MINISTRY OF HEALTH
MANATŪ HAUORA

NATIONAL HEALTH BOARD
POARI HAUROA Ā-MOTU

National Cardiac Surgery Update

And the Formation of the New Zealand Cardiac Network

New Zealand Government

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Foreword

When the National Cardiac Surgery Clinical Network (the Network) was formed in 2009, New Zealanders needing cardiac surgery faced lengthy and distressing delays.

There was a lack of confidence in the health system's ability to care for those in need.

The Network was developed to lead and oversee reform of the New Zealand cardiac surgical system and improve the delivery of cardiac surgery in line with the recommendations of the Cabinet Decision *System Change to Improve the Delivery of Cardiac Surgery in New Zealand* and recommendations from the Cardiac Surgery Service Development Working Group.

Its membership includes cardiac surgeons and clinical directors as well as a director of nursing, anaesthetist, intensivist, national co-ordinator and DHB Chief Executive representation.

Since that time the Network has worked tirelessly with District Health Boards, the National Health Board and the Ministry of Health to turn this situation around.

We now have public cardiac surgery services to be proud of, and we can be confident that those in need are able to access them.

New Zealand Cardiac Network

This success presents us with new opportunities to consolidate our gains and further improve the system. Much of this work will be undertaken by a newly formed **New Zealand Cardiac Network** which encompasses a wider range of stakeholders.

This will encompass representatives from the National Cardiac Surgery Clinical Network, the four regional cardiac networks and also include membership from the Cardiac Society, NZ Heart Foundation, primary health care and the Ministry of Health.

It will oversee and co-ordinate a work programme that focuses on the entire cardiac care pathway to ensure people have the access to the care they need.

This is the next step to build on the achievement of the National Cardiac Surgery Clinical Network and to drive further improvements which will result in better access to cardiac care for those who need it.

We need to ensure that other parts of the cardiac patient journey work as smoothly as possible, and I look forward to being involved in this work.

Andrew Hamer
National Clinical Leader

Introduction

Improved access to cardiac surgery has reduced patient waiting times to levels never achieved before.

The National Cardiac Surgery Clinical Network has worked with the National Health Board (NHB) and District Health Boards (DHBs) throughout New Zealand to help achieve this unprecedented outcome.

Thanks to these efforts, significant progress has been made in shortening the patient journey so that patients are assessed and treated more quickly.

Significant progress has been made in increasing the volume of cardiac surgery operations, improving the geographic equity of cardiac surgery provision, enhancing the effectiveness of clinical prioritisation, and reducing the number of patients waiting for surgery.

The National Cardiac Surgery Clinical Network

The Network was developed to lead and oversee reform of the New Zealand cardiac surgical system and improve the delivery of cardiac surgery.

It was formed following real concerns about ballooning waiting times and access to cardiac surgery in New Zealand.

This concern saw a range of recommendations made by the Cardiac Surgery Service Development Working Group and the Government.

The Network was established by the Minister of Health in April 2009 to lead the reform of New Zealand's cardiac surgical system and to improve the delivery of cardiac surgery in New Zealand. The five goals of the Network are to:

- increase the delivery of publicly funded cardiac surgery
- improve equity of access to cardiac surgery
- improve the quality of service of cardiac surgery
- ensure the development of appropriate systems and processes to support these goals
- support the Ministry of Health, DHBs and health professionals to enhance the provision of publicly funded cardiac surgery in New Zealand.

Significant progress has been made in increasing the volume of cardiac operations.

