Complex Care & Internal Medicine Clinical Stream Service Development Priorities *2014 - 2018*

Leading care, healthier communities

NSW GOVERNMENT Health
South Western Sydney Local Health District

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Foreword by Clinical Director

Complex Care and Internal Medicine covers a range of inpatient, outpatient and community based services. Services include respiratory, stroke/neurology, medical assessment units, general medicine, ambulatory care, diabetes and endocrinology, HIV and immunology, infectious diseases, clinical genetics, rheumatology and general practice. These services include an acute inpatient service with a consultancy service across South Western Sydney Local Health District (SWSLHD).

Demographic change will significantly increase demands for healthcare across SWSLHD by 2018. The population in South Western Sydney is predicted to increase by approximately 18,000 people per annum and by 2018 the population is expected to increase to 1.05 million people. The most significant change will occur in the population aged 65 years and over, which is predicted to increase to 154,843 people by 2021.

Challenges and opportunities for improvement for Complex Care & Internal Medicine for the next four (4) years are vast with a broad range of services provided within the stream. The most significant challenges and opportunities for improvement are:

- Population growth which will increase demand for both services and facilities, particularly created by the South West Growth Sector. This will see increasing complexity of patients, particularly high rates of chronic disease and obesity which will require more complex and coordinated interventions and involvement of multidisciplinary teams
- Unique health needs of high needs populations such as Aboriginal people, people from diverse cultural backgrounds and frail, older people
- The Chronic Care for Aboriginal People - 48 Hour Follow Up has been a significant step forward in 'closing the gap' on Aboriginal Health and is the result of the Walgan Tilly Redesign Diagnostic Report. Although still in its infancy, this process allows the follow up of Aboriginal chronic disease patients post hospital discharge to improve health outcomes increasing appropriate links to GPs, Aboriginal Medical Services, Specialists and other services
- Distribution of residential aged care facilities (providing long term care to older people with more complex needs and requirements) is uneven across the District. Difficulty finding a suitable RACF close to the patient's or carer's home prolonging hospital stays
- The need to expand models of ambulatory, outpatient and community based care to provide a more timely and responsive service to patients and alternatives to hospitalisation. This has the potential to reduce high numbers of avoidable Emergency Department presentations and hospital admissions through stronger preventative care and alternative models, such as GP after hour's clinics and ongoing development of Triple I HUB
- The Complex Care and Internal Medicine Clinical Stream has and will continue to encourage partnership arrangements with external providers in an attempt to improve the holistic care of patients within the local community. An example of this is the SWSLHD and SWS Medicare Local Joint Diabetes Working Group where significant work has been developed and continues in order to establish a Clinical Pathway for Type II Diabetes. This project is establishing increased links with the patient, General Practitioners and the LHD

Introduction

The health services provided by South Western Sydney Local Health District (SWSLHD) are organized both vertically within an area of geography (hospitals and health centers serving defined population catchments) and horizontally across a service or process (clinical streams). Financial, workforce, activity and performance management is vertically integrated at the facility level. Clinical streams primarily focus on:

- Clinical services planning and the development of clinical networks
- Identifying service gaps and reviewing the appropriateness and configuration of services
- Innovation, research and best practice in models of care
- Maintaining and improving patient access to care
- Flexibility and robustness of clinical systems to respond quickly to changing environments
- Improving consistency and quality of care, safety and clinical governance
- Workforce planning, ensuring the right clinical teams in the right place at the right time
- Strengthening partnerships between facilities within a clinical specialty and between clinical services within a facility

Three strategic planning documents guide the future directions of SWSLHD:

- Strategic and Healthcare Services Plan- *Strategic Priorities in Health Care Delivery to 2021*
- Corporate Plan 2013 – 2017 *Directions to Better Health*
- Summary of Strategic Directions

Together these Plans form the basis of aligning all SWSLHD services to achieving the Vision of ***Leading Care, Healthier Communities***. SWSLHD facilities have prepared Operational Plans which outline local corporate strategies and actions. This includes the clinical streams with facility management responsibilities i.e. Mental Health, Oral Health, Community Health, Population Health and Drug Health. These Operational Plans outline how SWSLHD strategic and corporate priorities will be achieved within local vertically integrated facilities.

For those Clinical Streams that have not prepared an Operational Plan a high level *Service Development Priorities* plan outlines the priority actions that will be pursued horizontally in areas of Stream responsibility, to assist in achieving SWSLHD service development and corporate strategies. It outlines high priority actions for the Stream in the eight *Priority Strategic Directions in Service Development* from the Strategic & Healthcare Services Plan and for other core areas of Stream focus from the Corporate Plan i.e. providing high quality health services, community partnerships, developing our staff, supporting business and efficiency and sustainability.

The Strategic and Healthcare Services Plan outlined for each Clinical Stream in the timeframe to 2021, models of care for the future, service development directions and partners in service development. These are included at Attachment A, providing the framework for development of these Service Development Priorities.

Vision, mission, values and primary purpose

The Complex Care & Internal Medicine Clinical Stream is committed to achieving the **SWSLHD Vision** of

Leading care, healthier communities

It is also committed to the ***SWSLHD Mission*** which is to promote the health of the residents of the District and patients using our health services through the delivery of high quality healthcare.

We do this by providing health services that are population based, patient-centred and involve families and carers.

We use evidence to inform health practices; and consult, communicate, engage and collaborate with patients, local communities, agencies and care providers to improve the way we plan and provide health care services and programs.

We strive to deliver services that are respectful of personal dignity and autonomy; and sensitive to the needs of people from different cultures.

We emphasise learning and reflection and are committed to continuous quality improvement and innovation in delivering efficient and sustainable health care.

Our culture enables excellence and accountability, values our people and supports positive leadership and teamwork.

Staff in the Complex Care and Internal Medicine Clinical Stream upholds the **core values** of:

Collaboration

Openness

Respect

Empowerment

Specifically the primary purpose of the SWSLHD Complex Care and Internal Medicine Clinical Stream is to continually enhance services to appropriately meet the growing, changing and emerging clinical care needs arising from population growth and ageing. The Complex Care and Internal Medicine clinical stream is a diverse service providing care across a wide range of medical disciplines and settings, focusing on identifying future models of care and service development directions under the main departments included within the stream.

Services provided by the Complex Care & Internal Medicine Clinical Stream

Ambulatory Care

Ambulatory Care in SWSLHD is considered an overall approach to achieving integrated and appropriate care. It is the sum of all the different components of services such as Hospital in the Home (HITH), early discharge programs, shared care programs, outpatient clinics, same day medical and surgical services, provided within Hospitals, emergency services, care in the community and in General Practitioner and specialist rooms. It is all about ensuring that all these components are part of an overall direction for the Local Health District. The following hospitals in the SWSLHD offer Ambulatory Care service.

Bankstown:

Ambulatory cares role includes the provision, facilitation and promotion of non-inpatient management of acute and subacute patients. It facilitates patient flow between hospital and the community. Ambulatory care has a role in assisting Emergency Department (ED) in reducing access block and assists Perioperative Services to achieve day of surgery admission (DOSA) targets.

The Ambulatory Care Unit primarily manages the presenting acute condition. Treatment goals are clearly defined at the beginning of the program. The GPs and outside specialists continue to manage the patient's chronic conditions.

Comprehensive patient assessment is a core part of practice in the Ambulatory Care Unit. It allows early identification of problems and intervention thus preventing serious complications. Depending on the nature of newly identified problems, they can be managed by the Ambulatory Care Unit, GPs or inpatient medical teams with appropriate communication.

Main Services Provided

The Ambulatory Care Unit provides three main services.

1. Ambulatory Care Program (Hospital in the Home).

This program is available to patients with a range of acute medical conditions that previously required inpatient care. These include patients with cellulitis, osteomyelitis, deep venous thrombosis, pulmonary embolism and atrial fibrillation. Treatment can be given to patients at home or in the Ambulatory Care Unit, or a combination of both. A significant number of patients are taught to self-inject. These patients are closely monitored by telephone contacts and clinical reviews.

2. Day Only Procedures / Day Hospital.

A broad range of procedures and treatments can be carried out in the Ambulatory Care Unit. Examples include venesection, abdominal tap, drug infusion, blood transfusion. The Unit is also increasingly being used to facilitate direct referrals to medical teams for assessment, bypassing ED. Direct admissions can also occur via the Unit.

3. Rapid Assessment / MAU Clinic

This unit accepts patients at risk of hospital admission on referral from GPs. It is serviced in collaboration with the Medical Assessment Unit as some of these patients would require a short stay admission. The capacity of this service is limited at present due to current resourcing.

Service Location

The Unit is located within the main hospital grounds in close proximity to the ED, to outpatient clinics, and to diagnostic departments i.e. radiology and nuclear medicine. The location is crucial for the efficient

functioning of the Ambulatory Care Unit. Patients from ED can be transferred easily. Arrangement and discussion of diagnostic tests occurs rapidly. Specialist medical and surgical services can be readily obtained. For patients coming in from home, the service is easily accessible.

Other Service Providers

Primary Health Nurses - The Unit relies on external service providers to deliver nursing care in the home. Primary Health Nurses are mainly sourced from Bankstown Community Health, however private nursing services are utilised when patients are eligible. Approximately 60% of patients have their treatment administered via home visits.

Allied Health - The need for Allied Health involvement is determined following thorough patient assessment. When required, referrals are made to the hospital's Allied Health Department. The timeliness of response to referrals is dependent on the department's priorities and competing demands.

Campbelltown (Macarthur):

Clinical units at both Campbelltown (4 chairs and 1 bed) and Camden (7 chairs and 1 bed) offer both Hospital-in-the-Home (HitH) and Day Hospital services to Macarthur residents.

HitH Operates "virtual" ward of 26 beds across 2 sites managing IV antibiotics, anticoagulation, complex wounds, PICCs and infusers. Patients are admitted under care of named doctor. Campbelltown offers domiciliary visiting by MACS staff; Camden has domiciliary visits by Community Health Nursing as an out-patient option. Max visit regimen is twice daily. Clear handover back to primary care

Day Hospital

Day admissions are for infusions and transfusions, procedures and clinical reviews. Patients remain under the care of the referring practitioner. Admissions are booked via the electronic scheduler. The majority of infusions, transfusions and venesections are done at Camden hospital.

Fairfield:

Fairfield Ambulatory Care Service is a multi-disciplinary service, mainly looking after community patients. Team members include medical specialists, career medical officers, nurse practitioner, nursing, physiotherapy, occupational therapy and social work, and provide total hospital substitution service at home (Hospital-in-the-Home program). Team members do a lot of home visits, but also have a busy Day ward, which allows the ability to do simple procedures such as abdominal and chest tapping, blood transfusion, immunoglobulin infusion, intravenous medication infusion (such as iron infusion, Aclasta infusion etc.). They also provide services such as Trial of Void, BCG bladder irrigation (for bladder carcinoma patients) and run a warfarin clinic.

