

# **CHRONIC CARE MANAGEMENT PROGRAMME**

**General Practice Team Manual**

**For**

**Chronic Heart Failure**

**Version 0.1 -March, 2005**



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

<b>CHF Contents</b>	<b>Page No.</b>
<b>1. Overall Aim of the Programme</b>	<b>3</b>
<b>2. Which Practices can participate</b>	<b>4</b>
<b>3. Target Group/Funding entry criteria/Disenrolment reasons</b>	<b>5</b>
<b>4. Desired Patient Outcomes/KPIs/NYHA classifications</b>	<b>6</b>
<b>5. Steps in Implementation</b>	<b>8</b>
<b>6. Training Requirements for CCM Delivery</b>	<b>9</b>
<b>7. Patient enrolment</b> <ul style="list-style-type: none"> <li>• Patient Letter</li> <li>• Privacy and Consent Issues</li> <li>• Patient Information</li> </ul>	<b>11</b>
<b>8. Information systems/Templates</b>	<b>15</b>
<b>9. Key clinical messages</b> <ul style="list-style-type: none"> <li>• Aetiology of HF</li> <li>• Titrating ACE Inhibitors</li> <li>• Beta Blockers in HF</li> <li>• BNP</li> <li>• Diastolic Heart Failure</li> <li>• Diagnostic and treatment algorithms - <b>Systolic Dysfunction</b></li> </ul>	<b>17</b>
<b>10. Patient self management</b> <ul style="list-style-type: none"> <li>• Wellness Planning</li> <li>• Resources</li> </ul>	<b>27</b>
<b>11. Integration with Secondary Care</b> <ul style="list-style-type: none"> <li>• Referral to secondary services/ Outpatient Echo Form</li> </ul>	<b>30</b>
<b>12. Reporting</b>	<b>33</b>
<b>13. Delivery systems</b>	<b>39</b>
<b>14. Claiming Reimbursement for Services Provided</b>	<b>41</b>

## 1. Overall Aim of CCM CHF Programme

The Chronic Care Management (CCM) Programme has been developed by a working party involving Counties Manukau District Health Board (CMDHB), Middlemore Hospital Specialists and representatives of South Auckland Primary Care groups. The programme is funded directly by CMDHB with the aim of reducing *preventable* morbidity and mortality in people with COPD, through improved clinical management, 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

- Ø Structured care at a population level.
- Ø Targeting of high-risk patients for intensive management of the high-risk components of their disease together with a reduction in smoking.
- Ø 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.
- Ø Funding to support free GP quarterly review of high-risk patients and to facilitate the use of primary care nursing services to support lifestyle changes in patients with heart failure.
- Ø 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 (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 (telephone or face to face) 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 heart failure information of individual patients.

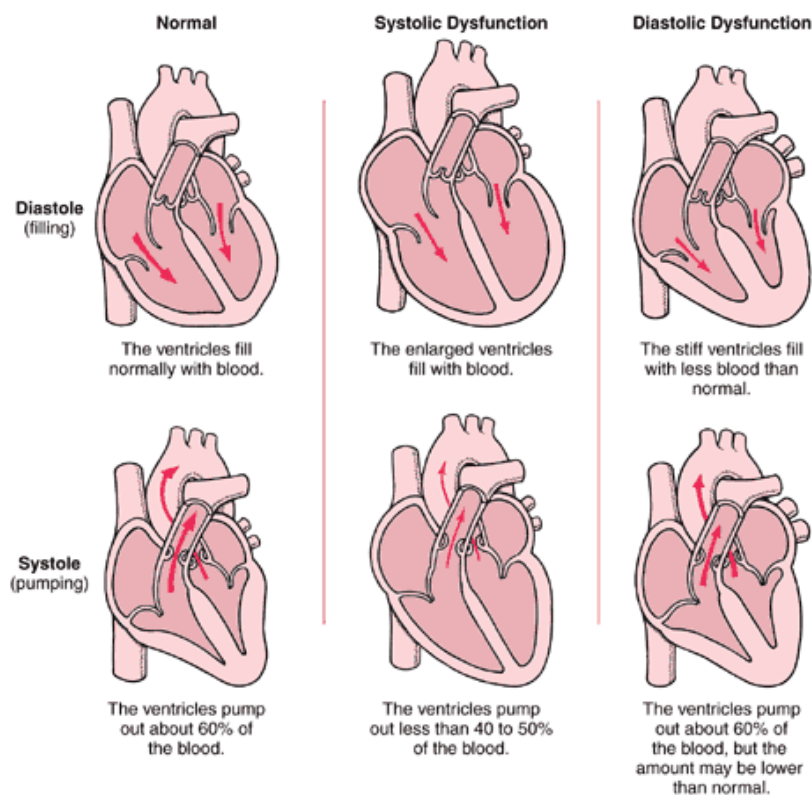
Project management support will also be provided to develop, introduce and evaluate an appropriate joint primary/secondary care clinic.

## 2. Which Practices can participate?

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

- Ø Established use of computerised clinical reports
- Ø MedTech 32 (other patient systems are pending alignment with the CCM programme)
- Ø HealthLink mailbox
- Ø Ability to generate Heart Failure 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 PHOs and 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 Leaders with overall responsibility for managing the project at practice level, and meet the targets negotiated in the **Agreement for Services (PHO/CMDHB agreement)**.



**3. Target group**

Practices involved in the heart failure research project will already have patients enrolled in the heart failure programme. These patients will transfer to the CCM programme. All patients with a confirmed diagnosis of heart failure would benefit from being enrolled on the CCM programme.

The clinical criteria to qualify for CCM funding at March 2005 are:

Patient accepts the “Patient Agreement” to participate

**Entry Criteria for Funding**

Systolic or Diastolic dysfunction on ECHO

**AND one of**

A hospital admission with primary diagnosis of CHF within the last TWO years

**OR**

Clinical and radiological evidence of heart failure (congestion and X-Ray signs)

**OR**

**FAMA criteria**

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

**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

#### **4a. Desired Patient Outcomes**

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

- Ø Report that they have a good understanding of heart failure and their role in managing this condition, actions they need to take to improve their condition, an understanding of their Action Plan (which is written, explained and given to the patient for reference) and an understanding of the role of their medications.
- Ø Have a wellness plan to encourage goal setting to promote lifestyle changes.
- Ø Report they are satisfied with their health care.
- Ø Be a non-smoker
- Ø Reduce alcohol intake (or if confirmed alcoholic cardiomyopathy is present – abstain completely.)
- Ø Monitor weight daily where possible
- Ø Be following a cardioprotective/less than 2gm salt per day diet
- Ø Be physically active (where possible) 30 minutes each day.
- Ø Be on a practice recall for annual influenza vaccination
- Ø Be compliant with their medications.

#### **4b. Key Performance Indicators (KPIs)**

- 1. % patients with Echo documented ventricular dysfunction**
- 2. % patients with systolic dysfunction on an ACE**
- 3. % patients with ACE at >50% of target dose**
- 4. % patients with beta blocker use as Class II or III and systolic dysfunction**
- 5. % patients with spironolactone prescribed in class III or IV symptoms and systolic dysfunction**
- 6. % patients identified as current smokers**

## NYHA Functional Classification.

### **Class 1:**

Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnoea or anginal pain

### **Class 2:**

Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnoea or anginal pain.

