

**Counties Manukau
District Health Board**

**Elective Services
Health Services Plan**

February 2008

Executive Summary

The Elective Services Continuum of Care development builds on earlier work completed in the Clinical Services Plan (CSP v2.5). The continuum takes a 'whole system' view of existing elective surgical service configuration and gaps before identifying future models of care within surgical services within Counties Manukau.

Elective Services are defined as "A non acute non emergency service designed to improve a problematic health situation of an individual". Elective Services provide planned care, across a range of settings that include outpatient clinics, ambulatory daystay surgery and inpatient surgery at both the Middlemore and Manukau campuses. They are predominantly, but not exclusively, surgical based services. The Ministry of Health strategy 'Reduced Waiting times for Public Hospital Elective Services' is the basis for the provision of Elective Services within New Zealand.

The Elective Services planning process has involved developing models of care across the care continuum with directions for moving care to increasingly ambulatory models; ensuring appropriate service co-locations, synergies and links with the community and primary care are identified; reviewing and determining the elective facilities required to deliver care for services in the future and identifying key workforce requirements and issues for the current and future.

Counties Manukau is not exempt from the impact that international and national trends are having on elective service delivery nor from the need to tailor services to match the increasing and aging population of a ethnically diverse nature. The blurring of traditional boundaries between secondary and tertiary services is likely to continue and impact upon secondary care service development and delivery. Elective Service provision has a high political profile and is of particular interest to politicians, the Ministry of Health, Board of CMDHB, local community and health service providers.

Funder intent is that in the absence of significant changes in funding and access over the period of the Health Services Plan, the current level of investment in elective services - relative to demographic changes and population growth, will continue.

The Elective Services Continuums of Care demonstrate that a wide range of services and procedures are offered within each specialty, and that whilst there is a predominance of service delivery in hospital or ambulatory care settings, increasingly models of care will have elements occurring within community settings. This shift to ambulatory focussed care is continuing at the same time as a reduction in the boundary between primary and secondary care.

Key directions over the next 20 years include planning for ongoing incremental change, particularly arising out of technological developments; changes in delivery systems driven by both workforce availability and ongoing quality improvement and focus on patient safety; and better integration between primary and secondary care services.

Health promotion, illness prevention and early detection screening programmes are important elements in maximising health outcomes. Greater uptake of available programmes and introduction of new options will have value for the community; new programmes will be developed over the life of this continuum. While seldom delivering these programmes, specialist Surgical Services have a role to play in informing their development. Patients may come under the care of an elective service when it is recognised that they have health needs that have outgrown those programmes and need assessment for possible specialist surgical intervention.

General Practitioners have a role in the delivery of Elective Services. Many GP's have the capability and capacity to manage an array of conditions within their practice environment and in doing so retain those patients in primary care and to only refer those with whom assistance is required. In addition, with the medicalisation of treatment, for some conditions for which surgical intervention was previously a first line treatment, primary care is further able to increase the range of conditions managed without secondary care support. The decision to refer to the secondary sector for assessment is often around the need for specialist support or opinion, access to diagnostics or higher level treatments not within the scope of primary care and the need for surgical intervention.

International, national and local trends lead us to expect an increasingly older, sicker and more chronically ill population. Access to some clinical diagnostics is limited to referral by specialists only. Providing GP's better access to some of these investigations will reduce access delays for patients, reduce frustration levels in primary care around the current processes, and allow more effective use of the specialist surgical rather than fulfilling a gate keeping role. Integral to introducing direct access will be the development and introduction of access criteria and auditing of use for clinical compliance.

CMDHB is committed to continuing the split location between Middlemore and Manukau where services can be efficiently and effectively configured across both locations. With the increasing focus on improving access to elective surgery this separation allows the greatest opportunity for surgical scheduling to meet contracted volumes. There will be continuing development of clinical support services on the Manukau site to support the delivery of robust elective services at the Manukau Surgery Centre.

Service collocations and synergies are crucial to providing care in a more efficient and cost effective manner. Care coordination can be improved by the greater development and use of multi-speciality multidisciplinary teams to work collaboratively in patient assessments and treatment planning. Ongoing review of service configuration at the Manukau Campus against the New South Wales Role Delineation Model will support ongoing service development and delivery to the increasing number of patients with multiple comorbidities.

Technology plays a major role in the provision of elective services; it has been and will continue to be one of the drivers encouraging the shift of care to a more ambulatory-focused approach. The evolution of new technologies, new models of care, and new best practice developments will bring about incremental changes that will sum to significant changes in the way Elective Services are delivered in Counties Manukau. Changes in technology have driven surgical practice changes; that whilst making surgical operations longer have decreased the length of post-operative hospital stay, and allowed quicker recovery times in returning-to-life activities.

A number of gaps in access to services have been identified through the modelling process and need to be worked through to assess future potential implications and management options. Addressing them will improve quality, consistency and access to care. These are often opportunities around Nurse Specialists and integration with community based health professionals. Additionally anomalies in funding non-surgical interventions needs to be reviewed and transitional beds funded.

Links to and integration with primary care can be enhanced. The development of Primary and Community Health Care centres will allow opportunity to develop closer working relationships between primary and secondary clinicians with the benefit of patients being able to access more care closer to home.

The nature of the health workforce is changing. There is a worldwide shortage of doctors that is not expected to improve in the future so we need to find alternative ways to provide care. All services have identified areas of work that can be appropriately delegated to other health profession groups. Nurse-led initiatives are seen as a model to move CMDHB forward with introduction of such a model dependant upon the development or recruitment of suitably skilled nursing staff and the recruitment of other staff able to backfill their nursing positions. Likewise while graduated movement to specialists increasingly working in community based settings will happen, a wider range of procedures may be undertaken by GP's with a Special Interest (GPwSI).

Future facility requirements for undertaking Elective Surgery involve taking into account many factors. While further reductions in lengths of stay can be expected during the life of the Health Services Plan, gains are unlikely to be as significant as some of the major changes that have been introduced in the past. Many the high volume procedures have already moved to daycase service delivery. Intervention rates, technology changes and availability of support services are other factors that will affect facility requirements. Ongoing development of care pathways and new models of care that continue the reduction in hospital bed requirements relative to population growth is seen to be a strong direction for the future.

1.0 Introduction

The Elective Services Continuum of Care development builds on earlier work completed in the Clinical Services Plan (CSP v2.5). The continuum takes a 'whole system' view of existing elective surgical service configuration and gaps before identifying future models of care within surgical services within Counties Manukau.

Elective services are defined as "A non acute non emergency service designed to improve a problematic health situation of an individual"¹. Elective Services provide planned care, as opposed to acute care, which is unplanned and arises from an unexpected need for care. Elective Services are predominately, but not exclusively, surgical based services. Whilst the major focus of discussion in this paper centres on surgical services the principles around outpatient specialist assessment apply to all services, including medical and paediatric. The discussion on treatment provision; be it ambulatory or inpatient focused, concentrates on surgical services.

Elective surgical services provide multidisciplinary inpatient and ambulatory based care, which includes day patient and outpatient care, in a number of secondary and niche tertiary level specialities.

The following elective secondary services are provided by CMDHB clinicians within CMDHB facilities for both adult and paediatric patients:

- Orthopaedic including Orthopaedic oncology
- Plastic and Reconstructive Surgery including Burns
- Hand Surgery
- ORL
- Ophthalmology
- Maxillofacial including Dental

Elective services are provided by CMDHB clinicians within CMDHB facilities for adult patients in:

- General and Vascular Surgery
- Gynaecology

Ambulatory day surgery and outpatient services are provided in:

- Urology (ADHB clinicians at Manukau)

The Reconstructive Plastic Surgical Service at CMDHB is the recognised regional provider of elective services to the four northern regions DHB's, and includes the National Burn Service. Tertiary orthopaedic spinal surgical services are provided for most DHB's in North Island and orthopaedic oncology to patients from across New Zealand.

In March 2000 the Ministry of Health released a strategy paper entitled "Reduced Waiting Times for Public Hospital Elective Services"². This paper led to the replacement of "waiting lists" and the implementation of a "booking systems" approach to managing people waiting for elective services. This paper, with subsequent changes, remains the basis and for the provision of elective services within New Zealand.

In this paper the Government prescribed the three key principles:

- Clarity - where patients know whether or not they will receive publicly funded services
- Timeliness – where services can be delivered within the available capacity, patients receive them within a timely manner
- Fairness – ensuring that the resources available are directed to those most in need.

¹ Draft Reference Manual for Managing Elective Services 2002 pg 9

² Reduced Waiting Times for Public Hospital Elective Services, Ministry of Health, March 2000

Arising from this paper were a number of performance indicators known as Elective Service Patient Indicators (ESPI's) that are used to measure DHB performance – particularly around compliance with the principles of clarity and timeliness.

These ESPI's assess how well patient flow through the system is managed, including whether:

- All patients referred to hospital by their GP who can be seen within the available resources, are seen for a first specialist assessment within six months.
- All patients assigned a priority by a specialist are managed in accordance with that priority (relative to the priorities assigned to other patients managed by that service).
- All patients given a commitment that they will receive treatment receive that treatment within six months.
- All elective services patients have a plan of care and if not treated within six months are reviewed at a maximum of six monthly intervals until they receive treatment.

Although there was an anticipated 3-year period for implementation of the objectives, national progress was slower than anticipated such that during the 05/06 year heavy emphasis was placed on DHB's by the Minister and the Ministry to meet the performance indicator requirements.

CMDHB has for a number of years had a commitment to improving the performance and delivery of care associated with Elective Services. CMDHB was the first DHB to achieve compliance with the performance indicator targets in 05/06, and has maintained compliance since that date. In the process considerable progress in improving the access of its residents to elective surgery has been made. For the first time CMDHB residents now have rates of publicly funded surgery similar to or higher than the New Zealand average. There has been a substantial increase in the number of procedures performed when compared with 10 years ago and the overall complexity of the surgical procedures has increased³.

The Continuum of Care for Elective Services is described within a general framework for Elective Services, then at the level of the individual subspecialties to ensure that all components across the care continuum have been considered. These continuums build on the current model of care and look forward 20 years to 2026.

2.0 Key Issues

- Technology has, and will continue to have, significant impacts on the provision of elective surgical services. Increasingly surgery is supported by improved diagnostic and imaging services that support higher rates of minimally-invasive surgery.
- Recognition that screening and early detection programmes are an integral component of the elective service Continuum of Care. Programmes affect the flow rate of patient referrals with patients being referred earlier for treatment – and hence reducing the severity of the illness and improve patients outcome's.
- A shift to promoting earlier interventions and referral from GPs where this will improve access to specialist services and reduce a patient's condition deteriorating to a state whereby more complex intervention is required or the patient is less able to cope with treatment.
- Advances in technology can increase the operating theatre time for some procedures but generally this technology shortens post-operative length of hospital stay, and post operative convalescence before returning to normal activities.
- The shift to ambulatory focused care is continuing with care provided in in a clinic or daystay environment, as opposed to an inpatient setting. Technology is assisting this shift, but having the right equipment, facilities and personnel are also important elements in making what was once inpatient surgery now day patient or clinic based.
- An expanding range of ambulatory, short-stay options and changes in internal hospital processes is reducing the Average Length of Stay (LOS) in hospitals thus resulting in lower rates of surgical beds required by a population. This lower LOS and rising acuity puts pressure on the resources required to service hospital beddays and increases the pressure on Nursing Hours per Patient

³ Lindsay G. Counties Manukau District Health Board key procedure progress 1996/97 – 2005/06. CMDHB April 2007 draft

Day (NHPPD) required as hospitalised patients have higher acuity, and a higher proportion of care is associated with the first or last day of hospitalisation.

- Due to technological advances, elective surgery is increasingly being offered to patients who previously would have been considered unsuitable for treatment. This is occurring within CMDHB in the presence of an older, sicker and more chronically ill population.
- Increasing need for a multidisciplinary team approach incorporating expanded nursing, allied health and general practitioner specialist roles to address both increasing patient complexity and the workforce change.
- Increasing need for complex discharge planning and community-based care to drive reduced hospital length of stay and to support management of ongoing care needs within community settings.
- Improved integration of providers across settings and components of care within the full continuum of care.
- Inclusive, culturally appropriate care being targeted to groups with poorer health status and to promote lifestyle changes appropriate to different cultures, and individual health needs.
- Ongoing development of evidence based practice, clinical guidelines, audit and quality assurance programmes that are supported by enhanced clinical information systems which allow improved access to data.
- Increases in complex case management for patients with high risk conditions, high risk patients or long term patients.

3.0 Trends and Future Directions

3.1 Increases in Service Demand

Counties Manukau has one of the fastest growing populations in New Zealand. While CMDHB remains one of the youngest populations in New Zealand, it has the largest number of relatively deprived adults and children, and is one of the fastest ageing DHB populations – particularly in the over 65 year age group which is expected to double by 2021. In 2006, Statistics NZ medium projections are that CMDHB had 40,790 residents over the age of 65 (9.2% of the population) but that by 2026 this would rise to 92,020 residents over the age of 65 (15.3% of the CMDHB population).

As the Counties Manukau population has high levels of socioeconomic deprivation, there are low levels of self-funding or health insurance within the population. This results in a higher requirement for CMDHB to provide the elective surgery to meet all personal health and disability needs when compared to other DHBs with less socioeconomic deprivation. This distorts any national comparison of Standardisation Discharge Rates (SDR) with other DHBs where a large number of patients access private surgery with these interventions not included in the NMDS which is used to derive SDRs.

Incremental movement of care delivery from secondary care to primary care delivery is increasing pressure on the primary care workforce. While review of the models of care shows this direction continuing, the comparatively low rate of GPs to population in Counties Manukau, and the higher number of transient GPs, will challenge this direction.

3.2 Diverse Ethnic Composition

CMDHB has the most ethnically diverse population of any DHB in New Zealand with Maaori constituting 76,100 (17.2%), Pacific 90,800 (20.5%), Asian 68,200 (15.4%) and others 207,300 (46.9%).

The combination of an aging population, low socioeconomic status and diverse ethnic population leads to a disproportionately higher need for health and disability services at CMDHB when compared to most other DHB's. In addition to having lower socioeconomic status; transport, language and cultural barriers create challenges for service delivery to Maaori, Pacific and Asian ethnic groups across the continuum of care. Strategies that recognise cultural differences, promote ease of access and integrate primary and secondary care are critical in achieving health gains for these populations.

In addition there are different rates of illness requiring elective services amongst different populations and this influences the referral and intervention rates at a condition level. Subspecialty interests within services need to be configured around needs of particular groups where this is significant.

"Publicly funded elective surgical procedure rates for ethnic groups in the 15+ age group in CMDHB have increased in the 10 year period from 1996/97. The rate of increase has been greatest in Asian and Pacific peoples; however in 2005/06, for the first time, the Maaori rate equalled the Other rate. The gap between Pacific peoples and Other has reduced over time. Asian rates have been consistently much lower than all other groups. The trends in children, aged 0-14 years, have been similar to that of the adult population."⁴

3.3 Increasing Secondary Care Service Development

Servicing a projected population of 442,400 in 2006, CMDHB is the second largest DHB in NZ. By 2026, CMDHB population is forecast to be 590,300. Specialist elective services within the Elective Services need to be provided within the Counties Manukau district at an upper secondary care level (Level 5 or 5/6 of the New South Wales Delineation Model) to ensure provision of strong local service delivery of culturally appropriate local services.

CMDHB is not exempt from the international trend in 'blurring' of any traditional boundaries between secondary and tertiary services. This trend is likely to continue and impact upon secondary care service development and delivery.

Local service development is appropriate where services can be clinically and financially sustainable, where they support the needs of the CMDHB population better through delivering well-integrated local services, and when the changes in service provision can be worked through as part of the Regional Services Planning Process. Some components of sub-specialist surgical services are provided regionally by Auckland DHB for CMDHB residents either in ADHB facilities, or as outreach to the Manukau Campus. In return, CMDHB is the provider of some tertiary services, most notably in Plastic and Reconstructive Surgery, Hand Surgery, Orthopaedic Spinal Surgery and Orthopaedic Oncology services.

Funder intent is that in the absence of significant changes in funding over the period of the Health Services Plan, the current level of investment in elective services - relative to demographic changes and population growth, will continue. Specialist services need to respond to this growth through the development of extra capacity and service delivery consistent with new Models of Care.

3.4 High Profile Nature of Elective Services

Elective Service provision has a high political profile and is of particular interest to politicians, the Ministry of Health, Board of CMDHB, local community and health service providers.

As the New Zealand public health system is unable to fund all elective service requirements, elective care is targeted to patients who are prioritised as having the greatest needs that can be met within the funding available. While frequently this does not meet the expectations of the community, DHBs are required to manage both supply and demand subject to available funding. Increasingly a focus on Standardised Intervention Rates are being analysed with DHBs required to report against variations. To this end the environment in which elective services operates is one that includes tight internal and external monitoring of output performance. Political interest is expected to continue throughout the period of the Health Services Plan.

3.5 Elective Services Continuum of Care

The Elective Services Continuum of Care illustrates the complexity and interdependencies of the service components within the provision of Elective Services across the full continuum of care in Counties Manukau, and taking into account service co-locations and synergies to achieve better health outcomes.

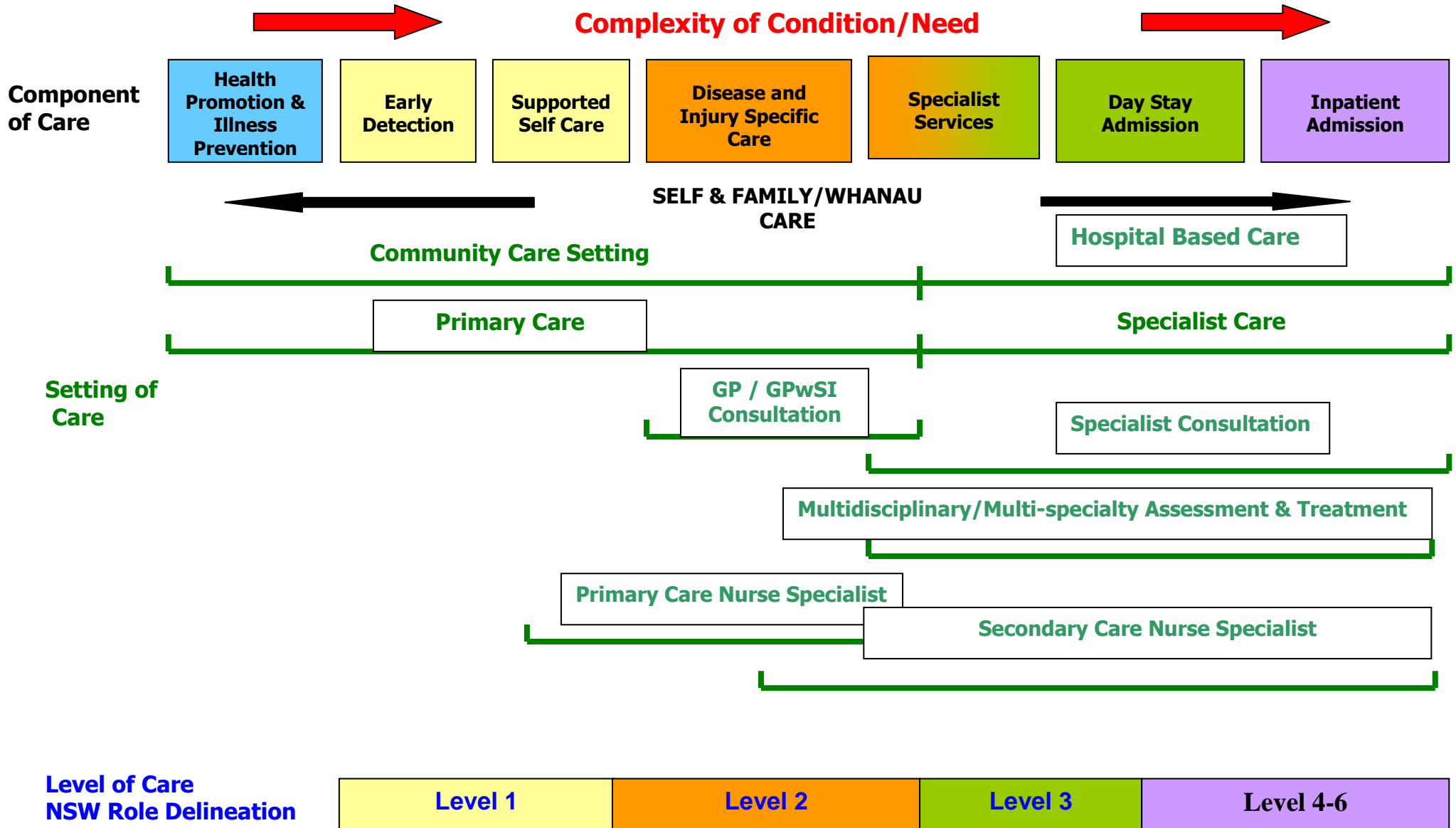
⁴ Lindsay G. Counties Manukau District Health Board key procedure progress 1996/97 – 2005/06. CMDHB April 2007 draft, pgs 15-16

The service based continuums are attached as Appendix 1 at the end of this document.

Key features of the continuums are:

- A wide range of services and procedures are offered within the Continuum of Care for Elective Services. Many services operate across several settings and components of care. The shift to ambulatory focused care is continuing.
- Whilst there is a predominance of service delivery in hospital or ambulatory care settings, increasingly models of care will have elements operating within community settings. Increasingly General Practitioners and specialist services will work in closer collaboration to reduce duplication, improve integration of care and streamline patient flow.
- More care can be provided in ambulatory and community settings with proposed changes in the models of care reducing the boundaries between primary and secondary care.
- The multidisciplinary and multi-speciality focus will enable a more comprehensive patient centred approach that frees up specialist surgeon resources to undertake additional surgery
- Specialist services do not function in isolation; there is regular consultation with other specialist services both in CMDHB and neighbouring DHBs.
- With the evolution of ambulatory focused care those patients needing specialised inpatient care are notably 'sicker'. Their presenting condition and associated comorbidities creates challenges in the level of work up and non surgical investigations required in order to be declared 'fit for surgery'.

Elective Services Continuum of Care



4.0 Key Directions

Over the next twenty years we are planning for ongoing incremental changes in Elective Services—particularly arising out of technological developments; changes in delivery systems driven by both workforce availability and ongoing quality improvement; and better integration between primary and secondary care services.

4.1 Health Promotion and Illness Prevention

There is a wide range of programmes available within Counties Manukau that promotes health and prevents illness. These targeted programmes are predominately community and primary care based with the aim of reducing the prevalence or incidence of disease processes and a focus on the well being of the general population. Many of the programmes are developed nationally and implemented locally by a range of providers including PHOs and Non Government Organisations.

Patients may come under the care of an elective service when it is recognised that the needs of those patients has outgrown the capacity of such programmes to meet their health needs and assessment for surgical intervention is being considered.

An example is the morbidly obese patient who following participation in non-surgical interventions, that includes a focus on the management of weight and optimising of health through participation in diet and exercise programmes, may be referred to General Surgery for consideration for Bariatric surgery.

For the obese patient potential programmes include:

- Healthy Eating Healthy Action
- Lets Beat Diabetes
- Smoking Cessation programmes

Key Directions

- ✓ *Ongoing health promotion and illness prevention programmes to improve health and well being of the population.*
- ✓ *Ongoing development of culturally appropriate programmes delivered in culturally appropriate settings for Maaori, Pacific and Asian peoples.*
- ✓ *Ongoing participation of CMDHB experts in the development of national and local programmes, and ensuring cultural fit within the Counties Manukau population.*

4.2 Prevention and Early Detection Screening

Early detection is an important element in the disease management process. Early identification of health issues allows initiation of treatment or further screening processes that can prevent disease progression and reduce the level of intervention required. There are multiple programmes available, where the condition detected by the programme will impact on one or more services that have an elective component. Specialist surgical services often see patients as a result of being initially detected by these programmes - rather than specialist services actually delivering the programmes. For some programmes there is a need to increase the participation rates in the prevention and early detection screening programmes e.g. Cervical Screening programme.

New screening programmes are likely to be introduced over the next 20 years with the first being a colorectal screening programme likely to be announced by the National Screening Unit in the next few years. A number of further programmes that have been introduced overseas are also likely to be reviewed to determine their applicability in the New Zealand context in the next few years (e.g. Abdominal Aortic Aneurysm screening).

Key Directions

- ✓ *Adoption of further programmes for prevention and early detection and screening. CMDHB clinicians will continue to play leadership roles locally and working with the Ministry of Health, in development of new programmes to achieve improved health outcomes, and to ensure that new initiatives cater for the diverse needs of the Counties Manukau Community.*
- ✓ *Elective Services advocate and promote participation, to patients, in available screening and early detection programmes.*
- ✓ *Configuration of elective services will be cognisant of potential developments in prevention or early screening programmes to ensure availability of workforce and facility capacity, and evaluation of appropriate Models of Care for efficiently and effectively configuring new services.*

4.3 Primary Care Elective Services

Primary Care Elective Services requires consideration of the role General Practitioners have in the management of elective service needs for their patient population, and as the initiators of elective services in the primary care setting. General Practitioners treat significant numbers of patients whose presenting complaint has the potential to require elective specialist consultation (medical/surgical/paediatric) or procedural intervention.

The undertaking of an initial assessment, making a diagnosis and initiating a management plan is the beginning care pathway for elective services. Most GP's have the capability and capacity to manage and treat an array of conditions within their practice environment and in doing so retain those patients in the primary care environment, and to only refer those with whom assistance is required. In addition, some conditions can now be effectively managed by medical or drug therapy when surgical intervention was previously the first line treatment e.g. treatment of menorrhagia with a mirena device. Primary care is therefore increasingly able to increase the range of conditions managed without secondary care referral or support.

The decision to refer to specialist services for assessment is often around the need for specialist support or opinion, access to diagnostics or higher level treatments not within the scope of primary care and the need for surgical intervention. Most GP's are aware of access thresholds for elective services and consider these, as well as the clinical appropriateness of more advanced treatment, before referring patients into the secondary sector.

This primary care management of elective service demand requires knowledge of best practice, access thresholds, and utilisation of management guidelines, care pathways and referral acceptance criteria to access secondary services appropriately and to provide a holistic view of patient-centred management. Increasingly electronic primary care practice management systems pull these elements together and provide the means to assist Primary Care to manage the demand.

Specialist services see the development and credentialing of GP's in areas of Special Interest (GPwSI) as an initiative that expands the GP scope of practice and establishes points of expertise for contact within primary care. The concept of PCHS development with large multidisciplinary practice sites and economies of scale in patient populations will support such practice changes.

There a number of conditions that are ongoing in nature and whilst episodic surgical intervention, or procedural medical intervention is required, much of the ongoing day-to-day follow-up and management can be managed by the GP and multi-disciplinary team in the primary sector. A greater referral rate to GP's for post-operative and ongoing care/management needs to be encouraged. The aim is to discharge all possible patients to GP follow-up where GP's have the clinical wherewithal and are able to perform this role. Frequently the patient is already seeing the GP on the same or other matters and duplication can be avoided.

Electronic transfer of discharge letters, results of blood tests and other investigation, whilst currently in place can be further developed by better integration of patient management systems and support from IT services. Some specialist services have previously continued to follow-up patients to monitor for post-hospitalisation infections and other complications. Increasingly GP's will be able to undertake this

role and report any problems electronically to the specialist services where they can be used for clinical audit.

Increasingly Primary Care will contribute to more effective elective services through:

- Managing their elective services demand (at individual practitioner, GP Practice and PHO level) using best practice guidelines and with a knowledge of elective thresholds and access
- Providing more post-hospitalisation follow-ups to make available more capacity within the specialist services for First Specialist Assessments or elective procedures
- Providing a greater range of office procedures previously undertaken by specialist services
- Having improved access to diagnostics currently limited to specialist services
- Having direct access to wait list a greater range of identified elective procedures

With the credentialing of GPwSI's, increased availability of senior nursing expertise in the community, availability of the facilities for undertaking 'office procedures', and access to more sophisticated equipment than held by the standard small GP practice, the following procedures could be performed in the primary setting:

General Surgery

- Haemorrhoid, skin lesion, lipoma and hernia assessments and direct listing for treatment
- Haemorrhoid banding and proctoscopy procedures
- Minor skin lesion, lumps and bumps programme including biopsy, early intervention non-surgical treatment, and non-complex excision
- Toenail wedge resection surgery
- An increased level of wound management complexity including community based leg ulcer management clinics
- Multidisciplinary input into the post obese bariatric surgery patient e.g. dietary support

Plastic and Hand Surgery

- Minor skin lesion, lumps and bumps programme including biopsy, early intervention non-surgical treatment, and non-complex excision
- Steroid injections to hand, wrist joints
- Carpal Tunnel assessment and direct listing for treatment
- An increased level of wound management complexity including community based leg ulcer management clinics
- Psychological support services for patients with body image issues from congenital or acquired deformities

Orthopaedic Surgery

- Casting services – primary care based nurse led specialised service for children requiring regular casting (club feet) and increased management of simple fractures

Women's Health

- Medical management of gynaecology conditions
- Tubal ligation assessment and direct listing for treatment
- GP Colposcopists
- Long term contraception procedures including insertion of Mirena and vasectomy
- Coordinated management of female incontinence through integrated care guidelines and pathways

Ophthalmology / ORL

- Continue ORL GPwSI programme with aim of GPwSI in each PCHS
- Assessment and direct listing of Grommet and tonsils for credentialed GP's
- Minor ophthalmic and ocular plastic surgical procedures by GPwSI
- Optometrists sharing care for Glaucoma patients, direct listing for surgical procedures for some conditions (e.g. cataracts), undertaking Retinal Screening

At the present time there are some GP's who have the skill and expertise to undertake the above procedures in the community setting and do so where the patient can afford to pay for that service.