There is a Falls Prevention Clinic, and an associated Able and Stable Exercise Class (FIT, Falls Intervention Team). The Falls Prevention Clinic (FPC) is attended by the 2 medical specialists, and has a multi-disciplinary assessment (physio, OT and social worker). The model of care has been quite successful and many colleagues from other hospitals and services have come to visit the falls prevention services.

There is a chronic wound clinic which is attended by medical and nursing, and if necessary other allied health, including podiatrists.

Paediatric services run a burns clinic in ambulatory care

Ambulatory Care mainly provides services in the Fairfield and Cabramatta and the surrounding LGA, although services have been provided for patients living in other areas if required (e.g. the patient of Liverpool come to have venesection or iron infusion in the department). Referrals are received from ED

(emergency department), GPs, specialists (private and public), GP Unit of UNSW (at Fairfield Hospital) and from the wards on discharge. The department has been achieving a goal of zero waiting time with a busy appointment system and relieves pressure from Fairfield ED, regarding category 4 and 5 patients.

Liverpool:

The PIXI Unit (Procedures, Infusions, Treatments and Investigations) formerly known as Ambulatory Care is located in the New Clinical Services Building Level 1 which operates as a 'third door' enabling rapid movement of patients to a model of non-admitted patient care. There is a strong network with other hospitals Westmead, St Vincent's, St George and North Shore
It provides high intensity levels of speciality treatments within a short period of time in an outpatient setting with links to the Community, GPs and Specialists

- Complex immunotherapy infusions, Blood transfusions and antibiotics
- Procedures (Biopsies, diagnostic aspirations, fluid challenges)
- After hours hospital cannulations
- Medical reviews

Clinical Genetics

Genetics Service is mainly an Outpatient service that performs consults with maternity (NICU). The service covers Bankstown, Campbelltown, Camden, University clinic at Bowral, also covering Murrumbidgee Area, Wagga Wagga, Griffith, and in the south Queanbeyan, sometimes Cooma and further south to Bateman's Bay. Patients are treated by face-to-face or Telehealth with a councillor always in attendance with the patient.

Inpatient consultations are provided primarily at Liverpool hospital but occasionally at Campbelltown and Bankstown Hospitals as necessary. The full range of clinical genetics services include reproductive genetics, paediatric and adult general genetics provided by clinical geneticists and genetic counsellors working together. Specialty services include examination of stillbirths in anatomical pathology, neuro-genetics and cardiac genetics in multidisciplinary clinics with relevant specialists. The Clinical Genetics service does not have expertise to manage patients with inborn errors of metabolism due to genetic metabolic diseases and these (usually) children are referred to the metabolic teams at the Children's Hospitals. Cancer genetics services are now provided by the Oncology Department with support to the cancer genetic counsellors by the more senior general genetic counsellors.

Clinical genetics services to rural NSW are provided by the major city units and our Department provides services to Southern NSW and Murrumbidgee with clinics in Goulburn, Queanbeyan, South Coast (Moruya), Far South Coast (Pambula/Bega), Wagga and Griffith, with occasionally other locations if needed. These Areas provide their own genetic counsellor, and pay for flights and transfers; MSOAP program provides "backfill" money to SSWLHD for the geneticists' time.

Connecting Care

Connecting care is a relatively new way of treating and managing chronic diseases, primarily in community and ambulatory settings. It focuses attention on those people with unique clinical needs. There is high demand from Aboriginal people (though this may be under enumerated) and rehabilitation patients. SWSLHD facilitates connecting care programs across all LGAs within the District.

Attention is required to manage program access primarily through Medical Assessment Units, Ambulatory Care and Emergency Departments in hospitals, and the SWS Medicare Local, Aboriginal health services and

GPs in the community. Relationships with these organisations must be strengthened to ensure patient needs are addressed across the acute and community settings, regardless of the hour.

The Connecting Care Program forms part of the overall Chronic Disease Management Program. Connecting Care is a community based program where Care Coordinators who are at Clinical Nurse Consultant level provide a care coordination service to patients in the community who have a chronic disease. This program is an initiative and is funded by the Ministry of Health. The targeted chronic disease groups are chronic obstructive pulmonary disease, heart failure, coronary artery disease, diabetes and hypertension. The program is designed for people over the age of 16 years, who have one of the listed conditions and have had one or more admissions to hospital for any one of these conditions or a patient who is considered to be at risk of admission.

The aim of this program is to help patients understand their health conditions, understand more about their medications, improve health at home, assist patients to access required services and to better connect with care providers. The program focuses on the patients' individual needs. Health coaching is proved by qualified health professionals working with the patient and health service providers. Self-management is encouraged and supported.

The Clinical Care Coordinators work with the General Practitioners and other health care providers to develop shared care plans for each patient. A shared care plan is an individual treatment plan which includes information on current treatment, patients' goals and strategies to help the patient better manage their chronic condition.

Diabetes and Endocrinology

The overall philosophy of the Department is to provide a holistic, multidisciplinary service to those with diabetes, their family members and significant others. The overall aim of this Department is to assist those with diabetes:

- To acquire skills and knowledge so as to improve their health status;
- To minimise the effect of diabetes on daily living, lifestyle, occupation and recreation;
- To increase peoples' ability to manage their diabetes in realistic and achievable terms, particularly by learning how to achieve and maintain normoglycaemia, and by learning about the acute and chronic complications of diabetes.

Diabetes and Endocrinology services are located at Bankstown, Campbelltown, Fairfield and Liverpool. The Liverpool and Fairfield services are amalgamated and the two centres function as one unit.

Each site provides:

- Inpatient admissions (excluding Fairfield)
- Inpatient consultations
- Outpatient clinics

Services include:

- Type 1 (including insulin pump therapy)
- Type 2
- Thyroid and general endocrine, neuroendocrine
- Group education for Type 2
- Individual for diabetes education or insulin commencement
- Pregnancy (Gestational) diabetes services (50% of workload)

- COPE (complex obstetrics physician and endocrine clinic)
- Education sessions, insulin commencement
- Services provided at antenatal clinic and diabetes centre

General Medicine

General Medicine is represented at Bowral, Campbelltown and Fairfield hospitals. The models of care, resources, demands and issues are different at each site.

Bowral Hospital:

General Medicine is provided in Bowral Hospital by a combination of VMO and GP VMO medical staff. Outpatient care is provided by VMO rooms and GP rooms. Patients are nursed in the general med/surgical unit Milton Park General (MPG) and HDU which takes "HDU" and general patients. Patients can be transferred to Liverpool and Campbelltown for higher level care and tertiary services (ICU, Cardiology, Neurology etc.). Endoscopy services are provided at Bowral Private Hospital

Campbelltown Hospital:

Campbelltown admits patients from Camden and Campbelltown ED and offers an inpatient consultation service to all specialties. Key partnerships with ED, ICU, CCU, Ambulatory Care, Radiology, Pathology, Allied Health, Community links with GPs relating to follow-up.

Fairfield Hospital:

The General Medicine Department of Fairfield Hospital comprises of physicians who have their own particular sub-speciality. They cover renal medicine, respiratory medicine, cardiology, neurology, endocrinology and gastroenterology. Each physician takes all medical admissions that present to the Accident & Emergency Department.

The hospital is a busy hospital with approximately 230 beds available. There are approximately 16,000 admissions per year, with the vast majority of the acute admissions being medical. There is also a significant preponderance of geriatric admissions through the Accident & Emergency Department under the general medical team.

Fairfield links are with Liverpool and Bankstown Hospitals and hence Liverpool provides tertiary services, particularly in cardiology, renal medicine, neurosurgery and other sub-specialities. Fairfield Hospital has a HDU, although it does not provide a level of care to manage the seriously ill and those that require higher level care are transferred to either Bankstown or Liverpool Hospitals. Fairfield also has an agreement for Bankstown to take those patients that present with gastrointestinal blood loss.

Fairfield Hospital has a very busy and proactive Ambulatory Care Unit, which is widely used by both the Accident & Emergency Department and the Department of General Medicine. This service helps avoid hospital admissions and helps early discharge of patients from hospital by providing an alternative site for medical care. There are no medical outpatients clinics at Fairfield hospital, patients are followed up in VMO rooms.

Currently the models of care in General Medicine vary across the facilities. The hospitals providing this service (Bowral, Campbelltown and Fairfield), are working towards standardising the model of care, with key elements including:

- Development of acute short stay medicine as a variant of general medicine with a view to discharge or transfer to specialty teams within 48 hours
- Increasing focus on service provision in alternative settings to inpatient wards e.g. short stay ED, ambulatory care, hospital in the home, day hospital

- Increased use of transitional care settings for lower acuity patients where the only requirement is for nursing care from the start of the admission
- Increasing focus on outpatient and ambulatory settings e.g. acute assessment clinics, rapid discharge clinics; reducing hospital admissions and facilitating early discharge
- Increasing use of endoscopic diagnostic investigation
- Potential for outreach visitation to RACF, this could be nursing or nurse practitioner led
- At the smaller hospitals a move to 24hr junior medical staff cover

Immunology

The department of immunology functions at Liverpool and Campbelltown hospitals and offers specialised outpatient clinics and inpatient services for:

- Allergy
- Autoimmune and connective tissue disorders
- Immunodeficiency's including HIV

Infectious Diseases

The diagnosis, management and prevention of infection are a critical component of hospital medicine. All areas of clinical medicine rely on microbiology and infectious diseases services to contribute to the care of their patients. Inadequate resourcing of these services leads to unsafe and poor quality care for our patients and delay, waste and inefficiency for our Hospitals.

Modern health care demands a proactive, integrated, multi-disciplinary approach to managing and preventing infection. Microbiology laboratory guiding and optimizing testing; pushing results to the patient's bedside in a time critical way; describing the epidemiology and the causes of infection in our patients. Infectious diseases specialists the effector arm actively managing infections from the community to the hospital and back to the community; optimizing antimicrobial use; coordinating infection prevention and quality improvement; supporting safe work environments for our staff; teaching hospital staff and supporting hospital administrators.

Currently in SWSLHD, Microbiology and Infectious Diseases services largely operate in a hub and spoke model centred on the Microbiology laboratory at Liverpool.

