

Part B – Health Facility Briefing & Design

Volume 1

Including Functional Planning Units



Indian Health Facility Guidelines

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Table of Contents

1.0	Introduction	7
1.1	Structure of these Guidelines	7
1.2	Levels of Recommendation	7
1.3	Health planning	7
1.4	Health service planning	7
1.5	Health facility planning	8
2.0	Role Delineation Guide	9
2.1	Role delineation level (RDL)	9
2.2	Role delineation guide	9
3.0	Standard Components	10
3.1	Room data sheets (RDS)	10
3.2	Room layout sheets (RLS)	10
4.0	Planning	11
4.1	Introduction	11
4.2	Planning	11
4.3	Area Measurement Methodology	12
4.4	Area Measurement Diagrams	13
4.5	Parking and Vehicular Access	16
5.0	Acceptable Standards and Guidelines	19
6.0	Administration Unit	20
6.1	Introduction	20
6.2	Planning	20
6.3	Design	21
6.4	Components of the Unit	22
6.5	Schedule of Accommodation	23
6.6	Functional Relationship Diagram	25
6.7	References and Further Reading	25
7.0	Admissions Unit	26
7.1	Introduction	26
7.2	Planning	26
7.3	Design	28
7.4	Components of the Unit	30
7.5	Schedule of Accommodation	32
7.6	Functional Relationship Diagram	34
7.7	References and Further Reading	34
8.0	Adult Mental Health Inpatient Unit	35
8.1	Introduction	35
8.2	Planning	35
8.3	Design	38
8.4	Components of the Unit	39
8.5	Schedule of Accommodation	41
8.6	Functional Relationship Diagram	45
8.7	References and Further Reading	45
9.0	Blood Bank	46
9.1	Introduction	46
9.2	Planning	46
9.3	Design	48
9.4	Components of the Unit	49
9.5	Schedule of Accommodation	51
9.6	Functional Relationship Diagram	52
9.7	References and Further Reading	53
10.0	Catering Unit	54
10.1	Introduction	54



10.2	Planning.....	54
10.3	Design.....	56
10.4	Components of the Unit	57
10.5	Schedule of Accommodation	60
10.6	Functional Relationship Diagram.....	61
10.7	References and Further Reading	61
11.0	Child & Adolescent Mental Health Unit	62
11.1	Introduction.....	62
11.2	Planning.....	62
11.3	Design.....	64
11.4	Components of the Unit	66
11.5	Schedule of Accommodation	68
11.6	Functional Relationship Diagram.....	71
11.7	References and Further Reading	71
12.0	Cleaning & Housekeeping Unit	72
12.1	Introduction.....	72
12.2	Planning.....	72
12.3	Components of the Unit	72
12.4	Schedule of Accommodation	74
12.5	Functional Relationship Diagram.....	74
12.6	References and Further Reading	75
13.0	Community Health Unit	76
13.1	Introduction.....	76
13.2	Planning.....	77
13.3	Design.....	79
13.4	Components of the Unit	80
13.5	Schedule of Accommodation	82
13.6	Functional Relationship Diagram.....	86
13.7	References and Further Reading	86
14.0	Day Surgery/ Procedure Unit	87
14.1	Introduction.....	87
14.2	Planning.....	87
14.3	Design.....	90
14.4	Components of the Unit	91
14.5	Schedule of Accommodation	92
14.6	Functional Relationship Diagram.....	94
14.7	References and Further Reading	95
15.0	Dental Health Unit	96
15.1	Introduction.....	96
15.2	Planning.....	96
15.3	Design.....	96
15.4	Components of the unit	97
15.5	Schedule of Accommodation	98
15.6	Functional Relationship Diagram.....	100
15.7	References and Further Reading	100
16.0	Emergency Unit.....	101
16.1	Introduction.....	101
16.2	Planning.....	101
16.3	Design.....	107
16.4	Components of the Unit	110
16.5	Schedule of Accommodation	112
16.6	Functional Relationship Diagram.....	116
16.7	References and Further Reading	117
17.0	Engineering & Maintenance Unit	118
17.1	Introduction.....	118
17.2	Planning.....	118
17.3	Components of the Unit	119



17.4	Schedule of Accommodation	120
17.5	Functional Relationship Diagram.....	121
17.6	References and Further Reading	121
18.0	Hospital Morgue	122
18.1	Introduction.....	122
18.2	Planning.....	122
18.3	Design.....	124
18.4	Components of the Unit	126
18.5	Schedule of Accommodation	127
18.6	Functional Relationship Diagram.....	128
18.7	References and Further Reading	128
19.0	Inpatient Accommodation Unit	129
19.1	Introduction.....	129
19.2	Planning.....	129
19.3	Design.....	131
19.4	Components of the Unit	135
19.5	Schedule of Accommodation	136
19.6	Functional Relationship Diagram.....	138
19.7	References and Further Reading	138
20.0	Intensive Care Unit	139
20.1	Introduction.....	139
20.2	Planning.....	139
20.3	Design.....	141
20.4	Components of the unit	143
20.5	Schedule of Accommodation	144
20.6	Functional Relationship Diagram.....	147
20.7	References and Further Reading	147
21.0	IVF Unit (Fertilisation Centres)	148
21.1	Introduction.....	148
21.2	Planning.....	148
21.3	Design.....	150
21.4	Components of the Unit	152
21.5	Schedule of Accommodation	156
21.6	Functional Relationship Diagram.....	158
21.7	References and Further Reading	159
22.0	Linen Handling Unit	160
22.1	Introduction.....	160
22.2	Planning.....	160
22.3	Components of the unit	160
22.4	Schedule of Accommodation	162
22.5	Functional Relationship Diagram.....	163
22.6	References and Further Reading	163
23.0	Main Entrance Unit	164
23.1	Introduction.....	164
23.2	Planning.....	164
23.3	Design.....	164
23.4	Components of the unit	164
23.5	Schedule of Accommodation	166
23.6	Functional Relationship Diagram.....	167
23.7	References and Further Reading	167
24.0	Medical Imaging Unit- General.....	168
24.1	Introduction.....	168
24.2	Planning.....	168
24.3	Design.....	170
24.4	Components of the unit	172
24.5	Schedule of Accommodation	173
24.6	Functional Relationship Diagram.....	177



24.7	References and Further Reading	178
25.0	Medical Records Unit.....	179
25.1	Introduction.....	179
25.2	Planning.....	179
25.3	Design.....	182
25.4	Components of the Unit	184
25.5	Schedule of Accommodation	185
25.6	Functional Relationship Diagram.....	186
25.7	References and Further Reading	186
26.0	Mobile Unit.....	187
26.1	Introduction.....	187
26.2	Planning.....	187
26.3	Design.....	188
27.0	Nuclear Medicine Unit.....	189
27.1	Introduction.....	189
27.2	Planning.....	189
27.3	Design.....	191
27.4	Components of the Unit	193
27.5	Schedule of Accommodation	195
27.6	Functional Relationship Diagram.....	197
27.7	References and Further Reading	197
28.0	Obstetrics Unit	198
28.1	Introduction.....	198
28.2	Planning.....	198
28.3	Design.....	201
28.4	Components of the Unit	203
28.5	Schedule of Accommodation	205
28.6	Functional Relationship Diagram.....	208
28.7	References and Further Reading	208
29.0	Operating Unit	209
29.1	Introduction.....	209
29.2	Planning.....	209
29.3	Design.....	212
29.4	Components of the Unit	213
29.5	Schedule of Accommodation	214
29.6	Functional Relationship Diagram.....	218
29.7	References and Further Reading	222
30.0	Outpatients Unit.....	223
30.1	Introduction.....	223
30.2	Planning.....	223
30.3	Design.....	225
30.4	Components of the Unit	227
30.5	Schedule of Accommodation	228
30.6	Functional Relationship Diagram.....	230
30.7	References and Further Reading	230
31.0	Pathology Unit.....	231
31.1	Introduction.....	231
31.2	Planning.....	231
31.3	Design.....	232
31.4	Components of the Unit	232
31.5	Schedule of Accommodation	234
31.6	Functional Relationship Diagram.....	235
31.7	References and Further Reading	236
32.0	Pharmacy Unit.....	237
32.1	Introduction.....	237
32.2	Planning.....	237



