

**Counties Manukau
District Health Board**

**Cardiology
Health Services Plan**

February 2008

1.0 Current Services

The CMDHB Cardiology Service provides assessment, investigations and treatment of patients with cardiac conditions. Cardiology Department services are provided in inpatient, daypatient and outpatient settings, and there is close collaboration with primary and community based providers.

Services provided by the Cardiology Department include:

Inpatient Services

- Inpatient care by a multidisciplinary team in Coronary Care Unit (CCU), Step Down Unit (SDU) and Ward 2
- Assessment and advice on inpatient management to other medical and surgical patients as well as those in Emergency Care
- Cardiac catheter laboratory investigation and treatment
- Full Cardiac Investigation Services for both inpatients and outpatients
- Cardiac MRI's (offsite)
- Case management for complex Congestive Heart Failure (CHF) patients
- Inpatient rehabilitation advice and consults
- Inpatient education using Cardiovascular Disease (CVD) predict
- Active research and audit

Outpatient services

- SMO clinics
- Nurse specialist clinics
- Health Psychologist clinics
- Cardiac Rehabilitation assessment clinics and an outpatient programme
- Health Care Professional education including primary and secondary care

ADHB provides CMDHB residents with a number of tertiary services:

- Cardio-thoracic surgery including transplantation
- ICD implants and follow-up
- Complex catheter studies
- Electro-physiology service

Model of Service Delivery

The cardiology service uses a multidisciplinary model of care to provide services to the our local community. Patients are educated in hospital during their acute event and then referred to the community for ongoing care where clinically appropriate. Specialist Services also work in partnership with GP's, practice nurses and local NGO's (i.e. The Heart Foundation) to ensure a seamless continuum of care. Patients are encouraged to actively take ownership of their care and make informed choices regarding their care. Where possible Primary Care providers are encouraged to use the Congestive Heart Failure (CHF) Chronic Care Management (CCM) programme and other community based care strategies to facilitate management of patients care.

Volumes

	Actuals	Projected outpatient								Increase 2006-26	% increase 2006-26	pa increase
	2006/07	2007	2008	2009	2010	2011	<i>approx only</i>					
	2006/07	2007	2008	2009	2010	2011	2016	2021	2026	Increase 2006-26	% increase 2006-26	pa increase
NP Consults	2,477	2,557	2,640	2,725	2,809	2,895	3,400	3,800	4,300	1,822	74	2.8
FU Consults	6,086	6,290	6,500	6,718	6,937	7,158	8,400	9,600	10,900	4,780	79	2.9
Education and Management*	1083	1116	1,149	1,184	1,219	1,256	1,444	1,661	1,910	827	76	3.8
Cardiac Investigation Volumes (in and out patient)*	10,200	11,016	11,897	12,849	13,877	14,987	20,982	29,375	41,125	30,925	303	8.0

* estimated

Current Workforce

Resource ¹	FTE
SMO	8.44
Registrar	4.00
HO	2.5
Charge Nurse	2.0
Nurse Specialist	2.0
Registered Nurse	39.68
Team Leader	0.9
Technologist/Technician	14.61
Clerical Support	4.26

Key service synergies for the Cardiology Services are:

- Division of Medicine
- Radiology Department
- Heart Foundation
- Cardiology at ADHB
- University services for MRI provision
- Mercy and Ascot Hospitals

¹ * Cardiology Services resources including Cardiology, CIU, CCU, SDU and Catheter Laboratory budgets but excluding ward or allied health staff.

SWOT Analysis - Cardiology

<p>Strengths: The team:</p> <ul style="list-style-type: none"> • Range of staff expertise. • In-depth knowledge of patient population. • MDT model and approach to patient care. • Emphasis on a patient centric approach. • Dedication and commitment. • Multicultural team mix. • Leadership. • Links with and active involvement in the community. • Ongoing technology development in cardiology. • The ongoing development of effective local solutions for our client base. • Catheter Laboratory, CIU and inpatient facilities. • The development of CVD predict. • The education and professional development programme and commitment to ongoing up-skilling within the department. • Relationship with ADHB and integration in the regional cardiology interventional roster. • Audit activities. • Strong research base. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Shortage of technologists and lack of training facilities to meet current and future need. • Direct GP access to investigation services. • Lack of sufficient CNS FTE to meet the current need and future demand. • Insufficient Health Psychology resource to meet the patient need. • Limitations on covering our intervention lists within current FTE. • Lack of funds and resources to continue IT development. • No regional complications database. • The strength of our cross cultural networks, apart from Maori, and to a lesser extent Pacific. • Community/GP integration.
<p>Opportunities:</p> <ul style="list-style-type: none"> • Repatriation of Implantable Cardiac Defibrillation service provision from ADHB in 2008. • Instigation of biventricular pacemaker implantation. • Development of additional nurse specialist roles within Cardiology. • Further development of the health psychology service for cardiac patients. • Increased emphasis on community based care and the patient centric based model of care. • Re-development of technologist training posts. • Ongoing commitment to research excellence. • Provision of CT angiography onsite at CMDHB in 2009. • Increased emphasis on improving health disparities and in particular that of Maori and Pacific patients. • The development of cross cultural networks both internally and externally • Workforce development. • Improved GP access to diagnostic tests i.e. Holter, ETT, Echo. • Health prevention strategies. 	<p>Threats:</p> <ul style="list-style-type: none"> • Lack of funding for new drug therapies and technological advancement as they are developed and released on the market. • Potential changes in government and funding models. • An ageing population with changing patient demographics which will require increased funding to support their care. • Demand for services versus our capacity to provide them. • Ability to recruitment and retain staff.