Within Counties Manukau, price is frequently a barrier to accessing treatment in primary care as many of the population are unable to pay a GP the additional costs of these services – particularly as these services are available free through specialist services. Thus these low-acuity conditions are referred to secondary care to access treatment.

The challenge for CMDHB is to determine how funding issues can be reduced to support the most time, efficient and quality service to be provided in the primary sector without bringing into the “public purse” the many procedures that are currently self-funded by the patient or through health insurance.

Key Directions

- ✓ *Support the primary care focused development of Primary Care Health Centres.*
- ✓ *Ongoing development of speciality-focused training programmes to enable credentialing of GP's as GPwSI's.*
- ✓ *Models of care practiced by secondary services are cognisant of the capacity within primary care and demonstrate increasing referral rates for ongoing follow-up and management by GP's.*
- ✓ *Assist primary and secondary care in the management of elective service demand through the development and introduction of electronic tools to assist decision making and the integrated transfer of data.*
- ✓ *Develop a funding formula to allow appropriate public funding of clinic procedures in the primary sector.*

4.4 Access to Clinical Diagnostics

Despite the advances that have been made in the health international trends tell us to expect and increasingly older, sicker and more chronically ill population. Whilst early and regular intervention in primary care aims to improve well being and prevent deterioration, it is recognised in today's environment that patients needing specialised inpatient treatment are notably 'sicker'.

To be declared 'fit for' and access surgery these patients need intensive assessment by anaesthetists and medical sub-specialists. Elective surgical patients often have a lower priority grading for access to medical specialist FSA or a required clinical investigation due to volume pressure in medical and clinical support services. Examples of services where this is particularly prevalent are Cardiology with access to Echocardiograms, Radiology for CT and MRI scans, Gastroenterology for Colonoscopy and Electrophysiology at ADHB for nerve conduction studies. Frequently this lead to delays in their surgical treatment with convoluted patient flow and multiple waiting times between agreement to treat and surgery occurring. In addition to the clinical imperatives for treatment, regularly this creates significant organisational challenges in meeting the timelines and performance expectations set by the Elective Service Performance Indicators (ESPI's).

Allowing direct access to some of these investigations will reduce access delays for some patients, reduce frustration levels in primary care around the current processes, and allow more effective use of specialist time from removal of a gate keeping role. Integral to introducing direct access would be the development and introduction of access criteria and auditing of use for clinical compliance.

Prioritising processes for patients wait listed for surgical treatment will be reviewed to ensure that studies or subspecialty consultations do not delay treatment that is required to be undertaken within a timeframe stipulated through the Elective Services Strategy.

Key Directions

- ✓ *Develop clinical and funding frameworks that support direct access to diagnostic investigations by credentialed primary care clinicians. Improving access to timely 'community-referred' investigations will improve the ability of GP's to manage patients in primary care without referring them for specialist outpatient consultation or referring them acutely merely to access diagnostics.*

- ✓ *Improving access to clinical investigations and subspecialty consultations to ensure timeliness in surgical treatment, compliance with ESPI requirements, and improve patient-centred pathway.*

4.5 Continuation of Split-Site Service Operation within CMDHB

In 1997, CMDHB developed the Manukau SuperClinic located on Great South Road, Manurewa, some 9 km from Middlemore Hospital. This facility implemented the concept of ambulatory care and using a module concept, outpatient services have increasingly transferred from Middlemore Hospital to the Manukau site. Where appropriate, a range of procedures and investigations are undertaken alongside outpatient consultation. By early 2007, the only outpatient consultation services still being provided at Middlemore Hospital are the Plastic Surgery Cleft clinic, Craniofacial, Dental, Gastroenterology procedures and day-stay Haematology.

The original SuperClinic facility included 4 theatres and 2 procedure rooms which undertook day patient surgery only. The Manukau Surgery Centre was commissioned, opening in late 2001 with 40 beds available for inpatient stay, and an additional 6 theatres with all 10 theatres in the complex to accommodate both inpatient and day-patient elective surgery. Gradually new theatres were brought on stream and elective inpatient surgery transferred to Manukau Surgery Centre over a 2-year period to mid 2003.

The Model of Care at CMDHB involves separating elective and acute surgical procedures with the express intent of reducing the cancellation of elective patients to accommodate acute patients which was regular practice at Middlemore. In April 2005 a second 38-bed inpatient ward which included a level 1 Intensive Care Unit was opened and a further cohort of specialties and procedures were transferred to Manukau Surgery Centre. In early 2007, 75% of elective surgery is being undertaken on this site through the 10 theatres, 2 procedure rooms and 78 beds on the Manukau campus.

Increasingly clinical support services at Manukau have developed to support a higher level of elective surgery complexity. In 2005, with the opening of the second floor, a Level 1 Intensive Care Unit was commissioned to support high dependency patients and overnight ventilation if required. Oversight of this facility gives confidence to deliver a high number of relatively complex surgical procedures at Manukau Surgery Centre with supported early transfer of patients to Middlemore Hospital if indicated.

The co-location of Elective Services to the Manukau campus has delivered a number of benefits to patients and CMDHB:

- Being a new, low-rise facility with expansive grounds, ample and free parking, and physical ease of access to the buildings, the Manukau campus has developed strong community and staff acceptance.
- Separation of elective and acute surgery has allowed low rates of cancellation of elective surgery to be achieved. The Elective Surgery focus of the wards is to deliver short Average Length of Stay with peri-operative processes set up to deliver high Day of Surgery Admission (DOSA) rates, and promoting daycase surgery where appropriate.
- On-site presence of specialists from most surgical specialties in the SuperClinic provides synergies for ward rounds or patient reviews for elective surgical patients. This is attractive as it limits the time that surgical specialists spend travelling between facilities – specialists provide their acute care cover at Middlemore Hospital and almost all their elective responsibilities (surgery and outpatients) at the Manukau campus.
- For Medical and Paediatric specialties, the elective components of care are effectively “ring-fenced” to improve the throughput of specialist consultations and co-location of relevant clinical support services is substantially being achieved.
- A strong customer service focus and continuous improvement on processes that support efficient management of outpatient clinics, is linked to high patient satisfaction rate both with the Manukau SuperClinic and with Manukau Surgery Centre.
- ORL and Ophthalmology are predominantly ambulatory-based services with no contracted acute services. They have Manukau Campus as their hub – including operating, outpatient services, offices and support staff.
- The community of Counties Manukau has taken great pride in the Manukau facility and the building and grounds are well maintained with no evidence of graffiti or wilful damage. Volunteers are integral to many of the services such as the “meet-and-greet” and way finding service.

Delivering over 150,000 outpatient consultations per annum, and 11,000 operations or procedures (including endoscopy) per annum, economies of scale are being achieved which now support further evolutionary expansion of clinical support services.

CMDHB is committed to continuing the split location for acute and elective surgery provision where this is appropriate. With the increasing focus on improving access to elective surgery CMDHB will continue to actively promote acute/elective separation where this can be delivered safely at Manukau Surgery Centre. This separation allows the greatest opportunity for surgical scheduling to meet contracted volumes because elective cases are separated from emergent and critical cases that have greater clinical priority and which would take precedence in a combined acute/elective surgical setting. The majority of elective work is undertaken on the Manukau campus where the close location between outpatients and the elective services is enabling the continuing shift to ambulatory focused care.

In 2006/2007 there were 2,600 elective surgical procedures undertaken at Middlemore Hospital, predominantly:

- Patients undergoing low or moderate risk surgery but for whom advanced clinical support services are required to manage high anaesthetic or post-operative risks
- Spinal Surgery
- Major vascular surgery
- Surgery on children under 15 years requiring inpatient admission
- Elective procedures undertaken on the MMH site to ensure full list utilisation
- Burns Surgery

Consideration is being given to devolving a further range of elective procedures to the Manukau Surgery Centre as clinical support services evolve on the site. These include:

- Select moderate-risk vascular patients
- Spinal Surgery
- Maxillofacial Surgery

The volume of these additional services, for transfer, is not extensive with the vast proportion of elective surgery is already sited at Manukau.

The Model of Care in Ambulatory Care is also evolving. Already a range of procedural activity is being undertaken as office procedures within Manukau SuperClinic including tissue expansion, nipple tattooing, colposcopy. Further procedures currently done as day-surgery will become Office procedures with the further expansion of facilities currently underway within the ambulatory care modules.

Key Directions:

- ✓ *Continuing to promote the separation of elective and acute services where these services can be efficiently and effectively configured across two locations. Evolutionary transfer of Elective Services to the Manukau site or office procedures to a PCHC where this is appropriate.*
- ✓ *Continuing the development of Clinical Support services at Manukau Campus to support the delivery of robust elective services, where these can be efficiently and effectively provided, and where the services are sustainable.*

4.6 Service Co-Location and Care Coordination

Service co-locations and synergies allow for more seamless care which benefits patients and clinicians, and supports effective and efficient delivery of patient care.

In applying the model of care framework, services have identified areas in service provision for further enhancement which will improve care coordination and delivering better patient care in a more efficient manner. Enhanced collegial relationships, with greater collaboration and use of multidisciplinary multi-specialty team work, and shared care are seen to significantly advance

services. Examples of this include the collocation of the Orthopaedic and Spinal Unit services on the Manukau campus, and the development of multidisciplinary General Surgery, Plastic Surgery and Oncology clinics. In many services development of Nurse Specialist roles would significantly progress the model of care, reduce a number of gaps in the model of care, and increase availability of specialists for First Specialist Assessments or operating.

Where services can be efficiently and effectively configured and delivered, the model of care for Elective Services will promote the patient being able to see all required specialists for that health issue, and receive appropriate diagnostics during the same attendance at Manukau campus. This will reduce the number of appointments patients are required to attend and allow a comprehensive management plan to be discussed, with all in attendance, providing clarity of management.

Using the New South Wales Role Delineation Model⁵ each of the surgical services have been assessed against the model to determine at what level support services, staff profile, safety standards and other requirements are provided on both the Middlemore and Manukau campuses to ensure that clinical services are provided safely and appropriately supported by clinical support services. It is evident from this assessment that particularly the level of radiology and laboratory services provided at Manukau does not support the complexity, volume and acuity of the work being undertaken on that site. Continuing development of these clinical support services will facilitate the devolvement of some of the remaining elective surgery on the Middlemore site to Manukau – principally moderate-risk vascular and spinal surgery.

On-site physician support for the surgical inpatient in the Manukau Surgery Centre is limited. If, during the course of an inpatient stay, a patient needs assessment by a physician that patient is likely to be transferred to Middlemore Hospital by ambulance. Enhanced physician input into elective surgical cases pre-operatively and post-operatively will improve the care to elective surgery patients and reduce post-operative transfers to Middlemore Hospital.

Alongside physician access, continuing development of the Manukau Intensive Care, with investment in staff training and expertise development, will also contribute to the devolvement of the elective surgery from Middlemore to Manukau.

The vision of the future model of care for Rehabilitation Services is specialist rehabilitation services will be involved early in the care of surgical inpatients, provide support in developing and implementing functional maintenance programmes following hospital admission, consultation and assistance with safe discharge to home or residential services, and /or with rehabilitation services providing early 'pulling' of patients requiring admission to an ATR ward.

The development and collocation on the Manukau campus of rehabilitation facilities will improve timely access for the elective service patient and allow a greater collaboration between the elective and rehabilitation service, on a shared care basis if required. The facilitated preoperative assessment of elective surgical patients and earlier involvement in rehabilitation care will lead to better outcomes post-discharge.

With the known aging of the population surgical inpatient wards need to be configured to cater for a primarily elderly population as this will be the inpatient of the future. It will be contingent on staff to ensure that these elderly patients have Functional Maintenance activities included and delivered in their care plans. This is critical to ensure that during an admission avoidable muscle loss or loss of function which results in permanent disability or long term rehabilitation requirements is avoided.

Key Directions

- ✓ *Moving the Spinal Rehabilitation Unit to the Manukau Campus will create better synergy between Spinal Rehabilitation and Orthopaedic Surgical services who provide the spinal surgery for local spinal injury patients and any patients from other DHBs who have not had spine stabilization surgery at the referring hospital. Orthopaedic surgeons provide orthopaedic outpatients and elective surgery on the Manukau Campus site each Monday- Friday, facilitating better ward consultations at the new Spinal Rehabilitation on the Manukau Site.*

⁵ Guide to the Role Delineation of Health Services, 3rd edition, NSW Health Department, 2002

- ✓ *Development of additional cross-disciplinary outpatient clinics (e.g. surgical specialties, oncology and medicine specialties).*
- ✓ *Ongoing review of service configuration at the Manukau Campus against the New South Wales Role Delineation Model to support ongoing service development and delivery across both Middlemore Hospital and the Manukau campus.*
- ✓ *Enhancing radiology and laboratory services on Manukau campus to support further transfer of further elective surgical procedures (particularly moderate-risk vascular patients, elective spinal surgery) at the Manukau campus. Options for provision of a CT at Manukau for elective investigations and improved access to blood bank services will be particularly appropriate.*
- ✓ *Enhanced physician support at the Manukau site for elective surgical patients supporting the increasing number of patients with multiple comorbidities requiring physician review during their post-operative period at Manukau campus.*
- ✓ *Increasing development of the Manukau Intensive Care Unit to facilitate movement of further moderate risk elective surgical patients to Manukau Surgery Centre.*
- ✓ *Improved care planning around functional maintenance, care coordination and access to rehabilitation services for elective surgical patients.*

4.7 Impact of Technology

Technology plays a major role in the provision of elective services. The evolution of new technologies, new models of care, and new best practice developments will bring about incremental changes that will sum to significant changes in the way Elective Services are delivered in Counties Manukau.

Changes in technology have driven surgical practice changes; that whilst making surgical operations longer have decreased the length of post-operative hospital stay, and allowed quicker recovery times in returning-to-life activities. The development of laparoscopic surgery and the use of minimally invasive investigations (e.g. MRCP) are examples of such technologies. New technology innovations into the market will continue to advance the provision of elective services and reduce the need for some forms of surgical intervention.

The impact of technology has been, and will continue to be, one of the drivers encouraging the shift of care to a more ambulatory-focused approach. Procedures that were once considered inpatient surgery are now daypatient surgery, and many daypatient procedures are now being delivered as office procedures. Reductions in surgical intervention rates will decrease in some specialties where either drug treatment has reduced the need for surgery (e.g. new drug treatment options for the management of menorrhagia rather than hysterectomy), or where there is international evidence supporting changed clinical criteria for intervening e.g. tonsillectomy and myringotomy.

The introduction of new technologies is frequently associated with significant workforce issues and CMDHB staff will continue to be leaders in the introduction of new technology and new methods of service delivery.

Key Directions

- ✓ *Adoption of new evidence-based technology will be incorporated into practice within Counties Manukau with efficient and effective changes in services delivery reflected changes in Models of Care. CMDHB frameworks (both within the provider arm and within the funding frameworks) will be sufficiently flexible to ensure that provision of services and the manner in which services are funded can support early and appropriate adoption of new technology, innovation and changes in best practice.*
- ✓ *The purchase of technological equipment is costly. In order to advance the models of care and an ambulatory focused approach by adopting the available new technologies serious consideration*

will need to be given to the inclusion of funding for such technologies whilst developing the District Strategic and Annual Plans.

- ✓ *The movement of care due to the impact of technologies impacts on future facility requirements. The need for more theatres and clinic consulting / procedures rooms and less inpatient beds relative to the population will be a result in the change of care direction. Ongoing review of facility requirements and staffing skills will be required to respond to changes in technological developments.*

4.8 Addressing Service Gaps Across the Continuum

Most surgical services, in reviewing and developing the Model of Care continuums, have identified gaps in service provision and areas for further enhancement. While currently no “gaping holes” can be identified, they are opportunities to improve quality, efficiency, efficacy, consistency and access to care. Examples are rehabilitation and convalescent care for the under 65’s; psychology support for patients with cancer and congenital deformities; shared care approaches to patient management; availability of lymphoedema and podiatry services, and access to timely clinical support services.

The development of Nurse Specialist roles would be of significant benefit in closing many of the identified gaps. The roles, whilst they could be based within the specialist services, could take a case management focus and work across both the hospital and community setting improving the interface between the two settings. Within the surgical continuums, patients needing long term case management are low in volume (and hence the specialist knowledge is unlikely to be available across the multiple primary care practices in Counties Manukau), high in need, and high in cost. Care requirements for these patients are episodic in nature, with patients moving between the hospital and community dependent on those care needs and generally for a defined forecasted period of time. Nurse led initiatives (e.g. in complex pressure ulcer management or plastic surgical paediatric congenital conditions) are examples of areas where case management would address service gaps.

Anomalies exist in the funding of services thus intentionally or otherwise creating attractiveness to one method of care and a perverse incentive to not seek the alternative. There are examples where non or less invasive care are not funded but the surgical intervention is. For fertility control in women a Mirena device is very successful but Mirena are not funded for fertility control reasons. The cost of \$300 is prohibitive to most in the CMDHB community so tubal ligation, (which is ‘free’ to the patient but considerably more expensive and is an invasive procedure), is one option that is sought.

There is, on a regular basis, a small cohort of patients who need some ongoing care following admission from injury or following surgical intervention. The care they require is not complex and is short term interim in nature; it does not need to be provided in the secondary setting. These patients are not yet suitable to be discharged to their home environment – they may be non weight-bearing and unable to manage the non weight-bearing status, may need to stay on bedrest and need regular change of position, or they may not yet be at a stage where clinical assessment will determine if rehabilitation is the appropriate next stage of care. Patients who need these transitional services are both under and over the age 65 and not appropriately managed as hospital inpatients. In current circumstances some of this group of patients are retained in secondary beds and block this valuable resource whilst others, particularly if age 65+, are publicly funded for care in rest homes or private hospitals. Access to publicly funded “interim” beds for patients not requiring care in a secondary care inpatient bed, but needing interim care arrangements, is appropriate both clinically and financially

Key Directions

- ✓ *Ongoing development of nurse specialist roles to provide case management in the hospital and community setting for selected conditions and appropriate patients*
- ✓ *Ongoing development of services across the continuum of care where there are identified gaps in the care provision as per Model of Care templates*
- ✓ *Review funding models for conditions where non-surgical interventions are available and appropriate*

- ✓ *Development of access to transitional beds within community for surgical patients who need interim care that is not required to be provided in a secondary setting but who are not suitable for discharge to their home environment*

4.9 Integration with Primary Care - PCHC Opportunities for Elective Surgical Services⁶

The development of the Primary Health and Community Centres within Counties Manukau will facilitate integration between specialist and general practice services, and enable more care to be provided closer to the home or work environment for patients. By grouping together local primary health care services, the PCHC provides an option for members of the specialist team to work in closer collaboration with primary care.

While providing consultation and minor specialist procedures at PCHC (which would otherwise have been undertaken at the Manukau campus) staff from specialist services working in PCHC would be able to care for patients with surgical conditions in primary care by providing:

- Direct advice to GPs in relation to the surgical management of a particular patient or condition without a formal referral.
- Direct advice to GPs on technical procedures that they may be undertaking in primary care to support an increase in the range of investigations, procedures or medical management of surgical conditions that are undertaken in Primary Care (e.g. the development of GP's in removal of skin cancers, proctoscopy, sigmoidoscopy, management of menorrhagia).
- Provision of educational seminars to primary care practitioners.

To ensure the efficiency, effectiveness and appropriate use of specialist surgeons, the range of outreach procedures likely to be carried out in PCHC will generally be limited to those requiring specialist equipment that is easily portable ('can be carried in a bag'), where the equipment used the specialist services in the PCHC would be used within the PCHC on a regular basis in the delivery of primary care.

Many staff from specialist surgical services will be involved in the PCHC including a range of nurse-led initiatives. Specialist nurses will be involved throughout the episode of the patient's care, with communication between the nurse and GP more effectively carried out by the nurse working within a PCHC setting. With the development of larger PCHC, Primary Care may develop the economies of scale to employ community-based nurses in primary care for the management of select surgical conditions.

Increased activities being carried out in PCHC will decrease the growth pressure on the Manukau Campus with some slowing in the need for additional Manukau SuperClinic facilities.

All surgical services envisage being able to provide select first specialist assessments, follow-up consultations and nurse/allied health specialist clinics in the primary setting. In addition to the generic speciality work, services predict that the following could also be provided by specialist services - given the appropriate environment and equipment:

General Surgery

- Nurse specialist clinics with a focus on management of colorectal, leg ulcer and breast conditions
- Non-operative management of varicose veins
- Screening and detection; ultrasound and portable doppler for particularly vascular conditions, and mammography

Plastic and Hand Surgery

- Specialist surgical treatment of lesions under local anaesthetic
- Nurse specialists undertaking minor procedures eg tissue expansion, more complex wound care
- Hand therapy - including casting and splinting

Orthopaedic Surgery

- Nurse specialist clinics in casting and paediatric club foot

⁶ Discussion paper on PCHC opportunities/issues for Surgical Services CMDHB April 2007

- Botox treatments for children
- Club and diabetic feet procedures
- Fracture clinic follow-up

Women's Health

- Clinical Nurse Specialist led fertility control clinics including minor procedures – IUCD and pessary insertion
- Community-based nurse coordinator monitoring and managing colposcopy assessment and treatment
- Colposcopy clinics in selected PCHC including use of Nurse Colposcopists
- Screening and detection; gynaecological transabdominal and vaginal ultrasound

Ophthalmology / ORL

- Nurse specialist clinics for follow up of cataract and glaucoma patients
- Retinal photoscreening and laser photocoagulation in selected facilities
- Nurse specialist clinics focusing on chronic ear conditions
- Audiology testing

CMDHB has been recognized as the national leader in the development and introduction of GP with Special Interest (GPwSI) roles, and this strategy will continue to be rolled out in the future. GPs with a Special Interest are trained and credentialed by CMDHB to assess, diagnose and initiate treatment of some common high volume, low acuity conditions. Currently there are GPwSI in Counties Manukau in ORL, Plastic Surgery and Gynaecology. Over the life of the Health Services Plan it is proposed to roll this out into other surgical specialties predominantly acting as an alternative to specialist surgeons, the GPwSI is involved in:

- Reviewing referrals from other GPs, undertaking assessments and managing direct access to the elective treatment list for patients needing designated elective procedures.
- Undertaking minor treatments that would otherwise be referred to specialist services for treatment e.g. skin lesion removal.

Key Directions

- ✓ *Providing visiting surgical specialist services to PCHC. The addition of further geographical sites for service delivery will add complexities in the scheduling of surgeon rosters. The intent would be, wherever possible, to schedule to provide a full day service at the PCHC to negate the need to commute between sites on a day basis. Scheduling for acute cover at Middlemore and arrangements made to cover specialist leave commitments at PCHC will be critical prior to services commencing.*
- ✓ *Ensure patients seen in PCHC will have approximately the same level and timeliness of access to specialist services as is available at the Manukau and Middlemore campuses. Prioritisation and scheduling of patients needs to be done in a manner to ensure compliance with ESPI processes and to ensure appropriate management of specialist resource, specialist scheduling and continuity of care across the secondary care spectrum.*
- ✓ *Promoting increased support for primary care by ensuring accessibility to surgeon time while providing elective consultation services to support GPs in their expanded elective services role.*
- ✓ *Increasing the development of GPwSI's by facilitating training and credentialing programmes, and through promoting appropriate use of equipment, clinical equipment and remuneration through funding formulae.*

4.10 Nurse Led Initiatives

All services have identified areas of work that can be appropriately delegated to other staff whilst remaining within an appropriate professional scope of practice. These are predominantly, but not exclusively, nurse-led initiatives. While nurse-led initiatives are seen as a model to move CMDHB

forward, introduction of such a model is dependant upon the development or recruitment of suitably skilled nursing staff and the recruitment of other staff able to backfill nursing positions.

Along with the identification of areas of practice suitable for such initiatives, training and funding packages need to be developed to enable this concept to progress. Nationally a number of nurse led initiative packages are already in place e.g. Cataract and Glaucoma at Auckland DHB, Colorectal at Otago DHB. Reviewing evaluations and leveraging off those already established would shorten the introduction timelines and provide opportunities to further efficiency and effectiveness of programmes.

While initiatives are most likely to be nurse-led, in some circumstances other allied health staff are appropriately positioned to provide initiatives that improve care and allow more appropriate utilization of specialist surgeons. There are two examples within the Orthopaedic Continuum of Care – the physiotherapy led back pain service taking redirected First Specialist Assessments, and the nurse management of club foot splinting.

Key Directions

- ✓ *Promote the concept of nurse-led, or allied health led initiatives as an attractive clinical career opportunity to attract and retain senior nursing and allied health clinicians and to make available additional surgeon resource.*
- ✓ *Supporting development of speciality-focused training programmes to enable credentialing of nurses to expand scope of practice into identified nurse led activities.*
- ✓ *Promote workforce substitution as a way to deliver care. Review the roles of health professionals to maximise the use of their skill and expertise and substitute activities that can provided by another member of the wider team.*

4.11 End Stage Care

Whilst a significant number of surgical patients will suffer from end-stage conditions that are principally but not exclusively cancer related, generally end-stage and palliative care is not the domain of surgical services with the exception of symptom management for some conditions. General Surgery is the major service provider of symptom management at an end stage of care; providing relief from obstructions in the upper gastrointestinal tract and bowel for example.

There is a continuing and increasing focus of providing the majority of this care in the home environment with family being the main care providers - supported by primary care, secondary care community services and independent healthcare providers such as Hospice and Cancer Society.

There is concern from within elective surgical services that in today's society, due to social circumstances or work commitments, not all patients requiring end-stage care have the support of family and friends to provide the main stay of that care. This has implications for the investment in palliative beds in the community and provision of community care services.

Likewise of concern is the low level of input of some General Practitioners to support patients in the later stages of life. The fall back position of admission to secondary services can be avoided with a robust primary / community based service to these patients.

The implementation of an Advanced Life Planning programmes within CMDHB will improve the quality of decision making around some elective surgery patients with end-stage conditions.

Key Directions

- ✓ Integrated options for palliative care for patients are provided across multiple settings with support from Palliative Care subspecialty services as required.
- ✓ Implementation of Advanced Life Planning across CMDHB

4.12 Facility Requirements

Establishing facility requirements for undertaking Elective Surgery, both in total services and site specific, involves taking into account many factors:

- Pre-operative Length of Stay and Day of Surgery Admissions (DOSA) rate.
- Changes in the Average Length of Stay (between theatre and discharge).
- Equipment requirements of individual specialties – specific services have specific equipment and equipment processing needs which can limit the portability of the service.
- Elective surgery intervention rates (which in turn are affected by funding, prioritisation between specialties, private/public funding, rates of health insurance cover, primary care referral rates, demographic change, patient health status).
- Technology changes including the conservatism that occurs during the introduction of new technology.
- Major, moderate or minor procedures - the scheduling of lists and management of the risk factors associated with each procedure.
- High, moderate or low risk patients – the individual patient risk profiles due to pre-existing conditions and severity of the surgical disease.
- Availability of supporting services and facilities (particularly pathology, radiology, intensive care and medicine).

Over time Average Length of Stay has continued to decrease with elective surgical Average Length of Stay for CMDHB now 1.7 days. While further reductions in ALOS can be expected during the life of the Health Services Plan, gains are unlikely to be as significant as they have in the past.

Many of the high volume procedures have already moved to daycase service delivery and many procedures that are now being done as daycase procedures clinically require a substantial second-stage recovery period that limits the number of times the bed can be used on the one day. Almost all suitable patients are now Day of Surgery Admissions. When daycase surgical procedures are transferred to office procedures, these procedures are no longer included in the Average Length of Stay calculations. While clinically this makes available daycase capacity, these changes statistically increase the reported ALOS as the numbers of daycases decreases.

Table 2: Current Facility and Service Provision by CMDHB Services

Middlemore Hospital	Manukau Surgical Centre
All Acute Surgery	All daypatient surgery
Elective Inpatient Surgery for Children	Elective inpatient and daypatient surgery
Some high risk elective surgical conditions	Elective daypatient surgery for children

Key Directions

- ✓ *Ongoing development of care pathways and new Models of Care to continue the reduction in hospital bed requirements relative to population growth.*
- ✓ *Increases in elective bed requirements determined by the success of strategies to provide more surgery in ambulatory care or daypatient settings.*
- ✓ *Improvements in production planning to optimise resource utilisation of elective facilities.*

4.13 Workforce Implications

Workforce development is key to the provision of elective services being able to manage the proposed future care directions. Of particular note is the worldwide shortage of medical staff - and this is not likely to improve in the foreseeable future. High rates of economic growth in a number of developing countries will reduce western country's ability to access trained specialists, Resident Medical Officers, nurses and allied health staff as employment conditions in their home countries become more favorable, and as health systems in these countries develop.

Within CMDHB, the Surgical Continuum is most affected by the international shortage of Resident Medical Officers and the scarcity of GPs. In addition a shortage of nurses and allied health staff at all

levels is challenging Models of Care with a significant inability to develop and retain staff that can function in specialist positions across both the hospital and community.