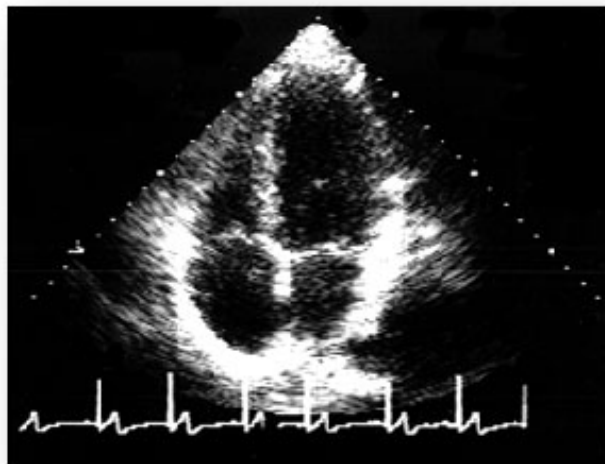
### **Class 3:**

Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity causes fatigue, palpitation, dyspnoea or angina pain.

### **Class 4:**

Patients with cardiac disease resulting in an inability to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency or of anginal pain are present at rest. If any physical activity is undertaken discomfort is increased.

(<http://www.cochranfoundation.com/docs/hyha-class.htm>)



## 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. Attend all related education and training sessions (see training section 6)	Practice Team	<input type="checkbox"/>
4. Identify all enrolled patients with heart failure	GP Practice Nurse	<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 section 7) Offer opportunistic enrolment to patients for whom letters or phone calls are not the best means of communication	Practice Nurse	<input type="checkbox"/>
7. Enrol patients in the heart failure programme (refer to the <b>PMS specific user guide</b> .) Obtain consent and complete agreement with patient	GP Practice Nurse	<input type="checkbox"/>
8. Go Live with limited enrolment (10-20 patients)	GP Practice Nurse	<input type="checkbox"/>
9. On completion of limited enrolment: <ul style="list-style-type: none"> <li>Ø Review feedback from IC server and identify any problems.</li> <li>Ø Review feedback from the team and address any operation issues.</li> <li>Ø Brainstorm any other problems</li> </ul>	GP Practice Nurse	<input type="checkbox"/>
10. GPs to provide patients at high risk with free GP consultations <b>every three months</b> with reference to key messages below and management guidelines provided.	GP Practice Nurse	<input type="checkbox"/>
11. Provide patients with an average of six hours 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 develop personalised wellness plans.		<input type="checkbox"/>
12. Arrange regular case reviews which should include: <ul style="list-style-type: none"> <li>Ø Discussion of areas of concern</li> <li>Ø Medication review</li> <li>Ø Investigations required, review of clinical data</li> <li>Ø Lifestyle issues to reinforce</li> <li>Ø Review of wellness plan</li> </ul>	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"/>
13. 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"> <li>• CCM Philosophy</li> <li>• Structure of programme</li> <li>• Inviting patients to join the CCM programme</li> <li>• Overview of current guidelines and IT application to IT template and clinical rules for one specific disease</li> <li>• Introduction to the importance of self-management</li> </ul>	<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.	<b>DHB/PHO IT liaison</b> 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.

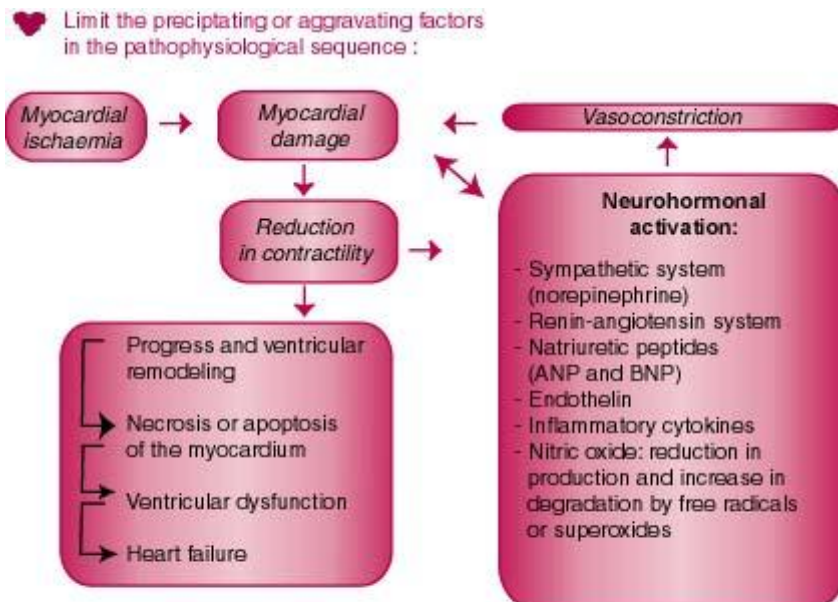
**Accessing on going CCM education is through your PHO representative.**



**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.**



In order to :

- ♥ reduce symptoms
- ♥ reduce hospitalizations
- ♥ enhance the quality of life and survival.

[www.santepub-mtl.qc.ca/mdprevention/fiches/coeur/heart.jpg](http://www.santepub-mtl.qc.ca/mdprevention/fiches/coeur/heart.jpg)

## **7. Patient Enrolment 7a. Patient Letter**

This sample letter can be used to invite patients to join the CHF 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 looking after people with heart failure 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 heart failure 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 Congestive Heart Failure. 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 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 Heart Failure 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 can also be displayed on boards in waiting or treatment rooms.

**Patient consent for programme (available in Wellness plan.)**

- 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.
- 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 HCWs 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 Wellness Plan)**

### **How much of your information is shared?**

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

1. Identification information such as my name, date of birth and National Health Index Number (NHI)
2. Specific details on my condition such as blood sugar levels or blood pressure. A detailed list of what information is collected is available from my care team and can be discussed with me 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:

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

### **What happens if I 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?**

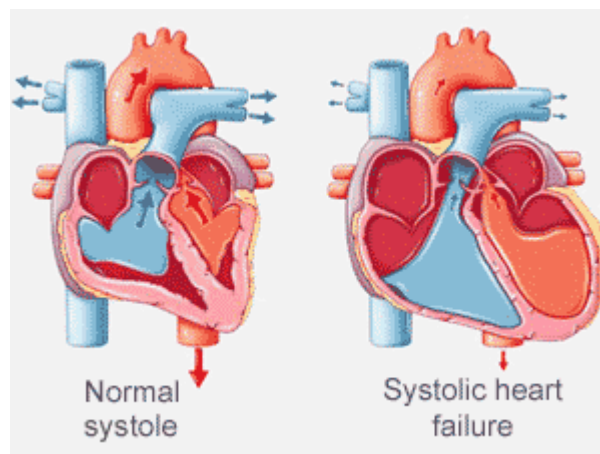
The Primary Health Care Organisation (PHO) supported by Counties Manukau District Health Board (CMDHB) are the kaitiaki or governance groups responsible for managing my information.

**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

The CCM programme is presently supported by Medtech32 and a centralised computer, the IC service (Integrated Care 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's. This covers use of the CCM Template, claiming and correcting error messages.