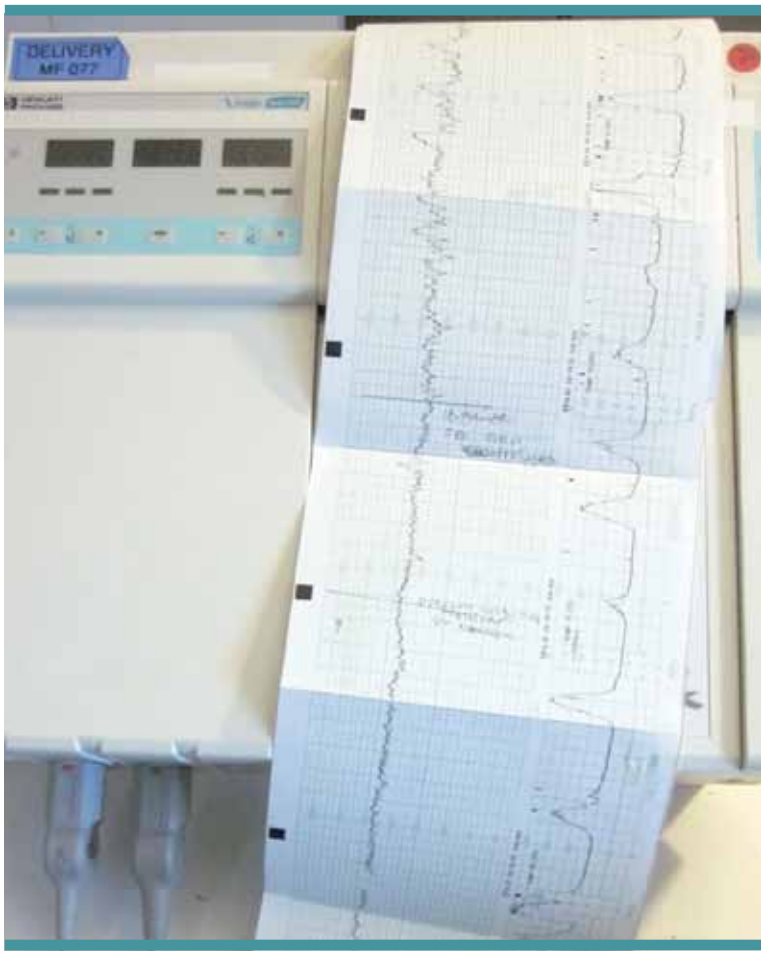
More patients operated on sooner

The initial challenge facing the Network was to provide surgery for the backlog of patients on waiting lists around the country.

Under the guidance of the Network, DHBs developed recovery plans to ensure these patients got the surgery they needed as soon as possible.

The plans included outsourcing to public and private facilities, arranging for 24 Capital & Coast patients to go to Australia in 2008/09, and a backlog initiative for Auckland which saw 58 extra operations in 2008/09 and 59 in 2009/10.

These initiatives turned the tide.



Meeting future demand

The next challenge was to ensure DHBs had the capacity to meet demand for cardiac surgery presented by their communities in the medium and long term.

The Ministry of Health and the Network worked with DHBs to put targets in place to give DHBs a focus for improvement and to measure success.

Two targets were set for every cardiac surgery centre, and weekly reporting to the Ministry of Health was established to help DHBs ensure their populations had improved access to cardiac surgery. The two targets were:

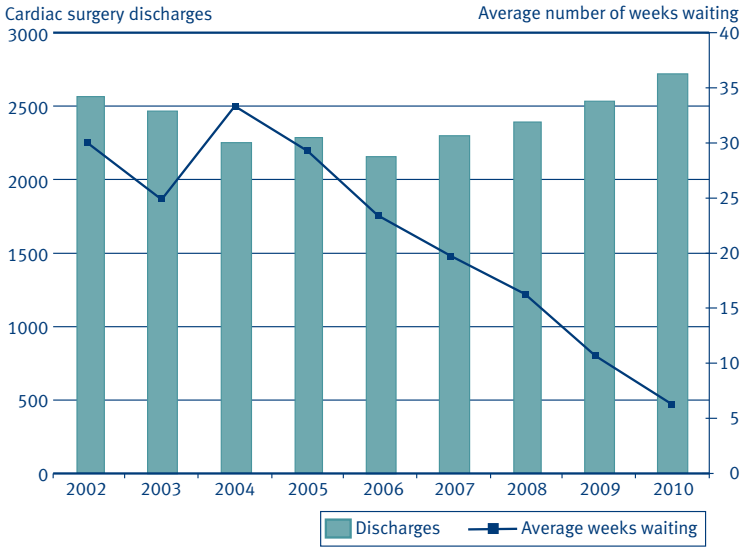
- an increased contract number of patients to be operated on, and/or
- a maximum waiting list number (approximately 10% of annual throughput).

Each cardiac surgery centre had to meet or exceed its increased contract target unless there were too few patients referred to it, in which case the centre would be expected to keep well below the maximum waiting list number.*

All five centres are now continuously achieving one or both targets.

* A waiting list of at least 5 percent of throughput (2.5 weeks throughput) is necessary to allow scheduling and patient preparation for surgery.

Figure 1: National trends in cardiac surgery waiting times



National trends in cardiac surgery waiting times

Figure 1 shows that this approach has been very successful. More patients have received procedures and fewer patients are waiting for surgery.

In fact, the higher number of cardiac surgery operations planned in 2010/11 cannot actually be delivered because the referrals of patients for surgery is lower than the number of operations planned by DHBs.

Improved equity

A key aim has been to ensure cardiac surgery is available to those who need it most, no matter where they live in New Zealand. As shown in Figure 2, regional variations in levels of cardiac surgery have been significantly reduced.