Services currently provided are:

- **Infectious diseases inpatients –** at Liverpool Hospital only
- **Infectious diseases consultations –** mainly at Liverpool, limited service to Bankstown and Campbelltown Hospitals
- **In depth ID liaison with certain clinical services: -** ICUs at Liverpool, Bankstown and Campbelltown. Some liaison with NICU at Liverpool. Limited liaison with Haematology and Bone Marrow Transplantation at Liverpool
- **Telephone advice –** to all clinicians in the LHD, as well as GPs and community nurses.
- **ID outpatient service** – at Liverpool Hospital only
- **HIV outpatient services**
- **Viral Hepatitis combined outpatient clinic**
- **Infection control and prevention:-** Committee membership (LHD ICAC, Liverpool, Bankstown, Campbelltown, Fairfield ICCs, network meeting), day to day advice and support to facility Infection

control practitioners often by telephone, outbreak investigation and management, exposure incidents, policy advice to facility executives, analysis and response to poor performance in KPIs

- **Infection control quality improvement: -** design and implement quality improvement programmes around HAI prevention: example LivSAB project
- **Antimicrobial stewardship:-**currently limited to representation on some Facility Drug Advisory Committees, formulation of restricted antibiotic lists and analysis of antimicrobial usage benchmarking data
- **Education and training: -** training of 2 advanced trainee registrars in Infectious Diseases
- **Clinical research in Infectious diseases:** - limited involvement in multicentre clinical infectious disease research projects, infection control research and laboratory research

Medical Assessment Unit (MAU)

Medical Assessment Units (MAU) are located at Bankstown, Campbelltown, Fairfield and Liverpool. Each unit has a slightly different model of care and functions. Please see details of individual hospital units.

The main role of MAU is the acute management of medical admissions through the ED. The unit has a significant focus on streamlined and proactive multidisciplinary and specialist medical care with the aim of assessing patients from multiple perspectives within a 48 hour time frame. Ideally, patients are then transferred to the most appropriate ward or in some cases discharged home. Due to various challenges it is not always possible to meet the aim of a 48 hour average length of stay in the unit.

MAU outpatient clinics taking direct referrals from General Practitioners and follow up clinic after MAU discharge are available at some sites (Bankstown, Campbelltown)

At most sites MAU units have very strong links with Ambulatory Care to enable early discharge of patients and outpatient management of patients

The model of care for the Medical Assessment Unit (MAU) which has been developed for acute management of medical admissions through the ED with multidisciplinary assessment within 48 hours is expected to continue and expand into the future. In the future MAUs are likely to be referred to as Acute Assessment Units (AAU). Key aspects of the model of care development for the future include:

- The majority of stable patients admitted from the ED will transit through the MAU/AAU or equivalent, and will have any complex work up done there rather than in the ED
- There will be an increasing emphasis on suitable patients bypassing the ED direct to the MAU/AAU; supported by a stronger relationship of the MAU/AAU with ED triage and mechanisms for direct admission to AAU/MAU from GPs, specialists and community services
- Effective use of the MAU/AAU will require close liaison between MAU/AAU staff specialists and other specialties, to ensure that all patients in the Unit are assessed and managed expeditiously – the intention is that all patients in the AAU in the morning should be cleared out of the AAU by 5.00 pm to provide beds for admissions during the evening and night
- MAU/AAU patients will rapidly be transferred to relevant medical specialities home wards within less than 48 hours from presentation
- Effective use of discharge planning services, ambulatory care, community services and the connecting care program to help early discharge and prevent readmission
- Establishing MAU/AAU clinics for rapid assessment of patients referred from GP and community sources to prevent admission if possible and to allow early discharge of inpatients with review

Neurology

Neurology / Stroke Services are provided at Liverpool, Campbelltown, Bankstown, Fairfield and Bowral. Liverpool provides a comprehensive neurology neurophysiology neuroaudiology and stroke service. Campbelltown provides a neurology and stroke service with some patients referred to Liverpool for some services. Bankstown provides a neurology and stroke service with some patients referred to Liverpool for some service. Fairfield provides a general medical inpatient care for stroke with one VMO neurologist available and patients referred to Liverpool or Bankstown for neurology and stroke services. Bowral provides a general medical inpatient care for stroke with one VMO neurologist available and patients referred to Liverpool or Campbelltown for neurology and stroke services

Respiratory

Bankstown Hospital:

The Respiratory Unit is located in a shared clinic with the Neurology Unit in the middle of the hospital, with 3 consulting rooms and a Lung Function laboratory. There are 4 Consultant Staff Specialists, 1 Full time, 2 x 0.4 and 1 x 0.5. There is a basic trainee and 1 advanced Respiratory trainee position (latter currently not filled) and 2 JMOs. There are offices for Respiratory CNC, Consultants and Registrar. The inpatients are admitted to ward 2G, which is a mixed medical ward, with a respiratory subspecialty slant. The nursing staff have been up-skilled in looking after intercostal tubes and sicker respiratory patients. Outpatients are reviewed in the clinic.

Clinics are run by 3 Consultants and the Advanced Respiratory Registrar. There are 5 – 6 clinics per week. Additionally patients are reviewed by the Respiratory CNC, concurrently at these clinics. Outpatients are also reviewed at the clinic at other times by the Advanced Trainee, Consultant and Respiratory CNC. "Our level of care is 4." We have links with Oncology Department at Bankstown Hospital, Radiation Oncology at Liverpool Hospital and Cardiothoracic Surgeons at Liverpool Hospital. There are links with Ambulatory Care Department, especially in treating pulmonary emboli and mild pneumonia. Outpatients requiring follow up maybe seen in Ambulatory Care Unit.

A Pulmonary Rehabilitation is run by the Respiratory Physiotherapists. Flexible Bronchoscopy and EBUS are performed at Endoscopy Unit.

There are informal links with the community nurses. The Respiratory CNC has links with community nurses, but in-hospital work occupies most of his time. There are links with Concord Hospital and RPAH, including the advance trainee doing a Sleep Clinic and involved in Concord Clinic Meetings. Patients requiring sleep investigations are referred to the Sleep Clinics at Liverpool and Concord Hospital

Campbelltown Hospital:

The Respiratory Unit consists of an inpatient service for acute respiratory admissions, and outpatient services (University Medical Clinics, Camden and Campbelltown) comprising 6 clinics (including one multidisciplinary OSA/metabolic clinic), a respiratory function laboratory and pulmonary rehabilitation. Macarthur Health provides inpatient and outpatient services at the Campbelltown Hospital site, with further outpatient facilities located at Camden Hospital.

Network arrangements:

- Pathology, Cardiothoracic services, outpatient ENT, endobronchial stents, rigid bronchoscopy, tuberculosis clinic, inpatient care for the "severely limited services" and complex ICU in selected cases (Liverpool Hospital)
- EBUS (Bankstown, Nepean Hospitals)

- Endobronchial valves (RPAH)
- Pulmonary hypertension (St Vincent's, RPAH)
- Lung function (Liverpool, CRGH, RPAH)
- Sleep diagnostics (Liverpool Hospital, private sector Campbelltown, RPAH, CRGH)

Liverpool Hospital:

The Department of Respiratory and Sleep Medicine performs the following functions as core business:

- Care of inpatients with respiratory and sleep disorders
- Outpatient clinics for general respiratory and sleep patients,
- Outpatient rapid assessment clinic – to urgently see patients with aim of hospital admission avoidance
- Sleep service
    - Diagnostic and CPAP titration sleep studies
    - Nurse specialist clinics for sleep patients
    - A loan pool of CPAP and non-invasive ventilator support machines
- Interventional pulmonology – bronchoscopy and pleural drainage
- Tuberculosis treatment and control services for South Western Local Health District
    - Clinics for patients with tuberculosis and related conditions
    - Outreach service for providing treatment at home for selected patients
    - Screening service for staff, contacts of infectious persons and immigrants
- Lung function assessment in a lung function laboratory
- Pulmonary rehabilitation program
- Chronic and complex care program

Rheumatology

Rheumatology services are provided at Liverpool, Bankstown, Campbelltown and Camden hospitals. At all sites except Camden, inpatient, outpatient and consultation services occur.

Liverpool consists of multidisciplinary and level 6 services, provides support to Bankstown when their VMO is on leave and to Fairfield by telephone and by transfer of patients to Liverpool. Paediatric rheumatology clinics run at Liverpool.

Campbelltown consist of outpatient services at Camden in combination with Immunology at Campbelltown. There is rostered coverage for ED calls and admissions to Campbelltown Hospital. Inpatient consultation service to all specialties is available.

Bankstown consists of an inpatient and consultative service by sole VMO with outpatients seen in private rooms. The majority of patients are managed on an ambulatory basis with admissions mainly limited to patients with complex connective tissue disease, patients with complications of immunosuppression and patients with acute pain who are unable to weight-bear. The latter include an increasing number of patients with acute osteoporotic fractures. Increasing numbers of patients require infusion therapies including chemotherapy, biologic DMARD therapy, pulsed intravenous corticosteroids, intravenous immunoglobulin and antibiotic therapy. These are currently managed largely through the ambulatory care service.

Service Summary Table

Specialty or Service	Service Type	Facility or Setting								
		Bankstown	Braeside	Bowral	C'town	Camden	Fairfield	Liverpool	CHC	Other (list)
Ambulatory Care	I/P beds									
	I/P Consult									
	Ambulatory Centre	√			√		√	√		
	O/P Clinics	√			√	√		√		
	Outreach	√			√		√	√		
Connecting Care	I/P beds									
	I/P Consult									
	Ambulatory Centre									
	O/P Clinics									
	Outreach	√	√	√	√	√	√	√		
Diabetes and Endocrinology	I/P beds	√			√		√	√		
	I/P Consult	√			√		√	√		
	Ambulatory Centre	√			√			√		
	O/P Clinics	√			√	√		√		
	Outreach									
Genetics	I/P beds									
	I/P Consult	√			√			√		
	Ambulatory Centre									
	O/P Clinics	√		√	√	√		√		
	Outreach									Rural & Southern NSW

Specialty or Service	Service Type	Facility or Setting								
		Bankstown	Braeside	Bowral	C'town	Camden	Fairfield	Liverpool	CHC	Other (list)
General Medicine	I/P beds			√	√		√			
	I/P Consult			√	√		√			
	Ambulatory Centre									
	O/P Clinics				√					
	Outreach									
HIV and Immunology	I/P beds				√			√		
	I/P Consult	√			√			√		
	Ambulatory Centre									
	O/P Clinics				√			√		
	Outreach									
Infectious Disease	I/P beds							√		
	I/P Consult	√			√		√	√		
	Ambulatory Centre									
	O/P Clinics							√		
	Outreach									
Medical Assessment Unit (MAU)	I/P beds	√			√		√	√		
	I/P Consult									
	Ambulatory Centre									
	O/P Clinics	√						√		
	Outreach									
Respiratory	I/P beds	√			√			√		
	I/P Consult	√			√			√		
	Ambulatory Centre							√		
	O/P Clinics	√			√			√		
	Outreach									
Rheumatology	I/P beds	√			√			√		
	I/P Consult	√			√			√		
	Ambulatory Centre									
	O/P Clinics				√			√		
	Outreach									

Specialty or Service	Service Type	Facility or Setting								
		Bankstown	Braeside	Bowral	C'town	Camden	Fairfield	Liverpool	CHC	Other (list)
Stroke/Neurology	I/P beds	√		√	√		√	√		
	I/P Consult	√			√			√		
	Ambulatory Centre									
	O/P Clinics	√			√			√		
	Outreach									

Demographic and health profile of SWSLHD communities

Comprehensive demographic and health status profiles of SWSLHD communities are available at http://www.swslhd.nsw.gov.au/planning/. The population of SWSLHD is expected to grow significantly over the period covered by the *Service Development Priorities* plan, with Attachment B outlining the projected population by LGA and age category in 2011, 2016 and 2021.