32.3	Design.....	240
32.4	Components of the Unit	241
32.5	Schedule of Accommodation	243
32.6	Functional Relationship Diagram.....	245
32.7	References and Further Reading	245
33.0	Public & Staff Amenities Unit.....	246
33.1	Introduction.....	246
33.2	Planning.....	246
33.3	Design.....	246
33.4	Components of the Unit	247
33.5	Schedule of Accommodation	249
33.6	Functional Relationship Diagram.....	250
33.7	References and Further Reading	250
34.0	Radiation Oncology Unit	251
34.1	Introduction.....	251
34.2	Planning.....	251
34.3	Design.....	251
34.4	Components of the Unit	252
34.5	Schedule of Accommodation	253
34.6	Functional Relationship Diagram.....	258
34.7	References and Further Reading	258
35.0	Rehabilitation – Allied Health Unit.....	259
35.1	Introduction.....	259
35.2	Planning.....	259
35.3	Design.....	265
35.4	Components of the Unit	268
35.5	Schedule of Accommodation	271
35.6	Functional Relationship Diagram.....	275
35.7	References and Further Reading	275
36.0	Sterile Supply Unit (SSU)	276
36.1	Introduction.....	276
36.2	Planning.....	276
36.3	Design.....	277
36.4	Components of the Unit	278
36.5	Schedule of Accommodation	280
36.6	Functional Relationship Diagram.....	281
36.7	References and Further Reading	285
37.0	Supply Unit	286
37.1	Introduction.....	286
37.2	Planning.....	286
37.3	Design.....	287
37.4	Components of the Unit	287
37.5	Schedule of Accommodation	289
37.6	Functional Relationship Diagram.....	290
37.7	References and Further Reading	290
38.0	Waste Management Unit.....	291
38.1	Introduction.....	291
38.2	Planning.....	291
38.3	Design.....	292
38.4	Components of the Unit	292
38.5	Schedule of Accommodation	294
38.6	Functional Relationship Diagram.....	295
38.7	References and Further Reading	295
39.0	Appendix A – Role Delineation Level Guide	296



1.0 Introduction

1.1 Structure of these Guidelines

Part B of the India Health Facility Guidelines covers the subject of Health Facility Design and the factors which influence the outcome. Health Facility Design requires knowledge, skill and experience. These guidelines alone may not be sufficient to ensure good design, however, using these guidelines, a reasonably skilled designer should be able to focus on the required functionality quickly and deliver a product which meets the minimum Local Health Authority requirements.

The administrative requirements for health facility applications have been covered in Part A of the India Health Facility Guidelines. This part focuses on the Architectural and Health Planning Aspects. This part may include aspects of service health service provision and facility design which are not part of the Local Health Authority approval but required as part of the process of delivering a competent health facility.

Part C addresses issues related to Access, Mobility and Occupational Health and Safety requirements.

Part D details the Infection Control requirements of healthy facilities.

Part E will focus on the Engineering aspects.

All parts must be taken into consideration in the design of health facilities.

1.2 Levels of Recommendation

1.2.1 *Mandatory Requirements*

Within these Guidelines, all paragraphs by default are mandatory. In situations where the text has the potential for misunderstanding, the note "mandatory" may be used to clarify any aspect which is absolutely required without re-interpretation. Even if the word "Mandatory" does not appear in the text, it does not indicate that the paragraph is optional.

This principle also applies to Schedules of Accommodation, Room Data Sheets and Room Layout Sheets. Items listed are required and only optional if indicated.

1.2.2 *Recommended Requirements*

On some occasions a standard is mandatory but a higher standard is recommended. The intention is to guide designers who wish to voluntarily upgrade the facility to a higher standard and wish to know what the higher standard is.

1.2.3 *Optional Requirements*

The text, Schedules of Accommodation and Room Data Sheets will indicate "Optional" for all items that are not mandatory requirements.

1.3 Health planning

Health Service Provision is determined by the discipline known as Health Planning. There are two branches to this discipline; Health Service Planning and Health Facility Planning.

1.4 Health service planning

This discipline relates to the research, analysis and calculation of demand and supply for a



given population catchment. Every competent proposal for a health service starts with a Service Plan.

1.4.1 Demand

A Health Service Planner uses various statistical tools as well as benchmarks and localised information to determine the raw demand. This may be represented by Occasions of Service (OOS), Average Length of Stay (ALS), Presentations Per Annum (PPA) etc. The service planner will consider inflows of patients from other catchment areas as well as outflows to other catchment areas. The calculations will include level of self-sufficiency desired or anticipated.

The demand is typically calculated for a period of time into the future known as the Time Horizon of the Study. This may be 10 to 20 years into the future. The starting point will be known as the Base Point or Base Year. The characteristics of the population in terms of age, gender and predisposition to various diseases and socio-economic class have the greatest influence on the demand of each population catchment.

A Service Planner finally converts raw demand into facility units known as Key Planning Units (KPU's). KPU's may vary greatly depending on the nature of the facility. They include:

- Bed numbers of a variety of types
- Operating Room Numbers
- Birthing Room Numbers
- Emergency Treatment Cubicles
- Consultation Rooms
- Diagnostic modes of a variety of types

These KPU's are later used by Health Facility Planners to prepare a full brief for the proposed facilities.

1.4.2 Supply

This refers to the current supply of health facilities and the service they provide to the same population catchment. This may or may not meet the needs of that population catchment now or in the future.

1.4.3 Service Gap

The difference between the Demand and Supply is the Service Gap which needs to be met by the provision of health facilities. The process of determining this gap and proposing solutions for meeting it is described as:

- Needs Analysis,
- Feasibility Study; or
- Business Case

A proposal for a facility, therefore, should not commence with a block of land and design. Health Facilities are too important to be treated purely as a real-estate development. A competent Service Plan resulting in a Needs Analysis, Feasibility Study or Business Case must be at the core of any proposal.

1.5 Health facility planning

This is the discipline which aims to design facilities and meet the health service gap. The outcome of this discipline is design and specifications for the construction of facilities or refurbishment and expansion of existing ones.

Design does not start from a blank sheet of paper. Prior to design a great deal of preparation is required. These are briefly described in the following sections.



2.0 Role Delineation Guide

The health service requirements can be classified under broad categories such as Emergency, Inpatients, Surgery, and Intensive Care etc. Each of these may be designed for a particular level or standard of service. These are known as Role Delineation Level or RDL and numbered from 1 to 6 (including in-between numbers such as 4-5), level 1 representing uncomplicated health facilities, ascending to level 6 representing complex specialist services and hospitals.

2.1 Role delineation level (RDL)

To illustrate the difference in RDL, an Intensive Care Service provided by a major Metropolitan hospital which also incorporates Teaching and Research will be at RDL 6. The same service provided at a small General hospital without Teaching and Research facilities will be at RDL 4. At higher RDL's the service provision will require access to higher levels of skill and additional, complementary services. For example Surgery at RDL 5 will require Intensive Care services also at RDL 5 plus many more supporting services.

The relationships between all the services and the inter-dependence of the services at each RDL results in a large matrix with services one side and 6 RDL's on the other side.

The operators of health facilities and/or the designers need to decide what services they wish to provide as well as the RDL for those services. Only then, the facility requirements can be determined and verified. For example, the number, type and size of rooms for an ICU service at RDL 6 will be different to one at RDL 4.