The Model of Care for the Surgical Continuum focuses workforce development on:

- Training: CMDHB plays an important role in providing local leadership and training across the Surgical Continuum. Providing high quality training for medical, nursing and allied health staff recruitment of new graduates' results in improved recruitment of new employees, and provides a learning environment that enlists the ongoing commitment of existing staff.
- Workforce substitution: All services have identified areas of work that can be appropriately delegated to other staff whilst remaining within a professional scope of practice. These are predominately, but not exclusively, nurse-led initiatives. While nurse-led initiatives are seen as a model to move CMDHB forward, this is dependant upon the development or recruitment of suitably skilled nursing staff and the recruitment of other staff able to backfill nursing positions. A number of other professions will also make a valuable contribution to Model of Care and allow workforce substitution e.g. GP with Special Interests, Optometrists for retinal screening.
- Focusing on efficient service delivery: Avoiding duplication and promoting the development of primary care to be able to manage more patients without referral to specialist services. Whenever appropriate specialists will devolve follow up care to GP's or a specialist nurse (either through a patient appointment or by phone consult). Systems and processes both within CMDHB and between primary and secondary care must be robust to manage both the efficiency of the system, but also to ensure patient safety and quality is achieved.
- Development of GPwSI: Credentialed GP's, in areas of their interest and expertise are able to act as points of reference within PHO's for advice regarding specific issues and thus enhance the interface between primary and secondary care. Increasingly these GPs will manage cases on direct referral from their colleagues without referral to specialist services.

Appendix 1: Continuums of Care, Surgical Specialities

Speciality: Orthopaedics

Current Service Configuration and Model of Care

1.1 Description of Service:

The Orthopaedic Department at Counties Manukau District Health Board provides a wide range of secondary and tertiary specialist Orthopaedic services. The department provides extensive acute and elective Orthopaedic services from the Middlemore Hospital and Manukau SuperClinic and Surgery Centre site.

Since the opening of the Manukau Surgery Centre First Floor in October 2001 there has been a significant shift of the treatment of elective patients to the Manukau site with the majority of elective surgery now occurring there. The exception to this is the complex spinal patient, inpatient paediatric and complex, multiple co-morbidity patients at risk with the potential for needing ICU or Cardiology back up.

To ensure the ongoing management of patients within the CMDHB catchment area there is a very strong focus on managing non CMDHB domicile referrals. All non urgent GP referrals for non domicile patients are sent onto the DHB of domicile. A tertiary referral DHB to DHB will be considered on request if a clinical need for sub specialist skills is identified and from both a clinical and financial perspective the need for the tertiary referral is valid.

While there are no officially agreed or finalised and funded elective tertiary arrangements in place tertiary orthopaedic services are provided in the following disciplines:

Orthopaedic Oncology.

The New Zealand Cancer Treatment Working Party (NZCTWP) approved, in principle, a New Zealand Orthopaedic Association (NZOA) proposal to centre orthopaedic oncology services at two centres in New Zealand: Auckland/Counties Manukau DHB's [1 service with two sites at Auckland and Middlemore Hospitals] and Canterbury DHB. While the treating DHB's have agreed a willingness to provide these services and the service change for best practice reasons is already underway or arguably in place at CMDHB, it is not formally mandated and no official referral criteria has been completed.

Spine surgery

Acute spinal trauma, as the only approved and funded tertiary Orthopaedic service, is accepted from throughout the Upper North Island in conjunction with the Otara Spinal Unit. In addition whilst not funded as a tertiary service, elective adolescent and adult scoliosis referrals are accepted.

Complex trauma including pelvic trauma, acetabular trauma

Referrals for these injuries are accepted from within the North Island.

Other elective disciplines periodically referred from outside CMDHB include:

Complex foot and ankle conditions
Orthopaedic rheumatology
Complex revision total joint replacement surgery

All general areas of orthopaedic surgery are covered with hand orthopaedic surgery being part of the Plastics Department.

**Departmental Staffing
Medical Staff**

Traditionally, Orthopaedic surgery has been based on a team structure and this is believed to be a major strength of the department. The Senior Medical staff has a 5-team structure arranged around the Monday to Friday acute coverage. There is a range of FTEs' with the majority of clinicians having both public and private commitments. They are supported by four advanced orthopaedic trainees, six non trainee registrars and ten house officers. The allocation of 6 House Surgeons (between all surgical specialties) to cover the requirements of the Manukau Surgery Centre site is in addition to the Orthopaedic allocation.

Nursing Staff

Senior and experienced RN's are responsible for and play a critical role in the coordination of elective waiting list management, elective theatre list patient selection and booking and the pre-admission process. They are integral within the department having a strong liaison with SMO's, Registrars, House Officers, Ward Charge Nurses, Theatres (both MSC & MMH), Anaesthetics Department and Modules 1 & 4. There is an identified need for Clinical Nurse Specialist resource in the area of casting and traction cares, and further need for the development of a Clinical Nurse Specialist in the management of Spines and Oncology. Expansion of the Acute Ortho-Geriatric Nurse role to include elective patients will enhance the effective co-ordination of the management Orthopaedic Geriatric patients ensuring the needs of the patient, family and other key stakeholders are met.

Patient presentation

GP-referred patients requiring acute consultation are initially referred with either a faxed referral to EC or a phone call to the On Call Registrar. Patients either present directly to EC or may be advised to attend an outpatient appointment at MSC. Whereas elective patients have a referral mailed or faxed to the central referrals office for management through the booking system process.

MMH Patient Mix	MSC Patient Mix
Inpatient Elective – High risk (10%) Self presenting acutes – EC GP referred acutes EC presentations – A/Hrs Inpatient acute surgery	Inpatient Elective (90%) GP referred Acutes (occasional) All outpatient clinics

1.2 Current Service co-locations and synergies

Orthopaedic inpatients are based in three wards one of which one is predominately acute, a second combined specialities, the third predominately electives and based at the Manukau Surgery Centre.

Orthogeriatric

In order to comprehensively look after the complex medical problems of the acute Orthogeriatric patient and provide the necessary link between AT&R and Orthopaedics, the services of an Orthogeriatrician were employed approximately six years ago. This was initially a 0.6 FTE position with an additional 0.5 being recruited.

Hand Surgery

The Division of Hand Surgery is a combined Plastics and Orthopaedic Service now operated as part of the Plastics Surgical Department. Currently three orthopaedic hand surgeons cover secondary and tertiary hand injuries for the metro-Auckland DHB's and tertiary hand surgery from Northland DHB. The plastic surgeons within the Hands Service do not cover complex bone related carpal and distal radial problems.

Module One Outpatients Clinic – MSC

Staffed with a combination of RN's and EN's led by a Team Leader, this facility provides for a range of speciality Orthopaedic outpatient clinics including fracture, club foot, DDH clinic, new patient and follow up. A casting unit is situated within the central area of the Module.

Casting Unit – Middlemore Hospital

The Casting Unit at Middlemore is located between the two Orthopaedic Wards in the central core of the new Orthopaedic floor. It works in-conjunction with hand therapists, paediatric physiotherapists, podiatrists and Orthotics where specialist castings are required.

The Casting Unit provides a service and assistance to a number of areas – including in-patient services Middlemore Hospital, Emergency Care, Middlemore Theatre, RMO education, Middlemore Nursing education, Support for Module 1 Orthopaedics and Module 9 MSC Plastics Department and Primary Health Care link for education

Spinal Unit

Currently the Spinal Cord Injury Unit at Otago accepts spinal cord injury patients for the upper two thirds of the North Island with the cut off being Palmerston North. The present waiting time for patients referred to the Spinal Cord Injury Unit is excessively long. This delay in the rehabilitation of the patients with spinal cord injuries is detrimental to patient care and highly undesirable. The surgeons at Middlemore Hospital recognise that the service provided by the Otago Spinal Unit combined with Middlemore Hospital is considerably less than the service provided by the Canterbury Surgeons and the Burwood Spinal Unit and are keen to be part of a reconfigured service that better meets the needs of Spinal patients.

Primary Health Care for interim care solutions

For patients >65 requiring a period of non-weight bearing following a injury or surgical intervention who are not able to manage the non weight bearing status and not suitable for discharge; local rest homes and private hospitals are utilised to place the patient for the 6 week period as required. Once able to weight-bear a clinical review determines whether rehabilitation in the Assessment, Treatment and Rehabilitation (AT&R) facility is required.

1.3 Desirable Service Co-locations and synergies

Orthogeriatric

Further development of the acute focused service to include the elective patient. In preparation for surgery an elective pre-assessment service to maximise health condition of complex medical problems in the Orthogeriatric patient to is desirable and currently missing from the continuum of care.

Spinal Unit

A very important task to be undertaken in the very near future is the upgrading of the Otago Spinal unit. The service provided in the Auckland region should be at least the equivalent to that provided in the Canterbury region and Burwood Spinal Unit. The preferred option is for a specialised Spinal Care unit capable of taking patients at a very early stage following an acute presentation and once surgical intervention is completed with early transfer into a spinal rehabilitation facility that is adjacent to a general rehabilitation centre. In addition an acute and rehabilitation focus the spinal unit also needs to have a focus in the ongoing care and treatment of spinal patients including those of non traumatic origin.

Manukau Surgery Centre Radiology

Radiology's ability to manage peak capacity demand during peak clinic times leads to backlog and downtime between patients resulting in delays for patients and late finishes for medical staff. The lack of both MRI and CT scanning facilities on the Manukau site results in the need to transfer patients via

ambulance back to the MMH site, impacting on patient safety and comfort, the resources of medical, nursing and St John services.

Allied Health

Continued synergies with Orthopaedics and Allied Health are essential in the future development of services particularly on the MSC site and in particular the shared vision of a MSC based rehabilitation facility and services. FTE allocated to Manukau Surgery Centre across the two surgical inpatient wards (totalling 50 resourced beds for the range of surgical subspecialties) will be insufficient with future growth in elective volumes.

Laboratory Services including Blood Bank

To ensure adequate support of the increasing complexity and volumes of surgery that will occur on the Manukau site there is a need for an extension of the current Laboratory and Blood Bank services to ensure timely and adequate response, range and response for products and services required.

Orthotics

Continuing provision of an Orthotic service is vital to meet the clinical needs of the orthopaedic service. Currently provided through contractual agreement with a private provider, an Orthotist provides an onsite service with a range of products. Orthoses requiring more advanced manufacture or adjustment to meet individual patient needs are done off-site at the private provider premises.

1.4 Key issues, opportunities and technology affecting the specialty (locally and globally)

Spinal Unit – refer to previous discussion 1.3

Elective Spinal Surgery

The transfer of elective spinal surgery to the MSC as a possible future direction has significant implications for capital requirements. The duplication of theatre equipment and instrumentation is required to facilitate the routine elective management of these surgical cases. Complex spinal surgery could only be considered once increased ICU services, unplanned return to theatre options, increased Blood bank and Radiology services are in place. Difficulties arise when patients, particularly in the younger aged group and who may not not qualify for ACC support, do not have access to suitable convalescence inpatient type facilities and care.

Paediatrics at MSC

Paediatric inpatient surgery at MSC is not routine and most elective paediatric surgery requiring inpatient stay is provided on the MMH site. Provision of paediatrician input, paediatric skilled nursing staff, and dedicated child friendly ward area and play therapy specialists would be required to ensure a similar service is provided as is currently provided at KidzFirst.

Outpatient Talipes treatment

New techniques in treatment of talipes is eminent with a planned move for some patients to have a tendon lengthening procedure done in a clinic setting with local anaesthesia instead of the general anaesthetic based procedure.

Model of Medical Staffing at Manukau Surgery Centre

Filling the allocation of the 6 House Officers on the Manukau Surgical Centre site has traditionally not been a challenge however changes to the volumes and throughput of electives volumes along with changes to educational study requirements for RMOs, has had an impact on the ability to fill these positions and we are now frequently faced with not being able to fill these roles. This has direct risks for elective surgery on the MSC site. Strategies to address the medical model and staff requirements are currently being developed.

1.5 Existing Continuum of Care “gaps” for patients accessing this service

Paediatrics

Throughput of elective paediatric patients requiring ongoing Physiotherapy impacts directly on the community based physiotherapy resources. If physiotherapy requirements fall within the school term this is done primarily by the school based physiotherapy services. Once outside of the school term this impacts significantly on other community based physiotherapy services which have difficulty meeting the need. While this is taken into consideration when scheduling these children it is affected by surgeon availability and leave requirements and other waiting list priorities.

Development of specialised community based casting services for children requiring regular casting treatment for some foot conditions e.g. club feet, would particularly benefit the patient and family unit reducing travel and the difficulties parents experience having to transport children with special needs and other siblings to and from a hospital based clinic setting.

Shared Care

The provision of multiple speciality consultation for those patients that require assessment and/or treatment across more than one specialty is at times difficult to set up and manage. Referrals are to one specialty only with very limited provision of shared specialty FSA or FU clinics/care with challenges of consultant timetables and consultation/clinic space, e.g. Orthopaedic/Rheumatology and Orthopaedic/Medical Oncology. A further example is the need to establish multidisciplinary team clinics involving Orthopaedic Specialists, Orthopaedic Nurse Specialists and Paediatricians to enhance the management of complex paediatric patients.

Podiatry Services

No CMDHB onsite podiatry services available. This service is particularly required for patients with chronic foot conditions and associated diabetes.

Oncology services

While there is an agreement and willingness by DHB's for the provision of orthopaedic oncology services at two centres in New Zealand: Auckland DHB /Counties Manukau DHB's and Canterbury DHB it is not formally mandated with no progress towards further development of the service and official referral criteria. Currently a service is in place at CMDHB with frequent referrals and treatment of patients from across the country taking place. Identification of the scope of the service, further clarification and service configuration is required

1.6 Identification of key intersectoral relationships and opportunities

The **New Zealand Orthopaedic Association** (NZOA) provides leadership in all matters relating to orthopaedic surgery, education and research. It promotes excellence in standards of patient care and professionalism by providing, developing and encouraging training and research in orthopaedic surgery and related musculoskeletal disorders. It is the dominant source of advice to Government and other health-related organisations and agencies on orthopaedic matters. NZOA members are orthopaedic surgeons or medical graduates training to be vocationally registered as orthopaedic surgeons. This organisation provides a key link for policy review and health care planning.

The National Joint Register was established by the New Zealand Orthopaedic Association, so that technical information about hip and knee surgery could be accurately recorded. It includes all public and private surgical hospitals throughout New Zealand and now registers joint replacements for hip, knee, shoulder, elbow and ankle surgery. Approximately six months following surgery, all registered patients are sent a questionnaire to measure the outcome of their surgery. This can now be answered on-line. The combination of technical data about the joint implanted, and the individual patient assessment, will give valuable information for New Zealand based research.

The partnership between Counties Manukau DHB and the **University of Auckland** that supports training and development of health professionals within the service

Physiotherapy services in schools for children do not continue during the holiday periods and the requirements for children needing ongoing treatments during holiday period's falls to the Home Health Care Physiotherapy resources which become very stretched. An interagency approach will be required to address this situation in the future.

Voluntary consumer organisations including:

Grey Power is a very strong and high profile group within NZ representing older people – many needing treatment from the Orthopaedic service. This body can play a valuable role in improving communication through their network for the aged population group. One of their objectives is to strive for the provision of quality Health Care for all New Zealand residents regardless of age, income and location, advance support and protect the welfare and well being of older people.

Wishbone Club is a national organisation (aligned to similar organisations in Australia, Britain and Canada), formed to maintain communication with people who have had joint replacements. Membership is free and open to all people who have had a joint replacement, other orthopaedic surgery, or have an interest in orthopaedics.

Members receive regular newsletters giving updates on joint replacement research and other topics of interest. A major focus of the Club is the "Joint Effort" sponsored walk. This is a nationwide event in which people with joint replacements walk one kilometre to raise funds for the Wishbone Trust, and its support of orthopaedic research in New Zealand. Development of a relationship at DHB level would provide a beneficial link to the population to which we provide services, particularly the development of the expert patient and feedback in regard to effects of treatment options on health and lifestyle.

Club Foot (Talipes) and Clicky Hips Support groups -While there is information in regard to talipes on websites in NZ, there is not currently a support group set up in the CMDHB area where there is a high rate of Club Foot. Similarly with clicky hips support networks.

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care for Orthopaedic conditions

Physio led back clinics. CMDHB has ongoing significant demand for specialist assessment of patients with back pain. With a flow-on rate of only 18% in 05/06 of those needing surgical intervention, following FSA, most patients did not need to be assessed by a surgeon. The aim is to provide early access to patients - particularly regarding their suitability for conservative management. A planned pilot from Dec 06 to June 07 is for all patients referred with back pain to have Triage assessment and grading of FSA referral by a specially trained Physiotherapist with subsequent referral to a surgeon if surgical pathology exists – or the patient is referred to primary setting as appropriate. This clinic is located alongside other Orthopaedic clinics.

Radiology Review of 1 year follow up for hips and knees. Changes to Follow-up joint patients will see 1 year follow up of primary hip and knees being reviewed radiologically with accompanying questionnaire based feedback from the patient reducing the need for in person clinic based Follow-Up appointments.

Clicky hip management is currently predominately SMO led with some Nurse led involvement. The referral patterns from Plunket have resulted in large volumes being referred with few requiring treatment. Plans are underway for Plunket Nurses to be up-skilled on clicky hip assessment by an SMO in outpatient clinic

Tendon Achilles lengthening This procedure can be undertaken in a clinic setting under local anaesthetic preparation and followed by casting techniques. This removes the need for operating theatre and a general anaesthetic

Potential development of day stay Arthroscopic procedures being undertaken in an outpatient setting with procedural type facilities - away from a main hospital base, and not requiring main theatre facilities but serviced with adequate anaesthetic facilities

Templating system An electronic templating system for surgical scenario planning with the ability to identify placement of surgical cut lines and estimation of implant replacement dimensions using industry standard templates is being introduced in 2007. This will provide a radiological image of an implant which is placed over the patients x-ray to determine the appropriate size and position of the implant for insertion.

Nurse Specialists

Increase use of nurse specialist role for assessment, monitoring and follow up for identified conditions/procedures, particularly in the areas of joint replacement, oncology and community based paediatric casting services

2.2 Proposed Service Development

- Focus on the development of the transfer of inpatient facility procedures to ambulatory care settings.
- Development of Physiotherapy led FSA clinics.
- Increasing involvement of nurse specialists in patient management and the development of Nurse-led inpatient discharges.
- Review of Interim care requirements for patients requiring specialised assistance e.g. Non weight bearing.
- Development of regional outreach services for semi-complex paediatric patients is a possible future model of care.
- Further development of Orthogeriatric role.
- Improved services for Spinal Patients with the development of the Rehabilitation Centre at Manukau campus.
- Increasing the percentage of patients requiring post-discharge or post-surgery followed-up by GPs, nurses or physiotherapists rather than specialist surgeons.

2.3 Movement of procedures or components of Care to greater ambulatory care delivery

- Physio led back pain – model of care change in progress.
- Tendon Achilles lengthening in a clinic setting under local anaesthesia - as opposed to a general anaesthetic. The movement of some lengthening procedures from inpatient to clinic setting will be subject to developing protocols for patient flow, pain management. Changing of pre-operative pathway would also be required. It is estimated that 30% of current paediatric lengthening will be able to be transferred. Bed day costs will not be saved as these are routinely day-stay however theatre sessions and anaesthetic time will be made available for other elective cases.

2.4 Workforce factors affecting movement care to ambulatory setting

- Nurse led initiatives are dependant on the development and recruitment of suitably skilled and experienced nursing staff.
- Clinical Nurse Specialist integration across inpatient/outpatient/community and supporting the development of consistent best practice standards across different settings e.g. casting standards across into GP Practices and Accident and Medical Centres.
- Collaboration with PHO's to increased and improve communication and the quality of referrals between GPs for both inpatient and outpatient services.
- Orthogeriatric model of care with increased focus on elective pre-assessment to accommodate an ageing population with increasing chronic conditions.
- Enhancement of musculo-skeletal and community / school based paediatric speciality physiotherapy skills.
- Increased allied health involvement in preadmission, community follow up, provision of home-based rehabilitation and support to facilitate early discharge post operatively (e.g. day 3 post joint replacement) for suitable patients.

Appendix

3.1 Draft Model of Care template per speciality

Service: Orthopaedics Hip and Knee

Model of care planning template V2

Conditions: OA Hip and OA Knee

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Obesity management Lifestyle management	Population at risk of joint replacement (Obese, >65 yrs)			
	Early Detection		Fracture Neck of Femur			
	Supported Self Care			Pain Management Alternative self medication e.g. Glucosamine, Chondroitin <i>Participation in selected exercise program for joint protection and pre surgery conditioning</i>	Pain Management Alternative self medication e.g. Glucosamine, Chondroitin <i>Participation in selected exercise program for joint protection</i>	
	Disease / Injury specific care			GP assessment and medical management Referral to Orthopaedic specialist Radiology review Orthotics Pain management Physiotherapy	GP assessment and medical management Referral to Orthopaedic specialist Radiology review Orthotics Pain management Physiotherapy	<i>Primary care coordination and management of support services Physiotherapy Orthotics Home health Care Meals on Wheels Podiatry Pain management</i>

	Specialised Care			FSA management with access based on CPAC Pain Management Radiological investigation	FSA management with access based on CPAC Pain Management Radiological investigation Surgical Intervention relevant to stage of disease process	FSA management Pain Management Radiology Surgical Intervention relevant to stage of disease process
	Day Admission			Arthroscopic surgical Intervention relevant to stage of disease process	Minimal day stay options of advanced techniques foreseen in the immediate future	
	Inpatient Admission			Joint resurfacing techniques to defer need for prosthetic replacement	<i>Decrease LOS with increased community support requirement to allow further reductions in LOS</i> Increased longevity of prosthetic components with technology advances Introduction of templating system in 2007 will allow a better fit of prosthesis. <i>Possible introduction of new technique using Anterior approaches will decrease length of stay but increase intraoperative time</i>	Surgical intervention requirements for revision arthroplasty management. Expect slowly decreasing demand for revision due to improved prosthetic implant fit and procedure types.
	Palliative Care					Home Health Care Residential Care Mobility issues

Conditions: spinal cord and nerve compression, scoliosis anterior and posterior, intravertebral disc protrusion

		Need Complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	ACC public awareness campaigns for back care and accident prevention Occupational health and safety programmes in workplaces General safe care of back	General fitness and healthy lifestyle Occupational health and safety programmes			
	Early Detection		Occupational health and safety programmes GP, osteopath and chiropractor checks	Early assessment and diagnosis by GP's and referral to specialist Early intersectoral communication and sharing of information Occupational health and safety programmes GP, osteopath and chiropractor checks Physiotherapy exercise programmes Orthopaedic clinics	Occupational health and safety programmes GP, osteopath and chiropractor checks Physiotherapy exercise programmes Orthopaedic clinics	
	Supported Self		GP, osteopath and	GP, osteopath and	GP, osteopath and	These have the

	Care		<p>chiropractor checks</p> <p>Exercise</p> <p>Safe lifting techniques</p> <p>Work safety as per occupation Health and safety programmes</p>	<p>chiropractor checks</p> <p>Utilising Physiotherapy programmes through outpatient or private providers.</p> <p>Use of Orthotic supports/splints/braces</p> <p>Pain management</p> <p>Expert patient and Support groups</p> <p>ACC work support for retraining or adjustment to work practices.</p> <p><i>Home based carers need to have rehabilitation philosophy</i></p>	<p>chiropractor checks</p> <p>Utilising Physiotherapy programmes through outpatient or private providers.</p> <p>Use of Orthotic supports/splints /braces</p> <p>Pain management</p> <p>Expert patient and Support groups</p> <p>ACC work support for retraining or adjustment to work practices</p> <p><i>Home based carers need to have rehabilitation philosophy</i></p> <p><i>Gap: convalescent type care facilities catering for younger population that do not fit criteria for >65 yrs AT&R services.</i></p>	<p>opportunity to be chronic and long term disability conditions.</p> <p>Ongoing self management supported by primary and community based care are the mainstay of management with episodic specialist intervention prn</p> <p>Pain management</p> <p>Expert patient, family and Support groups</p> <p>Home Health Care support of a wider range of services</p> <p>Some residential care Private hospital / rest home</p> <p>Teams of carers</p>
	Disease / Injury specific care		<p>Routine GP and Primary care intervention</p> <p>Referrals to Orthopaedic service Physiotherapy Occupational therapy</p> <p>Orthotic</p>	<p>Routine GP and Primary care intervention</p> <p>Referrals to Orthopaedic service Physiotherapy Occupational therapy Orthotic Spinal rehabilitation services</p>	<p>Routine GP and Primary care intervention</p> <p>Referrals to Orthopaedic service Physiotherapy Occupational therapy Orthotics for splinting / bracing Spinal rehabilitation services</p>	<p>Physiotherapy</p> <p>Occupational therapy</p> <p>Orthotic splinting</p> <p>Pain management</p> <p>Expert patient, family and Support groups</p>

			bracing/splinting	Rapid access to radiology investigations (MRI, CT)		Home Health Care support - District nurse Residential care Private hospital / rest home Teams of carers
Specialised Care				<p>Currently Multidisciplinary team care with Specialist Orthopaedic Spinal surgeon responsible for care with input from Rehabilitation consultant who then takes over care in the rehabilitation phase at Spinal Rehabilitation facility</p> <p>Inpatient ward setting for initial management with surgical intervention as appropriate.</p> <p>Rehabilitation at Spinal Unit Home health care services ACC Case manager if appropriate</p> <p><i>Development of specialised treatment centre providing continuum of care from acute presentations</i></p>	<p>Currently SMO led with Allied Health team managing the rehabilitation needs and networks Limited availability of community based case management for non accident related spinal patients</p> <p>As well as hospital ambulatory care based options</p> <p><i>Development of community based satellite clinics and inpatient facilities for rehabilitation or treatment</i></p> <p><i>Development of Spinal Nurse Specialists for pressure ulcer and ADL management</i></p> <p>Use of Orthotic splinting</p>	<p>Orthotics</p> <p>Specialised equipment needs</p> <p>Surgical Intervention PRN</p> <p>Palliative care in home – home health care</p>

				<p><i>through to rehabilitation and ongoing community support.</i></p> <p><i>Development of community based satellite clinics for non complex surgical intervention – pressure ulcer management.</i></p> <p><i>Development of Spinal Nurse Specialists for pressure ulcer and ADL management</i></p> <p>Use of Orthotic splinting</p>		
	Day Admission			Limited shift to day patient surgery for less complex surgical spine procedures.	Limited shift to day patient surgery for less complex surgical spine procedures.	Respite Day care Allied Health Home health Care reassessments Orthotics
	Inpatient Admission			Minor interventions New techniques Inpatient management for management of co morbidity risk <i>Availability of MRI (onsite) and CT at MSC an issue to achieve an integrated ambulatory service</i>	Surgical intervention with less invasive approaches Arthroscopic based surgery Range of surgical interventions eg Tendon transfers, pressure ulcers Equipment advances being available for providing support for ADL's Future research and improved treatment for spinal cell stem rejuvenation	Surgical intervention for palliation and pain management PRN Residential care Private hospital / rest home

					<p><i>Gaps</i> <i>Lack of spinal unit beds both for rehabilitation following acute/elective episode of care and inpatient treatment of complications e.g. pressure ulcer.</i></p> <p><i>Medical model has limited integration of Rehabilitation Physician with orthopaedic service. Dedicated Rehabilitation Physician required for Orthopaedic Services.</i></p> <p><i>Limited Urology service input into Spinal patients</i></p>	
	Palliative Care					<p>Palliative care in home – home health care with ADL support Consultation with specialist services PRN Pain relief management</p>

Discussion

ACC is playing an important population health role in preventing back injuries across New Zealand and local attention should focus on personal health. There is a strong correlation between acute and elective spinal treatment and ongoing needs for care however the volumes of the two groups differ considerably.

