

CHRONIC CARE MANAGEMENT PROGRAMME

General Practice Team Manual

For

Cardiovascular Disease

Version 0.1 - March, 2005



He maha ngā pūtake, kotahi te tohenga kē
From many paths, towards a common goal

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1. Overall Aim of CCM CVD Programme

The Cardiovascular Disease (CVD) Chronic Care Management (CCM) Programme has been developed by a working party involving Counties Manukau DHB, Middlemore Hospital Specialists and representatives of South Auckland Primary Care Groups. The programme also has had considerable input by ProCare, the National Heart Foundation and the New Zealand Guidelines Group. The programme is funded directly by Counties Manukau with the aim of reducing preventable morbidity and mortality in people with ischaemic cardiovascular disease through improved clinical management of CVD risk factors and by providing timely and integrated care, thereby decreasing long-term resource use in the health delivery system.

This will be achieved through implementation of:

- § Structured care at a population level.
- § Targeting of patients for intensive management of CVD risk factors.
- § Consistency of care at an individual level through the use of guidelines, audit and feedback reports, discussion and guideline based CME to peer groups, with selected one to one “academic detailing” where provider variance exists.
- § Funding to support free GP quarterly reviews of high-risk patients, and to facilitate the use of primary care nursing services for implementation, with cardiovascular risk management support for high risk patients (Wellness planning, health promotion etc.).
- § Extra clinical support from secondary care for selected care coordination.

Funding to enrol appropriate patients on the programme (see entry criteria for funding) has been calculated to resource free quarterly GP visits and an average of seven hours of practice nurse time (six clinical hours, and one hour for administrative duties, recalls etc). The practice team will offer this nurse time according to individual patient need, with monthly contact with patients expected.

The programme will include upgrading the IT system to provide population tracking and reminders, variance reporting on patient attendance and patient status, decision support and communication process for several providers to share core CVD information of individual patients.

Project management support will also be provided to develop, introduce and evaluate and appropriate joint primary/secondary care clinic, where appropriate.

2. Which Practices Can Participate?

The criteria that practices must meet in order to participate in the CVD CCM Programme are as follows:

- Ø Established use of computerised clinical records
- Ø MedTech 32 (More PMS alignments are pending)
- Ø HealthLink mailbox
- Ø Ability to generate CVD register and recall system
- Ø Dedicated Practice Nurse resource available.

Clinical education, IT training and ongoing support necessary for successful implementation of the programme will be provided by primary care organisations in conjunction with CMDHB. Practices will be required to participate fully in the education and training programme, identify a GP and a Practice Nurse to act as Project Leader, with overall responsibility for managing the project at practice level, and meet the targets negotiated in the **Agreement for Services (DHB/PHO agreement)**



3. Recommended Target Population for CVD Risk Assessment

Assessment and Management of Cardiovascular Risk. NZGG/NHF/Stroke Foundation/MoH.. December 2003

- Ø All patients with previous CVD event (Angina, MI, Stroke, TIA, PTCA, CABG, PVD) or a CVD equivalent (diabetes or specific genetic lipid disorders – FH, FDB & FCH). These patients are classed as clinically at very high risk (>20%) of a CVD event in the next 5 years and should be strongly encouraged to enrol on the CCM CVD programme.
- Ø All asymptomatic male patients from the age of 45 years (or from the age of 35 if they have known risk factors).
- Ø All asymptomatic female patients from the age of 55 years (or from the age of 45 years if they have known risk factors).
- Ø Maori, Pacific peoples and people from the Indian sub continent should be assessed for CVD risk 10 years earlier than other ethnicities.
- Ø The CVD risk assessment tool (CCM template and supporting IT) will assist practices to identify the high-risk group of patients.

There is a large evidence base that CVD preventive and therapeutic interventions such as:

- Ø Antiplatelet Agents
- Ø Smoking cessation (and other lifestyle factors)
- Ø Cholesterol and BP lowering interventions (Statins and Beta-blockers).
- Ø ACE Inhibition, can dramatically reduce future CVD events or deaths.



In appropriately targeted patients approximately

66-75% of future CVD events could be prevented

(Yusuf, S. Lancet 2002; 360:2-3)

Although all persons with existing CVD or CVD equivalent are considered to be clinically at very high risk (>20%), the CVD CCM programme currently, specifically targets those people with CVD or CVD equivalents who require *optimisation of their risk management*.

Entry Criteria for Funding in CCM CVD (March 2005)

Patient accepts the “Patient Agreement” to participate

Previous CVD event

(MI, angina, PVD, PTCA, CABG, Ischaemic stroke, TIA)

Or

CVD equivalent

(Diabetes/specific GLD ie FH, FDB & FCH).

AND ONE OF:

§ BP > 150/90mm

§ Current Smoker

§ Fasting TC > 6 or LDL > 2.5

Or

FAMA criteria

Two or more admissions for CVD to an Adult Medical Ward for a total of 5 or more bed days in the last year.

Exit after 1 year on the programme



Important Exit from the Funded Chronic Care Management CVD Programme Occurs after 12 Months.

Disenrolment reasons

Disenrolment Reason	Termination Option in Participation Status
Patient Dies	Term – Patient reason
Patient transfers/moves	
Patient requests to be taken off programme	
Clinical assessment of need is lower	Term – Doctor reason
Non attendance	Term – Other/Unknown

Cardiovascular risk is an intrinsic part of diabetes management, and funding for high intensity case management (CCM funding) is available for only one module. For patients with diabetes, this funding is allocated to the diabetes module. Co-morbidity funding may be relevant for CHF and COPD modules. From 2004, patients with existing CVD or CVD equivalent who meet the above criteria will qualify for **12 months of funding** within the CVD Chronic Care Management Programme. Exit from the funded programme occurs after 12 months in order to make this programme accessible to a larger number of people with CVD who are at high risk. These patients are still eligible to receive the same CVD risk assessment and management advice embedded in the CVD decision support programme.

Any practice enrolled in the CCM programme may also use this module to access high quality evidence-based CVD risk assessment and management advice for patients not meeting funding criteria.



Important: If the patient meets the ECF for diabetes this should be the primary enrolment for CCM but all diabetic patients should be entered on the CVD template for clinical decision support and if clinically indicated enrolment on both the diabetes and CVD programme is strongly encouraged.



4a. Desired Patient Outcomes

Wherever possible as a result of intensive regular review and management patients will:

Report that:

- Ø They have a good understanding of their cardiovascular condition or CVD equivalent (Diabetes or genetic lipid disorder) and their role in managing their risk factors
- Ø They have a good understanding of actions they need to take to improve the management of their condition
- Ø They feel confident with their medication, how it works and when it should be taken
- Ø They are satisfied with their health care

4b. Key Performance Indicators (KPI's) for CVD Module

For patients enrolled on the CVD module who fit the entry criteria for funding.

- Ø % of patients with LDL>2.5
- Ø % of patients on a statin
- Ø % of patients with SBP <130 and DBP <80
- Ø % of patients identified as current smokers
- Ø % of patients on Antiplatelet/anticoagulant agents
- Ø % patients with IHD/CABG/PTCA on a beta- blocker
- Ø % of patients on ACE

5. Steps in Implementation

	Task	Who Responsible	Completed
1.	Discuss programme overview and expectations	Practice Team	<input type="checkbox"/>
2.	Sign MOU with PHO for services to be provided	GP	<input type="checkbox"/>
3	Identify all enrolled patients with CVD	GP Practice Nurse	<input type="checkbox"/>
4.	Attend all related education and training session (see section 6)	Practice Team	<input type="checkbox"/>
5.	Assess all patients on disease register for eligibility to join the CCM programme against the target criteria identified above	GP Practice Nurse	<input type="checkbox"/>
6	Inform eligible patients of the programme through phone calls or letter of invitation; (see sample letter). Offer opportunistic enrolment to patients for who letters or phone calls are not the best means of communication	Practice Nurse	<input type="checkbox"/>
7.	Enrol patients in the CVD programme (refer to the PMS specific user guide). Obtain consent and complete agreement with patient	GP Practice Nurse	<input type="checkbox"/>
8.	Go Live with limited enrolment (10 to 20 patients)	GP Practice Nurse	<input type="checkbox"/>
9.	On completion of limited enrolment: <ul style="list-style-type: none"> Ø Review feedback from IC Service and identify any problems Ø Review feedback from the team and address any operation issues. Ø Brainstorm any other problems 	GP Practice Nurse	<input type="checkbox"/>
10.	GPs to provide patients at high risk with free GP consultations every three months with reference to key messages and management guidelines.	GP	<input type="checkbox"/>
11.	Funding is provided for 6 hours practice nurse time over 12 months (eg. 12 x 30 minute sessions of PN time per year). This time is flexible according to patient need, allocated as required to meet the programme requirements for all patients. This time can be used to support patients to achieve agreed Wellness Plan goals.	Practice Nurse	<input type="checkbox"/>
12.	Arrange regular case review which should include: <ul style="list-style-type: none"> § Discussion of areas of concern § Medication review § Investigations required, review of clinical data § Lifestyle issues to reinforce § Review of Wellness Plan 	GP Practice Nurse	<input type="checkbox"/>
13	Link with secondary specialist staff for advice, review, virtual or actual clinics	GP Practice Nurse	<input type="checkbox"/>
14	Claim for services provided	Practice Manager	<input type="checkbox"/>

6. Training Requirements for CCM Delivery

Outlined below are the **minimal requirements** identified for a practice team (doctors, nurses, community health workers and reception staff) to have completed before being able to deliver the CCM disease specific programmes to patients. This is to ensure quality and a standardisation of the programme with an aim to improving patient outcomes. The journey of a patient along the chronic care pathway is influenced by many people. It is as important for the receptionist to have an overall understanding of why effective chronic care requires a proactive team approach as it is for the clinical leader. The reception staff can be a vital link in supporting an empowered patient.

PHOs will be responsible for ensuring delivery of this programme to practices with the CMDHB multidisciplinary team providing trainers and facilitators, as required. It is expected that all members of the practice team funded to provide CCM undertake the CCM introductory sessions.

Introductory sessions – minimal requirements

Session One (Approx 2 hour session)	Format/resource people
<ul style="list-style-type: none"> • CCM Philosophy • Structure of programme • Inviting patients to join the CCM programme • Overview of current guidelines and IT application to IT template and clinical rules for one specific disease • Introduction to the importance of self-management 	<p>Mixture of CCM GP, CCM specialist nurse and secondary care specialist</p> <p>Combination of presentations and small group exercises</p>

Session Two relates to the practice based IT component of the education programme. This session focuses on setting up the practice with the IT knowledge and support to run the CCM templates within their PMS.

Session Two (IT)	
Practice based review of CCM template and IT delivery system.	DHB/PHO IT liaison Interactive/practical sessions

Ongoing support is provided by your PHO CCM Clinical programme manager to review CCM delivery systems, troubleshoot and facilitate effective CCM interventions.

Further education available – the disease specific Modules

A further more detailed educational session is available once you have been doing the programme for a few months and are ready to explore how you can get the best out of the programme and even better outcomes for your patients. This is called Module A Diabetes or CVD or CHF or COPD). It is organised for you by your PHO CCM Clinical programme manager and will be held either in your practice, or for a group of practices in your region, usually at lunch time. The session includes new information around wellness planning and clinical management, and a chance to solve any problems you have – either with the programme, or with wellness planning, or clinical conundrums.

It is expected that providers will begin with one specific disease programme for example diabetes and then once confident with delivering CCM in that programme, move on to the other disease programmes.

When implementing any other programme (i.e. adding CVD to a practice already offering the diabetes programme), the introductory sessions **will not need** to be repeated – participants can go straight to Module A (eg CVD) for the new disease specific programme.

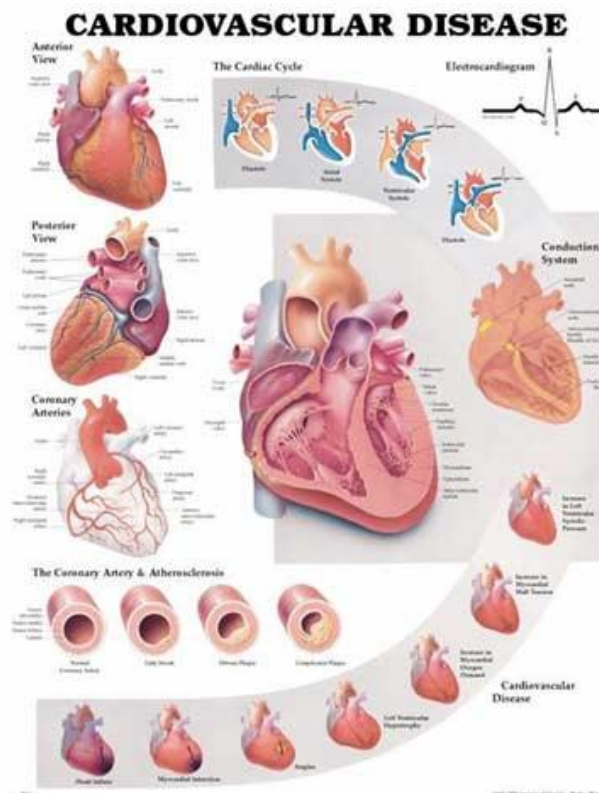
Accessing on going CCM education is through your PHO representative.



