

**Counties Manukau
District Health Board**

**Gastroenterology
Health Services Plan**

February 2008

1.0 Current Services

The CMDHB Gastroenterology service currently provides inpatient and outpatient consultation and endoscopic services for gastrointestinal, pancreatic and hepatobiliary diseases. Services are provided in a number of settings:

Inpatient Services

- Inpatient assessments
- Ward Consultation service
- Endoscopy and gastroenterology investigations and treatment

Outpatient Services

- Gastroenterology outpatient services at (Manukau SuperClinic (Module 4) and in the Medical Specialities Unit at Middlemore Hospital.
- An endoscopy service is provided in the Medical Specialties Unit at MMH and Manukau Surgery Centre. In total twenty endoscopy lists; two bronchoscopy lists; and three ERCP lists are undertaken per week at CMDHB. The service provides direct GP referral access to endoscopy services without prior gastroenterology outpatient consult.
- The current endoscopic service at MMH is co-located with the gastroenterology clinics and offices and facilitates junior medical staff undertaking a number of additional endoscopy lists under supervision.
- There are ten inpatient beds in Ward 6 Middlemore Hospital, including a three bedded close observation unit within the ward for patients with upper gastrointestinal bleeding.
- pH monitoring for gastric reflux has recently been introduced within the gastroenterology service.
- The Hepatitis service at CMDHB has strong links to the regional service provided by ADHB. Hepatitis is a major problem in CMDHB due to the local demography. Treatment with oral chemotherapy is supported by a Hepatitis C Clinical Nurse Specialist.

Service	Location	Who & Workforce	Volume Information (2006/07)	Service Linkages
Outpatients	Manukau SuperClinic Medical Specialities Unit MMH	SMO, RMO, and Nurse led clinics in Hepatitis C	New Patients - 900 Follow Up Patients - 3199 Genetics - 211	Clinics are carried out at MSC – Module 4 and in clinics co-located with the treatment suite at MMH. Receptionist, scheduling, call centre & support staff provided by MSC Receptionist staff at MMH provided from within the service at MMH Laboratory and Radiology services available at both Manukau & MMH Cultural Support Services

Day patients	Medical Specialities Unit MMH and MSC	SMO, RMO, Nurses, & Clerical	Discharges per Annum Bronchoscopies 251 Colonoscopies 1608 Gastroscopies 1194 ERCP (outpt) 44 Approximately 40% of total endoscopies and 70% of ERCPS are acute and are not included in the figures above.	Elective admissions for endoscopy as well as an acute service to the acute wards at MMH. Full range of endoscopic services available e.g. gastroscopy, colonoscopy, ERCP, enteroscopy etc. Strong links with radiology and laboratory services.
Inpatients	10 speciality inpatient beds on Ward 6 in the AMC Building Middlemore Hospital	SMO, RMO, Nurses, Social Worker, Pharmacist, Physio, OT & Clerical.	Discharges per Annum Approximately 730	Acute Admissions through EC & direct admissions via the procedural suite and outpatients. Full range of support services and sub speciality referral service available.
Hepatitis Service	Medical Specialities Unit MMH	SMO, RMO and CNS Hepatitis C	Volumes included in general outpatient volumes.	Strong links with regional service at ADHB. Supported by laboratory and pharmacy services. Would benefit from social work input.
PEG service	Hospital Wide	SMO & Gastroenterology Nurses	Inpatient consultation service	Strong links with the stroke service.

SWOT Analysis – Gastroenterology Services

<p>Strengths:</p> <ul style="list-style-type: none"> • Experienced staff • Flexibility • Patient Focused • Strong academic and research programme • Ambulatory focus • Gastroenterology research fellow • Developing regional endoscopy database • Ongoing five year scope replacement plan • Hepatitis C programme with CNS support 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Poor IT system (see development of regional database) • Activity levels have not kept pace with population growth resulting in increasing waiting times for endoscopy (particularly surveillance) • National workforce issues
<p>Opportunities:</p> <ul style="list-style-type: none"> • Potential to develop CNS role in infectious bowel disease • Developing a purpose built gastro outpatient unit at MSC supported by an inpatient facility at MMH linking acute procedures with the gastro ward • Opportunity to pilot colorectal screening service • Technological change 	<p>Threats:</p> <ul style="list-style-type: none"> • Inability to keep pace with increasing demand for endoscopy • Availability of emerging technologies • Current facilities not fit for purpose • Facilities to meet growth in demand for services • Workforce to meet demand especially medical and nursing • Workforce with the right set of skills. • High number of co-morbidities in patient population including diabetes, obesity and CVD

