

Figure 1-1: Complete Functional Adjacencies, Phase 2 redevelopment

Relationship Matrix 22.08.2023										Building 5				Clinical Support				Inpatients				Outpatients				TT&R		WYC	
Building 5	Emergency Department	B5 Med Imaging	Critical Care (ICU/CCU)	Operating Theatres/Cath Lab	Sterilisation Services	Medical Imaging - New Core	Pathology	Pharmacy	Health Information Services	Cardiology Diagnostics	Specialist Medicine	MAPU	Palliative Care	Day Medical Unit	Addiction Medicine	Specialist Surgery	Day Surgery Unit	Endoscopy	Mental Health SSU	HITH	Medical Outpatients	Cardiology/Cardiothoracic Outpatients	Surgical Outpatients	Interventional Radiology	Addiction Medicine Outpatients	Learning & Teaching	Research		
Building 5	x	1	1	1	5	5	5	5	5	5	4	4	5	5	5	4	5	5	2	5	5	5	5	5					
		x	1	1	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
			x	1	5	5	5	5	5	4	3	3	3	5	5	3	5	5	5	5	5	5	5	5					
				x	1	5	5	5	5	5	3	3	3	5	5	3	4	4	5	5	5	5	5	5					
						x	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
							x	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
								x	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
									x	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
										x	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
											x	5	5	5	5	5	5	5	5	5	5	5	5	5					
												x	5	5	5	5	5	5	5	5	5	5	5	5					
Clinical Support																													
Inpatients																													
Outpatients																													
TT&R																													
WYC																													

Legend
1 Directly adjacent (Horizontal / Vertical)
2 Easily accessible (less than 3 minutes)
3 Accessible 3 to 5 minutes
4 Accessible 6 to 10 minutes
5 Accessible 10 minutes plus

Adjacency is with WYC Birthing Suite

Figure 1-2: Functional Relationships Adjacency Matrix for Medical IPUs and Outpatients

Relationship Matrix	Medical Imaging - building 5	Pathology	Pharmacy	Health Information Services	Cardiology Diagnostics	Dermatology	Respiratory and Sleep	Infectious Diseases	Endocrinology and Diabetes	Gastroenterology	Hepatology	Palliative Care	Renal Medicine (incl Dialysis)	Rheumatology	Neurology and Stroke	General Medicine	Day Medical (& HITH)	Addiction Medicine	Clinical Trials	General Surgery	Endoscopy	Orthopaedics	Ophthalmology	Otolaryngology Head and Neck	Maxillofacial surgery	Mental Health Short Stay Unit	Plastic Surgery	Outpatient clinics (med and surg)	Teaching, training and research
Medical Imaging - New Core In-Scope MI	3	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	1
Pathology		x	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	1
Pharmacy			x	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-
Health Information Services				x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardiology Diagnostics					x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dermatology						x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Respiratory and Sleep							x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Infectious Diseases								x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endocrinology and Diabetes									x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastroenterology										x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hepatology											x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Palliative Care												x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renal Medicine (incl Haemodialysis)													x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rheumatology														x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neurology and Stroke															x	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Medicine																x	-	-	-	-	-	-	-	-	-	-	-	-	-
Day Medical (& HITH)																	x	-	-	-	-	-	-	-	-	-	-	-	-
Clinical Trials																		x	-	-	-	-	-	-	-	-	-	-	-
General Surgery																			x	-	-	-	-	-	-	-	-	-	-
Endoscopy																				x	-	-	-	-	-	-	-	-	-
Orthopaedics																					x	-	-	-	-	-	-	-	-
Ophthalmology																						x	-	-	-	-	-	-	-
Otolaryngology Head and Neck																							x	-	-	-	-	-	-
Maxillofacial surgery																								x	-	-	-	-	-
Mental Health Short Stay Unit																									1	-	2	2	3
Plastic Surgery																										-	-	-	-
Outpatient clinics (med and surg)																										-	x	2	3
Teaching, Training and Research																												x	3

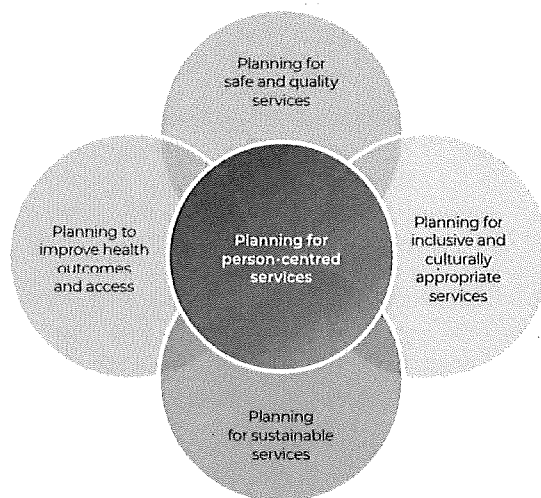
Legend 1 directly adjacent (Horizontal / Vertical) 2 easily accessible (less than 3 minutes) 3 accessible (3 - 5 minutes)

2. Context

2.1. ACT PLANNING PRINCIPLES

The following principles underpin the ACT Health Services Plan 2022-2030⁵. These principles also accord with the development of the previously developed Medicine Service Model.

Figure 2-1: ACT Health Service Planning Principles



Person-centred services - The ACT Government consults with consumer and carers so that services are planned to treat consumers with dignity and respect; the ACT Government makes it easier for people to access services equitably, to move between services across the health system, and to partner with health professionals to participate in decisions about the services provided to them.

Inclusive and culturally appropriate services - The ACT Government consults with groups underrepresented in the healthcare system so that services are planned to be inclusive and culturally appropriate and targeted to specific health needs where necessary.

Safe and quality services - Planning is guided by evidence-informed policy directions, and the ACT Government continually strives to plan for services that improve health outcomes, experiences of receiving care, experiences of providing care, and effectiveness and efficiency of care.

Health outcomes and access - Planning is guided by evidence-informed policy directions, with specific focus on at-risk and priority population groups; planning the right service, at the right time, in the right place, by the right team, every time.

Sustainable services - The ACT Government maximises the use and efficient allocation of limited resources by taking a Territory-wide approach to planning services across the ACT public health system, guided by clear role delineations, service levels, and evidence informed policy directions: service planning activities are prioritised based on need.

5. ACT Government, Health, *ACT Health Services Plan 2022-2030*, available <https://www.health.act.gov.au/about-our-health-system/planning-future/act-health-services-plan-2022-2030#:~:text=The%20ACT's%20population%20is%20growing,and%20effective%20care%20for%20everyone.>

2.2. CANBERRA HEALTH SERVICE VISION AND SERVICE DIRECTION

CHS' vision is to '**Create exceptional health care together**'. Improving the quality of healthcare across the ACT is a key priority for CHS as it aims to be the safest healthcare system in Australia, delivering high-quality, person-centred care that is effective and efficient.

Specifically, CHS will provide health care that is:

- Person-centred: providing care that is respectful, responsive, and focused on the patient's needs;
- Safe: avoiding harm to patients from care that is intended to help them;
- Effective: providing services based on scientific knowledge and which produce a clear benefit;
- Timely: reducing waits and sometimes harmful delays;
- Efficient: avoiding waste and reducing unit costs; and
- Equitable: providing care based on clinical need, and that does not vary in quality because of a person's personal circumstances.

2.2.1. Consumer Principles

A fundamental component of patient-centred care is recognising and understanding the consumer perspective of the service. Central to patient-centred care are the themes of Participation, Communication, Experience and Support. These themes form the basis for Consumer Care Principles, the guiding principles for this FDB. The Consumer Care Principles are:

- Participation: consumers (and where appropriate their family members and carers) will be equal partners within the multidisciplinary care team, enabling them to be actively involved in their own care;
- Communication: embedding frequent and meaningful communication with consumers, their family members, and carers, about their care for their entire hospital journey, including discharge;
- Experience: care is delivered in a way that supports the consumers' experience of safety and fosters trust; and
- Support: recognising the importance of involving family and carers in the consumer's care and recovery throughout their health journey.

2.2.2. CHS Future Directions

CHS' future service directions are set out in the *ACT Health Services Plan, 2022–2030*.⁶ The desired outcomes from each of the directions are also articulated. These are outlined below.

Addressing key areas of service demand and reform

- Improve health outcomes and access to care, with a particular focus on priority population groups.
- Support access to the services experiencing most significant demand pressures.
- Ensure our services are flexible and inclusive to respond to individual needs and circumstances.

Transitions of care

6. ACT Government, Health, *ACT Health Services Plan 2022-2030*, available <https://www.health.act.gov.au/about-our-health-system/planning-future/act-health-services-plan-2022-2030#:~:text=The%20ACT's%20population%20is%20growing,and%20effective%20care%20for%20everyone.>

- Improve health outcomes and access to care.
- Make it easier for patients, families, and service providers to navigate the service system.
- Address issues of patients 'falling through the gaps' as they move between services and care settings such as between hospital and the community.
- Break down the barriers and silos between services.

The ACT's role as a local, Territory and regional service provider

- Improve access to care closer to home in a safe and sustainable way.
- Reduce unwarranted variation between services.
- Maximise the efficient use of health resources to meet the needs of the community.

Strengthening core ACT Government funded clinical support services

- Improve patient outcomes and reduce length of stay in hospital.
- Ensure that our clinical support services have the appropriate capacity and capability to support new and expanded clinical services.
- Optimise clinical decision making in determining the most appropriate treatment and care for patients.

2.2.3. Learning, Teaching and Research

CHS' *'Clinical Learning and Teaching Strategy 2023 – 2027'*⁷ provides the overarching vision, goals and strategic commitments to clinical learning and teaching. The six Strategic Commitments are:

- Strengthen governance and processes to prioritise and enable learning and teaching.
- Prepare and support the clinical workforce to work safely and effectively at the leading edge of their practice.
- Develop and support the clinical workforce to deliver effective, innovative, evidence-based teaching and point of care clinical supervision.
- Establish collaborative environments that maximise and enable effective, innovative, and efficient learning and teaching.
- Foster and strengthen strategic partnerships for learning and teaching with clinicians, consumers and carers, communities, and academia.
- Promote, share, and celebrate learning and teaching.

To achieve these strategic commitments, and to develop a contemporary health precinct, a holistic approach to integrated education, training and research activities into the clinical areas will be key. For clinicians, access to teaching and learning will be built into the flow of their day. This means rooms available on each unit or a shared area readily accessible to clinical (patient) areas, as well as the necessary audiovisual equipment to record and transmit the education and training. To complement the integrated clinical spaces, a teaching and learning hub would provide greater opportunities for education.

Refer to the Clinical Support Service Model for more information on Learning, Teaching and Research.

7. ACT Government, *Clinical Learning and Teaching Strategy 2023 – 2027*. Available: https://www.canberrahealthservices.act.gov.au/_data/assets/pdf_file/0012/2222040/69e04bc4df49dfd4a9ff49375fe0a3bcfd9dd628.pdf

2.3. OVERARCHING DRIVERS FOR CHANGE

The above strategic and policy positions articulated by ACT Health and CHS are underpinned by a range of drivers for change. The Territory, like other jurisdictions, are facing increasing challenges that are forcing changes in the way people seek and access services. Some of these challenges which are driving change are described below.

The ACT Health Services Plan (2022 to 2030) provides context within which the FDB needs to be considered. The *ACT Health Services Plan* indicates that the Territory's population increased by 14% between 2016-2021 and is projected to increase by 9.7% over the decade to 2030. It is also ageing with those in the 70+ age category increased 34% between 2016-21 and is forecast to rise a further 22.7% by 2030, more than doubling the growth rate for the total population. In addition to population growth and ageing, there are important factors that drive change for the Territory:

Ageing population and increasing chronic disease – the demand for health services is increasing as people live longer with more chronic and multi-morbid conditions. The aged population are high users of health services;

Access for vulnerable population groups – some population groups in Australia experience health inequalities. Aboriginal and Torres Strait Islanders and people from low socioeconomic areas are likely to have poorer health compared to the general population;

Increasing service demand – for elective and emergency surgery, chronic disease, cancer services, and mental health. These have been exacerbated due to the COVID-19 pandemic;

Climate change – has been causing more extreme weather events, such as bushfires and floods. Instances of heat stress, smoke inhalation, food insecurity, and mental health and wellbeing issues are increased for people experiencing extreme weather events; and

COVID-19 – the delivery of healthcare has rapidly changed since the beginning of the COVID-19 pandemic, especially in terms of how and where care is delivered, with a virtual and care closer to home becoming the norm. COVID-19 patients have caused greater pressure on health system capacity, especially in general IPUs and for multidisciplinary teams treating people experiencing the effects of 'long COVID'. Additionally, workforce availability has been significantly impacted, with burnt out staff choosing to leave their professions and with the usual immigrant workforces being unavailable.

3. Design principles of the patient environment

This section outlines the facility wide design principles. Design elements that are specific to particular specialties are identified in the relevant sections.

3.1. INPATIENT UNITS

The overarching planning principles for an inpatient unit are derived from the AusHFG for Adult Acute Inpatient Unit - Health Planning Unit (HPU) 340.⁸

The inpatient units are intended to be as standardised as possible. For CH a standard IPU is a 28-bed configuration, which is operationally efficient. An inpatient unit may be operationally organised into pods, or clusters, for different clinical specialities or levels of acuity. In the interests of flexibility, this FDB provides standardised design approaches, with relatively few exceptions. The exceptions that do require specific consideration include:

- MAPU;
- Acute stroke unit;
- Respiratory unit;
- Infectious diseases and winter surge unit; and
- Acute palliative care unit.

Configuration

A core criterion of the Phase 2 Capital Redevelopment is the replacement of like-for-like functional capacity. This constitutes six medical IPUs and three surgical IPUs, as well as shell space for a 10th IPU given that the B10 floor plate accommodates 2x IPU per floor hence the 9th IPU leads to a 5th IPU floor.

Functional Operations

Inpatient units have several functional zones, being the patient and family/carer areas (reception, waiting, bedrooms, ensuites, bathrooms, lounges and treatment spaces), clinical support areas (e.g., beverage bays, handwashing bays, linen bays, mobile equipment bays, resuscitation bays, blanket/fluid warmer bays, cleaner's rooms, clean stores, medication rooms, dirty utility, interview rooms, staff stations, clinical workrooms, photocopy/stationary bays, general stores, equipment stores, meal trolley bays, flowers bays and toilets), shared areas (with other units, such as disposal rooms), learning and teaching areas (in the form of meeting rooms) and staff areas (e.g., single person offices, office workstations, staff rooms, property bays and staff toilets). Other configuration factors include the mix of single vs double vs quad bedrooms; centralised and/or decentralised staff bases; and inboard, outboard, or nested ensuites.⁹

Overarching inpatient design principles:

-
8. Australasian Health Facility Guidelines, Adult Acute Inpatient Unit HPU B.0340. Revision: 7.0. Date published: 07/04/2020. HPU 340 Adult Acute Inpatient Unit describes the operational, functional and design requirements for adult acute inpatient units (IPUs). Available: <https://healthfacilityguidelines.com.au/hpu/adult-acute-inpatient-unit>
 9. Australasian Health Facility Guidelines, Adult Acute Inpatient Unit HPU B.0340. Revision: 7.0. Date published: 07/04/2020. HPU 340 Adult Acute Inpatient Unit describes the operational, functional and design requirements for adult acute inpatient units (IPUs). Available: <https://healthfacilityguidelines.com.au/hpu/adult-acute-inpatient-unit>

- Allow for clear wayfinding for patients and carers/visitors from entry to exit, including clearly signed directions.
- Support maximum clinical and workforce productivity and efficiency through design that supports workflows with short travel distances (horizontal and vertical), clear patient flows, separation of clean and dirty material workflows to and from the unit/s.
- Safety in design measures to prevent occupational violence, including access control for staff only areas as part of preventing unauthorised access.
- Maximising comfort for inpatient, visitors, and staff through visual observation, acoustic, climate control, natural light, and Artwork elements.
- Ensure adequate infection control measures, facility maintenance and environmental sustainability in finishes and surfaces, air handling systems, water management and environmental sustainability.
- Digital infrastructure that accommodates existing and future systems which promote flexible telehealth, POC mobile device utilisation, unit specific communications and advances in technology.

Inpatient units may include:

- Rehabilitation and allied health therapy spaces;
- Treatment rooms (one per floor, to be shared between two adjacent units);
- Interview rooms;
- Learning, research, and education spaces;
- High and close observation units should support high levels of monitoring;
- Each inpatient unit will have a minimum of one of the 28 beds as a negatively pressured bedroom with ensuite for isolation. Negative pressured isolation rooms provide respiratory isolation and prevent the transmission of infection. The anteroom provides an area for staff to don and doff personal protective equipment. Respiratory and Infectious Diseases inpatient units will have higher ratios of negatively pressured bedrooms with ensuites;
- Each inpatient unit will also include one bariatric bedroom and one super bariatric bedroom, with ensuite and a lifter through the bedroom into the ensuite;
- Bariatric equipment weighted to 250kg and super bariatric equipment to 450kg.
- Ceiling mounted hoist or mobile hoists; and
- Sufficient readily accessible storage and charging spaces for frequently utilised ICT and medical equipment.

3.2. OUTPATIENT CLINICS

The overarching planning principles for outpatient clinics are derived from the AusHFG for Ambulatory Care and Community Health - HPU 0155.¹⁰

There are 85 medical and 34 surgical outpatient POC planned for building 10.

Outpatient clinic areas should be in the same building as the most relevant inpatient unit, with patient drop-off zones and parking to enable easy access.

10. Australasian Health Facility Guidelines, HPU 0155 Ambulatory Care and Community Health. Revision 7.0. Date published: September 2020. Available: https://aushfg-prod-com-au.s3.amazonaws.com/HPU_B.0155_7%2020.pdf

It is likely that outpatients would be configured as a central outpatient area. A consolidated outpatient service (whether in one or two buildings) would require:

- Entry / Reception;
- Consumer amenities (such as a paediatrics play area, a mask and sanitiser bay, a wheelchair parking bay and public toilets);
- Patient areas in pods of 15-23 POC, each with its own waiting area, examination plinths (for diagnostic cardiology only), patient toilets, clinical offices/workstations/workrooms, a cleaning utility room, and a height/weight bay. The POCs are generally made up of consult rooms (of various sizes), interview rooms, and (general) treatment rooms, with the addition of some allied health treatment rooms (including a hand therapy/splitting room, a plaster room, a podiatry room, an orthotics/prosthetics workshop, and an audiology testing room) as well as other specialised rooms (including a negative pressure room for respiratory outpatients, a lung function lab, and two stress testing rooms);
- Clinical support services to be shared amongst 2 adjacent pods (if there is an adjacent pod), including resuscitation bays, linen bays, equipment stores, general stores, cleaner's rooms, disposal rooms, dirty utility rooms, and specimen collection bays;
- Staff areas also to be shared amongst 2 adjacent pods (if there is an adjacent pod), including offices, workstations, file stores, photocopy stores, beverage bays, staff rooms, property bays, and staff toilets; and
- Learning and teaching spaces (in the form of meeting rooms within the Schedule of Accommodation).

Clinical Support Services such as pathology collection, medical imaging and pharmacy should also be accessible to the outpatient service.

Configuration

The design of these spaces should be flexible and standardised unless there is a need for specialised spaces. Standardised outpatient POC will be arranged in pods or clusters. Based on the number of medical outpatient clinics that are in-scope for this redevelopment, it is identified that the following configuration would be feasible:

- Four standardised/flexible pods of 15-17 POC each for medical clinics;
- One pod of 23 POC for cardiology/cardiothoracic and diagnostic cardiology clinics; and
- Two standardised/flexible pods of 15 and 19 POC each for surgery clinics (which would also include the orthopaedic and plastics registrar clinics).

The entry / reception / waiting area(s) is the main visitor entry point to the unit. This should be well sign-posted to assist with wayfinding.

The reception should oversee the main entrance and waiting areas should control access to the patient treatment areas. Self-registration systems may be in use in the waiting areas. If the outpatient clinics are arranged in pods, then sub-wait areas may be designed depending on distances from the main outpatient reception.

Seating in waiting areas should be arranged to allow for separation of groups in an informal way. Rows of seating should be avoided. Views to nature or televisions should be provided for entertainment. Seating should also consider the needs of elderly, children, bariatric patients, and those with a disability.

Standardised rooms may include consult rooms and supported by interview rooms and/or treatment rooms. The treatment and interview rooms may be shared across pods if configuration allows.

A mix of larger consultation rooms will facilitate multidisciplinary care, as well as cater for patients who bring children or larger family groups.

The support areas for outpatient clinics include:

- Resuscitation equipment for medical emergencies;
- Point of care testing for pathology and specimen collection;
- A system for reprocessing reusable medical devices;
- Storage for equipment and consumables; and
- Back of house functions such as waste disposal rooms.

3.3. ALLIED HEALTH

Allied Health professionals are integral to the multidisciplinary care of inpatient and outpatients. Allied health bed-based therapy will be provided to inpatients as soon as possible after admission to support early rehabilitation and patient mobility. Allied health professionals will provide treatment at the patient's bedside, in treatment rooms, or in gym/therapy spaces.

A multi-purpose gymnasium will also be available for therapy with Allied Health practitioners, focusing on mobility, strength, and activities of daily living.

Sufficient space is required for safe assessment of mobilisation and activities of daily living, including stairs. Depending on the service mix, a shared therapy unit may be required with plinths and therapy tables, interview rooms, large storage areas for equipment and mobility aids, and a larger therapy area. Many patients attending allied health therapy are physically incapacitated to some extent, and areas are required to accommodate patients using walkers, wheelchairs, and motorised scooters.

3.4. ELDERLY PATIENTS

The elderly population often present with multiple comorbidities and frailty. All inpatient units should support the maintenance and restoration of these patients. Spaces for assessment, such as cognitive assessment, and in-unit therapy is important. They can also be prone to falls, therefore, non-slip surfaces should be considered for all patient areas, hi-lo beds should be available for patients who are at risk of falling, and consideration could also be made to having bed alarms installed.

Access close to where patients are being treated is also important for those who are non-ambulant. Patient drop-off zones in front of buildings will be important, as well as consideration of additional building entrances, especially for day-stay services.

3.5. FAMILY / CARERS

Family and carers who are visiting, or staying overnight with patients, will require a fold out chair to bed in the patient's room, somewhere to sit away from the unit, a quiet room for relatives, a beverage bay and access to bathroom facilities. Interview rooms need to be available for private family meetings.

An environment that is considerate of patients and family from culturally and linguistically diverse backgrounds, including Aboriginal and Torres Strait Islander people, is an important consideration. A multi-faith space needs to be available somewhere on the campus.

3.6. BARIATRIC PATIENTS

A patient would be considered a bariatric patient if they weigh over 150kgs. In an IPU, it is important that there are bariatric bedrooms and ensuites, with lifters, for patients weighing up to 250kg. These rooms may be used flexibly for non-bariatric patients, particularly if there is special equipment required or a carer needs to stay over.

A super bariatric bedroom and ensuite is for patients weighing from 250kgs to 450 kgs. The size, equipment, fittings, and fixtures make it difficult to use this room flexibly. The super bariatric bedrooms and ensuites should service all inpatients, and not be allocated to just one speciality.

The equipment to support safe staff handling of bariatric and super bariatric patients will include ceiling mounted hoists, and either floor scales long enough to take the bed, or specialised beds with built-in scales.

Areas accommodating bariatric or super bariatric patients will need to have provision for wider doorways, larger space for turning, lift access and the storage of beds, electric bed movers, chairs, and wheelchairs.

Sufficient storage space is required for all bariatric equipment.