Service: Orthopaedics General

Model of care planning template V2

Conditions: including oncology, foot and ankle, non Osteo-arthritis, hip and knee, upper arm

		Need Complexity					
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition	
	Prevention	Diabetic Health checks General healthy lifestyle issues General care of limbs					
	Early Detection		Routine GP checks Diabetic Clinic checks	Routine GP checks Diabetic Clinic checks	Routine GP checks Diabetic Foot clinic		
	Supported Self Care		Routine GP checks Diabetic Clinic checks	Routine GP checks Diabetic Clinic checks Physiotherapy Orthotic splinting Alternative medicines e.g. Glucosamine, Chondroitin Pain management Expert patient and Support groups including cancer society	Routine GP intervention Diabetic Clinic checks Physiotherapy Orthotic splinting Alternative medicines eg Glucosamine, Chondroitin Pain management Expert patient and Support groups including cancer society	Physiotherapy Occupational therapy Orthotic splinting Alternative medicines e.g. Glucosamine, Chondroitin Pain management Expert patient, family and Support groups Home Health Care support - District nurse Residential care Private hospital / rest	

						home Diabetic clinics Teams of carers Home health Care Hospice /Palliative care / Oncology
	Disease / Injury specific care		Routine GP and Primary care intervention Diabetic Clinic checks Referrals to Orthopaedic service Physiotherapy Occupational therapy Podiatry Orthotic splinting	Routine GP and Primary care intervention Diabetic Clinic checks Referrals to Orthopaedic service Physiotherapy Occupational therapy Podiatry Orthotic splinting Multi specialities can be involved in patient care destination of referral is dependent on addressee by GP <i>Gap - Shared care system of referrals</i> GP and A&M centre management of simple fractures with access to specialist services if indicated	Routine GP and Primary care intervention Diabetic Clinic checks Referrals to Orthopaedic service Physiotherapy Occupational therapy Podiatry Orthotic splinting Multi specialities can be involved in patient care destination of referral is dependent on addressee by GP <i>Gap - Shared care system of referrals</i>	Physiotherapy Occupational therapy Orthotic splinting Pain management Expert patient, family and Support groups Home Health Care support - District nurse Diabetic Nurse Specialist Residential care Private hospital / rest home Diabetic clinics Teams of carers Home health Care Hospice /Palliative care / Oncology
	Specialised Care			Currently SMO led Shift to clinic based Tendo Achilles lengthening for	Currently SMO led <i>Development of combined service clinics eg Orthopaedics and</i>	Limb Centre for prosthetics Surgical Intervention PRN

				<p>appropriate patients.</p> <p><i>Development of combined service clinics e.g. Orthopaedics and Rheumatology</i></p> <p><i>Improving the access to podiatry services for specific patients</i></p> <p><i>Development of community based satellite clinics for non complex surgical intervention.</i></p> <p>Development of Nurse Specialists (Paediatric, Orthopaedic, Rheumatology) and nurse led clinics for case management, followup, patient education and the assessment and development of treatment plans for select conditions</p> <p>Use of Orthotic splinting</p> <p>Nurse led casting services</p>	<p><i>Rheumatology</i></p> <p><i>Improving the access to podiatry services for specific patients</i></p> <p>As well as hospital ambulatory care based options, <i>Development of community based satellite clinics for non complex surgical intervention.</i></p> <p><i>Development of Nurse Specialists (Paediatric, Orthopaedic, Rheumatology) and nurse led clinics for case management, followup, patient education and the assessment and development of treatment plans for select conditions</i></p> <p>Use of Orthotic splinting and Limb centre input</p> <p>Early surgical intervention</p> <p>Nurse led casting services</p>	<p>Palliative care in home – home health care and hospice based supporting family.</p>
	Day Admission			<p>Shift to day patient surgery</p>	<p>Shift to day patient surgery</p> <p>Day stay Tendon Achilles lengthening</p>	<p>Aged care</p> <ul style="list-style-type: none"> - Respite - Day care <p>Allied Health Orthotics Limb Centre</p>
	Inpatient Admission			<p>Minor interventions</p> <p>New techniques</p>	<p>Surgical intervention with less invasive approaches</p>	<p>Surgical intervention for palliation and pain</p>

				Inpatient management for patients with high co-morbidity risk	<p>Arthroscopic based surgery</p> <p>Palliative Surgery PRN</p> <p>Increased longevity of prosthetic components with technology advances will reduce the rate of patients proceeding to revisions</p> <p>Radiological advances leading to ongoing reductions in invasive investigations (CT/MRI reducing need for arthroscopy)</p> <p>Equipment advances what?</p> <p>Use of Interim Care (temporary residential care episode coordinated by the Orthopaedic Specialty Nurses) to reduce hospital LOS and costs</p>	<p>management PRN</p> <p>Chemical Sympathectomies amputations</p> <p>Residential care</p> <p>Private hospital / rest home eg amputees</p> <p><i>Gap - Difficulties with placement of <65 yrs for rehab and residential care</i></p>
	Palliative Care					<p>Palliative care in home – home health care and hospice based supporting family.</p> <p>Consultation PRN</p> <p>Pain relief management</p>

Discussion

Need to define oncology services, particularly what is the scope of Orthopaedics vs. the scope of General Surgery
 Process of placement of patients in interim care (temporary residential care episode) but, particularly the budget needs review

Conditions: Paediatric Club Foot, DDH, Cerebral Palsy

		Need Complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Unpreventable – will always be a proportion of births with congenital abnormalities.	Community and primary care based awareness programmes regarding these conditions. Minor increase expected with future population increase.			
	Early Detection	Awareness of familial and / or genetic tendency particularly amongst Maaori and Pacific populations. Genetic screening may be developed?	Pregnancy Screening Plunket Checks School/Public Health Nurse GP checks Post natal check for all children for CDH and Club foot.	Routine GP checks Paediatric and orthopaedics clinics	Proportion of population not utilising early detection systems leading to late referrals with more advanced conditions	
	Supported Self Care			Community based expert patient and disability focused based support groups Utilising Physiotherapy, Orthotic services School intervention and education programmes, some in specialised schooling units Pain management <i>Home based paediatric</i>	Community based expert patient and disability focused based support groups Utilising Physiotherapy, Orthotic services School intervention and education programmes, some in specialised schooling units Pain management	These are or have opportunity to be chronic long term disability conditions. <i>Ongoing self care supported by limited primary and community focused care are the mainstays of management with episodic specialist intervention PRN</i>

				<i>care for plaster management</i>	<i>Home based paediatric care for plaster management</i>	
	Disease/Injury specific care			<p>Routine GP checks</p> <p>Referral to combined Ortho/ Physio clinic or separate clinics from Paediatric, Orthopaedic Physiotherapist Occupational Therapist Orthotics <i>Gap in availability combined MDT clinics</i></p> <p>School intervention and education programmes</p> <p><i>Specialised school Physiotherapy programmes. Surgery usually scheduled to optimise access to physiotherapy</i></p> <p><i>Development of community / PHO based casting services</i></p> <p>Pain management</p>	<p>Regular GP checks</p> <p>Referral to combined Ortho/ Physio clinic or separate clinics from Paediatric, Orthopaedic Physiotherapist Occupational Therapist Orthotics <i>Gap in availability combined MDT clinics</i></p> <p><i>Specialised school Physiotherapy programmes. Surgery usually scheduled to optimise access to physiotherapy</i></p> <p><i>Regional outreach service for semi complex patients is a possible future model of care.</i></p>	<p>These are or have opportunity to be chronic long term disability conditions.</p> <p><i>Ongoing self care supported by limited primary and community focused care are the mainstays of management with episodic specialist intervention PRN</i></p> <p><i>Out of area paediatric patients requiring ongoing care in adulthood will need to be referred to local DHB provider – ADHB or WDHB.</i></p>
	Specialised Care			<p>Regular follow up by paediatric or orthopaedic team.</p> <p><i>Community based satellite clinics for non complex surgical intervention.</i></p> <p>Specialised Casting</p>	<p><i>Development of MDT clinics involving (orthopaedic specialist, orthopaedic nurse specialist, paediatrician)for complex patients</i></p> <p>Referral to Limb centres, Paediatric Home Care Nurse Specialists (Paediatric, Orthopaedic)</p>	<p>These are or have opportunity to be chronic long term disability conditions.</p> <p>Ongoing self care supported by primary and community focused care are the mainstays of management with</p>

				<p>intervention available - Nurse led</p> <p><i>Nurse led mini procedures e.g. casting</i></p> <p>Early surgical intervention to provide optimum results</p>	<p>Ongoing Follow up and treatment planning by Orthopaedic Specialist</p>	<p>episodic specialist intervention PRN</p>
	Day Admission			<p>Further increases in the scope of surgery undertaken as day case</p> <p>Expect some shift of care from day and inpatient admission into clinic and community setting</p> <p><i>Nurse led casting further utilised</i></p>	<p>Further increases in the scope of surgery undertaken as day case</p> <p>Expect some shift of care from day and inpatient admission into clinic and community setting</p> <p><i>Day stay Tendon Achilles A lengthening under development</i></p> <p><i>Nurse led casting further utilised</i></p>	
	Inpatient Admission			<p>Decreasing proportion of inpatient surgery with development of increased range of day patient procedures and non-surgical management</p> <p>Inpatient management for management of co morbidity risk</p>	<p>Decreasing proportion of inpatient surgery with development of increased range of day patient procedures and non-surgical management</p> <p>Decreasing LOS with case management, technology and care advancement.</p>	
	Palliative Care					

Discussion

Orthopaedic service focus is around surgical intervention for these patients. The primary responsibility for coordination of care and community based management lies with paediatric based Kidz First service.

3.2 Change in Procedure/Component of Care Table

Orthopaedic - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic)Procedure	Outreach Office Surgery
Now	THJR / TKJR	100% Specialist	Nil	Nil	Nil
2010		100% Specialist	Nil	Nil	Nil
2020		100% Specialist	Nil	Nil	Nil
Now	TAJR Arthrodesis Foot	100% Specialist	Nil	Nil	Nil
2010		90% Specialist	10% Specialist	Nil	Nil
2020		80% Specialist	20% Specialist	Nil	Nil
Now	Club Feet (Paediatric)	15% Specialist	60% Specialist 10% Nurse Specialist	10% Specialist 5% Nurse Specialist	Nil
2010		10% Specialist	45% Specialist 10% Nurse Specialist	15% Specialist 10% Nurse Specialist	10% Specialist
2020		10% Specialist	10% Specialist	20% Specialist 20% Nurse Spec	25% Specialist 15% Nurse Spec
Now	Botox (CP)	15% Specialist	85% Specialist	Nil	Nil
2010		5 % Specialist	20% Specialist	40% Specialist 20% Nurse Spec	15% Specialist
2020		5% Specialist	5% Specialist	40% Specialist 20% Nurse Specialist	20% Specialist 10% Nurse Specialist
Now	Knee Non OA	40% Specialist	50% Specialist	10% Specialist	Nil
2010		20% Specialist	60% Specialist	20% Specialist	Nil
2020		10% Specialist	10% Specialist	35% Specialist 10% Nurse Spec	30% Specialist 5% Nurse Spec
Now	Spinal	95% Specialist	5% Specialist	Nil	Nil
2010		85% Specialist	15% Specialist	Nil	Nil
2020		75% Specialist	20% Specialist	5% Specialist	Nil
Now	Shoulder/Upper Arm	85% Specialist	15% Specialist	Nil	Nil
2010		70% Specialist	30% Specialist	Nil	Nil
2020		30% Specialist	50% Specialist	10% Specialist	10% Specialist

3.2 Role Delineation Model

<u>Specialty: Orthopaedics</u>	<u>Clinical Support Level</u>								
	<u>Specialty</u>	<u>Pathology</u>	<u>Pharmacy</u>	<u>Imaging</u>	<u>Nucl.Med</u>	<u>Anaesthet ICU</u>	<u>CCU</u>	<u>Op.Theatres</u>	
Middlemore-Current Actual	6	5	5-6	5-6	4	6	6	5	6
Middlemore-Current Required	6	4	4	5	5	5	5	3	6
Middlemore-Proposed (Yr)									
Manukau - Current Actual	6	2-3	2	3-4	4	5-6	4	1	4-6
Manukau - Current Required	6	4	4	5	5	6	6	3	6
Manukau - Proposed (Yr)									

Levels dependent on RDM scoping of rehab services which currently looks like level 4-5 (20/12)
meet all Ortho requirements for level 6

Specialty: General Surgery

Current Service Configuration and Model of Care

1.1 Description of Service

The Department of General Surgery provides a wide range of secondary and tertiary general and vascular surgical services to the people of the CMDHB region. Services include both elective and acute surgery, and specialist consultation in the out-patient setting. Acute growth in General Surgery is currently running at between 10 and 15% per annum.

General Surgery acute, trauma and some elective services are provided at the Middlemore Hospital campus, whilst an increasing volume of Elective surgery has moved to Manukau Surgery Centre including complex colorectal and upper gastrointestinal cases. The General Surgery Department at CMDHB holds a premier status as a training institution for surgical trainees and undergraduates.

1.2 Current Service co-locations and synergies

Breast Screening Aotearoa (BSA)

The General Surgical Department works closely with Breast Screen Aotearoa which is co-located at Manukau SuperClinic.

Multidisciplinary Breast Team

There are approximately 250 new breast cancers diagnosed annually. These are managed very effectively within the multi-disciplinary team (MDT) environment. The Breast surgeons, with General Surgery and Plastic Surgery foci, are important parts of the MDT. The patients are seen by the full team in outpatient clinic as a "one stop shop". Although the General and Plastic Surgery services are spread across two sites they are actively engaged in the twice weekly meetings on Tuesday and Thursdays.

Vascular Laboratory

The vascular laboratory is also co-located with the module at SuperClinic as a 'one stop shop' which includes sonography. This allows for more efficiently follow up of these complex patients.

Tertiary Services

ADHB provide tertiary general surgery services for the people of Counties Manukau - , particularly for liver and upper GI patients. A synergy with these services is maintained through regular MDT meetings.

1.3 Desirable Service Co-locations and synergies

Oncology Services

Currently CMDHB patients are required to attend ADHB in order to receive cytotoxic chemotherapy and radiotherapy. This poses a number of challenges for the people of Counties Manukau and a satellite chemotherapy service is being commenced at Manukau SuperClinic. This will encourage patient compliance with treatment regimes, reduce the financial burden on the families, and support improved integration of care between oncology and general surgery.

Physicians at Manukau Surgery Centre

Currently medically unstable patients at Manukau Surgery Centre require ambulance transfer to Middlemore Hospital Physician input pre-operatively and post-operatively for patients at MSC will improve the standard of care at Manukau campus and reduce the transfer of patients to MMH.

Allied Health Support Manukau Surgery Centre

There is a limited Allied Health service provided to patients in the Manukau Surgery Centre. Extension of the service by providing greater input into patient care is required with expected impact to be reduction in the number of follow up appointments required for post operative patients and

possible reduce the unplanned readmission rates whilst improving the patient experience and recovery.

Teleconference Facilities

Working on 2 sites has compromised some involvement in MDT discussions. With the addition of teleconference facilities more members of the MDT could be available to discuss and plan patients care.

1.4 Key issues, opportunities and technology affecting the speciality

Cancer Incidence

With screening and surveillance practices cancer rates have remained relatively static as a percent of population with the exception of upper gastrointestinal cancers. The General Surgery team will need expansion to accommodate this area of growth. With expected growth in population some increased demand across all types of cancer treatment can be expected. Wider screening using cancer markers for high risk patients could be initiated in primary care in order to allow early identification of patients with cancer related disease and thus earlier treatment intervention.

Morbid Obesity

There are currently 10,339 morbidly obese people in CMDHB with the health problems associated with the definition. One of CMDHB's strategic outcomes requires both surgical and non-surgical intervention to manage the disease to get desired outcomes. General Surgery is involved in the provision of laparoscopic banding and stapling of the stomach - along with the ongoing post-operative management of these patients as part of a larger team.

'Fast Trak' Surgery

In 2004 'fast trak' surgery was introduced at CMDHB. It is based on a Danish concept involving a thorough preparation of the patient, with eating and mobilising almost immediately following their operation. This has reduced the length of stay to 5 days for colorectal cases (without stoma) and has vastly improved the patient experience. Further extension to other types of general surgery is proposed in the future.

Vascular Surgery

The available technology in vascular surgery is constantly improving. With the development of the interventional suit in radiology there has been a small increase in the number of endo-luminal procedures completed and further development of this treatment modality will occur in the future. In addition there have been many practice changes initiated overseas that following evaluation, may be initiated in CMDHB if appropriate to our population needs.

Acute Workload

If acute growth of 10-15% per annum continues into the future changes in service configuration will be required to accommodate the change. Acute call is difficult for SMO's while working across 2 sites.

Clinic availability and scheduling

Additional clinic availability is required to meet the growing needs for FSA outpatient activity and to enable more responsive scheduling to meet patient needs. The current clinic scheduling processes that take 6 weeks to implement changes need review.

Manukau Surgery Centre Theatre Suite

Extension of daystay surgery hours to 2300hrs is desired to extend the range of procedures able to be undertaken as day stay.

Community Links

Strengthening links with referrers with better communication to GPs will ensure more appropriate referral – some GPs are not referring cases that now would qualify for General Surgery procedures under the new, lower thresholds.

Workforce Issues

Shortages of nursing, medical and anaesthetic staff are having a significant impact on the ability to provide a consistent service and meet production targets. While this is an international problem, CMDHB strives to make General Surgery a 'magnet' workplace.

1.5 Existing Continuum of Care “gaps” for patients accessing this service

Vascular services

Currently vascular patients present when they are experiencing symptoms, either through the ED or their GP. Introduction of screening for Abdominal Aortic Aneurysm (AAA) subject to meeting clinical criteria will reduce the rate of acute AAA, and improve the outcomes for patients when treatment for AAA can be managed as an elective procedure.

Better utilisation of primary healthcare resources and the development of a GPwSI programme

Providing GPwSI direct waiting list access (e.g. hernias) or supporting them to treat some conditions that are currently referred to the General Surgery service (e.g. excision of lipomas), would better use scarce health resources.

Shared Multidisciplinary Care

The provision of more multi-speciality consultation for patients requiring assessment and/or treatment from more than one speciality will be developed where this can be provided in an effective and efficient manner.

Oncology services

General Surgery have a specialist clinician with expertise in soft tissue tumour management who is informally referred cases for management, with frequent referrals and treatment requests for patients from across the country. These are authorised on a case by case basis. If this is to continue the establishment of a new position that provides overall coordination of patient's needs and support, would be of benefit, particularly when a significant number reside outside of the CMDHB domicile. There is at times tension with the undefined scope of the service and the cross over of General Surgery and the newly establishing Orthopaedic oncology service. A clear pathway for accessing services is required.

Development of an outreach cytotoxic chemotherapy service at Manukau is proposed in 2007. This will improve cancer services for people of CMDHB, and support better coordination between General Surgery (CMDHB) and Oncology (ADHB).

1.6 Identification of key intersectoral relationships and opportunities

There is a partnership between Counties Manukau DHB, **Manukau Institute of Technology** and the **University of Auckland** and this supports training and development of health professionals within the service.

Pressure ulcer management

Greater care coordination and participation by private providers in residential and personal care combined with early primary care and District Nursing management would improve the management of early pressure ulcers, and minimise the involvement of the General Surgery or Plastic Surgery services required to managed large pressure ulcers.

Voluntary Support Groups

Cancer society, Crohn's support groups and breast cancer support groups are active in supporting service alignments, and provide a strong advocacy focus with improvement in care delivery.

Grey Power plays a strong advocacy role for elderly patients and have strong networks that can be used for communication with its members.

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care for General Surgery conditions

Direction of Care

It is expected the major change in care will be a refinement of surgical techniques, that whilst this will create an increase in intraoperative time for some procedures, it will result in a shorter length of stay in hospital for the patient, enhanced surgical outcomes, and earlier return to work is likely. Some patients require multiple operations spanning several years and this is unlikely to change.

Nurse Specialists

Nurse Specialists will continue to play an expanding role in case management and undertaking of minor procedures e.g. skin cancer management, surveillance of bowel cancer patients, and Breast Care Nurse Specialist coordination of breast cancer care. Training and funding packages will be developed to ensure that the skills and expertise for this develop are available.

Multidisciplinary Service Provision

Development of further collaborative multidisciplinary approaches to management of patients including

- Soft tissue tumour management with Orthopaedics and Oncology
- Bariatric (obesity) management

Direct Access to Booking List for Treatment

Following development of referral processes further conditions will be able to be directly wait listed for treatment by credentialed GP's (e.g. Haemorrhoids, skin lesions, lipomas)

Primary Care Development

With a desire to retain and or shift more components of care to the ambulatory and community care settings, a medium term programme for up-skilling both GP's and practice nursing staff in the management of additional General Surgery conditions is required in areas such as wound care, non complex skin lesion management, primary options for managing haemorrhoids

Role of Junior Medical Staff

Ongoing significant difficulties' filling available junior medical staff positions, due to international staff shortages, is compromising the provision of services. A review of the medical staffing model including refining the practice of junior medical staff and considering the introduction of the role of physician assistant needs to be completed to provide direction for future service provision.

2.2 Proposed Service Development:

- Establishment of an Upper Gastrointestinal and Bariatric service using an in-house, one-stop approach to assessing and treating this disease group. An experienced surgeon is available to perform the bariatric surgery and other skilled professionals are available locally.
- Extension of the 'fast trak' surgery programme beyond colorectal surgery, to include other conditions with resultant reductions in length of stay.
- Increasing involvement of skilled nurse specialists in the management of selected stable patients. Cancer surveillance in colorectal and breast patients are examples as is the management of vascular patients.
- Vascular service will expand to include stronger links with the community - development of a dedicated and skilled team working in the community alongside GPs to provide wider and improved surveillance to defined patient groups. The use of interventional radiology is increasing but there is still room for the adoption of further available new vascular technologies and techniques for patient management.

2.3 Movement of procedures or components of Care to greater ambulatory care delivery

A number of procedures will move to more ambulatory settings reducing inpatient admissions and hospital lengths of stay

Development of the Nurse Specialist to undertake advanced nursing practice activities and the development GPwSI roles for procedures such as banding of haemorrhoids.

Vascular screening clinics extending into the community with surveillance of the general at risk population.

2.4 Workforce factors

- Ongoing promotion of General Surgery as a 'magnet' workplace for the future.
- Introducing formal succession planning incorporating the development of new skills and techniques within the department, and providing opportunities for training for senior clinical roles
- Managing competing salaries between the public and private sectors.
- High acute surgery growth challenges staff retention and job satisfaction.
- Development of a nursing career pathway that supports and enables development of specialist nurses is required. Nurse led initiatives are dependant on the development and recruitment of suitably skilled and experienced nursing staff. Clinical Nurse Specialist roles in General Surgery will need to be integrated across inpatient, outpatient, and community settings – this requires nurses with an expanded focus, excellent team building skills.
- Supported development of care teams with qualified professionals supported by unregulated staff.
- An aging nursing workforce will challenge the ability to provide services across all settings.

Appendix

3.1 Draft Model of Care template per speciality

Service: General Surgery - Breast

Model of care planning template V2

Conditions – Breast Cancer at various stages, breast lumps non malignant, breast cysts

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Awareness programmes re importance of preventative measures. Mammograms 45-69 through Breast Screen or if indicated earlier / more frequently through CMDHB or Breast Screen Breast Checks				
	Early Detection	Mammograms 45-69 through Breast Screen or if indicated earlier / more frequently through CMDHB or Breast Screen Breast Checks	Mammograms 45-69 through Breast Screen or if indicated earlier / more frequently through CMDHB or Breast Screen Breast Checks	Mammograms 45-69 through Breast Screen or if indicated earlier / more frequently through CMDHB or Breast Screen Breast Checks		
	Supported Self Care		Education Well women's service in pods in community	<i>Gap – need a one stop shop for education</i>		Teams of carers Home Health Care Hospice /Palliative care / Oncology
	Disease / Injury specific care		Education with GP, Community based nurses, NP, CNS.			<i>Potential Gap – GP involvement in end stage of care and family availability to provide</i>

						<p><i>end stage care.</i></p> <p>Teams of carers Home Health Care Hospice /Palliative care / Oncology</p>
	Specialised Care		Nil other than education and screening	<p><i>Gap - Reconstructive one stop shop teams Envisage a specialised continuum of care with a team of nurses led by a nurse practitioner supported by CNS and RN's including new graduates. For career pathway.</i></p>	<p><i>Gap – in Oncological service available at CMDHB patients are required to travel to ADHB for treatment</i></p> <p><i>One stop shop philosophy includes following available at time of diagnosis</i> Plastic surgery Oncologist Psychologist Nurse Practitioner Surgeon Social Worker</p>	Palliative care in home – home health care and hospice based supporting family.
	Day Admission			<p><i>Expand Nurse Specialist role and introduce GPwSI</i></p> <p>Nurse specialist currently undertaking Drainage seromas <i>could also do</i> FNA Core biopsies</p>	<p>Shift to day stay continuing particularly with use of WLE and SNB.</p> <p>Use of interventional radiology increasing</p>	<p>Adjunct therapy often causes delay to surgical intervention.</p> <p>Respite day care</p>
	Inpatient Admission				<p>Decreasing LOS with more emphasis on WLE vs Mastectomy.</p> <p>Mastectomy normally 1 night LOS, WLE day or 1 night dependent on time of surgery.</p> <p>Immediate/rapid</p>	General Surgery provides episodes of care rather than continuity

					reconstruction	
	Palliative Care				<i>Community based more so than currently with smaller pods in local settings and lots of respite care to the carer very important.</i>	<i>Follow up care of carers – expanded bereavement care programme</i>

Service: General Surgery - Colorectal

Model of care planning template V2

Conditions – bowel cancers, haemorrhoids, anal fissures, PR bleeding, Diverticular Disease

		Need complexity				
		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
Component of Care	Prevention	National and local Dietary advice campaigns (High fibre/low fat diets) Reducing obesity <i>Development of Community dieticians situated with PHOs would support weight loss and healthy diets that will reduce bowel conditions – particularly cancers</i> Possible weight reduction / specialised diets etc	Specialised diets if appropriate to conditions CMDHB dietary initiatives targeting Pacific Island people to improve diets will reduce cancer rate and obesity.			
	Early Detection	<i>Proposed general population screening is likely</i> <i>This may include CT colonography +/- colonoscopy +/- cancer markers</i>	Current screening for at risk (personal/family) individuals. 12 monthly surveillance by CT scanning/colonoscopy	Ongoing monitoring/removal of polyps to reduce risk of developing bowel Cancer. Staged colonoscopy by protocol for patients with past history of colorectal cancer		

	Supported Self Care		Encourage attendance at screening	<p>Active management of bowel disease processes with assistance of Support groups eg Crohns Disease</p> <p>Community Health Workers (Support workers with district nurse oversight) support restorative functioning programmes.</p> <p>Wound and ostomy support from District Nurses</p>	<p>Active management of bowel disease processes with assistance of Support groups eg Crohns Disease</p> <p>Community Health Workers (Support workers with district nurse oversight) support restorative functioning programmes.</p> <p>Wound and ostomy support from District Nurses</p>	
	Disease/Injury specific care	GP / Practice Nurse providing appropriate education and advice	<p>GP / Practice Nurse providing appropriate education, advice and referral</p> <p><i>Proposed development of screening using cancer markers for high risk patients in primary care</i></p>	<p><i>Community based centres with Nurse led MDT available to run clinics and offer advice. May include genetic counselling etc. One stop shop approach for patients in their neighbourhood.</i></p> <p><i>GPs credentialed to undertake Haemorrhoid banding, proctoscopy</i></p> <p>Ongoing GP management of chronic conditions including irritable bowel syndrome, Crohns disease, diverticular disease.</p> <p><i>GP and or Nurse Specialist provide outpatient followup using</i></p>	Ongoing GP management of chronic conditions including irritable bowel syndrome, Crohns disease, diverticular disease	<p>GP oversight of palliative care needs</p> <p>Teams of carers Home Health Care Hospice /Palliative care / Oncology</p> <p><i>Potential Gap – GP involvement in end stage of care and family availability to provide end stage care.</i></p>

				<i>protocol driven approach</i>		
	Specialised Care		<i>Database formation for people at risk and requiring regular surveillance</i>	<p>Nurse Specialists in clinics monitoring conditions and follow up.</p> <p>Specialist Ostomy nurses provide ostomy oversight as required</p> <p><i>MDT approach to problem</i></p> <p>Nurse Endoscopists responsible for monitoring and follow up of patients possibly based in communities although need to consider critical mass/economies of scale issue</p>	<p>Nurse Specialists in clinics monitoring conditions and follow up.</p> <p>Specialist Ostomy nurses provide ostomy oversight as required</p> <p>Ongoing gastroenterologist oversight of diverticular disease managed thru ambulatory clinics</p>	<p>Specialist input from Ostomy Nursing service.</p> <p>Advanced cancer - Palliative care in home – home health care and Hospice Nurse specialist to case manage</p> <p>Stenting of bowel (Ca) obstructions by interventionists to avoid operation (noncurative)</p>
	Day Admission			<p><i>Increase hours of Manukau theatre facility until 11pm.</i></p> <p><i>Review day surgery criteria, post discharge service and extend hours of operation to 11pm will extend the-range of procedures that can be undertaken as day stay</i></p>	<p>Management of more cases through day stay facility</p>	<p>Stenting being undertaken as a -day stay procedure</p>
	Inpatient Admission				<p>Envisage decrease in LOS as more can be undertaken as day surgery</p> <p><i>Availability of MRI (onsite) and CT at MSC an issue to achieve an integrated ambulatory service</i></p>	<p>Palliative patients requiring acute surgery for symptom management</p> <p>Consultation with Palliative Care service</p>

					<i>Incorporation of access to PET scanning -for select cancer investigations and improved staging</i>	
	Palliative Care				Care teams available in community to facilitate care. Families aware of more options in the management of patients in palliative situations due to internet etc	Palliative care in home, hospice or residential care may include home health care; hospice and Nurse specialist to case manage.

Service: General Surgery - General

Model of care planning template V2

Conditions – Cholecystectomy, all hernias, endocrine – thyroid and parathyroid, Upper GI, Skin lesions, Lumps and bumps

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention					
	Early Detection					
	Supported Self Care		Education Workplace safety and practice programmes Obesity and Dietary management advice	Education Workplace safety and practice programmes Obesity and Dietary management advice		
	Disease / Injury specific care		OSH involvement in workplace. Manual handling guidelines	Primary care management of underlying condition e.g. with blood monitoring.	Develop GPwSI for lesion, lumps and bumps scheme. Dietary advice and Support Shift in Follow up care to primary consultations and community based specialist nurse or specialist GP FSA –consultations	<i>Potential Gap – GP involvement in end stage of care and family availability to provide end stage care.</i>

Specialised Care		Preventative surgery - Ca stomach genetic disposition	Renal patient parathyroid monitoring. Dietary advice and support <i>Nurse led case management eg skin lesions, lumps and bumps</i>	<i>Develop direct entry criteria to IPWL for specified conditions</i>	Palliative care in home – home health care and hospice based supporting family.
Day Admission			<i>Introduce Nurse Specialist, GPwSI and surgical technicians (Drs but not specialists) treating</i> Promote early intervention – more timely care.	Shift to day stay continuing particularly with cholecystectomy. Use of interventional radiology increasing	Palliative surgical intervention PRN. General Surgery provides episodes of care rather than continuity except for Major upper GI.
Inpatient Admission				Decreasing LOS with case management, technology and care advancement.	Palliative surgical intervention PRN. Stenting of obstructions using interventional radiology General Surgery provides episodes of care rather than continuity except for Major upper GI.
Palliative Care				Stenting of obstructions by interventional radiology Episodes of care PRN	Episodes of care PRN

Service: General Surgery - Vascular

Model of care planning template V2

Conditions – Claudication acute and chronic leg ischaemia, diabetic foot, vascular access ,Upper limb disorders ,Varicose Veins, Carotid endarterectomy, fem Pop bypass, fem distal bypass, venous leg ulcers, AAA, peripheral vascular disease +/- lower limb amputations

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Attention to well being and heart disease indicators of Diabetes Smoking Obesity/^ BP Cholesterol level High levels of any of above precursor for disease Educate younger generations	Attention to well being and heart disease indicators Diabetes Smoking Obesity Cholesterol level High levels of any of above precursor for disease Educate younger generations			
	Early Detection	Screening/education for above disease processes	Screening for above disease processes <i>Gap- Initiate ultrasound screening of males aged 65+ to detect AAA as per UK model</i>	<i>Regular ultrasound screening of detected AAA to prevent rupture.</i>		
	Supported Self Care			Active Management of any heart/vascular disease processes. High recurrence rate for venous leg ulcers on	High recurrence rate for venous leg ulcers on healing – need to more effectively use compression stockings for use on healing.	High recurrence rate for venous leg ulcers on healing – need to more effectively use compression stockings for use on healing.