2.0 Key Issues

Growth in demand

The level of demand for endoscopy procedures across New Zealand, both diagnostic and therapeutic, exceeds supply. It is anticipated that the demand for both gastroscopy and colonoscopy procedures will continue to grow partly as a result of an increase in cancer above demographic growth and partly increased patient awareness and demand. There has been an increase in endoscopy volumes in the last year at CMDHB, however this was the first increase for five years and as a result the service has not kept up with population growth and this has resulted in an increased waiting list, particularly for surveillance patients.

Colorectal cancer is the second most common cause of cancer death in New Zealand with rates being among the highest in the world and annually about 2,000 New Zealanders are diagnosed with colorectal cancer. Guidelines have been developed for the surveillance and management of groups at increased risk of colorectal cancer, including those with a personal or family history of colorectal cancer. The service at CMDHB currently struggles to meet the demand for this type of surveillance.

There will be a significant impact on the demand for endoscopic services if a colorectal cancer screening programme were implemented and it is very likely that we will be undertaking general population based screening within the next five to ten years.

There has been an increase in therapeutic endoscopy with the removal of larger polyps endoscopically. With the introduction of MRCP the intervention rate for ERCP has increased. These

procedures are less invasive than surgery and the recovery time for the patient is considerably shorter, however these procedures are more labour intensive and take longer than a diagnostic procedure. The increase in therapeutic work will affect the throughput and productivity of the unit.

ERCP has changed significantly over the last five years from a largely diagnostic modality to a mainly therapeutic modality. The majority of procedures are now interventional (stone extraction, stents etc). At present CMDHB is performing an average of 30 ERCPs per month and over 70% of these patients are acute inpatients admitted under General Surgeons.

Facilities to meet demand

The current facilities are not a good fit for purpose and are due to be demolished within the next five years. The strategic vision for CMDHB is to have the majority of ambulatory care located on the Manukau Campus site. The gastroenterology service supports this vision and plans to evolve the outpatients service at Manukau Campus is between 60% and 70% of the endoscopic workload is ambulatory. Locating an endoscopy suite within an outpatient module to create a gastroenterology 'pod' will support an ambulatory model of care, and also supports the preferred model of care within gastroenterology with specialist gastroenterology nurses providing pre-procedure and post-procedure (recovery) care.

There will always be a requirement for an acute endoscopic facility within the acute facilities at MMH for high risk procedures and inpatient procedures. Ideally this acute endoscopic facility would be within the gastroenterology ward, with dedicated recovery space and located proximal to surgical wards and radiology.

Patient Population

The population of South Auckland is projected to grow at a rate of 8% between 2006 and 2011 against a national growth rate of 2%. About 12% of NZ resident Maaori and 25% of NZ resident Pacific people live in CMDHB. A high percentage of Maaori and Pacific people live in deprived areas. The incident of Hepatitis C is higher in CMDHB than in most other areas of NZ. There are a high number of co-morbidities in the patient population, particularly diabetes and obesity.

Non-alcoholic fatty liver disease is likely to have an enormous impact in the next decade and CMDHB is likely to see more than elsewhere due to a background of high obesity levels in the population and a high incidence of non insulin dependent diabetes.

The number of patients with cirrhotic liver disease has increased over the last six years and with improvements in treatments these patients are surviving longer. These patients are currently followed up in secondary outpatient clinics and the increase in this patient population has had a significant impact on both the clinics and the gastroenterology inpatient ward.

Colorectal cancer is increasing at a rate higher than population growth, largely due to the ageing of the population. Colorectal cancer is the second most common cause of cancer death in New Zealand with the rates being among the highest in the world and annually about 2,000 New Zealanders are diagnosed with colorectal cancer.

With the introduction of antiviral treatment in Hepatitis B there has been a dramatic increase in the number of patients followed up by the liver service.

Workforce

The recently published report by the Colorectal Cancer Screening Advisory Group identifies significant shortages in endoscopists nationally (outside the major centres).

