MIDCENTRAL DISTRICT HEALTH BOARD

Te Pae Hauora o Ruahine o Tararua

Primary Referred Radiology Strategy

Unpublished

Table of Contents

1. THE STRATEGY IN SUMMARY

One of the five key directions identified in the Referred Services Management Strategy was improving access to primary referred radiology. The Primary Referred Radiology Strategy expresses the Board's commitment to providing quality diagnostic services for General Practitioners in MidCentral District.

The strategy aims to fulfil the following **principle**:

In principle, diagnostic procedures should be provided in a manner to facilitate the ability of General Practitioners to diagnose and treat patients in an efficient and effective manner.

The **vision** of this strategy is:

> *Primary referred radiology will provide General Practitioners within the MidCentral district with a quality and timely service to assist their ability to diagnose and treat patients.*

The key directions to achieve the vision are to:

1 Create a funding context consistent with MidCentral's Primary Health Care Strategy to provide timely and efficient services for primary referred radiology. In particular:
   - 1.1 Establish a district wide primary referred radiology service level specification
   - 1.2 Provide funding for local Primary Health Care Teams

2 Incorporate primary referred radiology within the current referred services management structure.

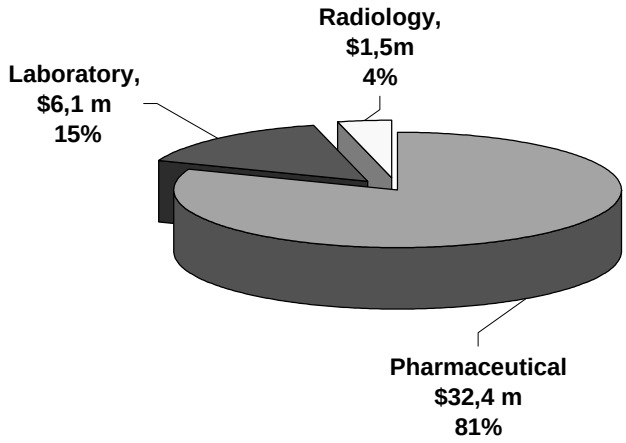
Collaboration was identified in the referred services management strategy as a key to success. This is especially important for the radiology sector as the current workforce shortages combined with the relatively small size of MidCentral District means collaboration is more of an imperative to achieve the vision and realise the associated health outcomes.

This strategy will be implemented over the next three years in a staged approach. The identified quick wins will be implemented as soon as is practical with the development of a funding context developed and implemented in an iterative process involving key stakeholders.

2. DEFINING PRIMARY REFERRED RADIOLOGY

In MidCentral District over $40 million was spent on referred services in 2003/2004 (excluding general medical services (GMS). As shown in the diagram below, the total spend on community referred radiology was $1.5 million or 4% of the total referred services expenditure.

Referred Services Spend - 2003-2004



The procedures available for GP referral are:

- conventional "plain film" X-ray
- diagnostic non maternity ultrasound
- fluoroscopy
- diagnostic mammography
- nuclear medicine.

Issues in the Current Environment

The current systems and processes for the provision of primary referred radiology have a number of issues that will be addressed by this strategy.

Diagnostics versus Elective Services

Laboratory tests and radiology procedures are two services available to be ordered by GPs to enhance their ability to make a diagnosis. Both services are funded by the MidCentral DHB as part of the overall funding for referred.

The following table compares aspects of the current environment for radiology, laboratory and elective services.

	Radiology	Laboratory	Elective Service
Prioritisation	-None for plain film -Wait lists for other procedures	None	Wait lists
Cost to patient	Free or privately purchased	Free	Free or privately purchased
Rationing System	Wait lists	None	Wait lists
Privately available	Yes	Not required	Yes
Service delivery	Quicker in private	On demand	Quicker in private

Wait Lists

A key aspect of elective services, and the current provision of radiology, is the use of wait lists to ration and prioritise services. Wait list systems increase patient risk and potentially increase severity of conditions when patients are treated.

The following table documents the wait times at MidCentral Health for all radiology procedures apart from plain film which is provided on demand.

Procedure	**No.**	**Time** weeks	**No.**	**Time** weeks	**No.**	**Time** weeks
	30 Sept 2003		31 Jan 2004		31 Jun 2004	
Barium Meals	42	16	17	5	6	1
Barium Enemas	75	24	62	8	20	4
IVU	5	4	1	3	10	2
Digital Subtraction Angiography	20	2	15	3	24	4
Ultrasound General	237	12-14	282	12-14	521	24
Mammography Symptomatic	14	2-3	2	2-3	10	4
Mammography At Risk	38	4-6	24	12	11	6

Urgent Radiology

Until recently, if a GP required an urgent radiology procedure they had two options:

1. If the patient affordability is not an issue, the GP can refer them privately
2. If the patient affordability is an issue, the GP can send them to the MidCentral Health Emergency Department (ED).

With option one, patient affordability allows the GP to refer privately though whether this appropriate for a diagnostic procedure is a moot point. To contrast this, **all** GP requested laboratory tests are performed within 24 hours at no patient cost.