Note: MOPS points and nurse certificates will be organised for Introductory Session One by your PHO.

MOP points and & workbooks (assessments/ case study) for nurse Clinical Career Pathway are available for undertaking Module A sessions.

RNZCGP members can obtain Practice Review Activities / Quality Improvement MOPS points if they put in place internal quality improvement activities around their management of the programme – See Reporting section 12 Maintenance of Professional Standards for further details.



7. Patient Enrolment /7a. Patient Letter

This sample letter can be used to invite patients to join the CVD CCM programme. It can be posted, emailed or handed to patients when they next attend the surgery.

Dear

Our practice is involved in a South Auckland wide programme focusing on working with cardiovascular disease as well as possible. The main aim is to help to keep you well and give you an opportunity to better understand your condition.

As a patient known to have cardiovascular disease we would like to provide you with the opportunity to participate in this programme.

You will be allocated four free consultations over a year, (one every three months) with the GP and additional time with a Practice Nurse involved in your care, to review your cardiovascular disease. To establish what areas are of concern to you we will start with a wellness plan that is designed specifically to meet your needs and promote your well being, developed with you, and reviewed by the GP and practice nurse on each visit.

This programme has been developed with the Specialist Cardiology team at Middlemore Hospital, and they will continue to be involved in your care as required. To help in this process and to monitor success of this programme, some information in relation to your condition will be shared. Should you decide to be part of the cardiovascular disease programme, this will be explained to you in detail.

We will contact you within the week by phone to discuss your interest in taking part in this programme, and to make an appointment for your first visit.

Yours sincerely,

7b. Privacy Issues and Consent

All patients enrolled in a Chronic Care Management programme will need to understand and consent to the sharing of information about their health care by all members (and potential members) of the care team.

Legally, you don't need the signed consent of clients to collect and subsequently disclose, use or transfer etc. identifiable information. But you must be **open** and **transparent** about, among other things, the purposes for collecting the information, the flow of the identifiable information and the intended recipients. You must ensure that the health information you collect is for a lawful purpose and that the purpose is clearly explained.

How to ensure all of these aspects are adequately covered:

It is recommended that the standard enrolment form below, which is part of the patient held Wellness Plan, is used to explain the responsibilities of both patient and health provider, and to ensure the consent process is covered.

- Ø Oral explanations should be in an appropriate language to ensure understanding.
- Ø Notices should be displayed on boards in waiting or treatment rooms

Patient Consent for Programme (available in Wellness Plan)

- Ø I agree to take part in a personal wellness plan for my condition, to attend the regular checks with my doctor and practice team and that any cost has been discussed with me.
- Ø I understand that information about my condition is shared by all members of the team and may be collected along with other patients records to see how well I am doing and/or how well this programme is doing.

Members of your care team are

Doctors, nurses and HCW in your general practice

Specialist nurses working between the general practice and the hospital.

Hospital doctors and nurses in emergency care or the wards.

Clinicians in specialist practice doing checks for your condition (e.g. eye checks for diabetes)

Agreed By:

Patient

Care Team Member

Name:

Name:.....

Signature:.....

Signature:.....

Date:

Date:

7c. What happens with patient information (available in the wellness plan)

How much of my information is shared?

My information which my care team can share in order to assist with my care, will include:

- a) Identification information such as name, date of birth, and National Health Index Number (NHI)
- b) Specific details on your condition such as blood sugar levels or blood pressure. A detailed list of what information is collected is available from your care team and can be discussed with you, if you wish.

Who else can access my information and why?

My personal information will not be accessed in a manner that identifies me to anyone else. However grouped information about a large number of patients, in which I cannot be identified:

- a) May be used for research and analysis to guide further developments of this programme and service delivery for people with my condition(s).
- b) Will be used to produce statistics for health monitoring, planning and management purposes.

What happens if you do not wish my information to be used in this way?

I will receive the normal care I have always received and this will not be reduced in any way. I still have access to all services such as Emergency Care and the hospital but they will not be in a position to know what has been happening with my condition recently.

Who carries responsibility for managing my information?

The Primary Health Care Organisation (PHO) supported by Counties Manukau District Health Boards are the kaitiaki or governance groups responsible for managing my information.

If I have any concerns, I will discuss them with my care team.



Remember that as health providers you have an obligation to ensure that an individual or their representative is aware of the following:

- Ø The fact that health information is being collected;
- Ø The purpose for which the health information is being collected;
- Ø The intended recipients of the health information;
- Ø The name and address of the health agency collecting the health information and the health agency which will hold the health information;
- Ø Whether the supply of the information is voluntary or mandatory; and if mandatory, the particular law under which it is required;
- Ø The consequences of not providing the information;
- Ø The right of access to and correction of the health information

Finally, health information obtained for one purpose shall not be used for another unrelated purpose. Also you must not disclose health information unless, among other things, the disclosure of the information is one of the purposes in connection with which the information was obtained.



8. Information Systems and Flow

The CCM programme is presently supported by MedTech32, a centralised computer, the IC Server (Integrated Care Server) and a decision support server (PREDICT server). Connectivity is via a Healthlink mailbox, and in future this may be enhanced by ADSL connections. A detailed CCM user guide relevant to your PMS system is provided and available from your PHO. This covers use of the CCM Template, claiming and correcting error messages.

The IT support is provided as follows:

- § Clinical templates for cardiovascular risk management have been incorporated into the Practice Management Systems. The templates prompt collection of the relevant clinical and laboratory data, communicate with the IC server and provide decision via messaging from the IC server.
- § The decision support for the CVD programme is driven by a sophisticated rules engine (PREDICT) which incorporates recent evidenced based guidelines. New rules which reflect the new CVD and diabetes guidelines are being developed and will be ready for use in the CCM programme by 2006.
- § In some cases the templates can be configured to produce documents required frequently in the management of patients with CVD (lab order forms, referral forms to various agencies, elements of the Wellness plan, special authority forms etc).
- § A back up is available to report on missed recalls.
- § There is an inbuilt facility for claiming and clinical reporting integrated into the template.
- § The system integrates with ED (secondary care) where the diabetes dataset is available as a read-only non-modifiable extract in Pims for those patients presenting at Middlemore Emergency Department.



www.ninds.nih.gov



The following screening templates are available for use by MedTech 32 users:

CCM SMITH Arnie (3263)

Main | Diabetes | Diabetes ... | CHE | COPD | CVD | Chart | Documents | Audit | Parked

Main
 Provider: Sam Eaves (SFE)
 Date: 13 Jan 2005

Options
 Diabetes Programme
 Congestive Heart Failure
 Chronic Obstructive Pulmonary Disease
 Cardiovascular Diseases Risk
 Access Risk

NHI: PRP4545
 Ethnic Origin: European/Pakeha NZ (1)
 Height: 187 cms
 Weight: 110 kg
 BP Systolic: mm Hg
 BP Diastolic: mm Hg
 Pregnant: Not Applicabl
 Smoker: No
 Smoking advice?:
 Type of Diabetes: Type 2
 Flu Vac?:
 Flu Vac Date?:
 TC/HDL Ratio: 0.69
 IHD: Yes
 PTCA/CABG: No

Stroke/TIA: No
 Gen Lipid Disorder: Yes
 PVD: No
 Family Hx of CVD: Yes
 BMI: 31
 CVD Risk: %
 Age: 70 yrs
 Gender: M

OK and Send OK Cancel

CCM SMITH Arnie (3263)

Main | Diabetes | Diabetes ... | CHE | COPD | CVD | Chart | Documents | Audit | Parked

Physically Active?:
 Green Rx:
 NHF Diet Advice:
 Fasting Tot Chol: 6 mmol/l
 Fasting LDL Chol: 1.2 mmol/l
 Fasting HDL Chol: 5 mmol/l
 Fasting Tgs: 5 mmol/l
 Aspirin:
 Clopidogret:
 Warfarin:
 ACE:
 B-Blockers:
 Thiazide:
 Ca Channel Blocker:
 Other BP drugs: Yes
 Statins: Yes
 Fibrates:
 Other LL drugs:

Program consent?: Yes
 Care Plan Discuss?:
 Mx Goals met?:
 Particip. Status:

PREDICT

Outcome / Note
 Outcome:
 Note:

Recall
 Recall In:
 Provider: Sam Eaves (SFE)
 Note:

Inactive: Park: 4 months since last check

OK and Send OK Cancel

9. Key Clinical Messages

Assessment of absolute CVD risk is the starting point for all discussions with people who have CVD risk factor measured. Reduction in CVD risk is the goal of treatment.

- Ø A fasting lipid profile, fasting plasma glucose and two blood pressure measurements are recommended for comprehensive risk assessment.
- Ø CVD mortality is high in people with impaired glucose tolerance or diabetes. Maori need particular attention as they have a high rate of CVD and renal complications from diabetes. (A fasting plasma glucose is not a requirement of the current CVD CCM template but is being introduced in early 2005 to highlight the importance of the metabolic syndrome and the role diabetes has in CVD risk)
- Ø Aim for a blood pressure at or below 130/80mmHg.
- Ø Aim for a total cholesterol at or below 4, a TC/HDL at or below 4.5 and an LDL at or below 2.5.
- Ø Be on a statin after an MI and for most people after a TIA or ischaemic stroke, in other people with a CVD 5 yr. risk of >15% intensive lifestyle and Statins are a cost effective management of high lipids.
- Ø Be on a ACE inhibitor especially if previous myocardial infarction, left ventricular dysfunction or blood pressure is over 140/85mmHg, TC/HDL is greater than 4.5 or currently smoking.
- Ø Be on beta-blocker if previous myocardial infarction (unless contra-indicated).
- Ø Be on aspirin or other anti-platelet agent if CVD risk >15% (unless contra-indicated).
- Ø Virtually all ischaemic stroke and transient ischaemic attack survivors should be taking low dose aspirin, a combination of two BP lowering drugs and a statin.
- Ø Be a non-smoker.
- Ø Participate in at least 30 minutes of physical activity every day.
- Ø Have a BMI of less than 30 (there is a proposal in the cardiac rehabilitation guidelines August 2002 www.nzgg.org.nz that Maori and Pacific Island peoples be considered at high risk of co-morbidities when their BMI is over 32, and that Asian and Indian peoples threshold should be lowered to very high risk at a BMI over 25).
- Ø Be on the practice recall for influenza vaccination.
- Ø Drink less than 14 standard drinks of alcohol each week if female and less than 21 standard drinks if male. And on any one drinking occasion, drink no more than 6 standard drinks for men and 4 standard drinks for woman.

Example: Standard Drink = 10gm alcohol = 1 can/or stubbie of beer = 1 glass wine = 1 nip (single spirit)

Cardiac Rehabilitation Guideline

Goals	Intervention
Psychosocial Management	Assess level of social support needed. Monitor symptoms of depression and anxiety. Advise on return to vocational activity, driving and return to sexual activity. Refer to home or hospital based comprehensive cardiac rehabilitation programme.
Smoking Goal <i>Complete Cessation</i>	Assess tobacco use. Strongly encourage patient and family to stop smoking and avoid smoke. Facilitate counselling, pharmacotherapy and cessation programmes as appropriate.
Physical Activity Goal <i>At least 30 minutes on most days of the week</i>	Assess exercise risk, preferably with exercise test to guide prescription. A gradual increase to periods of physical activity of at least 30 minutes most days of the week and an increase in daily lifestyle activities as advised. Vigorous exercise is not routinely recommended. The benefits of regular moderate physical activity overall, considerably outweigh any risk of sudden death.
Nutrition Management Goal: <i>Adoption of a cardioprotective dietary pattern</i>	This dietary pattern includes: <ul style="list-style-type: none"> Ø Large serving of fruit, vegetables and whole grains. Ø Low fat dairy products Ø Small servings of unsalted nuts and seeds regularly. Ø Fish or legumes frequently in place of fatty meat and full fat dairy products. Ø Small lean meat servings.
Weight Management Goal:	For overweight or obese patients, an individually planned nutritionally balanced diet may be considered. The initial goal of weight loss should be to reduce the patient's weight by 10%. Encourage exercise and nutrition goals.
Lipid Lowering Medication Goals: <i>Total cholesterol <4mmol/L</i> <i>LDL cholesterol < 2.5mmol/L</i>	Ensure cardioprotective dietary change. Promote exercise and weight management. Assess fasting lipids profile. Start drug therapy (statin generally most appropriate. Consider adding fibrate if low HDL or high TGL).
BP Control Goal: <i><120-140 / 80-90</i> <i>Or lower if diabetes</i>	Ensure lifestyle measures. Add BP medication individualised to patient characteristics.
Antiplatelet Agents:	Continue aspirin indefinitely. If aspirin contraindicated, consider warfarin.
Beta Blockers:	Continue betablockers indefinitely unless contraindicated.
ACE Inhibitors:	Continue ACE inhibitor indefinitely in high-risk, post MI patients (anterior MI, previous MI, LV dysfunction or CHF). Consider chronic therapy in other patients.