Aspects of the demographic and health status profile and projected growth of SWSLHD communities of particular importance for the Clinical Stream include:

SWSLHD as an entity continues to be one of the fastest growing regions in the state. The population is projected to increase by 21 per cent over the next 10 years, and reach 1.5 million people by 2021. In the decade 2011-2021, the population is expected to increase by almost 18,000 people each year. It is a vibrant, culturally diverse region with around 48 per cent of the population speaking a language other than English at home. The region is home to clusters of affluent professional groups contrasted with communities of moderate to severe social disadvantage.

With population growth, demands on the clinical stream are expected to grow significantly. This will include demands for the provision of care as hospital inpatients, outpatients and care provided in the community. Attachment C illustrates the projected growth in demand from SWSLHD residents for inpatient hospital care by Service Related Group, a combination of DRGs that align with clinical specialties. Aspects of projected demand of particular importance for the Clinical Stream include:

CHRONIC DISEASE

By 2020, it is expected that 80% of the disease burden in Australia will be due to chronic disease. Chronic illnesses are prolonged conditions that often do not improve and are rarely cured completely. Diabetes, dementia, chronic obstructive pulmonary disease (COPD), congestive heart failure and asthma are examples of chronic diseases which have a significant impact on the health of the community. Many of these diseases result from lifestyle factors or social determinants of health including poor nutrition, overweight/obesity, lack of physical activity and smoking. Others are caused by personal biological or genetic factors.

The Australian Institute of Health and Welfare information on chronic disease indicates that over 7 million Australians had at least 1 chronic disease in 2004-05. These were predominantly in older people. As the number of chronic diseases per person increases with age, the growing aging population will impact on the Chronic Disease Management Service.

Increased rates of chronic disease and obesity will require more complex interventions within a multidisciplinary framework. Enhanced models of ambulatory, outpatient and community care will be required to meet performance targets, minimise inappropriate hospitalisation and provide more timely localised service provision. Workforce planning, job design, administrative support and enhanced emphasis on research and education were also seen as important goals in our service.

With the increasing numbers of individuals with obesity and diabetes, SWSLHD has limited access to Obesity Services with no public access to bariatric surgery services in the LHD. Therefore there is a significant need to enhance obesity services and establish a public bariatric surgery service in the LHD.

Coordinated strategies with General Practice, Medicare Local and the LHD will facilitate disease prevention and management in general practice, particularly in relation to diabetes, obesity and

metabolic syndrome which can be altered by lifestyle changes. Additionally key partnerships with University of Western Sydney (UWS) with current funding for research in development of metabolic (specifically obesity) services within Macarthur.

To coherently address these issues, a comprehensive range of service development directions have been identified, traversing corporate and clinical practice. These directions are addressed in four themed areas:

- Corporate and organisational directions
- Model of care development for clinical streams and service networks
- Addressing the needs of priority population groups
- Enablers for clinical practice

Delivering on priority strategic directions in service development

The SWSLHD Strategic and Healthcare Services Plan- *Strategic Priorities in Health Care Delivery to 2021* identified eight priority strategic directions to underpin service development, enhancing the way health care is delivered and organizations partner for better health in local communities. The following identifies priority areas where the Clinical Stream will contribute to delivering on the eight strategic directions.

Build capacity to effectively service growing demands for health care

- Reappraisal of priority projects in the Asset Strategic Plan focussing on non-asset strategies and alternative service models, hospital avoidance strategies and private not for profit sector involvement in responding to demand growth
- Providing additional, enhanced and new clinical services of greater sophistication and complexity at all hospitals, with role delineation uplift across clinical networks i.e. Microbiology and Infectious Diseases restructure including enhancements across the LHD
- Developing with partner education agencies, more comprehensive educational services for all employees with flexible technology assisted learning using modern state of the art facilities
- Enhanced attention to patient-centred care, meeting National patient safety, quality and performance indicators and implementing initiatives from the CEC and ACI
- Creating systems to plan implement and evaluate new models of care and emerging technology, with reengineering and disinvestment in current inefficient or ineffective models i.e. Diabetes Services across the LHD following review conducted in 2014

Redesign of services bringing them closer to people and their communities

- Exploring the potential to consolidate the existing matrix of Community Health provision into larger centres providing a greater range of services more efficiently, matched specifically to local health needs and readily accessible by local communities
- Establishing a rolling program for the increased migration of acute ambulatory care and day stay hospital services to community health centres, enhancing local access for communities and mitigating demand at congested hospital sites
- Participating in the establishment of Regional Integrated Primary and Community Care centres at Oran Park, Leppington and Wollondilly to allow residents to access a seamless and integrated continuum of services across prevention, primary care and ambulatory specialist care

Integrated action with primary care providers and regional primary health organisations

- Working in conjunction with Medicare Locals and General Practitioners to reach the best outcomes for the patient
- Collaborating to improve access to care providers in the community aiming for extended hours availability across primary care, community health services and specialist outreach services
- Providing education to General Practitioners and working collaboratively on hospital avoidance strategies

- Ensuring an integrated preventative health strategy is functioning, involving all settings of care, providers of care, tiers and agencies of government and is embedded in community action
- Establishing an integrated clinical governance framework with links between Clinical Councils

Partnering with external providers to deliver public health care

- Exploring Public Private Partnership (PPP) opportunities e.g. for diagnostic and interventional laboratories within public hospitals; medical specialist centres in the community; providing public care in high demand specialties in the private sector; privately referred ambulatory care
- Strengthening partnerships with Ministry of Health (MoH) Pillars and academic institutions
- Partnering with Affiliated Health Organisations to increase capacity in sub-acute care

Enhancing service networks and growing centres of excellence

- Strengthening existing well performed service networks with Triple I HUB
- Strengthening existing professional relationships with Community Health incorporating recommendations from review
- Strengthening existing clinical services for Diabetes incorporating recommendations from review
- Strengthen and enhance Microbiology & Infectious Diseases Services across the LHD

Shared access to unified information for all the health care team

- Expanding teleconferencing, telehealth, web based technologies, fibreoptic initiatives and social media to improve connectivity of all the health care team, including patients and carers
- Supporting research and education through eMR modules and firewall traversal to Universities
- Exploring web and social media portals for the community and service providers to access a unified service directory and resources in health information, education and health literacy

An integrated focus on primary prevention for patients and communities

- Closing the Gap in Aboriginal communities, in partnership with Aboriginal Land Councils and health organisations, with a focus on chronic disease management
- Reducing the burden of preventable chronic disease through programs addressing smoking, obesity, healthy eating and drinking, food security, physical activity and falls prevention
- Reducing health inequity through primary prevention and multilateral community renewal programs in areas of locational disadvantage and ensuring services address health equity

Embedding education and research within service delivery

- Creating a stronger research and teaching culture. Showcasing and providing a forum for the presentation of undertaken research
- Encouraging collaborative research that focuses on national, state and local priorities
- Increasing the community's willingness to participate in research and clinical teaching programs
- Using new Clinical Skills and Simulation centres and the South Western Sydney Education Centre, with effective IT links, to develop clinical skills and translate research into practice

Working with facilities on corporate enabling strategies

The SWSLHD Corporate Plan 2013 – 2017 *Directions to Better Health* identified eight areas of corporate action where organizational values and vision can be included in the day to day operation of health services. The corporate areas of action are underpinned by the eight priority strategic directions identified in the SWSLHD Strategic and Healthcare Services Plan. Implementation of the corporate actions is primarily the responsibility of facilities and the way this will be achieved is outlined in each facility's Operational Plan.

Clinical streams will work with facilities on corporate actions which have close alignment to the areas of focus of the Streams. The earlier identification of priority areas where the Clinical Stream will contribute to delivering on the eight strategic directions also identifies the Stream's contribution to three corporate action areas – seamless networks; research and innovation; and enhancing assets and resources. Clinical Streams will also contribute to delivering on the remaining five corporate areas of action – providing high quality health services; community partnerships; developing our staff; supporting business; and efficiency and sustainability. The following identifies priority areas where the Clinical Stream will contribute to delivering on these five areas of corporate action.

Providing high quality health services

- Developing a tertiary prevention and support model in chronic disease
- Further developing Infection control strategies
- Managing the patient journey to improve the patient experience
- Focusing on Screening and early intervention strategies
- Providing a Strong Clinical Governance framework
- Manage and implement recommendations from the SWSLHD Diabetes Review specific to each facility

Community partnerships

- Using new technologies for example the development of the Complex Care and Internal Medicine Website to reach more people with health information.
- The purchasing of the Telehealth technology to monitor patient's health in the community
- Building partnerships with Aboriginal medical services though the Connecting Care Program

Seamless Networks

- Partnering with the South Western Sydney Medicare Local (or equivalent) on integrated care strategies such as care pathways
- Implementing chronic disease programs for Aboriginal people to reduce avoidable hospitalisations
- Improve transfer of care and patient access to services
- Developing further integrated networks of care

Developing our staff

- Providing models of education that foster inter and intra-disciplinary teamwork
- Developing systems and processes to identify the skill mix for new models of care and managing job redesign
- Developing and using workforce information to inform decision making, planning and benchmarking
- Develop a sustainable workforce that reflects and has the skills required to address community needs

Research and Innovation

- Strengthening the application of evidence in new models of service delivery
- Developing a framework to assess, plan for, implement and evaluate new models of care, innovations in practice and emerging health technology
- Implementing clinical redesign programs in priority areas

Enhancing Assets and Resources

- Identify emerging technologies and innovative funding opportunities
- Regular review of models of care for accordance with best practice i.e. Diabetes Services across the LHD including care pathways and care plans.

Supporting business

- Expanding teleconferencing, telehealth, web-based technologies and fibreoptic initiatives to improve clinical care and service networking
- Ensuring facility, stream and service plans link to the KPIs in the SWSLHD Annual Strategic Priorities and Performance Agreement
- Participating in national and state wide technology developments
- Developing a framework for cascading of District priorities and directions to facility, stream and service plans
- Developing business planning capacity to identify the benefits, risks and financial implications of new proposals and service development directions

Efficiency and sustainability

- Educating staff within the Clinical Stream on the fundamentals of Activity Based Funding (ABF), enhancing capability, understanding and responsiveness to ABF. Developing and distribution of ABF “cheat sheets” to ensure information is not omitted.
- Maximising ABF funding, achieving clinical coding targets and contributing to State wide costing processes
- Reviewing efficiency and effectiveness of services, identifying strategies for reengineering and disinvestment as well as implementing new innovative models of care using existing resources.
- Expanding availability of sub-acute beds to increase efficiency of acute bed utilisation

Attachment A Models of care, service development directions and partners

The Complex Care and Internal Medicine clinical stream provides care across a wide range of medical disciplines and settings. The identification of future models of care and service development directions is provided under the main departments included within the stream.