Option two is not a good use of health resources as the Emergency Department should not be used for non emergency referrals.

The situation has been remedied in part by the recent re-introduction of an urgent radiology facility within MidCentral Health.

Service Difference by Area

Throughout the region it was notable that the services offered and the processes used differed resulting in varying outcomes for GP and patient. The following table documents the differences observed:

Area	Manawatu	Tararua	Levin/Otaki
X-ray	• Plain film on demand, others wait listed • On demand in private	• Plain film on demand • Others wait listed at PN hosp.	• Plain film on demand, others wait listed • On demand in private
Ultrasound	• Wait list 24+ wks • On demand in private	• 2-4 days	• Wait list 24+ wks • On demand private
Reporting	• 8-10 days • 1-2 days private	• 1-2 days	• 10-12 days
Access Issues	• Ability to pay can result in faster service in private	• No variation	• Ability to pay can result in faster service in private
GP satisfaction[1]	• Generally dissatisfied • Reporting time a major negative • Lack of ability to access urgent service directly	• Generally very satisfied	• Generally very dissatisfied • Reporting time a major negative

Acute Radiology

MidCentral Health has a requirement to provide a 24x7 acute radiology service and in order to do this effectively requires a critical mass of staff. The current shortages in a number of key areas in radiology have put pressure on the radiology department to maintain its rosters without being detrimental to staff. These staff shortages have also had an effect on the service levels able to be delivered.

There is a concern that the shifting of volumes and/or revenue without altering the current environment would result in further difficulties around the ability to provide the required 24x7 services. Any option, in order to be feasible, needs to ensure that MidCentral Health maintains the ability to provide an effective 24x7 acute radiology service.

[1] Based on anecdotal feedback received

Workforce Issues

The current workforce shortages in radiology are well known and are affecting many radiology providers throughout New Zealand as well as internationally. These staff shortages have an effect on the service levels able to be delivered for primary referrals.

Currently MidCentral Health and Broadway Radiology actively collaborate in the recruitment of radiology staff as well as having some staff work in public and private capacities. These measures have had some effect on alleviating the workforce issue though the core issues remain.

It is a strategic planning assumption that collaboration between providers is essential to achieve the service levels required across the district.

Technology

The move to digital radiology and the use of Picture Archiving Communication Systems (PACS) will fundamentally change the way radiology processes are configured. Images captured or converted to digital files can be sent electronically to where they can be reported without any loss of quality.

Soon, the majority of, if not all, radiology will be in a digital format. The world has moved quickly to utilise digital technology, such as CD-ROM and DVD and the benefits this technology offers the radiology industry will soon see it as a standard feature.

It is important then to ensure our investment decisions today incorporate the future trends to ensure the investment is for short term and long term benefit.

MidCentral DHB is currently involved in a regional project to implement a PACS solution. Hawke's Bay DHB, which was part of the project, has recently elected to implement its own PACS solution.

Non electronic Processes

The radiology referrals process and reporting of results to GPs by MidCentral Health remain paper based though two projects have commenced to make these processes electronic. The use of paper impacts on the potential efficiency of the service and creates more work for GPs and their practice staff. Currently, once a report is verified it must be printed and then posted adding at least a one day delay. Ideally once a report has been verified the report should be made available to the requestor. It is understood that the projects to look at electronic referrals and reporting have both advanced significantly.

Funding of Procedures

The price:volume schedule[2] for primary referred radiology with MidCentral Health was set up funded on a Relative Value Unit (RVU) basis. As the prices have not been altered for a number of years it is now purchased in the price:volume schedule as a number of procedures. This change has meant that the same amount of revenue is earned for a minor plain film procedure, a barium enema or an ultrasound. The effect of this is to make plain film procedures appear as profitable and more complex procedures, such as nuclear medicine, as unprofitable.

In addition the time and resource requirements for each procedure are different and these need to be factored into any process assessing changes within MidCentral Health. For example removing 50% of the primary referred volumes may only remove 25% of the resource and time required.

Computerised Tomography (CT) and Magnetic Resonance Imaging (MRI)

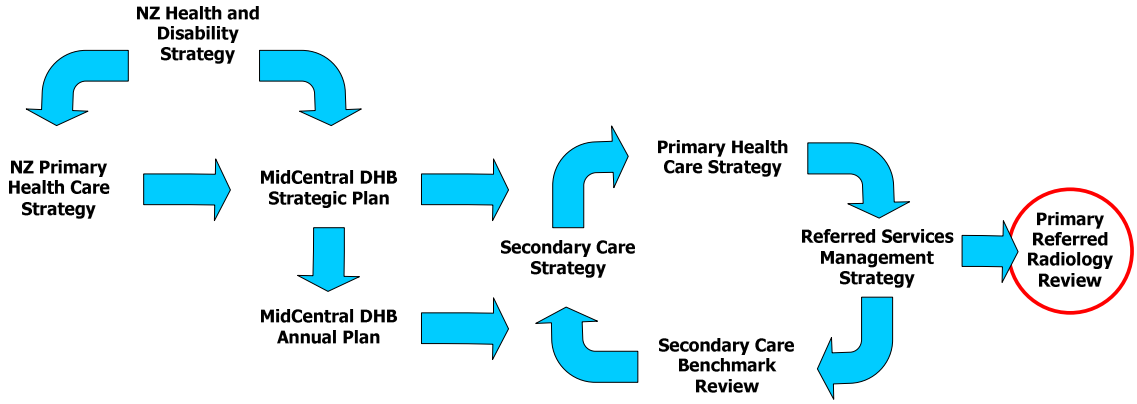
Both CT and MRI procedures are currently not available through primary referral and must be ordered by a specialist. There is potential to decrease the number of First Specialist Assessments required if GPs can order CT or MRI procedures. Access to these procedures would be made available in conjunction with strict clinical guidelines and specialist input.