Major Differences between 2003 NZ Guidelines for the Assessment and Management of Cardiovascular Risk and Previous Lipid, BP and Secondary Prevention Guidelines (Dr Sue Wells)

2003 Guidelines CVD Risk	Previous CVD Guidelines
<i>Risk Assessment</i>	
Target population for CVD risk assessment defined	Less explicit target population
Fasting glucose included within risk assessment	Not included
Greater risk stratification of diabetics § Renal disease/overt nephropathy classified as being clinically at high risk § Upward risk adjustment 5% if duration type 2 diabetes over 10yrs or HBA1c consistently greater than 8%	Most diabetics considered at high risk (Interim Consensus Statement) Upward risk adjustment for family Hx only (Interim Consensus Statement)
Upward risk adjustment 5% for metabolic syndrome and family Hx of first degree relative having ischaemic event (Male<55yrs, female<65yrs) Upward risk adjustment 5% for Maori, Pacific and Indian sub-continent ethnicity	Upward risk adjustment for Maori and Pacific peoples only (Interim Consensus Statement)
<i>Treatment Indications – Primary Prevention</i>	
Over 15% risk recommendations: Attention to smoking cessation, cardioprotective diet and regular moderate physical activity plus triple Rx with aspirin, BP lowering and lipid lowering medications Aim-reduce re-calculated risk to less than 15% Less than 15% attention to lifestyle; Smoking cessation, cardioprotective diet and regular moderate physical activity	Over 15% risk recommendations: Attention to smoking cessation, cardioprotective diet and regular moderate physical activity plus triple Rx with aspirin, BP lowering and lipid lowering medications Target BP less than 150/90mmHg and TC/HDL less than 4.5 Over 10% BP therapy recommended if BP over 150/90mmHg
<i>Treatment Recommendations – Secondary Prevention</i>	
Treatment for those with existing CVD with statin medications irrespective of lipid levels. Aim towards the population ideal of BP115/70mmHg and TC/HDL<4.5, TC<4 and LDL <2.5. For those with venous CABG aim for TC<3 and LDL<2mmol/l Virtually all with ischaemic stroke or TIA should be having low dose aspirin, 1 combination of 2BP drugs and statin	Treatment for those with existing CVD with statin medications if TC/HDL greater than 4.5 Aim for BP<140/85 (prior CVD non-diabetic) BP<130/80 (diabetic with or without prior event) Less explicit

CVD Risk and Interventions

Cardiovascular Risk	Lifestyle	Drug Therapy	Treatment Goals	Follow-Up
CVD risk clinically determined more than 20%	Intensive lifestyle advice on a cardioprotective dietary pattern with a dietician, physical activity and smoking cessation intervention. Lifestyle advice should be given simultaneously with drug treatment	Aspirin, if not contraindicated, a beta blocker, statin and an ACE-inhibitor (after MI) or aspirin, statin and a new or increased dose of a blood pressure lowering agent (after stroke)	Efforts should be made to reach optimal risk factor levels	Cardiovascular risk assessments at least annually, risk factor monitoring every 3 to 6 months
CVD Risk calculated more than 20%	Intensive lifestyle advice on a cardioprotective dietary pattern with a dietician, physical activity and smoking cessation intervention. Lifestyle advice should be given simultaneously with drug treatment	Aspirin and drug treatment of all modifiable risk factors (blood pressure lowering, lipid modification and glycaemic control)	Risk factors treated to a level that will lower 5 year cardiovascular risk to less than 15% (by recalculating risk)	Cardiovascular risk assessments at least annually, risk factor monitoring every 3 to 6 months.
15 to 20%	Specific individualised lifestyle advice on a cardioprotective dietary pattern, physical activity and smoking cessation. This lifestyle advice should be given by the primary health care team for 3 to 6 months prior to initiating drug treatment	Aspirin and drug treatment of all modifiable risk factors (blood pressure lowering, lipid modification and glycaemic control). Drug therapy indicated for people with extreme risk factor levels.	Risk factors treated to a level that will lower 5-year cardiovascular risk to less than 15% (by recalculating risk).	Cardiovascular risk assessments at least annually, risk factor monitoring every 3 to 6 months
10 to 15%	Specific individualised lifestyle advice on a cardioprotective dietary pattern, physical activity and smoking cessation. This lifestyle advice should be given by the primary health care team.	Non-pharmacological approach to treating multiple risk factors	Lifestyle advice aimed at reducing cardiovascular risk.	Further cardiovascular risk assessment in 5 years.

Less than 10%	General lifestyle advice on a cardio protective dietary pattern, physical activity and smoking cessation	Non-pharmacological approach to treating multiple risk factors.	Lifestyle advice aimed at reducing cardiovascular risk	Further cardiovascular risk assessment in 5 to 10 years.
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Genetic Lipid Disorders

Genetic lipid disorders potentially putting people at a 5-year CVD risk >20%. Assume high risk clinically in this group	
Familial Hypercholesterolemia (FH)	<p>People presenting with cholesterol levels >8mmol/L plus a family history of premature coronary heart disease, or tendon xanthelasma should be referred and offered family tracing.</p> <p>People with FH usually have a family history of premature autosomal dominant inheritance. Heterozygous FH has prevalence in the general population of at least 1 in 500.</p> <p>Family tracing of the siblings and children of people with FH is recommended.</p> <p>Refer to a centre with expertise in management of lipid problems as mutation analysis allows more precise family tracing and screening. If referral is not possible these people should be discussed with an appropriate specialist.</p>
Familial Defective ApoB (FDB)	<p>These people with elevated ApoB levels should be managed and referred as for people with FH.</p>
Familial combined dyslipidaemia (FCH)	<p>This is characterised by a strong family history of cardiovascular disease and a combined dyslipidaemia high LDL-C, high triglycerides and usually a low HDL-C with small dense LDL-C particles.</p>

Genetic Lipid Disorders Potentially Putting People at a 5-year CVD Risk <20%. Calculate CVD Risk in this Group	
Low HDL-C Syndromes	<p>Low HDL-C confers a high risk for cardiovascular events. The courses of low HDL-C are multiple and these subjects are refractory to most drug interventions. Refer if HDL-C is <0.7 mmol/L</p>
High LP(a)	<p>The genetic cause of high LP(a) is unknown. High values are refractory to most drug interventions.</p>
Isolated High Triglycerides (>8 mmol/L)	<p>The management of people with isolated high triglycerides should be discussed with the appropriate specialist.</p>
Broad Beta Disease	<p>If the TC: triglyceride ratio approaches one, with both lipid fractions elevated, then further investigation is needed.</p>

The Metabolic Syndrome

The Metabolic Syndrome (Insulin Resistance Syndrome)

This cluster of clinical features identifies individuals at increased risk of cardiovascular disease despite only moderate elevations of individual risk factors.

People with the metabolic syndrome are at increased risk of ischaemic heart disease, raised blood pressure, sub fertility, diabetes, gout, heart failure and obesity.

The Recommended Definition of the Metabolic Syndrome*

Three or more of these five risk factors are required for diagnosis:

Risk Factor	Sex	Defining Level
1. Abdominal Obesity	Men	≥100 cm waist circumference
	Women	≥90 cm waist circumference
2. Fasting Triglycerides		≥1.7 mmol/L
3. HDL Cholesterol	Men	<1.0 mmol/L
	Woman	<1.3 mmol/L
4. Blood Pressure		SBP >130 or DBP >85
5. Fasting Glucose		> 6.1 mmol/L

* Adapted from the National Cholesterol Educations Programme ATPIII 2001 definition (units rounded).



Cardioprotective Dietary Pattern

Benefits of dietary treatment

Dietary treatment now involves the promotion of a cardioprotective dietary pattern. This pattern offers more than simple LDL-cholesterol reduction, via mechanisms that improve the lipid profile and glycaemic control, lower blood pressure, and reduce the risk of clotting. Dietary treatment is additive to drug therapy and integral to reducing cardiovascular risk.

A variety of dietary patterns reduce cardiovascular risk. These patterns have in common a high plant food content and minimal content of meat or dairy fats, and commercially hardened plant oils or fats. They include most of the following food components:

Food Component	Recommendation	Serving Size Example
<p>Vegetables and Fruit Choose coloured varieties daily, especially the green, orange and red vegetables</p>	Aim for at least 8 servings a daily	½ cup cooked vegetables, 1 cup raw green vegetable or salad, 1 medium apple, pear, orange, nectarine, banana, ½ cup stewed, frozen or canned fruit.
<p>Whole Grain Breads and cereals Chose a variety of grain products with at least half as whole grain products</p>	Aim for 6 or more servings daily depending on body weight and activity	1 medium slice of bread or ½ bread roll, ½ cup bran cereal or 2/3 cup wheat cereal, ½ cup cooked porridge or 3T muesli, ½ cup cooked pasta or 1/3 cup cooked rice
<p>A variety of oils, and spreads (including sterol-fortified spreads), nuts, seeds or avocado Choose products made from sunflower, soya bean, olive, Canada, linseed, safflower or nuts and seeds, other than coconut</p>	Aim for 3 or more servings daily depending on body weight and activity	1t soft table margarine or oil, 2t light margarine (45-60% fat), 3t low fat mayonnaise (10% fat or less), 1T avocado, 1D nuts or pumpkin seeds, 1D peanut butter, 1T sunflower or sesame seeds.
<p>Low fat or fat-free milk products Use 0-0.5% fat milk. Hard cheese and semi-soft cheeses can be included to 4 times weekly in very small amounts</p>	Include 2 – 3 servings daily or replace with soy products	1 glass trim or low-fat milk, 1 pottle low fat yoghurt, 1/3c cottage cheese, 2T parmesan cheese, 2cm cube cheddar cheese, 3cm cube standard camembert, brie, edam, feta, mozzorella
<p>Fish, dried peas, beans, soy products, skinned chicken, or very lean meats Choose 1-3 servings from this group daily depending on body weight. If eating fish, choose some oily fish species such as tuna, kahawai, trevally, kingfish, warehou, dory, salmon, sardines, eel, squid, mussels and oysters</p>	<p>Include 1-2 fish servings weekly. Include dried peas and beans 4-5 times per week Limit meats to 1-1 ½ servings daily</p>	<p>2 small/medium fillets of cooked fish, 1c mussels, 1/3c salmon or ½ can sardines. 1C cooked dried beans, chickpeas, lentils, dahl, ½ C tofu or tempeh, 1 glass fortified soy milk. 100-120 grams trimmed meat/chicken, ½ C mince or casserole</p>

Abbreviations: c=Cup, D = Dessertspoon, T = Tablespoon t = teaspoon

When considering a healthy dietary pattern think about the following:

- Ø Choose plenty of fresh foods
- Ø Choose more dried peas, beans or nuts if you do not eat fish, meat or poultry
- Ø Select ready prepared and packaged foods labelled low in saturated fat and salt and high in fibre
- Ø Mostly avoid deep fried foods, butter, palm oil products, hard or visible white fat, salty foods, or adding salt to foods.