The IT support is provided as follows;

- Ø Clinical templates for heart failure management have been incorporated into the PMS,. The templates prompt collection of the relevant clinical and laboratory data, communicate with the IC server and provide decision support via messaging from the IC server.
- Ø The decision support is driven by a rules engine incorporating the evidence-based guidelines.
- Ø In some cases the templates can be configured to produce documents required frequently in the management of patients with heart failure (lab order forms, referral forms to various agencies, elements of the Wellness Plan, special authority forms etc.)
- Ø A backup is available to report on missed recalls.
- Ø There is an inbuilt facility for claiming and clinical reporting integrated into the template.
- Ø The system integrates with Emergency Care where the heart failure dataset is available as a read-only non-modifiable extract in PIMS for those patients presenting at Middlemore Hospital.



The following screening templates are available for use by MedTech32 users:

**CCM SMITH Arnie (3263)**

Main | Diabetes | Diabetes ... | **CHE** | COPD | CYD | 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 Applicable  
 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 | CYD | Chart | Documents | Audit | Parked

CXR+Congestion?   
 CXR Date:  
 Echo Done?   
 Date of Echo?: 05 Aug 2004  
 Diastolic Dysfn?: No  
 LV Systolic Dysfn?: Mild  
 Conges. Symptoms?:  
 Pulse Rate:  
 Cause Hyperten?:  
 Cause Ischaemic?:  
 Cause Valvul abno?:  
 Cause Idiopathic?:  
 Cause Alch induce?:  
 Cause Arrhythmia?:  
 NYHA Class: Class I

Cr: 0.40  
 TFT:  
 K+: 5  
 Beta Blockers?:  
 Ace Inhibitors?:  
 ACE Type:  
 ACE Strength?: mg  
 ACE Dosage:  
 Diuretics?:  
 Spironolactone?:  
 Ferritin Done?:  
 Care Plan Discuss?:  
 Particip. Status?:

Outcome / Note:  
 Outcome: QCHF  
 Note:

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

Inactive:  Park:     4 months since last check

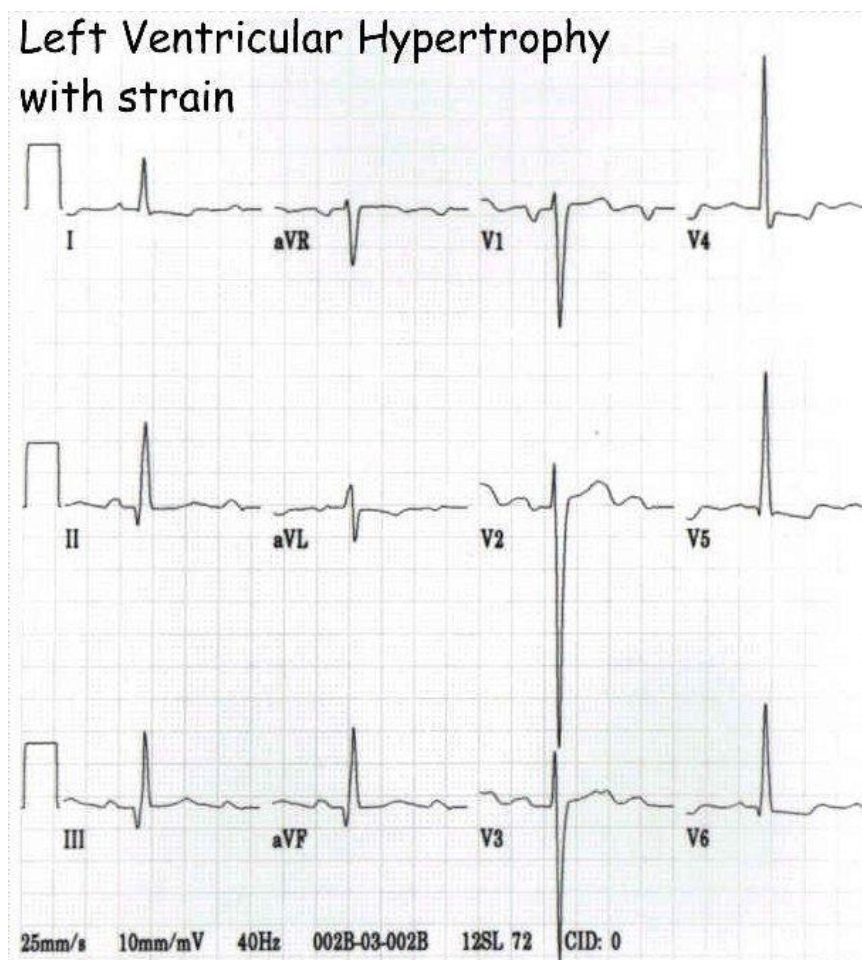
OK and Send    OK    Cancel

## 9. Key Clinical Messages

1. Accurate diagnosis with Echocardiogram to prove systolic or diastolic dysfunction is essential.
2. Educational interventions, including one to one patient counselling are a vital part of patient management and have been shown to improve patient outcomes and compliance. Some of the educational and counselling topics suggested include:
  - Ø Vaccination against influenza and pneumococcal disease
  - Ø Activity recommendations
  - Ø Dietary recommendations including limitation of alcohol and salt restriction.
  - Ø Appropriate medications
  - Ø Smoking cessation
  - Ø Prognosis
  - Ø Adherence with medications and treatment/wellness plan
3. Practitioners should be attuned to the problem of non-adherence and its causes. They should discuss the importance of compliance at follow up visits and assist patients in removing barriers to compliance (e.g. cost, side effects or complexity of management regime.)
4. Rehabilitative exercise training in patients with heart failure and moderate to severe left ventricular systolic dysfunction improves functional capacity and symptoms.
5. Regular daily weights are an important part of self management – a rise in weight over 2-3 days (needs to be discussed for individual patients what a significant rise in weight signifies) is suggestive of fluid retention.
6. Patients with heart failure should be advised to avoid excessive fluid intake, however fluid restriction is not advisable unless clinically indicated (e.g. patient develops hyponatraemia.)
7. Patients with heart failure and clinical signs of fluid overload should be started on a diuretic and have an action plan discussed with them.
8. All patients with a diagnosis of heart failure and systolic dysfunction should be on an ACE Inhibitor at the target dose or maximal tolerated dose.
9. Angiotensin II antagonists should be considered for patients with systolic dysfunction, intolerant of ACE inhibitors.

10. All patients with a diagnosis of chronic stable heart failure and systolic dysfunction with mild to moderate symptoms, on adequate doses of ACE and diuretic, with no asthma or contraindications should be on a beta blocker (metoprolol or carvedilol.) These are proven to increase survival.
11. Spironolactone in selected patients with moderate-severe heart failure is safe and confers substantial survival benefits. Recent evidence using another aldosterone inhibitor (EPHESUS) did show improved morbidity and mortality in patients with less severe heart failure with systolic dysfunction.
12. Digoxin may be considered for patients with heart failure and systolic dysfunction who are in atrial fibrillation or in patients in sinus rhythm who remain symptomatic despite treatment with an ACE inhibitor and diuretic.
13. Patients with underlying CVD should be treated with low dose aspirin and statins.