2.0 Key Issues

Capacity to respond to the increased need for services resulting from demographic growth and ageing of the CMDHB population.

Workforce development is a key issue across all Cardiology Services workforce areas. Active involvement in education and training will ensure that staff are available to address both secondary care needs, but also to ensure that primary care is confident in the management of cardiac disease.

The Cardiology Service needs to continue to develop new services and introduce new technology to remain at the leading edge of service delivery. As a DHB with a large, growing, high needs population, services support the full range of secondary care activities.

CMDHB has a Model Of Care that supports primary care management of patients with Cardiac conditions. Close collaborative relationships between primary and secondary care are required with secondary care providing leadership and education to primary care in the management of Cardiac conditions.

3.0 Trends and Future Direction of Services

Future Directions of Cardiology Services at CMDHB involve Workforce Development, introduction of new services/technologies, and ongoing Primary and Secondary Care integration. These include:

- The local development of new procedures and tests that may reduce the need for invasive intervention (i.e. 3-D Mapping, CT Angiography). This will have significant benefits for patients both in reducing the risks associated with invasive procedures and in the provision of more accurate diagnostics.
- The Cardiology service will be actively involved in development of new rehabilitation facilities which support improved patients outcomes.
- Repatriation of Implantable Cardiac Defibrillators (ICD) (+Biventricular Pacing) service provision from ADHB in 2008 will allow reconfiguration and expansion of the existing pacing service and further improve local service delivery.
- Expansion of nurse specialists and the development of a Nurse Practitioner role will improve services in Cardiac Rehabilitation and CHF and improve the roll-out of CVD predict. Development of Nurse Led Exercise Tolerance Testing to include Saturday and Sunday will support prompt diagnosis and management of chest pain. The development of the Nurse Practitioner role for the management of complex patients who have repeat admissions.
- Further development of the health psychology service for cardiac patients through improved timeliness in accessing services, support group education initiatives, improve the management of cardiac patients with recurrent admissions, and support the development of the ICD service.
- Working closely with PHOs to support their development strategy and increase the emphasis on community-based care and the patient-centric based model of care. Continued evolution of partnership model with practice nurses to up-skill and educate them in patient management.
- Re-development of technologist training posts to meet future service growth.
- Development of CT angiography (64 slice CT) to increase access to minimally invasive diagnostics available at CMDHB.
- Increased emphasis on ambulatory and community based care including continued evolution of community based clinics with GP's and the devolution of more diagnostic procedures out to MSC.
- Active nurse specialist case management for patients with complex needs.
- Evolution of the Nurse Practitioner role in ambulatory, primary and secondary care.
- Working with the Maaori Health Team and the Pacific Health Unit to develop effective networks in the community.

Phased Development Plan – Cardiology Services		
5 Year Plan	10 year Plan	20 year Plan
Expansion of OP hours of operation to allow easy access for patients	Primary care based model of care with an increasing number of specialist clinics at GP practices	Imbedded model of care that is predominantly based in primary care with limited secondary care clinic's
WL < 3mths for all diagnostic testing	Direct GP access for all diagnostic testing	All initial screening in primary care with only complex cases referred for specialist advice
Local technologist training programme provides enough technologists to meet expanding service demands	Local technologist training programme meets local and regional demand between the three DHB's	No national shortage of technologists
Development of a nurse led model in the PHO's	Complex patient with multiple co-morbidities only seen in secondary care	Complex patient with multiple co-morbidities only seen in secondary care
Rehabilitation facilities in use at Manukau Campus	Rehabilitation programme predominately provided in primary care or the community	Rehab either home, community or primary care based
Continuation of a multicultural workforce working with tertiary institute to develop a hospital based training model	Multicultural workforce, trained locally and primarily from our local community	Multicultural workforce, trained locally and primarily from our local community
National Research centre of excellence	International research centre of excellence	International research centre of excellence
Local access to most diagnostic's i.e. 64/128 slice CT and cardiac MRI	Local access to all diagnostic's i.e. 64/128 slice CT and cardiac MRI	Local access to all diagnostic's i.e. 64/128 slice CT and cardiac MRI
Cardiothoracic OP consults provided in CMDHB facilities	All pre and post-surgical appointments and tests performed locally	Cardiothoracic surgery OP and IP provided locally
Very limited tertiary service provided by ADHB	Patient referral to ADHB for management only in exceptional circumstances	Patient referral to ADHB for management only in exceptional circumstances

4.0 Key Directions

- ✓ *Continued development of primary care management of cardiology conditions and the provision of community based services.*
- ✓ *Ongoing development of additional cardiology investigation and treatment services, and the introduction of new technologies.*
- ✓ *Movement of specialist consultation clinics to community and primary care settings.*
- ✓ *Better access for primary care to cardiology investigations to support timely diagnosis and treatment.*
- ✓ *Workforce development for all groups of staff to meet needs for additional services and the introduction of new services.*
- ✓ *Development of Nurse Specialist and Nurse Practitioner roles across the care continuum.*