More information on the 5 a day campaign is available from the Heart Foundation website

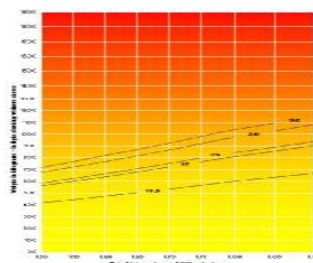
www.nhf.org.nz

Dietary interventions	
Dietary intervention is strongly recommended as an integral component of the management of cardiovascular risk.	A
Use behavioural and motivational strategies in education and counselling to achieve and sustain dietary change	A
Everyone with cardiovascular disease, a 5-year cardiovascular risk of greater than 20%, genetic lipid disorders, diabetes or the metabolic syndrome should receive intensive lifestyle advice. Lifestyle changes that have been shown to benefit people with these risk profiles include: <ul style="list-style-type: none"> § Dietary change (A) § Smoking cessation (A) § Physical activity (B) 	A
Intensive dietary advice should be given in individual/group sessions with a dietician.	A
Everyone with a 5-year cardiovascular risk between 10 and 20% should receive specific lifestyle advice on cardioprotective dietary pattern activity and smoking cessation from their primary health care team. This advice should be followed for 3 to 6 months prior to considering drug treatment and continued for life.	A
People with a 5-year cardiovascular risk of less than 10% should receive general lifestyle advice on a cardioprotective dietary pattern, physical activity and smoking cessation.	ü
Everyone should be encouraged to adopt a cardioprotective dietary pattern that includes fruit and vegetables, whole grains, fish and/or dried peas and beans or soy products, oil, margarine spreads, nuts or seeds, very low-fat milk products, and optional small servings of lean meat or skinned poultry. This dietary pattern avoids regular consumption of foods prepared with meat or dairy fats.	A
A cardioprotective diet in people with type 2 diabetes who are overweight or obese should be tailored to promote weight loss.	B
Fish oil supplements, 1g/day EPA and DHA combined, may be offered post myocardial infarction.	A
The use of antioxidant supplements is not recommended for the prevention or treatment of cardiovascular disease.	A
Individualise dietary counselling and other lifestyle changes to complement prescribed risk factor modifying pharmacological agents to assist the individual in reducing their absolute risk of cardiovascular disease.	ü

PHYSICAL ACTIVITY	
Everyone should aim to do a minimum of 30 minutes of moderate-intensity physical activity (3 to 6 METs) on most days of the week.	B
For people with time constraints this physical activity may be accumulated in bouts of 8 to 10 minutes.	B
People who are already doing 30 minutes of moderate-intensity physical activity per day should be encouraged to do physical activity of higher intensity or for longer to increase the beneficial effect by further improving their cardio respiratory fitness.	B
Physical activity is an integral part of the lifestyle advice for people with increased cardiovascular risk.	B
Individuals with a history of cardiovascular disease should consult their doctor before they undertake vigorous physical activity. Vigorous activity is generally not encouraged in people with impaired left ventricular function, severe coronary artery disease, recent myocardial infarction, significant ventricular arrhythmias or stenotic valve disease.	B
Physical activity for people with coronary heart disease should begin at a low intensity and gradually increase over several weeks.	C



Weight Management	
Measure body mass index (BMI) and waist circumference as part of a comprehensive cardiovascular risk assessment.	B
The immediate priorities in weight management are to prevent weight gain, to achieve and sustain moderate weight loss (5 – 10%) where appropriate and to increase physical fitness.	B
Encourage people with a 5-year cardiovascular risk above 15% or with diabetes and a BMI greater than 25 (especially anyone who has a BMI > 30), to commence graduated lifestyle change aimed at weight reduction.	B
For significant weight loss, recommend a reduction in energy intake and an increase in physical activity.	A
Discourage the use of weight loss programmes that promote the exclusion of food groups from the cardioprotective dietary pattern or that increase saturated fatty acid intake.	C
Consider referral to weight management health care practitioners for motivational counselling or specific energy balance assessment and advice when general lifestyle advice does not achieve a sustained weight loss.	ü
Appropriate equipment is required to assess the cardiovascular risk in people who are overweight or obese.	ü
Review the indication for use of drugs that cause weight gain. Offer weight management support to people requiring drugs that cause weight gain.	ü
Only initiate pharmacological interventions as an adjunct to a comprehensive weight management programme that includes diet and physical activity and uses motivational and behavioural methods.	ü
Surgery may be considered for people with a BMI greater than 40. Decisions should take into account both the absolute cardiovascular risk and other health risks and co-morbidities.	ü



Smoking Cessation	
All smokers should be encouraged to stop smoking. Smoking cessation has major and immediate health benefits for smokers of all ages.	A
The recording of current and past smoking habits is recommended as part of a comprehensive cardiovascular risk assessment.	ü
Nicotine replacement therapy (NRT) is recommended as first-line pharmacotherapy for smoking cessation in New Zealand. Bupropion or nortriptyline hydrochloride are the alternatives and recommend as second-line agents.	A
Use NRT cautiously (after discussion with a specialist) in the immediate post-myocardial infarction period (4 weeks) and in those with serious arrhythmias, or severe or worsening angina.	C
Nortriptyline hydrochloride is contraindicated during the acute recovery period after myocardial infarction.	C



The QUITLINE 0800 778 778



Management of Lipid Abnormalities	
The higher the calculated cardiovascular risk, the more aggressive the management of modifiable risk factors, including lipids, should be.	B
People presenting after an acute cardiac event (myocardial infarction or unstable angina) should start treatment with a statin simultaneously with intensive lifestyle advice. Treatment should aim to lower LDL-C to less than 2.5 mmol/L * This should be given in association with other appropriate medication such as aspirin, a beta-blocker and an ACE-inhibitor.	B
Lipids should ideally be measured at the time of the acute event. Since the metabolic disturbance continues for 10 to 12 weeks after a myocardial infarction, further measurements should be deferred for three months.	B
People presenting after an acute cardiac event with hypertriglyceridaemia and a low HDL-C should be considered for a fibrate or combination therapy.	A
In people with venous CABG, treatment should aim to lower the total cholesterol to less than 3.5 mmol/L and LDL-C to less than 2.0 mmol/L *	C
Most people presenting after an ischaemic stroke or transient ischaemic attack should start treatment with a statin.	ü
Everyone with a total cholesterol greater than 8 mmol/L or TC:HDL ratio greater than 8° should have drug treatment and specific lifestyle advice to lower risk factor levels.	ü
Within the rage of total cholesterol 4 to 8 mmol/L, all decisions to treat should be based on the individual's cardiovascular risk.	ü
People with low HDL-C and elevated triglycerides with a 5-year cardiovascular risk greater than 15% should be treated with intensive lifestyle interventions and are likely to need treatment with a fibrate or combination drug therapy.	ü



Note: * Where risk factor thresholds are given these should be interpreted as approximate guides to clinical practice only.

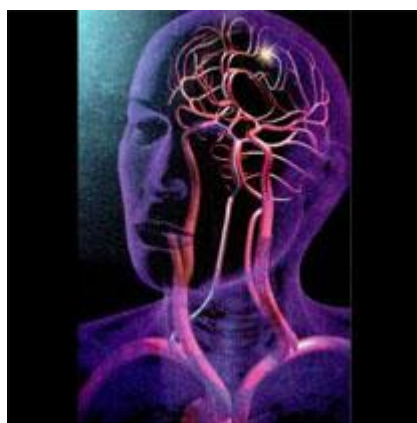
Management of Blood Pressure	
The higher the calculated cardiovascular risk, the more aggressive the management of modifiable risk factors, including blood pressure, should be.	C
People presenting after an acute myocardial infarction should be considered for a beta-blocker and ACE-inhibitor regardless of blood pressure level, concurrently with intensive lifestyle advice. This should be given in association with other appropriate medication, such as aspirin and a statin.	A
People presenting after an acute ischaemic stroke or transient ischaemic attack should start blood pressure lowering medication unless the person has symptomatic hypotension. This medication should be given in addition to other appropriate medication such as aspirin, a statin or warfarin, if indicated. Treatment should start concurrently with intensive lifestyle advice. It is usually advisable to wait 7 to 14 days before starting blood pressure lowering medication.	A
Everyone with blood pressure consistently greater than 170/100 mm Hg should have drug treatment and specific lifestyle advice to lower risk factor levels.	C
Within the blood pressure range 115/70 to 170/100 mm Hg, all decisions to treat should be based on the individual's cardiovascular risk.	B
A cardioprotective dietary pattern is strongly recommended as an integral component of blood pressure management.	A
Dietary advice should include the limitation of both alcohol (see Table 6) and sodium consumption.	B
Among people with a 5-year cardiovascular risk greater than 15% the aim of treatment is to lower 5-year cardiovascular risk to less than 15%	B
A low dose thiazide diuretic is the drug of first choice in those without contraindications.	A
Intensive blood pressure management is required (with early consideration of an ACE-inhibitor) in all people with diabetes due to the increased risk of renal complications.	A
More than one drug is frequently required to lower blood pressure to optimum levels.	B
Aggressive blood pressure control is indicated in people with diabetes and overt nephropathy, or diabetes and microalbuminuria or diabetes and other renal disease.	A
People with diabetes and overt nephropathy or diabetes and confirmed microalbuminuria should be started on ACE-inhibitor or A2 receptor-blocker (if there are no contraindications) irrespective of blood pressure levels.	A
Most of the treatment benefit is achieved by reaching the following blood pressure levels: <ul style="list-style-type: none"> ○ 140/85 mm Hg* is people without clinical cardiovascular disease. ○ 130/80 mm Hg* in people with diabetes or cardiovascular disease. 	A
A blood pressure lower than 130/80 mm Hg is preferable for people with diabetes and overt nephropathy or diabetes with other renal disease.	ü

Antiplatelet Therapy for People Without Clinical Cardiovascular Disease.	
Everyone with a 5-year cardiovascular risk greater than 15% should be started on low-dose aspirin (75 – 150 mg/day) if there are no contraindications.	A
Aspirin is contraindicated in people with aspirin allergies or intolerance, active peptic ulceration, uncontrolled blood pressure and in people with other major bleeding risks.	A

Aspirin Use After Myocardial Infarction & Stroke	
After Myocardial Infarction Aspirin 75 to 150 mg/day should be given routinely and continued for life. These doses are at least as effective as higher doses.	A
After Stroke Aspirin 75 to 150 mg/day should be given routinely after ischaemic stroke or transient ischaemic attack, unless there is an indication for anticoagulation with warfarin. These doses are at least as effective as higher doses.	A
CT scan should be obtained prior to aspirin therapy to exclude intracranial haemorrhage.	C

Clopidogrel Use After Myocardial Infarction & Stroke	
After Myocardial Infarction Clopidogrel (75 mg/day) is an effective alternative to aspirin for people with contraindications to aspirin or those who are intolerant of aspirin.	A
After Stroke Clopidogrel (75 mg/day) can be used as a safe and effective alternative to aspirin after stroke.	A

Recommendations: Warfarin Use After Myocardial Infarction & Stroke	
After Myocardial Infarction Warfarin should be prescribed for high-risk survivors of myocardial infarction including those with: <ul style="list-style-type: none"> § Atrial fibrillation or paroxysmal atrial fibrillation § A large left ventricular aneurysm § Thrombus demonstrated in the left ventricle at the infarction site by echocardiography § Systemic embolism 	A
Warfarin should be considered for people who cannot be given antiplatelet agents after myocardial infarction.	A
After Stroke Warfarin should not be prescribed for people with transient ischaemic attack or minor strokes unless cardiac embolism is suspected.	A
Warfarin should be considered for people after stroke associated with atrial fibrillation unless contraindicated.	A
Warfarin should be considered for people with ischaemic stroke associated with mitral valve disease, prosthetic heart valves, or within 30 days of myocardial infarction.	C
Warfarin should ideally be started in hospital. For minor stroke, it can be started after the first 48 hours or later if haemorrhage has been excluded by brain imaging. Delay for 7 to 14 days may be preferable for people after a major stroke.	C
After Myocardial Infarction or Stroke The target INR should be 2.5 (range 2 – 3), for most people prescribed warfarin after myocardial infarction or after ischaemic stroke associated with atrial fibrillation or mitral valve disease.	A



www.stanfordhospital.com/clinicsmedServices/medicalServices/interventionalNeuroradiology

Complementary & Alternative Therapies	
Clinicians should enquire about the use of alternative and complementary medicines when assessing cardiovascular risk or prescribing medication.	Ü
<p>There is insufficient evidence to recommend the following complementary and alternative therapies for the treatment or prevention of cardiovascular disease:</p> <ul style="list-style-type: none"> ○ Herbal medicines, botanicals ○ Garlic, ginkgo biloba, rosemary, horse-chestnut seeds, xin bao ○ Acupuncture ○ Chelation ○ Oriental medicine ○ Aromatherapy ○ Homeopathy ○ Hypnosis ○ Meditation ○ Yoga, tai chi ○ Intercessory prayer ○ Strauss heart drops 	I
Fever few, garlic, ginko biloba, ginger and ginseng may alter bleeding time and should not be used concomitantly with warfarin	C
St John;s Wort reduces serum digoxin levels and can enhance the metabolism of warfarin.	C
Herbs (eg, karela and ginseng) may affect blood glucose levels and should not be used in people with diabetes mellitus.	C

Use of Lipid-Modifying Agents After Myocardial Infarction & Stroke	
<p>After Myocardial Infarction A statin equivalent to simvastatin 40 mg/day should be prescribed to everyone after myocardial infarction. Statin therapy should preferably be started in hospital.</p>	A
<p>After Stroke Treatment with a statin is recommended for most people following ischaemic stroke or transient ischaemic attack. Statin therapy should preferably be started in hospital.</p>	B