[2] The price:volume schedule is the contractual method for purchasing secondary care services

3. THE STRATEGY IN CONTEXT

> A strong primary health care system is central to improving the health of New Zealanders and, in particular, tackling inequalities in health.
>
> **New Zealand Primary Health Care Strategy**

Taking its lead from the New Zealand Primary Health Care Strategy, the MidCentral District Health Board developed a primary health care strategy and referred services management strategy to enable the MidCentral district to work towards achieving a strong primary health care system.



This Referred Services Management (RSM) Strategy has been developed to contribute to one of the MidCentral six key strategic goals: effective and efficient healthcare services. The referred services vision is in line with, and supports, the vision of MidCentral's Primary Health Care Strategy. It emphasises collaboration as key to successfully meet our goal of maximising health gains from referred services expenditure.

The directions for achieving the vision of the RSM Strategy are:

1. Establish a clinical governance quality council (CGQC)
2. Take a partnership approach to Referred Services Management
3. Focus on quality and removing inequalities
4. Continuously improve quality using quality information
5. **Improve access to primary radiology.**

Radiology is a key aspect of the referred services area providing GPs with the ability to diagnose and treat patients. It can also have a significant effect on referrals and wait lists in secondary services.

4. THE PRIMARY REFERRED RADIOLOGY STRATEGY

The Primary Referred Radiology Strategy expresses the Board's commitment to providing quality diagnostic services for General Practitioners in MidCentral District. The **vision** of the strategy is that:

> *Primary referred radiology will provide GPs within the MidCentral district with a quality and timely service to assist their ability to diagnose and treat patients.*

The strategy aims to fulfil the following **principle**:

> *Diagnostic procedures should be provided in a manner to facilitate the ability of GPs to diagnose and treat patients in an efficient and effective manner.*

The table below shows in high level terms some of the **key differences** between the existing arrangements and those of the future vision:

Old		New
Single provider environment	➢	Multiple provider environment
Information delays	➢	Timely information
Radiology separate from referred service management processes	➢	Radiology incorporated in referred service management processes
Referral patterns not monitored	➢	Analysis and feedback of referral patterns
No primary referred CT access	➢	CT available within clinical guidelines

Strategic Planning Assumptions

In order to advance the review process to produce a strategy, a number of core strategic planning assumptions were made.

1. It is a fundamental consideration that primary referred radiology must be available in a timely and efficient manner.
2. Given the current and projected workforce issues, collaboration between providers is seen as essential to achieve the service levels required across the District.
3. Sending all primary referred radiology volumes to a single provider will not provide the level of servicing required.
4. The ability for MidCentral Health to provide an effective 24x7 service is partly dependent on community referred radiology volumes.
5. In line with Ministry of Health guidelines, any new funding will be applied to new services and/or initiatives.
6. The application of technology offers considerable potential to improve service delivery though technology alone will not resolve the current issues.

Key Directions

The key directions to achieve the vision are to:

1 Create a funding context consistent with MidCentral's Primary Health Care Strategy to provide timely and efficient services for primary referred radiology. In particular:

- 1.1 Establish a district wide primary referred radiology service level specification
- 1.2 Provide funding for local Primary Health Care Teams

2 Incorporate primary referred radiology within the current referred services management structure.

These directions are discussed in the following sections.

1. Funding Context

Models of primary referred radiology in other districts were analysed as part of the review process (see Appendix 2). All these models had aspects that could be incorporated or developed to meet the requirements of the MidCentral environment, but no model was clearly identified as the option most appropriate.

The funding context will be created through policy and contractual arrangements. It will create an environment where the provision of funding for primary referred radiology will:

- Set service level criteria and expectations
- Encourage collaboration between stakeholders
- Ensure rewards and incentives are aligned with the outcomes sought
- Ensure quality and timely information
- Allow local community and primary health care team involvement in radiology service decisions.

The funding context will developed and implemented in an iterative process involving key stakeholders.

1.1 Establish a district wide primary referred radiology service level specification

One of the key outcomes identified is that all people in MidCentral District should be able to access a high quality primary referred radiology service no matter where they live. To facilitate this, a district wide radiology service level specification based on current national models will be established. A draft specification can be found in Appendix 3.