3.7. PATIENTS WITH BEHAVIOURS OF CONCERN

As in many other health services across Australia, CHS has experienced an increase in the number of incidents of violence directed to IPU staff by patients, consumers, and visitors. The design of the built environment is important to minimise the risk of occupational violence and aggression occurring. Specifically, the design should incorporate:

- Low stimulation rooms;
- Comprehensive Closed Circuit Television (CCTV);
- Access controls and duress alarms (fixed and mobile);
- Dual egress in a proportion of clinical consultation rooms and interview rooms;
- Line of sight from nurse's stations to the rooms allocated with higher-risk patients;
- Reception in waiting areas; and
- Interview rooms to undertake screening.

3.8. STAFF

Staff areas in the inpatient units include a main staff station (or stations) where the IPU clerks are located, clinical work rooms to access the digital health record, view images, and make phone calls, and workstations closer to patients, for immediate work associated with patient care. Alternatively, workstations on wheels (WOWs) with a laptop may be used. There should be offices in each inpatient unit for the nurse unit manager (single office) and other senior nurses, such as the clinical nurse educators (shared office).

A staff room is to be provided on each IPU for staff to take tea/coffee, lunch or dinner breaks. A beverage bay should be available to each IPU for staff to make tea or coffee for patients. Property bays and staff toilets should be proximal to the unit. Meeting rooms for teaching and training will either be provided in each unit or shared between units.

Staff areas in the medical outpatient clinics will require a secure area that is not accessible to patients for staff work areas and amenities. There is also a requirement for offices and workstations within the clinical zones. There should also be a group meeting / education room, a staff room with kitchenette and a beverage bay.

A summary of the administration functions that are in-scope for relocation to new Building 10 is outlined below:

The number of offices, workstations, break-out bays, and meeting rooms are outlined in the Schedule of Accommodation. The allocation of work points is based on:

- Activity based working environment aligned with contemporary workplace design standards;
- The number of staff on-site who require a desk space, but do not have either a permanent or workflow related touchdown point within a department;
- Shared Meeting Rooms;
- Future COVID working arrangements; and
- Whole of facility shared functions (staff tea rooms, toilets, showers, and end of trip facilities).

Staff offices/workspaces should:

- Collocate workspaces for related services, where possible. Support areas such as tutorial rooms, beverage areas, central printing, and staff toilets should be shared, when office spaces are collocated;
- Collocation should consider identifying and grouping staff and services who might be handling similar confidential information, and should also consider the acoustics and noise levels within shared workspaces;
- Include activity-based workstations that are flexibly designed, reflecting changing patterns of work including employment hours, type of work undertaken, job share and multi-site appointments;
- Small meeting rooms will be provided for private meetings / confidential conversations;
- Support increased collaboration between health professionals and a focus on multidisciplinary teamwork, including integration, collaboration, and multidisciplinary interaction;
- Be easy to reconfigure to meet changing needs;
- Ensure adequate storage space for both work related and employee personal items; and
- Include staff only, 'patient free' break out areas, providing a sanctuary away from the work environment.

The area allocations will be consistent with the CHS Staff Accommodation Policy.

The specific configuration of staff and skills mix for medical and surgical inpatient units and outpatient clinics will be determined closer to the commencement of the services through the development of a comprehensive workforce strategy. General workforce requirements are outlined below.

Medical staff:

Full-time staff or visiting Medical Officers, Fellows, Registers and Residents will typically carry out day-to-day management of patients.

Nursing staff:

As per a Level 5/6 Clinical service there are specific requirements for the nursing workforce in relation to skill mix, clinical supervision, education, and expertise. Workforce number and skill level of the nurses required to provide day to day care should be based on the patient number and care acuity within each unit and adhere to the minimum Nursing Hours per Patient Day as set out in the ACT Public Sector Nursing and Midwifery Enterprise Agreement and ACORN standards. Roles include Registered Nurses, Enrolled Nurses, Assistants in Nursing

Allied Health professionals:

Pharmacists, Physiotherapists, Occupational therapists, Social Workers, Speech Pathologists, Medical Physicists and Allied Health assistants.

Executive and Administrative staff:

Clinical support staff consisting of Medical, Nursing, Allied Health positions in managerial roles who are closely integrated with service provision and clinical day-to day activities. Administrative staff vary from clerical to managerial roles.

Clinical and Non-clinical support staff:

Clinical support persons will assist with service operations and patient flow such as manual handling, patient transfers, medical equipment and imprest supply management, cleaning, waste management and specimen couriers.

Refer to Section 29 for the design principles of all Front of House areas, and to Section 30 for Back of House services.

4. General Medicine

4.1. DESCRIPTION OF SERVICE

General Medicine inpatient care is for patients with diagnosed and undiagnosed medical conditions, or those with multiple medical conditions and there is no clear subspecialty admitting team, or adults who would benefit from a period of investigation and management prior to discharge home.

General Medicine is a Level 6 service.¹¹

The admission criteria for General Medicine are adults over the age of 16 years of age. Adult patients who will benefit from a period of investigation and management prior to discharge home.

Examples of patient cohorts are:

- Step down for patients from Intensive Care Unit (ICU) with acute illness for conditions such as intentional overdose or sepsis and require close clinical monitoring on arriving to the unit. These patients may require multiple medical teams' consultation and intense allied health input over a long period of time;
- Those with chronic pain who require ketamine infusions for opioid management and stabilisation as part of chronic illness and pain management; or
- Inpatients from the Adult Mental Health Unit (AMHU) who require urgent medical treatment under a generalist medical model. This does not include patients requiring surgical intervention;
- Those who require toxicology treatment for acute toxicity or overdose or those with an alcohol and other drug related illness requiring medical stabilisation;
- Those with an eating disorder who require a multi-disciplinary approach and strict adherence to individual specific care plans;
- Delirium of uncertain aetiology, weight loss for investigation, functional decline, sepsis, and patients from community aged care with multi-system illness not requiring a dementia specific unit for management.
- When required, General Medicine also admits patients under other specialties when there is a hospital demand for inpatient bed. This includes patients under the specialties of cardiology, respiratory, renal, infectious disease, neurology, dermatology, and rheumatology.

The General Medicine Unit has also been used as an infectious threat response unit for COVID-19, and potentially used for Ebola, Middle Eastern Respiratory Syndrome, and other pandemic responses.

General Medicine outpatient clinics provide care for patients who are directly referred by their general practitioner, or from other specialities within CHS, following an Emergency Department (ED) presentation to determine if specialist inpatient care is required, or following an IPU admission or procedure for follow-up monitoring and care.

11. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

4.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for General Medical inpatient units or Outpatient Clinics. Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

4.3. OPERATIONAL MANAGEMENT

4.3.1. Hours of operation

General Medicine admits and cares for patients 24 hours a day, 7 days a week.

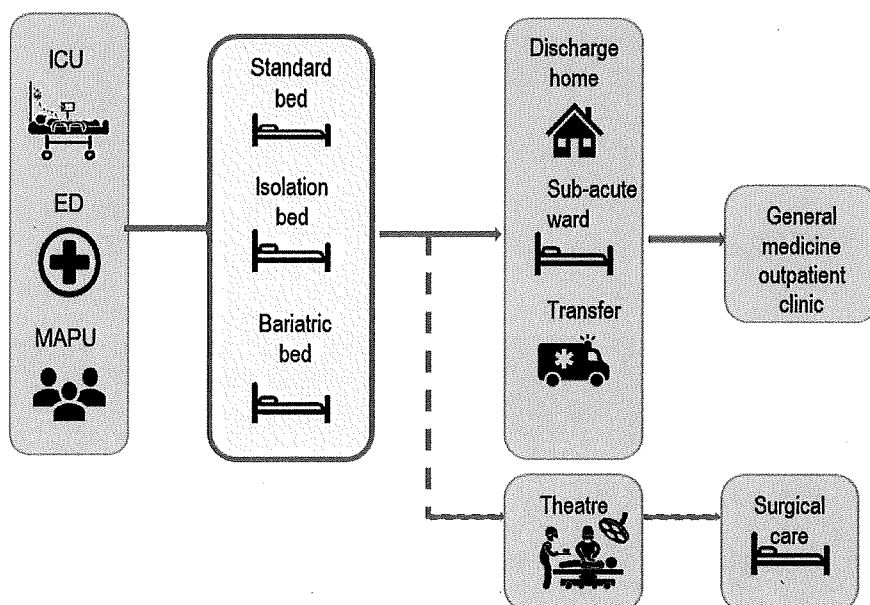
IPU clerks are available from 8am to 4pm Monday to Friday. An after-hours IPU clerk is contactable outside of these hours.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period of time.

4.3.2. Patient journey

The General Medicine patient pathways are depicted below in Figure 4-1.

Figure 4-1: General Medicine patient journey



Patients admitted to General Medicine usually present in one of the following ways, from:

- ED;
- A direct admission from the community or an elective list;
- Transfer from another inpatient unit;
- Medical Assessment and Planning Unit (which has not been operational since COVID-19); or

- ICU as step-down care.

There may also be instances of transfer from other CHS healthcare facilities such as North Canberra Hospital, University Canberra Hospital (UCH), AMHU and the Alcohol and other Drugs (AOD) withdrawal inpatient unit, or a non CHS health care facility such as a private hospital.

All patients admitted to General Medicine will be allocated to an appropriate single or double room, or a close observation bed by the nurse's station. A bariatric bedroom with ensuite and a negative pressure bedroom and ensuite will also be available on the unit.

Communication call systems are present in all clinical areas utilised by both patients and staff to enact time critical workflows. These workflows range from simple calls generated by patients when in need of a nurse or other staff member, to emergency calls raised by clinical staff when a patient's health deteriorates rapidly.

Fixed duress capability is required in clinical and administrative spaces to promptly call security when required. Staff will be able to utilise multifunctional wireless phones and devices in addition to fixed duress systems.

Patient discharge may be to subacute services (rehabilitation, geriatric evaluation and management or palliative care), HITH, to home, an alternative living facility, or to a surgical team for a procedure. Follow-up care would typically be provided through the General Medicine outpatient clinic, the patient's general practitioner (GP), subacute services in the home, such as Transition Care or Rehabilitation-in-the-Home, or Community Health Services.

4.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

4.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

4.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce requirements for a Level 5/6 service include those outlined in Section 3. Specifically, a general physician available 24 hours per day, a medical officer on-site 24 hours per day and a post

graduate trainee with three or more post graduate years who may be in training with the Royal Australasian College of Physicians (RACP).¹²

The general medical registrar may also cover some of the medical sub-specialities overnight, depending on the rostered requirements. Nursing staff will be rostered for 24 hours per day according to the patient ratios. Administrative staff will support the unit.

4.4. FUNCTIONAL CONTENT

General Medicine will operate from more than one of the six medical IPUs and more than one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH.

Outpatients will operate from a centralised outpatient area.

4.5. FUNCTIONAL ADJACENCIES

The key internal and external functional relationships for General Medicine are:

Internal:

- | | |
|---|--------------------------------|
| ■ ED; | ■ Stomal Therapy; |
| ■ Other acute and subacute medical inpatient units; | ■ Outpatients; |
| ■ Medical Imaging; | ■ ICU; |
| ■ Pharmacy; | ■ Allied health; |
| ■ Pathology; | ■ Language services; |
| ■ Hospital in the Home; | ■ Food services; |
| ■ Alcohol and Drug Service; | ■ Multifaith Support Services; |
| ■ Acute Chronic Pain Service; | ■ Environmental services; and |
| ■ Psychiatry; | ■ Mortuary. |

External:

- GPs;
- Community specialist consultants;
- Residential Aged Care facilities;
- Ambulance and non-emergency patient transfer services.

The principal functional adjacencies for General Medicine are the general acute unit to be proximal to the medical day unit, accessible in 3-5 minutes.

12. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

5. Medical Assessment and Planning Unit

5.1. DESCRIPTION OF SERVICE

A Medical Assessment and Planning Unit (MAPU) provides care for medical emergency inpatients who have presented through the ED and require comprehensive and rapid assessment. In the MAPU, patients will be clinically assessed and screened for risk. The MAPU facilitates patient flows from the ED, reduces delays in comprehensive assessment, diagnoses and determines a definitive care pathway earlier than would be normal practice.¹³

CH was operating a MAPU prior to 2020. However, with the COVID-19 pandemic, MAPU beds were required for COVID patients, and the MAPU ceased operating. The MAPU originally had eight POC. The intention is to reinstate MAPU to become once again operationalised in the redevelopment. It will also be important that MAPU functions as a genuine early and comprehensive assessment and planning service, and not simply another acute medical bed.

The MAPU is the responsibility of General Medicine but will include other medical specialties as required, most commonly with geriatricians.

5.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

The MAPU is a designated inpatient unit for transitioning patients. Staff and equipment support assessment and treatment for a designated period only. Patient stays will generally be 24 to 48 hours only.

The MAPU unit will be accessed by many multidisciplinary staff, so should be accessible without causing disruption to other patients.

The MAPU is intended to be in two 4-bed bays.

Patients being discharged home may go through the Discharge Lounge, depending on the complexity of the arrangements to be finalised and whether they will be completed within the operating hours of the Discharge Lounge, 0700 - 2130 Monday to Friday. Refer to Section 26 for more detail on the Discharge Lounge.

5.3. OPERATIONAL MANAGEMENT

A key feature of a MAPU is the need to deliver rapid assessment and planning, which means access to the necessary medical, nursing, and allied health services over the weekends for the service to function effectively.

13. Victorian Department of Health, *The role of Medical Assessment and Planning Units in Victorian Health Services*, October 2011. Available: <https://www.health.vic.gov.au/sites/default/files/migrated/files/collections/research-and-reports/t/the-role-of-medical-assessment-and-planning-units-in-victorian-health-services---pdf.pdf>

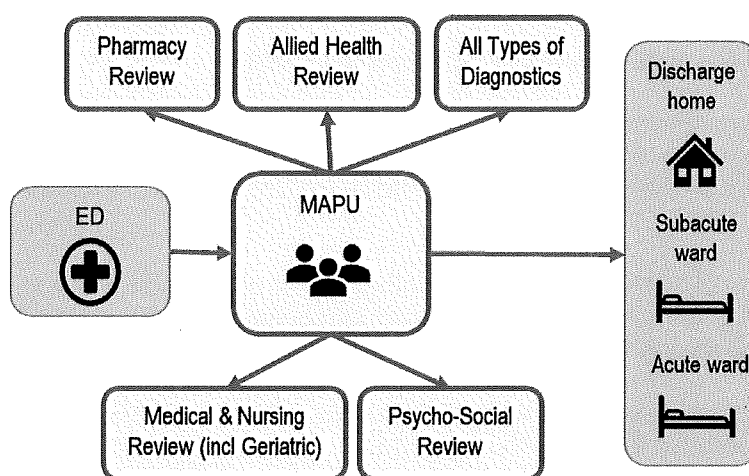
5.3.1. Hours of operation

The MAPU operates 24 hours a day, 7 days a week as part of the General Medicine inpatient unit.

5.3.2. Patient journey

The patient journey for MAPU is outlined below.

Figure 5-1: MAPU patient pathway



Patients entering the MAPU arrive from ED. Often patients in MAPU require diagnostic tests, so they may be transferred to Medical Imaging and/or bloods taken and almost certainly have a pharmacy review.

Some MAPU patients will receive definitive care and be discharged home from the MAPU, whilst many patients will transfer to an acute medical unit, or to subacute services.

Patients being discharged home may go through the Discharge Lounge, depending on the complexity of the arrangements to be finalised and whether they will be completed within the operating hours of the Discharge Lounge, 0700 - 2130 Monday to Friday. Refer to Section 26 for more detail on the Discharge Lounge.

5.3.3. Clinical Support Services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

5.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

5.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

Medical specialists are responsible for patients admitted to MAPU and should be available 24 hours a day. In some cases, and by agreement with protocols, ED may have admitting rights directly to MAPU. This is dependent on the Service Model of choice for CH. Nurses are responsible for ongoing patient care.

Multidisciplinary teams in the MAPU include physiotherapists, occupational therapists, nutritionists, psychologists, and social workers. Presently, these categories of staff tend to be only available during business hours which works against the philosophy and Service Model of a MAPU¹⁴.

Nursing and medical staff will generally have expertise in the care of complex frail patients. Particular skills will often include gerontic and geriatric medicine.

5.4. FUNCTIONAL CONTENT

CH was operating a MAPU prior to 2020. However, with the COVID-19 pandemic, MAPU beds were required for COVID patients, and the MAPU ceased operating. The MAPU originally had eight POC. MAPU will become operational in the Phase 2 redevelopment with eight POC.

5.5. FUNCTIONAL ADJACENCIES

The key internal and external functional relationships for MAPU are:

Internal:

- ED;
- Subacute inpatient units;
- All Allied Health categories;
- Medical Specialties;
- Endoscopy;
- Diagnostic Cardiology;
- Medical Imaging;
- Pharmacy;
- Pathology; and

14. Victorian Department of Health, *The role of Medical Assessment and Planning Units in Victorian Health Services*, October 2011. Available: <https://www.health.vic.gov.au/sites/default/files/migrated/files/collections/research-and-reports/t/the-role-of-medical-assessment-and-planning-units-in-victorian-health-services---pdf.pdf>

- Language services.

External:

- GPs and community medical specialists;
- Residential Aged Care facilities
- Ambulance and non-emergency patient transfer services

The principal functional adjacency for MAPU is with General Medicine. However, patient will require a safe and expedient path of travel from the ED.

6. Respiratory and Sleep Medicine

6.1. DESCRIPTION OF SERVICE

Respiratory Medicine at CH is a Level 6 service.¹⁵ Respiratory medicine involves the diagnosis and treatment of disorders of the respiratory system (for example, the lungs, trachea, and diaphragm). Disorders include, but are not limited to, asthma, chronic obstructive pulmonary disease (COPD), tuberculosis, emphysema, pneumonia, cystic fibrosis, and pulmonary hypertension.

Respiratory is part of a larger service including the Sleep Medicine Unit, the Respiratory diagnostic laboratories, and a Cystic Fibrosis Clinic. Respiratory also manage a Tuberculosis Clinic.

Sleep Medicine provides Specialist appointments for assessment and management of sleep disorders by a sleep physician. This service is provided as both an outpatient appointment and inpatient admission at CH.

The Sleep Medicine service also provides hospital (type 1) and home based (type 2) sleep studies and positive airway pressure acclimatisation. Sleep studies are conducted and analysed by sleep scientists and reported by sleep physicians. This service is only for the adult patient cohort.

The Sleep Disorders Unit (Sleep Laboratory) provides diagnostic reports and tests for people experiencing issues with their sleep, usually resulting from airway problems. The current Service Model has overnight as well as day only sleep disorder services. The service also caters for inpatients or outpatients with type two respiratory failure and patients with suspected sleep disordered breathing who are pregnant. Primary insomnia is not managed by the respiratory and sleep team however referrals to exclude sleep disordered breathing or restless leg syndrome in patients presenting with insomnia will be accepted.

The respiratory outpatient clinics provide multidisciplinary respiratory care for interval care, acute episodes, and post-acute care.¹⁶ A home ventilation or home oxygen service is also offered.

The Respiratory Physiology Laboratory provides diagnostic tests for people with breathing problems. The range of tests performed in the Respiratory Physiology Laboratory include:

- Spirometry;
- Static Lung Volume Measurements;
- Gas Transfer;
- Bronchial Provocation Testing;
- 6 Minute Walk Tests;
- Cardiopulmonary Exercise Testing; and
- Hypoxic Challenge Testing¹⁷

Bronchoscopy and Endobronchial Ultrasounds are also offered to assist in diagnosis (these will take place in the Endoscopy Suite).

15. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

16. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

17. <https://www.canberrahealthservices.act.gov.au/services-and-clinics/services/respiratory-physiology-laboratory-and-sleep-disorders-unit-sleep-lab>

The Cystic Fibrosis clinic provides specialist, multidisciplinary care for adults living with cystic fibrosis.

6.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

Respiratory inpatients will be discharged from the Discharge Lounge, depending on the complexity of the arrangements to be finalised and whether they will be completed within the operating hours of the Discharge Lounge, 0700 - 2130 Monday to Friday. Refer to Section 26 for more detail on the Discharge Lounge.

In addition, there are specific design principles for Respiratory as outlined below.

The Respiratory Medicine inpatient unit provides care for patients in respiratory failure. Bariatric equipment (up to 400kg in weight) is required for management of acute non-invasive ventilation patients and for ICU patients requiring long-term ventilation via tracheostomy or slow ventilator weaning as a transition strategy to a stabilised unit environment and ultimately to rehabilitation.

Refer to Section 3 for the design principles of the patient environment.

This is one specialty service that could benefit from the collocation of outpatients with the small inpatient area, subject to sufficient space.

- Sleep Medicine requires specialised POC. Sleep Medicine is a laboratory-based discipline in the hospital, with the more complex sleep studies for suspected respiratory failure or parasomnia as well as Continuous Positive Airway Pressure (CPAP) and non-invasive (NIV) treatment conducted in the hospital with medical backup.
- Sleep spaces need to accommodate the bariatric and super bariatric patients and their overnight carers with a 1:3 ration of scientist to patients.
- The ideal location of Sleep Medicine Service is in a low traffic quiet corner within the CH with a response from the Medical Emergency Team (MET) when required. The sleep scientists will be supporting the proposed inpatient high dependency respiratory unit on the respiratory ward to titrate their CPAP and NIV requirements.
- The rooms need to be blacked out, preferably windowless to allow for day sleep studies. They should also be soundproof.
- *Collocation of Sleep Laboratory and sleep clinic* will allow both areas to share facilities such as clinic rooms (e.g., physician consultation during the day, patient positive airway pressure (PAP) education in the afternoons and set up of home-based sleep studies in the evenings), cleaning areas, thermo-disinfector, and storage areas.
- This allows central storage of all equipment such as CPAP/NIV machines and all the masks and accessories and eliminates the need for repeated travel between two areas by Sleep Scientists during the clinic sessions, which affects the efficiency of the clinic operation.

Home based sleep studies can be provided in a Community Health Care setting (or in an ambulatory setting in the hospital). Set up of monitoring equipment will occur at the Centre and the patient will return to their usual residence for the study. It should be easily accessible by the community.

The respiratory physiology laboratory is also an ambulatory service and should also be easily accessible by the community.

The respiratory clinic and the cystic fibrosis clinic are outpatient clinics. Refer to Section 3 for the design principles of the patient environment.

The Domiciliary Oxygen and Respiratory Support Scheme (DORSS) is currently administered through the ACT Equipment Service, without the involvement of respiratory staff.

6.3. OPERATIONAL MANAGEMENT

6.3.1. Hours of operation

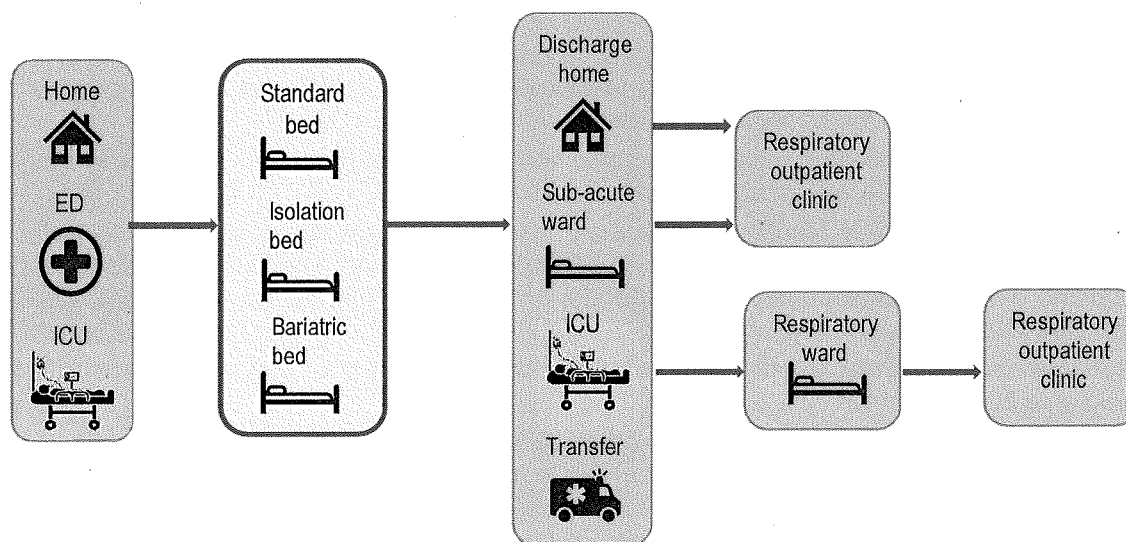
Respiratory Medicine admits and cares for inpatients 24 hours a day, 7 days a week. Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period.