Beta-Blocker Use	
After Myocardial Infarction Beta-blockers should be considered for everyone following myocardial infarction unless there are contraindications.	A
Beta-blockers are also recommended in those with left ventricular dysfunction and heart failure.	A
The initial dose of beta-blockers should be low and the dose should be titrated upwards slowly.	ü
Everyone should receive an explanation of the benefits and risks of treatment.	ü
Beta-blockers given at night may reduce the risks of postural hypotension and alleviate symptoms of tiredness and lethargy.	ü
Before discontinuing beta-blockers because of side effects a lower dose or alternative beta-blocker should be tried.	ü
If full doses of a beta-blocker and ACE-inhibitor are not tolerate moderate doses of both are preferable to a high dose of single agent.	ü

Ace-Inhibitor Use After Myocardial Infarction & Stroke	
After Myocardial Infarction An ACE-inhibitor should be prescribed for everyone after myocardial infarction, regardless of left ventricular function. Treatment should be started early and continued long-term especially in those with anterior infarction, left ventricular dysfunction or heart failure. Long-term ACE-inhibitor therapy should be prescribed for all people with coronary hear disease.	A
After Stroke Blood pressure lowering medication or increased doses of current agents should be started for people presenting after an acute ischaemic stroke or transient ischaemic attach unless they have symptomatic hypotension. An ACE-inhibitor in conjunction with a thiazide diuretic is an appropriate combination.	A
Blood pressure targets after a stroke should take into account the number and dose of medications prescribed as well as comorbidities and general frailty.	ü
It is advisable to wait 7 to 14 days after an acute stroke to start blood pressure lowering medication.	ü
After Myocardial Infarction or Stroke In general low-dose combination therapies are good choices. Periodic monitoring of electrolytes and renal function is recommended.	ü

Physical Activity Advice for Patients with History of CVD

Cardiac Rehabilitation Guidelines (NZGG 2002)

For **most patients with CVD**, exercise is beneficial. Health benefits increase with the amount of regular physical activity, but this needs to be balanced against a small increase in the risk of an event associated with the exercise activity. Advice depends on the patient's current level of activity, cardiovascular condition and the presence of other co-morbidities than may limit mobility.

Assess the patient's current level of activity

If the patient is sedentary consider referral to a cardiac rehabilitation programme which includes exercise training.

Advise

- Ø Modest incremental increases in activity starting, if sedentary, with only light intensity activity such as slow walking.
- Ø Start with intermittent bouts lasting 3-5 minutes with rest periods either at the patients discretion OR lasting 1-2 minutes OR shorter than the exercise bout duration.
- Ø Increase the duration to 10-15 minutes of continuous exercise, then increase the intensity.
- Ø Aim towards putting together at least 30 minutes of moderate – intensity physical activity on most if not all days of the week. This can be taken in small intervals such as ten minutes. Aerobic and resistance exercises are beneficial.
- Ø Group activity is beneficial for elderly people for social interaction, support and safety. Layered clothing should be suggested to prevent overheating or cooling (as they are less tolerant to the heat and cold).
- Ø Start slowly and warm-up, including some flexibility exercises or stretches and allow a cool down period (again stretches are also useful).
- Ø Avoid unusually vigorous exercise (e.g. heavy weight lifting or sprint training).
- Ø Slow down or reduce physical activity if a person finds he/she can't pass the "talk test".
- Ø Stop exercise if symptoms occur, e.g. chest discomfort, dizziness, nausea.
- Ø Report to your doctor if experiencing increasing symptoms such as angina, dizziness and shortness of breath with physical activity.

Exercise advice needs to be **cautious** for patients with significant cardiac disease including:

- § Unstable angina
- § Recent myocardial infarction (<6 weeks)
- § Recent decompensated heart failure
- § Significant impairment of left ventricular function (<30% LVEF)
- § Arrhythmias
- § Severe aortic stenosis

§ Hypertrophic cardiomyopathy

Consultation with a cardiologist should be considered when in doubt about appropriate advice.



Examples of Intensity of Physical Activity

Light	** Walking slowly with dog (3-4km/hr)
	** Ballroom dancing (slow)
	** Stationary bicycling (50 watts)
	** Bicycling for pleasure (< 16 km/hr)
	** Rowing stationery (50 watts)
	** Walking slow (4 km/hr)
	** Walking slow uphill
	** Walking moderate pace (5 km/hr)
	** Walking moderate uphill
	** Vacuuming
	** Gardening
	** Water aerobics
	** Weight lifting light circuit ¹
	** Volleyball (non competitive)
	Moderate
** Lawn and garden : weeding, trimming, planting & mowing	
** Badminton (non competitive)	
** Ballroom dancing (fast)	
** Aerobics (low impact)	
** Cricket, batting or bowling	
** Lawn and gardening, carrying/stacking wood, digging	
** Softball	
** Tennis doubles	
** Walking briskly (< 7.0km/hr)	
** Bicycling stationery (100 watts)	
** Bicycling for pleasure, light effort (16-20 km/hr)	
** Jog/walk combination	
** Lawn and garden: chopping wood/splitting logs	
** Tramping	
** Rowing stationery (100 watts)	
** Walking moderate pace uphill	
Heavy	** Running/walking
** Walking very briskly	
** Walking brisk uphill	
** Aerobics (high impact)	
** Backpacking	
** Bicycling stationery (150 watts)	
** Jogging	
** Rugby, soccer, touch rugby (non competitive)	
** Tennis	
** Walking upstairs	
** Running (9.5 km/hr)	

Note: ¹ low resistance, high repetition lifting exercised with proper breathing technique. This type of training is not appropriate for some cardiac patients.



Sexual Activity & Heart Disease

Some people, for a variety of reasons may not resume sexual activity straight away and other ways of expressing their feelings should be considered. Advise caution, not timidity.

After the shock of being diagnosed with heart disease and the natural fear of losing each other, a couple may find that their relationship is made stronger by resuming their sex life.

Question	Answer
<i>Does sexual intercourse pose any risk for people with heart disease and with Stable Angina or a past history of a myocardial infarction?</i>	A healthy sex life is part of returning to a normal life after a cardiac event and can be very beneficial to the couples relationship, helping them to feel secure and happy.
<i>Does sexual intercourse pose any risk soon after a cardiac event (acute myocardial infarction or a period of unstable angina)?</i>	Choose a time when you are rested and relaxed, having had your prescribed medications. Start slowly, allowing the intimacy to build before starting intercourse. This can sometimes be associated with fear and anxiety related to the fear of losing each other.
<i>Will sexual activity damage my heart?</i>	No. Intercourse represents a very small risk of triggering a myocardial infarction. Sexual intercourse uses only 3-5 METs, about the equivalent of walking up 2 flights of stairs briskly. If your typical angina pain starts, stop and take your nitroglycerin spray as you have been directed. When your pain has completely resolved, you may resume sexual activity, though you may want to go more slowly. Report chest pain when you next see your doctor. It might be that your medications need adjusting or you may need to use nitroglycerin spray before intercourse.

<p><i>Is it common for people to lose interest in sex after a cardiac event or myocardial infarction?</i></p>	<p>Yes. These feelings are common in both the person who has had the cardiac event and/or their partner. Cardiac blues, anxiety or fear can significantly decrease the desire for sex. This situation is normal and often temporary. Open communication about the issue can help, along with cardiac rehabilitation that can help build confidence. These are many ways of expressing your love and fondness without having intercourse, including touch, cuddling and kissing each other without the goal of orgasm. Impotence or a dry vagina may be helped by changing medications and should be discussed with your doctor.</p>
<p><i>How does depression impact on sexual intimacy?</i></p>	<p>Depression occurs in approximately 14% of people who have suffered a myocardial infarction. Common symptoms of depression may include some of the following; a loss of interest in things normally found pleasurable, that includes sex, withdrawal from family and social interaction, depressed mood, anger or irritability and disturbance in normal sleep patterns.</p>
<p><i>Will sex be different now?</i></p>	<p>More than 75% of people don't change the way they engage in foreplay and sexual positions, though don't hesitate to experiment in ways that make it easier for the individual with the heart condition.</p>
<p><i>Will medications affect sex?</i></p>	<p>Modern medications tend to be more specific and have less side effects, though if you are troubled by impotence or not having enough vaginal fluid to make intercourse comfortable, then consult your doctor.</p>
<p><i>Is it safe to use drugs like Viagra?</i></p>	<p>Sildenafil (Viagra) should not be used by those using nitroglycerin tablets or spray. It may be used safely for those with stable angina and taking nitrates.</p>
<p><i>What if it is not the same?</i></p>	<p>Like in any relationship, there are many reasons why couples may experience problems with sex. Contributing factors can be too much alcohol, medications (see above) fatigue and stress related to recovery, fear, relationship conflict and depression to name a few.</p>
<p><i>When should I seek help?</i></p>	<p>If sex becomes a concern to you, don't hesitate to contact your nurse or doctor.</p>

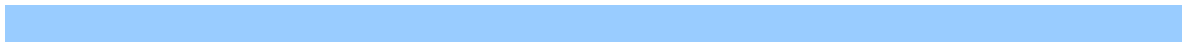


Driving and Heart Disease

Medical Condition	Class 1 or class 6 licence and a D, F, R, T or W licence endorsement in relation to vehicles of less than 4,500 kg GLW or GCW	Class 2,3,4 or 5 licence and P,V,I or O Licence endorsement
Angina pectoris	Individuals with angina at rest or on minimal exertion despite medical therapy should not drive	Individuals with angina at rest or on minimal exertion despite medical therapy should not drive
Acute uncomplicated myocardial infarction	Should not drive for at least two weeks . Return to driving subject to specialist assessment	Should not drive for at least four weeks . Return to driving subject to specialist assessment.
Coronary artery bypass surgery	Should not drive for at least four weeks . Return to driving subject to specialist assessment	Should not drive for at least three months . Return to driving subject to specialist assessment.
Coronary angioplasty	Should not drive for at least two days . Returning to driving subject to specialist assessment	Should not drive for at least four weeks . Return to driving subject to specialist assessment.
Cardiac Arrest	Should not drive for at least two months . Return to driving subject to specialist assessment	Normally considered permanently unfit to drive. For exceptions refer section 3.3.1 of LTSA guide.



Note: Reproduced from the Land Transport Safety Authority publication. **The Medical Aspects of Fitness to Drive : A guide for medical practitioners.** For more information see www.ltsa.govt.nz



Guidelines for Intervention & Management

Currently under the auspices of the New Zealand Guidelines Group, the National Cardiovascular Advisory Group, the National Heart Foundation and the Stroke Foundation, a series of cardiovascular guidelines have been developed in 2003 including guidelines for the assessment and management of CVD risk, cardiac rehabilitation guidelines and stroke guidelines. www.nzgg.org.nz. Excerpts from these guidelines are included in this CCM manual. And to access additional evidence the guidelines themselves should be reviewed. These guidelines will be incorporated into the electronic decision support tool for primary care by the middle of 2005. In the interim, the following guidelines/guidance form the evidence-base of the CVD-CCM programme delivered in electronic format tailored to individual patient risk profile:

- Ø 1996 National Heart Foundation Clinical Guidelines for the assessment and management of dyslipidaemia. NZMJ 1996;109:224-31.
- Ø NHF/NZGG Cardiovascular Guideline Group advising on the management of cardiovascular risk (2002) Interim Consensus statement for the management of dyslipidaemia
- Ø National Cholesterol Education Program Expert Panel (2001) Guidelines on detection, evaluation and treatment of high blood cholesterol in adults (Adult Treatment Panel III) www.nhlbi.nih.gov
- Ø AHA/ACC guidelines for preventing heart attack and death in patients with atherosclerotic cardiovascular disease. J American College Cardiology 2001;38:1581-3; Circulation 2001; 104:1577-79.
- Ø New Zealand Guidelines Group (1998) Guidelines for the management of mildly raised BP in New Zealand (www.nzgg.org.nz)
- Ø Arauz-Pacheco C, Parrott M, Raskin P. The treatment of hypertension in adult patients with diabetes (Technical Review) Diabetes Care 2002; 25:134-47.
- Ø American Diabetes Association. Treatment of hypertension in adults with diabetes. Position Statement. Diabetes Care 2002; 25(S1): S71-73.
- Ø Joint British Recommendations on prevention of coronary heart disease in clinical practice. BMJ 2000;320:705-8
- Ø The Heart Outcomes Prevention Evaluation Study Investigators (HOPE) Effects of an angiotensin-converting enzyme inhibitor, ramipril, on cardiovascular events in high risk patients. NEJM 2000;342:145-53
- Ø National Health Committee (2002) Guidelines for Smoking Cessation. National Advisory Committee on Health and Disability, Wellington, New Zealand
- Ø NHF evidence-based nutrition statements on dietary patterns
- Ø National Heart Foundation (1999) Nutrition and Cardiovascular Disease: An evidence summary. NHF Technical Report no 77, White H, series editor.
- Ø New Zealand Guidelines Group (2002) NZGG/NHF Cardiac Rehabilitation Guidelines
- Ø Stewart, R. for the National Heart Foundation (2002) Physical Activity and cardiovascular disease. NHF Technical Report No 78; White H, series editor.
- Ø Hillary Commission for Sport, Fitness and Leisure. Movement= Health. Push Play. Guidelines for promoting physical activity. Based on the recommendations of the 1998 Ministerial Physical Activity Taskforce.
- Ø Aspirin Antithrombotic Trialists' Collaboration Collaborative meta-analysis of randomised trials of antiplatelet therapy for prevention of death, myocardial infarction and stroke. BMJ 2002;324:71-86
- Ø Hayden M, Pignone M, Phillips C and Mulrow C. Aspirin for the primary prevention of cardiovascular events: A summary of the evidence for the US Preventive Services Task Force Ann Intern Med 2002;136:161-72.
- Ø American Diabetes Association. Aspirin therapy in diabetes. Position Statement. Diabetes Care 2002; 25(S1):S78-S79.
- Ø SIGN (2001) 55 Management of diabetes. A National Clinical Guideline. Scottish Intercollegiate Guidelines Network
- Ø NHLBI (1998) Clinical Guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. The evidence report. National Heart, Lung and Blood Institute, USA.
- Ø SIGN (1996) Obesity in Scotland. Integrating prevention with weight management. A National Clinical Guideline recommended for use in Scotland by the Scottish Intercollegiate Guidelines Network.