Extended treatment options

There has been a real focus on ensuring patients receive the most appropriate clinical procedure for their condition. Consequently, not only have more patients been offered cardiac surgery, but more have received coronary artery stenting as shown in Figure 3.

Transcutaneous aortic valve implantation (TAVI)

This revolutionary procedure has been piloted in New Zealand for patients at very high risk for open heart surgery. After the success of the pilot and supportive international research, this procedure has been approved for use in New Zealand public hospitals as an alternative to surgery, where clinically appropriate. The future growth of this procedure is unclear, but it is achievable within the planned increases in cardiac surgery, keeping New Zealand at the forefront of this technology in a cost effective manner.

Figure 2: Cardiac surgery standardised intervention rate per 10,000 population, by region

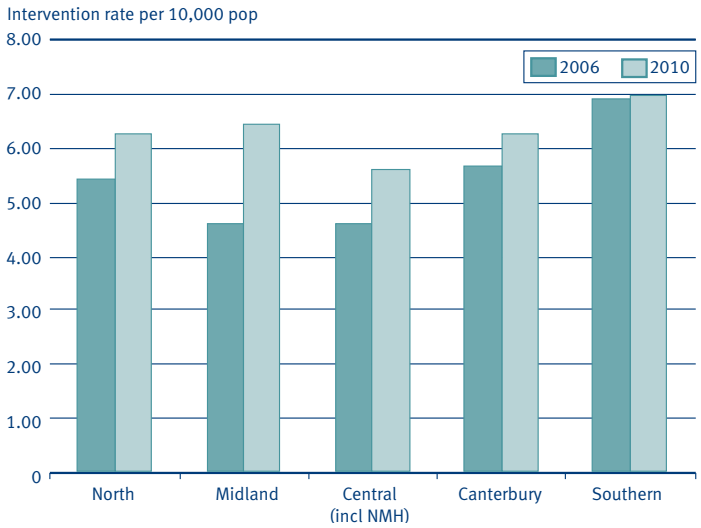
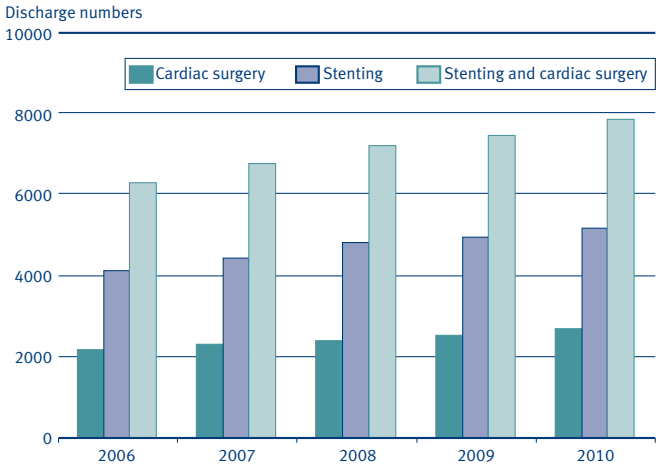


Figure 3: Trends in delivery of cardiac and cardiology procedures



More diagnostic coronary angiography

Patients who might benefit from cardiac surgery need a diagnostic coronary angiogram, or 'dye study'. There has been a significant increase in this important diagnostic test as shown in Figure 4.

Fewer patients waiting to be seen

As demonstrated in Figure 5 the total number of patients waiting to be seen for their first specialist assessment continues to fall.

However, the Network would like to see further improvement.

Now that cardiac surgery waiting times are down to a record low, there is a need to focus on other parts of the patient journey to ensure there is timely access to cardiac assessment.

The patient journey starts with referral from a general practitioner. In the past this could see a lengthy wait to see a specialist.

We need to ensure that patients don't face lengthy delays before they are referred to a cardiac surgeon or interventional cardiologist.