The Sleep Laboratory operates 24 hours a day, as patients are admitted for overnight observation. The Physiology Laboratory operates during business hours only.

6.3.2. Patient journey

The inpatient pathway for respiratory patients is shown in Figure 6-1 below.

Figure 6-1: Respiratory inpatient pathway



Patients admitted to respiratory usually present from the ED or from the ICU for step-down care. A small percentage of patients will be a transfer from another CHS inpatient unit. There may also be instances of transfer from another health care facility.

The Sleep Laboratory currently conducts diagnostic and treatment titration sleep studies. Home based sleep studies can be performed for diagnostic purposes provided the patient is mobile, fairly independent and does not have severe obesity. Those who are suspected to have respiratory failure, have underlying unstable medical problems, neuromuscular disease, intellectual disability, or those with BMI>50 will require an attended sleep study in hospital. Patients from a correctional facility are also required to attend the hospital for a diagnostic sleep study. Treatment titration sleep

studies cannot be performed at home due to the need for the sleep scientist to adjust PAP settings during the sleep study.

Patient discharge may be to subacute services (rehabilitation, geriatric evaluation and management or palliative care), to home or an alternative living facility, or to ICU with clinical deterioration. Follow-up care may be provided through the respiratory outpatient clinic.

6.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

6.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

6.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce required to operate a Level 6 respiratory inpatient and Sleep Medicine service includes respiratory medicine physician, a Sleep Medicine physician, or a dual trained physician as Head of Unit. Additional physicians should also be available during hours. Medical officers with at least three years of post-graduate training, which may be with the RACP, are required onsite for 24 hours per day, although this medical officer may cover several sub-specialities. Allied health and dedicated nursing staff support is also required.¹⁸ Nursing staff will be rostered for 24 hours per day according to the patient ratios. Administrative staff will support the unit.

6.4. FUNCTIONAL CONTENT

Respiratory Medicine will operate from one of the six medical IPUs and more than one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH. Outpatients will operate from a centralised outpatient area.

Sleep Medicine (including Sleep Disorders Unit) will not be part of an IPU, it will be located separately in a quiet corner of the hospital with access to the MET team. There will be two consultation rooms and six sleep labs allocated for this department.

18. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

6.5. FUNCTIONAL ADJACENCIES

Internal:

- ED;
- Medical acute and subacute Inpatient units;
- Medical Imaging;
- Pharmacy;
- Pathology;
- Outpatients;
- ICU;
- Cardiac Care Unit (CCU);
- Electrophysiology;
- Obesity management services;
- Antenatal outpatient services;
- Allied health;
- Language services;
- ACT Equipment Scheme.

External:

- GPs and community medical specialists;
- Residential Aged Care facilities;
- Ambulance and non-emergency patient transfer services.

7. Endocrinology

7.1. DESCRIPTION OF SERVICE

Endocrinology and Diabetes is a Level 6 service.¹⁹

Endocrinology and Diabetes involves the diagnosis and treatment of conditions of the endocrine system. Endocrinology services provide education, assessment, diagnosis, treatment, and management of endocrine disorders. Endocrine disorders affect many body systems across all age groups and often require lifelong management.

The CHS Endocrinology and Diabetes Service provides acute and ambulatory outpatient services to patients over the age of 16 in the ACT and surrounding NSW region. This includes treatment and education to patients with diabetes and carers. Patients may be offered care through inclusion in clinical trials where appropriate. Endocrinology specialists provide clinical advice on request from other hospital-based specialities, other hospitals and GPs in the ACT and surrounding region.

Services provided include:

- Group programs and individual appointments for people with newly diagnosed diabetes;
- Individual appointments for people with complex care needs including ambulatory initiation of insulin and other diabetes injectable medication;
- Continuous glucose monitoring;
- Paediatric service for infants & children up to 18 years (Paediatric Endocrine & Diabetes Service);
- Transition Service (Youth and Adolescent Service for ages 16-23 years);
- Specialised satellite multidisciplinary diabetes services within community settings (Gungahlin and Tuggeranong Community Health Centres); and
- Diabetes Education Pregnancy Service for women.

7.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

For endocrinology, the specific design requirements include:

- Access to automated insulin pumps;
- Access to bone densitometry diagnostic equipment;
- Shielded treatment room for provision of radiofrequency ablative thyroid treatment;
- Provision for specialised endocrine dynamic testing (e.g., adrenal venous sampling, inferior petrosal sinus sampling, water deprivation tests, insulin tolerance tests); and
- Inclusion of 2 lead lined ensuite rooms for Iodine 131 treatments, these rooms can be utilised for standard care when not required.

19. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021.

7.3. OPERATIONAL MANAGEMENT

7.3.1. Hours of operation

Endocrinology inpatient unit operates 24 hours a day, seven days a week.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period.

7.3.2. Patient journey

The patient pathway for endocrinology inpatients is shown in Figure 7-1 below.

Figure 7-1: Endocrinology inpatient pathway

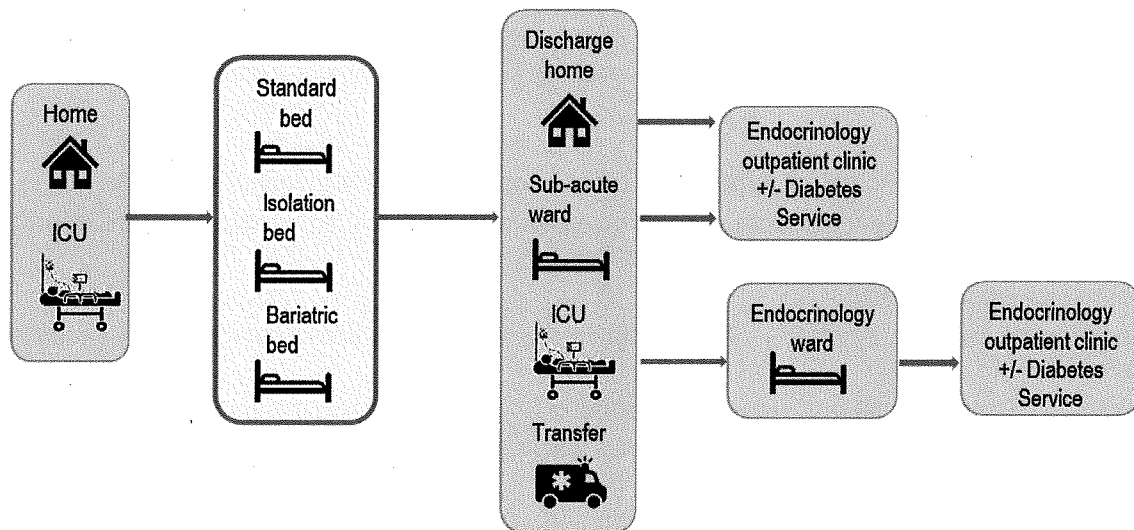
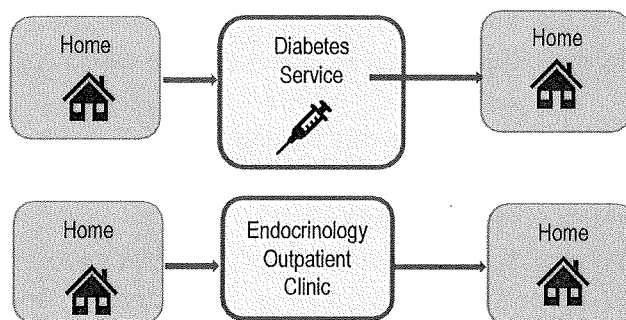


Figure 7-2: Endocrinology Outpatient and Diabetes Service patient pathways



Patients admitted to Endocrinology usually present through the ED. There may also be instances of transfer from another health care facility.

A patient may step down from ICU and be admitted to the endocrinology unit, or a patient may have escalating care requirements and be transferred from the unit to the ICU.

Patient discharge may be to subacute services (rehabilitation, geriatric evaluation and management or palliative care), to home or an alternative living facility. Follow-up care and monitoring takes place through the endocrinology outpatient clinic and/or the Diabetes service.

7.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

7.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

7.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce requirements for a Level 6 service include a consultant Endocrinologist as Head of Unit, and a consultant Endocrinologist on-call 24 hours per day. A registrar should be onsite 24 hours per day. During the day, Endocrinologists, and medical officers with at least three years of post-graduate training, which may be with the RACP, should be onsite. Allied Health professionals for Endocrinology should include social workers, physiotherapists and or occupational therapists. Specialist diabetes nurses will also form part of a Level 6 team, as will an exercise physiologist and psychologist.²⁰ IPU nursing staff will be rostered for 24 hours per day. Administrative staff will support the unit.

7.4. FUNCTIONAL CONTENT

Endocrinology will operate from one of the six medical IPUs and one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH.

Outpatients will operate from a centralised outpatient area. The outpatient service involves a multidisciplinary team comprising an Endocrinologist, Diabetes Nurse Educator, Dietitian and Social Worker. These clinics are provided in the ambulatory outpatient setting at CH:

- Diabetes Endocrinologist clinic;
- Individual and group appointments for diabetes;

20. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

- Insulin initiation and stabilisation;
- Continuous glucose monitoring; and
- Pre-diabetes group education.

7.5. FUNCTIONAL ADJACENCIES

Internal:

- ED;
- Medical acute and subacute Inpatient units;
- Medical Imaging;
- Pharmacy;
- Pathology;
- Outpatients;
- ICU;
- CCU;
- Electrophysiology;
- Obesity management services;
- Inpatient obstetric services;
- Antenatal outpatient services;
- Allied health;
- Language services;
- ACT Equipment Scheme.

External:

- GPs and community medical specialists;
- Specialised satellite multidisciplinary diabetes services (Gungahlin and Tuggeranong Health Centres)
- Residential Aged Care facilities;
- Ambulance and non-emergency patient transfer services.

8. Gastroenterology and Hepatology

8.1. DESCRIPTION OF SERVICE

Gastroenterology and Hepatology Unit (GEHU) is a Level 6 service at CH. GEHU involves a wide range of digestive system diseases and disorders (of the bowel, intestines, stomach, oesophagus, liver, bile ducts and pancreas). Conditions treated include polyps and cancer of the colon, Crohn's disease, Ulcerative colitis, Gastroesophageal Reflux Disease (GORD), Barrett's oesophagus, irritable bowel syndrome (IBS), Coeliac disease, liver cancer, peptic ulcers, acute and chronic pancreatitis, other diseases of the pancreas and biliary tree, oesophageal and gastric cancer, swallowing and motility disorders, cirrhosis, hepatitis, non-alcoholic fatty liver disease, obesity, and biliary cholangitis.

Inpatient services include the following:

- General gastroenterology consultative and endoscopic services for persons with upper/lower gastrointestinal (GI) tract symptoms and digestive diseases, including liver and biliary tract disease and inflammatory bowel disease;
- Inpatient care of patients with gastroenterological diseases; and
- Services for clients with Hepatitis B and C, Autoimmune Hepatitis, and liver cirrhosis through the hepatology service.

Refer to the Surgical Functional Design Brief for information on the Endoscopy service.

8.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for the Gastroenterology and Hepatology inpatient unit.

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

Gastroenterology and Hepatology inpatients will be discharged directly from the unit or from the Discharge Lounge, depending on the complexity of the arrangements to be finalised and whether they will be completed within the operating hours of the Discharge Lounge, 0700 - 2130 Monday to Friday. Refer to Section 26 for more detail on the Discharge Lounge.

8.3. OPERATIONAL MANAGEMENT

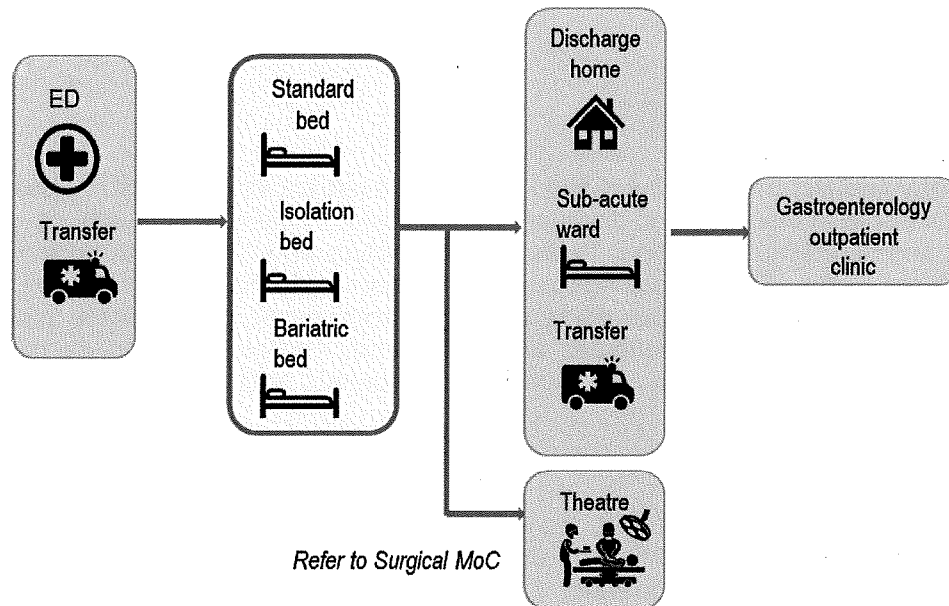
8.3.1. Hours of operation

Gastroenterology and Hepatology admit patients 24 hours 7 days per week. Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition.

8.3.2. Patient journey

The patient pathway for Gastroenterology and Hepatology inpatients is shown in Figure 8-1 below.

Figure 8-1: Gastroenterology and Hepatology inpatient pathway



Services fall into one of three categories, outpatient clinics, day only procedures where patients arrive and discharge on the same day, and overnight admissions in the inpatient unit. *Note the outpatient clinics and day only procedure patient pathway is described in the Building 6 Functional Design Brief.*

8.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

8.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

8.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce requirements to support a Level 6 service include a gastroenterologist or dual trained general physician on-call 24 hours per day, a medical officer with at least three years of post-graduate training, which may with the RACP, on-site 24 hours per day. During the day, Gastroenterologists, and medical officers with at least three years of post-graduate training, which may be with the RACP, should be onsite.²¹ Nursing staff will be rostered for 24 hours per day according to the patient ratios. A multi-disciplinary approach is adopted for both inpatients and outpatients. Administrative staff will support the unit. An on-call arrangement is in place for endoscopy medical and nursing after-hours.

8.4. FUNCTIONAL CONTENT

Gastroenterology and Hepatology will operate from one of the six medical IPUs. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH.

Outpatients will operate from new Building 6 as it needs to be collated with the endoscopy theatres, this will be the only outpatient service in B6 (all other outpatient services in Phase 2 will be located in B10).

8.5. FUNCTIONAL ADJACENCIES

The functional adjacencies for Gastroenterology and Hepatology include:

Internal:

- The main Sterilising Services Unit;
- Operating suite;
- Upper GI and Colorectal Surgery;
- Oncology;
- Respiratory inpatient unit;
- Other inpatient units;
- MAPU;
- Pre-admission clinic; and
- Medical imaging;
- Pathology;
- Pharmacy

External

- GPs and community specialist consultants;
- Residential Aged Care facilities; and
- Ambulance and non-emergency patient transfer services.

21. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

9. Neurology and Stroke

9.1. DESCRIPTION OF SERVICE

The **Neurology and Stroke** inpatient services at CH are a Level 5 service.²²

Neurology involves non-surgical care for people with disease of the nervous system and brain. Conditions include general neurology, stroke, Transient Ischemic Attacks (TIA), movement disorders, neuro-ophthalmology, severe epilepsy, severe migraine, Parkinson's disease, Multiple Sclerosis, Motor Neurone Disease, and peripheral neuropathy.²³

The Neurology inpatient unit also includes a nine-bed hyperacute stroke unit (SU) with central monitoring to provide 24hours monitoring, or longer if appropriate.

Canberra Hospital also includes an allied health led investigation service in the Neurophysiology unit. The Neurophysiology Unit monitors brainwaves and nerves to diagnose conditions. Investigations include:²⁴

- Electroencephalography (EEG) and sleep-deprived EEG;
- Nerve conduction studies;
- Electromyography; and
- Brainstorm, Visual and Somatosensory Evoked Potentials.

Neurology outpatients includes:

- General clinics for a range of neurological conditions (such as epilepsy, Parkinsons Disease, dementia etc); and
- Stroke/TIA follow up clinic.²⁵

Long-term specialised rehabilitation requirements are referred to subacute ambulatory services at the University of Canberra Hospital.

Currently, Neurology is the only medical unit that can receive patients with a tracheostomy from ICU.

9.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

Neurology inpatients will be discharged from the Discharge Lounge, depending on the complexity of the arrangements to be finalised and whether they will be completed within the operating hours of the Discharge Lounge, 0700 - 2130 Monday to Friday. Refer to Section 26 for more detail on the Discharge Lounge.

22. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

23. Cleveland Clinic, *Neurologist*, updated 2023. Available: <https://my.clevelandclinic.org/health/articles/22277-neurologist>

24. ACT Government, Canberra Health Services, *Neurophysiology*. Available: <https://www.canberrahealthservices.act.gov.au/services-and-clinics/services/neurophysiology>

25. The stroke clinic is currently in Building 15.

In addition, the specific design principles of Neurology are described below.

The Stroke Unit requires cardiac monitoring equipment. The monitors should be on visual display at both the bedside and at the staff station. Each bed should be individually monitored. Monitors in the unit should be visible from the door, so that staff don't need to disrupt the patients and can assess the patient with a glance. Alternatively, a bank of monitors outside the unit could be considered.

In the future, the high dependency unit should be increased and interventional clot retrieval be available.

Neurology also perform EEGs, including video EEGs, nerve conduction studies, and Botox. A treatment room for these procedures is also required in the Neurology inpatient unit.

9.3. OPERATIONAL MANAGEMENT

9.3.1. Hours of operation

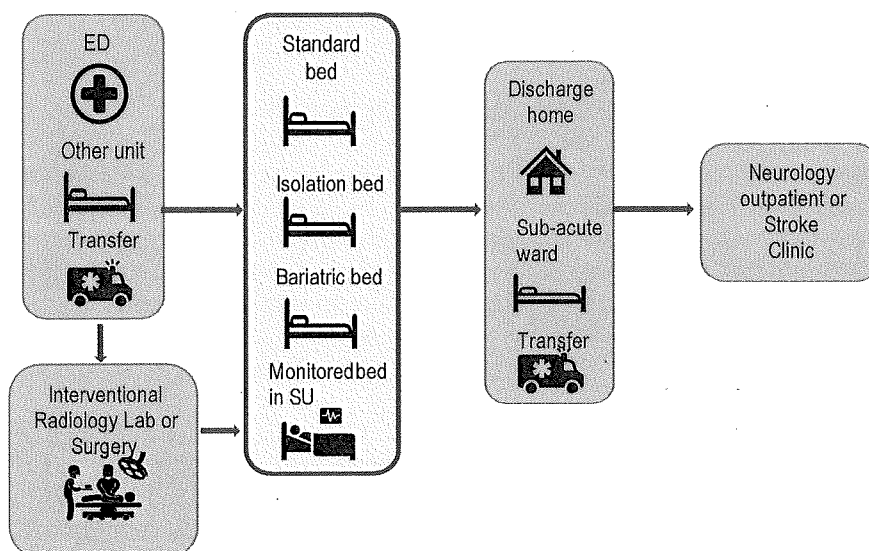
Neurology and Stoke Unit admits patients 24 hours 7 days per week.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period.

9.3.2. Patient journey

The patient journey through neurology or the SU is outlined below.

Figure 9-1: Neurology and stroke pathway



Refer to Surgical Service Model

CHS is part of an ACT/NSW stroke network service. Patients with acute stroke will either transfer into Stroke Unit from ED, direct from another hospital, other inpatient area or from an interventional suite post endovascular clot retrieval. Occasionally patients maybe intubated for airway support and

these patients will be transferred to ICU from ED or interventional suite. CHS has a dedicated Stroke team that are activated through a stroke call. This is led by specialised stroke nursing and medical team which are notified of stroke and review patients in ED or another clinical unit within CHS. Decisions regarding timing of transfers out of the Stroke Unit are made in collaboration with medical teams and nursing leadership and are dependent on acuity and bed demand.

Patient discharge may be to subacute services (rehabilitation, geriatric evaluation and management or palliative care), to home or an alternative living facility, or to a surgical team for a procedure.

9.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

9.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

9.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce required to support a Level 5 Neurology inpatient service is a Neurologist available on-call 24 hours per day. A Neurosurgeon should also be on-call 24 hours per day. There should also be a medical officer with three or more post-graduate years of training, which may be with the RACP, on-call 24 hours per day, as well as a medical officer in Neurology on during the day. Allied Health support includes physiotherapists, occupational therapists, speech pathologists, social workers, and a dietitian.²⁶ Nursing staff will be rostered for 24 hours per day according to the patient ratios of 1:4 for general beds and 1:3 for acute stroke monitored beds. Administrative staff will support the unit.

The acute stroke nurses are responsible for assessment of hyperacute stroke patients in the Emergency Department or inpatient areas of CH along with the medical teams. They are involved in the initiation of reperfusion therapies (thrombolysis/endovascular clot retrieval) in collaboration with clinicians in the emergency department, radiology, and neurology.

26. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

9.4. FUNCTIONAL CONTENT

Neurology and stroke services will operate from one of the six medical IPUs and one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH. However, neurology has a notional 14 acute beds including a 9-bed acute stroke unit.

Outpatients will operate from a centralised outpatient area.

9.5. FUNCTIONAL ADJACENCIES

The neurophysiology unit would ideally be located with the neurology outpatient clinics.

The functional adjacencies for the inpatient unit are:

Internal:

- | | |
|--|---------------------------|
| ■ ED; | ■ Pathology; |
| ■ Other Inpatient acute and subacute IPUs; | ■ Outpatients; |
| ■ Neurosurgery; | ■ ICU; |
| ■ Interventional Radiology Suite / Hybrid operating theatre; | ■ Allied health; |
| ■ Medical Imaging; | ■ Language services; |
| ■ Pharmacy; | ■ Clot Retrieval Service. |

External:

- GPs and community specialist consultants;
- Residential Aged Care facilities; and
- Ambulance and non-emergency patient transfer services.

10. Cardiology (Diagnostics and Ambulatory)

10.1. DESCRIPTION OF SERVICE

CH Cardiology Department provides level 6 inpatient (out of scope), outpatient and ambulatory diagnostic tertiary health services to ACT and Southern NSW Local Health District residents. This includes cardiac rehabilitation services and patient education.

Cardiology diagnostics involves a range of Allied Health, and Cardiology Physician led diagnostic investigations, including Electrocardiography (ECG), Stress Electrocardiography (Exercise stress test), ambulatory electrocardiography (Holter monitoring) and Echocardiography.

The cardiology services work closely with the cardiothoracic surgeons in diagnosing and developing care plans.