10. Patient Self Management

One of the aims of the CCM CVD risk management programme is to increase patients' knowledge and understanding of the disease to enable them to become more involved in their own management. For this purpose, all patients enrolled in the programme will be provided with a personalised patient held Wellness Plan.

The Wellness Plan

- Ø The Wellness Plan is patient-centred and unique to each patient.
- Ø Development of the Wellness Plan is facilitated by discussion between the patient and the practice nurse agreeing to a set of **SMART** (Specific measurable, achievable, realistic and time framed) goals that the patient can complete or work on before the next consultation.
- Ø The Wellness Plan has certain components in common with all CCM programmes.
- Ø Demographic details of both patient and health providers
 - List of ongoing health problems
 - Medication list (including purpose and directions for use)
 - A **Goals Page** (lifestyle and management goals)
 - A page for writing down tests for appointments due



In addition the CVD Wellness Plan includes optional CVD specific components:

- Ø Printed copy of the electronic decision support patient information based on a patient's own cardiovascular risk factors
- Ø Chest Pain Action Plans (existing ischaemic heart disease)
- Ø Other educational booklets and pamphlets (see resources)
- Ø [www/nhf.org.nz](http://www.nhf.org.nz) (Heart Foundation website with some good patient information that can be printed for the patient).
- Ø Copy of most recent ECG (if appropriate)

Promoting Self Management (Andy McLachlan. Clinical Nurse Specialist)

What is self management?

An observation made frequently by doctors who take care of patients with long-term chronic illness is "my patients understand their condition better than I do". Many patients are indeed experts in their own right for they have gained the life skills to cope with a chronic condition, and there is increasing evidence that patients - with proper support - can take a lead in 'self-managing their conditions. A review of the available UK and US research on self-management conducted for the Expert Patients Task Force by Professor Julie Barlow of Coventry University showed that the benefits include reduced severity of symptoms, significant decrease in pain, improved life control and activity, resourcefulness and life satisfaction.

The concept of patient self-management was first developed in the 1960s and 1970s as a method of seeking better solutions to illness. Often this meant patients taking more control of their lives by ceasing involvement with organised health care systems.

Today the emphasis is very different. Self-management is seen as an integral, even central, part of the system of care provided to people with chronic diseases. Patient self-management or 'Expert Patient' Programmes are not simply about educating patients about their condition or giving them relevant information - they are based on developing patients' confidence and motivation to use their own skills, information and professional services to take effective control over life with a chronic condition.

From the UK Expert patient programme available online at www.expertpatients.nhs.uk/about_whatpatient.shtml

The role of the wellness plan in promoting self management principles.

Building a relationship of partnership, cultural safety and a positive, honest approach.

This is a key component in a patients journey to developing self management skills. The wellness plan needs to be explained clearly to patients so they understand that it is their plan. Each contact with The GP and the practice nurse or community health worker should involve a discussion around some aspect of the wellness plan. The GP may review the medications and the patients knowledge/concerns around this section while the practice nurse may focus more on promoting and supporting the goals the patient has set.

Assessment

Stage of change – What does the patient want to change about their lifestyle? What they have tried to change in the past? Why didn't it work before?

Lifestyle review- What do they currently do?
Physical activity and dietary diaries can be useful.
Discuss social situation/ should anyone else be involved (e.g. Wife, Brother, etc)
What is the patient/Whanaus attitude and understanding around medications/ illness perceptions- If misconceptions exist try and correct them by discussion (not arguing)

Assessment is vital before trying to begin to negotiate goals

Goal setting

Take time to explain to the patient what goal setting is all about in clear and straight forward language

Focus on what the patient wants to do. If they don't want to do something its very unlikely that goal will be achieved.

Write the goals down and include a discussion about steps to achieving the goal, who can help and strategies to avoid failure. Encourage this as a positive experience and discuss rewards for goals achieved. Rewards can be anything the patient feels is a positive reinforcer for them You don't need to do a lot of goals it may be best to start of with only one you know will be achieved and negotiate increases over a longer time. If goals aren't met then review what went wrong and set easier targets. Once goal setting is started it will tend to continue with ongoing support.

Review medications

At each visit review any concerns about medications and discuss issues that arise. Most patients will take a medication if they understand why it has been prescribed and what would happen if they didn't take it. Most patients - regardless of their reading or language skills - prefer medical information that is simple and easy to understand.

Encourage questioning

Corrects misconceptions

Clarifies instructions

Good for assessing comprehension of illness/medications

Involves the whanau

Often a patient will broach a topic that health professionals may avoid

Action Plan

Most patients do not know what to do when their condition worsens. Many go to hospital unnecessarily and many stay at home (when they should go to hospital) until far too late. A clear and frank discussion (with a patient and their family/whanau) and a written plan that is given to the patient and regularly reviewed will help clear up misconceptions and could save a patients life.

Review appointments

By working to understand the pressure on patients to attend a huge range of medical appointments a strategy can be discussed with the patient and family regarding what to do if they cant make an appointment. Also some compromise may be needed. Can the practice deal with the problem (ie routine follow up for a problem long since resolved), Can the appointments be rationalised e.g. to the same clinic location with appointments grouped?

Education

Most patients need to know and understand what their condition means to them. A campaign in the US called the ask me 3 simplifies the process to 3 questions.

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?

www.askme3.org/PFCHC/what_is_ask.asp

The Ministry of Education 's report on the 1996 International Adult Literacy Survey shows that about 20 percent of New Zealand adults between the ages of 16 and 65 have very poor literacy skills. these adults may experience considerable difficulties when using the printed materials that they encounter in everyday life. Particularly many health related leaflets which are often written at an academic level of comprehension. Almost everyone feels more comfortable with simple and clear instructions.

(www.learningmedia.co.nz/downloads/educationnow.pdf)

Additional factors that may hinder understanding include:

- Intimidation, fear, vulnerability
- Shock upon hearing a diagnosis
- Extenuating stress within the patient's family
- Multiple health conditions to understand and treat*

Education should be aimed at what the person wants to know, using simple written material, graphics where possible in a calm, culturally safe and non threatening way. It may be necessary to repeat sessions and evidence is mounting that many patients respond better to education in a group/peers setting.

Health review

Many clinicians see the health review page of the wellness plan as a list of the patients clinical diagnosis. By changing the focus and asking the patient to write down what they see as being their main health problem we often get an insight into the patients concerns. While a patient most certainly may have heart disease and gout they may see their main health problem as loss or enjoyment in life or fatigue. By addressing and working through with the patient these issues the patient feels listened to and empowered.



Resources

National Heart Foundation



Good Health is in your hands! A food guide for Indian Adults in New Zealand. An educational booklet written in Gujarati with English translation (Available from NHF 09 5719191)



National Heart Foundation Consumer Patient Education Resources-on-line available from www.nhf.org.nz

Wellness Plan Inserts (from the Predict On-Line Resources)

- National Heart Foundation Cardioprotective diet (Mild risk <10% absolute 5 year CVD Risk).
- National Heart Foundation Cardioprotective diet (Moderate to very high risk > 10% absolute 5 years CVD Risk).
- Physical Activity Guidance (Mild Risk < 10% 5 year CVD Risk)
- Physical Activity Guidance (Moderate or greater risk >10% 5 year CVD Risk).
- Physical Activity Guidance (Patients with history of CVD)

Wellness Plan Inserts (from the Middlemore Hospital Cardiac Rehabilitation Team)

- Chest pain action plan (English, Maori, Tongan, Samoan, Cook Island)- NB these chest action plans do not specifically mention aspirin (assumes patient is already on low-dose aspirin).
- When smokers quit (one page picture of benefits from quitting smoking at 20mins, 8hrs, 24hrs, 48hrs, 2 weeks to 3 months, 1-9 months, 1 yr)
- Coping with stress –booklet produced by Occupational Therapists at MMH

Te Hotu Manawa Maori Resources contact 09 571 9018 .www.tehotumanawa.org.nz



- **Kawea Ake Te Wero.** Step up to the Challenge. Kainga nga kai hauora
- **Kia Tika te Kai.** Eating the right foods is easy
- **Nga Miti He Kai Reka!** (Healthy meat meals, casseroles, boil-up, mince etc)
Produced by Te Hotu Manawa Maori and the New Zealand Beef and Lamb Marketing Bureau
- **Kawea Ake Te Wero.** Step up to the Challenge, Kia Kamakama Be Active

Pacific Islands Heart Beat resources available from NHF 09 5719191
www.pacificheart.org.nz



- **Eat for Health**
- **Taumafa Mo Le Soifua Maloloina** (Samoan Translation Eat for Health)

- **Kai Ke Mo'ui Lelei** (Tongan Translation Eat for Health)
 - **Kai Ke Malolo** (Nuiean Translation Eat for Health Available)
 - **E kai Meitaki No Te Oraanga Kopapa** (Cook Island Translation Eat for Health)
- Other resources available.

- **CVD risk and diabetes** (Available from diabetes NZ.
www.diabetes.org.nz/resources/files/CardiovascularRisk.pdf)



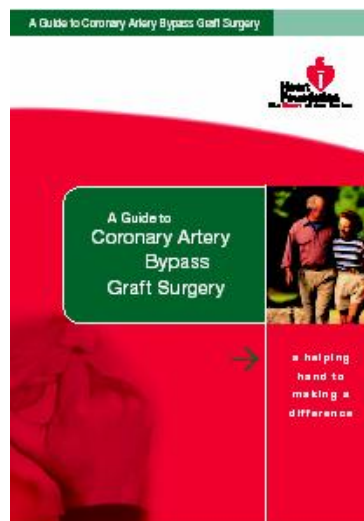
- **Having a smoke... Having a think. I like being a smoker I think. He rawe ki a au te kai paipa, ki taku mohio** Reprinted 2002 produced by Ministry of Health, Available from www.moh.govt.nz/moh.nsf



- **The Quit Book** Produced by Ministry of Health, reprinted August 2002 This and other Quit Me Mutu resources available from QUITLINE ph 0800 778 778 www.quit.org.nz.
- **Push Play- Medical Conditions and Physical Activity.** There are a range of stretching and walking leaflets also promoting the benefits of physically activity (Available from SPARC 0800 ACTIVE (0800 22 84 83)- www.sparc.org.nz and www.pushplay.org.nz)

Websites

www.everybody.co.nz and the www.health.net.nz/index.asp are websites on family healthcare
www.5aday.co.nz Promoting cardioprotective nutrition.



11. Integration with Secondary Care

The aim of CCM CVD programme is to strengthen the mechanism for integration at the following levels:

- Ø Primary and secondary care input into guideline development and maintenance.
- Ø Secondary care participation in CME, and peer group sessions where appropriate.
- Ø Secondary Care nurse specialist involvement at a general practice level, (virtual clinics, support with difficult management problems and for upskilling of the practice team).

The linking of Secondary Care nurse specialists to each general practice for ongoing liaison is already occurring in some practices. The aim is for this to be achieved for all practices involved in the CVD CCM programme.

Resource	Access
Practice Support	Telephone and physical meetings with Secondary Care CCM-CVD Nurse Specialist Andy McLachlan 09 276 0044 ext. 2080 (locator number 9198) azmclachlan@middlemore.co.nz
CME	PHO, or Practice Based – Dr Andrew Kerr and clinical team available (with due notice) as resource. Contact through CNS.
Other Potential Linkages	Maori Disease State Management Nurses Cardiac rehabilitation team
Secondary Care Nurse Specialists	CVD – CCM Nurse Cardiac rehabilitation nurse
Facilitated Access to Services	Usually arranged directly through Secondary CCM-CVD Nurse Specialist.