The service level specification will be used to set expected service level provision as well as providing a basis for a monitoring framework. This will be implemented as part of incorporating the radiology information within the current and future referred services management processes.

Key areas the service level specification will detail are:

- An urgent radiology facility
- Non urgent radiology procedures
- Service objectives
- Access criteria
- Exclusions
- Wait list processes
- Quality requirements
- Payment and reporting requirements.

1.2 Funding for Local Primary Health Care Teams

In support of MidCentral's the primary health care strategy and the move to establish and develop Primary Health Organisations and primary health care teams, it is proposed to develop a funding model that allows for the provision of primary referred radiology services to be decided locally. This will enable radiology services to be provided to meet local needs. Initially this will be limited to plain film and ultrasound services in the Tararua, Horowhenua and Manawatu districts.

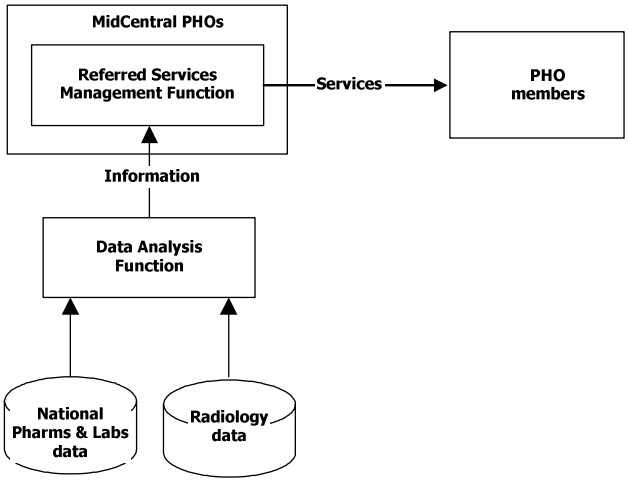
2. Incorporate primary referred radiology within the current referred services management structure

Traditionally referred services management has focussed on pharmaceutical and laboratory expenditure. This has meant the referral patterns and other information relating to primary referred radiology has not been available. Such information will be needed to monitor the provision of services against the district wide radiology service level specification to ensure the best health outcomes possible are achieved for the approximate $1.5 million expenditure.

Inclusion of radiology within referred services management will provide a good method for activities such as:

- Dissemination of national and local radiology guidelines
- Providing analysis on referral patterns
- Continuing medical education (CME) opportunities
- Advances in electronic decision support
- Information dissemination

The following diagram displays the proposed process for incorporating feedback on referred services utilisation to GPs and PHOs as part of the rollout of the referred services management strategy.

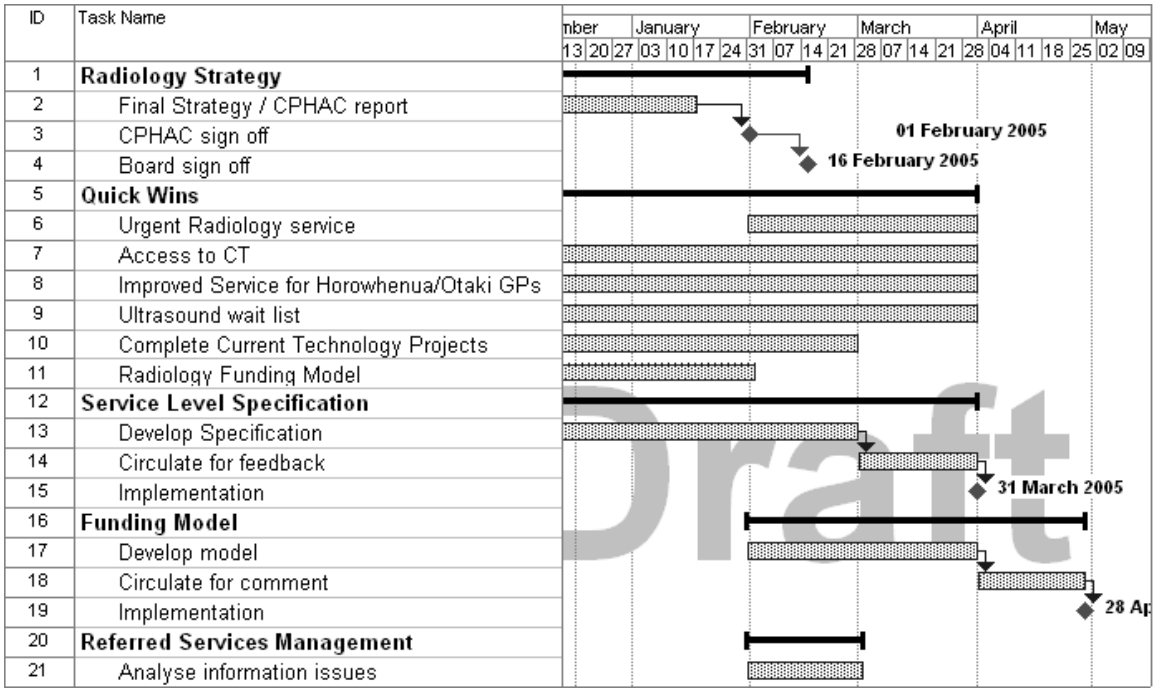


5. IMPLEMENTING THE STRATEGY

Implementing the primary referred radiology strategy will occur over the next two to three years. Considerable effort is required in the initial six months to implement the proposed directions and address the issues identified. To ensure the implementation is smooth, the Board needs to ensure that:

- The appropriate level of urgency is maintained during the implementation process
- The identified quick wins are implemented
- A collaborative approach with all providers is maintained
- A stepwise approach to implementation involving key stakeholders is taken.