				<p>healing – need to more effectively use compression stockings for use on healing.</p> <p><i>Gap – need to fund compression stockings for patients who will develop recurrent ulcers as the result of not being able to afford compression stockings</i></p> <p><i>Home Care provided by District Nurses and Community Support Workers for vasculogenic patients</i></p>	<p><i>Gap – need to fund compression stockings for patients who will develop recurrent ulcers as the result of not being able to afford compression stockings.</i></p> <p><i>Home Care provided by District Nurses and Community Support Workers for vasculogenic patients</i></p>	<p><i>Gap – need to fund compression stockings for appropriate patients who will develop recurrent ulcers as the result of not being able to afford compression stockings.</i></p> <p><i>Home Care provided by District Nurses and Community Support Workers for vasculogenic patients</i></p>
	Disease / Injury specific care			<p><i>Gap: Development of a community based clinic with GPwSI or specialist attending with specialist vascular nurse to manage problem ulcers.</i></p>	<p>District Nurses providing specialised wound care for patients with vascular ulcers with referral to vascular nurse specialist as required</p> <p><i>Gap – a community based clinic, GPwSI or specialist attended for problem ulcers.</i></p>	<p>Improving access to community based support services, wheelchairs (many amputees unsuitable for artificial leg).</p>
	Specialised Care			<p><i>Specialist workforce potential issues with change in vocational training and registration to Vascular vs. current General /Vascular status.</i></p> <p><i>Reducing demand for surgical treatment of Varicose veins by 60-70% by moving to adopting treatment by laser (EVLT)</i></p>	<p><i>Gap-incorporation of new technologies and modes of treatment that have recently appeared in the clinical arena.</i></p> <p><i>Expansion of the Nurse Specialist led leg ulcer clinic with inclusion of surgeon attendance and where appropriate the community based DN responsible for</i></p>	<p>Improving access to access to wheelchairs as the largest percentage of patients is older aged such that artificial limb not the best or safest mobility option following amputation.</p> <p>Often then required to have housing</p>

				<p><i>Pts in ambulatory setting or FOAM is the treatment of choice Yet to be adopted in CMDHB. Reduces need for surgery.</i></p> <p><i>Development of one stop shop multidisciplinary care team approach would enhance the coordination of patient care – input from Diabetes physicians, Orthopaedic and Vascular surgeons</i></p> <p><i>Interventional radiology making increasing inroads into treatment of vascular disease reducing need for theatre time and inpatient bed days.</i></p> <p><i>Development of exercise programmes for select vascular patients. (Peripheral Vascular disease - efficacy of angioplasty for femoro-politeal aorto iliac segment at 1 year is under study currently (MIMIC trial) vs. use of dedicated attendance exercise programme that could be hospital or community based.</i></p>	<p><i>patient.</i></p> <p><i>Gap: improving access and increasing the utilisation of vascular lab for assessments</i></p> <p><i>AAA - increasing use of interventional radiology. Evidence for stenting growing based on UK published trial EVA1 / EVA2 (multi centre) fit or not fit for GA. (Long term outcome still to be published) UK and USA commonly repair ruptured AAA by using stents.</i></p> <p><i>MDT (diabetes, vascular, orthopaedic, rehabilitation) clinic for integrating the care of selected vascular patients</i></p>	<p><i>modifications to accommodate wheelchair or be placed in residential care.</i></p> <p><i>Artificial Limb through limb centres for appropriate patients.</i></p> <p><i>Expect ongoing and significantly increasing demand for Renal dialysis vascular access surgery until growth of diabetes in community more controlled.</i></p> <p><i>MDT (diabetes, vascular, orthopaedic, rehabilitation) clinic for integrating the care of selected vascular patients</i></p>
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				<p><i>Indications are outcomes similar at 1 year).</i></p> <p><i>MDT (diabetes, vascular, orthopaedic, rehabilitation) clinic for integrating the care of selected vascular patients</i></p>	
	Day Admission			<p><i>Movement to Angiography/plasty which are now predominantly day stay procedures in UK (MMH average LOS ~ 3 days) – management protocols for warfarinisation / diabetes to help to change practice.</i></p>	<p><i>Because of slow healing rates due to vascular supply recent increases in use of hyperbaric oxygen therapy for difficult cases – further clinical research will determine the efficacy of this high cost treatment.</i></p>
	Inpatient Admission			<p>Inpatient episodic care for assessment, pain management and surgery that cannot be undertaken in an ambulatory environment</p> <p><i>Improved coordination of care, access and transfer of care to Rehabilitation services. Increased numbers of vascular patients will be under 65 with the high growth in Diabetes.</i></p> <p><i>Reductions in LOS for amputees with earlier access to rehabilitation and wheelchair access</i></p> <p><i>Reduction in Length of Stay for patients with Carotid</i></p>	

					<i>disease LOS Stay in NZ (at 4-5 days) higher than experience in UK (1-2 days). GALA (GA vs. LA) Trial multicentre UK and Europe showing LA may be the way forward for anaesthesia. Potential increase in Carotid stenting rather than endarterectomy is likely in the future.</i>	
	Palliative Care					Most patients' die of heart related disease rather than other vascular disease – same issues causing vascular s disease also cause heart disease.

Discussion

Huge problem with varicose leg ulcers from peripheral vascular disease. Large cost to the primary and community based health services.

AAA - increasing use of interventional radiology with stenting under epidural or spinal anaesthesia possibly the way of the future.

UK (N.I.C.E) National Institute for Clinical Excellence approved EVLT laser treatment for varicose veins

No major advances in technology expected in next 20 years internationally as they have recently appeared in the clinical arena

3.2 Change in Procedure/Component of Care Table

General Surgery - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic) Procedure	Outreach Office Surgery
Now	Hernias –Inguinal Umbilical Incisional	Specialist 50%	Specialist 50%	Nil	Nil
2010		Specialist 10%	Specialist 80%	Nil	Specialist 10%
2020		Specialist 10%	Specialist 60%	Nil	Specialist 10% GPwSI 10%
Now	Cholecystectomy	Specialist 50%	Specialist 50%	Nil	Nil
2010		Specialist 40%	Specialist 60%	Nil	Nil
2020		Specialist 20%	Specialist 80%	Nil	Nil
Now	Breast - Ca, lumps, cysts, biopsy	Specialist 80%	Specialist 20%	Nil	Nil
2010		Specialist 70%	Specialist 30%	Nil	Nil
2020		Specialist 30%	Specialist 40%	Nil	Specialist 20% GPwSI 10%
Now	Upper GI – Whipples Bariatric	Specialist 100%	Nil	Nil	Nil
2010		Specialist 100%	Nil	Nil	Nil
2020		Specialist 80%	Specialist 20%	Nil	Nil
Now	Major Colorectal - Ca	Specialist 100%	Nil	Nil	Nil
2010		Specialist 90%	Specialist 10%	Nil	Nil
2020		Specialist 70%	Specialist 30%	Nil	Nil
Now	Minor Colorectal	Specialist 35%	Specialist 60%	Specialist 5%	Nil
2010		Specialist 25%	Specialist 55%	Specialist 5% Nurse 5%	GPwSI 10%
2020		Specialist 10%	Specialist 50%	Specialist 15% Nurse 10%	GPwSI 10% Nurse 5%
Now	Endocrine – Thyroid	Specialist 100%	Nil	Nil	Nil

	Parathyroid				
2010		Specialist 100%	Nil	Nil	Nil
2020		Specialist 80%	Specialist 20%	Nil	Nil
Now	Major Vascular - AAA, Carotid, Fem Pop	Specialist surgeon 70% Intervent Radiologist 10%	Nil	Nil	Nil
2010		Specialist surgeon 80% Intervent Radiologist 20%	Nil	Nil	Nil
2020		Specialist surgeon 30% Intervent Radiologist 50%	Intervent Radiologist 20%	Nil	Nil
Now	Minor Vascular – VV, angiography, angioplasty	Specialist surgeon 70% Intervent Radiologist 10%	Specialist 20%	Nil	Nil
2010		Specialist 10%	Specialist surgeon 20% Intervent Radiologist 70%	Nil	Nil
2020		Specialist 5%	Specialist surgeon 20% Intervent Radiologist 55%	Nil	Specialist 20% GPwSI 10%
Now	Lumps & bumps Malignant and non malignant	Specialist 20%	Specialist 80%	Nil	Nil
2010		Specialist 10%	Specialist 80%	Nil	GPwSI 10% lipomas, Minor skin
2020		Specialist 10%	Specialist 60%	Nil	GPwSI 30% lipomas, Minor skin

3.3 Role Delineation Model

<u>Specialty: General Surgery</u>	<u>Specialty</u>	<u>Clinical Support Level</u>							
		<u>Pathology</u>	<u>Pharmacy</u>	<u>Imaging</u>	<u>Nucl.Med</u>	<u>Anaesthet ICU</u>	<u>CCU</u>	<u>Op.Theatres</u>	
Middlemore-Current Actual	5-6	5	5-6	5-6	4	6	6	5	6
Middlemore-Current Required	5-6	4	4	5	5	5	5	3	6
Middlemore-Proposed (Yr)									
Manukau - Current Actual	5-6	2-3	2	3-4	4	5-6	4	1	4-6
Manukau - Current Required	5-6	4	4	5	5	6	6	3	6
Manukau - Proposed (Yr)									

Definitely 5, some elements of 6. Although registrars general, teams include subspecialities.
Principal referral hospital(tertiary)for gastric cancer from Waikato and retroperitoneal sarcoma.

Specialty Plastic Surgery

Current Service Configuration and Model of Care

1.1 Description of Service:

The Plastic Surgery Service provides a regional acute and elective tertiary plastic surgical service to patients, both adult and paediatrics, from Northland to Meremere and secondary services to the greater Auckland area. In addition, there are a number of nationally referred cases particularly from the Midland Region. CMDHB is the site of the national burn centre.

Elective plastic surgery includes a wide range of surgical procedures that repair, reconstruct or replace structures in many different parts of the body that are abnormal or have been affected by a birth defect, accident or disease including the skin, face and head, hands, breast, stomach and limbs. This includes for example cleft lip and palate repair, reconstruction - including skin grafting, following birth defects, burns or cancer-related surgery; scar revision. Surgery is usually performed to improve function, but may also be performed to bring the appearance of a part of the body as close as possible to normal.

Acute plastic surgery includes bony fractures and soft tissue injury to the hand, brachial plexus injuries, facial fractures, pressure sore surgery, infections of the hand and face, all complex soft tissue injuries, and injuries requiring complex reconstruction such as microsurgery.

The orthopaedic hand service, provided by three consultant orthopaedic hand consultants, has been amalgamated into the plastic surgical department following a review 5 years ago. The plastic surgeons that cover hand injuries currently do not cover complex bone related carpal and distal radial problems.

In Northland, limited plastic surgery is provided by one consultant plastic surgeon who is employed as part of the general surgical department with other cases being referred to CMDHB.

Oral and Maxillofacial services are provided by ADHB with a division sited at MMH an integral part of the plastic surgery service.

Plastic Surgery has developed as a hub and spoke model with outreach services provided at Waitemata (breast reconstruction), Auckland Hospital (head and neck reconstruction), Starship Hospital (craniofacial and complex paediatric hands).

1.2 Current Service co-locations and synergies

- Oral Health service
- Hand therapy service
- Dermatology
- General Surgery
- Intensive care
- Orthopaedic
- Kidz First
- ORL – craniofacial and cleft management
- Spinal – rehabilitation
- Allied Health service particularly in acute and rehabilitation management
- Home Health service

Please see section 1.3 below for the benefits of co-location and synergies

1.3 Desirable Service Co-locations and synergies

The Plastic and Reconstructive Plastics Department maintains strong links with clinical specialities in CMDHB and with other hospitals e.g. Auckland City (ACH), North Shore, Starship and other regional plastic surgery centres – Waikato, Hutt and Christchurch.

The Craniofacial specialty works closely with Neurosurgery at ACH with combined clinics held once a month at MMH.

Complex soft tissue/cranial tumours are managed by the joint Head and Neck service, which includes a Plastic Surgeon, based at ACH.

Complex paediatric hand clinics are held monthly at MSC between Starship and Plastic and Reconstructive Surgery.

Post hand surgery, rehabilitation by hand therapy team is critical and is provided at both MSC and MMH.

Multidisciplinary Cleft Clinic with specialty input from Maxillofacial, ORL and Speech language therapy is critical to providing long term care coordination and planned staged surgery from birth to early adulthood. These clinics are held weekly at MMH.

Within CMDHB, the GP liaison position is well established and has enhanced the primary and secondary services. This has significantly assisted the service to introduce new models of care (GPwSI) - who can manage lumps, bumps and minor skin lesions, improved GP referrals and general education on number of conditions.

1.4 Key issues, opportunities and technology affecting the specialty

Specialist Medical Staff

For several years there have been significant issues in the recruitment of specialist medical staff to fill available resourced positions. The department has lacked a full compliment of specialist staff which has included the under provision of elective services creating lengthy wait times for patients to access services. Recently the department has been supplemented by short term contracts of overseas specialists who have both supported the workload of the department and added knowledge of other systems and clinical practice. Permanent appointments continue to be sought. The part time nature of the SMO workforce and sub-specialty interests' creates scheduling challenges consistent with the provision of tertiary services.

Plastic Surgery Review and Regional Service Planning

In late 2006 a review of the provision of Plastic Surgery services was initiated. The service is currently working through the strategic direction of services, engaging in regional service planning, and establishing the direction for future service provision and departmental configuration.

Spinal Unit

With the imminent upgrading of the Spinal unit it is important that in addition an acute and rehabilitation focus the spinal unit needs to have a focus in the ongoing care and treatment of spinal patients including those of non traumatic origin. At times these patients have significant treatment needs which are not met by the current facility or available staff.

Service Networks

There remains a need to build upon local and regional collaboration in the delivery of plastic, maxillofacial and burn surgery to improve service coverage, improve patient access to the service, enhance quality of care and improve long term clinical and financial viability of the service.

Paediatric Inpatient beds at MSC

Paediatric inpatient surgery is frequently undertaken at MSC. Due to the inability to admit children for inpatient stay at MSC they are transferred postoperatively from the recovery room by ambulance to a bed at Kidz First. Provision of paediatric beds at MSC would improve theatre access for paediatric

patients; reduce paediatric recovery time and the need for ambulance transfer. The Plastic Surgery clinical team would support the development of an inpatient paediatric unit within the surgical ward at Manukau Campus.

Ageing Population

The high rate of skin cancers in New Zealand is well documented and will continue with ageing of the population. Significant volume increases are forecast until education programmes come to fruition with the current younger generations. Increasing demands for skin cancer / lesion surgery have necessitated changes in the Model of Care with GPwSI now treating many simple lesions within CMDHB

Modern plastic surgical treatment uses a number of implant devices (e.g. breast reconstruction implants) which have unknown longevity. As the population ages an implant replacement service may be required.

Consumer Expectation

The more knowledgeable, internet savvy consumer has increased expectations from blurring of the margins between reconstruction and cosmetic surgery, and functionality versus aesthetics - creating challenges in patient management. We expect the number of women requesting breast reconstruction following mastectomy to significantly increase, with the increasing demands continuing the current access issues.

1.5 Existing Continuum of Care “gaps” for patients accessing this service

- Community and secondary based psychology services to provide support for patients in a number of subspecialties e.g. congenital cases with body image and psychosocial issues related to their disease and recovery process.
- Lack of elective paediatric inpatient provision at MSC.
- Inconsistent local regional pressure ulcer management model of care.
- Lack of clinical pathways to plan and execute care along a predicted pathway
- Inadequate multi-speciality multidisciplinary clinics or service provision to provide a combined approach to patient management.
- Excess volumes of low complexity acute presentations from other DHB areas overwhelms the service and leads to a comprised acute/elective imbalance.
- Availability and access to Lymphoedema and scar management services provided by nursing and allied health professionals is extremely limited. There are patients who could benefit from these services who do not due to gaps in service provision.
- There are large numbers of patients requiring Carpal Tunnel Surgery with the only access to nerve conduction studies at ADHB.

1.6 Identification of key intersectoral relationships and opportunities

Pressure ulcer management

Greater care coordination and participation by private providers in residential and personal care combined with early primary care and District Nursing management would improve the management of early pressure ulcers, and minimise the involvement of the General Surgery or Plastic Surgery

Voluntary Support Groups

Both the Burn Support Group, and Cleft Lip and Palate Support Group are extremely active in aligning against service requirements, strong advocacy focus and improvement in care delivery. Both have national representation formed to maintain communication with families who are facing the same challenges. Members receive regular newsletters giving updates on research and other topics of interest. A major focus of the Burn Support Group is its fund raising activity whilst cognisant of South Auckland Health Foundation fundraising activities.

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care for conditions

Direction of Care

It is expected the major change in care will be a refinement of surgical techniques – a number of which will increase intraoperative time but reduced length of hospital stay and convalescence. Many Plastic Surgery patients will continue to require multiple staged operations over many years.

Nurse Specialists

Nurse Specialists will play a greater role in case management and the undertaking of minor procedures e.g. skin cancer management, nurses undertaking punch biopsy, Breast Care Nurse Specialist for reconstruction management. Training and funding packages will be developed to ensure that the skills and expertise for this develop are available.

Multidisciplinary Service Provision

Development of collaborative multidisciplinary team approach to management of patients including:

- Breast reconstruction services combining with General Surgery and Oncology
- Skin cancer management in closer collaboration with Dermatology
- Pressure ulcer management in conjunction with General Surgery, vascular surgery and Home Health Care.

Direct Access to Booking List for Treatment

With the development of referral processes and credentialing, further conditions will be suitable for direct wait-listing by credentialed GPs e.g. carpal tunnel surgery

Primary Care Skill levels

With a desire to retain and or shift more components of care to the ambulatory and community care settings, a medium term programme for up-skilling both GP's and practice nursing staff in the management of additional Plastic Surgery conditions is required in areas such as wound care, non complex skin lesion management, repair of lacerations including extensor tendons, medical management of Carpal Tunnel and Dupuytren's complaints.

2.2 Proposed Service Development:

- Regional Hand Service – development of a hub and spoke model with other local hospital providers with more secondary care hand procedures being done by DHB's of domicile.
- Continuing development of Plastic Surgical services delivering secondary care Plastics Surgery at North Shore Hospital, Auckland City Hospital, and Starship Childrens Hospital. Changes in services delivery are likely to arise following implementation of the Plastic Surgery Review.
- Continuing the development of sub-specialisation with tertiary services, with shared responsibility for the provision of core and acute services – research supports better clinical outcome with this model of work.
- Development of multidisciplinary local and regional Breast reconstruction and Oncology service.
- Development of secondary-based Nurse Specialist to work between hospital and community to manage early discharge of patients to home environment e.g. Pressure Ulcers, Paediatric congenital conditions, breast conditions.
- Nurse specialist to manage continuum of care for pressure ulcer patients with technical input from surgeons on a as required basis.

2.3 Movement of procedures or components of Care to greater ambulatory care delivery

GPwSI will play a larger role in surgical intervention in the next 20 years as will the GP initiating early intervention of non-surgical treatments e.g. Aldara, Efudex for skin cancers. 80% of cancers/lesions can be treated as day surgery with some able to be completed in primary care facilities.

Improved telecommunication and enhanced IT systems will support increased feasibility of enhanced outreach clinics.

Development of a hybrid model between Emergency Care/Plastics and continued up-skilling of GPS/EC Nurse Practitioners to manage more minor skin conditions

Inpatient length of stay is decreasing as moves to increase the complexity of procedures carried out as day surgery, and movement of daystay procedures to an outpatient environment continue.

Development of Nurse Specialist to undertake advanced nursing practice in clinic e.g. tissue expanders

2.4 Workforce factors

- Managing competing salaries between the public and private sectors.
- Inability to readily change SMO rosters to fit with community based clinics.
- Focus of surgeon sub-specialisation likely to change and cross college faculty boundaries.
- High acute workload (particularly secondary level hand surgery) challenging recruitment, staff retention, and job satisfaction.
- Shortage of experienced, trained nurses for advanced nursing roles. Development of a nursing career pathway that supports and enables development of specialist nurses is required. Nurse led initiatives are dependant on the development and recruitment of suitably skilled and experienced nursing staff.
- Supported development of care teams with qualified professionals supported by unregulated staff.
- An aging nursing workforce will challenge the ability to provide services across all settings.
- Retention of staff in public sector.

Appendix

3.1 Draft Model of Care template per speciality

Service: Plastics Skin

Model of care planning template V2

Conditions: skin lesions malignant and benign, scar revisions, pressure ulcers, hemangiomas

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Awareness programmes re importance of prevention programmes for skin cancers.	Awareness programmes re importance of prevention, skin checks from Primary care and community sources.			
	Early Detection		Skin Checks undertaken	Encourage early presentation to primary care for patients with lesions of concern.		
	Supported Self Care		Patients prone to pressure ulcers further educated in preventative self cares by primary care practitioners, community-based workers and secondary care.	Community support groups incl Cancer Society available.	Community support groups incl Cancer Society available.	
	Disease / Injury specific care	Skin checks from Primary care and community sources.	Punch biopsy undertaken in primary care to promote diagnose	Encouraging early intervention - initiate non surgical treatments – Efudex, Aldara. by GP's	GP assessment of histology and referral to specialist PRN. GPwSI will play increasing	Advanced skin cancer - Palliative care in home – home health care and Hospice

				<p>GPwSI will play increasing role in surgical intervention in next 20 years.</p> <p><i>Gap- development of an early and coordinated primary and community care programme for early stage pressure ulcers to prevent deterioration.</i></p> <p><i>Early and appropriate referral to specialist service to minimise extent of plastic surgery required</i></p>	<p>role in surgical intervention in next 20 years.</p> <p><i>Gap: Understanding of skin cancer services as to what care component sits where eg within primary care, general surgery, dermatology and secondary domicile DHB.</i></p>	<p>Palliative Nurse specialist to case manage Medication management</p>
	Specialised Care	Setting referral guidelines for primary care to secondary care eg proven skin cancer punch biopsy.	<p><i>Care is uncoordinated in prevention and treatment of pressure ulcer. Issues of access to community and hospital based care.</i></p> <p><i>Referral for Clinical psychology for patients with significant body image and psychosocial issues associated with disease and recovery, Currently a gap in these services</i></p> <p><i>Surgical Removal of appropriate skin lesions as day patient procedure by plastic specialists /registrars.</i></p> <p><i>Gap: Development of Nurse specialist role to</i></p>	<p>Service requires regionally spread clinics to work in a collaborative model with Head and Neck and Paediatricians to discuss best options of care with Specialist and patient/family.</p> <p><i>Referral for Clinical psychology for patients with significant body image and psychosocial issues associated with disease and recover, Currently a gap in these services</i></p> <p><i>Referral to Specialist Nurse for Pressure Ulcer care oversight and coordination with District Nursing Service</i></p> <p><i>Gap: Development of Nurse specialist role to manage</i></p>	<p><i>Referral of patient to hospice service for ongoing care.</i></p> <p><i>Provision of specialist consult on re-referral</i></p> <p><i>Gap: Development of secondary based Pressure Ulcer Nurse Specialist role to work between hospital and the community to manage early discharge patients in home environment</i></p>	

				<i>manage continuum of care with technical input from surgeons.</i>	<i>continuum of care with technical input from surgeons.</i>	
	Day Admission			80% skin cancers/lesions are day surgery. Some of which are excised in primary care facilities. Gap: Skill set in primary care to provide non complex surgery	Type of surgery provided as day surgery will show small increases.	
	Inpatient Admission				Complex skin cancer / lesion reconstruction provided in conjunction with other specialties. <i>Gap: Plastic Surgery needs to develop more of a hub and spoke model of care with outreach services to other regional hospitals.</i> Strengthen the provision of ongoing psychological care required for select patients/family.	<i>Need to review model of care for pressure ulcer management re the provision of complex flap surgery. Waikato model is only intervening in acute wound care rather than the provision of complex flap surgery (</i>
	Palliative Care				<i>Gap: Development of a new model of care for follow up care of reconstruction patients who have had advanced cancers</i>	

Discussion

Significant volume increase expected in the future of skin cancers in the population. The increasing demands for (skin cancers/lesions) surgery are creating access issues – both are likely to continue.

Consumer expectations are blurring the margins between reconstruction vs. cosmesis and functionality vs. aesthetics creating patient management challenges.

Need to improve interfacing with Dermatology.

Major change in care will be refinement of techniques with shorter LOS with recovery from surgery and return to daily living likely to be quicker.

Research shows that issues around metastases into reconstruction site can be detected with early and regular follow up post advanced cancer.

Society changes – may not have family around to provide for palliative care needs – implications for community care services.

Conditions – Reconstruction, Reduction incl Male, Congenital eg Polands assemetry

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Obesity management programmes	Awareness programmes re importance of prevention of obesity			
	Early Detection		Mammograms 45-69 Breast Checks	Gap: detection and disability management of patients with disproportional breast to body size vs. those proportionally large.		
	Supported Self Care			Breast Cancer support groups Exercise classes <i>Community-based psychological input required to manage body image issues.</i>	Breast Cancer support groups Exercise classes <i>Community psychological input required to manage body image issues.</i>	
	Disease / Injury specific care	Obesity management	Obesity management	<i>Gap: Development of Primary care based programmes/strategies for large breasted women to avoid complications of this or surgery – e.g. weight loss, clothing to prevent back injury</i> Setting referral guidelines	GP assessment and referral to specialist PRN. GP knowledge of treatment options – currently a gap for some GPs. <i>Referral for psychological support for select patients with body image issues –</i>	Palliative care in home – home health care, Hospice and Palliative Care teams. <i>Palliative Nurse specialist to case manage incl Medication management</i>

				eg BMI.	currently a gap in services available <i>Gap: Development of Referral service for ambulatory secondary and domiciliary based Lymphoedema management provided by Home Health Care – Nurses and Allied Health</i>	
Specialised Care				<p><i>Referral to combined General Surgery/Plastics/oncology service for combined approach – currently a gap.</i></p> <p><i>Implementation of case management with development of reconstruction breast care nurse specialist -currently a gap</i></p> <p><i>Follow up appointments provided by specialists and plastic surgical breast care nurses</i></p> <p><i>Large body image and psychosocial components with disease and recovery service – Gap in services available.</i></p>	<p><i>Referral to combined General Surgery/Plastics/oncology service for combined approach – currently a gap.</i></p> <p><i>Follow up appointments provided by specialists and breast care nurses</i></p> <p><i>Large body image and psychosocial components with disease and recovery service – Gap in services available.</i></p> <p><i>Coordination of earliest date for surgical interventions with oncologists and general surgery for patients having adjunct therapy.</i></p>	<p>Patients requiring palliation are referred to the palliative care service with specialist consultation if indicated</p> <p>Referral to specialist breast care nursing referral for advice regarding prosthesis, wound care etc</p>
Day Admission				Post major reconstruction surgery is undertaken as day surgery.	Nurse led clinics in place - Nipple Tattooing - Tissue expansion.	

					Techniques for breast reduction will allow straight forward surgery to be performed on day stay basis within 10 yrs. Type of surgery provided as day surgery is otherwise unlikely to increase.	
	Inpatient Admission				<p>Reconstruction now being offered by other surgical specialities as well as by Plastics.</p> <p><i>Gap: Plastic Surgery needs to develop more of a hub and spoke model of care with outreach services to other regional hospitals</i></p> <p><i>Inpatient reconstruction, reduction and congenital surgery with reducing length of stay due to new techniques</i></p> <p>Breast reduction currently only 1 night hospitalisation.</p> <p>“Growing a breast” may become feasible by 20 years.</p> <p>Referral for prosthesis</p> <p><i>Referral to Allied Health for scar and lymphoedema management – currently a gap</i></p> <p><i>Gap - Psychological care is</i></p>	

					<i>required to aid post operative recovery.</i> <i>Development of service for replacing implants that are damaged or rejected in the body's response to foreign body.</i>	
	Palliative Care					

Discussion

Consumer expectations are blurring the margins between reconstruction vs. cosmesis and functionality vs. aesthetics creating patient management challenges.

General Surgery moving to Wide Local Excision vs. mastectomy, Plastic surgery will need to adapt techniques and intervention to match. Gold standard of care for post mastectomy reconstruction, if clinically suitable, is "Free Flap". In recent years very few have been done due to surgeon numbers and expertise. This is being addressed with a move back towards this procedure– will increase intraoperative time. However, the procedure agreed is often the result of patient personal choice Lat dorsi flap (scarring implications) vs. free flap.

In the future surgeons are likely to be pure 'breast surgeons' in future vs current general surgeon and plastic surgeon.

Major change in care will be refinement of techniques with shorter LOS. Recovery from surgery and return to work also likely to be quicker. Direction of care will be nurse specialist to case manage continuum of care with technical input from surgeons.

Expect the number of women requesting breast reconstruction to significantly increase, with the increasing demands continuing the current access issues.