[www.nzgg.org.nz/guidelines](http://www.nzgg.org.nz/guidelines)



## Aetiology of Heart Failure

Heart failure should never be the final diagnosis. The aetiology of heart failure and the presence of exacerbating factors or other diseases that have important influence on management should be carefully considered. The extent to which the cause of heart failure should be pursued by further investigation will depend on the life expectancy of the patient, the resources available, and the likelihood that diagnosis will influence management.

Chronic heart failure may be due to several different underlying aetiological factors (Table A). Myocardial dysfunction as a result of coronary artery disease (most commonly from myocardial infarcts) is the most common cause of heart failure under the age of 75 years, and clear abnormalities of systolic function are usually present. In the elderly, accurate diagnosis is more difficult and obscured by multiple other diagnoses. Hypertension, hypertrophy and myocardial fibrosis may be more important causes of heart failure in the elderly and may occur in the presence of preserved systolic function. Often there is uncertainty over which factor dominates.

### A. Causative Factors:

- Ø Coronary Artery Disease
- Ø Hypertension
- Ø Valvular Heart Disease
- Ø Infections
- Ø Cardiomyopathies (including alcoholic and idiopathic)
- Ø Endocrine disorders (especially thyrotoxicosis.)
- Ø Genetic Conditions
- Ø Congenital Heart Disease
- Ø Inflammatory/immunological
- Ø Chronic arrhythmias e.g. complete heart block or incessant tachycardia

### B. Precipitating or Exacerbating Factors:

It is important to identify and treat any reversible factors which may be exacerbating the symptoms of heart failure. These factors include:

- Ø Anaemia
- Ø Infection
- Ø Arrhythmias, especially atrial fibrillation
- Ø Drugs, e.g. non-steroidal anti-inflammatory drugs, calcium channel blockers, corticosteroids and liquorice
- Ø Renal dysfunction / renal artery stenosis
- Ø Pulmonary embolism
- Ø Silent myocardial infarction
- Ø Excess salt intake

### ACE Inhibitor Up-titration

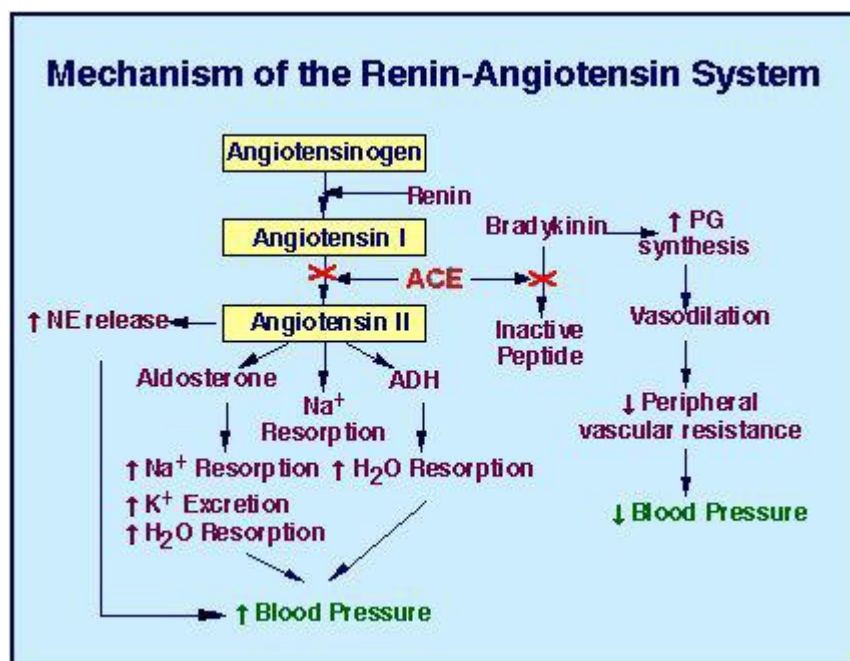
- Ø Starting with low dose and doubling dose at not less than two weekly intervals.
- Ø Aiming for target dose or highest tolerated dose
- Ø Start only if;
  - Creatinine < 0.2
  - K+ ≤ 5.0 mmol/l

Up-titration provided that:

- Ø Blood pressure ≥ 110 systolic
- Ø Any increase in creatinine is not >25% above baseline
- Ø K+ less than or equal to 5.0 mmol/l
- Ø Urea, creatinine, K+, to be checked **one week** post up-titration
- Ø Check biochemistry every **three months** when patients have reached target or maximum tolerated dose.

Cilazapril	Lisinopril	Enalapril	Captopril	Accupril
0.5mg daily	5mg daily	2.5mg bd	6.25 mg tds	2.5mg bd
1.0mg	10mg	5mg bd	12.5mg tds	5.0mg bd
2.5mg	20mg	10mg bd	25mg tds	7.5mg bd
5.0mg		20mg bd	50mg tds	10mg bd
				20mg bd

Dr Mayanna Lund/June Poole CNS.MMH 2004



[http://www.ovcnet.uoguelph.ca/BioMed/Courses/Public/Pharmacology/pharmsite/98-309/Cardio/Cardio\\_cases/Images/Angiotensin\\_fig1.jpg](http://www.ovcnet.uoguelph.ca/BioMed/Courses/Public/Pharmacology/pharmsite/98-309/Cardio/Cardio_cases/Images/Angiotensin_fig1.jpg)



## Beta-Blockers

*A Guideline for the Management of HF – Health Professionals Guide. Dec 2001*

[www.nzgg.org.nz/index](http://www.nzgg.org.nz/index)

Beta-blockers should be considered for all patients with heart failure due to systolic dysfunction (low ejection fraction) who have mild to moderate symptoms and are clinically stable.

The aim of treatment is to improve survival and reduce hospitalisations.

### Key points

- To date, 14,776 patients with chronic heart failure have been entered into randomised clinical trials of beta-blocker therapy (these clinical trial data are approximately double that which is available for ACE inhibitors in patients with heart failure).
- Trials have now shown conclusively that beta-blockers improve survival, decrease hospitalisations and improve left ventricular function in patients with chronic heart failure.
- Effects on patients' symptoms and exercise tolerance are less consistent and probably should not be considered a main aim of therapy (at least in the short term.)
- The benefits of beta-blockers are *in addition* to the benefits gained with ACE inhibitor therapy.
- There is a potential for adverse effects of beta-blockers particularly during initiation of therapy. Patient selection, timing of starting therapy and careful dose titration are of key importance.
- The role of beta-blockers is in the treatment of patients with chronic heart failure and **there is no place for the use of beta-blockers in the treatment of acute pulmonary oedema.**

### Benefits

The following data for survival benefits are from the total dataset combined in a meta-analysis: Absolute 4.5% (approx. annual risk reduction mortality rate 17.4% in placebo treated patients vs 12.9% in beta-blocker treated patients.) Relative 28% (SD 4%) risk reduction.

Number needed 22 (to prevent one death to treat during approximately one year of treatment.)

### Practical points for use of beta-blockers in heart failure

Patients considered for beta-blocker therapy should be similar to those represented in the clinical trials. Patients should:

- have chronic stable heart failure
- have left ventricular systolic dysfunction (LVEF < approximately 45%)
- have mild to moderate symptoms (NYHA functional class II-III)
- in general, be stable for about two weeks (without major changes in diuretic regime.)