India Health Facility Guidelines provide a Role Delineation Guide which sets out the most common health services under each RDL. Under each category the requirements and dependencies are stated. The Role Delineation Guide is enclosed at the end of this section.

A blank version of the Role Delineation Guide is available in electronic spreadsheet format to allow the proposed services and RDL's to be listed. This is known as the Role Delineation Matrix. This RDL Matrix can be used by the Health Facility Planning team to prepare the Facility Brief. It is also used by the Local Health Authority to assess applications for health facilities (refer to Part A of the India Health Facility Guidelines)

2.2 Role delineation guide

The Role Delineation Guide is described in Part B, Volume 1, Appendix A of this document.



3.0 Standard Components

The FPU Schedule by RDL includes listings of Standard Room Types required. In order to assist designers to better understand the requirements of each room type, the India Health Facility Guidelines includes a comprehensive set of Standard Components. These Standard Components are represented by two sets of documents:

3.1 Room data sheets (RDS)

These are written descriptions of each room type, described under various categories:

- Room Primary Information; includes Briefed Area, Occupancy, Room Description and relationships, and special room requirements)
- Building Fabric and Finishes; identifies the fabric and finish required for the room ceiling, floor, walls, doors, and glazing requirements
- Furniture and Fittings; lists all the fittings and furniture typically located in the room
- Fixtures and Equipment; includes all the serviced equipment typically located in the room along with the services required such as power, data, hydraulics
- Building Services; indicates the requirement for communications, power, Heating, Ventilation and Air conditioning (HVAC), medical gases, nurse/ emergency call and lighting along with quantities and types as relevant

The Room Data Sheets (RDS's) represent the detailed briefing requirements of each room type. Some RDS's provide options for certain elements such as materials. If an external document refers to these RDS's, without qualifying the choice of options, then the default options will prevail. In case of any discrepancy between various documents, the RDS's will take precedence.

Where materials or elements are mentioned by generic type (eg Vinyl), the requirements may be satisfied by other materials and elements which have very similar properties (eg impervious sheet flooring).

Refer to Volume 2 and Volume 3 of Part B for the full set of Room Data Sheets.

3.2 Room layout sheets (RLS)

These are individual sheets incorporating typical design of rooms at 1:50 scale with abbreviations, dimensions etc. Each Room Layout Sheet includes a Plan as well as 4 or more elevations showing the installation height of elements.

Note: These Room Layouts are indicative plan layouts and elevations illustrating an example of minimum acceptable design standard. The Room Layouts shown are deemed to satisfy these Guidelines. Alternative layouts and innovative planning shall be deemed to comply with these Guidelines provided that the following criteria are met:

- Compliance with the text of these Guidelines
- Minimum floor areas as shown in the schedule of accommodation
- Additional 2 M2 added for each additional door above the minimum required area
- Heights and dimensions where shown
- Any Clean/ Dirty separations shown or implied
- Accessibility to and around various objects as shown or implied

Room Layout Sheets must indicate relative location and empirical dimensions of:

- Hand rails and Grab rails
- Call points, Power, Light Switch, Data and Gas outlets
- Bed Screens
- Sanitary Fixtures

Refer to Volume 4, Volume 5 and Volume 6 of Part B for the full set of Room Layout Sheets.



4.0 Planning

4.1 Introduction

The planning of Health Facilities requires general knowledge of the appropriate relationships between the various components. Certain components (also referred to as Functional Planning Units or FPU) need to be adjacent or close to other components. Most components must be accessible independently without having to go through other components. In short, the planning of a Health Facility requires a certain logic which is derived from the way the facility functions.

4.2 Planning

4.2.1 *Good Planning Relationships*

- Increase the efficiency of operation
- Promote good practice and safe health care delivery
- Minimise recurrent costs
- Improve privacy, dignity and comfort
- Minimise travel distances
- Support a variety of good operational policy models
- Allow for growth and change over time.

4.2.2 *Inappropriate Planning Relationships:*

- Result in duplication and inefficiency
- May result in unsafe practices
- Increase running costs
- May result in reduced privacy, dignity and comfort
- Increases travel distance or force un-necessary travel
- Result in lack of flexibility to respond to future growth and change
- May limit the range of operational possibilities.

Planning of a complex Hospital or Day Procedure Centre depends on commonly recognised "good relationships" as well as site constraints and conformity with various codes and guidelines. In theory it is possible to go back to the basics every time. In practice, however, designers soon discover that this is an inefficient way of arriving at appropriate planning solutions. Just as in other buildings types e.g. Hotels and Shopping Centres, Health Facilities have overtime evolved around a number of workable Planning Models. These can be seen as templates, modules, prototypes or patterns for the design of new facilities.

A skilled designer will use these planning models to assemble the requirements of a health facility on the site without compromising functionality. Some of the key relationships are indicated or implied in the Functional Relationship Diagrams included in these guidelines.

4.2.3 *Local Design Regulations*

Typical Design factors for Health facilities depending on local customs and traditions should include the following

- Access to Recovery areas for relatives
- Separation of male and female recovery areas
- Separation of male and female waiting areas
- Larger family waiting areas
- Prayer room on each floor
- Independent male and female Inpatient Unit accommodation

PRAYER ROOMS

The typical hospital facility should respect the local customs of the population. Prayer rooms



on each floor may be required. Separate prayer rooms for male and female may be required. The following consideration should be given to prayer rooms.

- Location of the prayer room should be in an accessible area but away from noise, distraction and heavy clinical traffic.
- Orientation of the prayer room is important; appropriate location of entry into the prayer room is essential.
- Airlock to the prayer room is desirable; this may accommodate hand basin for ablution, shoe racks, bag lockers and coat hooks as deemed necessary.
- Appropriate finish on the floor and walls is desirable
- Windows are desirable.

4.3 Area Measurement Methodology

Within these Guidelines, Room areas, Departmental boundaries, Circulation, Travel and Engineering are defined and calculated according to the following standards.

4.3.1 *How to Measure Drawings*

To measure drawings, the following measurement technique will apply.

FOR ROOMS

- Areas are measured to the inside face of outside walls,
- To centre of walls to adjoining rooms,
- To the full thickness of corridor walls facing rooms,
- To the centre of departmental boundary walls (except where boundary wall adjoins a corridor).

Areas not included are:

- Circulation % (represented by Departmental corridors)
- Service risers, Service cupboards and Plant Rooms
- Fire Hose Reels, Fire Stairs, Lift Shafts

FOR DEPARTMENTAL CORRIDORS REPRESENTING CIRCULATION %

- Areas are measured to the face of corridor walls
- To the inside face of outside walls

Areas not included are:

- Service Risers, Service Cupboards and Plant Rooms
- Fire Hose Reels, Fire Stairs Lift Shafts

FOR 'TRAVEL'

- Corridors between departments (HPUs) to the face of corridor walls
- To the inside face of outside walls
- Stairs including Fire Stairs
- Internal Fire Stairs and ramps.

Areas not included are:

- Service risers and cupboards
- Fire Hose Reels, Lift Shafts
- Plant Rooms.

FOR ENGINEERING

- Plant Rooms, Fire Hose Reels and Service Cupboards to the centre of adjoining walls,
- To the inside face of outside walls,
- To the full thickness of riser walls.

Areas not included are Lift Shafts (the void area).