Key areas of focus include valve disease, coronary artery disease, heart failure, arrhythmia, hypertension, and electrophysiology.

An ECG records the electrical activity of the heart, including the rate and rhythm. Exercise stress tests require patients to walk on a treadmill, or pedal on a stationary bike, with increasing intensity, to help diagnose blockages or narrowing of arteries, or coronary heart disease. Holter monitoring involves a patient wearing the monitor for 24 to 48hrs to assess the effectiveness of cardiac medication and any irregularity in heart rhythm. An echocardiogram is an ultrasound test to observe heart valves and pumping action, to observe any heart muscle damage, valve dysfunction and the measurements of the heart structure.

The **outpatient clinics for cardiology and cardiothoracic** patients provide diagnosis and management for discharged patients.

The Cardiology clinics include:

- Heart Function Service including rehabilitation;
- Pacemaker and Defibrillator Clinic;
- Cardiac Pre-admissions Clinic;
- Cardiac Rehabilitation Program;
- Cardiology Research Trials Clinic; and
- Advanced Care Planning Service – Chronic Care Program.

There is medical telephonic advice available for GPs and specialist in other hospitals.

The Nursing staff provide initial education to all patients with coronary artery disease, including post myocardial infarction and stenting, surgical patients post coronary artery bypass grafts, providing guidelines on resuming normal activities after discharge.

It is noted that Cardiology inpatients, the Coronary Care Unit, Cardiac Catheter Laboratories, and Cardiothoracic Surgery will operate from the Critical Services Building – Building 5. Therefore, all in-scope cardiology-related services are ambulatory.

10.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the key design principles, the facility-wide approaches to design, and the planning principles for an inpatient unit.

The functional zones of a Cardiac Diagnostics include the following specific designs:

- An entry, reception and waiting area that is easily accessible to the public;
- Consult rooms for outpatient ECGs, and Holter;
- Stress testing rooms that may be flexibly used for ECG, transthoracic echocardiography exercise stress testing, and pharmacological stress testing; and
- Tilt table testing rooms.

10.3. OPERATIONAL MANAGEMENT

10.3.1. Hours of operation

The Cardiology Diagnostics Laboratory operates during business hours, 8am to 5pm.

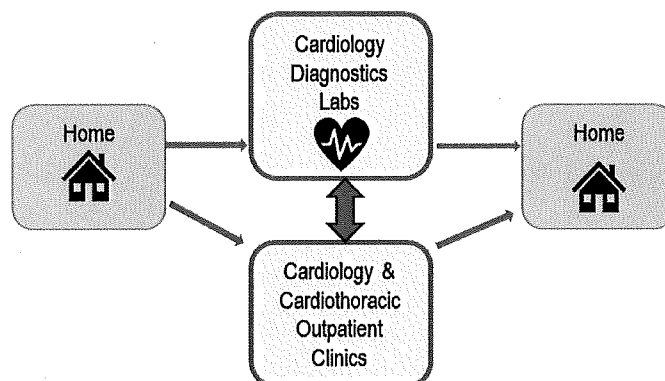
10.3.2. Patient journey

The Cardiology Diagnostic Laboratory is an ambulatory service, thereby people arrive from home (or their alternative living facility), have their diagnostic tests, and return home again.

In the case of Holter monitoring, the patients must wear the monitor overnight (at home), for continual monitoring for 24 to 48 hours. Therefore, the patient will need to re-present to the Cardiology Diagnostic Laboratory following monitoring period to return the monitor.

The patient pathway for the Cardiology Diagnostic and Ambulatory services are outlined below.

Figure 10-1: Cardiology diagnostics laboratory patient pathway



10.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

10.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

10.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce to support the Cardiology Diagnostics laboratory are echo sonographers and cardiac electrophysiologists during business hours. Cardiologists review all studies.

10.4. FUNCTIONAL CONTENT

Outpatients will operate from a centralised outpatient area.

10.5. FUNCTIONAL ADJACENCIES

Internally, the ambulatory cardiology services have the closest relationship with:

- Interventional cardiology, coronary care unit, and cardiac surgery;
- Cardiac rehabilitation inpatients and community programs at University of Canberra Hospital

There are also typical relationships with the main support services such as:

- | | |
|---|----------------------|
| ■ ED; | ■ Pharmacy; |
| ■ Inpatient cardiology (critical care and procedural beds); | ■ Pathology; |
| ■ Cardiothoracic services; | ■ Outpatients; |
| ■ Allied Health; | ■ ICU; |
| ■ Medical Imaging; | ■ Allied health; |
| | ■ Language services. |

External:

- GPs and community specialist consultants;
- Residential Aged Care facilities; and
- Ambulance and non-emergency patient transfer services.

11. Renal and Haemodialysis

11.1. DESCRIPTION OF SERVICE

Renal Medicine is a Level 6 service at CH.²⁷ Renal medicine involves the diagnosis and management of renal related medical conditions, hypertension, and electrolyte disorders. Conditions include acute haemodialysis and therapeutic plasma exchange, chronic kidney disease, and renal weight management. Renal transplant, including a live renal donation program also operates at CH, and the renal inpatient unit provide pre-and post-transplant care.

CH provides comprehensive inpatient and outpatient care for people with all forms of kidney disease including hypertension, dialysis, pre and post care of renal transplantation, acute renal failure, and management of the complications of chronic kidney failure.

The Renal Department at the CH is the hub of the Renal Network, providing governance across the entire network. The Renal Department manages patients with acute kidney injury (including after hour emergencies for dialysis), and chronic kidney disease (CKD), as well as the care of patients requiring investigation related to their renal impairment. The service contributes to research in the areas of vasculitis, vaccination, sleep disordered breathing and micronutrient deficiencies, as well as quality improvement surveillance of patients with renal disease.

Nephrologists also provide a consultative service for patients in ICU, Coronary Care or Surgical inpatient units. Patients who require haemodialysis will generally remain with the primary unit and travel to the dialysis unit when required during their inpatient stay.

Satellite dialysis units are located across the ACT and Southern NSW. In-scope for this project is a satellite inpatient dialysis unit which incorporates:

- 4 standard single bedrooms for inpatient dialysis for CH, National Capital Private Hospital, University of Canberra Hospital and North Canberra Hospital;
- 1 bariatric room with an overhead lifter;
- 1 isolation room with negative pressure;
- 1 treatment room; and
- 6 bays that accommodate all general unit dialysis, including some (although to a lesser degree) outpatients dialysis activities.

Outpatient renal clinics are not in-scope for the Phase 2 project. Outpatients are conducted from Building 16 and forms part of the renal network delivering telehealth and secondary consultation services to multiple hospitals and health centres across the ACT and South Eastern NSW. CH Renal Medicine provides specialised renal support to lower-level services.

Clinic structure is primarily face to face consultations with patients. There are renal clinics for:

- CKD management;
- General nephology management;
- Transplant clinics (with transplant surgeons);

27. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

- Urgent Registrar review clinic;
- Post inpatient-stay clinic;
- Renal Supportive Care Clinic;
- Rural Outreach Clinics;
- Telemedicine clinics to outreach clinics;
- Glomerulonephritis clinic; and
- Renal Research clinics.

11.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for design principles of the patient environment.

The design of the Renal Dialysis service must also incorporate the following specific design requirements.

It is proposed that the renal unit is collocated with the IPU's, including:

- A patient weigh bay (floor weigh bay), and public amenities at the entry point of the service, with a reception, and sub-wait area;
- Ease of access for patients who are immobile or bariatric;
- Patients lifting tracks for each bay and holding bay (although patients mostly arrive in their beds and stay in their beds, there are a number of patients transported for treatment from another hospital); standard weight rated to 250kg and one bariatric weight for 400kg;
- The nurse station requires a clear view of entry and exit/egress points of the service;
- A consult room with privacy for staff conversations with patients, or for staff to have private conversations regarding the patients on the telephone when required;
- A separate, dedicated medication room for Renal Dialysis;
- Windows to treatment areas are necessary as the provision of natural daylight is crucial to promote natural circadian rhythms, however, glare should be avoided;
- All patient areas will have access to active and passive therapy spaces, including outdoor spaces where appropriate. Due to the nature of Renal Dialysis and the connection between the patient and the Dialysis machine, this may only be an option pre or post treatment;
- Patients and visitors should not be able to view directly into the Renal Dialysis treatment spaces from outside the facility, including from waiting areas, garden areas or the main entrance;
- Patient treatment spaces/chairs should be orientated to avoid direct vision of other users;
- Patients should have acoustic privacy;
- There must be adequate storage space to support renal dialysis staff providing services in the community;
- Plumbed medical gases;
- Water pre-treatment system including Reverse Osmosis (RO) units;
- A biomedical engineering workshop for all equipment servicing requirements;
- Infection Control Guidelines are adhered to with particular emphasis on:
 - ▶ Air Flow;
 - ▶ Decreasing cross infection between patients;
 - ▶ Patient and equipment flow between dirty and clean areas;
 - ▶ Hazardous waste flow; and

- ▶ One Negative Pressure room with Ensuite for patients with an infectious disease.
- Space for transfer of a patient from a wheelchair to a trolley in a holding bay;
- Storage/Equipment room large enough to store a hoist or Sara Steady machine located near the holding bay;
- The Clinical Nurse Consultant will require an office located within the unit.
- There should be access to multidisciplinary meeting rooms; and
- There should be a shared staff room located near the renal dialysis service so that staff can be called for urgent assistance in the event a patient deteriorates suddenly whilst treatment is being administered.

11.3. OPERATIONAL MANAGEMENT

11.3.1. Hours of operation

Renal admits and cares for inpatients 24 hours a day, 7 days a week.

Renal haemodialysis operates Monday to Saturday from 8.30am to 6.30pm. Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period of time.

Afterhours emergency dialysis, such as for trauma patients, is also available. Mobile intermittent haemodialysis is a service provided to the ICU and other areas where the patient is not stable enough to be transported to the haemodialysis unit.

11.3.2. Patient Journey

On arrival to the unit the patient and family/carer will be greeted by a nurse who will take the patient to an interview/consult room where they will be screened for any contagious infections. If no infectious disease appears present, the patient will then be weighed and escorted to their dialysis chair by the nurse for their treatment.

The weighing station will be in the entrance of the dialysis unit which will enable patients in bariatric sized wheelchairs or patients arriving on a stretcher to be weighed (using scales built into the floor and long enough to accommodate a stretcher).

Those renal patients that have an infection will be escorted to a bedroom to have their treatment. This will be large enough to accommodate a trolley and have a window view or will be escorted to a holding bay where they will be transferred from their trolley to a wheelchair and then to their allocated renal chair for treatment.

All elderly and/or non-ambulant patients (such as bariatric patients) may require hoists or a Sara Steady machine and storage for this equipment is required in the holding bay.

Patients coming for haemodialysis treatments will typically attend the unit three times/week for supervised dialysis or complete nursing management.

Once admission/access formalities are completed, patients will be guided to an appropriate treatment room or bay. Typically, this will be an inpatient bed or an open-plan recliner chair, which will be one of many designed in clusters that allow for nursing staff to maintain patient observation. These clusters will also be arranged to allow for peer-to-peer line of site between nursing, medical

and other staff. Where clinically required, patients may be cared for in an enclosed space which should be positioned adjacent to the open bays and allow for the same level of staff oversight. Some staff may be required to provide care for patients in both open and enclosed bays, therefore the principles around line of sight are important.

Clinical support facilities should be easily accessible to the treatment bays to minimise any time nursing staff are away from the patient care zone. Patients are 'booked' for treatment times and staff have usually prepared all equipment for their treatment prior to arrival. Time spent away from patients should be minimal.

There will be established protocols if a patient deteriorates and requires transfer to the emergency department.

The patient journey for renal is outlined below.

The patient pathway for general renal inpatients is shown in Figure 11-1 below. A patient may step down from ICU and be admitted to the renal IPU, or a patient may have escalating care requirements and be transferred from the IPU to the ICU. Patients may also be admitted directly from HITH if they have deteriorated clinically.

Figure 11-1: Renal inpatient pathway

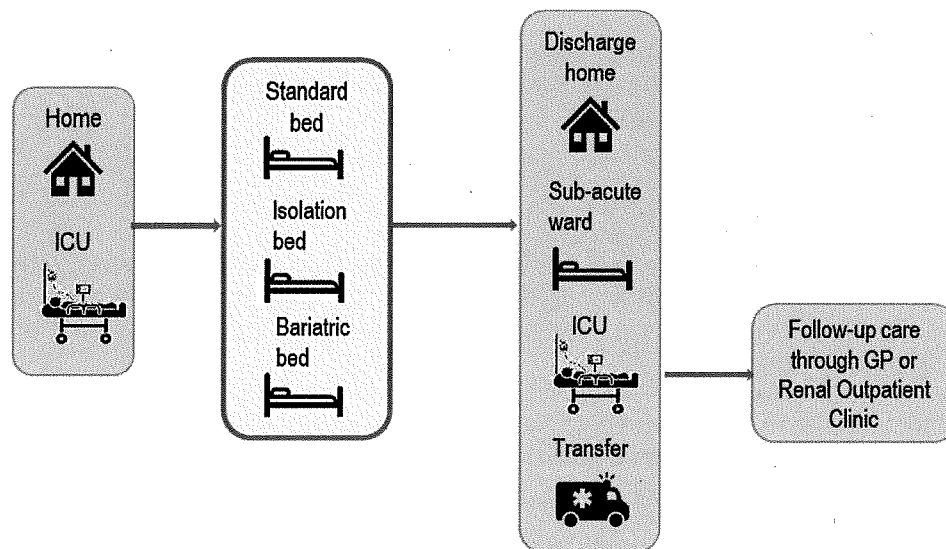
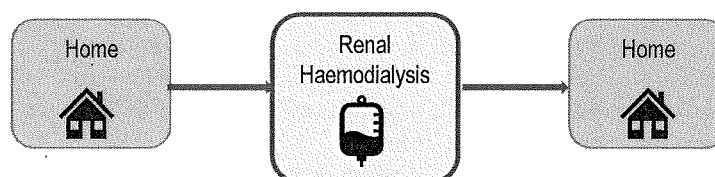


Figure 11-2: Renal haemodialysis patient pathway



11.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

11.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

11.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

To support a Level 6 renal service there should be a Nephrologist as Head of Unit, as well as physicians available within business hours. A registrar or Junior Medical Officer (JMO) should also be rostered during business hours, preferably someone with at least 3 years of post-graduate training, which may be with the RACP. Nurses are rostered for two shifts a day: 8.30am to 5pm and 10am to 6.30pm. After hours, on-call medical and nursing staff are available from 6.30pm to 8.30pm.²⁸

11.4. FUNCTIONAL CONTENT

It is proposed that in phase 2 Redevelopment there will be 13 dialysis POC – including 4 bedrooms, 6 open bays, 1 bariatric room, 1 negative pressured isolation room and a treatment room.

There are currently no renal outpatient clinics in scope for the Phase 2 Redevelopment.

11.5. FUNCTIONAL ADJACENCIES

Internal:

- | | |
|--|---------------------|
| ■ Renal inpatients; | ■ Pathology; |
| ■ ED; | ■ Outpatients; |
| ■ Other Inpatient acute and subacute IPUs; | ■ ICU; |
| ■ Medical Imaging; | ■ Allied health; |
| ■ Pharmacy; | ■ Language services |

28. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

External:

- GPs and community specialist consultants;
- Residential Aged Care facilities
- Ambulance and non-emergency patient transfer services

12. Infectious Diseases

12.1. DESCRIPTION OF SERVICE

Infectious Diseases (ID) at CH is a level 6 service.²⁹ The ID service is concerned with prevention, education, diagnosis, management, and treatment of patients with infections. They also lead the Antimicrobial Stewardship Program (AMS) across all hospital campuses and contribute to the management of communicable disease outbreaks, infectious threats, and pandemic responses. The clinical service involves diagnosis and management of patients with complex infections, including severe sepsis and infections in the immune-compromised, interpretation of laboratory results, travel medicine, infections due to multi-resistant bacteria, Human Immunodeficiency Virus (HIV) medicine and extrapulmonary tuberculosis.

The service provides care to all age groups through hospital outpatient clinics, inpatient care and through a consultation service to community health facilities. The service works closely with other clinical specialties to provide care and advice as appropriate.

The ID service works in close collaboration with other hospital-based services such as clinical microbiology, pharmacy, and many clinical specialties. ID provide a consultative service for patients admitted to other specialties who have infections, as well as patients with undiagnosed illness and high fever. Staff also provide telephone advice and an infection control advice service. There is a 24-hour, 365-day phone consultation service provided to GPs and community nurses in ACT and Southern NSW local Health District by the ID consultants based at CHS.

There is also collaboration with external organisations such as the Australian Government Department of Health, Australian National University Research School of Population Health, and local and national organisations, such as the Public Health Laboratory Network, the National Surveillance Committee for Notifiable Disease Surveillance, and the Australian Group for Antimicrobial Resistance.

There are usually also a small number of people admitted to Infectious Diseases who have complex infections, such as Influenza and COVID-19.³⁰ However, during the winter months, the prevalence of Flu and COVID-19 increases, and a Winter Surge strategy is required to manage a higher influx of infectious disease patients during this time. Overflow of patients to dedicated Winter Surge beds is usually required. Severely unwell infectious patients will be admitted to ICU in an isolation bed.

12.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment. Specific design requirements for ID include:

- Inpatient beds with negative pressure rooms;
- Access to antimicrobial stewardship pharmacy service; and
- Facilities that can be zoned to treat specified infectious diseases, including very high risk infectious/ novel/ quarantinable conditions such as COVID-19.

29. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021.

30. ACT Government, Canberra Health Services, *Infectious Diseases Unit*. Available: <https://www.canberrahealthservices.act.gov.au/services-and-clinics/services/infectious-diseases-unit>

12.3. OPERATIONAL MANAGEMENT

12.3.1. Hours of operation

The ID inpatient unit admits patients 24 hours a day, 7 days a week.

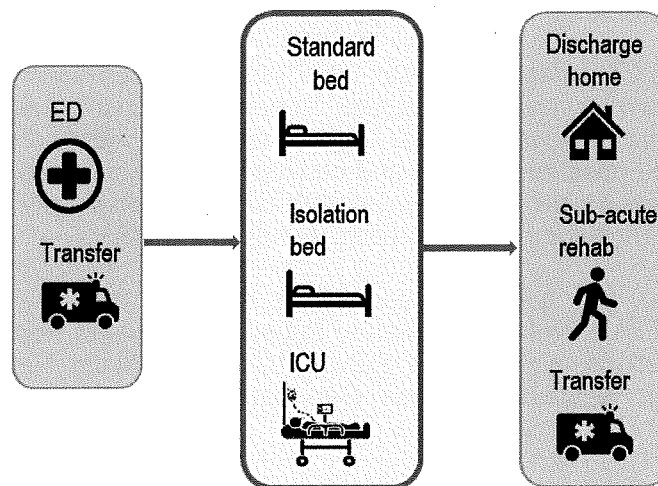
The ID phone consultation service operates 24-hours a day, 7 days a week.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period.

12.3.2. Patient journey

The ID patient journey is outlined below.

Figure 12-1: Infectious Diseases patient pathway



Infectious disease patients are admitted through ED or may be transferred from another health facility or another CH unit.

Patients hospitalised with COVID-19, the Flu or other infectious disease will all have different recovery times based on any pre-existing conditions.

The pathway for infectious patients will require barrier nursing and the provision of several (approximately four) negative pressure single rooms and ensuites.

ID also provide a consultative service to all other inpatients.

12.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;

- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

12.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

12.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce requirements for a Level 5/6 service include a general physician or specialist infectious diseases physician available 24 hours per day, a medical officer on site 24 hours per day and a post graduate trainee with three or more post graduate years who may be in training with the RACP.³¹

The general medical registrar may also cover some the medical sub-specialities overnight, depending on the rostered requirements. Nursing staff will be rostered for 24 hours per day according to the patient ratios. Administrative staff will support the unit.

12.4. FUNCTIONAL CONTENT

Infectious Diseases will operate from one of the six medical IPU's and one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH. Outpatients will operate from a centralised outpatient area.

12.5. FUNCTIONAL ADJACENCIES

Internal

- | | |
|---------------------|--------------------|
| ■ HIV medicine | ■ Neurology |
| ■ Sexual health | ■ Maternity |
| ■ Immunology | ■ Paediatrics |
| ■ Surgical services | ■ Nuclear Medicine |
| ■ Operating suite | ■ Radiology |
| ■ Anaesthetics | ■ Pathology |
| ■ ICU | ■ Pharmacy |
| ■ Haematology | |
| ■ Oncology | |

31. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

External

- GPs and community nurses in ACT and Southern NSW local Health District

13. Rheumatology

13.1. DESCRIPTION OF SERVICE

Rheumatology at CH is a Level 5 service.³² Rheumatology is a specialty of medicine for musculoskeletal and systemic autoimmune conditions commonly referred to as rheumatic diseases. Rheumatology services provide treatment to alleviate pain, prevent disease progression and joint damage, maintain, or improve joint mobility and assist with managing other associated existing medical conditions. A significant portion of the service is focused on the management of osteoarthritis, osteoporosis, and spinal pain.

Rheumatology inpatients is in-scope for Phase 2 Redevelopment Project. The rheumatology outpatient clinic, which is currently located in Building 3, is also in-scope for the redevelopment.

Rheumatology Outpatient services include assessment, treatment, clinical management, and specialised services for all residents of the ACT community and neighbouring regions of NSW, particularly Queanbeyan and South Eastern NSW, and include:

- Rheumatology Biologic Clinic;
- Outpatient clinic is for patients with inflammatory arthritis undergoing biological Disease-Modifying Anti-Rheumatic Drugs therapy;
- General Rheumatology Clinic;
- Rheumatology related conditions, i.e., suspected inflammatory Arthritis (Rheumatoid Arthritis, Psoriatic Arthritis, Ankylosing Spondylitis, Connective tissue disease);
- Rheumatology Early Arthritis Clinic;
- Clinic aimed at identifying and treating patients with early inflammatory arthritis, i.e., early morning stiffness and swelling, raised inflammatory markers, psoriasis, inflammatory bowel disease or family history of inflammatory arthritis, or positive rheumatoid;
- Outpatient clinic Rheumatology MINERVA Clinic;
- Outpatient clinic for people with likely early inflammatory rheumatic disease who have a willingness to participate in research programs consisting of clinical trials; and
- Paediatric Rheumatology Clinic. This clinic aims to identify and treat children and adolescents with early inflammatory arthritis and connective tissue disease who are aged less than 18 years of age.

13.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for the Rheumatology inpatient unit or outpatient clinics.

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

32. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

13.3. OPERATIONAL MANAGEMENT

13.3.1. Hours of operation

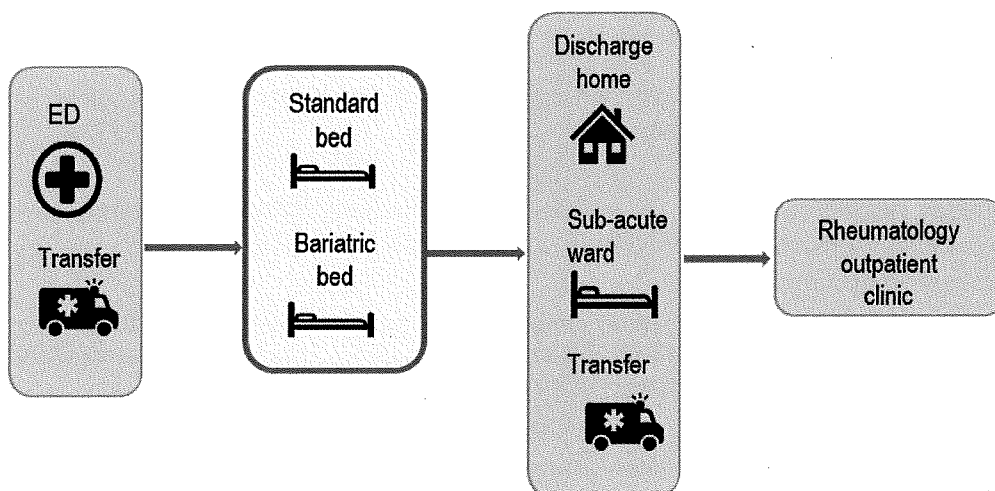
Rheumatology admits and cares for patients 24 hours a day, 7 days a week.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period of time.