Society changes – may not have family around to provide for palliative care needs – implications for community care services.

Service: **Plastic Surgery - Hands**

Model of care planning template V2

Conditions: Carpal Tunnel, Dupuytren's, Trigger Finger, Rheumatoid Arthritis

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	OSH involvement Ergonomic OOS workplace practice.	Awareness programmes from primary and occupational health. Ergonomic workplace practice.			
	Early Detection		Dupuytren's – awareness of familial tendency. Rheumatoid Arthritis Screening detection through GP consults Genetic screening developed?	Occupational Health workplace assessments.		
	Supported Self Care	Follow recommended workplace practices.	Follow recommended workplace practices.	Workplace support and aids Analgesia Home Aids Remove from irritants Community Support groups -Arthritis	Home care support, analgesia and home aids for patients with Rheumatoid Arthritis Home Help, Analgesia, Home Aids short term (Personal care) following surgery for some patients Community Support groups - Arthritis	Home care support, analgesia and home aids for patients with Rheumatoid Arthritis Home Help, Analgesia, Home Aids short term (Personal care) following surgery for some patients Community Support groups -Arthritis
	Disease / Injury		Health assessment	GP's credentialed in	GP injections steroids.	Hand therapists public

	specific care		screening by Primary care.	<p>steroid injections</p> <p>Hand therapy – Protocols and Splinting CT/RA/ Dupuytrens available to Primary Care</p> <p>Nerve Conduction Studies ordered thru ADHB</p> <p>GP access Radiology investigations for confirmation of diagnosis</p>	<p>Hand therapy – Protocols and Splinting CT/RA/ Dupuytrens available to Primary Care</p> <p>Nerve Conduction Studies ordered thru ADHB</p> <p>GP access Radiology investigations for confirmation of diagnosis</p> <p>Analgesia</p>	<p>and private practice to maintain function.</p> <p>Home Health Care - ADL's Analgesia Home Aids</p> <p>Community Support groups -Arthritis</p>
	Specialised Care			<p>Referral from specialists or GP's to hand therapists' public and private practice to maintain function.</p> <p><i>Multidisciplinary Team Assessment incl Surgeon, Nurse, Hand Therapist, Social Worker</i></p> <p>Nerve Conduction Studies ADHB to confirm diagnosis</p> <p><i>Development of protocols at secondary level to upskill EC staff and primary care in initial management of conditions and indications for referral to specialist hand services</i></p>	<p>Referral from specialists or GP's to hand therapists' public and private practice to maintain function.</p> <p>Shift to greater volumes of community based care explore opportunity for a GPwSI to do Carpal Tunnel surgery in PCHC (within 20 yrs)</p> <p>Changes in diagnostic procedures what /where/ when?</p>	<p>Hand therapists public and private practice to maintain function.</p>

	Day Admission			Specialist based steroid injection (LA if any) Clinic based	Largest percentage of patients receives treatment as a day stay and this is expected to increase further. <i>Protocols will facilitate earlier discharge to hand therapist / primary care with re-referral to specialist as indicated</i> Explore opportunity for a GPwSI to do Carpal Tunnel surgery in PCHC (within 20 yrs)	Minimal surgical involvement
	Inpatient Admission				Small amount IP surgery and this is expected to decrease further as daypatient surgery continues to increase <i>Development of implants TWJR prosthesis</i> Development of bionics in medium future	Minimal surgical involvement
	Palliative Care				Primary and community care based to support stay at home living	Primary and community care based to support stay at home living

Discussion

No gaps in care

Need to maximise access to specialist services - resources allow lower complexity to be treated in primary care

No significant advances in surgical techniques foreseen in next 20 years

Increasing population over next 20 yrs is likely to result in more hand trauma incl from industry that will increase need for secondary elective reconstruction

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Unpreventable – will always be a proportion of births with congenital abnormalities.	Awareness programmes from primary care. Minor increase expected with future population increase.			
	Early Detection	Can be detected through Antenatal screening.	Awareness of familial and / or genetic tendency. Genetic screening may be developed in the future			
	Supported Self Care		Antenatal education where abnormality is detected pre-birth.	Community Support – Cleft support group <i>Access to community-based psychological input when required – current gap.</i> <i>Infant care at home supported by Plastics Cleft / Craniofacial Nurse Specialist</i>	Community Support – Cleft Support Group <i>Access to community-based psychological input when required – current gap.</i> <i>Infant care at home supported by Plastics Cleft / Craniofacial Nurse Specialist</i>	
	Disease / Injury specific care		If not diagnosed in immediate post natal period may be picked up at Well child checks by GP and Plunket. School health	GP, paediatric home care and Plunket actively involved in care. <i>In future envisage case management by Plastics Cleft / Craniofacial Nurse</i>	GP assessment and referral to Specialist PRN. <i>Psychological support required</i>	

			involvement for hearing assessment and psychological support for body image issues	<i>Specialist aligned to primary care and Multidisciplinary clinics in community.</i>		
	Specialised Care			<p>Strong Multidisciplinary Team approach to assessment and treatment evident. Team includes Dental interfacing with orthodontic splinting Psychological support Speech Language Therapy ORL Play Therapy Health school in hosp</p> <p>Complex cases require MRI, max facial <i>modelling</i> (sourced from overseas)</p>	<p>Strong Multidisciplinary Team approach to assessment and treatment evident. Team includes Dental interfacing with orthodontic splinting Psychological support Speech Language Therapy ORL Play Therapy Health school in hosp</p> <p>Complex cases require MRI, max facial <i>modelling</i> (sourced from overseas)</p> <p><i>Regional Craniofacial service requiring MDT including neurosurgery and PICU</i></p> <p><i>Long term specialist follow ups (Cleft 20 years, Craniofacial most of life)</i></p>	
	Day Admission			Some Cleft secondary procedures are day procedures.	Some Cleft secondary procedures are day procedures.	
	Inpatient Admission				<p>No real change expected over next 10 -20 years in day vs. inpatient treatment.</p> <p>Intracranial cases done jointly treated at Starship and extracranial by Plastics at</p>	

					Counties Manukau.	
	Palliative Care					

Discussion

Consumer expectations are blurring the margins between reconstruction vs. cosmesis and functionality vs. aesthetics creating patient management challenges.

Major change in care will be refinement of techniques resulting in increase in length of intraoperative time however LOS may be marginally shorter.

Patients frequently require multiple operations.

Use of new closure technique for Cleft Lip preventing need for anaesthetic for Removal of Sutures pre-discharge

Service: Plastic Surgery

Mixed Other

Model of care planning template V2

Conditions: Congenital Ears – Otoplasty, Microtia, Congenital urogenital – hypospadias

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Unpreventable – will always be a proportion of births with congenital abnormalities.				
	Early Detection	Antenatal screening for urogenital conditions	Awareness of familial and / or genetic tendency. Potential future development of genetic screening			
	Supported Self Care			Involvement of community support groups e.g. Deaf Society	Involvement of community support groups e.g. Deaf Society	
	Disease / Injury specific care				GP assessment and referral to specialist PRN. <i>Gap: Community psychological support required for urogenital patients / families.</i>	
	Specialised Care			Specialist clinics Some patients require a multidisciplinary team	<i>Specialist clinics</i> <i>Gap: Development of regional MDT clinics to work collaboratively with Head and</i>	Multiple operations for some conditions leading to long term patient relationships.

				<p>approach to care including interface with Audiology / ORL</p> <p><i>Gap: Development of agreed pathways for managing patient care e.g. hypospadias</i></p> <p><i>Gap – Need to develop clinical psychology input into Urogenital service as large body image and psychosocial components with disease and recovery service –needs currently not being met</i></p>	<p><i>Neck service (ADHB) and Paediatricians to discuss best options of care with Specialist and patient / family.</i></p> <p><i>Gap: Development of secondary based Nurse Specialist role to work between hospital and the community to manage early discharge patients in home environment</i></p> <p><i>Gap – Ongoing psychological care required for patient/family in inpatient and ambulatory care settings.</i></p>	<p>For others no long term relationship and discharged from service once surgical care completed.</p>
	Day Admission			<p>Considerable ear surgery, otoplasty and microtia is already day surgery.</p>	<p>Considerable ear surgery, otoplasty and microtia, already day surgery.</p> <p>The range of surgical procedures provided as day surgery is unlikely to increase.</p>	
	Inpatient Admission				<p><i>Gap: Plastic Surgery needs to develop more of a hub and spoke model of care with outreach services to other regional hospitals</i></p> <p>LOS of stay for urogenital patients will reduce to 1day.</p> <p>Current major change in care is refinement / new technique with longer theatre time but less operations and shorter</p>	<p>Urogenital – known high complication rate.</p> <p>Relationship completed once staged surgery +/- complications managed</p>

					LOS. <i>Gap: Development of secondary based Nurse Specialist role to work between hospital and the community to manage early discharge patients in home environment.</i>	
	Palliative Care					

Discussion

Consumer expectations are blurring the margins between reconstruction vs. cosmesis, and functionality vs. aesthetics creating patient management challenges.

Urogenital and microtia surgery is staged surgery usually requiring multiple operations.

3.2 Change in Procedure/Component of Care Table

Plastic & Hand Surgery - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic) Procedure	Outreach Office Surgery
Now	Breast Reconstruction	Specialists 50%	Specialists 30%	Nurse 20% Tissue Expanders Nipple Tattooing	Nil
2010		Specialists 30%	Specialists 45%	Nurse 20%	Nurse 5% Tissue Expanders
2020		Specialists 30%	Specialists 40%	Nurse 20%	Nurse 10% Tissue Expanders
Now	Breast Reduction	Specialists 100%	Nil	Nil	Nil
2010		Specialists 80%	Specialists 20%	Nil	Nil
2020		Specialists 60%	Specialists 40%	Nil	Nil
Now	Skin Lesions	Specialists 25%	Specialists 40%	Specialists 10%	GPwSI 25%
2010		Specialists 20%	Specialists 30%	Specialists 20%	Specialists 10% GPwSI 30%
2020		Specialists 10%	Specialists 20%	Specialists 20%	Specialists 10% GPwSI 40%
Now	Cleft Lip / Palate Surgery	Specialists 70%	Specialists 30% Secondary procedures Pharyngoplasty	Nil	Nil
2010		Specialists 60%	Specialists 35%	Specialists 5%	Nil
2020		Specialists 50%	Specialists 25%	Specialists 10%	Nil

Now	Craniofacial Surgery	Specialists 95%	Specialists 5%	Nil	Nil
2010		Specialists 95%	Specialists 5%	Nil	Nil
2020		Specialists 90%	Specialists 10%	Nil	Nil
Now	Ear	Specialists 20%	Specialists 80%	Nil	Nil
2010		Specialists 20%	Specialists 80%	Nil	Nil
2020		Specialists 20%	Specialists 80%	Nil	Nil
Now	Hand	Specialists 10%	Specialists 85%	Nil	Specialists 5%
2010		Specialists 10%	Specialists 70%	Nil	Specialists 20%
2020		Specialists 5%	Specialists 55%	Nil	Specialists 30% GPwSI 10%
Now	Urogential	Specialists 95%	Specialists 5%	Nil	Nil
2010		Specialists 85%	Specialists 15%	Nil	Nil
2020		Specialists 70%	Specialists 30%	Nil	Nil

3.3 Role Delineation Model

	<u>Clinical Support Level</u>								
	<u>Specialty</u>	<u>Pathology</u>	<u>Pharmacy</u>	<u>Imaging</u>	<u>Nucl.Med</u>	<u>Anaesthet ICU</u>	<u>CCU</u>	<u>Op.Theatres</u>	
Middlemore-Current Actual	6	5	5-6	5-6	4	6	6	5	6
Middlemore-Current Required	6	4	4	5	5	5	5	3	6
Middlemore-Proposed (Yr)									
Manukau - Current Actual	4-5	2-3	2	3-4	4	5-6	4	1	4-6
Manukau - Current Required	4-5	4	4	5	5	6	6	3	6
Manukau - Proposed (Yr)									

Level of RDM scoping for Rehab service needs to be considered - at 20/12 looks like 4-5

Specialty: Otorhinolaryngology (ORL)

Current Service Configuration and Model of Care

1.1 Description of Service:

The Otorhinolaryngology (ORL) Department at Counties Manukau District Health Board (CMDHB) provides elective secondary specialist services for surgical and medical diseases of the ear, nose, throat and adjacent areas of the head and neck. It includes disorders of balance, hearing, voice and nasal allergy and also deals with neck lumps, salivary and thyroid gland disease.

A limited Acute service is provided for conditions such as manipulation and reduction of fractured noses removal of foreign bodies, and cautery for epistaxis.

The Otorhinolaryngology Department is based at the Manukau SuperClinic (MSC) site for all elective services and all stable acute referrals.

Elective outpatient clinics are held daily. Patients are assessed and treated by Consultants, Medical Officer Special Scale, Registrars, House Surgeons or an Ear Nurse Specialist. Supported assessment and treatment is provided by a weekly Speech Language Therapist clinic and the Audiology Department which provides hearing testing services for both adults and children.

Emergency treatment and assessment is provided Monday to Friday during clinic hours at CMDHB with stable acute referrals being seen at MSC. Unstable cases (e.g. severe active bleeding / airway obstruction) are directed to Middlemore Hospital Emergency Department. The after-hours acute service contract is provided at Auckland City Hospital by ADHB using a regionally-based on-call service.

The ORL Department is affiliated to the University of Auckland, and is presently participating in teaching graduate medical students, audiology students and training post-graduate doctors. The department is also involved in ongoing research programmes.

1.2 Current Service co-locations and synergies

CMDHB ORL service provides both inpatient and outpatient services for adult and paediatric patients. Referrals are generally received via GP referral however there is a small percentage of non planned "walk ins" provided as part of acute care – these are patients who have accessed the service previously.

Module Four Outpatient Clinic MSC

Outpatient Clinics are staffed with a combination of one nurse specialist, RN's, EN's and clerical staff led by a team leader. This facility provides clinics for surgical and medical diseases of the ear, nose, throat and adjacent areas of the head and neck. The Nurse Specialist runs a Nurse-Led Clinic for assessment and management of ear conditions e.g. otitis media, otitis, mastoid cavities, ear wax, foreign bodies and grommet follow up. Stable acute patients are assessed and treated as appropriate in a procedure room within the module.

Manukau Surgery Centre and the Manukau Intensive Care Unit (MICU)

ORL elective and acute theatre procedures are undertaken at Manukau Surgery Centre with treatment being predominantly day stay and short stay. Following surgery adult inpatients are admitted to the ward on level 2 at Manukau Surgery Centre. Inpatients requiring post-operative intensive management and some acute outpatient patients are admitted to MICU.

Audiology Service

The Audiology Service is co-located within the ORL department in Module Four. The Audiology Service has close professional and process links with ORL and provides assessment of hearing and hearing disorders as well as habilitation/rehabilitation for individuals who have hearing loss. Patients

requiring input from both ORL and Audiology are provided with linked appointments wherever practical.

Audiology provides the following assessment and treatment.

- Assessment of hearing from neonates through to adults
- Pure tone audiometry, including play audiometry and visual reinforcement audiometry for children
- Speech testing
- Immittance testing, including tympanometry and acoustic reflexes
- Otoacoustic emission testing
- Auditory brainstem response testing for both infants and adults including assessment under general anaesthetic if necessary
- Hearing aid fitting and follow-up for children and adults
- Auditory Processing Assessment
- Clinics for trouble shooting hearing aid problems

Speech Language Therapy

The Speech Language Therapist provides a limited service for assessment diagnosis and treatment of patients with voice and swallowing disorders related to ORL aetiology. This includes providing assessment diagnosis and treatment for patients whose voice quality, pitch, volume, or flexibility differs significantly from the norms related to age, sex, and cultural group. Assessment of swallowing includes assessment with video- fluoroscopy.

Allied Health

Outpatient dietetic input is available for management of oncology and head and neck patients, and to support Speech Language Therapist for patients with swallowing difficulties.

Voice Clinic at Greenlane Clinical Centre

Currently Clinical staff and outpatients travel to the Greenlane Clinical Centre ADHB to use equipment that is not available at MSC. Voice Analysing Software (2007) provides the department with greater autonomy and reduces the need for travel for assessments by CMDHB patients and staff.

Auckland District Health Board (ADHB) management of tertiary and after hours acute treatment

ADHB provides tertiary and after hours acute treatment. Patients are accepted via referral and there is often co-management between DHB's for ongoing-post surgical management of oncology patients. CMDHB Consultants and trainee registrars contribute to the metro-Auckland on-call roster provided by Auckland DHB.

General Practitioners with a Special Interest (GPwSI Programme)

The ORL GPwSI programme was developed in mid 2005 as a priority initiative to help address the problem of unmet need with approximately 20% of ORL referrals being sent back to primary health care due to resource constraints. Four GPwSI's have now been trained, one has moved overseas, and a fifth GP commenced training in February 2007. There has been a considered and strategic selection process of applicants to ensure that a spread of PHO's and geography has been obtained.

Once selected, GP's attend a practical three month training programme. The programme consists of SMO-run workshops and SMO GPwSI side-by-side clinics teaching examination techniques, interpretation of variations in normal appearances and disease states and assessment/ management of patient's difficult clinical problems. Once training is completed the GPs are accredited as GP's with a Special Interest in ORL, and are provided with examination equipment to undertake assessment and treatment of lower-level secondary care referred patients in the community at their existing practice. Routine low risk clinic follow-up appointments are now also able to be referred to the GPwSI programmes because of instrument and microscope availability.

The number of referrals to MSC will over time reduce and the quality of specialist referrals enhanced - such that the ORL SMO's would be seeing a greater proportion of FSA's that require specialist care. Many routine referrals can be effectively managed in Primary Care; improving waiting times, freeing up valuable SMO time to be used on more complex cases, and reducing travel for patients enabling them to be seen in the communities where they live.

GP Liaison

The ORL service has close links with the GP Liaison Officer who provides a GP clinical perspective and advice regarding the management of outpatient FSA and follow-up appointments to enable the service to manage patient volumes to meet MOH ESPI clinical performance indicators.

Community Ear Clinics

The ORL Service has strong links with the Public Health Nurses and provides two weekly SMO run Community Ear Clinics. Children can be placed directly onto surgical wait lists from these Community Ear clinics.

Hearing Screening Programmes

Plunket provides a high risk register for infants. There is tympanometry testing for preschool testing at three years and for school new entrants at 5 years. At present there is no national newborn hearing screening programme although planning is underway to introduce this in the near future.

1.3 Desirable Service Co-locations and synergies

Speech and Language Therapy

While the service is provided on site at MSC, further development is required to reduce CMDHB patients needing to travel to Greenlane Clinical Centre for several basic tests that could be completed at MSC. SLT services will need to be increased beyond the 1 day per week that is currently available.

Paediatric Inpatient beds at MSC

Provision of paediatric beds at MSC would improve theatre access for paediatric patients; reduce paediatric recovery time and the need for ambulance transfer to Kidz First. The ORL clinical team would support the development of an inpatient paediatric unit within the surgical ward at Manukau Campus.

Plastic Service and Oral Health Department

Both the Plastic Department and Oral Health Departments are based on the Middlemore Hospital site and the ORL department is based at the Manukau SuperClinic. It is desirable that there is co-location for surgical management and treatment of craniofacial abnormalities such as cleft palate, Pierre Robin syndromes and oral mucosal and dental problems.

Laboratory testing

Currently CMDHB does not have a Parathyroid hormone assay machine and test samples are sent to North Shore Hospital. Purchase of this machine will reduce reliance on frozen section would decrease anaesthetic time and LOS.

1.4 Key issues, opportunities and technology affecting the specialty

Acute ORL Patient Management

Management of acute presenting patients with severe bleeding or airway obstruction at Middlemore Hospital Emergency Department is problematic as the service has no consultants/registrars routinely present at the Middlemore site and consultation when required involves about 30 minutes travel time. It would be desirable for there to either be adequate Emergency Department support based at MSC site or for there to be a greater synergy between both sites of routine ORL department work so that there is routinely a clinical presence at Middlemore to manage acute presentations that are not stable enough to be transferred to MSC.

Paediatrics at MSC

There is a Paediatric inpatient policy that stipulates criteria for children staying at MSC. This includes children over 12 years with a body weight of > 40 kilograms who could be safely resuscitated using adult resuscitation equipment. Children who meet the age and weight criteria and who have a disability or special needs may also stay with the consent of their parent or guardian. All other paediatric inpatients are required to be transferred to Kidz First. This policy has implications for paediatric theatre scheduling, to ensure that paediatric patients do not need to be transferred during peak traffic, or have at least four hours recovery time available earlier in the day so that so if an overnight stay is required transfer is done in day light.

Neonate national screening programme

As part of the child health funding package included in the May 2006 Budget, the Government announced \$16 million over the next four years for the creation of a Universal Newborn Hearing Screening Programme (UNHSP) in New Zealand. Since this announcement, the Ministries of Health and Education have been working together to provide advice to both Ministers on preferred options for national programme design and implementation. An implementation date is yet to be confirmed.

While the CMDHB Audiology Service will not necessarily be responsible for the implementation of a screening programme for its population, the implications for the Audiology and ORL Departments may be substantial. There is an expectation that the screening programme will initially increase referral rates for both services through the early identification of symptoms and also due to a percentage of false positive referrals. It is inevitable therefore that this screening process will generate an increase in referrals to the service and additional capacity will be required. The cost of this should probably be borne by the allocated funding, but as yet it is not clear whether any of the NZ\$16m set aside for the Neonate National screening programme will be allocated to DHB's to manage the flow on activities that this will generate.

National Audiology Service

This service is currently provided by ADHB as the regional provider. Early in 2007 ADHB identified that they will be not continuing to provide this service from 1 July 2007. Planning and funding services are in discussion with ADHB over the short notice of this decision and the ramifications on service provision. This will predominantly impact upon funding processes for children's hearing aids

Expansion of the GPwSI Scope of Practice

The department currently sends low level new and follow up referrals to GPwSI community clinics. As the programme progresses the department is developing protocols and algorithms for treatment of a number of conditions to further enable patients to be seen in the community where they live and reduce travel needs. The GPwSI programme is soon to be extended to chronic mastoid conditions.

Other issues affecting ORL

CMDHB's discharge rate for tonsillectomy is below the national average. The national guidelines for tonsillectomy may result in GP's being overly cautious in referring patients. This, along with South Auckland having a highly mobile population may result in patients qualifying for referral being missed because previous episodes of primary care are missed.

Other key areas that are likely to affect the specialty are changes to imaging and laser technology for procedures such as tonsillectomy, oral and laryngeal cancers, and improved parathyroid testing equipment.

1.5 Existing Continuum of Care "gaps" for patients accessing this service

Funding is available for children and those in work for hearing aid devices. There is no public funding however for hearing aids for older people which has a significant impact on the quality of life - many in this group are least able to afford to self purchase.

Inadequate assessment and follow-up guidelines to support an appropriate secondary/primary interface.

Insufficient specialist nurses or nurse led clinics

Inadequate access to treatment for ORL/ immunological conditions.

Inadequate links with respiratory services and access to sleep disorder services.

1.6 Identification of key intersectoral relationships and opportunities

Groups such as Cancer society Deafness research foundation ACC Hearing association and ACC have an important role in education the public regarding issues such as smoking and industrial hearing loss.

Hospice provides palliative care support for end stage cancer patients.

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care for conditions

Developments in Molecular Biology

In the future it is expected that developments in molecular biology will impact on the model of care for conditions such as nasal polyps and cancers for causal treatment. Already we are starting to see the impact of the development of monoclonal antibodies for treatment of cancers and this should reduce the need for surgery or reduce the radical nature of cancer surgery.

Management of Deafness

Hearing aid technology is advancing at a rapid rate with aids getting smaller and more sophisticated. It is likely in the future that implantable aids may improve hearing quality making surgical implantation preferential management for certain types of hearing loss and in particular for children where compliance for wearing aids is crucial to learning and speech development.

Early Detection

Advances in imaging technology such as PET scanning for surveillance of cancer is likely to result in earlier detection and treatment.

Operative Procedures

New surgical technologies such as;

- **Carbon dioxide laser for tonsil ablation (LTA).** LTA is performed in 15 to 20 minutes in an office setting under local anaesthesia. The patient leaves the office with minimal discomfort and returns to school or work the next day. Post-tonsillectomy bleeding may occur in two to five percent of patients. Previous research studies state that laser technology provides significantly less pain during the post-operative recovery of children, resulting in less sleep disturbance, decreased morbidity, and less need for medications..
- **Bipolar Radiofrequency Ablation (Coblation):** This procedure produces an ionized saline layer that disrupts molecular bonds without using heat. As the energy is transferred to the tissue, ionic dissociation occurs. This mechanism can be used to remove all or only part of the tonsil. It is done under general anaesthesia in the operating room and can be used for enlarged tonsils and chronic or recurrent infections. This causes removal of tissue with a thermal effect of 45-85 C°. The advantages of this technique are less pain, faster healing, and less post operative care.
- Possible changes in models of care for treatment of chronic otitis media, possible may include more adenoidectomies in conjunction with grommet insertion and an overall drop in grommet insertion.

2.2 Proposed Service Development:

New equipment has been purchase that will enable the service to increase Laryngology management of voice disorders. This enables patients to better visualise what their problems are and to be actively involved in their treatment programme. This reduces the need for patients to travel to Greenlane Hospital for assessment and treatment.

Patient access to immunological diagnosis co-management of chronic inflammatory ENT problems such as chronic sinusitis is limited and provided as a tertiary service. These conditions have a high cost to the community both in loss of productivity cost of expensive antihistamine treatment and travel costs to ADHB for desensitisation programmes. The service plans to improve access to its patients through regional service planning processes.

Development of Nurse Practitioner roles with prescribing rights and the ability to directly wait list patients from the community onto surgical waiting lists

Movement of procedures or components of Care to greater ambulatory care delivery

Management of a number of current secondary care procedures can be moved to a community setting. This will be achieved by continuing to develop and grow the GPwSI community clinic programme, development of community nurse specialist positions and further developing and supporting the Public Health Nurses who have a significant role already in the management of chronic paediatric ear conditions. This will free up valuable capacity to enable the service to treat a higher percentage of patients who require surgical treatment.

2.4 Workforce factors

Currently there is world wide shortage of junior doctors. This is not expected to improve in the future. ORL training of GP's is likely to have a flow on effect of reducing referrals to secondary services.

The ORL Department Registrar Training Programme has recently been assessed by the College of Surgeons. The assessors raised concern that the registrars workload was too heavy, especially with the management of acute provision across two sites with only two registrars. They have recommended provision of a third registrar post to ensure the long term sustainability of the trainee programme.

NZ also has a shortage of nurses with an ageing workforce. Programmes are required to develop Nurse Practitioners and Nurse Specialists - roles that will reduce the demand for junior doctors in the secondary hospital environment. There will also be a positive impact on workforce development by providing greater employment opportunities and autonomy for nurse roles.

Appendix

3.1 Draft Model of Care template per speciality

Service: ORL

Otology

Model of care planning template V2

Conditions - Grommets, Myringoplasty, Mastoid surgery +/- Ca, Hearing loss / Deafness incl adult older age, Tinnitus, Audiology

Need complexity						
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Noise abatement	Workplace - OSH Hearing protection Education Promote safe home/ work environments.			
	Early Detection		<i>Expect imminent introduction of universal national neonatal hearing screening with huge implications for extra paediatric assessments, resources & equip.</i> <i>Gap: ADHB withdrawing from providing National Audiology Service July 07</i> School programmes	Community group hearing testing of older people – no prescribing.		
	Supported Self Care			If working full time qualify for Access-Able funded HA (MOH initiative)	Deaf Society <i>Gap: the lack of public funding for hearing aids for older people has a significant impact on Quality of Life for</i>	

					<i>many older people</i>	
	Disease / Injury specific care		<p>Early intervention for ear infections</p> <p>Assessment by public / private audiologists for hearing aid devices</p> <p>GP & GPwSI assessment.</p> <p>Ear van assessment and aural toilets for adults and children.</p> <p>Public health School hearing testing</p>	<p>GP primary assessment and Treatment</p> <p>GP's provide Follow up assessments following grommet surgery.</p> <p>Regular and ongoing assessment Paed deaf and hearing aid prescription managed by Audiology.</p> <p>Assessment by public / private audiologists for hearing aid devices</p> <p><i>GPwSI to provide Post-Mastoidectomy surveillance in the future with potential for Nurse Specialist to also be involved in care</i></p>	<p>GP primary assessment and Treatment</p> <p>Tinnitus management programmes provided by ORL Specialists for children or hearing therapists and tinnitus clinic Auckland University if adults.</p> <p>Assessment by public / private audiologists for hearing aid devices</p> <p>Vertigo assessment and management provided by ORL Specialists</p>	
	Specialised Care		<p>Expectation of increased referral rate from neonatal screening.</p> <p>Audiology service available.</p> <p>Patients with unilateral hearing loss need to be investigated for acoustic neuroma – by CT</p>	<p><i>Outpatient clinics (specialist and specialist nurse) undertaking consultation and wide range of office procedures</i></p> <p>CT monitoring of acoustic neuromas – high cost</p> <p>Ear Nurse Specialist undertakes mobile and ambulatory based clinics</p>	<p><i>Outpatient clinics (specialist and specialist nurse) undertaking consultation and wide range of office procedures</i></p> <p>Specialist consultant monitoring of acoustic neuromas by CT - high cost.</p> <p>Referral of most tertiary procedures to ADHB</p>	<p>Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms</p>

Day Admission			Majority of surgery is Daycase surgery with further movement in future years to clinic environment.	Majority of surgery is Daycase surgery with further movement in future years to clinic environment. <i>Gaps –Required development of implantable and bone anchored hearing aid service in the future. Technology change likely to make this a secondary care procedure.</i>	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms
Inpatient Admission				Range of secondary inpatient procedures provided. Referral of most tertiary procedures to ADHB. Not expected to change in future (planning assumptions)	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms
Palliative Care				Links with Oncology, Radiation Oncology and ORL Head and Neck services at ADHB	

Discussion

Need to initiate succession planning for sole ENS, incl fit within nursing practice framework.