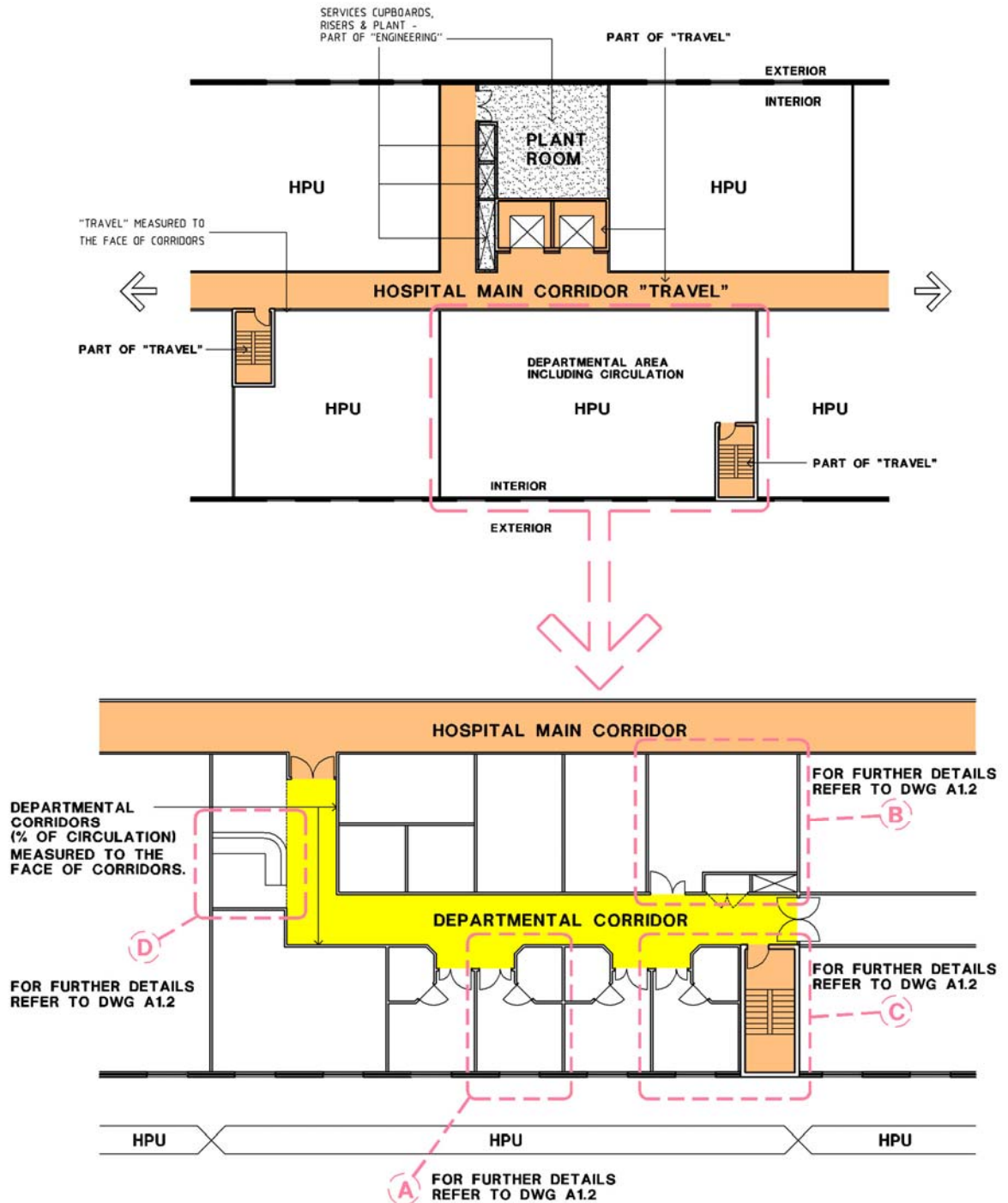
The minimum room sizes in these Guidelines assume wall thicknesses of 100mm. For wall



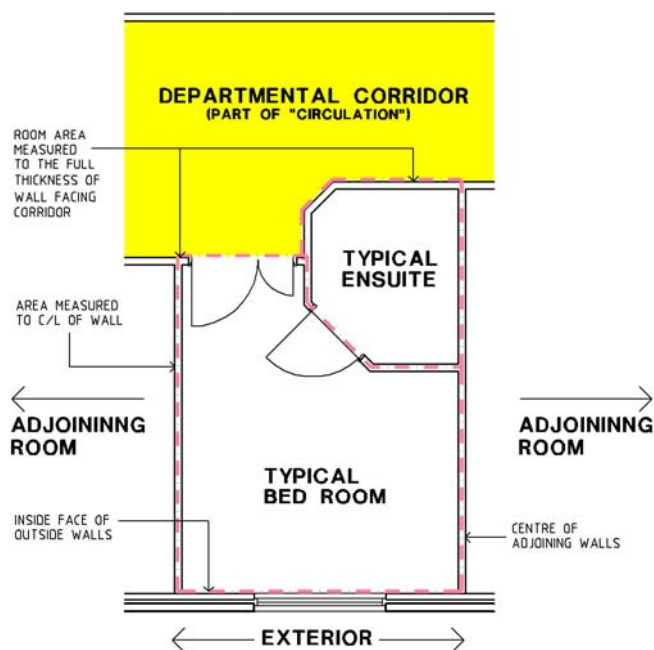
thicknesses of more than 120 mm, the minimum area of the room (as measured in accordance with these Guidelines) shall be increased to compensate for the greater wall thickness. Refer to Area Measurement Diagrams attached below for a visual representation of these area measurements.