The following draft high level Gantt chart details the logical steps that need to be taken to commence implementation and this will be finalised as other projects and processes are incorporated into the planning process.



Quick Wins

The following quick wins have been identified as part of the project. Each area will be developed into a stand alone business case.

Urgent Radiology Service

An urgent radiology facility will be created and will be managed in the primary health care setting. The service level specification for this will be incorporated in the district wide primary referred radiology specification. It is anticipated that the service would be funded as an interim measure and would be reduced as service levels improved over time.

GP Ability to refer to CT

GP ability to order CT has the potential to reduce the current growing wait lists, in particular for Neurology First Specialist Assessments (FSA). In consultation with the appropriate specialists within MidCentral Health and the development of clinical guidelines, referrals for CT scans will be made available.

Improved Service for Horowhenua/Otaki GPs

A service change will be developed with the goal of improving the reporting times in Horowhenua and Otaki. This will be developed in conjunction with MidCentral Health.

Ultrasound Wait List

The current wait list for community referred ultrasound has been recognised as a major concern. A business case will be developed to ascertain the best method for reducing this wait list in the short term.

Complete Current Technology Projects

The projects delivering electronic referrals and electronic provision of reports will provide improvements within the current system in terms of speed and efficiency. Resources will be applied to complete these projects and realise the benefits that were identified.

Radiology Funding Model

The current process of funding primary referred radiology based on procedures performed is clouding the viability of individual radiology procedures. This model will be reviewed and incorporated in the 2005/2006 price:volume schedule.

Appendix 1 - Benchmarking MidCentral Health

In October 2002, Dr Fred Jensen the Director of Radiology for the Royal Children's Hospital in Melbourne benchmarked MidCentral Health's diagnostic imaging. The following are the key finding and conclusions pertinent to this project.

Key Findings

- Just over 70,000 diagnostic x-rays performed in last 12 month period (2002) with a budget of only $5.3 million.
- An extremely cost efficient service when compared to Australia and one New Zealand hospital.
- This study identified an acute shortage of Radiologists (Medical Practitioners specialising in Diagnostic Radiology).
- Unduly heavy workloads carried by Radiologists. Workload should be ideally one Radiologist for 7,500 examinations but at least no greater than one Radiologist for 10,000 examinations. At MidCentral Health, the ratio is one Radiologist for every 17,500 examinations.
- The support staff in Diagnostic Imaging is adequate to meet present clinical needs.
- Ultrasound services at MidCentral Health require more qualified staff to answer the clinical needs (currently there is an 8 month waiting list for outpatient ultrasound services).
- Future role of Technology in Diagnostic Imaging will require MidCentral Health to meet the challenge of Digital Imaging.
- Digital Imaging will lead to the acquisition, display and transmission of diagnostic images by television (replaces x-ray films).
- An equipment replacement programme is detailed for Fluoroscopy, CT and Digital dictation.
- Quality control activities very good but the slow turnaround of reporting of inpatient plain film needs evaluating.
- Strategies suggested addressing the acute shortages of Radiologists.
- Professional development remains an expensive but essential requirement.
- Special relationship between CT services and Cancer Services of MidCentral Health needs to be acknowledged and strategies introduced to prevent a breakdown of this essential service.

Conclusions

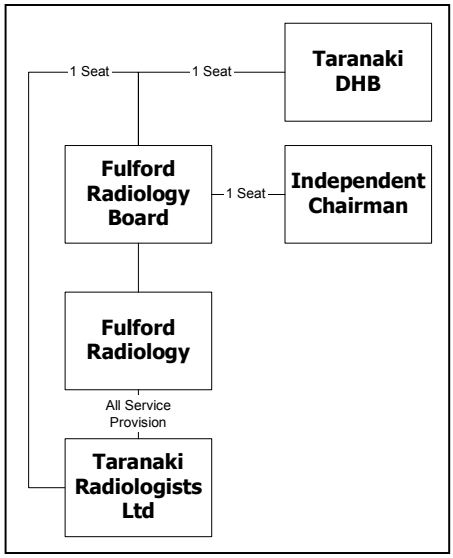
- The x-ray service is operating just within its allocated budget however if the service was fully staffed the budget would have to be increased.
- There is a serious shortage of Radiologists at MidCentral Health which will require both dollars and improved conditions of employment to attract more staff to meet the needs of Mid Central Health.
- The present x-ray film taking, reporting, dictation storage at MidCentral Health needs updating with new technology – PACS and digital dictation.
- The equipment replacement process is inefficient and needs streamlining and a five year replacement plan with appropriate budget.
- There is a need to consider the strategy of "privatising" the inpatient/outpatient plain film reporting. Such a move would make MidCentral Health a more financially attractive centre in which to work and would also reward the overworked Radiologists.
- The serious disadvantage of not having a radiology reporting system at Horowhenua Hospital would be easily solved by introducing a PACS. A small price to pay when the benefit to the doctors and their patients in Levin is considered.