13.3.2. Patient journey

Patients requiring overnight or ongoing acute care for Rheumatological conditions are admitted to a General Medical unit under the care of a Rheumatology physician. The patient journey is outlined below.

Figure 13-1: Rheumatology patient pathway



13.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

13.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

13.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce to support a Level 5 service includes a Rheumatologist as well as a medical officer with at least 3 years of post-graduate experience, which may be with the RACP. On-site coverage for 24 hours per day is required, however, this could be a medical officer covering multiple sub-specialities overnight. Allied Health professionals with specific skills in musculoskeletal conditions should also be available to patients on the IPU.

13.4. FUNCTIONAL CONTENT

Rheumatology will operate from one of the six medical IPUs and one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH. Outpatients will operate from a centralised outpatient area.

13.5. FUNCTIONAL ADJACENCIES

Internal:

- ED;
- Dermatology;
- Medical Imaging;
- Pharmacy;
- HITH;
- Pathology;
- Outpatients;
- ICU;
- Allied health;
- Language services.

External:

- GPs and community specialist consultants;
- Residential Aged Care facilities
- Ambulance and non-emergency patient transfer services

14. Palliative Care

14.1. DESCRIPTION OF SERVICE

Palliative care is 'practised' in many inpatient settings at CH. To date, there has been no dedicated CH operated palliative care inpatient service. The Territory Government has committed to the development of an interventional inpatient palliative care service at CH.

"Introduce more end-of-life treatment and care options, including a palliative care unit at the Canberra Hospital, enhanced after hours palliative care, palliative care respite facility for carers and a scoping study for a secular hospice".³³

The proposed CH's palliative care inpatient service would be a Level 4 service.³⁴

The World Health Organisation defines palliative care as an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual.³⁵

Palliative care is person and family-centred care provided for a person with an active, progressive, advanced disease, who has little or no prospect of cure and who is expected to die, and for whom the primary treatment goal is to optimise the quality of life.³⁶

The term life-limiting illness is used to describe illnesses where it is expected that death will be a direct consequence of the specified illness. Such illnesses may include, but are not limited to cancer, heart disease, chronic obstructive pulmonary disease, dementia, heart failure, neurodegenerative disease, chronic liver disease and renal disease.

Patients are admitted to palliative care inpatient unit for symptom management and stabilisation of condition, who are then suitable for discharge.

Inpatient palliative care is managed by specialist palliative medicine physicians, for the management of complex episodes and/or for people who are living with a life-limiting illness and whose care needs cannot be supported at home. Consultative palliative care involves provision of consultative support services (by specialist palliative medicine physicians or nurse-led models) to other health professionals involved in caring for the person living with a life-limiting illness. This includes consultation to other acute hospital units and to outpatient and community-based settings.³⁷

14.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment. Specific Design Principles for palliative care include:

³³ Parliamentary and Governing Agreement, Item 12.3, p23.

³⁴ NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021.

³⁵ WHO. *National Cancer Control Programs: Policies and Managerial Guidelines*, 2nd ed. Geneva: WHO, 2002.

³⁶ Palliative Care Australia, 2018, *Service Development Guidelines*

³⁷ Palliative Care Australia, 2018, *Service Development Guidelines*

- Larger patient rooms to accommodate many visitors, including several chairs and a pull-out chair to bed for overnight visitors;
- A large ensuite to accommodate aids and equipment;
- A fridge within the patient's room, for food brought from outside the unit;
- A pleasant view from the window/windows as patients may be admitted for two weeks or longer;
- A family lounge room for visitors to gather, with a tv, magazines and board games;
- A counselling room;
- A multi-faith / prayer room;
- The ability to order food for visitors; and
- Outdoor areas for patients to sit / walk in.

14.3. OPERATIONAL MANAGEMENT

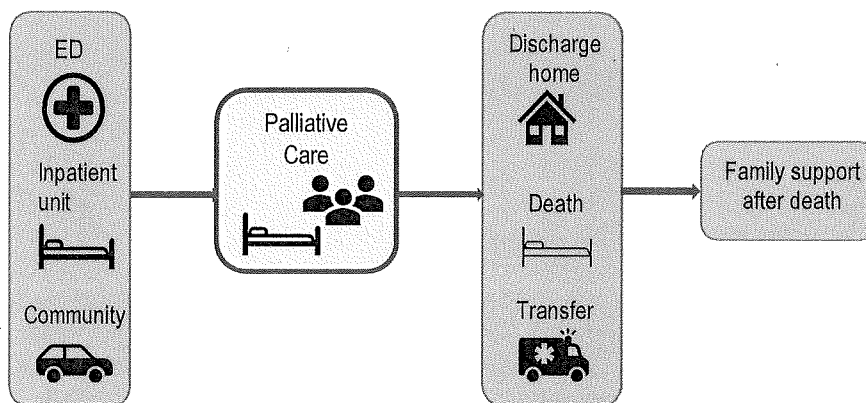
14.3.1. Hours of operation

The palliative care inpatient unit will operate 24 hours a day, 7 days a week.

A telephone support service will operate 24 hours a day, 7 days a week for palliative care patients at home and their families / carers.

14.3.2. Patient journey

The palliative care pathway is outlined below.



Patients are admitted to the unit from:

- ED;
- From other acute and subacute units; and
- Directly from community settings.

The Service Model should include direct admission from the community for known/existing patients without first having to present to ED. This requires protocols that are supported by the palliative care physicians and the ACT Ambulance Service, as well as a clinical capability on the unit to admit 24/7. Such models enable earlier provision of treatment and stabilisation of conditions than would result from the usual process of admission through ED.

Palliative care can be a subspecialty that is introduced late in the patient's progression of their illness, especially for cancers. Introducing the palliative care team early in the process can be beneficial in developing rapport with the team, improving the quality of the patient's life and support for families. Therefore, the preferred Service Model is for a 'pull model' where the palliative care team participates in patient meetings, identifies patients who are likely to benefit from palliative care and works with the currently treating team to admit patients to palliative care. It is often not in the experience of many physicians to provide timely introduction to palliative care in the absence of a 'pull' model.

Discharge should be under the clinical care of a GP, the community palliative care program or a hospice, or to home.

14.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

14.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

14.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The nature and level of workforce required for the inpatient is expected to be fully integrated with the community palliative care services and the CHS Clare Holland House. Contemporary practice suggests that both medical, nursing, and allied health staff may be inter-changeable across service settings. This facilitates improved patient integration and timely care as noted above.

As this is a new service, there is no current staffing profile. The workforce profile would typically include:

- Palliative care physicians (and possibly general physicians);
- Specialised palliative care nurses;
- Nurse Practitioners;
- Various allied health disciplines as needed, which could include practitioners specialising in palliative care; and
- Administrative staff.

14.4. FUNCTIONAL CONTENT

There is no current acute palliative care unit, although there are palliative care patients being cared for in CH. The FY21 data indicates around 6.5 acute inpatient beds are being used for palliative care patients.

The 12-bed planned unit will consolidate and further enable more specialist care and support for palliative care patients.

14.5. FUNCTIONAL ADJACENCIES

Internal

- Acute medical services including:
 - ▶ Medical oncology
 - ▶ Radiation oncology
 - ▶ Cardiology
 - ▶ Neurology
 - ▶ Respiratory
 - ▶ Renal Medicine
 - ▶ Gastroenterology and Hepatology;
- Medical Imaging, Pathology, Pharmacy;
- Surgical services;
- Intensive Care;
- Subacute services including:
 - ▶ Geriatric and Evaluation Management services;
 - ▶ Rehabilitation services.
- Consultation-liaison psychiatry service;
- ED;
- Multifaith Support Services;
- Volunteer groups that specialise in patient and family support;
- Allied Health professionals for mobility and conditioning.

External

- Community-based palliative care services;
- GPs; and
- ACT Ambulance Service.

15. Day Medical Services (HITH)

15.1. DESCRIPTION OF SERVICE

Hospital in the Home (HITH) is a clinical service that substitutes traditional inpatient care in a hospital setting into a patient's home. HITH can also take place in settings such as clinics, schools, workplaces and / or the HITH unit located at CH. The setting depends on the initial clinical and risk assessment, the HITH Model of Care, patient preference, and available resources. HITH services also occur via telehealth and / or telemonitoring where the risk assessment and patient preference allows.

The HITH program provides individualised acute treatments by health care professionals. Patients admitted to the HITH service are classified as inpatients and are considered acute care admissions, but medically stable enough to be treated at home. Patients admitted under HITH require medical and nursing care that is more intensive and / or specialised than could be supported by community-based nursing services, an Outpatient Clinic, community nursing or GP.

Common conditions managed through HITH include:

- Cellulitis;
- Pneumonia, COVID and other respiratory conditions;
- Deep vein thrombosis;
- COPD;
- Complex wounds;
- Perioperative anticoagulant management; and
- Urinary tract infections.

A future range of services could become much broader.

In any HITH program there will be cause to 'call in' patients to review their condition, particularly if there are signs of deterioration and/or a requirement to provide diagnostic test, specimen collection or pharmacy review. Attendance to the HITH unit may also be advised for medical review and treatment episodes / procedures that cannot be completed safely outside the hospital setting (i.e., first dose of a parental medication) and patient utilisation of pharmacy, medical imaging, physiotherapy, occupational therapy, social work, psychology, podiatry, or dietician, as required.

As the HITH service sits within the CHS General Medicine governance structure, HITH unit location within the CH is optimal for close collaboration and integrated care with other services and specialities. Access to after-hours on-call medical workforce and opportunities to take part in an established teaching, training, and quality review programs.

HITH work on occasions of service (OOS), each occasion is blocked into 30mins. The HITH have five cars on the road throughout the day and undertake 35 OOS per day.

CH no longer has a designated Medical Day Unit (MDU), this service has been absorbed into B19 Day treatment Unit (DTU).

The DTU are currently providing the regular booked treatment for patients of Rheumatology, Gastroenterology, Respiratory, Dermatology and Neurology. This is currently 10 patients per day.

HITH is providing interventional procedural support for hospital specialties (for example ascitic taps and CSF sampling) as well as the less predictable infusions (for example iron infusion, blood transfusions and biological infusions). This is currently 4 patients per day.

CH Intravenous Access Team (IVAT) are a nurse led service that place longer term intravenous devices (Peripherally inserted central catheters - PICC) into patients (HITH and inpatients) requiring longer term intravenous infusions. They also support the IPU in placing challenging intravenous cannulas (IVC). This is done for approximately 6 patients per day.

It is proposed to combine HITH, DTU and IVAT into the one space in the longer term.

15.2. SPECIFIC DESIGN REQUIREMENTS

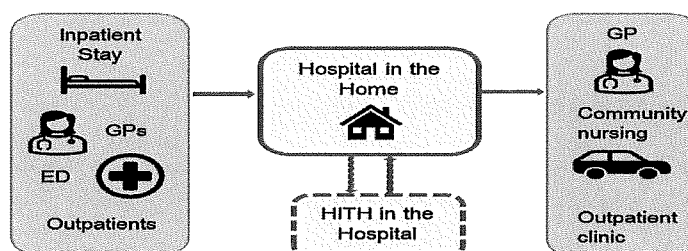
The specific design principles for HITH include:

- Located close to a building entrance for accessibility reasons. Ideally, there would be a short direct journey from a car park to the door, and the door to the care setting;
- Patient bays must provide enough space to allow access for resuscitation equipment;
- Treatment settings will include provision of an additional chair for a carer or family member for each treatment space, and will provide appropriate individual patient privacy so that patients can engage in confidential personal discussions in an appropriate setting;
- There should be ability to isolate patients either in rooms/partition/treatment rooms depending on their clinical diagnosis with toilet amenities close by;
- Capability to treat bariatric patients will be facilitated through the provision of hoists, a bariatric treatment chair and toilet facility;
- There should be a treatment or procedure room attached to the unit;
- There should be visibility for staff to have peer-to-peer line of sight;
- There will be weigh stations (located in a discrete area); and
- Proximity of HITH vehicle parking for restocking purposes prior to home visitation.

15.3. OPERATIONAL MANAGEMENT

15.3.1. Patient journey

Figure 15-1: HITH patient pathway



The patient journey for HITH is outlined above.

Patients enter HITH as a diversion/substitution service where clinical outcomes can be achieved without having to admit the patient, or without the need to continue to have the patient in an inpatient bed. Referrals to HITH should be able to be generated from:

- ED;
- Outpatients;
- After becoming stable whilst an inpatient stay and meet the criteria of the service.

A well-developed model with clear admission criteria will also take referrals from GPs.

Discharge from HITH occurs once the patient's care needs can be met through GPs, community-based nursing, or outpatient clinics.

15.3.2. Hours of operation

Day medical services (HITH) is available to adults and delivered 24 hours, seven days per week with on-call provisions after business hours.

15.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10 and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

15.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

15.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

HITH is predominantly staffed by nurses who visit patients in their home (or in other community settings). However, medical staff from General Medicine and allied health professionals support patients in the service.

The number of staff in day medical services HITH is a function of volume and the technology available at the time. Hence, the staffing levels will vary

15.4. FUNCTIONAL CONTENT

There are 31 POC currently for HITH, all of which will be part of the Phase 2 Redevelopment, comprising 28 chairs and 3 bedrooms (1 standard, 1 bariatric, and 1 with negative pressure). There will also be a reception and a waiting room.

15.5. FUNCTIONAL ADJACENCIES

HITH has a broad range of inter-relationships within CH. Indeed, almost all clinical units should have a liaison and referral with HITH:

Internal

- ED;
- Pathology;
- Medical Imaging;
- DTU;
- IVAT;
- Specialist outpatient clinics;
- Geriatric Rapid Acute Care Evaluation;
- Rapid Assessment of the Deteriorating Aged at Risk;
- CHS Community Nursing; and
- CHS Community Allied Health.

External

- Residential Aged Care Facilities; and
- GPs.

16. Dermatology

16.1. DESCRIPTION OF SERVICE

The Dermatology service at CH is a Level 5 service.³⁸

Dermatology involves the treatment of people with problems relating to skin, hair, and nails. The Dermatology unit cares for both inpatients and outpatients, with the following clinics:

- Adult Dermatology Clinic;
- Paediatric Dermatology Clinic;
- Renal Transplant Dermatology Clinic; and
- Oncology Dermatology Clinic.

Dermatology may also be involved in clinical trials.

16.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for Dermatology inpatient units or outpatient clinics.

Refer to Section 3 for the facility-wide design principles, and the design principles of the patient environment.

16.3. OPERATIONAL MANAGEMENT

16.3.1. Hours of operation

Dermatology cares for patients 24 hours a day, 7 days a week.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period.

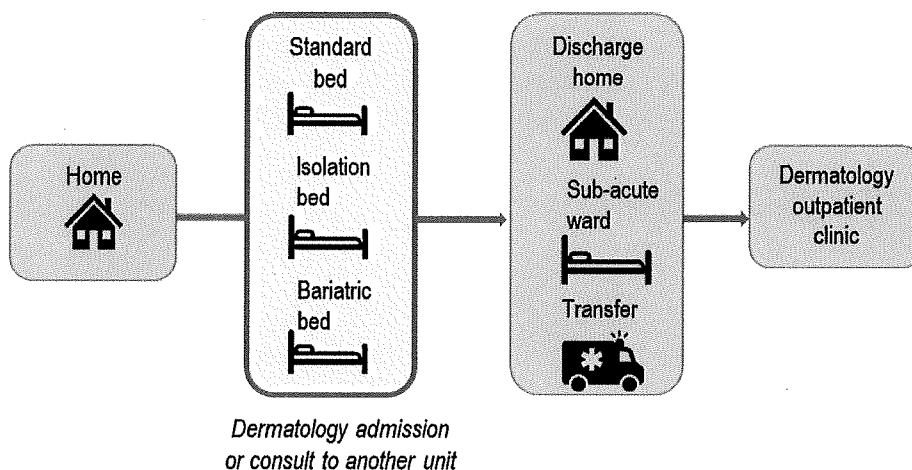
Dermatology outpatients is in-scope, transferring from Building 3.

16.3.2. Patient journey

The patient journey for dermatology is outlined below.

38. NSW Health, *Guide to the Role Delineation of Clinical Services*, 2021. Available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>

Figure 16-1: Dermatology patient pathway



Patients may be admitted to dermatology inpatient beds; however, this is uncommon. The dermatologists provide a consultative service to patients admitted to other clinical units within the hospital.

16.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

16.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

16.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce requirements for a Level 5 service include a consultant dermatologist, as well as a medical officer with three or more postgraduate years of experience; may be in training with the Australasian College of Dermatologists.

16.4. FUNCTIONAL CONTENT

Dermatology will operate from one of the six medical IPUs and one of the five medical OPU pods. The number of inpatient POC will vary with demand. There are no 'exclusively designated' medical beds at CH. Outpatients will operate from a centralised outpatient area.

16.5. FUNCTIONAL ADJACENCIES

Internal:

- Rheumatology;
- General Medicine;
- Medical Imaging;
- Pharmacy;
- HITH;
- Pathology;
- Outpatients;
- ICU;
- Allied health;
- Language services

External:

- GPs and community specialist consultants;
- Residential Aged Care facilities.

17. Surgery Classification

Although surgery is a relatively small component of the relocating services (perioperative theatres i.e., WYC obstetric theatres is the only surgical service relocating to B10), the classification of the surgery influences the patient pathway, and therefore capacity and supporting allied health functions.

Surgery may be classified as elective, emergency, or other surgery. Elective surgery is planned surgery that can be booked in advance. A GP will refer a patient to a surgeon who will determine whether a patient requires planned surgery, and then place the patient on the Elective Surgery Waiting List.

People on the Elective Surgery Waiting List will be assigned an urgency category (1, 2 or 3) depending on the seriousness of their condition. These are defined as:³⁹

- Category 1: Procedures that are clinically indicated within 30 days.
- Category 2: Procedures that are clinically indicated within 90 days.
- Category 3: Procedures that are clinically indicated within 365 days.

Emergency surgery is required to treat trauma or acute illness after a presentation at the ED or by helicopter transfer. Surgery may be required immediately, or at a later time. Emergency surgery also includes unplanned surgery if someone on the Elective Surgery Waiting List has deteriorated in condition.⁴⁰

Surgery takes place in Building 5, with the exception of the WYC obstetric theatres in new Building 10 (as detailed below) and the endoscopy suites in B6 (as detailed in the B6 FDB).

39. ACT Government, Health, *Waiting Time, and Elective Surgery Access Policy: Managing Elective Surgery patients in ACT public Hospitals*, July 2016. Available: <https://health.act.gov.au/sites/default/files/2019-02/Waiting%20Time%20and%20Elective%20Surgery%20Access%20Policy.docx>

40. ACT Government, Health, *Waiting Time and Elective Surgery Access Policy: Managing Elective Surgery patients in ACT public Hospitals*, July 2016. Available: <https://health.act.gov.au/sites/default/files/2019-02/Waiting%20Time%20and%20Elective%20Surgery%20Access%20Policy.docx>

18. Women, Youth and Children Obstetric Theatres

18.1. DESCRIPTION OF SERVICE

There will be three new obstetric **Theatres** for the Women, Youth and Children (one of which is a shell space).⁴¹ The Model of Care for these theatres is currently under development, and not available at the time of this FDB development. Future versions of this FDB will need to consider the confirmed service provision.

The WYC obstetric theatres will provide rapid access for time-critical procedures relating to obstetric services.

The three new theatres will be located in the new Building 10, on the same level as, and as close as possible to, the birthing suite on Level 3 of Building 11 (the Centenary Hospital for Women and Children). There will be additional doorways along the existing East-West corridor to block public access, providing a discreet linkage for emergency maternity patients transiting between B11 and B10 theatres. The new theatres will be quite some distance from the main Building 5 operating theatre complex.

18.2. SPECIFIC DESIGN REQUIREMENTS

The theatre design will be based on the AusHFG HPU 0520 – Operating Unit.

The design of the Sterilising Services will be based on the AusHFG HPU B.0190 – Sterilising Services and Endoscope Reprocessing Unit.

Operating theatre module

The operating module comprises three operating theatres with an exit bay and an anaesthetic preparation room each, a shared scrub bay, and a shared clean-up room. The configuration should optimise patient and staff flows in and out of the operating room and the labour suites in Building 11.

The key functional zones for the WYC obstetric theatres are described below.

Access

Access to the theatres will vary:

- Unrestricted pre-surgical areas are where staff and visitors may wear street clothes. This would apply to the main entrance, public areas, and change rooms.
- Semi-restricted areas are where staff and selected visitors are wearing perioperative attire only. This could include patient holding bays and recovery areas.
- Restricted areas are only accessible by approved staff wearing perioperative attire. This includes the operating rooms and supporting spaces such as imprest store and workrooms.

41. To be confirmed based on the final asset solution.

Preparation and Holding

This area may comprise change rooms, patient toilets and shower, holding bays with beds or room for a trolley, handwashing bays, a linen bay, a blanket/fluid warmer bay, a property bay and access to interview rooms.

Case assembly set-up

The case assembly set up area is where the reusable medical devices (RMD) and sterile consumables for the next day are assembled. These are usually assembled into carts or trolleys, and these need to be stored unopened overnight in a sterile supply room.

Operating theatres

The preferred approach is to have a mirror image layout, with a shared scrub up bay and clean up room.

Obstetric operating theatres require additional gases on the wall to support newborns (for up to triplets). There should be sufficient provision for multiple births at one time.

The operating rooms will need to be arranged to support separate clean and dirty zones and flows, usually by having separate clean and dirty corridors. There should be one sterile stock room for the theatres.

Other areas in the unit will include:

- General and equipment store/s;
- Medication store;
- Dirty utility – accessible to pre- and post-operative holding areas;
- Disposal and cleaner's rooms;
- Blood store;
- Pathology room;
- Linen bay and mobile equipment bay; and
- Staff write up area/s and toilet.

Recovery

Stage 1 recovery is a dedicated area where post-procedure patients are recovered under supervision. Patients receive 1:1 nursing care and constant observation. Open plan bays allow oversight from the staff station.

Stage 2/3 recovery is not required for perioperative patients as patients will be returned to (inpatient) ward after stage 1 recovery. However, 6 stage 2/3 beds will be allocated for Medical Imaging patients recovery post procedures and imaging that have required sedation.

Sterilising services

The three Obstetric operating theatres will require sterilisation services to support service provision of sterile stock. The requirements include:

- Reprocessing Reusable Medical Devices (RMDs):
 - ▶ Disassembling, cleaning, and disinfecting instruments, trays, and other items requiring reprocessing;
 - ▶ Preparing, assembling, and inspecting package instrument trays and packs, including device functionality and safety checks; and
 - ▶ Sterilising completed trays and packs and provide disinfected items acceptable for patient use;
- Ensuring that all processes meet quality assurance practices;
- Storing raw materials/components before they are assembled into instrument trays/packs;
- Distributing sterile items to theatres; and
- Manage RMD purchases, repairs, and maintenance.