## Starting patients with heart failure on beta-blockers

Patients with heart failure should be started on beta-blockers **by clinicians experienced with their use in heart failure or in specialist clinics.** Contraindications to beta-blockade, such as asthma or heart block (in the absence of a permanent pacemaker) should be checked for prior to starting treatment. Training and support may be available from your PHO.

### Initiation of beta-blockers in patients with heart failure:

- Start at low dose, e.g. metoprolol CR 47.5mg 1 / 4 tablet, or carvedilol 3.125-6.25mg.
- Give under supervision in out-patient setting
- Some patients may need observation of heart rate and BP for two hours
- In some cases, beta-blockers may be initiated prior to hospital discharge provided that the patient does not have signs of overt congestion.

### Dose titration:

- **Fortnightly visits to titrate dose of beta-blocker**  
Check specifically for signs of worsening congestion, hypotension or bradycardia at each visit.
- Withhold the morning dose on the day of the visit
- Some patients may need observing for two hours after each dose increment (e.g. if relative hypotension)
- Doubling of the dose every two weeks is a reasonable titration regime. However, titration can occur slowly and sometimes may take several months to achieve the desired maintenance dose.

### Potential adverse effects of beta-blockers in heart failure patients:

- Dizziness (common with the vasodilating beta-blockers such as carvedilol, often decreases if persist with treatment)
- Hypotension – usually a sign of intolerance (decrease dose or stop)\Worsening heart failure – mainly increasing congestion. Manage by increasing diuretics and continuing beta-blocker if possible
- Heart block

### Target doses:

- Aim for metoprolol 190mg CR daily or carvedilol 25mg bid





## B-Type Natriuretic Peptide (BNP)

### BNP

### N-terminal-proBNP

### N-BNP

### Indication

1. Congestive Heart Failure Marker
2. Dyspnea Evaluation
  - Most useful for Negative Predictive Value

BNP is a hormone secreted by the pressure or volume overloaded left ventricle of the heart. N-BNP (also called NT-pro BNP) is a peptide which is co-secreted with BNP. Most Auckland labs measure N-BNP. Assay of BNP and N-BNP in plasma are useful markers of cardiac decompensation, particularly when symptoms (fatigue, breathlessness) begin to appear.

Diagnosis of heart failure in patients with a background of chronic lung disorder can be difficult and in this setting assay of plasma N-BNP has been shown to have diagnostic value. In subjects with left ventricular dysfunction, plasma concentrations of BNP and N-BNP increase. The concentration of N-BNP in plasma reflects the degree of left ventricular dysfunction and may therefore be used to aid diagnosis of left ventricular dysfunction and heart failure. Preliminary data suggests that changes in N-BNP concentration could be used to evaluate or guide treatment in patients with left ventricular dysfunction or heart failure. The results of randomised controlled trials are awaited.

### Interpretation of Levels

Normal range in healthy subjects is <40pmol/L, and values in this range indicate that heart failure is a very unlikely cause of the patient's symptoms. Values greater than 220pmol/L strongly suggest heart failure in a newly symptomatic (breathless) patient.

In between these levels, heart failure is still possible but all clinical information must be taken into account. N-BNP may be elevated by renal failure, myocarditis, atrial fibrillation, LVH, Kawasaki disease, ascetic cirrhosis, cushings syndrome, Valve disease, after myocardial infarction and in the elderly.

N-BNP may be decreased by hypothyroidism, treatment with diuretics, vasodilators and ACE-inhibitors.

## Diastolic Heart Failure

Diastolic heart failure (DHF) is characterised by the clinical presentation of heart failure in the setting of preserved left ventricular systolic function and evidence of diastolic dysfunction. It is estimated to be present in at least one-third of patients who represent the signs and symptoms of heart failure and is especially prevalent among the elderly population. Despite an increasing understanding of the pathophysiology of this disease and the improvement of diagnostic and prognostic assessment, the management of DHF remains to be established. Medical therapy consists of the cautious use of diuretics and some studies suggested the beneficial role of beta-blockers and calcium antagonists. The rationale of current therapy is largely dependent on understanding the pathophysiology of DHF and observations from clinical trials that included relatively small number of patients. Large, multicenter, randomised, controlled studies are needed to define the role of various therapeutic agents in DHF and whether the prognosis of the disease will be altered.

The SWEDIC trial observed that carvedilol treatment in patients with DHF was associated with an improvement in diastolic indices measured by Doppler echocardiography. The CHARM-Preserved trial reported a non-significant reduction of cardiovascular death or admission for heart failure.

Other studies which are under way include PEP-CHF and the Hong Kong Diastolic Heart Failure study. They will play a pivotal role in ascertaining the therapeutic efficacy of various agents and will help experts to set up treatment guidelines for this common condition.

Current Vascular Pharmacology – July 2004, vol.2, No.3, pp.301-308(8) Yu C-M; Sanderson J.E.

### Useful reading

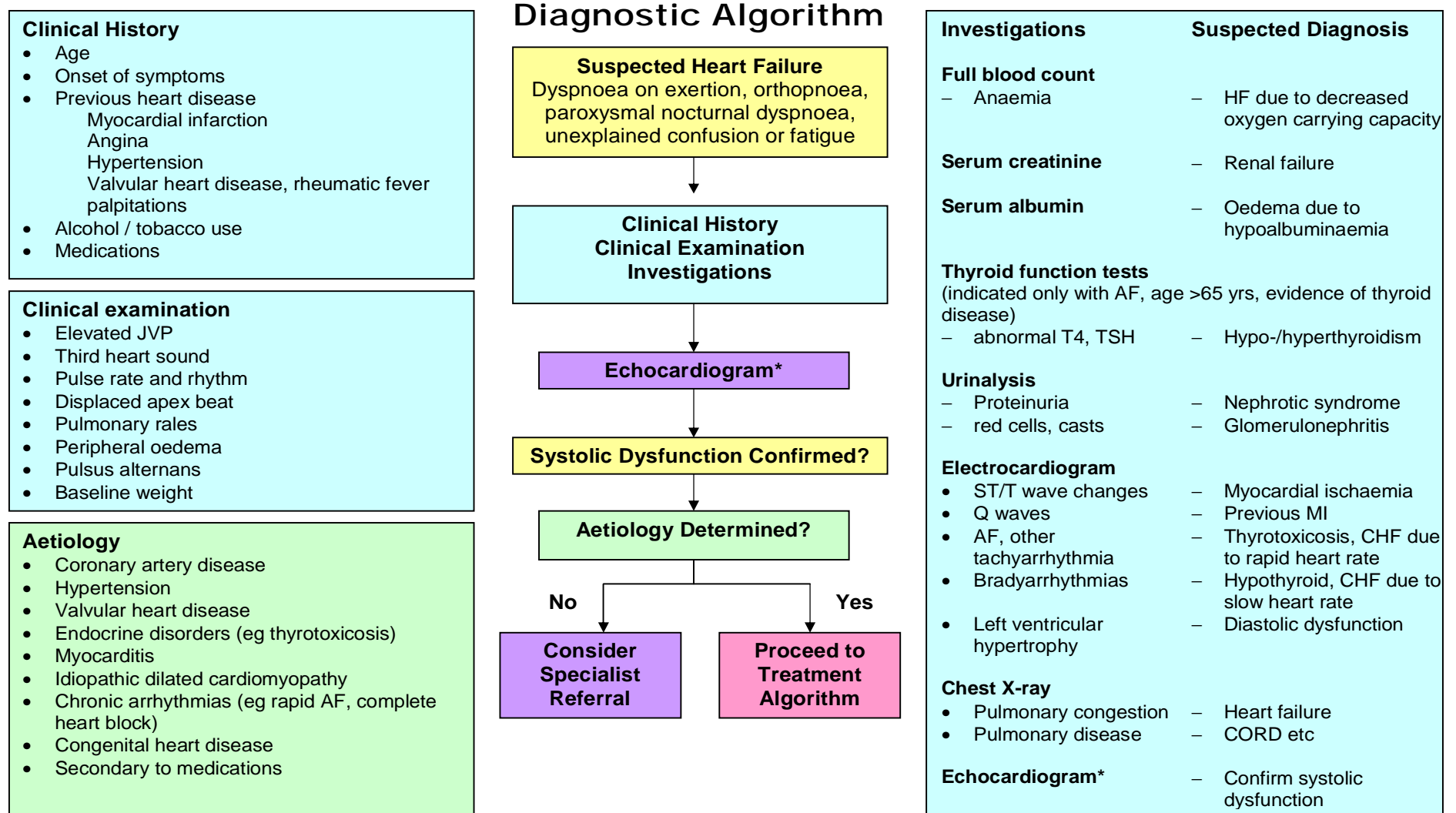
European Study Group on Diastolic Heart Failure. How to diagnose diastolic heart failure. *Eur Heart J* 1998;19:990-1003