Figure 5: Patients waiting for FSA – cardiology

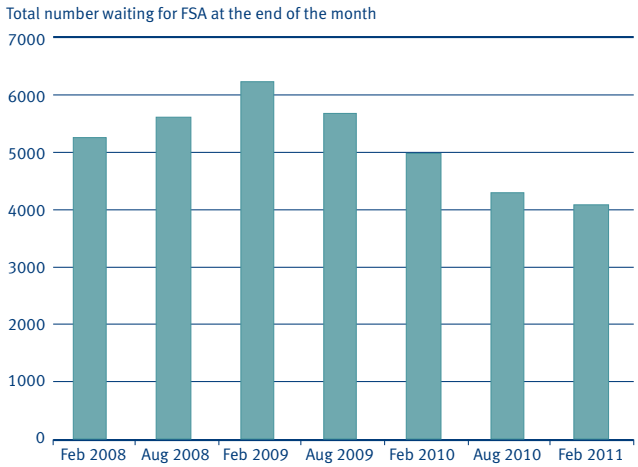
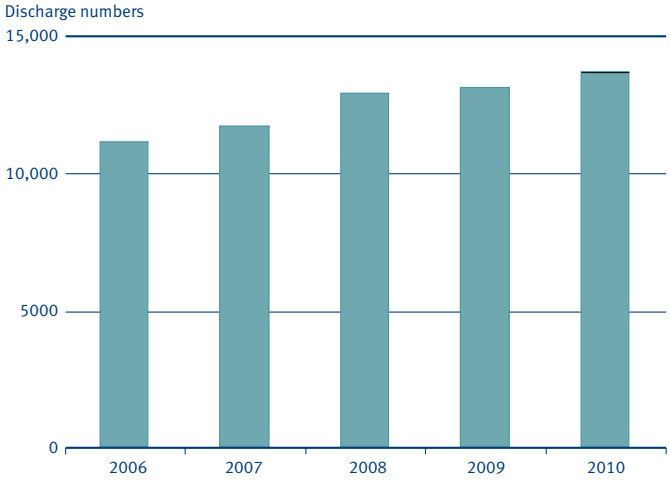


Figure 4: Trend in delivery of cardiac and cardiology procedures – angiography



Access for elective patients to first specialist assessment and cardiology diagnostics (angiography, stress testing and echocardiography) needs to improve.

For acute chest pain patients (acute coronary syndrome), it is essential to ensure those who would benefit from stenting or cardiac surgery are rapidly identified.

To help achieve this, the Minister of Health wrote to DHB chairs in June 2010 asking them to ensure high-risk patients receive coronary angiography in less than 72 hours.

Projects have been put in place such as the Midlands Regional ACS project and the establishment of a national ACS quality improvement database. These are supported by the Quality Improvement Plan for Diabetes and Cardiovascular Disease and the four regional cardiac networks.

Acute Coronary Syndrome Project

The Acute Coronary Syndrome (ACS) project began in the Midland region to address delays in diagnosis and treatment of ACS. The aim is to ensure patients presenting signs of cardiac chest pains will have a significantly reduced risk of dying through rapid and improved access to assessment and treatment.

Both the Lakes and Tairawhiti DHBs have been funded to develop quality improvement pilots in prevention, treatment and rehabilitation of ACS patients for their DHBs. This is part of developing long-term strategies and better systems to deliver improved services for their populations, with Professor Norman Sharpe, clinical director of the National Heart Foundation, providing consultation.

The Midland regional ACS project focuses on improving links between cardiac services provided by the region's DHBs, this includes tertiary services in Hamilton. All DHBs in the region are participating in the ACS project and will benefit from the outcomes. Dr Gerry Devlin, Clinical Director of the Waikato cardiac service, is providing the clinical leadership, and project management is provided by Waikato DHB.

The Midland ACS project builds on other current national projects such as the National Cardiac Surgery Network and Quality Improvement Plan for Diabetes and Cardiovascular Disease.

The ACS project aims to provide proper assessment and prioritisation at the local level for patients presenting ACS symptoms, followed by prompt access to the regional specialist cardiac service. The ACS project is also being supported by a cardiac quality improvement database, which is intended to be developed as a national system.

The ACS project is running for up to 18 months ending in late 2012. This regional programme is the basis for regional development of ACS services, which will be rolled out across the country.

Prioritisation and monitoring

A national cardiac surgery urgency scoring system is being implemented in all five cardiac surgery centres to ensure patients receive surgery in order of need.

The centres are implementing this work over the next year, pending a review in March 2012 and formal implementation in 2012/13.