Debate about long term efficacy of grommet surgery.

MRI need will increase as is now the expected standard for investigations.

Gap – inability to care for inpatient paediatrics in Manukau Surgery Centre

Insufficient funds nationally for adult cochlear implant surgery and poor funding for paediatric cochlear implant – under review 2007 by MOH and Disability Services.

Conditions – Predominately adult related - Sinus related, FESS, Septo/Rhinoplasty, Turbinoplasty, Polyps, Cancer nose

Need complexity						
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	Workplace & OSH policies particularly around inhaled dust / fumes – wood dust, welding, spores etc. Preventing irritation				
	Early Detection		Congenital Identification of those at risk from allergies and sinus issues			
	Supported Self Care			Allergy management – minimisation of contacts, pharmaceuticals – OTC Nasal clearing hygiene	Allergy management – minimisation of contacts, pharmaceuticals – OTC Nasal clearing hygiene	
	Disease / Injury specific care			GP assessment and treatment of primary care conditions Training programme available to up skill GP's to GPwSI <i>Gap – further assessment and follow up guidelines to further care provision and promote post-hospital</i>		

				<i>discharge care by primary care.</i>		
	Specialised Care			<p><i>Ongoing development of GPwSI programme to enable early condition assessment and management in primary care.</i></p> <p>Elective management of post acute injuries e.g. #nose</p> <p>Specialist FSA for primary referrals</p> <p><i>Specialist nurse clinics undertaking a range of clinic-based procedures</i></p>	<p><i>Ongoing development of GPwSI programme to enable early condition assessment and management in primary care.</i></p> <p>Management of post acute injuries e.g. #nose</p> <p>Specialist FSA for primary referrals</p> <p>Specialist nurse clinics undertaking a range of clinic-based procedures</p>	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms
	Day Admission			<p>Majority of specialist daypatient procedures subsequent to GP referral for FSA and Specialist assessment</p> <p>Anaesthetics for #nose could be community based with attending GPwSI</p>		Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms
	Inpatient Admission				<p>Significant proportion of adult surgery requires inpatient stay with further move to day stay expected in next 5-20 yrs and a decreased length of stay</p> <p>Very limited provision tertiary surgery – planning assumption is this will stay</p>	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for PRN management of symptoms

					with ADHB as regional provider.	
	Palliative Care				Links with Oncology, Radiation Oncology and ORL Head and Neck Services at ADHB	Links with Oncology, Radiation Oncology and ORL Head and Neck Services at ADHB

Discussion

Facility gaps - Clinic space insufficient for current requirements, size of theatres insufficient for modern theatre equipment

Gap – inability to care for inpatient paediatrics in Manukau Surgery Centre

Service: ORL

Laryngology / Throat / Neck

Model of care planning template V2

Conditions – Tonsils, Adenoids, Salivary Gland, Thyroid, Parathyroid, Oral Lesions, Microlaryngoscopy

		Need complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention	<p>Antismoking campaigns generic and targeted – MoH ASH, Maaori focused.</p> <p>Workplace & OSH policies particularly around inhaled dust / fumes – wood dust, welding, spores etc.</p> <p>Iodised Salt for endocrine disorders.</p>	Driving awareness – sleep apnoea			
	Early Detection	<p>GP wellness checks</p> <p>Regular Dental checks</p>				
	Supported Self Care			<p>Throat hygiene – OTC mouth and other gargle products.</p> <p>Anti allergy measures. Salivary massage Face masks use. Dietary – anti reflux</p> <p>Referral to Home Health care service for</p>	<p>Throat hygiene – OTC mouth and other gargle products.</p> <p>Anti allergy measures. Salivary massage Face masks use. Dietary – anti reflux</p> <p>Referral to Home Health care service for appropriate patients</p>	

				appropriate patients		
	Disease / Injury specific care			<p>GP primary assessment and treatment</p> <p>GPwSI training programme available to up skill GP's.</p> <p>Tonsillitis management guideline for assessment and treatment available.</p> <p>Post tonsillectomy follow up usually done by GPs</p> <p>GP's initiate radiology investigations and refer head/neck/oral masses for specialist assessment initiate radiology investigations as appropriate.</p> <p><i>Gap – further assessment, treatment and follow up guidelines to further care provision in primary care setting.</i></p>	<p>GP primary assessment and treatment</p> <p>Tonsillitis management guideline for assessment and treatment available.</p> <p>Post tonsillectomy follow up usually done by GPs</p> <p>Regular monitoring and medication adjustment for endocrine based conditions followed by GP's with assistance from endocrinology as required</p> <p>Ultrasound assessment and monitoring of salivary and thyroid and other neck pathology.</p> <p>Surveillance of patients previously treated for H&N cancer by secondary and primary care</p>	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) or GP for management of symptoms
	Specialised Care			<p><i>Outpatient clinics (specialist and nurse specialist) undertaking consultation and wide range of clinic procedures</i></p> <p><i>Ongoing development of GPwSI programme to enable early condition assessment and</i></p>	<p><i>Outpatient clinics (specialist and nurse specialist) undertaking consultation and wide range of clinic procedures</i></p> <p><i>Ongoing development of GPwSI programme to enable early condition assessment and management in primary</i></p>	Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for management of symptoms

				<p><i>management in primary care.</i></p> <p><i>Investigations using voice laboratory</i></p> <p><i>Stroboscopy for larynx Assessment – currently a gap</i></p>	<p><i>care.</i></p> <p><i>Investigations using voice laboratory</i></p> <p><i>Stroboscopy for larynx Assessment – currently a gap</i></p> <p>Protocol to allow GP direct entry to IPWL for tonsil surgery for credentialed GP's</p> <p>Limited long term relationship with patient once surgical care completed with exception of oral and head and neck malignancy.</p>	
	Day Admission			<p>Continuing emphasis on day and short stay surgery.</p> <p>Paed tonsils predominately day stay.</p> <p>Emphasis on Laryngology as day stay.</p>	<p>Continuing emphasis on day and short stay surgery.</p> <p>Paed tonsils predominately day stay.</p> <p>Emphasis on Laryngology as day stay.</p>	<p>Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for management of symptoms</p>
	Inpatient Admission				<p>Significant proportion of adult surgery requires inpatient stay. No significant change expected in next 20 yrs.</p> <p>Expect a decreasing length of stay for thyroid and salivary gland surgery.</p> <p>Due to presence of head and a neck surgeon on staff expect some increase in</p>	<p>Referral to Palliative Care with consultation and treatment from ORL (specialist or nurse specialist) for management of symptoms</p>

					head and neck cancer surgery – links with Plastic Surgery. Very limited provision tertiary surgery – planning assumption is this will stay with ADHB as regional provider.	
	Palliative Care				Links with Oncology, Radiation Oncology and ORL Head and Neck Services at ADHB	

Discussion

Equipment gap - stroboscope for larynx assessment and additional theatre sets for surgical lists.

Facility gaps - clinic space insufficient for current requirement, size of theatres insufficient for modern theatre equipment

Current SDR for tonsil and adenoid surgery below national rate

Gap – inability to care for inpatient paediatrics in Manukau Surgery Centre

Continuing emphasis on day and short stay surgery.

3.2 Change in Procedure/Component of Care Table

ORL - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic)Procedure	Outreach Office Surgery
Now	Grommets	Nil	Specialists 98%	Specialists Adults 2%	Nil
2010		Nil	Specialists 98%	Specialists Adults 2%	Nil
2020		Nil	Specialists 60%	Specialists 40%	Nil
Now	Tonsils +/- Adenoids	Specialists Child 2% Adult 70%	Specialists Child 98% Adult 30%	Nil	Nil
2010		Specialists Adult 10%	Specialists Child 90%	Nil	Nil
2020		Specialists 5%	Specialists 15%	Specialists 80% Laser technology	Nil
Now	Septo / Rhinoplasty	Specialists 100%	Nil	Nil	Nil
2010		Specialists 80%	Specialists 20%	Nil	Nil
2020		Specialists 50%	Specialists 50%	Nil	Nil
Now	Myringoplasty	Specialists 50%	Specialists 50%	Nil	Nil
2010		Specialists 30%	Specialists 70%	Nil	Nil
2020		Nil	Specialists 95%	Specialists 5%	Nil
Now	Sinus	Specialists 90%	Specialists 10%	Nil	Nil

2010		Specialists 50%	Specialists 50%	Nil	Nil
2020		Specialists 20%	Specialists 80%	Nil	Nil
Now	Microlaryngoscopy	Nil	Specialists 100%	Nil	Nil
2010		Nil	Specialists 80%	Specialists 20%	Nil
2020		Nil	Specialists 60%	Specialists 40%	Nil
Now	Mastoid	Specialists 60%	Specialists 40%	Nil	Nil
2010		Specialists 45%	Specialists 65%	Nil	Nil
2020		Specialists 20%	Specialists 80%	Nil	Nil
Now	Thyroid / Parathyroid	Specialists 100%	Nil	Nil	Nil
2010		Specialists 90%	Specialists 10%	Nil	Nil
2020		Specialists 70%	Specialists 30%	Nil	Nil
Now	Salivary Gland	Specialists 100%	Nil	Nil	Nil
2010		Specialists 75%	Specialists 25%	Nil	Nil
2020		Specialists 50%	Specialists 50%	Nil	Nil
Now	Oral Lesions	Specialists 10%	Specialists 90%	Nil	Nil
2010		Specialists 5%	Specialists 60%	Specialists 35%	Nil
2020		Specialists <5%	Specialists 45%	Specialists 45%	Specialists 10%

3.3 Role Delineation Model

Specialty: ORL	Clinical Support Level							
Specialty	Pathology	Pharmacy	Imaging	Nucl.Med	Anaesthet ICU	CCU	Op.Theatres	
Middlemore-Current Actual	5	5-6	5-6	4	6	6	5	6
Middlemore-Current Required	4	4	5	5	5	5	3	6
Middlemore-Proposed (Yr)								
Manukau - Current Actual	2-3	2	3-4	4	5-6	4	1	4-6
Manukau - Current Required	4	4	5	5	6	6	3	6
Manukau - Proposed (Yr)								

Level 5 elements attributable to teaching and research role and links to oncology, radiation oncology, and palliative care services

Specialty: Ophthalmology

Current Service Configuration and Model of Care

1.1 Description of Service:

Counties Manukau Ophthalmology Department is a secondary care service based at Manukau SuperClinic (MSC) providing Specialist consultation, diagnosis, medical and surgical treatment of diseases of the eye and visual system, the orbit and ocular adnexae.

Consultation services include:

- General ophthalmology
- Glaucoma
- Neuro-ophthalmology
- Diseases of the anterior segment
- Diseases of the ocular adnexae
- Oculoplastics
- Medical retina and diabetic eye disease
- Paediatric ophthalmology
- Orthoptic service
- Children's glasses prescriptions
- Ophthalmic surgery including: Cataract squint, glaucoma, oculoplastics
- Laser photocoagulation treatment

Paediatric Ophthalmology

Referrals for routine refractive problems will be accepted up to the age of 5 from pre-school screening programmes. Children aged 5 or over from the new entrant vision screening programme are referred to an Optometrist in the first instance. All referrals for other ocular pathology and strabismus referrals in children are accepted. All CMDHB premature babies are screened for retinopathy of pre-maturity according to national protocols, and if required are referred to National Women's Hospital for laser treatment.

Diabetes Ophthalmology

The majority of diabetes photo screening is undertaken in the community based diabetes retinal screening programme with a limited photoscreening service occurring at MSC. The Ophthalmology Department receives referrals from photoscreening of photo-failures for slit lamp screening, and for specialist clinical examination and monitoring of more advanced diabetic eye disease and laser photocoagulation treatment. All patient clinical data from photoscreening and from specialist clinical examinations and laser treatments is maintained in a clinical electronic database that can be accessed both in the community and secondary treatment setting.

Community Diabetes Retinal Screening Programme

CMDHB contracts private providers to provide community based retinal photo screening appointments for its enrolled diabetic population. Patients who cannot be photo screened or who require secondary review and treatment are referred to the MSC Diabetes clinic.

Tertiary and Inpatient Services

ADHB is the regional provider of Tertiary Ophthalmology services. All elective patients who cannot be treated either in the clinic environment or as day surgery admissions are referred to ADHB for treatment in that setting.

Medical Staff

Historically CMDHB has contracted medical staff from Auckland District Health Board (ADHB) on a per session basis. In the last 2-3 years there has been a move by CMDHB to employ an increasing number of its own clinical staff to provide a better skill mix of subspecialty clinicians to meet local

population needs. CMDHB now employs 5 staff, 2.6FTE consultants and 1FTE Medical Officer. The service appointed a Clinical Head of Department to provide direction and leadership to the department.

Nursing and Technical Staff

The department has approximately 3.2 FTE nursing staff and 3.2FTE technical staff including Ophthalmic Technologists, Orthoptists and Optometrist.

1.2 Current Service co-locations and synergies

The Ophthalmology service provides outpatient clinics at MSC and day stay surgery at Manukau Surgery Centre. Patients who require inpatient overnight stay are currently referred to ADHB as tertiary cases.

Outpatients

Adult outpatient clinics are held in Module 7 and Paediatric clinics are located in Module 3. Clinics are staffed by RN's and technical staff with a separate team leader for each of adults and paediatrics. The department has a range of diagnostic equipment including A and B scan, non-mydratic digital photography, mydratic digital photography and fluroscein angiography, OCT, Humphrey Visual field and Retinal tomography. YAG Laser, laser photocoagulation and some minor procedures are performed in module 7. Clinic space is being expanded at the SuperClinic to allow more clinics and an improved procedure room.

ADHB Greenlane Clinical Centre

ADHB provides a tertiary service for CMDHB patients via referral from GP or secondary Service. ADHB also provides an acute service via GP or secondary referral and also accepts patient walk ins. CMDHB patients are referred back to CMDHB for follow up management of post acute and some post tertiary patients.

Plastic's Department

Plastics Service outpatient clinics are co-located at MSC however there is minimal surgical co-management of patients.

Premature Baby Screening

A paediatric Ophthalmologist regularly visits the Neonatal Unit based at Middlemore Hospital to screen premature newborns for premature retinopathy and if required these babies are referred to National Women's Hospital for laser treatment.

Paediatric Screening Programmes

There are three community based programmes for screening children's vision including Plunket who are Well Child Providers screening as part of the regular well child check programme. There is also a CMDHB pre-school vision screening programme for pre-schoolers at three and a half years, and further checking by new entrant vision and hearing testers at five years of age at school.

Community Diabetes Retinal Screening programme

At present there are two community providers contracted to provide photo screening for diabetic patients via referrals either received from community providers or via CMDHB. Appointment attendance and planned appointment information is held in CMDHB patient information system and all clinical information is stored in a secure database which is able to be accessed by both CMDHB and community providers.

Blind and Low vision Network New Zealand (BLENNZ), Homai Campus

BLENNZ is the National organisation for vision education which incorporates the 11 Visual Resource Centres throughout NZ. BLENNZ, Homai Campus is located in Manukau City. Services provided on the Homai Campus include Residential, Class room based services (the school), the Assessment service which includes the Low Vision Clinic, and the Auckland Visual Resource Centre.

Referrals to the Assessment service are both local and national from Ophthalmologists, GPs, Visual resource teachers and other providers. A visiting Ophthalmologist funded by the Education Department provides a full eye assessment on children referred to the low vision clinic, and the

CMDHB Ophthalmology Department receives referrals for treatment for children who are domiciled in CMDHB.

1.3 Desirable Service Co-locations and synergies

Plastic's Department

Co-management of orbital and lid surgery between ophthalmology and Plastics at the Manukau campus could improve patient outcomes.

ADHB Greenlane Clinical Centre

Links between Greenlane Clinical Centre for the follow up management of tertiary and acute patients via referral and discharge summary would further improve local access and reduce overlaps in provision.

The concept that CMDHB will in the future deliver a low complexity acute service that provides local access to its population is currently under discussion.

1.4 Key issues, opportunities and technology affecting the specialty

CMDHB Ophthalmology participates in a regional District Health Board agreement for Ophthalmology provision and functions in a hub and spoke model. ADHB provides the hub, and provides providing tertiary and acute treatment with secondary elective services provided at CMDHB and Waitemata DHB. Local access for treatment is promoted where feasible and cost effective. Service development is collaborative, and in line with regional planning. This model provides opportunities for sharing clinical and technology resources costs and via referrals or subcontracting clinician skill mix. In line with this CMDHB aims to provide core services that are high volume while promoting local access and that are cost effective in terms of technology and subspecialty skill requirements.

Future locations of treatment provision

Development of new technology, treatments, and reduction in costs of existing equipment will impact on definitions of primary, secondary and tertiary services, and the most suitable location for service delivery. This will provide future development opportunities for the Ophthalmology Department for clinical staff including participation in the Resident Medical Officer Training Programme and development of nursing, technical and optometry roles.

Management of acute treatment is a significant burden on tertiary service providers and it is likely that this will be shared between secondary and tertiary services. Under discussion, at present, within the regional Ophthalmology forum is the concept of repatriation of selected acute services from ADHB to CMDHB.

Until recently there have been limited treatment options for age-related macular degeneration. Very recently, a number of new medical treatments have become available and this will have an impact on referral volumes and ongoing treatment costs.

Clinical technical and nursing roles

To better utilise Ophthalmologist resources, further development of clinical roles, for optometrists, ophthalmic technicians, nurse specialists and nurse practitioners working in conjunction with ophthalmologists for pre and post-operative cataract assessment, glaucoma management and treatment triage of acute patients and diabetic slit lamp screening.

Theatre Access

With the MOH introduction in 2005 of the Cataract Initiative and subsequent significant increase in volume of s to be undertaken, there is inadequate theatre availability and significant volumes of procedures are being subcontracted to the private sector. This will be addressed in the future with greater development of local resources.

1.5 Existing Continuum of Care “gaps” for patients accessing this service

Publicly funded community or secondary based low vision assessment clinics for non treatment assistance to vision impaired.

Currently the Ophthalmology service does not perform refractive surgery or cosmetic surgery and also does not provide a routine adult refraction service. Adults needing this service are advised to see their local optometrist.

1.6 Identification of key intersectoral relationships and opportunities

The Save Sight Society of New Zealand Inc

This society, previously known as the NZ society for the Prevention of Blindness was formed in 1966 by a group of New Zealand Ophthalmologists. Members include Ophthalmologists, Optometrists and some lay members.

Its aims are to:

- Raise public awareness of the causes of blindness
- Encourage early detection of preventable blindness in children
- Prevent eye injuries
- Promote research into the causes of eye diseases and their treatment
- Improve the quality of and access to eye care in New Zealand

The Royal New Zealand Foundation of the Blind

This Zealand's primary provider of vision-related habilitation and rehabilitation services to blind, deaf-blind and vision-impaired people. The foundation annually registers 1,200 New Zealanders as RNZFB members who have gone blind or experienced serious sight loss. The RNZFB equips its 11,700 members with the adaptive skills, technology and resources they need to create new beginnings and lead independent lives.

Glaucoma NZ

Is a registered charitable trust formed in 2002 and a non-profit organisation. "Glaucoma NZ aims to be the premier New Zealand resource for education, public awareness and research into glaucoma: the leading cause of preventable blindness."

Its aims are to

- To inform and educate all who have or are interested in glaucoma.
- To promote awareness in our community about glaucoma.
- To facilitate research in New Zealand into glaucoma.

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care for Ophthalmology conditions

Ophthalmologists are a scarce and expensive resource. New models of care will support greater roles for Optometrists, technical staff, nurse specialists and nurse practitioners in the pre and post operative management of surgical patients with conditions such as cataract patients, pterygium, ocular plastics and photocoagulation. These staff will also have greater involvement in the management of chronic eye conditions such as age related macular degeneration glaucoma and diabetic patients.

CMDHB has a high volume of Diabetes patients, in the future the service plans to increase optometrist slit lamp screening for patient photo failure. This may be secondary and or community based. This will make valuable Ophthalmologist resource for monitoring and treatment of more advanced diabetic eye disease. Likewise the development of Nurse Specialists in the management of Cataract and Glaucoma conditions will have similar benefits.

Whilst the focus of this document is on the provision of elective care it is worth noting that discussions are currently in progress within the regional Ophthalmology forum regarding the concept of repatriation of selected acute services from ADHB to CMDHB. Such a move, if it were to occur would have impact on staffing requirements and the structure of elective service provision.

2.2 Proposed Service Development:

Currently all corneal graft surgery and vitreo-retinal Surgery are referred to Auckland District Health Board. In the future many of these types of procedures could be undertaken locally as secondary

procedures with inpatient ward availability required to support this treatment. However based on current planning assumptions inpatient beds are unlikely to be developed in the near future.

2.3 Movement of procedures or components of Care to greater ambulatory care delivery

In the longer term future, with changes to facilities and equipment, it is likely that more surgery will be undertaken in procedure rooms both in the community and outpatient settings. This might include procedures such as pterygium, ocular plastics, cataracts and photocoagulation.

A model that has worked well in Otolaryngology using Specialty trained/credentialed GP's will be considered for Ophthalmology. By using GPwSI (GP's with a special interest in Ophthalmology) and OPwSI (Optometrists with a special interest) would provide support to Secondary Specialists for:

- Following up of referrals in the community
- Minor Ophthalmic Surgical procedures would be done in the community where possible in outpatient and community procedure rooms
- Specialty trained Optometrists could directly wait list patients for some procedures using agreed guidelines and clinical criteria
- Shared care for glaucoma management

With the purchase and use of portable laser technology, it is possible that laser treatments could be provided as an outreach service in the community with the benefits of diabetic patients receiving treatment in their own local community.

2.4 Workforce factors

Currently there is world wide shortage of junior doctors unlikely to improve in the future. Training of GP's in Ophthalmology skills and further up-skilling Optometrists is likely to have a flow-on effect of reducing referrals to and improving access to secondary services.

NZ also has a shortage of nursing workforce and the nursing workforce is aging. Senior Nurse roles such as Nurse Practitioners and Nurse Specialists will reduce the demand for junior doctors in the secondary hospital environment. There will also be a positive impact on workforce development by providing greater employment opportunities and autonomy for nurse roles.

Ophthalmology is highly dependent on specialised equipment. As technology continues to develop so does the need for technical staff such as Orthoptists and Ophthalmic technologists who are able to complete complex assessments and tests to support the Ophthalmologist. There are currently no NZ training programmes for Orthoptists and therefore NZ relies on overseas recruitment with orthoptists being scarce and difficult to replace.

Optometrists are predominantly part of the private workforce. Their business is predominantly concerned with primary health care for eyes and the provision of corrective eye such as glasses and contact lenses. Nationwide there are still very few Optometrists working in the public sector and historically there are political and divisive issues between Ophthalmologists and Optometrists in some areas. This is now changing and there is greater acceptance that Optometrists can play a positive role in the secondary treatment environment. This group has a wide range of skills that are adaptable and can improve models of care in the secondary environment by improving access to and cost effectiveness of treatment.

Appendix

3.1 Draft Model of Care template per speciality (this exercise should be used to engage Primary Care in what can be done to move care into Ambulatory Care)

Service: Ophthalmology

Model of care planning template V2

		Need complexity				
		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
Component of Care	Prevention	Community based education / awareness programmes. School healthcare programmes.	Sun protection Dietary Education – OSH, GP's			
	Early Detection	Screening for Diabetes in community and primary health facilities – GP / nurse. Pre school vision and squint screening programme including Plunket 0-5 programme. School based vision and squint assessments. Driver testing Optometrist vision assessments.	Diabetes screening Maaori and Pacific. GP 'Get Checked' programme for diabetes / hypertension/ lipids Diabetes Retinal Screening programme. Glaucoma 45+ - adhoc screening as part of Optometrist eye examination. Orthoptist assessment squints and amblyopia on self or GP referral Genetic screening for glaucoma may develop in future.	Ongoing Diabetes Retinal screening programme.		

Supported Self Care	<p>Primary healthcare monitoring.</p> <p>Education</p> <p>Optometrist ongoing vision assessments</p> <p>Support from Plunket.</p>	<p>Attend screening - GP Wellness and Optometrist Glaucoma checks, and use of safety and preventative measures.</p> <p>Health and Safety practices of wearing of protective glasses at home and work</p> <p>Education programmes</p>	<p>Regular monitoring by GP and other vision professionals.</p> <p>Management plans Glaucoma.</p> <p>Lazy eye patching</p> <p>Vision correction glasses adults and children.</p> <p>Promote safe home / work environments</p>	<p>Plan of care to control diabetes.</p> <p>Promote safe home / work environments.</p> <p><i>Community or secondary based low vision assessment clinics for non treatment assistance</i></p> <p>Visual resource centre Foundation for Blind</p> <p>Home help care</p>	<p>Promote safe home / work environments.</p> <p><i>Community or secondary based low vision assessment clinics for non treatment assistance</i></p> <p>Visual resource centre Foundation for Blind</p> <p>Home help care</p>
Disease/ Injury specific care		<p>Manage plan of care to control diabetes.</p> <p>Photostreening programmes.</p> <p>Optometry screening for glaucoma / AMD</p>	<p>Manage plan of care to control diabetes.</p> <p>Ongoing Diabetes Retinal screening programme.</p>	<p>Manage plan of care to control diabetes.</p> <p>Ongoing Diabetes Retinal screening programme.</p>	
Specialised Care		<p>Manage referrals from Photostreening programmes.</p> <p>Ongoing Optometry screening for glaucoma / AMD.</p> <p>2006 FSA breakdown 38% medical retina/diabetes 33% cataract 20% paed / orthoptics 8% glaucoma / ocular plastics</p>	<p>Of the blinding eye diseases Diabetic Retinopathy and Children's Lazy eye are preventable with the use of good screening programmes whilst Glaucoma, AMD and Cataract are not preventable.</p> <p>All diseases are treatable especially if diagnosed in early condition stage.</p> <p><i>Need to up skill</i></p>	<p><i>Planned development of review by Nurse Specialist for Cataract and Glaucoma.</i></p> <p>SMO FSA and ongoing followup review Diabetic eye disease.</p> <p>Patients requiring access to inpatient or tertiary based care are referred to ADHB for treatment in that setting. Initial assessment and ongoing followup of these patients is often provided at CMDHB</p>	

				<p><i>technologists, Optometrists and develop CNS to provide ongoing patient review diabetic retinopathy, cataract and glaucoma management.</i></p> <p>SMO FSA and ongoing followup review Diabetic eye disease.</p> <p><i>With development of GPwSI minor ocular plastics should be able to be undertaken within Clinic environment.</i></p> <p><i>Explore opportunity of Optometrists undertaking community based followups on selected patients</i></p>		
	Day Admission			<p>2006 Surgery breakdown 66% cataract 33% glaucoma / ocular plastics/ strabismus.</p>	<p>Timely Laser photocoagulation treatment for retinal disease critical to preventing blindness for Diabetic.</p> <p><i>Development of Ocular Plastic day surgery into Clinic environment with changes to facilities and equipment</i></p>	
	Inpatient Admission				<p><i>Inpatient service not provided at CMDHB and unlikely to be so based on current planning assumption</i></p> <p>Inpatient and tertiary care provided at ADHB</p>	

					<i>Potential development by 2020 of corneal grafting and vitreo retinal surgery to change from a tertiary to secondary based procedure. Will require inpatient beds to service these patients.</i>	
	Palliative Care				Palliative care is based on community and primary care based support to enable patients with blindness to live safely and function in the wider community environment.	

Discussion: *Insufficient theatre access within CMDHB to currently complete required volumes.*

3.2 Change in Procedure/Component of Care Table

Ophthalmology - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic)Procedure	Outreach Office Surgery
Now	Cataracts	Nil	Specialists 100%	Nil	Nil
2010		Nil	Specialists 80%	Specialists 20%	Nil
2020		Nil	Specialists 20%	Specialists 80%	Nil
Now	Pterygium	Nil	Specialists 100%	Nil	Nil
2010		Nil	Nil	Specialists 100%	Nil
2020		Nil	Nil	Specialists 75%	Specialists 25%
Now	Paed Squints	Nil	Specialists 100%	Nil	Nil
2010		Nil	Specialists 100%	Nil	Nil
2020		Nil	Specialists 100%	Nil	Nil
Now	Occular Plastic	Nil	Specialists 100%	Nil	Nil
2010		Nil	Specialists 40%	Specialists 50%	GPwSI 10%
2020		Nil	Specialists 20%	Specialists 60%	GPwSI 20%

Now	Laser Photocoagulation	Nil	Nil	Specialists 100%	Nil
2010		Nil	Nil	Specialists 75%	Specialists 25%
2020		Nil	Nil	Specialists 60%	Specialists 40%
Now	Corneal Graft Surgery	Nil	Nil	Nil	Nil
2010		Nil	Nil	Nil	Nil
2020		Specialists 100%	Nil	Nil	Nil
Now	Vitreo Retinal Surgery	Nil	Nil	Nil	Nil
2010		Nil	Nil	Nil	Nil
2020		Specialists 100%	Nil	Nil	Nil

Speciality: Gynaecology

Current Service Configuration and Model of Care

1.1 Description of Service:

The Gynaecology Service at CMDHB provides acute, acute arranged and elective services over 3 sites. The range of services includes acute services, early pregnancy, general gynaecology, urogynaecology, colposcopy, contraception and fertility control and procedures including day stay and inpatient. Complex urogynaecology and complex diagnostic and treatment procedures are undertaken in association with other specialities. Infertility and recurrent miscarriage services, and Gynaecology Oncology are part of the respective regional services.