Many aspects of Dr Jensen's report fall outside the scope of this project. His report findings and conclusions have been included as they indicate that, although there are issues to be addressed, MidCentral Health is performing relatively well given the 2002 workload.

Appendix 2 - Radiology Models

Fulford Radiology – a Joint Venture Approach

Set up in 1998 in response to concerns about the provision of radiology services, Fulford Radiology provides all hospital and primary referred radiology for the Taranaki DHB. Fulford Radiology offer services from five locations throughout the Taranaki district.



Fulford Radiology is a joint venture between the Taranaki DHB and Taranaki Radiologists Ltd and has grown into an organisation employing 54 FTEs, the majority on individual employment contracts. All Radiologists are attached to Taranaki Radiologist Ltd who is contracted by FulFord to provide all required radiology services.

GPs have full access to the majority of modalities with speciality procedures requiring specialist input.

Key points with the joint venture model:

- Commerce Commission clearance was required
- Radiologists are funded on a fee for service basis
- No waiting lists are used although routine procedures are not scheduled immediately (sometimes up to four weeks)
- Fulford invoice DHB on a monthly basis. The DHB currently has no ability to influence the referral rates although budget holding by GPs has been considered but has yet to be implemented
- Material capital purchasing decisions need to receive Taranaki DHB board ratification. Financing capital expenditure is the responsibility of Fulford Radiology
- Profits are split 50-50 between DHB and Taranaki Radiologists Ltd
- Inpatient procedures are hot reported – no reporting delays experienced
- All results are reported electronically. In the hospital they are made available via the intranet and GPs are sent results via the health intranet. Some GPs still receive faxed results though this is an automated service
- Anecdotal evidence suggests GPs are very satisfied with the service levels they receive.

WIPA – A Budget Holding Approach

In 2000 stakeholders in the Capital & Coast district accepted the need for action to address issues within the provision of radiology services. The key drivers for the stakeholders were:

- Health Funding Authority
  - Responding to a history of poor access
  - Elective services projects recognised that lack of access to diagnostics was driving inappropriate referrals
- Capital Coast Health
  - Reacting to the difficulty in providing contracted radiology volumes
- Radiologists
  - Acting on the desire to improve GP diagnostics by implementing guidelines
  - Offering spare capacity in private radiology practices.

It was agreed that a pilot would commence for WIPA to budget hold primary radiology. It was governed by the Radiology Oversight Committee comprising the funder, WIPA, hospital and private radiologists. The key tasks were to contract radiologists to provide services and the evaluation of the pilot.

Aims of the scheme:

- Provide GPs direct access to diagnostic imaging
- Assist FSA waiting list by initiating direct access to diagnostics
- Improve access for patients by locating services in the community
- Improve access to specialist services by ensuring referrals are for treatment and management
- Diagnosis and screening can be managed in primary care.

Key aspects of the system are:

- GPs can refer to both public and private radiology providers
- There is no patient charge for CSC holders and non CSC holders pay a part charge
- WIPA monitor GP usage and target the high users in the same manner as other referred services
- WIPA also monitor timeliness, quality standards and access to ensure overall system quality remains high
- Radiology oversight committee meets quarterly
- The National Radiology Referral Guidelines are the reference used to assist with identification of the most appropriate test. Specialist recommendations are sought for conditions that are outside the guidelines
- Private specialists can refer to the scheme if the patient has a community services card.

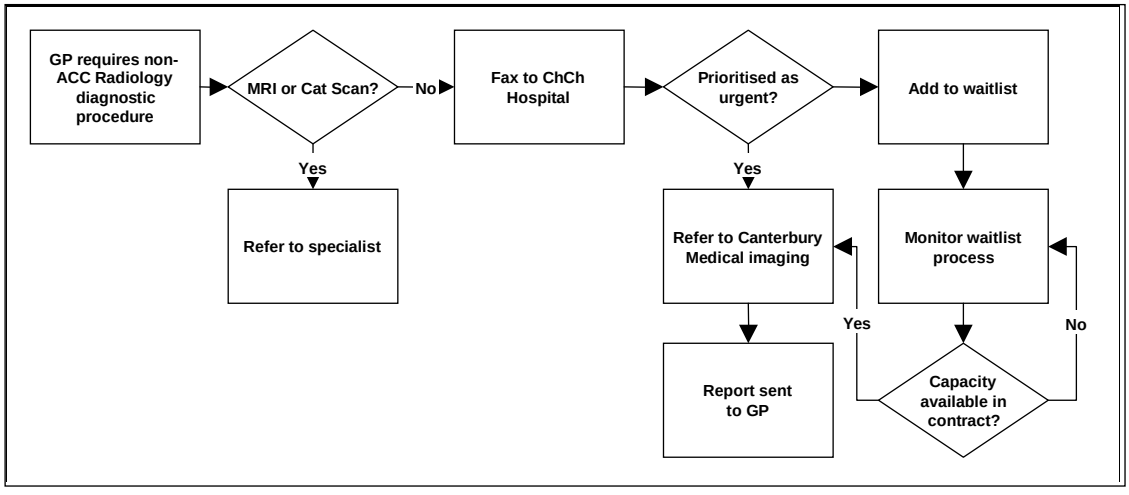
The current system continues to operate well with all stakeholders satisfied with the system.