18.3. OPERATIONAL MANAGEMENT

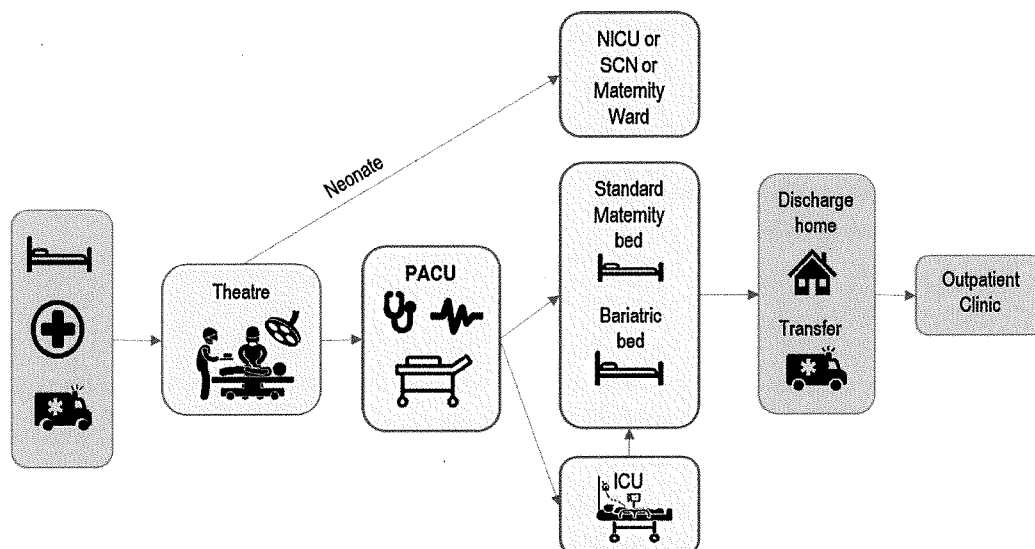
18.3.1. Hours of operation

The operating theatres and supporting functions will need to be available 24 hours per day.

18.3.2. Patient pathway

Patients admitted to the Building 11 maternity unit may require an emergency procedure as part of their stay. This pathway is outlined below.

Figure 18-1: Emergency Obstetric Surgery patient pathway



18.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;

- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

18.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

18.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

18.4. FUNCTIONAL CONTENT

There are 12 POC for the operating theatres, comprising 3 operating rooms (one of which is a shell space), 3 stage 1 recovery bays and 6 Stage 2/3 recovery bays.

19. General Surgery

19.1. DESCRIPTION OF SERVICE

General Surgery at CH provides emergency or elective surgery for a range of surgical conditions. Common conditions include hepatobiliary / pancreatic surgery, upper gastrointestinal surgery, hernia repairs (with or without mesh) and colorectal bowel disease.⁴² Surgical patients are admitted with (sometimes) complex general surgical injuries under the ACT Trauma Service delineation.

Surgery takes place in Building 5, which is out of scope for the Phase 2 redevelopment. The general surgery inpatient and outpatient units are the focus of this FDB.

19.2. SPECIFIC DESIGN REQUIREMENTS

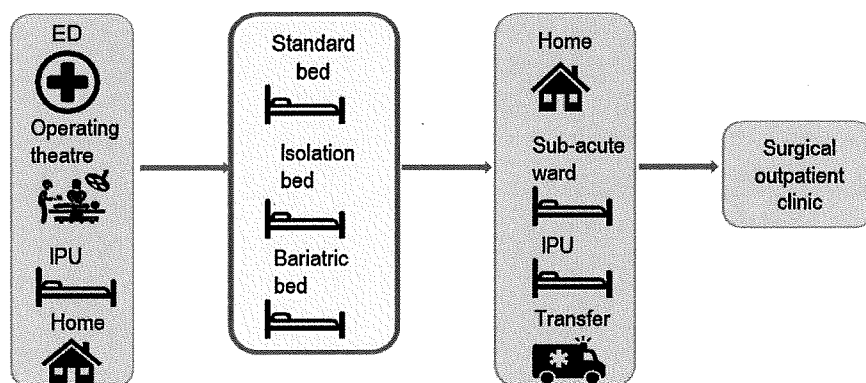
There are no specific design requirements for general surgery. Refer to Section 3 for the design principles of the patient environment.

19.3. OPERATIONAL MANAGEMENT

19.3.1. Patient pathway

General surgical patients may be admitted pre-surgery for work-up, for step down care after surgery, or for non-surgical treatment.

Figure 19-1: General Surgery patient pathway



19.3.2. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year. The inpatient units need to safely accept admissions from ED and operating theatres at any hour. IPU clerks are available from 8am to 4pm Monday to Friday. An after-hours IPU clerk is contactable outside of these hours.

42. Act Government, Canberra Health Services, *General Surgery*. Available: <https://www.canberrahealthservices.act.gov.au/services-and-clinics/services/general-surgery>

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period of time.

19.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

19.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

19.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient and outpatient areas.

19.4. FUNCTIONAL CONTENT

General Surgery will operate from at least one of the three surgical IPUs and one of the two surgical OPU pods. The number of POC will vary with demand. There are no 'exclusively designated' general surgical beds/rooms at CH.

20. Orthopaedic Surgery

20.1. DESCRIPTION OF SERVICE

Orthopaedic surgery involves procedures of the musculoskeletal system, mainly bones, joints, ligaments, tendons, muscles, and nerves. Common procedures can be associated with trauma as well as elective such as Total Hip Replacements, Total Shoulder Replacement, Total Knee Replacement, and upper and lower limb fractures but also comprise a broader range of procedures.

Due to the ageing population, the number of fractured necks of femur admissions are increasing. This cohort of patients are often vulnerable and more complex as they have multiple comorbidities and can live with a diagnosed/undiagnosed cognitive impairment.

There are often a range of clinical support functions associated with orthopaedic surgery including:

- Pre-habilitation;
- Trauma stabilisation prior to surgery;
- Orthopaedic Specialist Care;
- Due to the duration of procedures, patients can often have delirium/cognitive impairment and require additional nursing support post-surgery;
- Rehabilitation and 'gym' facilities; and
- Occupational therapy and home assessments

Refer to Section 3 for the design principles of the patient environment.

20.2. SPECIFIC DESIGN REQUIREMENTS

There will be a gymnasium adjacent to the orthopaedic inpatient unit for patient therapy. With a concertina door, the larger gym could be separated into two. Patients will receive patient centred and targeted maintenance therapy for rehabilitation.

The gym should have a reinforced ceiling for a ceiling track hoist. Storage for allied health equipment will be required.

20.3. OPERATIONAL MANAGEMENT

20.3.1. Hours of operation

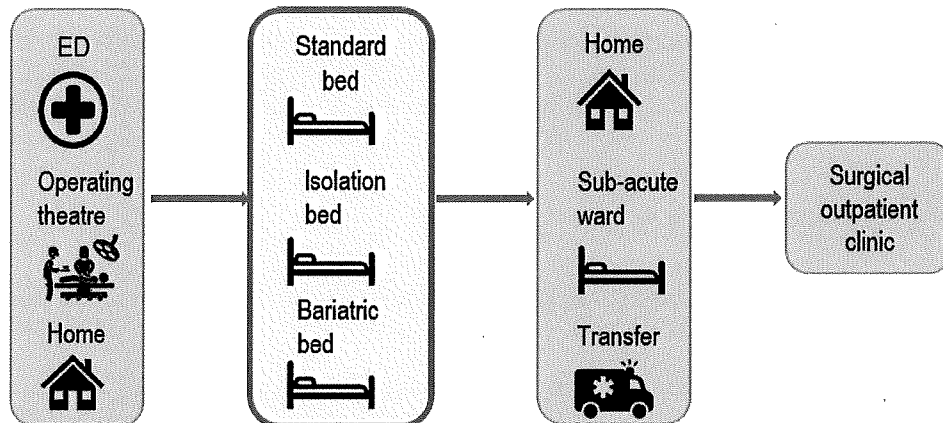
The surgical inpatient units will operate 24/7 every day of the year. Importantly, the inpatient units need to safely accept admissions from ED at any hour. IPU clerks are available from 8am to 4pm Monday to Friday. An after-hours IPU clerk is contactable outside of these hours.

Access to outpatients is by appointment, with initial appointment triaged based on the most urgent condition. Outpatient clinics provide post-discharge monitoring and treatment for a defined period of time.

20.3.2. Patient pathway

Orthopaedic surgical inpatients may be admitted pre-surgery for work-up, for step down care after surgery, or for non-surgical treatment.

Figure 20-1: Orthopaedic Surgery patient pathway



20.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

20.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

20.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient and outpatient areas.

20.4. FUNCTIONAL CONTENT

Orthopaedic Surgery will operate from two of the three surgical IPUs and one of the two surgical OPU pods. The number of POC will vary with demand. There are no 'exclusively designated' orthopaedic surgery beds/rooms at CH.

21. Ophthalmology

21.1. DESCRIPTION OF SERVICE

Ophthalmology is the diagnosis, management, and surgery of eye/vision disorders. It includes surgical procedures of the eye and other ocular adnexa including eyelids, conjunctival sac, lacrimal drainage system and gland, and orbital contents except for eye and optic nerve. Ophthalmology is a Level 5 service at CH.

21.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for Ophthalmology. Refer to Section 3 for the design principles of the patient environment.

A Consultation Room is likely required due to the specialised eye examination equipment, with dimmable lights, examination chair and examination testing equipment. Room size and FFE layout that can accommodate various special equipment and 3m vision tests needs to be considered. Given the uncommon inpatient stay this room could be flexible use if specialised equipment is minimal, stored away appropriately in specialised joinery, or instead the inpatient is followed up in outpatients in building 3 (out of scope) following discharge.

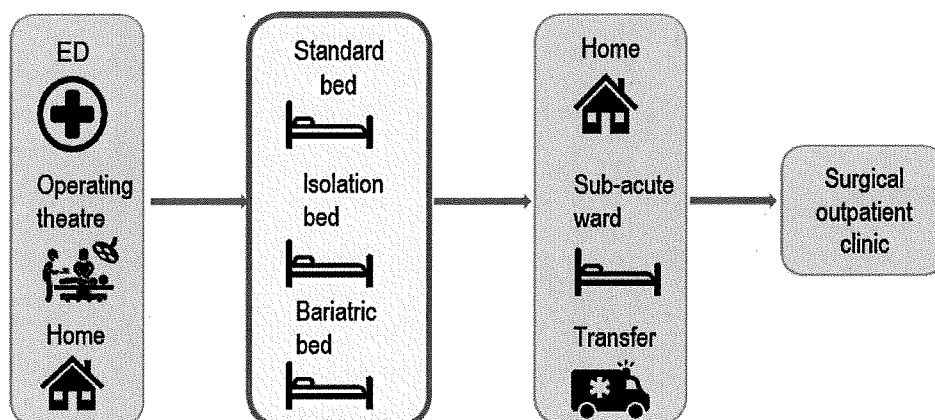
21.3. OPERATIONAL MANAGEMENT

21.3.1. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year.

21.3.2. Patient pathway

Figure 21-1: Ophthalmology patient pathway



Most ophthalmic surgeries are same day stay, which means patients are discharged on the day of admission. Therefore, the inpatient pathway is very uncommon. Nevertheless, it is outlined above.

21.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

21.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

21.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient areas.

21.4. FUNCTIONAL CONTENT

The number of inpatient POC will vary with demand but is less than one bed on average. There are no exclusively designated ophthalmology beds at CH.

22. Maxillofacial Surgery

22.1. DESCRIPTION OF SERVICE

Maxillofacial surgery involves management of the mouth, jaws, face, and neck. Maxillofacial surgeons work with Otolaryngology Head and Neck surgeons. Types of surgery include impacted teeth, dental implant surgery, bone grafting, facial trauma surgery, facial reconstructive surgery and cleft lip and palate surgery.⁴³ Maxillofacial surgery is a Level 5 service at CH.

22.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for Maxillofacial surgery. Refer to Section 3 for the design principles of the patient environment.

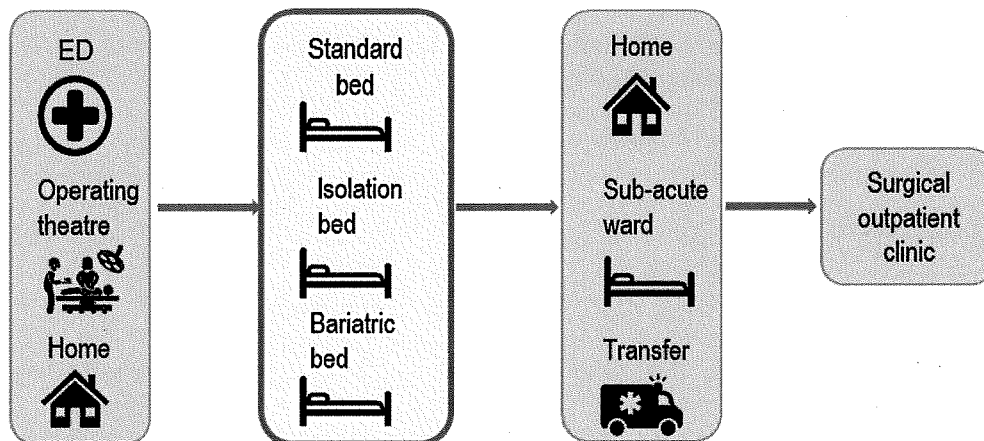
22.3. OPERATIONAL MANAGEMENT

22.3.1. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year.

22.3.2. Patient pathway

Figure 22-1: Maxillofacial patient pathway



22.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

43. Royal Australasian College of Dental Surgeons, *Oral and Maxillofacial Surgery*, updated 2023. Available: <https://racds.org/education/oral-and-maxillofacial-surgery-oms/>

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

22.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

22.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient and outpatient areas.

22.4. FUNCTIONAL CONTENT

Maxillofacial Surgery will operate from one of the three surgical IPUs and one of the two surgical OPU pods. The number of POC will vary with demand. There are no 'exclusively designated' maxillofacial surgery beds/rooms at CH.

23. Otolaryngology Head and Neck

23.1. DESCRIPTION OF SERVICE

Otolaryngology Head and Neck surgeons manage a wide range of conditions. include the investigation and treatment of conditions of the ear, nose, throat, and head and neck, such as nasal and sinus conditions, snoring and breathing problems, tonsillitis, cancer of the throat, voice problems, plastic surgery of the nose and face hearing difficulties and deafness, tumours of the head, neck, and ears⁴⁴ ENT / Head and Neck surgery is a Level 6 service at CH.

23.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for Otolaryngology Head and Neck. Refer to Section 3 for the design principles of the patient environment.

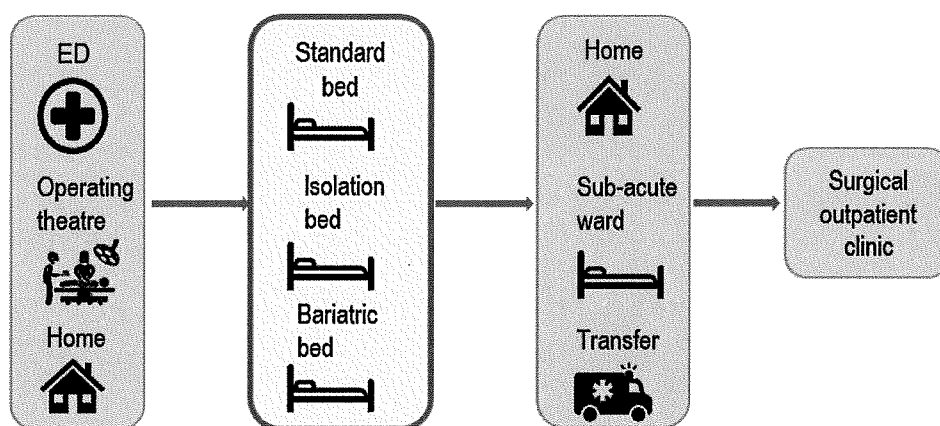
23.3. OPERATIONAL MANAGEMENT

23.3.1. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year.

23.3.2. Patient pathway

Figure 23-1: Otolaryngology / Head and Neck patient pathway



23.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

⁴⁴ Australian Society of Otolaryngology Head and Neck Surgeons

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

23.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

23.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient and outpatient areas.

23.4. FUNCTIONAL CONTENT

Otolaryngology Head and Neck will operate from one of the three surgical IPUs and one of the two surgical OPU pods. The number of POC will vary with demand. There are no 'exclusively designated' otolaryngology head and neck beds at CH.

24. Plastic Surgery

24.1. DESCRIPTION OF SERVICE

Plastic surgery involves both cosmetic and reconstructive surgery. Breast reconstruction, hand surgery, skin cancer surgery, medicinal leech therapy and skin flap management are all examples of reconstructive surgery. Plastic surgery is a Level 5 service at CH.

24.2. SPECIFIC DESIGN REQUIREMENTS

There are no specific design principles for Plastic surgery. Refer to Section 3 for the design principles of the patient environment.

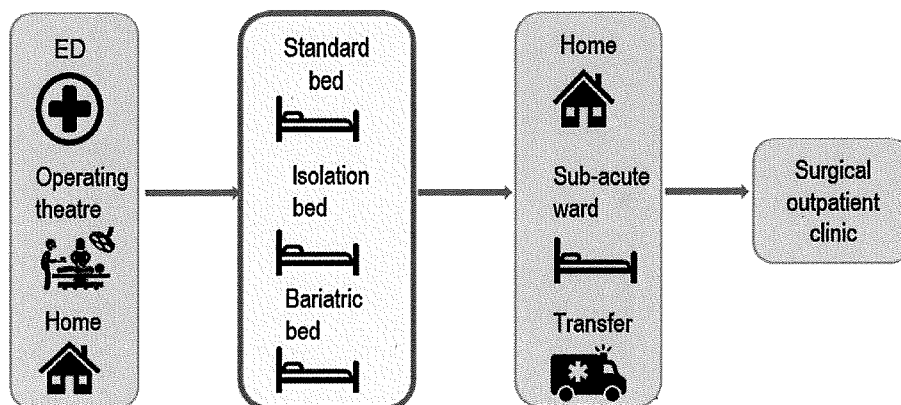
24.3. OPERATIONAL MANAGEMENT

24.3.1. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year.

24.3.2. Patient pathway

Figure 24-1: Plastic surgery patient pathway



24.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and

■ Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

24.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

24.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient and outpatient areas.

24.4. FUNCTIONAL CONTENT

Plastic Surgery will operate from one of the three surgical IPU's and one of the two surgical OPU pods. The number of POC will vary with demand. There are no 'exclusively designated' plastic surgery beds/rooms at CH.

25. ACT Trauma Service

25.1. DESCRIPTION OF SERVICE

The ACT Trauma Service (ACTTS) is the designated Major Trauma Centre for the ACT, Southern NSW, and the Murrumbidgee. It is a multidisciplinary team of doctors, nurses and allied health professionals who will coordinate the management and treatment of trauma related injuries, incorporating case management, coordinating the different services, and consultation post discharge.

People experiencing multiple system injuries resulting from trauma will be managed by the ACT Trauma Service.

25.2. SPECIFIC DESIGN REQUIREMENTS

Refer to Section 3 for the design principles of the patient environment.

25.3. OPERATIONAL MANAGEMENT

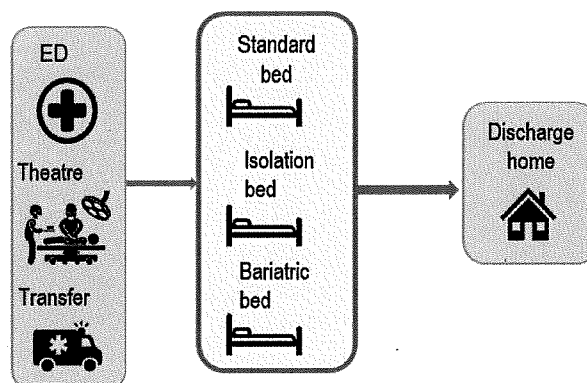
25.3.1. Hours of operation

The surgical inpatient units will operate 24/7 every day of the year.

25.3.2. Patient pathway

Patients suffering from multi trauma are admitted via the ED.

Figure 25-1: Trauma patient pathway



25.3.3. Clinical support services

Clinical support services for the Phase 2 redevelopment incorporates the following services, which are split between the two new buildings (building 10 and building 6):

- Pharmacy;
- Medical Imaging;
- Pathology;
- Learning and Teaching; and
- Research.

Medical Imaging is relevant for building 10, and will be detailed in section 27 of this document. Remaining clinical support services will be detailed in a separate FDB (for building 6). Refer to Sections 29 and 30 for Front of House and Back of House Services.

25.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

25.3.5. Staff support

Refer to Section 3.8 for the general requirements for staff in inpatient areas.

25.4. FUNCTIONAL CONTENT

Patients with multi trauma are admitted to the Surgical Inpatient Unit that is most appropriate according to area of the person's most severe injuries.

26. Discharge/Transit Lounge

26.1. DESCRIPTION OF SERVICE

The Canberra Hospital run an All Care Discharge Lounge MoC, currently working with 10 chairs and 4 beds, with a proposed 8 beds, 10 chairs and a positive pressured (isolation) room. The **Discharge/Transit Lounge** is a transition area for patients prior to going home, or prior to being transferred to another facility. Patients depart the Discharge/Transition Lounge to:

- Return to their usual community-based accommodation;
- Transfer to another acute hospital/care setting for ongoing management, i.e., interstate, rehabilitation, or step-down care; or
- Transfer to a residential, nursing or respite facility.

The Discharge Lounge supports effective patient flow, by increasing discharge rates in inpatient beds prior to noon, which increases the turnover of inpatient beds and supports flow through the ED and Operating Theatres..

26.2. SPECIFIC DESIGN REQUIREMENTS

The discharge lounge should not look clinical, it should look like a lounge area with reception, waiting area, beds and recliner chairs. There should be some form of entertainment, such as a TV and magazines. There should also be a range of support services and patient amenities in or adjacent to the Discharge/Transit Lounge, including but not exclusive to:

- A meal trolley bay;
- A handwashing bay;
- A linen bay;
- A mobile equipment bay;
- A resuscitation bay;
- A cleaner's room;
- A medication room and dirty utility;
- A general store;
- Patient showers and public toilets; and
- A staff station.

26.3. OPERATIONAL MANAGEMENT

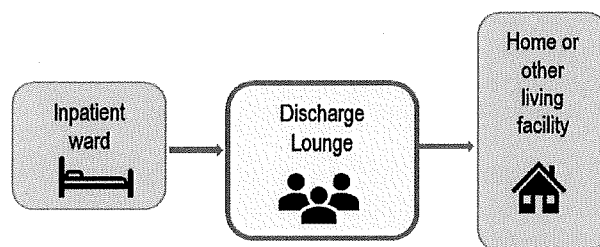
26.3.1. Hours of operation

The operating hours of the Discharge/Transit Lounge are Monday to Friday 0700 hours until 2130 Hours.

26.3.2. Patient journey

Patients who are ready for discharge from their inpatient unit will be transferred to the discharge/transit lounge where they will await their private transport back to home, a patient transport vehicle to other living facilities, or interstate hospital (for NSW based patients).

Figure 26-1: Discharge/Transit Lounge patient pathway



26.3.3. Clinical support services

Patients in the discharge/transit lounge may be waiting on outcomes from clinical support services, i.e., medical imaging and pathology results, pharmacy for discharge medications.

Refer to Sections 29 and 30 for Front of House and Back of House Services.

26.3.4. Family and carer support

Refer to Section 3.5 for the general requirements for family and carer support.

26.3.5. Staff support

Refer to Section 3.8 for the general design requirements for staff.

The workforce will be sufficient to enable some level of monitoring and patient care. It is most likely that the area is staffed by an Enrolled Nurse.

Discharge Lounge staff work in close consultation with Discharge Liaison Nurses (DLN) across CHS.

26.4. FUNCTIONAL CONTENT

There will be 8 beds, 10 recliner chairs and a positive pressured isolation room in the Discharge/Transit Lounge. Light meals/snacks should be made available to patients while waiting.