Vasan RS, Levy D. Defining diastolic heart failure: a call for standardised diagnostic criteria. *Circulation* 2000;101:2118-21

Hunt SA, Baker DW, Chin MH, Cinquegrani MP, Feldman AM, Francis GS, et al. ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult. *J Am Coll Cardiol* 2001;38:2101-13

Remme WJ, Swedberg K. Guidelines for the diagnosis and treatment of chronic heart failure. *Eur Heart J* 2001;22:1527-60

**NEW ZEALAND GUIDELINE FOR THE MANAGEMENT OF CHRONIC HEART FAILURE**



\* Assessment of left ventricular function is an important part of the investigation; however, if this is delayed due to local resource constraints, then treatment should continue on an empirical basis

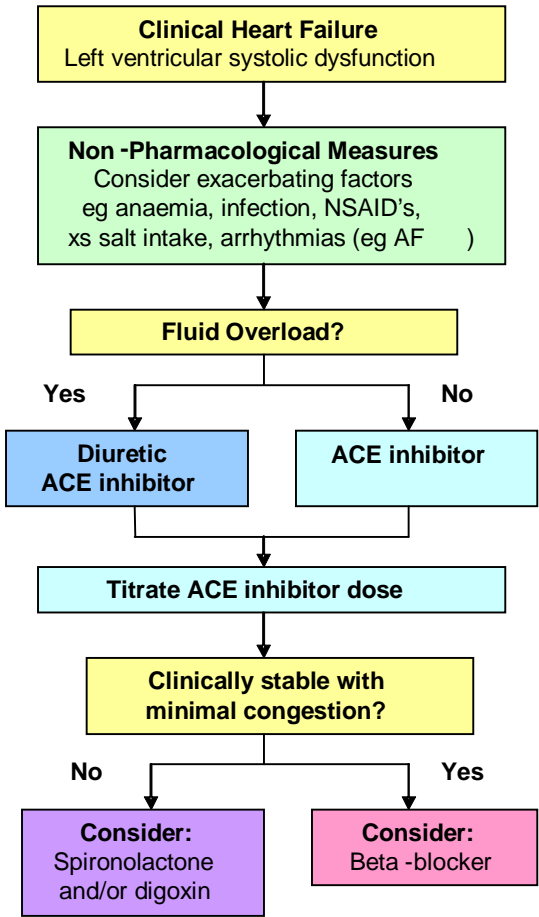
NZ GUIDELINE FOR THE MANAGEMENT OF SYSTOLIC DYSFUNCTION

- Non-pharmacological Management**
- General counselling (compliance, prognosis)
  - Daily weights (record in diary)
  - Avoid smoking
  - Regular exercise
  - Low-salt diet
  - Limited alcohol

- Diuretics**
- Titrate to symptoms and dry weight
  - Mild HF – thiazide alone may suffice (eg bendrofluazide 2.5-5mg daily)
  - Mod-severe HF – loop diuretic (eg initially frusemide 40mg daily)
  - Monitor K/creatinine weekly during titration, then 3-monthly
  - K<sup>+</sup> supplementation usually not required with concomitant ACE inhibitor
  - Serious hyperkalaemia can arise with combination of high-dose K<sup>+</sup>-sparing diuretic and ACE inhibitors (see also spironolactone)
  - In cases of resistant oedema, double the daily dose of diuretic, rather than give the same dose twice daily

- ACE inhibitors**
- Start at low dose (eg captopril 6.25 mg tds, enalapril 2.5 mg daily)
  - Titrate to target dose over 2-3 weeks (eg captopril 25-50mg tds, cilazapril 5mg daily, enalapril 10mg bid, quinapril 10-20mg bid)
  - Risk of first-dose hypotension if SBP < 90mmHg, or over-diuresis
  - Consider lower dosages if elderly or renal impairment
  - Monitor K/creatinine/BP weekly during titration
  - Contraindications: K<sup>+</sup>>5.5mmol/l, creatinine >0.25mmol/l, symptomatic hypotension or SBP<80mmHg, angioedema

**Treatment Algorithm**



- Beta-blockers**
- Consider for patients with chronic stable HF:
    - with mild-moderate symptoms
    - minimal signs of congestion
    - stable for one month on adequate doses of ACE inhibitors and diuretics
  - Contraindications: asthma, 2<sup>nd</sup>/3<sup>rd</sup> degree heart block, symptomatic hypotension, SBP < 80mmHg, HR < 50bpm
  - Initiation and titration may require referral (see NHF HF Doctors Guide)

- Spironolactone**
- Consider for patients with NYHA class III/IV HF symptoms
  - Recommended dose = 25m g daily
  - Hyperkalaemia/renal failure may arise if higher doses are used with ACE inhibitor
  - Contraindications: K<sup>+</sup>>5mmol/l, creatinine > 0.25mmol/l
  - Monitor K<sup>+</sup>/creatinine 3-4 days after starting
  - 10% of males may suffer breast pain or gynaecomastia

- Digoxin**
- Consider for patients in sinus rhythm if severe HF not controlled with ACE inhibitor & diuretic
  - If normal renal function – start with 0.25mg daily and check levels in 1 week
  - If elderly or renal impairment – start at 0.125 or 0.0625mg daily, check levels in 2-3 weeks
  - Toxicity: confusion, anorexia, nausea, visual disturbance, arrhythmias
  - Drugs which increase levels: antibiotics, amiodarone, diltiazem, verapamil, quinidine

## 10. Patient Held Wellness Plans

A fundamental component of the CCM heart failure 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

- The wellness plan is patient-centred and unique to each patient
- Development of the wellness plan is worked through in consultation with a practice nurse and/or the patient's GP. It is vital that this is done at each visit. The patient should be supported to make changes that are meaningful and achievable to them at each consultation.
- The wellness plan has many components in common with all CCM programmes;
  - 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 or appointments due
  - A questions page



In addition the heart failure wellness plan includes some specific components which are available as a separate “patient inserts for the wellness plan.”