4.4 Area Measurement Diagrams

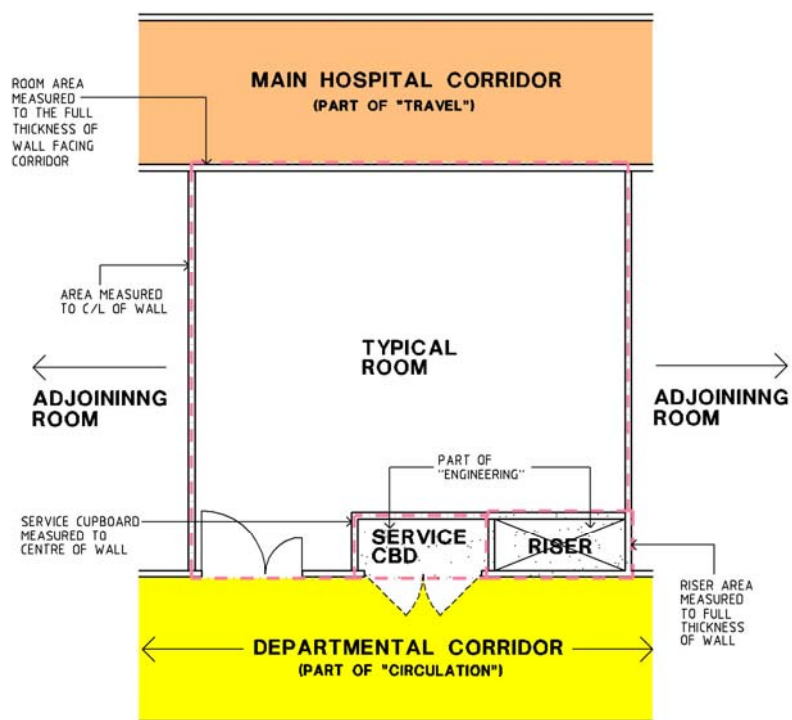
4.4.1 Area Measurement Methodology



MEASUREMENT OF ROOMS, CORRIDORS, TRAVEL



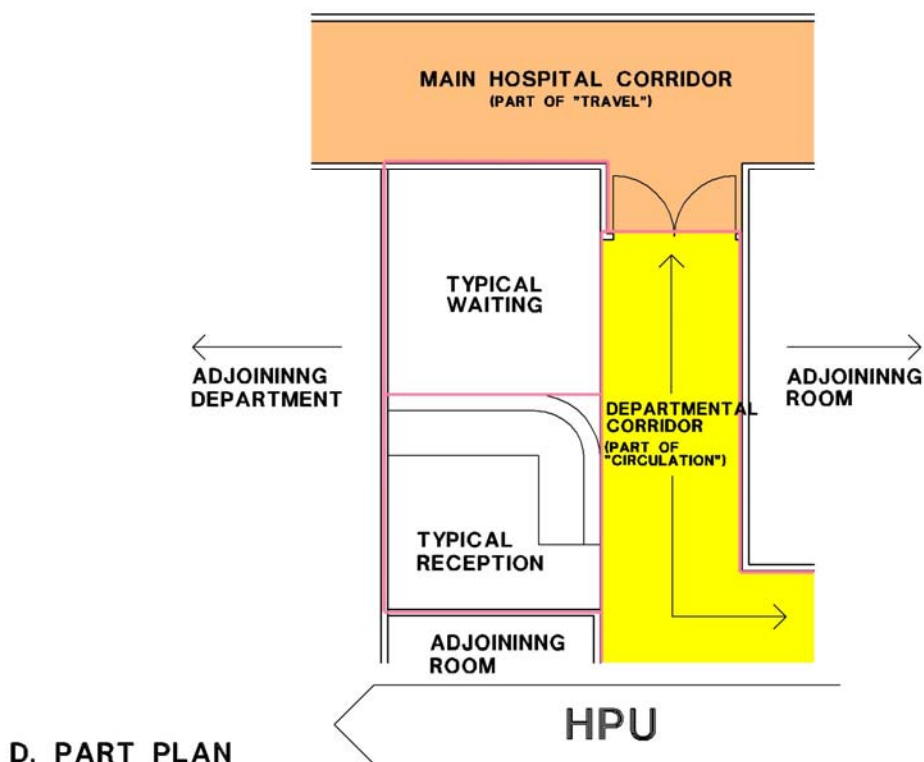
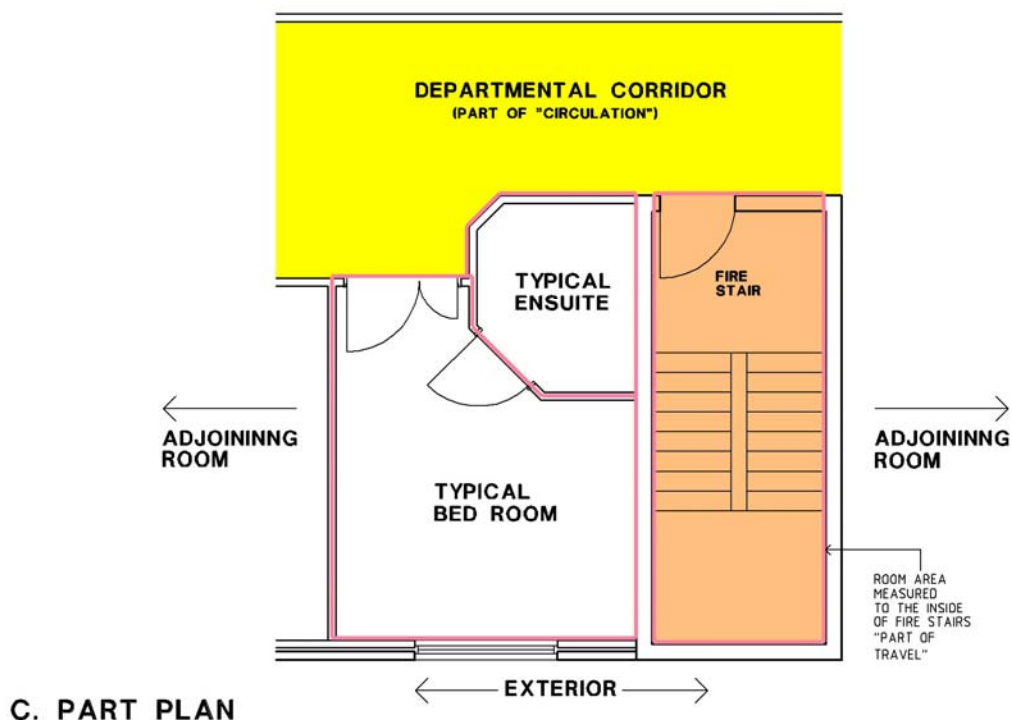
C. PART PLAN



D. PART PLAN



MEASUREMENT OF ROOMS, CORRIDORS, TRAVEL



4.5 Parking and Vehicular Access

4.5.1 Introduction

In a new hospital development, planned parking and vehicular access is essential and should be provided based on hospital functions, available staff, community needs and space available. The parking should provide an adequate number of spaces for vehicles including cars, commercial vehicles, emergency vehicles and 2-wheelers such as motorcycles, scooters and bicycles. Access to and from parking areas should meet disability standards and other relevant local and safety standards.

4.5.2 General Design Guidelines

PHYSICAL LOCATION

Various circumstances may dictate the location of the parking such as

- Location of Emergency department
- Location of the Main Waiting area
- Proximity to Staff, patients and other users.
- Practicality of consolidated parking versus spread out parking.
- Transport policy objectives laid by the local Road Transportation authority.
- Any other specific services offered at the Medical facility.

PHYSICAL CHARACTERISTICS

The physical characteristics of a car park must meet the needs of the different types of vehicles in use or expected to be in use.

For private and emergency vehicles, the car park or drop off areas should adhere to local building authority guidelines. For emergency areas, designated ambulance drop-off and parking is essential for the safety and well-being of patients and staff. Clear access ways and designated parking spots may need to be demarcated to avoid misuse.

For commercial and service vehicles such as delivery and waste management trucks, loading docks should be designed compatible with the type of vehicles to be used or expected to be used in the future. Traffic controls may need to be provided to segregate vehicles according to their use. For example loading/ unloading areas for a 'Clean' delivery truck and a 'Dirty' waste management truck. Similarly access points and access ways through the site need to be designed such that patient access does not interfere with emergency and service vehicle access.

PEOPLE WITH DISABILITIES

All access to and from the car park will need to adhere to local disability guidelines. Parking spaces for use by people with disabilities should be in accordance with such guidelines. A parking space for a person with disability should consist of an unobstructed area having a firm, plane surface with a fall not exceeding minimum requirements of the local disability code. Space width and overlap allowances also need to be in accordance with such codes. A continuous, accessible path of travel should be provided between each parking space to an accessible entrance/lift. Parking spaces should be identified by a sign incorporating the international symbol of access for people with disabilities.

COMMUNITY SAFETY

Car parking and vehicular access ways should provide a safe environment for its users. Clear sightlines should be provided throughout the car parking areas to enhance safety and avoid confusion. Car parks should be directly linked to accessible pedestrian pathways linking directly to the main building or reception areas. Adequate lighting is essential after hours for patients and staff to access their vehicles. Communication and security systems may be



installed in large car parks depending on the location, function and layout. Adequate traffic controls may be required to safely navigate pedestrian and vehicular traffic through the parking area. This could be achieved through signage or other electronic controls. Access ways and parking spots for emergency vehicles should be kept clear of any public interference for the well being of both patients and the general public. Loading and unloading areas should follow minimum local standards for Occupation and Health Safety. This may include adequate lighting, clear access ways and designated parking spots. Communications and security systems may be installed to monitor such areas that have low frequency of visitors or vehicular access.

LANDSCAPING AND SIGNAGE

Car parks should generally be attractive and pleasant spaces that are aesthetically designed for public and private use. To avoid unattractive expanses of paving, vegetation may be used to soften the visual impact. The landscaping should generally respect the terrain of the land. Trees may be utilised to provide greenery as well as shade during summer months. Plants should be selected that have vigorous growth, longevity, minimal maintenance and ample shade. Care should be taken that sub-soil drainage is provided for all trees and adequate drainage is provided for surface water run-off from paved areas.

