Review.
- People with diabetes require at least annual review through the 'Get Checked' programme.
- People with IFG/IGT should be followed up according to their CV risk. They also need yearly CV risk screening. Some practices or PHOs may want to establish review systems for this group.

Review for people with established cardiovascular disease and those with a cardiovascular risk of 15% or more:

- Management should be based on NZGG *'The assessment and management of cardiovascular risk'* and should include consideration of lifestyle modification and drug therapy.
- Management needs to include a wellness plan including goal setting techniques for follow-up consultations of those at risk and for annual reviews.
- Review should be at least yearly.
- Ideally, clinical templates and decision support tools should be available.

People with CV risk of 10-15% and people with IFG/IGT:

- In addition to initial telephone discussion these groups should have their notes flagged for further discussion at their next consultation.

Quality:

- The reporting system should include the capability to report (at both PHO and practice level) on management indicators in high risk individuals, and allow for targeted intervention of those individuals identified as falling in the 'treatment gap' between evidence based management and actual practice. These reports should be included in the PHOs' existing clinical governance systems (e.g. peer groups).
- Clinical staff should be trained in the management of these patients and have appropriate resources available.