- Key points for people with heart failure
- Action plans for heart failure
- Medications for heart failure
- Low salt diet
- Daily weigh section

## Heart Failure Resources



This popular booklet describes heart failure and how it affects the body, and provides guidelines on what you can do manage this condition. It also includes a diary to chart daily weight and symptoms. This booklet has been designed for health professionals to use when supporting patients living with heart failure.

Available from [www.nhf.org.nz](http://www.nhf.org.nz)



This pamphlet makes recommendations on being physically active if you are at high risk of or have coronary heart disease.

It makes ideas on how to get started safely and provides useful heart smart tips for becoming physically active.

See CVD manual resource section for further lifestyle resources available

### Heart failure websites

<http://www.nicsl.com.au/Presentations/EdWagnerJune04/player.html>

<http://www.nhf.org.nz/>

<http://www.heartcenteronline.com/professional/index.cfm>

<http://www.americanheart.org/presenter.jhtml?identifier=1486>

[http://www.nzgg.org.nz/guidelines/dsp\\_guideline\\_popup.cfm?guidelineCatID=32&guidelineID=26](http://www.nzgg.org.nz/guidelines/dsp_guideline_popup.cfm?guidelineCatID=32&guidelineID=26)

## Suggested Topics for Counselling and Education in CHF

### **General Counselling**

- Explanation of heart failure and reasons for symptoms
- Cause of heart failure
- Expected Symptoms
- Symptoms of worsening heart failure
- What to do if symptoms worsen (give action plan)
- Self-monitored with daily weights (discuss when to be concerned about weight increase.)
- Explanation of treatment/wellness plan (assist to set goals)
- Clarification of patient's responsibilities
- Can they afford weighing scales?
- Importance of cessation of tobacco use
- Role of family members or other caregivers in the treatment/wellness plan
- Importance of obtaining vaccinations against influenza and pneumococcal disease

### **Prognosis**

- Give patients an opportunity to ask about their prognosis and if requested, provide honest answers without undue emphasis.

### **Activity Recommendations**

- Recreation, leisure and work activity
- Physical activity
- Sex, sexual difficulties and coping strategies

### **Dietary Recommendations**

- Sodium restriction
- Cardioprotective diet (healthy diet)
- Avoidance of excessive fluid intake but promote adequate fluid intake
- Fluid restriction (if clinically indicated)
- Alcohol restriction or cessation if indicated.

### **Medications**

- Effects of medications on quality of life and survival
- Dosing/need to maximise dose
- Likely side effects and what to do if they occur
- Coping mechanisms for complicated medical regimes
- Availability of lower cost medications or financial assistance (e.g. disability allowance)

### **Importance of Compliance with the Treatment / Wellness Plan**

- Write up an individualised wellness plan with individualised goals focusing on achievable and realistic goals
- Establish follow-up procedures and enter recall events into practice computer system.



**11. Integration with Secondary Care**

One aim of the CCM heart failure programme is to strengthen the mechanism for integration at the following levels:

- Primary and secondary care input into guideline development and maintenance.
- Secondary care participation in CME and peer group sessions where appropriate.
- Virtual clinics in which advice and support on problematic patients is provided electronically (through PMS or electronic mail).
- Secondary care chronic care nurse specialist involvement at a general practice level, (support with difficult management problems and for support of the practice team.)

Resource	Access
Practice Support Care Coordinators available on locator (visiting practices to assist with wellness planning or telephone advice for problems)	Middlemore Hospital DDI 276 0044 Meg Goodman CNS 938772 June Poole Cardiac rehab CNS 938126
CME	PHO based
Facilitated access to services	Arranged through Clinical Nurse Specialist team either DHB or PHO based.

For clinical advice please contact	Contact details
Secondary care specialist	<u>Urgent (under one hour)</u> Contact <u>Dr Mayanna Lund</u> – on locator at Middlemore Hospital through the operator  <u>Non urgent</u> <a href="mailto:mlund@middlemore.co.nz">mlund@middlemore.co.nz</a>



## Referral to secondary services

- **Any patient with heart failure that GPs are concerned about**
- Patients with important valvular disease
- Patients with ongoing arrhythmias other than well rate controlled atrial fibrillation.
- Severe ongoing symptoms despite therapy
- Ongoing angina
- Patients who are under 60 years old but have a CVD risk rated as **high** clinically or via the common form template.
- Where GP is inexperienced in commencing beta blockers in patients with heart failure.
- Consider referral in younger patients with greater than or equal to moderate systolic impairment of unknown aetiology.

*Dr Mayanna Lund, Middlemore Hospital August 5, 2004*

The recommendations for specialist referral should not delay initiation of appropriate treatments for patients with symptomatic heart failure.

## Community Echocardiogram request form

For any patient who requires an Echo on the CCM programme.

Please send this form to:

Surya Sami

Business Improvement Team

Staff Centre

Middlemore Hospital

Ph 276 0044 ext 2151

Fax 276 0191

For the attention of Dr Mayanna Lund

Please note that:

- \*ECG
- \*Chest X-ray report
- \*Blood results



**Note: \*Must be included (or the form will be returned)**

**Fax to 276 0191 – for the Attention of Dr Mayanna Lund**

**Patient Details      Echocardiogram Chronic Care Management Request Form**

Name..... Male/Female.....

Address.....

Phone Number.....NHL..... Date of Birth.....

**Medical History**

	No	Yes		No	Yes
Ischaemic Heart Disease	<input type="checkbox"/>	<input type="checkbox"/>	(if yes)	Angina	<input type="checkbox"/>
				MI	<input type="checkbox"/>
Hypertension	<input type="checkbox"/>	<input type="checkbox"/>	Latest sitting BP.....		
Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	Type.....		
COPD	<input type="checkbox"/>	<input type="checkbox"/>			
Arrhythmia	<input type="checkbox"/>	<input type="checkbox"/>	Type.....		

Other co-morbidities.....

**Clinical symptoms suggestive of heart failure.**

**Clinical signs of heart failure.**

	No	Yes		No	Yes
Short of breath on exertion	<input type="checkbox"/>	<input type="checkbox"/>	Peripheral Oedema	<input type="checkbox"/>	<input type="checkbox"/>
Paroxysmal nocturnal dyspnoea	<input type="checkbox"/>	<input type="checkbox"/>	Elevated JVP	<input type="checkbox"/>	<input type="checkbox"/>
Orthopnea	<input type="checkbox"/>	<input type="checkbox"/>	Chest crackles	<input type="checkbox"/>	<input type="checkbox"/>
Ankle swelling	<input type="checkbox"/>	<input type="checkbox"/>	Hepatomegaly	<input type="checkbox"/>	<input type="checkbox"/>

NB. Peripheral oedema alone is not diagnostic of cardiac failure

**\*Previous investigations (investigations must have been done first and results attached).**\*

**\*ECG (copy attached)**  
(Tick if ECG criteria below are present)

- LVH evidence
- L BBB present.
- Q waves

**\*Chest X-ray (report attached)**  
(Tick if xray findings below are present)

- Interstitial oedema
- Cardiomegaly
- Pulmonary venous hypertension.