Way finding and signage are important elements that safely guide patients and staff to and from the hospital building. Signage should prominently highlight pedestrian/disabled access ways. Clear directions to the nearest stairwell or lift well should be posted at prominent locations or at proper intervals. Proper signage also helps visitors to identify a particular location so that they are able to access their vehicles in an easy and timely manner. Care should be taken that exit and direction signs are clearly visible to avoid incidents. Security systems may be installed to discourage miscreants.

MAINTENANCE

The design of car parks and vehicular access ways should aim to achieve minimum maintenance. Elements such as signs, landscape, barriers etc should be designed to ensure minimal maintenance and discourage vandalism. For example sealed pavement may be used instead of gravel that requires constant maintenance.

4.5.3 *Community and Healthcare Facility Land use Policies*

Community and Healthcare Facility Land Use Policies may apply to a variety of areas for a hospital building. Travel associated with community and health facilities land use therefore covers a range of purposes including the journey to work, personal business and recreation. Based on these the modes of travel vary depending on the prevalent functions associated with the health facility. For example the local authority may require a drop-off/ pick up area for public transportation. Some communities encourage sustainable lifestyles and may require bicycle parking or direct pedestrian access from main arterial roads. Ready access to public transport is often particularly important because of the absence of viable alternatives for the community.

The design of the health facility should ensure that due consideration is given to policies laid by the local community council with regard to community land use and the amenities required for such land use. The safety of all users at all times is essential and care should be taken that no safety hazards are created by the provision of access and parking facilities for a development.

4.5.4 *Car Parking Calculator*

Designers of health facilities should use local guidelines for calculating the number of parking required for the facility. In the absence of such guidelines, the Health Facility Briefing System (HFBS) provides a tool that designers can rapidly and accurately estimate the number of parking required for cars, trucks and other vehicles. The tool is based on algorithms devised by transportation experts and is used by designers all over Australasia. Based on a set of 8



questions, the tool is able to accurately predict the estimated car parking load for the Health Facility. Despite this, the tool should be used in conjunction with the appropriate local Bye Laws to ensure full local compliance.

https://wic720d.server-web.com - # - Microsoft Internet Explorer

HFBS Carparking Calculator
Version 1.2.860 by HPT

Select the Criteria for Carparking Calculator Conditions

City: [Dropdown]

Enter appropriate values into cells below	Carparking Rate		
	Morning	Afternoon	
Number of staff during the morning peak	0.8		0
Number of staff during the afternoon peak		0.8	0
Number of medical and nursing students during the morning peak	0.6		0
Number of medical and nursing students during the afternoon peak		0.6	0
Coefficient of public transport provision – 0.9 if a public transport node (e.g. bus/rail interchange) is located within 250 m from the facility boundary, otherwise 1.0	1	1	0
Number of beds, all patients except maternity and children patients	0.1	0.2	0
Number of maternity and children beds	0.2	0.3	0
Number of beds or recliners for day patients	0.2	0.2	0
Number of effective full time doctors and specialists treating outpatients (including community and allied health, physiotherapy and imaging).	1.3	1	0

Design for

Staff and visitor parking spaces	0
Time restricted set down / pick up spaces	0
Bicycle spaces	0
Motorcycle spaces	0
Loading bays	3
Suitable for HRV	2

Width: 615, Height: 720

Internet

Car Parking Calculator – Health Facility Briefing System (HFBS)

4.5.5 Additional Reading and References

- Guidelines for Design and Construction of Health Care Facilities, The Facility Guidelines Institute, 2010 Edition.
- AS 2890.1: Parking Facilities. Part 1: Off street car parking, Standards Australia.
- ACT Parking and Vehicular Access Guidelines, Planning and Land Management, Department of Urban Services, Canberra, 2000
- Design Standards for Urban Infrastructure, Section 10 Parking Areas, Department of Urban Services, Canberra, Australia, Edition 1.
- AS 2890.6: Parking Facilities. Part 6: Off-street parking for people with disabilities, Standards Australia



5.0 Acceptable Standards and Guidelines

The design requirements of each FPU as well as various room types are also described in a number of Indian guidelines. These are described in part A.

The following represents acceptable international guidelines:

- Guidelines for Design and Construction of Health Care Facilities, The Facility Guidelines Institute, 2014 Edition.
- Australasian Health Facility Guidelines. (AusHFG Version 3.0), Australasian Health Infrastructure Alliance, 2009 refer to website www.healthfacilitydesign.com.au
- DH (Department of Health), K 'Health Building Notes' 2009. Retrieved from: www.estatesknowledge.dh.gov.uk 2013
- Paul V. Richter, (Risk Management Coordinator for Support Services, South Carolina Hospital Association, West Columbia, SC) 'Hospital Disaster Preparedness: Meeting a Requirement or Preparing for the Worst?' published on the American Society for Healthcare Engineering (ASHE) of the American Hospital Association (AHA) website: <http://www.ashe.org/advocacy/organizations/TJC/ec/emergency/hospdisasterprepare.html> 2013
- Design Guide for Hospitals and Day Procedure Centres (DGHDP) <http://www.healthdesign.com.au/vic.dghdp/>

Where one guideline is deemed to be inadequate in the coverage of certain facility types, another guideline has been listed.



6.0 Administration Unit

6.1 Introduction

6.1.1 *Description of Unit*

The Administration Unit provides for the direction and management of the facility. This will involve administrative tasks, interviews and meetings by a range of executive, medical, nursing and support personnel.

The level and range of facilities provided for general office and executive administration functions will vary greatly depending on the size of the proposed facility, the range of services prescribed in the Operational Policy Statement, and the management arrangements that will apply.

Provisions for the following administrative services shall be considered:

- Accounting and Finance
- CEO, General Manager and other administrative support staff
- Facility Management
- Human Resources and Payroll
- Education and Development staff
- Medical and clinical executive and support staff
- Nursing executive and support staff

6.2 Planning

6.2.1 *Operating Models*

The Administration Unit will generally operate during business hours. Meetings and functions being held after-hours will require access to be provided for both staff and visitors.

Depending on the size of the facility, Administration Unit may be provided as a single unit for small facilities, or as separate functional units grouped according to services (medical, nursing, education etc) in multiple locations for larger facilities.

6.2.2 *Planning Models*

Provision of daylight shall be maximised throughout the Unit especially for those who spend most of their working hours in a single confined space. Offices should be provided with external windows, where possible.

6.2.3 *Functional Areas*

Facilities shall be provided to accommodate the following administrative functions according to the Operational Policy:

- General and/or individual office accommodation for appropriate clerical, administrative, medical and nursing personnel, if required; where possible, open-plan workstations shall be considered
- Storage of office equipment, stationery and supplies
- Meetings and conferences as required
- Staff and support areas including Staff Rooms and toilets

The Administrative and Clerical staff shall have access to toilet and dining facilities, which may be shared with other hospital staff.

FUNCTIONAL ZONES:

For larger facilities where a single unit is not sufficient to accommodate all functions, the following services may be provided as smaller individual units:

- Clinical and Medical Services Unit



- Executive Suite (may include Meeting/ Boardroom, Pantry, Waiting and Reception area)
- Facilities Management Unit
- Finance Unit
- HR and Payroll Unit (Occupational Health and Safety staff may be included; Medical and Nursing personnel may be separate units)
- Education and Development Unit
- Nursing and Patient Services Unit

6.2.4 *Functional Relationships*

EXTERNAL

Administration facilities should be provided, where possible, in reasonable proximity to the main entrance of the facility but not necessarily on the ground floor.

INTERNAL

If several discreet units are provided, it is recommended to locate the executive suite and the finance unit adjacent to each other.