Middlemore After Cardiac Surgery Programme 2005

Week 1 – Know Your Risks For Heart Disease

A discussion with a cardiologist about you still need to look after your heart.

Week 2 – Why Pills?

A Pharmacist will help you understand your prescription and how your tablets work. **Bring along a list of your tablets.**

Week 3 – Give Yourself a Break

An occupational therapist will help you understand stress and how to manage it.

Week 4 – Enjoy Your Food and Lower Your Cholesterol

Our dietician will give you practical tips about healthy eating.

Week 5 – It’s Time To Get Moving

A physiotherapist will discuss with you about recovering from surgery and starting back to exercise.

Week 6 – Don’t Let Your Heart Rule Your Head!

Common emotions and fears following surgery are discussed with the cardiac rehabilitation team.

Date	Wk	Date	Wk	Date	Wk
January 6 th	2	March 17 th	5	26 th	3
13 th	1	24 th	6	June 2 nd	4
20 th	3	31 st	1	9 th	5
27 th	4	April 7 th	2	16 th	6
February 3 rd	5	14 th	3	23 rd	1
10 th	6	21 st	4	30 th	2
17 th	1	28 th	5	July 7 th	3
24 th	2	May 5 th	6	14 th	4
March 3 rd	3	12 th	1	21 st	5
10 th	4	19 th	2	28 th	6



Middlemore Cardiac Rehabilitation Programme

It is recommended that you attend this programme of education, support and exercise if you have had **cardiac surgery**. It is a 6-week programme provided by the cardiac rehabilitation team, which includes cardiac nurses, cardiologists, physiotherapists, pharmacists, dietician and occupational therapists.

If you would like to attend the exercise programme held twice weekly, you will need to ask for an appointment and assessment. Please ask for an appointment when you attend the education classes.

For any further information, please phone either:

June – 09-2760044 Locator 938126 or Lauraine – 09-2760044 Locator 938698.

We look forward to seeing you.

Any family or close friend is also very welcome.

**You are invited to start our education programme on:
Thursday at 10.30am**

**The education session is from 10.30 to 11.30am in
A & R Clinic
Middlemore Hospital**

**This is situated at the back of the hospital in the Support
Building (30)**

Parking is available in front of the Support Building at \$2 per hour.

Middlemore Cardiac Education Programme 2005

Week 1 – Know Your risks for Heart Disease

A discussion with a cardiologist about why risk factors matter.

Week 2 – Why Pills?

A Pharmacist will help you understand your prescription and how your tablets work. **Bring along a list of your tablets.**

Week 3 – Give Yourself a Break

An occupational therapist will help you understand stress and how to manage it.

Week 4 – Enjoy Your Food and Lower Your Cholesterol

Our dietician will give you practical tips about healthy eating.

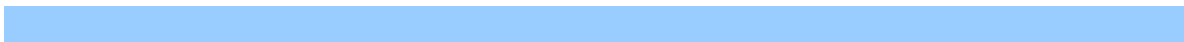
Week 5 – It’s Time To Get Moving

A physiotherapist will discuss with you about starting, continuing and enjoying exercise.

Week 6 – Don’t Let Your Heart Rule Your Head!

Common emotions and fears following surgery are discussed with the cardiac rehabilitation team.

Date	Wk	Date	Wk	Date	Wk
January 10 th	1	March 14 th	2	May 16 th	3
17 th	2	21 st	3	23 rd	4
24 th	3	28 th	Holiday	30 th	5
31 st	Holiday	April 4 th	4	June 6 th	Holiday
February 7 th	4	11 th	5	13 th	6
14 th	5	18 th	6	20 th	1
28 th	6	25 th	1	27 th	2
March 7 th	1	May 9 th	2	July 4 th	3



Middlemore Cardiac Rehabilitation Programme

We recommend that you attend this programme of education, support and exercise if you have recently had a **heart attack, angioplasty or have angina**. It is a 6-week programme provided by the cardiac rehabilitation team, which includes cardiac nurses, cardiologists, physiotherapists, pharmacists, dietician and occupational therapists.

There is also an exercise programme held twice weekly. If you would like to attend the exercise programme, ask for an appointment for a assessment, which you will need before you start the class. This can be arranged at your first visit, or by phoning the physiotherapist, Charulata 09-2760044 Locator 938271..

For any further information, please phone

June 09-2760044 locator or Lauraine 09-2760044 Locator 938698 We look forward to seeing you.

Any family or close friend is also very welcome

**You are invited to start our education programme on:
Mondayat 1.30pm**

**The education session is from 1.30 to 2.30am in
A & R Clinic
Middlemore Hospital**

**This is situated on the ground floor of the multi-storey building
at the back of the hospital in the Support Building (30). Follow
signs or ask directions to the Support Building. The A&R
Clinic is on the ground floor.**

Park is available in front of the Support Building, or the area between Tiaho Mai and the A & R unit between Wd 24 and the golf course. (\$2 per hour)

Chronic care management cardiac rehabilitation referral form

Patient label or Name and NHI			
Personal information			
<i>Ethnicity:</i>	<i>Language:</i>	<i>Interpreter required?</i>	<i>Hearing Loss?</i>
GP:			
Address:		Phone:	
Existing cardiac condition			
<u>Relevant Cardiac History</u>	<u>Diagnosis.</u>		
	<u>Results.</u>		
Angiogram	Date:		
Angioplasty/stent/surgery	Date		
Echo	Date:		
<u>Other Relevant Medical History:</u>			
Medications (please tick)			
<input type="checkbox"/> Aspirin	Please list other medications taken		
<input type="checkbox"/> Clopidogrel			
<input type="checkbox"/> Beta blocker			
<input type="checkbox"/> Nitrate			
<input type="checkbox"/> Calcium Channel blocker			
<input type="checkbox"/> ACE Inhibitor			
<input type="checkbox"/> Statin			
<input type="checkbox"/> Fibrate			
<input type="checkbox"/> Other lipid lowering drugs			
RISK FACTORS			
Smoker:	<input type="checkbox"/> Lack of exercise	<input type="checkbox"/> Diabetes Type:	
<input type="checkbox"/> Current	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Stress	
<input type="checkbox"/> Never	<input type="checkbox"/> Overweight	<input type="checkbox"/> Family History	
<input type="checkbox"/> Past			
<input type="checkbox"/> Nicotine Rx			
Total Cholesterol:	HDL:	LDL:	TRIG:
SOCIAL SITUATION			
Occupation:		Support Person and phone number.	
Any specific concerns?			
Fax to 276 0176 or Call 276 0044 extension 7305 for Cardiac Rehabilitation nurse			

12. Current CCM CVD Reporting

Monthly reports will be passed to individual practices via their PHO. These reports are important to help benchmark how each individual practice is performing against all the other practices involved in CCM, as well as identifying and allowing follow up of non attendees and overdue patients.

Reports definitions

Total Patients

The total number of patients currently enrolled in the programme as recorded in the CMDHB Integrated Care Server. It does not include those who have been disenrolled prior to the end date of this report.

New Patients

The number of new patients who enrolled during the time period indicated.

Total Visits

The number of visits made by your patients enrolled in the programme.

ECF Met

Of the total visits above, how many were made by enrolees who met the entry criteria.

Visits in Time:

Of those visits made by those who have met the ECF, how many were >10 week since the last funded visit.

Note:

All figures are derived from CMDHB's Integrated Care Server and not from each practice PMS. Therefore it is important that you get successful confirmation of messages sent to the ICS otherwise they will not be included in the reporting.

First visit Summaries:

The data of all the patients you have enrolled currently:

Latest Data:

Summarises the data from the latest time of each of the patient has been seen including those just enrolled as well as those enrolled more than a year ago (for example)

After One Year:

Summarises the date for all your patients who have had a review at one year after their enrolment.

Example of CVD reports available.

This report is a summary of data about your patients in the Chronic Care Management CVD programme for the period above. (Note: clinical measures are not displayed if n is less than 10.)

Programme activity and funding summary

Programme	Total patients	New patients	Total visits	ECF met	Visits in time
CVD					

Demographics

Ethnicity	% Maori	% Pacific	% European	% Other
Your patients				
Your DHB				

Attendance

Patient attendance	% Up to date with visits:	% not seen in 6 months:
Your patients		
Your DHB		

Clinical Measures

Lifestyle		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your patients	Your DHB
% Smokers	Maori						
	Pacific I.						
	All						
BMI	Maori						
	Pacific I.						
	All						

Lipids		First Visit		Latest Data		At 1 Year	
		Your patients	All	Your patients	All	Your Patients	All
% on Statins	Maori						
	Pacific I.						
	All						
% LDL < 2.5	Maori						
	Pacific I.						
	All						

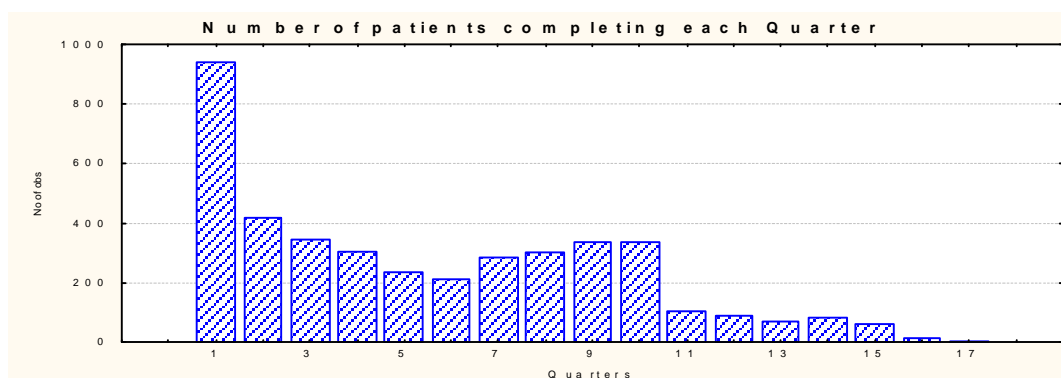
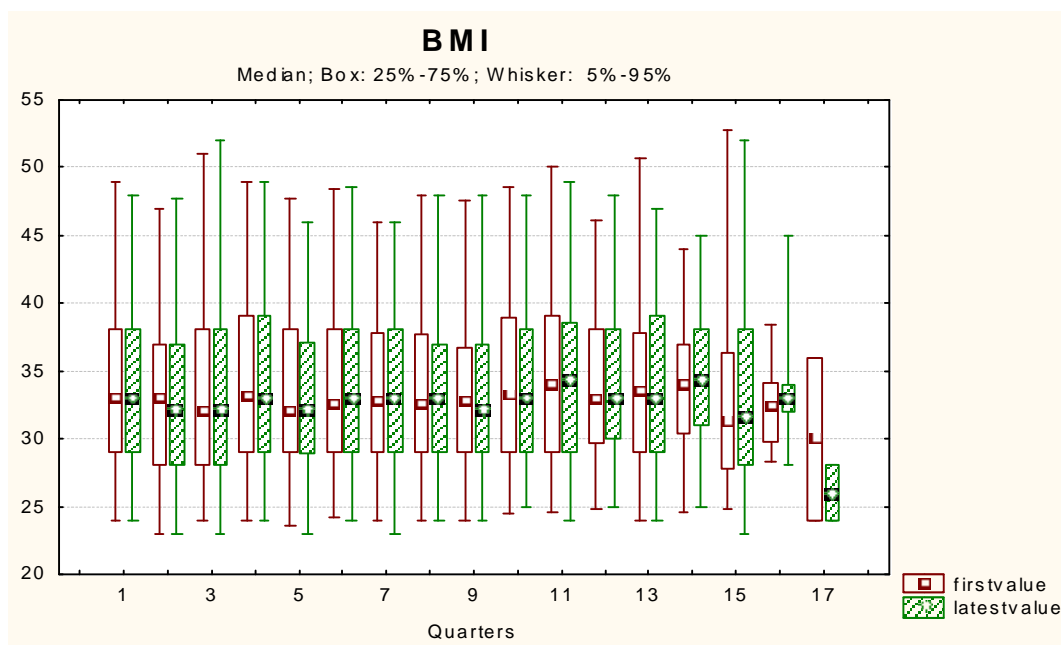
Blood pressure		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your patients	Your DHB
% SBP < 130	Maori						
	Pacific I.						
	All						
% DBP < 80	Maori						
	Pacific I.						
	All						

Therapy		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your patients	Your DHB
% on aspirin (antiplatelet)	Maori						
	Pacific I.						
	All						
% on ACE	Maori						
	Pacific I.						
	All						
% IHD on beta blocker#	Maori						
	Pacific I.						
	All						

Diagnosed Angina/MI/PTCA/CABG.