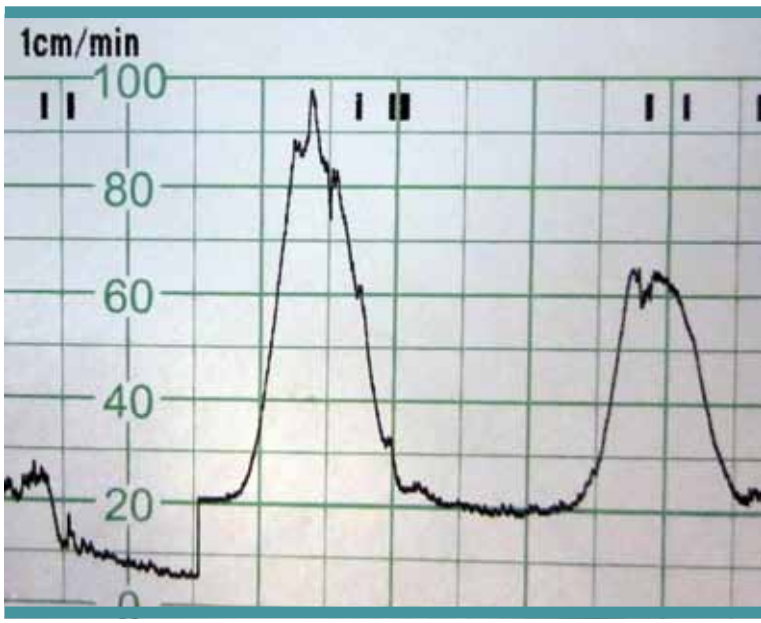
The urgency timeframes are 72 hours, 10 days, 30 days and 120 days.

Continuous quality improvement

To improve the quality of cardiac services we need good data on what is happening to cardiac patients in New Zealand.

Collecting national data on the cardiological assessment of elective and acute patients, prioritisation, and pre-operative, intra-operative and post-operative care is the essential ingredient for ensuring continuous quality improvement.

Current data collection only provides some of what is required, and improvements are being discussed with the National Health Board and the National Health IT Board.

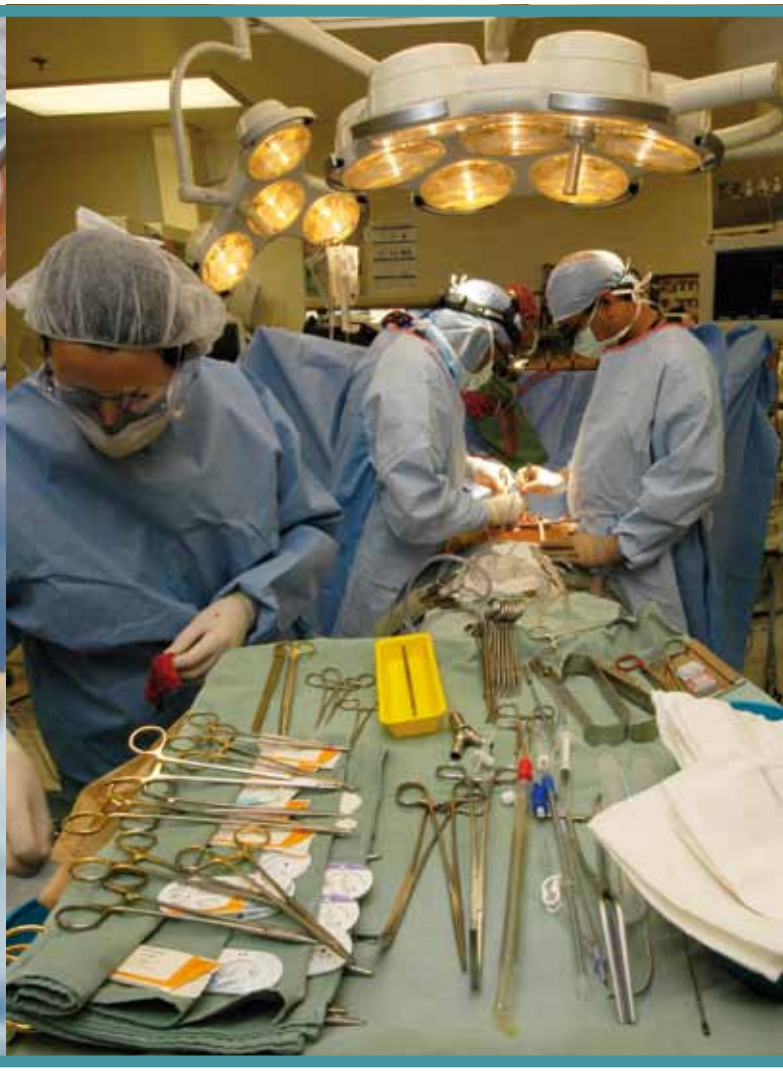


New Zealand Cardiac Network

To help capitalise on these recent gains an agreement has been reached to form the **New Zealand Cardiac Network**.

The New Zealand Cardiac Network will now encompass the Cardiac Surgery Network, the four regional cardiac networks and also include membership from the Cardiac Society, NZ Heart Foundation, primary health care and the Ministry of Health.

This network will build on the success of the Cardiac Surgery Network to drive improvements across the entire spectrum of cardiac care, and increase access and ensure better services for those who need them.

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