6.3 Design

6.3.1 *Environmental Considerations*

NATURAL LIGHT

Maximise provision of natural light to areas where staff workstations/offices are located.

PRIVACY

Privacy must be considered where confidential conversations are likely to take place. Acoustic privacy will be required in offices, meeting and interview rooms.

ACOUSTICS

Acoustic performance shall be high within the Unit, particularly conference and meeting rooms. Reverberation times and sounds levels shall be designed to meet the function of each space. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

6.3.2 *Space Standards and Components*

ERGONOMICS

Refer to Part C of these Guidelines.

6.3.3 *Safety and Security*

Administration Unit requires the following security considerations:

- Doors to all offices shall be lockable
- Rooms located on the perimeter of the Unit shall be locked at any time when they are not occupied by staff
- Rooms used for storing equipment and files must be lockable
- Provision of after-hours access and security for staff.

6.3.4 *Finishes*

Refer to Part C of these Guidelines.

6.3.5 *Fixtures and Fittings*

Refer to Part C of these Guidelines and Standard Components for information of fixtures and fittings.

6.3.6 *Building Service Requirements*

Provide IT/ Communication facilities including telephone lines, data connections, teleconferencing and videoconferencing as required within the Unit.



Refer also to Part E of these Guidelines.

6.4 Components of the Unit

6.4.1 *General*

The Administration Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

6.4.2 *Non Standard Components*

OFFICE – EXECUTIVE

Description and Function

The Executive Offices will be provided for facility or service directors and will be a larger room to allow for small meetings within the office.

Location and Relationships

The Executive offices may be provided as a zone within the Administration Unit with a Reception and secretarial offices in close proximity.

Considerations

Refer to Standard Components Office – CEO for the basic requirements. In addition, the Executive offices may include the following:

- Executive style furniture and fittings including joinery
- Entertainment facilities including television, DVD
- Beverage bay including refrigerator within the room or immediately adjacent
- Closet or wardrobe for items of clothing, briefcase, small items of luggage
- Comfortable seating that may include sofa lounges.



6.5 Schedule of Accommodation

6.5.1 Administration Unit Generic Schedule of Accommodation

Schedule of Accommodation for an Administration Unit for Levels 3-6

SUPPORT AREAS

ROOM/ SPACE	Standard Component		Qty x m2				Remarks
WAITING AREA	yes		2 x 10				1.2m2 per person as required
WAITING AREA - FAMILY	yes		1 x 25				
TOILET - PUBLIC - MALE	yes		1 x 3				If not available nearby
TOILET - PUBLIC - FEMALE	yes		1 x 3				If not available nearby
TOILET - DISABLED	yes		1 x 5				If not available nearby
RECEPTION	yes		1 x 9				1 staff. May be replaced by a workstation.
STORE - PHOTOCOPY / STATIONERY	yes		1 x 8				
BEVERAGE / PANTRY	yes		1 x 4				If no Staff Room
PANTRY	yes		1 x 8				Optional for functions
STAFF ROOM	yes		1 x 18				Optional; includes Beverage Bay
STAFF TOILET	yes		2 x 3				
STORE - FILES	yes		1 x 10				Documents & minutes
STORE - FILES	yes		1 x 10				Personnel files

OFFICES

Notes: Quantity to be determined by staffing establishment

Executives and Managers may be responsible for more than one area, but should have only one office assigned within the campus

ROOM/ SPACE	Standard Component		Qty x m2				Remarks
OFFICE - EXECUTIVE			1 x 18				
OFFICE - CEO	yes		2 x 15				For CEOs and General Managers
OFFICE - SINGLE PERSON, 12M2	yes		2 x 12				Managers, Staff Specialists, and Department Heads
OFFICE - SINGLE PERSON, 9M2	yes		3 x 9				Managers, Staff Specialists, and Department Heads
OFFICE - 2 PERSON SHARED	yes		2 x 12				Administrative support
OFFICE - 3 PERSON SHARED	yes		1 x 15				Finance, Nursing, Medical
OFFICE - 4 PERSON SHARED	yes		1 x 20				Human Resources, Finance

WORKSTATIONS

Note: Quantity to be determined by staffing establishment



ROOM/ SPACE	Standard Component		Qty x m2				Remarks
OFFICE - WORKSTATION	yes		4 x 6				Research Fellows Research Assistants
OFFICE - WORKSTATION	yes		4 x 6				Community Health, IT, Clinical Nurse Consultants,
OFFICE - WORKSTATION	yes		2 x 6				Administrative support as required

MEETING ROOMS

ROOM/ SPACE	Standard Component		Qty x m2				Remarks
MEETING ROOM – SMALL, 9M2	yes		2 x 9				Interview/ small meeting functions
MEETING ROOM - SMALL, 12M2	yes		2 x 12				Interview with family groups
MEETING ROOM - MEDIUM/ LARGE, 20M2	yes		1 x 20				Up to 16 persons
MEETING ROOM - MEDIUM/ LARGE, 30M2	yes		1 x 30				Up to 20 persons May be used as a Group Rm
MEETING ROOM - LARGE, 55M2	yes		1 x 55				Up to 45 persons May be used as a Group Rm
DISCOUNTED CIRCULATION %			25-30				Circulation will depend on size of unit

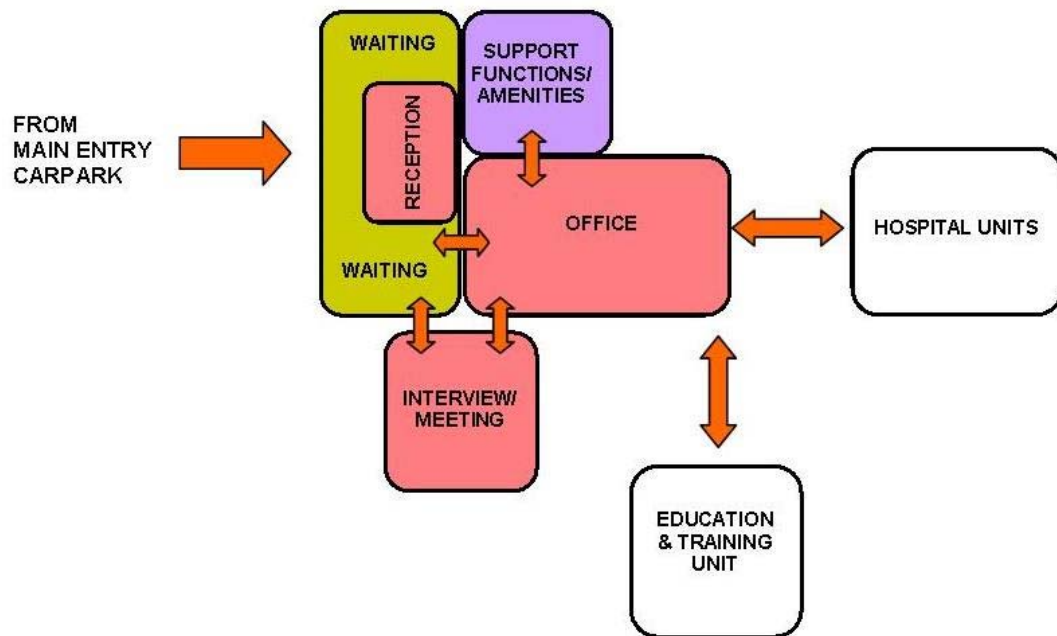
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



6.6 Functional Relationship Diagram

6.6.1 Administration Unit Functional Relationship Diagram



6.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Standards Australia, Handbook: Ergonomics - The human factor, A practical approach to work systems design, SAA HB5



7.0 Admissions Unit

7.1 Introduction

7.1.1 Description

The purpose of the Admissions Unit is the admission of patients, interview of patients as required and completion of the necessary documentation.