The results were:

- Met goal of improved access
- Below budget (fewer referrals per consultation)
- On average 202 GPs use the scheme per month
- Improved access to diagnostic imaging for GPs
- Approximately 20,000 radiology investigations were funded under the primary Radiology Service in 2002/03
- Improved access to radiology services for patients
- Patients can choose where they have procedures done
- Reduced referrals to outpatient clinics and overall savings for District Health Board – 30% decrease in gynaecology and gastroenterology clinics achieved
- Waiting times down
- Service reached low income people
- Less patient travel time.

Canterbury – Referral to Hospital to Private

The Canterbury DHB has a process for primary referred radiology that utilises both aspects of the public and private systems. The head contract for primary referred radiology is held by Christchurch Hospital though the majority (if not all) primary referred radiology procedures are provided by private providers. The flowchart below documents the high level process.



Key points with this model:

- Christchurch Hospital maintain waiting lists for all primary referred radiology including plain film
- The contract with the private provider sets limits on the number of procedures available; eg, 30 Barium procedure per week, 50-60 plain film procedures per day
- GPs can indicate the priority of the referral but all referrals are graded by radiologists. Initially the ability to classify referrals as urgent was being over used
- The introduction of this process saw waiting lists and turnaround times decrease
- Teleradiology is used as a backup system if radiologist availability decreases in the private practice
- The ability for GPs to refer CT and MRI directly is being reviewed
- GPs are generally very satisfied with the process.

Christchurch Hospital has moved to a PACS environment and has indicated that private providers with primary referred radiology contracts will need to be PACS capable. Whilst this will mean a significant investment is required, it is expected the technology will increase the speed and efficiency in the system resulting in a better primary radiology service for GPs.

Appendix 3 – Draft Service Specification

The following draft specification is based on a previous Health Funding Authority specification. It is included to demonstrate the areas that will be included in a district wide specification.

Definition

Diagnostic imaging services provide images of bodily structure and function to aid diagnosis and treatment. The range of diagnostic services includes the following procedures:

- conventional "plain film" X-ray
- diagnostic non maternity ultrasound
- fluoroscopy
- diagnostic mammography
- nuclear medicine.

This service excludes computerised tomography (CT scanning) and magnetic resonance imaging (MRI) and community referred angiography services.

Service objectives

General

We wish to purchase community diagnostic imaging services that:

- provides patients with the best quality and most cost effective services based on established professional and quality management standards and codes of practice
- improves the health of Maori
- provides timely reporting of results to referrers
- provides specialist advice as required to ensure optimal patient management
- ensures patient and staff safety at all times.

Maori Health

The community referred radiology service will be delivered in a supportive manner that respects the dignity, rights, needs, abilities and cultural values of the client, and their family/whanau.

Service users

The client group comprises eligible people who have been referred by general practitioners, private medical specialists, midwives or other approved practitioners. An Occupational Health Nurse may refer specifically for asbestos screening.

Access

Entry and exit criteria

Access to the service will be managed in such a way that priority is based on acuteness of need and capacity to benefit

Time

You will specify and publish the usual hours of operation, and arrangements for after hours and urgent services, prior to the commencement of this agreement.

Urgent Diagnostic Imaging services to assist in diagnosis and treatment in a primary care setting shall be provided as soon as possible, and shall be available to:

- 90% of eligible people within 8 hours of an urgent referral; and
- 95% of eligible people within 12 hours of an urgent referral; and
- 99% of eligible people within 24 hours of an urgent referral.

Service components

Processes

Service Component	**Description**
Provision of diagnostic examinations	Preparation of patient, including provision/administration of any services, substances and supplies incidental to the procedure, and undertaking of the examination/procedure
Reporting of examinations and other procedures	Provision of a written report to the referring practitioner within one week unless required sooner on the findings/outcomes and other advice as appropriate
Clinical advice and education	Advice to referring practitioners, including advice on the appropriateness of examinations

Settings

We wish to purchase diagnostic imaging services conveniently located for the majority of residents. You will advise us of locations where services are usually provided by you, and the usual service hours. You will give us written notice if you propose to change these hours or locations.