**Check list of recent tests to be attached.**

Renal function\*

Full blood count\*

Thyroid function\*

BNP (If done)

Spirometry (If done)

**\*Must be included.**

**N.B. In the absence of clear signs of fluid overload and or ECG or Chest X-ray abnormalities, left ventricular dysfunction is very unlikely and non cardiac causes for symptoms should initially be sought.**

## 12. Current CCM Heart Failure 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 CCM CHF Report

This report is a summary of data about your patients in the Chronic Care Management CHF programme for a specified period.

### Enrolments & activity

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

### 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

General		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your Patients	Your DHB
% Echo Done	Maori						
	Pacific I.						
	All						
% Smoker	Maori						
	Pacific I.						
	All						
Average NYHA class (a)	Maori						
	Pacific I.						
	All						

ACE Medications		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your patients	Your DHB
% on ACE (b)	Maori						
	Pacific I.						
	All						
% on ACE dose (c)							

Other Medications		First Visit		Latest Data		At 1 Year	
		Your patients	Your DHB	Your patients	Your DHB	Your patients	Your DHB
% Beta blocker (d)	Maori						
	Pacific I.						
	All						
% Spironolactone (e)	Maori						
	Pacific I.						
	All						

- (a) Average NYHA class for your patients
- (b) Percentage of your patients with systolic dysfunction who are on an ACE inhibitor
- (c) Percentage of patients with systolic dysfunction who are at or over 50% of the target dose
- (d) Percentage of patients who are NYHA class 2 or 3, and have LV systolic dysfunction who are on a beta blocker
- (e) Percentage of patients who are NYHA class 3 or 4 and have LV systolic dysfunction who are on spironolactone

## Examples of additional CCM reporting available

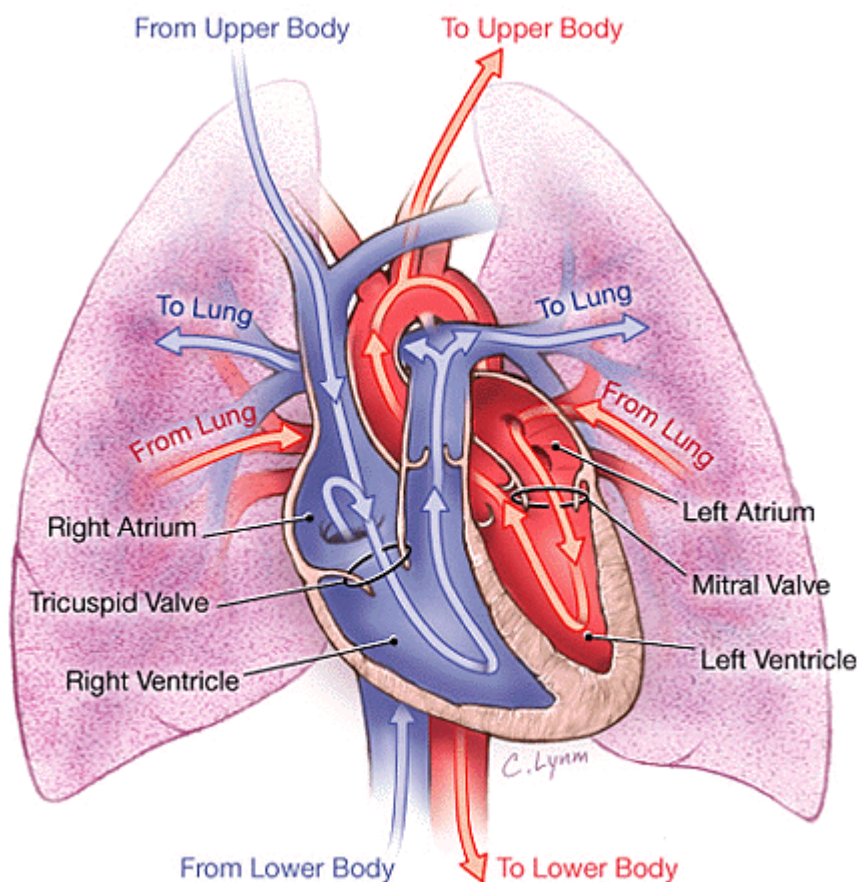
### CCM Overdue Patients

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.

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



## Using reports for the 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)<sup>1</sup>. The CCM programme is endorsed as meeting all the requirements of an RNZCGP CQI activity<sup>2</sup>. 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.

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<sup>1</sup> 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.

<sup>2</sup> 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 CCM<sup>2</sup>. Low overdue rates and changes in patient KPI's are difficult to achieve without good delivery systems.

Criteria
<b>Staff Roles</b>
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.
<b>Ensuring Regular Visits</b>
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..
<b>Encouraging Patient Self Management</b>
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:** <sup>2</sup> 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**

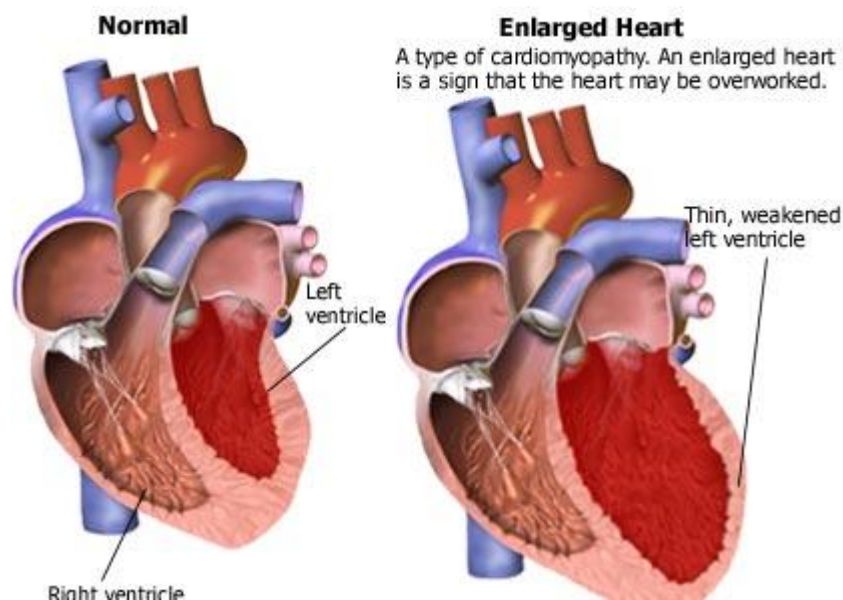
It is suggested that you review the above list at a practice meeting at three months post implementation to check that your systems are working well. You may find that due to the nature of your practice some aspects are easier to implement than others.

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 it 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.