Models of Care for the future

In **general medicine**, current models of care vary across the hospitals providing this service (Bowral, Campbelltown and Fairfield), increased standardisation of the model of care will develop in the future, with key elements including:

- Development of acute short stay medicine as a variant of general medicine with a view to discharge or transfer to specialty teams within 48 hours
- Increasing focus on service provision in alternative settings to inpatient wards e.g. short stay ED, ambulatory care, hospital in the home, day hospital
- Increased use of transitional care settings for lower acuity patients where the only requirement is for nursing care from the start of the admission
- Increasing focus on outpatient and ambulatory settings e.g. acute assessment clinics, rapid discharge clinics; reducing hospital admissions and facilitating early discharge Increasing use of endoscopic diagnostic investigation
- Potential for outreach visitation to RACF, this could be nursing or nurse practitioner led
- At the smaller hospitals a move to 24hr junior medical staff cover

In **ambulatory care** significant change to the current model of care is not expected, with focus to be on enhancement and refinement, including:

- Increased and more effective use of electronic communication, scheduling and telehealth applications, wireless connectivity between primary and secondary providers
- Continued close relationships with medical inpatient services, particularly MAU
- Closer relationships with general practice, through electronic referrals and discharges, single point of contact etc.; and closer integration with community health services
- Increasing hospital in the home and hospital in the RACF services – this could include a hospital element providing 24/7 and after hours troubleshooting and potentially a day hospital; with community hubs that could extend to providing infusion therapy for stable patients
- Increased participation in chronic disease management and prevention, particularly in secondary prevention of conditions frequently presenting to hospital e.g. falls, chronic airways disease, chronic heart failure
- Development of multidisciplinary Ambulatory/Primary Care super centres as one stop shops that general practice can refer complex patients to, providing minor procedures, intravenous infusions, specialist cardiac and respiratory nursing support, diabetes educators and allied health such as physiotherapy, occupational therapy, social work, speech pathology, podiatry and dietician – these could be at hospital sites, community health centres or integrated primary and community care centres

- Bringing together services that span the hospital/community divide with unified peer support, data sharing, safety and quality benchmarking etc.

In **respiratory medicine**, models of care are not expected to vary significantly to that provided currently with key aspects of focus including:

- Development of respiratory home wards with capability to manage higher dependency patients with respiratory failure requiring subacute non-invasive nasal ventilation
- Increasing outpatient and ambulatory care provision enabling patients to be reviewed earlier at home or in clinics, closely linked with chronic care teams
- Increasing management of sicker patients in the community shared with the general practitioner, supported by drop-in hospital assessment clinics or hospital visits to GP assessment clinics
- Outpatient specialist check-ups using telemedicine, involving general practice in a community setting
- Cohorting of respiratory patients with patients of like needs from other specialties e.g. cardiology and nontrauma cardiothoracic
- Scope for some respiratory services to be concentrated at one or two hospitals across the SWSLHD network e.g. pleural procedures, tuberculosis, pulmonary hypertension
- Increasing development of specialised clinics in sleep medicine and lung cancer, along with acute assessment clinics and multidisciplinary sleep clinics involving neurology, psychology, ENT, dental and psychiatry
- Advancing technology in sleep studies enabling home sleep studies and home CPAP titration
- Increasing interventional pulmonology with interventional bronchoscopy, endobronchial ultrasound and pleural ultrasound
- More advanced lung function testing including forced oscillation technique (FOT) and exhaled nitric oxide (ENO)
- Improved model of community care for COPD patients including improved access to pulmonary rehabilitation and improved integration with primary healthcare providers

In **neurology/stroke**, the model of care has developed such that most cases are now managed on an outpatient basis and this is expected to continue into the future. Further expansion of outpatient clinics will be required, to meet expanding demands and as an important strategy to reduce preventable admissions. Key aspects of the model of care development for the future include:

- Improved access to allied health services in outpatient settings – social work, physiotherapy, occupational therapy, speech therapy, dietetics, clinical psychology, neuropsychology
- New therapies for stroke – intravenous thrombolysis and neurointerventional radiology – interventional services need to grow at Liverpool and commence at Campbelltown
- Stroke admissions will increase significantly with ageing and increased obesity in south west communities
- Increased interaction with general practice, community health, allied health, connecting care program and ambulatory care services to support patients in the community with chronic neurology conditions and to manage cardiovascular risk factors

- Enhancement of neurointerventional radiology at Liverpool Hospital including anaesthetic cover, enhanced neuro-audiology services and provision of on-site rehabilitation beds
- Establishment of interventional neuroradiology at Campbelltown and a neurosurgical service, with enhancement of neurophysiology services (nerve conduction EMG and EEG) and the neurology department there able to manage complex neurological patients and operating as a centre for excellence in neurological research, with a full electrophysiology laboratory
- Enhancement of services at Bankstown – inpatient capacity, thrombolysis service, outpatients and neurophysiology
- Maintaining the general medical model of care for neurology and stroke patients at Fairfield and Bowral with increased stroke bed capacity and services at each site and establishment of a nurse specialist led stroke thrombolysis service at Bowral

For **Medical Assessment Units (MAU),** the model of care which has developed for acute management of medical admissions through the ED with multidisciplinary assessment within 48 hours is expected to continue and expand into the future. In the future MAUs are likely to be referred to as Acute Assessment Units (AAU). Key aspects of the model of care development for the future include:

- The majority of stable patients admitted from the ED will transit through the MAU/AAU or equivalent, and will have any complex work up done there rather than in the ED.
- There will be an increasing emphasis on suitable patients bypassing the ED direct to the MAU/AAU; supported by a stronger relationship of the MAU/AAU with ED triage and mechanisms for direct admission to AAU/MAU from GPs, specialists and community services.
- Effective use of the MAU/AAU will require close liaison between MAU/AAU staff specialists and other specialties, to ensure that all patients in the Unit are assessed and managed expeditiously – the intention is that all patients in the AAU in the morning should be cleared out of the AAU by 5.00 pm to provide beds for admissions during the evening and night.
- MAU/AAU patients will rapidly be transferred to relevant medical specialities home wards within less than 48 hours from presentation.
- Effective use of discharge planning services, ambulatory care, community services and the connecting care program to help early discharge and prevent readmission
- Establishing MAU/AAU clinics for rapid assessment of patients referred from GP and community sources to prevent admission if possible and to allow early discharge of inpatients with review

The **Connecting Care Program** model of care, involving community based CNC chronic care coordinators working with GPs to develop shared care plans, is expected to be strengthened and expanded in the future, with focus on:

- Prompt triage of chronic care patients seen in EDs, MAUs and Ambulatory Care Units to the appropriate service e.g. connecting care, HITH, aged care services, GPs; with Connecting Care staff working more closely with acute facilities especially EDs
- Pathways of care that are very clear, consistent and widely available.

- Enhanced education of staff in RACFs on care of patients with a chronic condition.
- Development of a single point of contact for aged patients and patients with a chronic condition to a centralised service encompassing all aged care services, all community health services, HITH, connecting care, rehabilitation services etc.
- Relocation of facility based rehab programs to community centres to provide better and quicker access for patients with a chronic condition. This could be provided within a one stop shop model e.g. pulmonary and cardiac rehabilitation together with smoking cessation, weight reduction and life style change sessions.
- Close liaison with the SW Medicare Local to ensure integrated primary care occurs, this should be supported by electronic systems to enable GPs and others to access the patient's medical record post-discharge

In **Diabetes and Endocrinology** the multidisciplinary Diabetes Centre ambulatory model of care has been a long established and proven management model to successfully keep patients out of hospital. Models of care for the future will build on and enhance this model with a focus on:

- Ensuring Hospital based diabetes services incorporate outreach community roles with hub and spoke models enabling community based services to be established at community health centres and/or integrated primary health care centres
- Increasing liaison with community based practitioners – GPs, community health, connecting care i.e. partnership with Medicare Local, General Practice and the LHD to develop Care Pathways for management of Diabetes.
- Clearer delineation of roles to avoid duplication of services - primary care physician/community services mainly responsible for patients with type 2 diabetes on diet control or adequately controlled on oral antihyperglycaemic medications. Primary prevention programs should also take place in the community. Diabetes services in public hospital are important in the management of complicated patients with diabetes who require insulin therapy, patients with type 1 diabetes and those with acute metabolic deterioration requiring hospital admissions
- Primary prevention programs run by general practitioners, Medicare Local, community health centres, integrated primary health care centres
- Ensure patients have access to complication screening service (either in public or private sector)
- Increased / better communication and transfer of medical records between all staff caring for patient (GP, nursing, allied health, specialist)
- Establish Urgent Assessment Clinics - to review patients referred urgently from GPs or other specialists for management of acute hyperglycaemia
- Establish an integrated Osteoporosis service - with rheumatology, orthopaedics, allied health, nursing, general practice
- Enhance and extend Multidisciplinary clinics e.g. Diabetes in pregnancy (with obstetricians, midwives, renal/hypertension service), Diabetes high risk foot clinic (with Infectious diseases, ambulatory care, vascular, orthopaedics, Diabetes /renal /hypertension); Neuroendocrine (with neurosurgery); Thyroid (with nuclear medicine and head and neck

surgery); Complication screening; Diabetes pre-admission to prepare poorly controlled patients with diabetes for elective surgery; Aboriginal diabetes/cardiovascular risk

- Establish site specific locally needed services e.g. nuclear medicine/thyroid services at Campbelltown, referral of all in patients with diabetes at Campbelltown to diabetes service for management
- Establish Obesity Services and Bariatric Surgery Service within the LHD with a coordinated strategy with General Practice, Medicare Local and LHD for disease prevention and management particularly in relation to diabetes, obesity and metabolic syndrome

In **infectious diseases** the current model of care is a hub and spoke model provided by Sydney South West Pathology Service centred on the Microbiology laboratory at Liverpool Hospital. Models of care for the future will maintain Liverpool as the main hub for infectious diseases, microbiology and infection control, inpatient care and specialised outpatient clinics; whilst building services provided at other facilities, aiming to optimise the clinical care of all patients with infection in the LHD. Services will be available at each of the main acute care hospitals of the LHD with an Infection Management and Prevention Team and local ambulatory care and clinic facilities which may extend to multidisciplinary clinics specific to clinical services provided there e.g. orthopaedic infection, haematology infection, transplantation etc. The aim is to ensure:

- Infectious Diseases is closely involved in the investigation, treatment and follow-up of all patients with infection through early clinical consultation, microbiology laboratory outreach, antimicrobial stewardship, acute sepsis management, acute referral from the community and multidisciplinary decision making about patients at the bedside
- Seamless management of patients with infections by the ID team through the ED, inpatient care, and acute ambulatory care, and in the community through hospital-in-the-home and chronic disease management; facilitated through closer collaboration between the ID team, the general practitioner and the community nursing service.
- Health care associated infections and complications are prevented through proactive quality improvement processes implemented by a team of Infection Preventionists and supported by epidemiology, data analysis and research.
- Antimicrobial use in the LHD is optimised with an educative, decision supporting, restriction and approval system backed up by data.
- LHD wide programs such as antimicrobial stewardship, infection prevention and quality improvement, infectious disease epidemiology and data analysis and research remain based at Liverpool. Clinical Governance and support, M and M review, continuing professional development, etc. will be provided centrally at Liverpool for all facility teams.
- Clinical care and implementation of programs is at the Facility level supported by a local multi-disciplinary Infectious disease management and prevention team comprising designated Infectious Disease physicians, registrars, specialist nurses (CNC), pharmacists, infection prevention practitioners and administrative staff

In **rheumatology** the current model of care is that the majority of patients are managed on an ambulatory basis with admissions mainly limited to complex patients e.g. with complications of immunosuppression or acute osteoporotic fractures. Increasing numbers of patients require infusion therapies, currently managed through the ambulatory care service. This model of care will continue with enhancements, focussing particularly on outpatient services:

- Development of urgent care clinics so that patients presenting to EDs or referred from a GP or other health care provider with e.g. acute gout or flares of inflammatory disease, can be seen quickly
- Development of an osteoporosis case finding, investigation and management service led by e.g. a nurse coordinator (See ACI fracture prevention model of care)
- Development of multidisciplinary care clinics for management of patients with obesity, arthritis and other complications of obesity e.g. Diabetes; in particular a comprehensive obesity service is required for SWSLHD.
- Expansion of ambulatory care infusion services – hospital ambulatory care, community centres and at home.
- Extending capability to participate in clinical trials of new therapies, requiring clinic, office and storage space and adequate staffing – medical, nursing, allied health, admin, research
- Expanding clinical services at Campbelltown and Bankstown to meet local demand
- Enhanced outpatient services, particularly for the socio-economic grouping unable to access private care. Currently insufficient private services exist to meet private demand
- Greater networking with GP/ Medicare Local, to support triaging of outpatient requests, optimising the provision of care in the community

In **immunology** the current model of care is predominately as a hospital based service providing inpatient care, consultations to other teams and an outpatient service. Departments are sited at Liverpool and Campbelltown hospitals, with consultative services provided to peripheral hospitals. The future model of care is expected to remain similar to the current model, with enhancements including:

- Continued outpatient service provision at hospital sites due to patient complexity and requirements for cross specialty referral and access to pathology and medical imaging. For immunotherapy and allergen challenges the risk of anaphylaxis requires a hospital setting.
- Increased enrolment of patients in clinical trials networked on a national and international basis to enable data collection on optimal treatment of rare and uncommon conditions often encountered. Centralised online enrolment systems would be beneficial.
- Use of telemedicine and “virtual clinics” to support patients in remote locations with rare immunological diseases. These patients are currently disadvantaged in access to specialty care, exacerbated by the shortage of immunologists across Australia.
- Development of a directory of physician’s interests and subspecialties across Australia to ensure patients with particularly complex diagnostic and management problems or very rare diseases can access the appropriate specialty expertise
- Timely access to records and results from other health services will be increasingly important in maintaining efficiency

In **clinical genetics** the current model of care is an outpatient, consultative service in hospital clinics and at a community health centres (Bowral) and the future model of care is to enhance these services maintaining the outpatient focus:

- Continued outpatient clinical services with hubs at major teaching hospitals and the provision of outreach clinics to smaller metropolitan hospitals and rural health Districts. A

hub would be expected based at Campbelltown Hospital by 2021 including a full time genetic counsellor in addition to the existing hubs at Liverpool and RPA

- Greater use of videoconference via telehealth for the provision of counselling services. The IT requirements are changing and should have changed from ISDN (phone) to web based technology.
- enhancements to meet the growing need for clinical geneticists with the new molecular technology of exome testing and next generation sequencing, allowing expanded gene testing both through health services and in the public domain e.g. online personalised genetic screening tests, which need interpretation and client counselling along with cascade screening of at-risk family members

Service Development Directions

For **general medicine** the critical service development directions for the future include:

- Develop stronger links with tertiary referral centres
- Develop stronger links with universities and increase medical student rotation, including nursing and allied health specialities.
- Further development of acute short stay medicine as a variant of general medicine, with patients either discharged or transferred to “specialty medicine” at 48 hrs.
- Further exploration of alternative care settings to deflect admissions e.g. short stay ED
- Increasing collaboration with ambulatory care services so that they are involved in both management and investigative workup, enhanced use of Hospital in the Home services, expanded use of day hospitals,
- enhanced use of connecting care program
- Enhancement of general medicine outpatient follow-up to reduce hospital admissions and allow early discharge e.g. acute assessment clinics, rapid discharge clinics
- Increased collaboration with geriatric services including on provision of services to RACFs and with enhanced urology services which are of high prevalence in geriatric populations
- Enhancements of services/workforce to meet increased demands from population growth and ageing; particularly increased junior staff both registrars and residents, to also enable decreased dependence on locums for overnight care
- Undertake a Randomised Controlled Clinical Trial (RCCT) to reduce respiratory presentations
- Development of outpatient and community based services to reduce hospital presentations and admissions
- Development of performance management tools, data collection and analysis capabilities to assess programs

In **ambulatory care** the critical service development directions for the future include:

- At most sites, expansion of capacity to meet increasing demand and maintain patient safety
- Closer integration of hospital in the home program with the SW Medicare Local activities, including in data analysis and research as a de facto measure of the harmonious integration of these health jurisdictions and providing venue for undergraduate education and post-graduate professional development across all health disciplines

- Enhancements to senior medical and other workforce to free time for professional development and research activities, case conferences, journal clubs and regular in-services and also to take on more medical students
- Enhancements to nursing workforce availability – endorsed enrolled nurses (EEN), clinical nurse specialists (CNS), clinical nurse educators (CNE)

For **respiratory medicine** the critical service development directions for the future include:

Providing non-invasive ventilator support (NIV) and tracheostomy weaning service at respiratory home wards, initially via the four respiratory high acuity beds provided in the Liverpool Hospital redevelopment

- Enhance Sleep Investigation services, initially at Liverpool Hospital by increasing from 4 to 6 sleep studies daily requiring an additional 2 inpatient beds, providing daytime multiple sleep latency tests (MSLT) and maintenance of wakefulness tests (MWT), specialised sleep clinics, respiratory failure clinics and multidisciplinary clinics; developing a Sleep and Respiratory Failure service at Bankstown-Lidcombe Hospital; increasing the available sleep investigation resources at Campbelltown to match the excess of sleep breathing disorders seen in the Macarthur community when compared to other areas of NSW
- Provide additional outpatient clinics e.g. Acute Assessment Clinics for early discharge and ED bypass (third corridor), specialty respiratory complex clinics
- Enhance Lung Function Laboratory capabilities, at Liverpool by introducing forced oscillation technique, exhaled nitric oxide, induced sputum analysis, multiple breath nitrogen washout
- Enhance interventional pulmonology services, at Liverpool by supporting lung cancer services for staging and diagnosis with EBUS (endobronchial ultrasound), providing a rigid bronchoscopy service and pleural procedures with bedside ultrasound; development of efficient EBUS and respiratory ultrasound services at Bankstown-Lidcombe Hospital
- Provide capacity at each of Liverpool, Campbelltown and Bankstown-Lidcombe hospitals to provide all of the necessary interventions to diagnose and treat COPD and lung cancer, as these diseases are responsible for the majority of the burden of disease in respiratory medicine
- Expansion of preventive health initiatives e.g. smoking cessation, obesity, vaccination
- improve the tuberculosis service, at Liverpool by introducing flexible arrangements for demand management during extensive contact screenings and refurbishment of clinic space
- Expansion of the chronic and complex care model to better manage respiratory patients at home and in community centres to reduce hospital presentations, improving coordination with chronic and complex care programs across Sydney; establishing a Chronic and Complex Care Team at Bankstown-Lidcombe hospital, similar to the St George Hospital model
- Enhance staff education and resource the educational program, creating industry and academic collaborations to develop innovative teaching tools for undergraduates and post graduates, ensuring web based educational resources can be delivered, including live streaming of lectures, increasing the appeal to trainees of SWSLHD placement to improve registrar recruitment; develop a structured system of retraining/up-skilling plus periodic education maintenance, designed to address the education needs of GPs and community healthcare professionals to manage larger numbers of sicker patients outside hospital

- Expanding research and maintaining research infrastructure including computing hardware, software, communications technology; ensuring research funding targets health system goals, and strategies for managing the most burdensome diseases (in terms of morbidity, mortality and finance); supporting clinician researchers (with salary/time components apportioned for research activities and provisional on research outcomes) to undertake research, aligned with specialist research expertise and collaborating across health districts to pool research strengths
- Enhancing Information and communications technology, with upload of reports from diagnostic tests onto electronic patient records (powerchart), Universal electronic medical record, internet access for all clinical staff at point of care, better electronic communications with GPs and all other services

For **neurology/stroke** the critical service development directions for the future include:

- Enhancement to bed base and associated resources at each site

  Expansion of services at Liverpool, Campbelltown, Bankstown – outpatient clinics (including specialist outpatient clinics – multiple sclerosis, Botox, stroke, movement disorder, dementia, epilepsy, neuromuscular); neurophysiology services (inpatient and outpatient); and ambulatory care /PIXI
- Expanded physical capacity at Campbelltown and Bankstown hospitals for neurology and neurophysiology clinics and departments
- Enhance the neuroaudiology service at Liverpool and potentially Bankstown and Campbelltown hospitals
- Enhance the Neurointerventional Radiology service at Liverpool Hospital and development of this service at Campbelltown Hospital – for management of stroke patients
- Establishment of a clinical trials centre for neurology at Liverpool Hospital
- Enhanced access to outpatient or community allied health services with acceptable waiting times – including social work, physiotherapy, occupational therapy, speech therapy, dietetics, clinical psychology, neuropsychology
- Enhancements specific to **Campbelltown Hospital** – neurophysiology laboratory (Nerve conduction/ EMG/EEG), neurology beds and associated workforce, angiography theatre, additional MRI, interventional neuroradiology, neurology research laboratory, introduction of neurosurgery and vascular surgery, increased clinical trials and research, physical infrastructure including lecture theatre, conference rooms, telemedicine, ability to offer outpatient services in the community and in disadvantaged areas, research collaboration with the UWS neuroscientists, enhanced specialty outpatient clinics e.g. for epilepsy, dementia etc.; staff offices, neuropsychological services

For **MAU** the critical service development directions for the future include:

- Establishment of MAUs/AAUs adjacent to EDs and MAU clinics with adequate physical space and staffing
- Enhanced linkages with ED, GPs, Medicare Local, Ambulatory care, community care, connecting care
- At Liverpool Hospital, the re-establishment of General Medicine as a major specialty, with an emphasis on early assessment and management of stable admitted medical patients - This

will require advanced trainees in general medicine – currently the only hospitals in NSW providing this are Royal North Shore Hospital and the Hunter Hospitals

- Development of Peri-operative Medicine in the Hospital to provide safer care for patients with multiple medical co-morbidities admitted under surgical teams - a joint initiative of Aged Care and General Medicine (MAU)
- Taking advantage of opportunities for development of research in general medicine

For the **connecting care** program, the critical service development directions for the future include:

- Increased capability to undertake clinical care coordination
- Improved access to allied health staff
- Improved electronic communication with GPs
- Development of a comprehensive HITH service across SWSLHD
- Unified data collection systems with shared access across settings of care

For **diabetes and endocrinology**, the critical service development directions for the future include:

- At **Liverpool Hospital**, maintaining the tertiary referral centre, demonstrating leadership and expertise through policy development and clinical guidelines for all medical practitioners in the region, including active roles in national bodies. Maintaining a research focus in gestational diabetes and thyroid disease, with additional staff resources to maintain expanding databases, engage in research and ensure enhanced provision of patient education information
- At **Campbelltown Hospital**, develop an inpatient diabetes team to better manage critically ill patients; enhance out-patient services through additional clinic space, advanced trainee, transition diabetes educator and dietician to avoid preventable admissions and better prepare elective surgery patients; increase awareness and management of those at risk of osteoporosis; improve access to nuclear medicine services to enable self-sufficiency in managing thyroid cancer
- At **Bankstown-Lidcombe** hospital, continuation of the current range of services, including acting as the National Benchmarking Centre for Diabetes Quality Audit Activities for the nation-wide Australian National Diabetes Information Audit and Benchmarking [ANDIAB] Initiative and providing research and teaching initiatives in areas such as high risk foot service multidisciplinary clinics to reduce times to ulcer healing and admissions to hospital; awareness of hypoglycaemia management and rates of inappropriate hypoglycaemic management; providing an insulin pump service for patients; studying the influence that ethnicity has on individuals with diabetes in pregnancy; telehealth
- At **Fairfield Hospital**, commence research projects in the areas of gestational diabetes and its complications and enhancements to patient education information; this activity would also build on collaborative study already underway with the GP Academic unit
- Strengthen existing clinical services for Diabetes incorporating recommendations from review.

For **infectious diseases**, the critical service development directions for the future include:

- Enhance infectious diseases consultative services and outpatient care at all sites with the plan to enhance both medical and nursing resources to allow comprehensive and cohesive

infection management and prevention services to be delivered to Bankstown, Campbelltown and Fairfield Hospitals and the reintroduction of onsite visits to Bowral Hospital.

- Develop an administrative and governance structure such as Infection Management and Prevention (IMAP) to coordinate, distribute and support clinical infectious diseases, antimicrobial stewardship, infection prevention and vaccination and BBF exposure services across the LHD.
- Establish a SWSLHD-wide Antimicrobial Stewardship Program with computerised decision support and approval system
- Initiate infectious diseases hospital-in-the-home services at Liverpool, Bankstown, Fairfield, Campbelltown and Bowral hospitals.
- establish infectious diseases acute assessment clinics at Liverpool, Bankstown, Fairfield and Campbelltown hospitals for new admissions, early discharges, acute GP referrals, ID hospital-in-the-home intake
- Provide infectious diseases chronic care clinics at Bankstown, Fairfield, Campbelltown and Bowral Hospitals.
- Enhance links with ambulatory care services and high risk foot clinics
- Establish an LHD Infection Prevention Operational Unit to coordinate and deliver infection prevention and control services to all facilities of the LHD. This Unit will also need epidemiology, data collection and management and quality improvement expertise and resources
- Set up an Infectious Diseases Clinical Research Unit.

For **rheumatology**, the critical service development directions for the future include:

- Establishing coordinated fracture prevention services.
- Building capacity to participate regularly in clinical trials in order to be able to provide novel therapies for patients with autoimmune diseases
- Developing a coordinated research program that focuses on the clinical case-load and expertise of the Liverpool Hospital department, including further development of the clinical rheumatology database to support case finding and work up of patients on DMARD and bDMARD therapy in trials
- Focusing on a multidisciplinary approach to obesity and osteoarthritis prevention and management

For **immunology**, the critical service development directions for the future include:

- Enhanced administrative support to improve efficiency in patient flow and provide front-desk capability to address unscheduled drop-in and semi-urgent patient attendances
- Enhanced specialist cover for immunology, immunopathology and on-call requirements, enabling additional clinics and enhanced research capabilities
- Improved access to dietician management of allergy and food chemical sensitivities for patients on complex and restrictive diets
- Enhanced nursing and allied health staffing
- Increased research activity within the Ingham Institute

For **clinical genetics**, the critical service development directions for the future include:

- Consider establishing genetic laboratories at Liverpool Hospital for provision of common molecular testing, possibly with high throughput gene sequencing and to liaise with other genetic laboratories to process gene testing as cost effectively and efficiently as possible. Research projects would develop in conjunction with molecular testing capabilities
- Developing a clinical genetics hub based at Campbelltown Hospital to provide genetics services to Campbelltown, Camden and Wingecarribee.
- Enhancement to the clinical genetics service at Bankstown Hospital with increased clinics
- Consider resuming genetics clinics at Fairfield Hospital
- Provide specialty genetics clinics for common disorders such as diabetes, hyperlipidaemias and hypertension when the genetic determinants of polygenic diseases are known
- Play a further educational role for medical students at UWS.
- Ensure counsellors are trained to handle the enquiries from private web based gene testing which is in its infancy currently but increasingly available and utilised by couples especially pre-pregnancy

Partners in Service Development

For **general medicine** the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Develop stronger links with tertiary referral centres
- Develop stronger links with universities and increase medical student rotation.
- Closer collaboration with primary care - general practitioners, SW Medicare Local, community health services, Integrated Primary and Community Care Centres - to promote hospital avoidance and early discharge
- Stronger links to private healthcare providers - private hospitals, radiology providers
- Increased use of connecting care program for hospital avoidance
- Enhanced collaboration with Ambulatory Care services for hospital avoidance e.g. Hospital in the Home, connecting care program

For **ambulatory care** the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- General Practice and the SW Medicare Local - ongoing dialogue and optimisation of shared care arrangements to improve efficiency, with clearly defined roles and care pathways for escalation and transfer of care
- Enhanced arrangements for GPs to be engaged in the discharge planning process\
- Strengthened links with existing Ministry of Health Structures such as the ACI, CEC, HETI, and BHI
- Defining local models of care and closure of gaps in service delivery across SWSLHD
- Specialist rooms and private nursing agencies – ongoing dialogue also in issues of shared care and good communication flow

Awareness of Commonwealth and community resources and projects which can complement care of common patients

- Prevention clinics
- GP After hours services
- Community Health
- Connecting care program
- Liaison with community groups, Aboriginal Community Controlled Health Services (ACCHS) and other Aboriginal health services
- Research with other hospital departments and universities
- Training of health professionals
- Specialty outpatient clinics at hospitals in niche specialties e.g. fall clinic, bone clinic at Fairfield

For **respiratory medicine** the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- General Practice - ongoing communication and review of their needs; better IT communication; better shared care plans of management; streamlined referrals and discharge planning
- Chronic and complex care services - develop a model of community care for COPD patients based on the best evidence; enhanced integrate with primary health care services; develop collaborative strategies for smoking cessation, obesity prevention with public health and primary care
- Sleep and respiratory failure services - multi-disciplinary sleep clinics involving neurology, psychology, ENT, dental medicine, psychiatry; developing a model for managing insomnia, through collaborations with psychology services and primary care; better communication with ENABLE via an electronic request for home respiratory equipment.
- ICU - Streamlined referrals with ICU, setting up High Care area on wards.
- Aged Care Department - where geriatricians assist in managing the elderly patients following recovery of the acute respiratory illness, with continuing management of multiple medical and social issues.
- Community services – consider telehealth and hospital community liaison (including allied health services and the various community nurse groups)
- Pulmonary Rehabilitation – consider out of hours pulmonary/cardiac/metabolic rehabilitation services; improved access to pulmonary rehabilitation via community based facilities
- TB services – at Liverpool, create a service agreement between main radiology and chest clinic to provide radiologist for TB patients
- Obesity services
- Lung function laboratory – identify a software solution for lung function data backup and transfer to Powerchart

- Teaching – strengthen partnerships with UNSW and UWS to train medical students; partner with RACP to train physicians
- Research – increase research capacity e.g. roll out as pilot projects, report on research outcomes; increase collaborations with research institutions, industry, academia
- Information and communications technology - integrating sleep reports and lung function reports into the electronic medical record

For **neurology/stroke** the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Enhanced access to neuroradiology intervention service to enable full 24/7 cover with anaesthetic cover at Liverpool then also at Campbelltown hospitals
- increased access to rehabilitation services including development of inpatient rehabilitation services at Liverpool Hospital
- Enhanced access to ambulatory care/PIXI/Hospital in the Home to enable outpatient intravenous therapies – methylprednisone, immunoglobulin
- rapid access to diagnostic services for inpatients and outpatients - radiology (CT CTA MRI MRA, ultrasound), vascular lab (carotid duplex, venous DVT studies), cardiology (Echo TTE TOE, Holter)
- timely access to nursing home beds including rapid ACAT assessment
- adequate home support services - home care, home nursing, EACH
- benchmark nursing, allied health and administrative staffing inpatients and adequate allied health outpatient clinic availability
- Good interface with connecting care program, community health, GPs and SW Medicare Local.
- Adequate support services for inpatients – porters, interpreters, cleaners etc.
- Adequate Biomedical engineering support
- Access to outpatient or community allied health services with acceptable waiting times – including social work, physiotherapy, occupational therapy, speech therapy, dietetics, clinical psychology, and neuropsychology.

For **MAU** the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Encouragement of direct referral of suitable patients by GPs to the MAU/AAU, rather than to the ED – this is not practicable until there is an AAU adjacent to the ED
- Improved links with GPs, ambulatory care, community care, connecting care to facilitate earlier discharge
- Establishment of acute clinics, both to enable same day discharge from the MAU/AAU and to facilitate earlier discharge of General Medicine patients - clinic space adjacent to the AAU would be ideal for this
- Enhance perception of the AAU/MAU as an option for avoiding the ED.

- General Practice – ongoing dialogue and review of their needs; optimised shared care programs to improve efficiency; defined roles as well as care pathways for escalation and transfer of care
- Improved awareness of Commonwealth and community resources and projects which can complement care of common patients.