Service linkages

Services are required to demonstrate effective links with the following services:

- primary care medical and nursing
- Maori primary and community care
- Pacific Peoples primary and community care
- private specialists
- midwifery
- secondary medical and surgical
- paediatric
- obstetric and gynaecology
- mental health
- accident and emergency
- intensive care units
- operating theatre and anaesthetics.

Exclusions

This service does not include:

1. Diagnostic imaging services provided for dental purposes, life insurance, superannuation or similar purposes, for visa or migration permits, for obtaining certificates of health or ascertaining a person's condition of health for employment purposes, and for other purposes excluded in the Social Security (Diagnostic Imaging Services) Regulations 1991
2. Diagnostic imaging services provided as part of another agreement with us such as Medical/Surgical Services and Breast Cancer Screening Services. Such services are covered under those agreements and are excluded from this agreement. (This includes diagnostic imaging services for individuals under treatment in (or referred by) Emergency Departments, in outpatient departments, or as inpatients)
3. Diagnostic imaging services for people eligible for direct funding under the Accident Insurance Act 1998
4. Community referred Magnetic Resonance Imaging
5. Community referred Angiography
6. Community referred Computerised Tomography

7. Ultrasound examinations in relation to maternity services performed pursuant to notices issued under Section 51 of the Health & Disabilities Act 1993, or which are the subject of a separate purchase agreement
8. Diagnostic imaging services provided to any individuals enrolled in services which are budget-holding for diagnostic imaging
9. Services provided without any substantial diagnostic justification.

Quality requirements

The service is required to comply with the General Contract Terms and Conditions and the Provider Quality Specifications. The following specific quality requirements also apply.

General

Community diagnostic imaging services should be delivered in accordance with professionally agreed codes of practice.

You will have documented protocols for the following:

- patient management including confidentiality and informed consent
- equipment management
- imaging procedures
- post-imaging follow-up and referral
- transfer and retention of patient records.

There shall be sufficient staff, with appropriate qualifications and training to conduct the diagnostic imaging service's work.

You will ensure that a copy of the results is made available to the referring medical practitioner within a maximum of one week after providing a diagnostic imaging service. In urgent cases a verbal report may be required. In such situations, results will be made available to the referring medical practitioner within a maximum of twenty four hours after providing a diagnostic imaging service.

Electronic reporting of results may be used also.

The copy of the report, films, plates, other diagnostic records, and/or where appropriate records of their delivery, shall be available for inspection by the accreditation body for assessment purposes.

Access

- Waiting times are maintained at an agreed rate.
- Access criteria are defined in co-operation with referrers, and in line with priority access criteria. Criteria and waiting times will be communicated clearly to referrers each 6 months.

- A booking system will be used for all referrals.

Acceptability

- Acceptability to Maori should be included in the review conducted by the provider in conjunction with Maori.
- Support services to Maori requiring community referred radiology services should be proactively offered and available.

Safety and Efficiency

- All equipment is appropriately licensed.
- The service has the expertise and facilities to cope with acute anaphylactoid episodes.
- Interpretation of results other than nuclear medicine scans must be undertaken by a Radiologist recognised by or registered with the Royal Australasian College of Radiologists.
- The results from any non urgent diagnostic image shall be made available to the referring medical practitioner within one week of the image being.
- The results from any urgent diagnostic image shall be made available to the referring medical practitioner within 24 hours of the image being taken.

Facilities

- You shall provide services from safe, well-designed, equipped and maintained premises which meet the legal and operational requirements which currently apply as set out in appropriate legislation
- Equipment used shall be licensed, safe and maintained to comply with safety and use standards.
- You will have in place a regular programme of equipment safety inspections. This must ensure that equipment is ready for use when required. Your equipment must be adequate to fulfil the requirements of this agreement.

Purchase units

The following purchase units apply to this service.

PU Code	PU Description	PU Measure
CS01	Community Radiology	Procedure

Reporting requirements

The following table indicates the reporting units and the service specific performance indicators you will provide.

PU Code	Description	Measure	Reporting Requirements	
			Frequency	**Reporting Unit**
CS01	Community Radiology	Procedure	Monthly	**Number of procedures** • Total • by type • by ethnicity • by type **Number of clients** • Total • by type • by ethnicity **Average waiting time** • by type **Average reporting time** by type

Quality measures

Specific quality measures for radiology services will be included among the quality measures reported. These are the waiting times for each procedure, and the average reporting time for each procedure.

These measures are defined as:

Quality Measure	Definition
Waiting time for a procedure	The average time from the date of referral to the date of procedure, for each procedure
Average reporting time	The average time from the date of procedure to the date of reporting to the referrer, for each procedure

Service planning information

You will collect the following information for all patients.

- Patient name
- Patient NHI
- Patient date of birth
- Patient gender
- Patient ethnicity
- Referring practitioner name
- Referring practitioner registration number
- Date of referral
- Date of procedure
- Type of procedure

- Site of procedure (ie lower limb, chest etc) as specified in the schedule
- Date report provided to referrer

Ethnicity will be collected and reported appropriately