Specialist gynaecologists are on-site 24 hours providing support for Registrars and House Surgeons.

The Gynaecology inpatient ward is managed by an experienced Gynaecology Charge Nurse and supported with experienced Registered Nurses. Professional Nursing support is provided by the Clinical Nurse Director of Surgical and Ambulatory Care. The Gynaecology Clinical Nurse Specialist provides education and support to both primary and secondary care nurses, and the Preadmission Nurse coordinates the elective procedures for the service. A dedicated gynaecology Social Worker with extensive experience in Women Health and counselling is part of the Allied Health team

Gynaecology diagnostic and treatment procedures are undertaken in simple and complex patients both in inpatient and ambulatory care settings, and performed regularly by gynaecologists with specialist anaesthetists in attendance for both inpatient and day stay surgery.

Teaching and research

The Gynaecology service has fifth year students and trainee interns attached as part of the University of Auckland undergraduate programme and has an active involvement in research through the Pacific Women's Health Research and Development Unit. There are two full time Senior Lecturers within the department with research interests in Pacific Women's Health and Minimal Access Surgery.

There are 10 Integrated Training Programme (ITP) training registrars in the department and SHOs regularly participate in the Diploma of Obstetrics and Gynaecology examination.

1.2 Current Service co-locations and synergies

Gynaecology inpatients are located in two wards: one is the acute ward at Middlemore Hospital known as the Gynaecology Care Unit (GCU) and in a second ward at the Manukau Surgical Centre which caters for elective patients combined with other surgical disciplines.

Manukau and Botany SuperClinics

This facility is staffed by a combination of Registered Nurses, Patient Care Assistants and clerical staff. The facility is responsible for the management of the staff although there is a strong functional relationship with the service. Gynaecology, urogynaecology including urodynamics and colposcopy are situated in these facilities. Having the urogynaecology collocated with urology promotes collegiality between the medical staff. The commonly shared equipment is easily shared thereby reducing operating costs.

Elective services being located on one site provide improved access to service for patients and promote coordination between the clinical and administration teams.

1.3 Desirable Service Co-locations and synergies

Oncology Services

Currently CMDHB patients are required to attend ADHB in order to receive their chemotherapy and radiotherapy. This poses a number of challenges for our community and a satellite service operating from Manukau SuperClinic is proposed. This will encourage compliance with treatment regimes and

reduce the financial burden on the families. This is supported by medical Oncology and a locally appointed Gynaecology Oncologist working as part of the regional service will facilitate this.

1.4 Key issues, opportunities and technology affecting the speciality

Population Growth

The predicted population growth in CMDHB and in particular an ageing population will create pressure on urogynaecology services. Controlling unwanted fertility will continue to provide challenges. The under 25 year old programme run by PHOs provides free access to contraception. The gap for the over 25 year old woman continues. Termination of Pregnancy rate in the 25 - 35 group remain the second highest of all groups. Mirena as a contraceptive device is not funded for contraception although it may have a place in fertility control in identified women.

Workforce

The health workforce in the district continues to age. There is a significant decrease predicted in the medical workforce and the speciality has considerable difficulty recruiting. In particular areas such as colposcopy continue to be threatened and one key finding of Ministry of Health review is the ethnic disparity of the workforce compared with the population. There has been a change in the skill level of the primary care workforce which impacts on secondary service. There is an opportunity to create further GP with Special Interest services in gynaecology. This has already successfully occurred in the Gynaecology Service with First Specialist Assessment for Tubal Ligation with strong support from the the Family Planning Association for this initiative.

Skill level of Junior Medical Staff

Over time the skill level of junior medical staff has decreased (more junior staff with less experience). Since the latest Registrar rotation in December 2006, there has been a steeper decrease in seniority and experience and this is will be challenging to change in the foreseeable future. This impacts on both the acute and elective service delivery with SMOs needing to direct and in many cases supervise or perform clinical duties previously performed by registrars. SMOs are resident in the hospital overnight and therefore not available for elective daytime services. In addition, there is the impact of the extra weeks annual leave for SMOs. Previously the SMO clinical workload lost due to the nights or leave would have been covered by Senior Registrars who had the ability to manage operating lists and outpatient clinics independently of SMOs.

The number of medical students and House Officers choosing Obstetrics and Gynaecology as a speciality continues to decline due to varied and complex reasons. This situation is not expected to change in the medium to long-term and impacts on the calibre of the staff recruited into training programmes.

Obstetric impact on elective gynaecology service

The ongoing growth in demand on Obstetric services continues to impact on elective services. Over the last five years the obstetric growth at CMDHB has been significant. Obstetric volumes were anticipated to grow by 3% for the 06/07 year but growth rates currently of around 5% p.a. appear to be continuing. This number may be underestimated as YTD December 06 CMDHB already sees a growth of nearer 5%. This increasing volume coupled with the severe midwifery shortages at CMDHB creates further workload for senior medical staff.

The elective LSCS list, which runs Monday to Friday mornings, is coordinated by a pre allocated Registrar and the SMO on call for Gynaecology (post acute ward round and overseeing acute surgery). The SMO's availability to support this list is dependent on the acute workload of gynaecology. A less skilled Registrar with limited support from the SMO needs more time to do the procedure and this can result in list overruns and inadequate acute patient reviews on the post acute ward round. This impacts on the elective procedures in the afternoon at Middlemore causing unnecessary delays for other services using the theatre after the elective LSCS list is completed. Although CMDHB continues to have an exceptionally low rate for elective LSCS, the increase in delivery numbers does result in an increase in absolute numbers. The admitting process for elective LSCS has been streamlined and until such time there is a dedicated SMO allocated to the elective LSCS list, delays and overruns will be unavoidable.

Funding Models

The current funding models can be a disincentive for modernisation of service e.g. While evidence-based clinical practice promotes mirena, which can be inserted in the ambulatory setting as the first line for the treatment of heavy menstrual bleeding, there is a perverse incentive for women to select hysterectomy which is available free within the public sector. (Mirena is now the treatment of choice recommended by NICE in the UK).

Technology

Advances in technology promote the ambulatory care model of care. Treatment of heavy menstrual bleeding may be undertaken in the ambulatory care facility. The cost of the consumables continues to be a barrier to service development

Continence Service

Currently there is lack of coordination within the DHB for continence services. There is an opportunity to design an integrated service from both secondary providers e.g. colorectal surgeons, urologist, urogynaecologist, nurses and physiotherapists and between primary/secondary services.

Cervical Smear taking and HPV vaccine

Maaori women have twice the national rate of cervical cancer. Cancer rates within the National Cervical Screening Programme remain low. Cervical Screening uptake rates in the CMDHB region, hysterectomy adjusted continues to be below the national target. With effective health promotion and population growth, demand for this service will increase and impact on the ability of the Colposcopy service to meet patient need. There is the need to develop extended nurse roles in line with the British model of Colposcopy services and this is being progressed currently.

Integration with primary care

Initiatives have been put in place to improve integration between primary and secondary care and there is an opportunity to up skill both GPs and Registered Nurses to provide more of the management of gynaecology conditions.

New facilities for Women's Health at Manukau SuperClinic

The CMDHB Core Consolidation Business Case (October 2005) identified the need to expand the Outpatient facilities at Manukau SuperClinic. The Business Case received Ministry approval and funding has been allocated for Outpatient expansion. The Outpatient Utilisation Review (January 2006) clarified the specific needs for Women's Health, particularly in regard to colposcopy. It recognised issues such as patient flow, space and privacy that could be improved with a purpose built area - for example: suitable changing and waiting areas, more procedure rooms and more recovery room.

Team Working

Working on 2 sites has compromised some involvement in the MDT discussions. With the addition of teleconference facilities more members of the MDT will be available to discuss and plan patients care.

Radiology Manukau Site

Lack of access to timely ultrasound in both the outpatient and community settings can result in delays for patients to access treatment. This can result in unnecessary day stay procedures being undertaken i.e. hysteroscopy and D and C to minimise clinical risk to women.

Allied Health

Many women undergoing elective gynaecology procedures are facing a loss (pregnancy, sexuality, fertility etc). This loss can have adverse impacts on psychosocial functioning. Access to appropriately skilled Social workers is limited on the Manukau site. The National Cervical Screening (NCSP) Programme guidelines in the Support for Women policy that Colposcopy services must have counselling available from a counsellor or social worker or a Nurse with Counselling experience (source NCSP Operational Policy and Quality Standards 2000 page 6.11).

Access to timely physiotherapy is the cornerstone of assessment and treatment of some types of incontinence. Currently the service offered is poor due to the inability to recruit into the position .There is an opportunity for Physiotherapist lead clinics.

Laboratory Services including Blood Bank

There is lack of timely access to both laboratory and blood bank facilities. To improve efficiency this deficit needs to be addressed.

1.5 Existing Continuum of Care “gaps” for patients accessing this service

Wait time for First Specialist Assessment

There continue to be delays for women accessing timely First Specialist Assessment. Improved access to diagnostics for primary care (e.g. ultrasound), and agreed national clinical practice guidelines will reduce service demand.

Low screening rates for cervical cancer

The screening rates for CMDHB continue to be below the national target and with rates declining. Cervical cancer develops slowly and without improving the uptake in cervical screening accessing appropriate preventative care is seriously impacted. Access to timely Colposcopy assessment following abnormal smear is a preventative care strategy that enables a reduction in cervical cancer rates. The Ministry of Health is prescriptive in the expected waiting times. Currently the wait times for CMDHB women are within the accepted parameters but mostly due to contracting additional locum SMO sessions to maintain clinic sessions.

Access to outpatient gynaecology

Currently, Women’s Health is not returning gynaecology referrals to primary care. Anecdotally there is a belief by some GPs that the Gynaecology Service cannot assess patients in a timely way and hence some GPs have stopped referring women considered to be a low priority. Strategies have been implemented where selected GPs have been credentialed to do First Specialist Assessment and directly enter a woman onto the tubal ligation operating list. This has improved access to one key area of service.

1.6 Identification of key intersectoral relationships and opportunities

- PHOs
- Maaori and Pacific Health Units
- RANZCOG
- NZNO Womens Health section
- New Zealand Medical Council
- NZ Nursing Council (Nurse Practitioner and Scopes of Practice)
- University Auckland and MIT
- Sexual Health services
- MOH
- Family Planning
- Association
- Independent Service Providers eg WONS
- WINZ
- Support groups eg endometriosis society
- Lets beat Diabetes
- Cancer Society
- Work and Income New Zealand
- Maaori Womens League

New Models of Care and Future Service Direction

2.1 Identified Changes in Model of Care

Heavy Menstrual Bleeding

- Outpatient hysteroscopy and ablation
- Outpatient sonohysterography and ablation
- Greater Mirena utilisation

Colposcopy

- Nurse Colposcopists
- HPV vaccine

Continence

- Integrated pelvic floor services incorporating Urogynaecology, urology, colorectal, physiotherapy and continence advisers.
- A GPwSI and physiotherapy role in urogynaecology
- Physiotherapist led pelvic floor clinics

Fertility Control

- Expanding Nurse led Fertility Control clinics including IUCD insertion - already occurring in parts of the primary sector

2.2 Proposed Service Development:

Regional Oncology Service

CMDHB have agreed to resource a subspecialty Gynaecological Oncologist to support the development of a hub and spoke model within the Auckland metropolitan region servicing the upper half of the North Island. THE CMDHB clinician who will be an integral part of the regional gynaecological oncology service currently managed through ADHB. This will improve access to service for CMDHB women requiring gynaecology oncology surgery and chemotherapy and provide ready access for patients to gynaecological oncology surgery across the greater Auckland Region. The appointment process for an oncological gynaecologist is underway.

SMO delivered service

Medical Workforce issues will continue to ensure that a SMO delivered service is integral to reduce clinical risk and improve RMO training opportunities. This has involved the SMOs being on-site 24/7/ to provide the oversight support and service.

“Fast trak” Hysterectomy

Work done within colorectal surgery has shown safety in fast tracking patient discharge if certain processes and parameters are met. It is proposed that a similar approach be adopted initially for Hysterectomy, but may become a feature of most gynaecological surgery. This will ensure women undergoing major surgery are treated and discharged more rapidly in the inpatient setting.

Integration with PHO re for long term contraception and sterilisation

This will increase access to long-term contraception including mirena and vasectomy. This will involve engaging with WINZ for a non-recoverable grant for vasectomy up to the value of \$300 which is separate from PHO funding.

Increasing Nurse Specialists/Practitioners

The role will promote integration between primary and secondary services, and provide patient and staff education. This education will ensure ongoing development of the multidisciplinary team and through this process clinical knowledge and skill. The Clinical Nurse Specialist may undertake some minor procedures including inserting IUCDs and pessaries. Nurse specialists will increasingly work alongside the medical teams and provide the holistic support for patients and complimentary skill sets to those of the medical staff.

There is an opportunity for nurse-led inpatient discharging through the development of policy and procedures

2.4 Movement of procedures or components of Care to greater ambulatory care delivery

The clear aim of the gynaecology service is to move procedures or components of care to a more complete ambulatory care setting. The new facilities and procedures being developed (see above) will facilitate this move. The development of the Nurse Specialist roles for Women's Health will improve communication and assist the transfer of care to the ambulatory setting. This has been achieved in part with the nurse led development of the Early Pregnancy Service. With robust change management strategies and marketing, the referral rate to the clinic by primary care providers has had a 300%

increase in the last 12 months. Whilst there has been a great improvement this can be greater enhanced with the new inpatient facilities due at the end of 2007.

Services will to a greater extent, incorporate the following initiatives:-

- GPwSI will play an increasing role in supporting medical management of the gynaecology conditions through continuing training and development. This will be facilitated by a close working relationship within Women's Health perhaps with the GPwSI working alongside SMOs and providing a liaison role for the interface with primary care.
- Development of models of care maximising the benefits of the input of Nurses (primary and secondary) GPs, SMOs, Sonographers, Physiotherapists and Social Workers will be further explored.

Currently most gynaecology activity is already delivered in day stay or ambulatory care

To improve utilisation in the ambulatory setting requires:

- Improved access to radiology service in particular ultrasound
- Appropriate funding to provide ablation and hysteroscopy in the ambulatory care setting
- Extended opening hours of the pre and post anaesthetic area of the Manukau Surgical Centre to prevent extended hospital admission
- Funding for identified nurses to undertake advanced practice training with an appropriate training framework and credentialing process

2.4 Workforce factors

- Women's Health needs to be a SMO delivered service. However one of the constraints with an aging workforce is that the acute workload becomes more difficult. There may be the inability to compete with the private sector. Development of collegial and supportive relationships with primary care providers, to develop capacity and capability and maintain women focused sustainable services, can only occur with both increased and improved communication. By modernising and focusing on the quality structures of Women's health and gynaecology in particular the service anticipates greater productivity by better utilisation of resource, enhanced recruitment due to an empowered workforce and improved access for patients due to reduced waste in the system.
- Nurse initiatives are dependent on the development and recruitment/retention of skilled nursing staff. The workforce is aging and the opportunities for career development may be limited due to financial constraints caused by a lack of postgraduate funding. The CNS role as been developed and proven successful in gynaecology by improving the integration of primary and secondary care providers' i.e. Tubal Ligation assessment.
- Physiotherapists have a role in assessing some types of incontinence as part of the incontinence and prolapse multidisciplinary team.
- The Nurse Colposcopist model, which has successfully been implemented in the UK and USA, needs to be developed locally to assess low-grade precancerous cervical changes. This will leave SMOs to manage cancers and high grade precancerous cervical lesions. The development of Nurse Colposcopists will require close liaison with the National Cervical Screening Programme, RANZCOG and Nursing Council to ensure training is endorsed and audit requirement are met.

Appendix

3.1 Draft Model of Care template per speciality (this exercise should be used to engage Primary Care in what can be done to move care into Ambulatory Care)

Service: Gynaecology Heavy Menstrual Bleeding

Model of care planning template V2

		Need Complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention		Lifestyle management Weight loss Exercise Smoking cessation			
	Early Detection		Self presentation to GP			
	Supported Self Care		May have lifestyle counselling. <i>Advice and education from Nurse Specialist</i> Well Women's clinics widespread within the community	May have lifestyle counselling. <i>Advice and education from Nurse Specialist</i> Well Women's clinics widespread within the community		
	Disease/Injury specific care			GP to initiate treatment using Nationally agreed clinical practice guidelines. May include a number of first level treatments	GP to initiate treatment using Nationally agreed clinical practice guidelines and referral to Specialist services as appropriate If anaemic or lifestyle compromised Primary Care to treat	

	Specialised Care			<p><i>Nurse Specialist to manage the interface between primary and secondary - may be community based as part of a Community health Care clinic attached to the PHO.</i></p> <p><i>Development of Primary Care Nurses in Mirena/ IUCD insertion</i></p> <p>Specialist consultation</p> <p><i>Improved access to ambulatory based Radiology Ultrasound and Pipelle biopsy will negate need for diagnostic Hysteroscopy and D+C for some patients</i></p>	<p><i>Nurse Specialist to manage the interface between primary and secondary - may be community based as part of a Community health Care clinic attached to the PHO</i></p> <p><i>Improved access to ambulatory based Radiology Ultrasound and Pipelle biopsy will negate need for diagnostic Hysteroscopy and D+C for some patients</i></p> <p><i>Development of service incl patient tracking for replacement of Mirena at end of lifespan (5 years)</i></p>	
	Day Admission			<p>Endometrial Ablation, insertion of mirena, and Hysteroscopy/Dilation and Curettage presently day stay but <i>could be undertaken in the ambulatory care setting with correct facilities.</i></p>		
	Inpatient Admission				<p>For surgical intervention ie hysterectomy.</p>	
	Palliative Care					

		Need Complexity				
Component of Care		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
	Prevention		Women following child birth and post menopause Lifestyle management Weight control Exercise Reduce smoking Promote high fibre diet Antenatal and postnatal exercise			
	Early Detection		Identification and appropriate management of 3 rd or 4 th degree tear at the time of Delivery Health promotion re incontinence Self-referrals to GP			
	Supported Self Care				<i>Supported funding of Incontinence products</i>	
	Disease/Injury specific care		<i>Access to Physiotherapy incontinence and Nurse Specialist based in the Community as part of Well Womens services</i>	<i>Access to Physiotherapy and Nurse Specialist based in the Community as part of Well Womens services</i>	Referral to Secondary care services using agreed CMDHB clinical practice guidelines <i>Nurse Specialist case</i>	

				<p>Referral to Secondary care services using agreed CMDHB clinical practice guidelines</p> <p><i>Nurse Specialist case managing the care of the woman in the community.</i> Will provide a link with primary care.</p>	<p><i>managing the care in the community.</i> Will provide a link with primary care.</p>	
	Specialised Care			<p><i>Development of integrated primary / secondary multidisciplinary incontinence service including Urology Gynaecology Colorectal Surgeons Older Persons Health Physiotherapists Nurse Specialists GP</i></p> <p>Nurse and PT may be able to undertake the First Specialist Assessment in the primary care setting.</p> <p><i>Urodynamic and Pessary procedures could occur if adequately resourced clinics.</i></p>	<p><i>Development of comprehensive multidisciplinary incontinence service including Urology Gynaecology Colorectal Surgeons Older Persons Health Physiotherapists Nurse Specialists GP</i></p> <p>Assessment by local Urogynaecology Services with consideration of a secondary and tertiary procedure</p> <p>Referral to physiotherapy as indicated</p> <p>Referral to Nurse Specialist as indicated for follow up and monitoring</p>	
	Day Admission			Move to more		

				<p>ambulatory services.</p> <p><i>Increase hours of Manukau theatre facility until 11pm.</i></p> <p><i>Review day surgery criteria, post discharge service and extend hours of operation to 11pm will extend the range of procedures that can be undertaken as day stay.</i></p>		
	Inpatient Admission				For some complex procedures only - particularly if other surgical specialties are involved e.g. bowel surgeon	
	Palliative Care					

Discussion

Further standardisation of clinical care amongst the variety services treating patients with incontinence is required

Cervical Screening Colposcopy						
		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
Component of Care	Prevention		<p><i>The implementation of HPV vaccination needs to be part of the Immunisation schedule in the future</i></p> <p>Population education re sexual health.</p>			
	Early Detection		<p>National Cervical screening programme.</p> <p>MOH to develop programme to look at ways to increase uptake of screening with PHO incentives</p> <p>CMDHB to develop local initiatives to reach hard-to-reach communities</p>	<p>Cervical screening follow-up for select patients under programme.</p> <p>Need to increase uptake through health promotion campaigns.</p>		

	Supported Self Care		<i>Nurse Specialist based Well Women's clinics widespread in the community.</i>	<p>Nurse Specialist based Well Women's clinics widespread in the community</p> <p>Referral to counselling as indicated</p> <p>Referral to Home Care service for post-discharge home-care</p>	<p>Referral to counselling as indicated</p> <p>Referral to Home Care service for post-discharge home-care</p>	<p>Discharge to Palliative Care Services from home health care and Hospice.</p> <p>Re-referral to specialist service for consultation and gynaecology symptom management as indicated.</p>
	Disease/Injury specific care		<p>Coordinated national database of all smear results, colposcopy assessment and treatments.</p>	<p>Referral to colposcopy service using agreed MOH clinical practice guidelines.</p> <p>Coordinated national database of all smear results, colposcopy assessment and treatments.</p> <p><i>Nurse Coordinator in the community to monitor and follow up colp and treatment. Will provide the link with primary care.</i></p>	<p>Referral to colposcopy service using agreed MOH clinical practice guidelines.</p> <p>Assessment and treatment prescribed as part of guideline.</p> <p>Coordinated national database of all smear results, colposcopy assessment and treatments.</p> <p>Referral to ADHB Regional oncology service to assist with care management</p>	<p>Re-referral to specialist service for consultation and gynaecology symptom management as indicated</p>

	Specialised Care		<i>Colp Nurse Coordinator could manage the interface between primary and secondary.</i>	<p>Assessment and treatment prescribed as part of guideline.</p> <p>Colp Nurse Coordinator could manage the interface between primary and secondary.</p> <p><i>Nurse/GP Colposcopists provide colposcopy directed treatments - may be community based as part of a Community health Care clinic attached to the PHO</i></p> <p>95% colposcopy treatment will remain as an ambulatory procedure.</p>	<p>Referral of patients with cervical cancer to the Northern Regional Gynaecology Oncology Service.</p> <p>Surgical and radiotherapy treatment as part of Regional oncology Service</p> <p>Very limited provision tertiary surgery – planning assumption is this will stay with ADHB as regional provider</p>	Re-referral to specialist service for consultation and gynaecology symptom management as indicated
	Day Admission			Remaining colposcopy treatment will be day stay		
	Inpatient Admission				For surgical or radiotherapy as part of the regional service	Discharge to Palliative Care Services from home health care and Hospice. Re-referral to specialist service for consultation and gynaecology symptom management as indicated.
	Palliative Care					Palliative Care services in home – home health care and Hospice.

Discussion

Planning assumption that cervical cancer management will remain as part of the Northern Regional Gynaecology Oncology Service based at ADHB means patients will continue to need to commute to access services.

		Need Complexity				
		General Population	Population at risk of condition	Population with an early condition and minimal co-occurrences	Population with advanced condition and multiple co-occurrences	Populations with an end stage condition
Component of Care	Prevention		<p>Public Health education re contraception including schools, teen units and tertiary institutions.</p> <p>Primary care options counselling re contraception to be undertaken as part of health assessment.</p> <p>Funding by PHO's of free contraception for under 25's</p> <p><i>Access to free contraception for age 25+</i></p> <p>Promote Emergency Contraception (ECP) thru health promotion.</p> <p>Improved access to Emergency contraception for women of unwanted fertility.</p> <p>Identification of high risk women of unwanted fertility.</p>			

		<p>Post delivery or TOP contraception provided by specialist / LMC/ GP</p> <p>Fast-track high risk women to secondary service for assessment regarding sterilisation treatment within agreed referral guidelines.</p>			
Early Detection		<p>Identification of high risk women of unwanted fertility.</p> <p>Early access to pregnancy testing through multiple sources</p>			
Supported Self Care		<p>Improve access and acceptability of contraception.</p> <p>Use contraception / Access ECP as required</p>	See GP early if unwanted pregnancy for early referral to TOP services.	See GP early if unwanted pregnancy for early referral to TOP services.	
Disease/Injury specific care		<p><i>Encourage contraception including public health funded mirena in the targeted population.</i></p> <p><i>Upskill GPs/ Primary Care Nurses in vasectomy and / or IUCD insertion</i></p> <p>Family Planning / GPs undertake First</p>	<p><i>GPs provide vasectomy and IUCD insertion – currently a gap in some GP's experience, funding issue and cultural issue</i></p> <p>Family Planning / GPs undertake First Specialist Assessment for TL surgery</p> <p><i>GPs able to offer funded alternatives for</i></p>	GP/LMC to refer to a pregnancy counsellor if issues with pregnancy or to refer to TOP services as requested by woman.	GP/LMC to refer to a pregnancy counsellor if issues with pregnancy or to refer to TOP services as requested by woman.

			<p>Specialist Assessment for TL surgery</p> <p><i>GPs able to offer funded alternatives for contraception including mirena, vasectomy, oral contraceptives</i></p>	<p><i>contraception including mirena, vasectomy, oral contraceptives</i></p> <p>GP's fastrack high risk women to secondary service with agreed referral guidelines.</p> <p>GP/LMC refers to a pregnancy counsellor if issues with pregnancy or refer to TOP services as requested by woman.</p>		
Specialised Care				<p>Mirena and IUCD insertion may be required to be performed in women who are identified as complex health needs e.g. large body habitus</p> <p><i>Nurse Specialist case managing the care of the woman in the community following Mirena / IUCD treatment initiated.</i></p> <p>Nurse Specialist fast tracks treatment for identified high risk patients.</p>	<p><i>Integration of secondary fertility control service with the regional and national termination service to fasttrack referral assessment and treatment for fertility control.</i></p> <p><i>Nurse Specialist case managing the care of the woman in the community following Mirena / IUCD treatment initiated</i></p>	<p>First trimester TOP Services provided as regional service at ADHB with referral from specialist, GP</p> <p>To improve access and accessibility Introduce medical vs. surgical management for first trimester TOP as part of the regional service</p> <p><i>Second trimester TOP services fragmented nationally - to become a recognised national service</i></p>
Day Admission				<p>Tubal ligations being done as a daystay procedure</p> <p>Access to Mirena and IUCD insertion provided as a daystay if required</p>		
Inpatient Admission					<p>May be required if health assessment identifies</p>	<p>May be required for second trimester TOP.</p>

					complex needs.	
	Palliative Care				NA	NA

Discussion

The principle of permanent sterilisation is that it must be the person requesting the service is the one who receives the procedure.

3.2 Change in Procedure / Component of Care Table

Gynaecology - Procedure level change by procedure and health professional substitution					
	Procedure	Inpatient Surgery	Daypatient Surgery	Office (Clinic) Procedure	Outreach Office Surgery
Now	Colposcopy	Nil	Specialist 20%	Specialist 80%	Nil
2010		Nil	Specialist 10%	Specialist 70% Nurse 20%	Nil
2020		Nil	Specialist 10%	Specialist 35% Nurse 10%	Specialist 10% Nurse 25% GPwSI 10%
Now	Tubal Ligation	Specialist 10%	Specialist 90%	Nil	Nil
2010		Specialist 10%	Specialist 90%	Nil	Nil
2020		Specialist 10%	Specialist 80%	Nil	Specialist 10%
Now	Hysterectomy • Vaginal • Abdominal	Specialist 100%	Nil	Nil	Nil
2010		Specialist 100%	Nil	Nil	Nil
2020		Specialist 100%	Nil	Nil	Nil
Now	Vaginal Prolapse Repair	Specialist 100%	Nil	Nil	Nil
2010		Specialist 100%	Nil	Nil	Nil
2020		Specialist 100%	Nil	Nil	Nil
Now	Urogynaecology incl TVT / TOT	Specialist 50%	Specialist 50%	Nil	Nil
2010		Specialist 35%	Specialist 65%	Nil	Nil
2020		Specialist 15%	Specialist 70%	Nil	Specialist 15%
Now	Hysteroscopy Dilation and Curettage	Specialist 5%	Specialist 95%		Nil
2010		Specialist 5%	Specialist 55%	Specialist 40%	Nil
2020		Specialist 5%	Specialist 40%	Specialist 55%	Nil
Now	Laprosocopy / EUA /	Specialist 10%	Specialist 90%	Nil	Nil

2010		Specialist 10%	Specialist 90%	Nil	Nil
2020		Specialist 10%	Specialist 80%	Nil	Specialist 10%
Now	Ovarian Surgery	Specialist 100%	Nil	Nil	Nil
2010		Specialist 100%		Nil	Nil
2020		Specialist 80%	Specialist 20%	Nil	Nil

3.3 Role Delineation Model

<u>Specialty: Gynaecology</u>	<u>Clinical Support Level</u>								
	Specialty	Pathology	Pharmacy	Imaging	Nucl.Med	Anaesthet ICU	CCU	Op.Theatres	
Middlemore-Current Actual	5	5	5-6	5-6	4	6	6	5	6
Middlemore-Current Required	5	4	4	5	5	5	5	3	6
Middlemore-Proposed (Yr)									
Manukau - Current Actual	5	2-3	2	3-4	4	5-6	4	1	4-6
Manukau - Current Required	5	4	4	5	5	6	6	3	6
Manukau - Proposed (Yr)									

Tertiary level Gynae oncology, infertility and terminarion services referred to National Womens Hospital