Example of graph reports available

For each of the following graphs your patients have been divided into groups according to the number of quarterly visits they have had. The Quarter 1 pair shows the data for those patients who have an enrolment only. The Quarter 2 pair includes all those patients whose **latest** visit is between quarter 1 and quarter 2 (ie their latest visit is after their first scheduled review but before their second scheduled review). The left bar for each quarterly pair shows the average for that quarterly cohort at enrolment. The right hand bar shows the average for that latest quarter.



Examples of additional CCM reporting available

CCM Overdue Patients

An overdue patient is one that has not had a visit in the 14 weeks prior to the period end date but has had a visit in the 28 weeks prior to the period end date.

CCM Poor Attenders

A poor attender is a patient that has not had a visit in the 28 weeks prior to the period end date.

Very High Risk Factor Report:

This report includes patients with one of the following observations in a fixed time period.

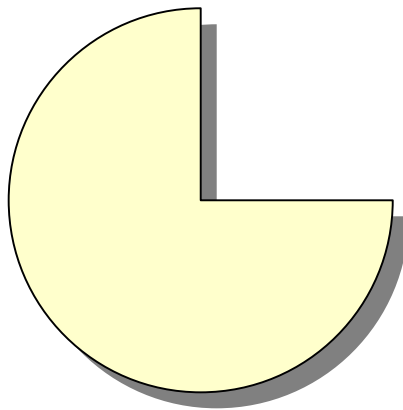
In development for CVD

Modifiable Risk Factor Report:

This report includes patients with one of the following observations in a fixed time period.

Smoker?	=	True
BP Diastolic	>	100
BP Systolic	>	180

PHOs are responsible for discussing and helping individual practice teams interpret and act on reports.



Bars and whiskers reporting

Cohorts

1. Each cohort is unique, ie the 6/12 cohort represents patients who have currently been in the programme for no more and no less than 6/12 (with a window of 2 weeks either side) These patients are NOT included in the 3/12 cohort, for example
2. There are 2 sets of bars and whiskers for each time based cohort. The one on the right is the current data for that cohort. The one on the left is the enrolment data for these same patients.
3. The enrolment cohort is only those patients who have enrolled in the last 3/12 but who do not yet qualify for a 3/12 review.
4. In the middle of the reporting pages are the volumes of patients who are in the cohorts for each time period. This total should add up to the full number of patients in the relevant module of the programme, in your surgery.

Bars and Whiskers

1. The outer limits of the lines (whiskers) represent the range of data, which is covered by 90% of the patients involved. ie 5% of patients lie above the range, and 5% below.
2. The upper and lower points of the solid colour (the bar) represent the range of data covered by 50% of the patients
3. The central point is the median, which is the point where most patients have the same reading

The overall effect is to describe a bell curve on its side, where the peak of the bell is the central point, the "shoulders" which contain the central 50% are shown by the bar, and the left and right tails are shown by the whiskers.

Confusing points

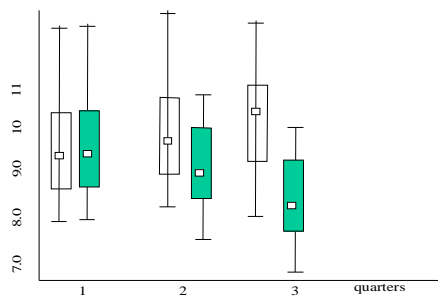
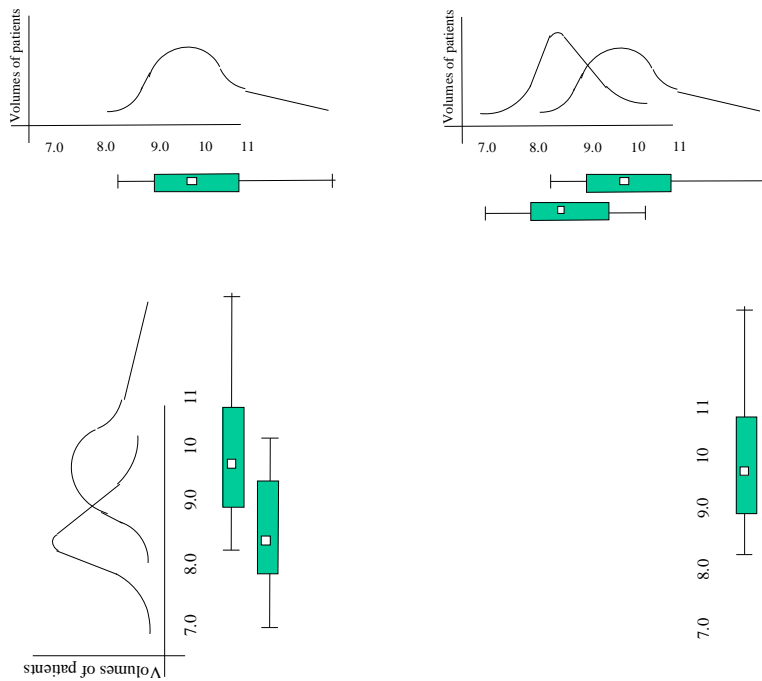
1. The enrolment cohorts are identical, as current = enrolment
2. Each cohort may have a different, and apparently conflicting, enrolment profile, as each is a different set of patients
3. Where cohort volumes are small (single figures) margins of error increase and make the differences less statistically significant.

The Aim

In general the aim is to narrow the bell curve (fewer outliers, especially at the "bad" end) and move it towards a healthier point. In the case of the bars and whiskers, this means

1. reducing the range of the whiskers, especially at the "top end"
2. making the bar shorter, especially at the "top end"
3. possibly, moving the median down

However, note that the median can be ideal, but there is still significant risk in the bell curve represented by the higher end of the bar and whiskers.



Explanation of graph design

Slide	
1.	A bell curve can be represented by a horizontal bar, with the median marked as a point or cross, the 50 percentile range as a box, and the 95 percentile range as whiskers
2.	2 bell curves can then be described and compared through the bars and whiskers
3.	Placing the bars and whiskers vertically is an important step to being able to compare a series of bell curves
4.	The bell curves and the original Y axis information can now be deleted.
5.	A series of comparisons can now be made. In the case of CCM reporting a separate pair of bell curves is described for multiple cohorts. The cohorts are for patients who have been in the programme for a specific number of quarters.

Using Reports for Maintenance of Professional Standards (MOPS)

Claiming Continuous Quality Improvement (CQI) points from CCM programme

The RNZCGP MOPS programme includes the option to include points from Continuous Quality Improvement Activities (previously Practice Review Activities)¹. The CCM programme is endorsed as meeting all the requirements of an RNZCGP CQI activity². This endorsement is VALID FROM 01 OCTOBER 2004

General Practitioners actively participating in CCM Quality Improvement can claim 15 credits per cycle. This status is valid until 2007. Claiming requires the following to be held by the member, and available for an RNZCGP random audit.

- 1** Either - A certificate of participation from the organisation that facilitated the activity. This is the PHO.
 Or **A summary of the data collected, eg front page of the CCM report.**

And

- 2** **A PRA/CQI summary sheet, containing date and detail of first and second cycle**

This is completed by the GP and encourages them to reflect on what they have learnt from taking part in the process, and to specify how the audit of their own practice has resulted in changes.

Each month's reports constitute an audit, and provide the data for the Data section of the summary sheet. A record of a review of results (Check) and change plan (Action) should follow. This constitutes a cycle, and is worth 15 Credits.

Credits are managed in conjunction with other MOPS credits. 30 Credits are required per triennium for CQI, but a maximum of 2 cycles (30 credits) can be claimed from this single activity per two triennia, in order to encourage participation in a range of activities.

However, further credits can be gained from this activity under "Additional Professional Development Activities: Practice Improvement Activities" section at 1 credit per hour to a maximum of 10 credits per annum.

¹ MOPS runs in a three-year cycle (triennium). (<http://www.rnzcgp.org.nz/mops.php>)

- All activities and programme modules attract credits, with a minimum 150 required over the full three years. For people joining in year two the requirement is 100 credits and in year three, 50 credits.
- Credits are obtained from three different categories of activity:
 - Practice Review Activities/Continuous Quality Improvement
 - Continuing Medical Education
 - Additional Professional Development Activities
- There are no annual minimums. Participants decide on the combination and timing of activities that make up the minimum totals over the triennium.
- Participants must participate in an RNZCGP endorsed resuscitation course to at least NZRC Level 5.

² Letter from Helen Glasgow, Professional Development Administrator, RNZCGP, 15 December, 2004

Summary Sheet for a PRA / CQI

Doctor's name:

The activity was designed by Counties Manukau CCM programme

Topic:

Chronic Care Management

Describe why you chose this topic - relevance, needs assessment:

First cycle (15 credits)

Data: Information collected.

Date of data collection: _____

Please attach:

- a summary of data collected **or**
- if this is an organisation activity attach a certificate of participation.

Check: Describe any areas targeted for improvement as a result of the data collected.

Action: Describe how these improvements will be implemented

Monitor: Describe how well the process is working. When will you undertake a second cycle?

Second cycle (15 credits)

Data: Information collected.

Date of data collection: _____

Please attach

- a summary of data collected **or**
- if this is an organisation activity attach a certificate of participation.

Check: Describe any areas targeted for improvement as a result of the data collected.

Action: Describe how these improvements will be implemented

Monitor: Describe how well the process is working. Will you undertake another cycle?

Additional comments:

13. Delivery Systems

i. Recommendations for best practice.

These aspects of delivery systems at the practice level are important for maximum effectiveness of CCM². Low overdue rates and changes in patient KPI's are difficult to achieve without good delivery systems.

Criteria
Staff Roles
Identified nurse project leader
Identified GP project leader
GP and nurse check monthly overdue and exception reports for patients that need following up.
Regular review of CCM progress (minimum of quarterly) at staff meetings, with discussion of reports.
GPs and PNs clear about their individual responsibilities for each aspect of programme.
Practice staff have had training in cultural competence for Maori and Pacific patients.
Ensuring Regular Visits
Read coding of all patients with chronic disease.
All patients enrolled in CCM flagged in PMS system.
All patients on recall.
Patients are recalled at least twice for each quarterly review, by phone and/or letter.
Alerts appear on the patients files if they are overdue for a review.
If no response to phone and letter then CHW follow up patients.
Wherever possible quarterly visits are aligned with timing of repeat prescriptions.
System in place to encourage patients to see same GP and nurse each time.
Appointments system in place for regular nurse and GP CCM visits (even if clinic does not usually run an appointment system).
Systems are in place that ensure that over 75% of patients have lab test results in the template prior to GP review.
Both GPs and PNs use the templates.
Receptionist notifies nurses and GPs if overdue patients arrive in surgery and organises review opportunistically.
If patients are deceased or transfer they are exited from the programme within 3 months..
Encouraging Patient Self Management
Each patient has agreed and documented self management goals, preferably a Wellness Plan.
Both GPs and nurses review and write in Wellness Plan at each visit.
The practice has well filed education pamphlets covering the range of chronic disease, with Maori and Pacific translations available as possible.



Note: ² These criteria were sourced from the following documents. Plan for CCM in Counties Manukau 2001-6, Institute for health care improvement Diabetes – Changing practice, changing lives (Health Disparities Collaborative) 2002, Review of CCM patient attendance (PHOCUS on Health) 2004.

ii. Use of the Recommendations List

2a. Practice Level Process to Review That These are Working Well

It is suggested that you review the above list at a practice meeting at three months post implementation to check that your systems are working well. You may find that due to the nature of your practice some aspects are easier to implement than others.

As you receive your clinical reports you will get an idea about how your practice is doing compared with your peers. If you do not seem to be managing as well as you had hoped, it may be that is worth reviewing the delivery system recommendations to see if there are systems you could change in your practice.

2b. PHO Support

Your PHO CCM project manager may also go over these recommendations with you at a follow up visit, to help you with CCM implementation.

Don't hesitate to ask your PHO CCM project manager for support if you have any concerns at any stage. They will have ideas from other practices as to how you can implement some of the delivery system aspects of the programme.

14. Claiming Reimbursement for Services Provided

General practices participating in the project can claim directly from the PHO holding the contract, on a quarterly basis for provision of the services as outlined. (This payment is to cover one free GP visit plus an average of one and a half hours of practice nurse time every three months).

This claim can be handled electronically where the systems have been set up prior to the commencement of the programme. If electronic systems are not in place, arrangements need to be agreed between the general practice and the PHO for a paper based claiming process.

The disease management templates fields are mandatory. If the information already exists or if the activity has already been carried out within the prescribed time period (e.g. laboratory tests) then the field will pre-populate. Every field must be completed before transferring the data and making a claim. This will be covered in the training programme.

The PHO will be responsible for reconciling the general practice claim against data reports supplied by Counties Manukau.