26.5. FUNCTIONAL ADJACENCIES

The Discharge/Transit Lounge must be located within easy access of the inpatient units and patient transport/ambulances. It should also be easily accessible for family/carers who are going to transport the patient home. Other important adjacencies for the Discharge Lounge are Pharmacy for discharge medication, and the Equipment Service for the provision of home aids.

27. Medical Imaging

27.1. DESCRIPTION OF SERVICE

Medical Imaging (MI) operates at a Level 6 clinical capability/functionality to support most tertiary level services provided by CH, across a range of clinical specialties. It is critically important that MI continues to operate at the highest clinical capability level as most specialist medical and surgical services depend on MI being able to consistently function at Level 6⁴⁵.

A Level 6 service means the provision of a comprehensive range of modalities that include those such as diagnostic, interventional MI, and nuclear medicine, the detailed description of which is provided in the Clinical Support Services Service Model Appendix A2. Also essential to a functioning Level 6 service is a Picture Archive and Communication System (PACS) and Radiology Information System (RIS). MI currently utilises AGFA Enterprise Imaging for the PACS component with EPIC Radiant as the RIS component.

This MI Service incorporates the (residual) MI in Building 12 CH not transferring to Building 5. The transferring in-scope MI is referred to as the new Core MI service. Modalities transferring out of Building 12 to a new location include some services that would represent an expansion to current modalities. The proposed Core MI service includes:

- Four general X-ray machines;
- Four Ultrasound machines (one procedural);
- Two procedural Computed Tomography (CT) machines;
- Two Magnetic Resonance Imaging (MRI) machines;
- One Fluoroscopy machine
- One Positron Emission Tomography (PET) / CT;
- Two Single Photon Emission Computed Tomography (SPECT) / CT;
- One Gamma Camera;
- One Mammography machine; and
- One Bone Mineral Density (BMD) scanner.

The new Core MI service will operate as a 'booked or planned' MI service with some unplanned walk-ins from the community for X-rays. The service will **not** need to respond to the Building 5 inpatient/emergency/ICU demand except in situations where Building 5 requests patient examinations at the Core MI service.

The Core MI services will provide reception capacity for overseeing booking and scheduling of inpatients and outpatients. This means that the service can operate with maximum efficiency and not have emergency examination interrupt daily workflow.

As the Core MI service, it will need to be accessible to the broader community as well as inpatients and outpatients. It is expected that the Core MI services will operate only during extended business

45. NSW Ministry of Health, NSW Health Guide to the Role Delineation of Clinical Services, Fourth Edition, October 2019, available: <https://www.health.nsw.gov.au/services/Publications/role-delineation-of-clinical-services.PDF>.

hours. All MI demand required by IPU's outside of the planned operating hours would be managed by Building 5's satellite MI services.

MI uses EPIC Radiant to provide both clinical and administrative needs from workflow, referral, vetting, protocolling, scheduling appointments, completing scans, to complication tracking after invasive procedures.

MI will operate a single centralised booking system that will include Building 5, University of Canberra Hospital, and Weston Creek Medical Imaging Service. There is also potential to include the future service at North Canberra Hospital site.

The central booking staff and MI management and administrative staff are in-scope and included in the planned area. However, it is noted that much of this function does not need to be within the MI space. It could be located elsewhere on campus.

The future role for MI will include learning/teaching, and research. Of particular importance will be the Tiers 1 and 2 learning and teaching and research, and the increasing role of Artificial Intelligence (AI) in the examinations and reading of images. This will be important to the design of the MI area.

27.2. SPECIFIC DESIGN PRINCIPLES

The overarching planning principles for the MI unit are derived from the AusHFG for Medical Imaging Unit, HPU 440.

For MI, where technology is a key driver of changing clinical practice, space needs to be developed as flexibly as possible and be positioned to enable future expansion.

Specific design principles relevant to the Core MI Service are as follows:

- Specific attention to the physical environment is required for MI patients to **ensure easy access** and **minimise unwanted distractions** from nearby services, and other factors that may increase noise or impact patient comfort;
- Location would ideally be close to the Satellite MI Service in Building 5. This preference is seen to be as important as Core MI being accessible to the community and to other inpatient and outpatient services;
- **Reception** may be supported by a patient reception kiosk or similar technology that can efficiently process patients on arrival;
- **Patient holding bay** will be provided for each modality:
 - ▶ The MI Day IPU is a consolidated single patient holding and recovery area within MI, with six open patient holding bays as well as other support facilities such as a staff station, clean and dirty utility rooms, linen bay, resuscitation trolley, mobile equipment and patient toilet(s);
 - ▶ General X-Ray. Fluoroscopy and BMD don't have patient holding bays specifically allocated to them but will use the shared bays within MI Day IPU. Design will ensure proximity between the Day IPU and these modalities especially Fluoroscopy, due to the need for potential patient transfer from their bed directly onto the Fluoroscopy examination table;
 - ▶ Ultrasound and Mammography services will share two patient holding bays which are used for patient holding and storage of mobile examination plinths (when not in use) only, they are not intended for patient recovery;
 - ▶ Interventional CT will have one patient holding bay and a preparation/cannulation room/bay;

- ▶ SPECT/CT, PET/CT and Gamma Camera will share two patient holding bays and one preparation/cannulation room/bay; and
- ▶ MRI will also share two patient holding bays and a preparation/cannulation room.

■ **Special needs design**

The Core MI service will need to cater for bariatric patients. This means:

- ▶ One CT would have a minimum bore size of 80cm, and a weight capacity of at least 250kgs (and preferably as high as possible);
- ▶ One digital X-Ray machine would need to be capable of at least 250kgs, and preferably as high as possible;
- ▶ At least one Bariatric MRI needs to be made available, along with MRI Safe Lifting equipment which is ideally shared between the different imaging departments. From a cost efficiency perspective, it is therefore important for the imaging departments to be as proximal to each other as possible for the purpose of equipment sharing; and
- ▶ There will need to be suitable lifting devices and circulation space around the equipment to facilitate the movement of bariatric patients.

■ **Mobile imaging equipment**

The Core MI service will require mobile imaging equipment. All mobile equipment should be digital. The typical mobile equipment will include:

- ▶ General X-Ray and image intensifiers (multiple);
- ▶ Ultrasound (multiple);
- ▶ The storage/parking (and powering) of this equipment would typically be within the clinical units using the equipment. Storage areas for this equipment will be required in each of the units, with the storage areas having double general-purpose electrical outlets, and single data outlet; and
- ▶ Demand for mobile equipment is not always predictable. It will be ideal that all mobile MI equipment would have real time locating systems (RTLSSs) to track their location.

■ **Shielding, radiation, and magnetic field protection**

For all imaging rooms that have ionising equipment, radiation shielding will be required. This is an area of strict regulatory compliance, and approvals, for the construction of imaging rooms.

The radiation protection (lead lining) will be required for all walls, doors, internal viewing windows, door viewing panels, and external windows. The level of protection must not vary by the type of setting or the nature of the facility and provides a stable shield over time. It will also be important that the shielding assessments are undertaken for the ceilings and floors with respect to the services above and below MI imaging rooms.

Magnetic field safety in the MRI suite and adjacent areas, including external walls, ceilings and building foundations (if not on ground level) is vital. The strong magnetic fields can attract and interfere with metal objects in the body and surrounding environment. Some of these interactions can cause equipment damage/failure, person harm or death.

■ **Air handling**

Air handling in MI is also critically important to ensure the right operating conditions for the equipment and adherence to (sometimes tight) operating tolerances, including heat and humidity.

Chillers are required to support some imaging equipment such as MRI, PET/CT and certain CTs. It is typical that separate chillers be installed for the to supply this equipment so that system-wide power interruptions do not affect service provision.

Venting (including 'quenching' of the MRI) of air to the external environment needs to be part of the planning of the MI suites.

■ **Major equipment replacement**

The location of the MRI will be important. It is highly advisable that the MRI be sited next to an external wall that is not accessible due to the artifact and safety impacts with moving Ferromagnetic materials and pacemakers/electronic devices in the magnetic field. Failure to comply with this rule may result in death or serious injury. It is also advisable to design the area proximal to the MRI with non-standard door heights and demountable windows, to minimise disruption and costs associated with replacing magnets. It is understood that a standard 3-tesla (T) magnet and related equipment can weigh as much as 8-12 tonnes and cannot be easily manoeuvred.

■ **Medical gases** considerations specific to the Core MI service include:

- ▶ An MRI warning label fixed to portable ferrous oxygen cylinders. When applicable;
- ▶ A medical gas alarm system within MI to Alert staff to potential failure or diminished performance of the medical gases that can be observed by staff;
- ▶ Locating the medical gasses panel so that it is easily accessed by staff; and
- ▶ Provision for oxygen, medical air, suction, and scavenging in all rooms where general anaesthesia is provided.

■ The Core MI modalities will be accompanied by supporting functions such as reception and patient amenities, plant rooms, reporting rooms, control rooms, hot labs, cannulation bays, uptake rooms, stress test room, clean store, medication, dirty utility, Clean-Up Room (for ultrasound), and patient change/waiting/recovery areas, amongst other support facilities:

- ▶ CHS clinical team has requested seven uptake rooms (including five chairs and two beds) in total as the Core MI Service will have Gallium production on site, which will result in increased patient throughput that requires sufficient number of prep rooms to support activity;
- ▶ There will be one sufficiently sized hot lab to support the production of isotopes for Nuclear Medicine, as well as PET/CT services;
- ▶ As mentioned in "Patient Holding Bays" section, there will be one shared cannulation room for the two MRIs, one for CT, and another one for SPECT/CT and the Gamma Camera;
- ▶ Clean Utility/Medication Room will be centralised for all services except the two interventional CTs, which has a separate (Clean Utility/Medication) room for itself. There may also be a separate room for procedural US if not in close proximity with the other Clean utility/Medication rooms;
- ▶ Dirty Utility Room will be centralised for all Core MI services;
- ▶ There will be sub-waits and sub receptions throughout Core MI services based on the proximity of modalities and the sharing of sub-waits. Sub-waits will require patient observation monitoring via a secure camera network with live monitoring display in the Control Rooms (CT, MRI, PET/CT and Nuclear Medicine);
- ▶ Change Cubicles will be provided and shared between modalities, with the exception of Ultrasound services where accessible toilets will double as change rooms with incorporation of suitable bench seating, and Nuclear Medicine where the uptake rooms will also be used for patients to get changed; and
- ▶ Consideration for shared Control Rooms between like modalities for workforce efficiency, noting requirement for patient privacy.

■ Design to maximise operational patient/staff flows within the Core MI Service;

- Design to maximise access to natural light and/or artificial light as part of ceiling light artwork elements replicating nature/external views (Imaging Rooms) and air flows (where possible);
- Design of all MI modality rooms to accept hospital trolleys and dual side access for patient scanning;
- Consideration of wider corridors than typically prescribed (given the volume of patients);
- Clear wayfinding for patients and their carers to and from all floors of the Inpatient and Outpatient building(s), Building 5, airbridge and other main areas of public access within the CH campus, including clearly sign-posted directions to the unit;
- Incorporation of safe design principles with features that promote the safety of staff, patients, and visitors, by:
 - ▶ Clear lines of sight to all entrances;
 - ▶ Modality (e.g., X-Ray) room in use signs if the room is in use;
 - ▶ Lead lining of all modality rooms including doors; and
 - ▶ Security systems including CCTV, fixed duress alarms and access controls.
- Options to maximise the comfort of patients, visitors and staff through:
 - ▶ Visual privacy in examination and holding bays, whilst allowing for appropriate observation by staff;
 - ▶ Acoustic attenuation to minimise noise;
 - ▶ Dimmable lighting control to maintain comfortable environment;
 - ▶ Climate control to maintain a comfortable temperature;
 - ▶ Locally controllable dimmable lighting;
 - ▶ The use of calming colours on walls and floors, art or murals on ceilings;
 - ▶ Greenery (real or artificial);
 - ▶ Beverage bays and vending machines; and
 - ▶ Capability to cater for bariatric patients (rooms and ensuites).
- Compliance with all regulatory requirements pertaining to radiation protection (Australian Radiation Protection and Nuclear Safety Authority Radiation Protection);
- Elements of infection control, such as hand-wash basins with sensor tapware, alcohol-based hand rub brackets, detergent wipe brackets, adequate storage for personal protective equipment in patient treatment areas, furniture and fittings that allow for ease of cleaning and discourage dust accumulation, washable floor and wall finishes, clean and dirty utility rooms, separation of clean and dirty work flows, etc;
- Ongoing environmental sustainability in air handling and ventilation systems, insulation, water management and choice of sustainable products; and
- Incorporate relevant ICT requirements that support examinations including high resolution monitors and bandwidth that support contemporary transfer of images, PACS storage and image reviewing and reporting.

27.3. OPERATIONAL MANAGEMENT

27.3.1. Hours of operation

The Core MI service will operate extended business hours, which is intended to support:

- All inpatient demand that is not associated with Building 5 satellite MI (during extended business hours);
- All outpatient demand; and
- General community referrals.

The extended business hours will be expected to be at least 8am to 8pm on weekdays and some limited hours on weekends for more common (diagnostic) modalities.

The MRI, fluoroscopy, gamma camera and other examinations that require induction are not proposed to be undertaken on the weekend or after-hours (except in the unlikely event that they were urgently required).

After hours emergency and urgent MI examinations would be managed by the satellite MI service in Building 5, not the Core MI service.

27.3.2. Patient journey

The patient pathway for the Core MI in-scope services is more complex than the patient pathway for the satellite Building 5 imaging service.

Patients, whether public or private, are **booked** (with the exception of walk-in general X-rays and some unplanned outpatient appointments). All patients – with the exception of walk-ins for general x-ray - will have a scheduled time slot for the required examination for each modality.

On arrival the patient/relative/staff will register the patient against the booked time slot. This will occur at reception, by a receptionist or by electronic kiosk.

The patient pathway for inpatients and outpatients, and public or private, is essentially the same. The main difference is the arrival source and the destination after imaging. (See Figure 27-1 below).

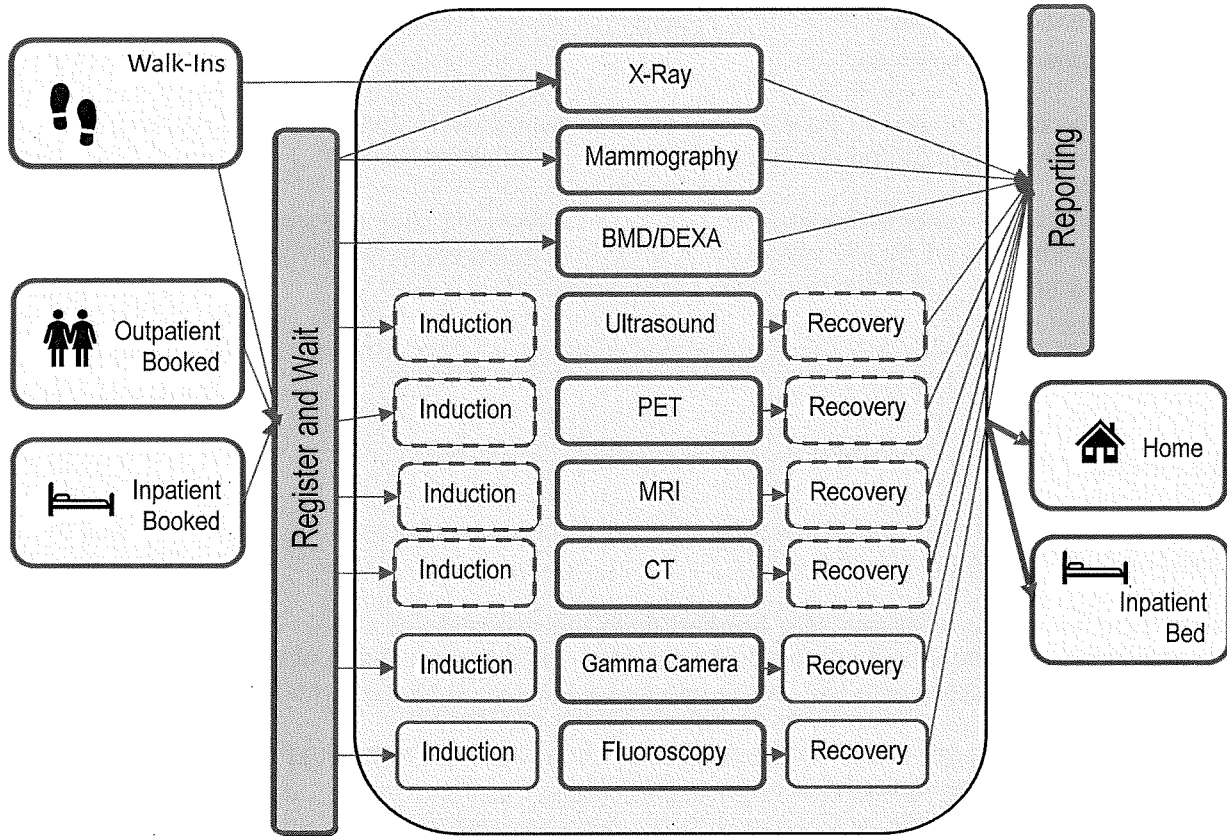
It is noted that for some imaging examinations, it is necessary to have an induction (of contrast of various types, including radiation induction for some nuclear medicine and PET/CT examinations). These are identified in the following figure as dotted lines. Imaging that requires an induction will often require some level of recovery or observation post examination. Nuclear medicine examinations will require a gamma camera imaging and may also involve the combination of other modalities principally CT-SPECT.

For some imaging examinations, and for some patient cohorts, anaesthesia, or oral sedation (anxiolysis medication) is required. For patients requiring general anaesthesia, this FDB includes these patients being managed as a Request for Admission (RFA) in the MI in building 5, which is closer to the Specialist Post Anaesthetic Care Unit (PACU) for patient recovery.

Patients who may require oral sedation will be identified at the time of booking. The requirement of oral sedation may be noted on the referral, from previous procedures or upon communication with the patient.

Patient departure for inpatients is back to the IPU and for outpatients/community patients, the departure is to home. Some patients may be transferred to the unit from UCH.

Figure 27-1: Patient Pathway



27.3.3. Patient transfer and movement

Inpatients and non-ambulant outpatients will generally require transport to and from MI by IPU support/nurse (for inpatients) or self-transfer/family (for outpatients).

There will be a reception area that acts as a central point of MI patient coordination. The reception area will have a general patient wait space. This will be the main waiting area for many modalities, whilst patients may also be directed to sub-wait spaces, particularly where there is a need for induction services. The IPU nurse will handover clinical information about the patient to the MI nurses via face-to-face, telephone, Digital Health Record or clinical documentation. Along with induction services comes the need for patient recovery or observation areas.

27.4. FUNCTIONAL CONTENT

There are currently three MI sites across CHS with four in operation by mid-2024 with the opening of Building 5. Not all sites offer all modalities:

- *Main Medical Imaging Unit*, Building 12 Level 2 CH. (Some of these MI services will transfer across to the new Building 5);
- *Satellite Medical Imaging Unit* in Building 5 – supporting the new ED, Intensive Care Unit, Operating Theatres and inpatient IPU (opening mid 2024).

- *UCH Medical Imaging*, a dedicated MI department at the UCH, which services UCH campus patients and some community referrals. UCH operates at Level 2⁴⁶ clinical capability with X-ray; and
- *Weston Creek Imaging Service*, Weston Creek Community Health Centre opened in May 2023, which offers MI service to support community referrals closer to home. Services include X-ray, Ultrasound and CT.

The MI day ward service provides preparation and post-recovery care for outpatient adults requiring light sedation as part of their diagnostic imaging procedure (i.e., CT and MRI). The Service Model for the safe recovery of patients after light sedation is in the recovery bays within MI day ward, then discharged home. Patients requiring general anaesthetics for MRI will have their scanning procedures completed in Building 5. The proposed model of care for fluoroscopy patients requiring a general anaesthetic will be dependent on Main Medical Imaging Unit location on the CH campus and travel distance to Building 5.

27.5. FUNCTIONAL ADJACENCIES

Internal

MI as a clinical core support service is expected to be used extensively by the different inpatient and outpatient units. The following functional relationship diagram indicates that MI is important to locate where there is good access to all parts of the campus.

Figure 27-2 identifies relative adjacencies for MI. This indicates that access to MI is pivotal to the efficient provision of inpatient and outpatient examinations across the campus. It has important links with Centenary Hospital for Women and Children, outpatients (particularly fracture clinic/orthopaedics), Building 19 Canberra Region Cancer Centre services and in Buildings 2 and 3. In many respects, it will be difficult to site the core MI service in any location without compromising ideal functional adjacencies for some clinical services.

Figure 27-2: Clinical Core Support Services Adjacencies Matrix – In-Scope Services

Relationship Matrix	Medical Imaging - CSB	Pharmacy	Health Information Services	Learning, Teaching & Research	Cardiology	Cardiology Diagnostics	Dermatology	Respiratory and Sleep	Infectious Diseases	Winter Surge/COVID ward	Endocrinology and Diabetes	Gastroenterology	Hepatology	Palliative Care	Renal Medicine (incl Dialysis)	Rheumatology	Neurology and Stroke	General Medicine	Day Medical (& HITH)	Addiction Medicine	Outpatients	Clinical Trials	General Surgery	Endoscopy	Orthopaedics	Ophthalmology	ENT / Head and Neck	Maxillofacial surgery	Plastic Surgery	Trauma Surgery
Medical Imaging -New Core	3	-	-	3	3	-	-	3	3	3	-	3	3	3	3	3	3	3	3	-	3	-	3	3	3	3	3	3	3	3

Legend

- 1 Directly adjacent (Horizontal / Vertical) 2 Easily accessible (less than 3 minutes) 3 Accessible (3 - 5 minutes)

There is preference in the Phase 2 Redevelopment that would locate the core MI with inpatients and/or outpatients to ensure patient-centred care imperatives. There are particular patient advantages where patient travel on-campus can be minimised, especially for those less ambulant,

46. NSW Health Guide to the Role Delineation of Clinical Services, 2021. Available: <https://www.health.nsw.gov.au/services/publications/role-delineation-of-clinical-services.PDF>

which means MI needs to be a reasonably short distance from inpatients, and from patient car parking/taxi/public transport, with 'direct paths' between services.

CH will work in partnership with UCH and the North Canberra Hospital to provide hospital MI services to meet the demand of all Canberra residents. As required, transfers from UCH, Weston Creek and the North Canberra Hospital may also occur if the patient requires a modality or examination that requires a Level 6 facility, or particular medical expertise (for example gamma camera or PET examination).

Develop facilities that can support an academic tertiary level teaching and research capability, and fully integrate and embed learning, teaching, and research into the clinical operations of CHS, which means as close as practical to the points of patient care delivery in IPUs, outpatients and clinical support services.

External

As a booked service, the new Core MI services is available to the community, including all referrals by GPs and specialists, Walk-in Centre referrals not eligible for CHS community imaging (such as bariatric, complex cannulation, and non-ambulant patients), and in many cases by allied health professionals.

CHS has clinical learning, teaching and research partnerships, as well as the core in-house services, with professional groups and education providers for a range of undergraduate and graduate medical, specialist, nursing, and allied health professions. It is also expected that MI will retain existing training and research activity with the ANU Medical School, UC, ACU, Charles Sturt University, and the CIT.

27.6. WORKFORCE

Staff and skills mix for the new Core MI service will ensure the following considerations:

- Expected planned demand (by type of examinations) by modality, by time of day will inform efficient rostering of staff for radiologists, radiographers, nursing, allied health, and IPU support staff;
- Planned adjustments of operating hours based on demand provides a more managed response to the effective operation of the MI service;
- Planned adjustments to specialist mix; and
- Enhanced planning of training opportunities in quieter periods.