For the **connecting care** program the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Improved access to rehabilitation programs in a variety of care settings
- Development of a model of community care for COPD and heart failure patients.
- Enhanced integration with primary health care services, including GPs
- Collaborative strategies for smoking cessation and obesity prevention effectively linked across Population Health and primary care in an integrated package
- Collaboration with diabetes services and Diabetes Australia to implement the community diabetes program across SWSLHD
- Increased and more effective engagement with Aboriginal Health services within the SWSLHD and with ACCHS and other Aboriginal organisations providing healthcare
- Access, facilitation and support of available services in NGOs and community groups e.g. exercise programs.

For **diabetes and endocrinology**, the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- General Practice /SW Medicare Local – a coordinated strategy for disease prevention and management in general practice, especially in relation to diabetes, obesity and metabolic syndromes which is flexibly amenable to lifestyle changes and can be escalated or de-escalated as defined trigger points; raised awareness of osteoporosis among GPs and in the community; regular seminars/teaching sessions for GPs
- In-hospital diabetes centres taking an enhanced leadership role in education of all staff, including enhanced links in educational activity with private endocrinologists
- Community – enhanced links with community groups for education sessions, e.g. local clubs, ethnic groups, Aboriginal community organisations

For **infectious diseases**, the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Multi-disciplinary inpatient and outpatient care – closer clinical partnerships between high users of Infectious Disease services such as Haematology/Oncology and surgical services such as orthopaedics; providing benefits in patient care and efficiency/effectiveness
- General practitioners – closer relationships whereby GPs can refer patients early to the ID acute care clinics/ambulatory care/community outreach services and GPs participate more in hospital-in-the-home treatments in partnership with the ID unit and community nursing
- Private Hospitals –SWSLHD infectious diseases services could be provided into private hospitals as community outreach; deficiencies in the availability of ID services in private hospitals may be a barrier to patient access

- RACFs – increasing evidence supports the role of RACFs as reservoirs and sources of multi resistant organisms (MRO) and MRO infections; ID services can play a role in improving antibiotic use, infection control and infection treatment in RACFS, helping divert admission of RACF residents from acute care hospitals – requires the collaboration of RACF clinical staff, GPs and community nurses.
- Community groups – those at increased risk include refugees and migrants, injecting drug users etc. ID could participate in community education campaigns and outreach programs for prevention and early detection e.g. HBV, HCV, and TB etc.
- Research – collaboration with universities and other clinical research groups on clinical infectious diseases research
- Public Health Unit and Communicable diseases Branch Ministry of Health- role in the surveillance and management of established and emerging infectious diseases threats' with enhanced information exchange and collaboration to optimise outcomes

For **rheumatology**, the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Maintaining and expanding long established close links to ACI, Arthritis Australia, Arthritis NSW and the College of Nursing, particularly to develop improved models of care and musculoskeletal training for nursing and providing information to the community on models of care, self-management and obesity prevention
- Community based services to help manage disabled patients
- Enhancing links with General Practice and the SW Medicare Local

For **immunology**, the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- Collaboration with other departments in areas such as pharmaco-immunology and neuro-immunology
- Maintaining and expanding relationships with patient support groups such as the Lupus Association and Immunodeficiency Diseases Association
- Supported residential care for patients with HIV dementia, to address prolonged hospital stays which arise because of lack of appropriate accommodation – currently The Bridge is the single HIV dementia specific unit in Sydney
- Collaborative links nationwide for research into individual immune-mediated diseases and immunodeficiency syndromes
- Work with the Australasian Society of Clinical Immunology and Allergy to provide patient information on immune mediated diseases in different languages
- Ambulatory Care services for rapid access to intravenous infusions

For **clinical genetics**, the partnerships which need to be forged and strengthened to facilitate models of care and service developments in the future include:

- General Practice - ongoing communication and review of their educational needs regarding genetic conditions and services available; better IT communication; better shared care plans of management

- Continued involvement with Ministry of Health via GSAC for planning of future genetic services for NSW
- Continued interaction with AGSA for genetic support information for patients and families.
- Continued support and interaction with Mothersafe program for information on teratogens in pregnancy
- Increased involvement with providers of personalised private genetic testing through web based sites to ensure their clients receive interpretation and counselling on the results of their testing

Attachment B Projected population of SWSLHD communities 2016 and 2021

Population projections	SWSLHD			Bankstown		
	2011	2016	2021	2011	2016	2021
0 - 4 yrs	63,172	73,317	80,383	14,291	15,979	16,546
5 - 14 yrs	125,198	133,606	149,714	26,276	27,861	30,526
15 - 44 yrs	371,889	400,104	428,701	79,512	81,425	84,949
45 - 69 yrs	246,607	274,788	298,218	51,713	55,762	59,348
70 - 84 yrs	57,062	68,380	87,866	15,071	15,663	18,409
85+ yrs	11,835	15,942	19,065	3,988	4,834	4,971
All ages	**875,763**	**966,137**	**1,063,947**	**190,851**	**201,523**	**214,749**

Population projections	Camden			Campbelltown		
	2011	2016	2021	2011	2016	2021
0 - 4 yrs	4,678	6,110	8,585	11,118	13,499	15,095
5 - 14 yrs	9,326	12,974	15,932	21,558	22,983	26,739
15 - 44 yrs	25,499	38,139	47,235	65,809	71,687	77,402
45 - 69 yrs	15,115	21,298	27,282	44,008	47,798	50,674
70 - 84 yrs	3,045	4,685	7,030	7,307	10,037	14,549
85+ yrs	776	1,204	1,614	1,373	1,830	2,310
All ages	**58,439**	**84,409**	**107,680**	**151,173**	**167,834**	**186,768**

Population projections	Fairfield			Liverpool		
	2011	2016	2021	2011	2016	2021
0 - 4 yrs	12,736	14,680	15,085	14,407	17,017	18,882
5 - 14 yrs	26,337	26,318	28,653	28,611	30,359	34,330
15 - 44 yrs	84,114	84,237	86,146	84,603	92,302	100,482
45 - 69 yrs	56,978	61,545	64,396	49,085	56,654	63,815
70 - 84 yrs	13,826	15,627	19,228	9,809	12,367	16,091
85+ yrs	2,488	3,527	4,367	1,573	2,512	3,353
All ages	**196,479**	**205,933**	**217,875**	**188,088**	**211,212**	**236,953**

Population projections	Wingecarribee			Wollondilly		
	2011	2016	2021	2011	2016	2021
0 - 4 yrs	2,696	2,482	2,510	3,246	3,551	3,680
5 - 14 yrs	6,171	5,997	5,864	6,919	7,114	7,669
15 - 44 yrs	14,361	14,211	13,966	17,991	18,103	18,522
45 - 69 yrs	16,229	16,928	16,997	13,479	14,803	15,706
70 - 84 yrs	5,490	6,690	8,123	2,514	3,311	4,436
85+ yrs	1,179	1,433	1,675	458	603	776
All ages	**46,126**	**47,741**	**49,134**	**44,607**	**47,485**	**50,789**

Source: NSW Department Planning and Infrastructure, New South Wales State and Local Government Area Population Projections: 2014 Final

Attachment C Growth in demand for inpatient care SWSLHD residents to 2016 and 2021

Projected separations of SWSLHD residents at all hospitals by Service Related Group

Service Related Group	2010-11	2016-17	% Δ to 10-11	2021-22	% Δ to 10-11
Acute Care					
11 Cardiology	10,655	11,897	11.66%	13,769	29.23%
12 Interventional Cardiology	4,346	5,219	20.09%	6,176	42.11%
13 Dermatology	783	820	4.70%	915	16.89%
14 Endocrinology	1,154	1,376	19.27%	1,586	37.43%
15 Gastroenterology	18,573	21,836	17.57%	25,079	35.03%
16 Diagnostic GI Endoscopy	14,184	16,345	15.24%	19,089	34.58%
17 Haematology	1,645	1,958	19.02%	2,199	33.66%
18 Immunology and Infections	2,067	2,252	8.96%	2,537	22.73%
19 Oncology	1,573	2,155	37.02%	2,565	63.04%
20 Chemotherapy	2,396	3,200	33.55%	4,021	67.80%
21 Neurology	6,695	7,536	12.57%	8,634	28.97%
22 Renal Medicine	2,383	2,666	11.87%	3,201	34.34%
23 Renal Dialysis	42,543	53,799	26.46%	64,444	51.48%
24 Respiratory Medicine	12,471	13,878	11.28%	15,769	26.45%
25 Rheumatology	1,032	1,368	32.57%	1,587	53.81%
26 Pain Management	1,380	1,362	-1.27%	1,559	12.98%
27 Non Subspecialty Medicine	10,686	12,256	14.69%	14,257	33.41%
41 Breast Surgery	1,615	1,833	13.47%	2,047	26.77%
42 Cardiothoracic Surgery	936	981	4.76%	1,094	16.89%
43 Colorectal Surgery	4,585	5,209	13.60%	5,823	27.00%
44 Upper GIT Surgery	4,486	4,862	8.39%	5,433	21.11%
46 Neurosurgery	4,129	4,617	11.82%	5,299	28.35%
47 Dentistry	3,098	3,607	16.45%	4,150	33.94%
48 ENT & Head and Neck	8,485	9,511	12.10%	10,676	25.82%
49 Orthopaedics	18,859	21,466	13.82%	24,743	31.20%
50 Ophthalmology	9,314	12,210	31.10%	15,496	66.37%
51 Plastic and Reconstructive Surgery	5,446	6,101	12.02%	7,023	28.95%
52 Urology	9,662	11,015	14.00%	12,665	31.08%
53 Vascular Surgery	2,669	2,781	4.20%	3,245	21.59%
54 Non Subspecialty Surgery	14,553	15,876	9.09%	17,819	22.44%
61 Transplantation	56	49	-12.73%	53	-4.86%
62 Extensive Burns	52	68	31.06%	75	44.15%
63 Tracheostomy	342	444	29.71%	519	51.81%
71 Gynaecology	10,690	11,634	8.83%	12,771	19.47%
72 Obstetrics	17,434	19,566	12.23%	21,132	21.21%
73 Qualified Neonate	2,739	2,981	8.83%	3,342	22.01%
74 Unqualified Neonate	10,623	12,145	14.33%	13,300	25.20%
75 Perinatology	617	578	-6.33%	657	6.47%
81 Drug and Alcohol	1,828	1,975	8.04%	2,126	16.31%
99 Unallocated	413	413	0.00%	413	0.00%
Total Acute all Hospitals	**267,197**	**309,846**	**15.96%**	**357,288**	**33.72%**
Sub and Non Acute Care					
84 Rehabilitation	12,153	17,395	43.14%	22,580	85.80%
85 Psychogeriatric Care	142	133	-6.46%	160	13.00%
86 Palliative Care	1,477	1,835	24.26%	2,095	41.87%
87 Maintenance	583	888	52.35%	1,106	89.77%
Total Sub and Non Acute all Hospitals	**14,355**	**20,252**	**41.08%**	**25,943**	**80.72%**
Grand Total all Hospitals	**281,552**	**330,097**	**17.24%**	**383,231**	**36.11%**

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