CMDHB supports the introduction of a Nurse Endoscopy Service at CMDHB together with an increase in the consultant workforce. This type of co-ordinated service, with medical staff managing therapeutic cases will have significant benefits to the people of CMDHB.

Technical Advances

There have been significant technological advances in gastroenterology over the last five years and this trend will continue into the future. Endoscopy has become more therapeutic over time with more sophisticated treatments being performed endoscopically. There is increased stenting and insertion of PEG tubes, an increase in therapeutic endoscopy (including the removal of larger polyps) and with the introduction of MRCP the rate for ERCP has increased. A range of new technologies have been introduced at CMDHB over recent years. Last year pH manometry and the pill capsule endoscopy system were added to the range of treatments available locally. pH manometry is used in the diagnosis of gastro oesophageal reflux and the pill capsule is an effective diagnostic tool for patients with obscure gastrointestinal bleeding that persists after initial negative endoscopic evaluation.

Other technologies on the horizon include single balloon enteroscopy and Endoscopic Ultrasound. Used to stage gastro-intestinal and lung cancers endoscopic ultrasound is the only modality that can define the depth of the lesion, thereby improving patient selection for surgery and patient outcomes.

There have also been significant advances in the medical treatment of patients with Hepatitis C and Hepatitis B with the introduction of antiviral treatment.

3.0 Trends and Future Directions

Gastroenterology will continue to be a growing field in medicine, primarily because it offers a less invasive forms of investigation and treatment. There will continue to be significant technological and therapeutic advances over time. In the short term, technological advances will come in the form of equipment and material design and in the field of information technology.

Demand for colonoscopy will increase dramatically with the implementation of colorectal cancer screening services. There is an epidemic of liver disease in South Auckland, particularly Hepatitis and non-alcoholic fatty liver disease. It is expected that this population group will continue to grow particularly as treatments improve and long term survival increases. 25% of the liver transplants undertaken annually are on CMDHB patients. These patients are followed up locally post transplant and as survival and morbidity rates improve, the number of patients being followed up will increase.

As the service grows more CMDHB will provide a wider range of local investigations and treatments and will take a leading role with some treatments across the region.

Changes in the workforce over time may also be significant. The role of the nurse endoscopist is well established in the UK, Canada and North America; however it has yet to be established in New Zealand.

The strategic vision for the gastroenterology service at CMDHB is to have the majority of elective outpatient endoscopies performed at a purpose built Gastroenterology Facility at Manukau Campus combining both the outpatient clinic facilities with the outpatient procedural facilities, with specialist gastroenterology nurses providing pre-procedure and post-procedure (recovery) care.

The service will provide a full range of therapies and will be supported by an acute endoscopic facility within the acute facilities at MMH for high risk procedures and procedures on acute inpatients. This acute endoscopic facility will be linked to the gastroenterology ward, with dedicated recovery space and will be close to ICU and within easy reach of radiology.

Implementation of Colorectal Cancer screening is likely to occur within the next 5-10 years and with this may come the impetus for the development of a Nurse Endoscopist role.

The Gastroenterology service at CMDHB according to the NSW Delineation Model is a Level 6 service although it does not currently have access to a Clinical Nurse Consultant, or strong anaesthetic support. There is a medical registrar on site 24 hours; there is a Gastroenterology registrar and a Gastroenterologist on call 24 hours. CMDHB Gastroenterology Department plays a leading role in teaching and research within New Zealand.

The Gastroenterology service at CMDHB will ultimately provide most therapies locally; however there will continue to be strong links with other gastroenterology services across the Auckland region. The CMDHB liver service has historically had close links with the regional service at ADHB and it is likely that this will continue to be a regional service. The development of a regional endoscopy database will also serve to strengthen these regional bonds.

4.0 Key Directions

- ✓ *Development of a Gastroenterology suite at Manukau Campus for outpatient consultation, elective endoscopy and other investigations.*
- ✓ *Development of Nurse Endoscopists to improve the ability of the service to respond to growth in demand.*
- ✓ *Implementation of Colorectal screening programme for early detection and treatment of colorectal cancer.*
- ✓ *Introduction of new gastroenterology investigations and treatment modalities across both Middlemore Hospital and Manukau sites.*