The workforce will comprise:

- Radiologists, with different interest and modality specialisations, to manage the examinations, review, report images, and participate in research and case meetings. Supporting the consultants would also be Registrars and Junior Medical Officers;
- Chief and Deputy Chief Radiographer;
- Clinical Educator;
- Radiographers (MI Technologists and sonographers), with specialised skills across the modalities;
- Nurses where there are interventional services delivered;

- IPU staff provide 24/7 clinical support by way of manual handling, assisting with skin care and other patient needs, provide internal transport services for the transfer of patients throughout the hospital campus;
- Administration, IPU clerks, technical and other support staff; and
- MI operational management staff including the Clinical Director.

In addition, a future workforce would be in a position to support more learning, teaching, and research positions, particularly in newer modalities, and AI learning.

It is acknowledged that staffing will fluctuate over the course of time and over the course of a day. The indicative staffing above represents a basis for determining support staff spaces and patient/staff flow.

27.7. THE FUTURE STATE

MI is a clinical support service where rapid changes in technology are driving new service offerings and changed clinical practice. MI has broadened its role to include much more interventional procedures, on top of expanding diagnostic examinations.

This trend is expected to continue resulting in increases in area requirements. Where possible, MI should be located close to ground and where it is able to expand.

28. Staff Administration

28.1. OFFICE ACCOMMODATION

This section describes in-scope *administrative functions/spaces* related to Phase 2 Redevelopment that were not relocated in the development of building 5 or new building 6.

They include administrative services that are in Buildings 1, 6, 12, and 23:

- Dermatology and Rheumatology;
- Diabetes and Endocrinology;
- GP Liaison;
- Voluntary Assisted Dying (VAD)⁴⁷ Admin;
- Junior Medical Officers Lounge;
- Physicians Training Office;
- Medical Officer Support, Credentialing, Employment & Training Unit (MOSCETU)
- Discharge Liaison;
- Division of Medicine;
- Division of Surgery;
- Pain Management Admin;
- COVID@Home;
- Consumer Feedback;
- Quality and Safety;
- Risk Management; and
- Legal Liaison, amongst others..

28.1.1. Administrative Spaces

The number of administrative spaces are outlined in the Schedule of Accommodation, including:

- 18m² single person offices for senior executives;
- 15m² single person offices;
- 12m² single person offices;
- 9m² single person offices;
- 15m² three-person shared offices;
- 12m² two-person shared offices;
- 4.4m² workstations;
- 2.2m² (open plan) workstations/hot desks;
- Breakout/huddle spaces (booths for staff to have meeting huddles, make private phone calls and allow 1:1 working);
- Meeting room(s) shared across the facility; and

47. VAD is a territory wide service for people who are at the end of their life, who meet strict eligibility criteria and request access to VAD. The service places the needs of a person requesting VAD at the centre of care. Providing consistent pathways and the coordination of care for the person, their family, and the treating healthcare team and staff within the health service.

- Support spaces such as a photocopy store, toilets, showers, change rooms, lockers, a staff beverage bay & a staff room/dining area, property bays, and general storage spaces.

Administration areas are for staff only. Access is by electronic access key.

The allocation of spaces is based on:

- Activity based working environment aligned with contemporary workplace design standards;
- The number of staff on-site who require a desk space, but do not have either a permanent or workflow related touchdown point within a department;
- Shared Meeting rooms;
- Future COVID working arrangements; and
- Whole of facility shared functions (staff beverage and dining areas, storage spaces, toilets, showers, and end of trip facilities).

28.1.2. Office Accommodation design Principles

The principles that underpin the provision of office accommodation at the new Inpatient, outpatient and Pathology facilities include:

- Australasian Health Facility Guidelines;
- Canberra Health Services Office and Workstation Accommodation Policy⁴⁸:
 - ▶ **Comply with legislative and industrial requirements.** This includes ensuring safety is a key consideration in the design and provision of office and workspaces to reduce the risk of injury;
 - ▶ **Enable and facilitate the ability to perform duties safely and effectively.** This includes the allocation of offices or other enclosed space on a demonstrated needs basis with shared offices or workspaces encouraged to increase space utilisation. Staff with multiple roles or working at multiple locations are not to be allocated more than one dedicated office or workspace. This also involves avoiding allocating spaces that risk impacting a building classification or compromising safety systems;
 - ▶ Encourage collaboration. This includes **adoption of open plan work environments and contemporary office designs** to ensure work settings are positioned within zones of amenity that have appropriate acoustic levels and meet workplace privacy and patient confidentiality requirements; and
 - ▶ **Flexible and adaptable to meet changing needs.** This includes ensuring future flexibility to accommodate changing requirements. This may include minimising built-in furniture and equipment that is fixed to floors, ceilings, core walls and external walls;
 - ▶ **The Policy also outlines that:**
 - An extra-large single office accommodation (18m²) is only allocated to someone that carries out a high level/volume of confidential information, typically the Chief Executive Officer;
 - A large single office accommodation (12m²) is only allocated to someone that carries out administrative functions in a degree of privacy including small meetings, typically the Deputy Chief Executive Officer, Chief Operating Officer, Executive Director, Executive Group/Branch Manager, Clinical Directors, Medical, Nursing and Allied Health. Visiting

48. Canberra Health Services, 6 June 2023, Office and Workstation Accommodation Policy

- Medical Officer (VMO) that occupies the equivalent position of Clinical Director of a Department/Service Academic Professor;
- A standard single office accommodation (9m²) is allocated to someone (>0.7 FTE) that carries out administrative functions in a degree of privacy including rosters, reports, counselling, and interviewing staff, typically Staff Specialists, Assistant Directors of Nursing, Allied Health Managers, Nurse Managers, Clinical Nurse Consultants, Business Support Managers;
 - A shared two-person office accommodation (12m²) is allocated to two people (<0.7 FTE) that carry out administrative functions in a degree of privacy, typically Research Fellows, VMOs and any staff referred to in Office C.
 - An individual 4.4m² workstation will be allocated to staff that spend the majority of the day at their desk; and
 - A 2.2m² workstation will be allocated for intermittent use by visiting staff/consultants and is not designed as the primary workplace but a space to attend ad hoc functions; and
 - Shared offices or workspaces must be encouraged, wherever possible, to promote cost effective office accommodation.
- **Open Plan** is described as making the optimal use of large, open spaces and minimises the use of small, enclosed rooms such as private offices;
 - **Collocate workspaces for related services, where possible.** Support areas such as reception points, waiting areas, tutorial rooms, beverage areas, central printing, and staff toilets should be shared when office spaces are collocated, and justified by operational requirements;
 - Collocation should consider **identifying and grouping staff and services** who might be handling similar confidential information, and should also consider the acoustics and noise levels within shared workspaces;
 - **Include activity-based workstations that are flexibly designed**, reflecting changing patterns of work including employment hours, type of work undertaken, job share and multi-site appointments;
 - **Multiple breakout/meeting rooms** will be provided for private meetings / confidential conversations;
 - Support increased collaboration between health professionals and a **focus on multidisciplinary teamwork**, including integration, collaboration, and multidisciplinary interaction;
 - Include **staff only, 'patient free' areas**, providing a sanctuary away from the work environment;
 - Ensure **adequate storage space** for both work related and employee personal items, such as staff lockers; and
 - **Public amenities** are to be provided when office spaces are collocated with clinical areas to cater for visitors to the administrative area.

The area allocations will also be consistent with the **CHS Accommodation Principles**⁴⁹, as per Table 28-1 below:

49. Canberra Health Services, Feb 2023, Canberra Health Services Accommodation Principles.

Table 28-1: Canberra Health Services Accommodation Principles⁵⁰

CATEGORY	PRIORITISATION	HEALTH SERVICES
1	Clinical staff delivering the CH based patient care requiring direct patient contact.	Nursing and midwifery staff, allied health staff, medical staff, specialists, medical imaging, medical physics/radiation engineering staff.
2	Administration staff directly supporting the delivery of CH based patient care. Support services providing direct support to the delivery of CH based patient care.	Reception, pathology, clinical support administrative staff such as service coordinators. Food services, biomedical, facilities maintenance, IPU Services, health assistants, Sterilizing Services, cleaning, security, fleet/parking, mail, fire/emergency management, Switchboard, contract management, localised supply services, critical IT systems support staff.
3	Line management of clinical staff.	ADON, DON, Clinical Directors, Allied Health and Administration Managers for these teams.
4	Support services providing auxiliary support to the delivery of CH based patient care.	People & Culture (HR) and Finance Business Partners Quality, Safety, Innovation, and Improvement Work Health Safety Insurance and Legal Liaison Unit Medico legal functions Capital Project Delivery Clinical Liaison Officers Chief Information Officer Territory Wide Surgical Services.
5	Other support services	Finance and Business Information, Capital Project Delivery, Canberra Hospital Foundation, People & Culture, Strategy and Policy, Media and Strategic Communications

50. Note: On campus accommodation to be prioritised for Categories 1 to 3, Categories 4 and 5 to be accommodated off campus; Off-campus accommodation to be a mixture of dedicated health locations or ACT government office accommodation, Health Services examples provided do not cover all workforce areas and are provided for guidance only, CHS Accommodation Principles have been developed specifically to inform allocation of space on CH campus. However, where applicable, the principles can be applied to non-CH campus locations.

29. Front of House

Each of the new buildings in the Phase 2 redevelopment will require FOH services. These are described below.

29.1. FORECOURT AND ENTRY

The public spaces and FOH services and amenities are those which require location in the main entrance or thoroughfare of the hospital and are easily accessible for patients, families, carers, and staff.

The building entry will become the pivotal point for all arrivals, enquiries and redirection of patients and visitors accessing any of the services in the building.

Arrival at the facility should be a smooth and streamlined process from drop-off locations, car parking and pedestrian circulation areas. The entry should be highly visible, identifiable and provide the most direct route to clinical areas and points of care. The foyer will accommodate commercial space as befits the scale of the building, patient/guest convenience, and proximity of other like commercial facilities, which in the case of Building 10 will be a retail pharmacy.

Other facilities will typically include trolleys, wheelchairs, adequate toilets for relatives /carers to wait, including male and female public and disabled toilets, a parenting/breastfeeding room with baby change facilities within the toilets, and an adult change space. At least one the buildings will also have a multi-faith space off the front foyer.

Entry will be designed to ensure staff and patient safety. Patients will enter the buildings via the main entry and be dispersed to the various departments from a central reception and waiting point. Patients being transported to an inpatient unit via non-emergency vehicles will access the facility via a dedicated entry.

Access to the hospital from the staff car park will be accommodated at a location closely accessible from the car park. Controlled access for staff will be provided via swipe cards.

29.2. MAIN RECEPTION

The design of the FOH should provide a light, open and welcoming arrival sequence for patients. Care should be taken to ensure that the first impression is welcoming and calm environment that appears efficient and orderly even during busy periods. To support this, internal circulation should be designed in simple intuitive ways to assist in preventing long complicated routes or decision-making processes to ensure people are able to easily navigate around the facility.

The reception should be located so that it is immediately visible to all visitors upon entry to the main foyer. The reception desk will accommodate between two and four workstations that suit the scale of the building. Attention will need to be given to the acoustic requirements of the main telephony functions. An area behind the reception is required for photocopying, scanning and label printers. The design of the reception desk should consider the view from the patient's perspective as well as accommodating deep counter tops and design features to protect staff. Furthermore, it should provide for visibility of the waiting spaces, amenities, and access points. The use of soundproof glass and other sound attenuation is required for these areas.

29.3. SECURITY

In general, design would facilitate and control of after-hours public access by authorised persons. All external doors and access points must be capable of being closed and locked after-hours, which is the role of the Security Department. Design must allow for staff and patients to access the facility after-hours.

Areas that staff will have access to after-hours include staff amenities, car park and bike lockers. Staff will have access to clinical and non-clinical areas based on need. All areas should be controlled by staff swipe cards. Security personnel should have the ability to lock certain areas of the building in threatening situations of Code Grey or Code Black emergency codes.

Design features that enable natural surveillance will be a feature of the new buildings, including controlled access, observation and a safe and secure environment that incorporates the elimination of climbing, jumping, and any potential self-harm fixtures/fittings e.g., ligature points, height of balustrades and handrails etc. The reception area and Security control room should be adjacent to one another each with full visibility to the entrance lobby. Security Services will be extended to provide a high profile but non-intrusive service on a planned preventative and reactive basis 24hrs a day and shall always be manned by competently trained Security Staff.

This may include, but not be limited to, the following:

- CCTV;
- Access control;
- Alarms – fixed and mobile duress systems;
- Intercom and communications;
- Physical security (barriers, walls doors, locks, bollards);
- Visitor management system;
- Patient and staff tracking;
- Photo identification; and
- Intruder detection.

29.4. PATIENT REGISTRATION, WAITING AND WAY-FINDING

Many hospitals are using self-register systems for patients presenting to outpatient departments and all other areas where patients can self-register. Self-registration kiosks will be located near sub-wait areas to reduce traffic and congregation of groups in the main entry foyer and for smooth patient flow. Consideration of the area's design should also promote the transition of people away to other areas (be it waiting areas with comfortable seating or directly clinical and non-clinical areas) in a fast and efficient manner to assist in promoting a non-congested and calm front entrance experience.

Appropriate internal spaces should be provided adjacent to all entrances for people to sit and wait, including patients waiting for pick up or transfer that are welcoming, user friendly and designed in a manner which does not congest the entrances they are near.

The incorporation of key place making and wayfinding features which may take the form of site-specific artworks, display areas or installations within the "front of house" design and throughout public spaces, should include an emphasis on visual connection and orientation.

Signage will be prominent, uniform, concise, written in plain English and include Braille indicators. Universal pictograms will be used where possible. In addition, the connection with the outside world, and nature, as well as access to natural light should be emphasised throughout the design features. Walls in the foyer including all corridor walls should have appropriate noggins and lighting to enable hanging of artwork and associated lighting. Power and data will need to be dispersed along the walls within the main foyer to enable the fixing of various electronic and interactive patient entertainment screens.

29.5. CULTURAL RESPONSIVENESS

Public confidence in any hospital is an important part of its public image and CH seeks to create an image which is welcomed by the community. As such, the design must respect the special needs and multicultural sensitivities ranging from children to elderly patients and their families /carers, including staff of the facility, whilst providing a comfortable and welcoming environment for all its visitors.

The CH aims to be culturally responsive through the provision of an environment that is respectful and relevant to the health beliefs, health practices, culture and linguistic needs of the diverse populations and community of its catchment. As such, design of public spaces needs to incorporate the use of public artworks or design features that recognise and celebrate this cultural diversity.

Implicit in the cultural consideration underpinning the design features is the principle of recognition of the traditional landowners and incorporation of Aboriginal heritage. The design should provide a culturally safe service and environment that is spiritually, socially, and emotionally safe, as well as physically safe for Aboriginal and Torres Strait Islander people; where there is no assault challenge or denial of their identity, of who they are and what they need.

30. Back of House

The BOH service will provide the functionality to meet the logistics needs of the new buildings in the Phase 2 redevelopment. Potential components of the BOH services are described below. Please note the exact components of BOH will be determined after the concept design phase.

30.1.1. Centralised Equipment Store

The Central Equipment and Courier Service at CH is a supportive inpatient service function supplying the hospital with a variety of clinical equipment for patient care across the Canberra Hospital campus, with a specific focus on pressure care, falls prevention, bariatric equipment and infusion pumps. This unit also couriers pathology blood products and patient specimens within CH and the National Capital Private Hospital.

30.1.2. Transport Pool

The Transport Pool and Wards Persons service is responsible for providing non-clinical support to the hospital, with a focus on patient-centred care, transporting patients through the hospital, and providing assistance to patients' positioning using appropriate equipment and manual handling techniques.

30.1.3. Linen Services

Centrally delivered and distributed to the new buildings.

- Linen will be distributed to linen stores and departmental linen bays by cleaning staff. Clean linen supplies shall be stored on trolleys in designated linen bays in all patient areas. Restocking will be by impress system;
- Dirty linen will be collected from the source and stored in dirty linen hampers in dirty utility rooms and disposal rooms. Collection and transfer to a central soiled linen holding room at the loading dock will occur on a regular basis; and
- Departments that require specific sterile linen will have this supplied on their exchange trolley.

30.1.4. Supply and Materials Management

- General store for non-clinical stock – toilet rolls / paper towels;
- All stock arrives, sufficiently broken down so that pallet delivery capacity is not required, and then distributed to departments;
- Dialysis fluids will be distributed to departments from a central facility;
- Additional space for excess stock over the busy periods (Easter/Christmas when suppliers are shut);
- Pharmacy – bulk supply of drugs will be delivered straight to the Pharmacy department; and
- A 500L chemical cabinet located in the general store will be sufficient for the storage of cleaning chemicals and alcohol-based hand gels.

30.1.5. Cleaners Storage

- A Store - Cleaners will be required for central storage of chemicals and supply items, equipment, including storage space for 2-3 floor scrubbers; and
- Cleaners Rooms will be required in clinical areas, with some shared between services.

30.1.6. Waste

- Waste management and removal will be managed locally. Waste management and removal will be as per Industry Code of Practice for the Management of Clinical and Related Waste, which includes appropriate segregation of waste and no decanting of waste between source and site removal;
- Waste will be segregated at the source and will include general, clinical, cytotoxic, and recyclable waste as a minimum;
- Clinical Waste (contaminated waste): Designated mobile bins for contaminated waste will be provided in dirty utility and sub-dirty utility rooms of all departments;
- General (dry) Waste: Designated mobile bins will be provided in all departments according to the volume generated;
- Recyclable Waste: Paper, cardboard, glass, aluminium, and plastics will be placed in co-mingled bins for collection on a regular basis. These will be also provided within the food retail;
- Sharps: Tamper proof, disposable containers will be provided in all clinical areas for disposal of sharps at point of use. Filled containers will be secured and held in the dirty utility room or disposal room to await collection by designated staff. Collection will occur on a regular basis. Sharps containers will also be provided in all public toilets. When full, containers will be changed by the cleaning teams;
- Cytotoxic Waste: Designated lockable colour coded (usually purple lids) mobile bins will be provided to the Pharmacy and any other location that prepares or administers cytotoxic agents;
- Dirty Utility Rooms will accommodate 2 x 660L bins for general waste and co-mingle recycling, and 2 x 240L clinical waste bins. Waste will be removed from Dirty Utility rooms and Disposal rooms once daily. Waste will be moved through the facility via service corridors and lifts;
- General and cardboard waste will be compacted prior to removal. Separate general waste and cardboard compactor are to be accommodated adjacent to the dock area. Adequate vehicle manoeuvring space appropriate to the type of compactor is required;
- Waste removal from site by an external contractor will be managed under the relevant contract process. Emergency spill kits are to be readily available within the area; and
- Service corridors and lifts are required to facilitate back of house movement of waste.

30.1.7. Food services

- There will be commercial food services in the foyer for staff, patients, and their families/carers;
- The café will require heating and chilling;
- Patient food services will be managed by CH and include:
 - ▶ Full catering service for inpatient areas;
 - ▶ Light meals and snacks (for example sandwiches, fruit, biscuits, and beverages) as required for specific Day services (for example haemodialysis). Fresh food orders for these services will be delivered daily and stored in fridges and designated storage areas. Fresh food will be distributed by trolley to the designated service;

- All dry goods (tea, coffee, and sugar), long life juice and milk will be purchased externally and delivered to the central store to be distributed as required; and
- Beverage making facilities will be provided for use in staff rooms throughout the facility. In addition, a beverage bay will be located for use by staff, visitors, and patients as appropriate. Beverage bays in patient areas will be secured as required. Beverage supplies will be ordered by the unit from the central store.

30.1.8. Medical Gases

- Special facilities will be provided for the storage of gas bottles, flammable products, and liquid oxygen. Deliveries will be direct to the medical gas compound, complemented by localised gas bottle storage facilities adjacent to clinical units;
- Plant rooms will incorporate requirements for medical gases; and
- A Dewar system developed for pathology.

30.1.9. Healthcare Technology Management

- Healthcare Technology Management (HTM) is a business unit within the Medical Services Division of CHS. HTM is responsible for the healthcare technology management (planning, assessment, risk assessment, procurement, installation, acceptance, commissioning, strategic maintenance planning, maintenance, replacement, and disposal of CHS inventory of medical equipment, medical electrical systems and medical IT-networks, a significant component of which is located on the CH campus.
- HTM services undertake the on-site support, servicing and repair of mobile medical equipment including management of medical gases;
- HTM requires access to documentation, operations and maintenance manuals, certifications, policies, and standards. All medical equipment assets will be recorded including all necessary details relating to procurement, maintenance, operation, compliance, and certification;
- Dirty and clean equipment will be handled and stored separately in line with infection control guidelines;
- Servicing and maintenance of high-end technology including imaging equipment will be provided by equipment vendors under maintenance contracts; and
- HTM workshop for the servicing and repair of mobile medical equipment will be equipped with medical gases and a sink for cleaning.

30.1.10. Information, Communication and Technology

- Information Communication Technology (ICT) impacts nearly every aspect of patient care, treatment, research, and facility operations, and is fundamental to the development of effective integrated care and advances in health care outcomes. ICT will drive coordination and integration of health care and communication, with greater information sharing between staff and patients within the community hospital setting;
- Integrated systems between the CHS campuses, and where possible co-located partner service providers, will support:
 - ▶ Continuity of care for patients that may utilise more than one service;
 - ▶ Clinical staff in their decision making;
 - ▶ Efficient and coordinated management of patient flow;
 - ▶ Best practice clinical care;

- ▶ Future service planning to meet the catchment's needs through the collection and analysis of activity data;
- ▶ Wearable patient monitoring technology;
- ▶ A proportion of consulting rooms will have telehealth/visual capacity;
- The ability to harness future technologies in a way that will enhance service delivery relies on the provision of adequate and future-proofed infrastructure. This should be capable of proactive development and adoption rather than reactive reconfiguration, sufficient server space to store and support programming, and implementation of a Wireless network solution within the hospital. This will be achieved through:
 - ▶ Integrated digital records, internal referrals, discharge, triage, and referral letters; and
 - ▶ Optimised use of mobile phone technology, teleconferencing and Telehealth;
- Of particular significance will be the development of ICT able to manage the emerging integration of clinical practice with Artificial Intelligence applications in clinical diagnosis, particularly for the clinical support services of pathology, medical imaging and pharmacy;
- Use of robotics; and
- Provision be made for enable remote, real time clinical monitoring of patients in their homes.

ICT Infrastructure

- ICT infrastructure and systems will comply with eHealth standards for data centres, communications rooms, cabling lengths etc., with additional capacity to support progress to units a virtual health environment and meet other ongoing changes in technology. Communication rooms are required on all floors;
- Sufficient redundancy is required to enable the adoption of emerging technologies that enhance patient care outcomes and the efficiency and effectiveness of service delivery. The selection of ICT systems and devices will enable the development of an integrated health care information and facility management system;
- Fixed duress alarms will be provided in public facing areas (for example, reception desks and some higher-risk services). Mobile duress infrastructure will be provided in designated areas as relevant;
- Nurse call infrastructure will be provided in designated clinical rooms / chairs;
- Overhead voice paging and overhead annunciation will be controlled by the main reception / switchboard;
- Wireless capability sufficient to support staff and the public in all areas of CH.

Facilities and Asset Management

The Facilities Management Section of Infrastructure and Health Support Services is responsible for the facilities management services across all CHS properties and buildings, plant and non-clinical equipment. Facilities Management is responsible for the coordination of:

- High quality and timely planned and reactive maintenance
- Technical and trade skill repairs
- Strategic asset management
- Property leasing
- Utilities
- Safety and Risk; and