The Admissions Unit will perform the following functions:

- Patient pre-registration prior to admission
- Patient admissions
- Patient discharge planning
- Handling of patient transfers from other facilities
- Demand Management
- Management of medical records for admission purposes
- Collection of financial information for the Finance section

These optional services may be considered:

- Making appointments of patient for admission
- Cashier (alternatively, a centralised Cashier for the entire facility may be located near the Admission Unit)
- Allocation of beds (or there may be a dedicated Bed Manager located elsewhere)

Other clinical functions required during assessment phase which may be located in a separate Pre-admission Clinic include:

- Collection of patient information (eg. clinical condition and medical history)
- Processing of all relevant paperwork relating to admissions
- Providing referrals for diagnostic consultations (eg. X-ray, blood test, ECG)
- Providing referrals to anaesthetist, allied health professionals where necessary
- Providing education to patients regarding the anticipated clinical pathway

The range of facilities provided for Admissions will vary depending on the size of the proposed facility and the range of services prescribed in the Operational Policy. Admissions functions may also be accommodated in the Main Reception area.

7.2 Planning

7.2.1 Operational Models

There are two types of admission to a healthcare facility:

- Planned patients who have made pre-bookings at the facility
- Unplanned patients who usually require immediate care at the Emergency Unit.

Planned admissions can be either multiday inpatients or day-only patients. Unplanned admissions (after-hours emergency care) are commonly handled by the Emergency Unit directly.

Currently, the provision of a Pre-admissions Clinic is becoming common in many health facilities. This can streamline the admission process for all pre-booked admissions where clinical pre-assessment is required. This shall be designed as an outpatient service.

7.2.2 Planning Models

The Admission Unit may be a stand-alone Unit or co-located with the Main Reception area near the Hospital entrance.

Where Pre-admission Clinics are provided, they shall be located in the Unit where the



procedure will occur. An alternate option is to co-locate this unit with other outpatient services.

There shall always be close access to public amenities and waiting areas.

ADMISSIONS UNIT

The size of the Admissions Unit can vary greatly depending on its location, the size of the facility, and operational policies. It is possible to combine counters, offices, cubicles and workstations in an open-plan environment to interact with clients. However, privacy (acoustic and visual) is the major concern to be considered when designing the Unit.

The front counter area (reception area) shall have an area behind to organise and complete paperwork. This area will require easy access to printer, fax (if applicable), photocopy, record storage and stationery storage. Workstations and offices for staff shall be located in close proximity but separated from the front counter. Private and enclosed interview rooms shall be provided to conduct confidential interviews with clients. Space within interview rooms shall be adequate to accommodate patients with different levels of mobility.

PRE-ADMISSION CLINIC:

Pre-admission Clinics when provided will vary in size and configuration. It can range from a small clinic with a few consulting and interview rooms to a much larger clinic to perform examinations of patients by clinical staff. In all occasions, they shall have access to other diagnostic testing units. Access to Allied Health service will be required in larger facilities. A reception area for initial patient consultation and separate waiting areas must be provided.

7.2.3 *Functional Areas*

Functional areas in Admissions Units shall include:

- Reception area
- Interview rooms for patient admissions and interviews; interview areas shall allow for private discussions
- Patient waiting areas
- Public Amenities (may be located in adjoining areas)
- Staff and support areas (offices and amenities)
- Cashier (may be located elsewhere)

Functional areas in Pre-admissions Clinics shall include:

- Reception area
- Patient waiting areas
- Interview/ Consult rooms for private patient interviews
- Consult rooms for patient assessment and examination
- Staff and support areas (utilities, store rooms, offices and amenities)
- Public Amenities (may be located in adjoining areas)

PATIENT WAITING AREA:

Waiting areas for patients shall be provided and sized accordingly to the expected number of patients on a daily basis. There shall be sufficient space for wheelchairs, prams, trolleys etc. A separate waiting for families including a play space for children may also be appropriate. Facilities to display reading materials, information pamphlets, and entertainment system (TV, speakers for music) shall be provided.

PATIENT INTERVIEW/ CUBICLE ROOMS:

Configuration and design of Interview Rooms shall provide a high level of visibility from outside without compromising privacy. The rooms will require acoustic privacy, for confidential discussion between staff and patients. Please refer to Appendix Table 2 Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"



CASHIER:

A Cashier may be incorporated within the Admission Unit if required by the operational policy. If such is provided, the following factors shall be considered carefully during planning stage:

- Accessibility during normal business hours and after-hours
- Safety provisions for Staff
- Secured storage where money is handled.

7.2.4 *Functional Relationships*

EXTERNAL

Admissions Unit shall ideally be located adjacent to the Main Reception area with close access to public amenities and waiting areas.

The Pre-admissions Clinic, where provided, may be located in the Ambulatory Care Unit or other Units where procedures will be performed such as Day Surgery Unit, Peri-operative Unit etc. Pre-Admissions will require readily available access to Diagnostic Units including Pathology, Medical Imaging and Pharmacy.

INTERNAL

Decentralised admission areas and pre-admission areas shall be configured to be clear and prominent for easy way-finding by patients and visitors.

If the Cashier is to be located with an Admissions Unit, access to security is recommended.

The Pre-Admission clinic Reception area must be designed in an efficient way to permit easy circulation to and from consultation areas for patients. Staff areas shall be sized accordingly and provide sufficient level of both visual and acoustic privacy.

7.3 Design

7.3.1 *General*

Admissions Unit and Pre-admission Clinic shall be located with easy access to a vehicle drop-off zone. The Admissions Unit and Pre-admission Clinic shall be designed to accommodate all types of patients including elderly, wheelchair-bound, patients using mobility aids, and children.

7.3.2 *Environmental Considerations*

NATURAL LIGHT

Natural light is recommended in the Admissions Unit but not essential. Presence of natural light can promote a pleasant environment for patients, visitors and staff.

PRIVACY

Careful consideration of privacy and patient comfort is required to reduce discomfort and stress for patients.

Provision of private interview rooms to conduct confidential discussions between patients and staff shall be considered. Location of the Unit within the Facility and workstations within the Unit shall be placed away from public corridors and thoroughfares to ensure privacy.

ACOUSTICS

In area where confidential patient information is shared, acoustic privacy must be maximised. If Admissions Unit is collocated at the Main Reception, the interior design of these areas shall include measures to control ambient noise. Please refer to Part C, 9.2 "Acoustic Solutions for



Healthcare Facilities”

In the Admissions area, provision of an augmented hearing loop for patients and visitors with hearing impairment may be considered.

7.3.3 *Space Standards and Components*

The Admissions Unit shall be appropriately sized to give a sense of space and avoid congestion. This is especially important in the waiting areas.

ERGONOMICS

Design and dimensions of counters and workstations shall ensure privacy and security for patients, visitors and staff. Counter heights should be made identical for both patients/ visitors and staff to enhance communication and minimise aggressive behaviour.

Seating in waiting areas shall be provided at a range of heights to cater for the different mobility levels of patients.

Refer also to Part C of these Guidelines.

7.3.4 *Safety and Security*

A sympathetic, pleasant, and friendly environment can be created with the appropriate type of security measures included in a facility. A risk assessment relating to security aspects shall be carried out in consultation with staff during the design stage. The following factors shall be taken into consideration:

- demographic population
- capacity, location and type of the facility
- availability of security staff
- responsive timing of the security unit
- expected impact of incidents and their severity.

The following security issues shall be addressed when designing the Admission Unit:

- counters shall be designed in such a way to enable unobstructed vision to waiting areas
- duress alarm and access to egress points must be provided at reception counters
- waiting areas shall have no visibility to the staff and/or cashier area behind the counter
- controlled after-hours access to prevent unauthorised entry and theft
- provision of CCTV to monitor movement and behaviour within the Unit
- provide training to staff on procedures to follow during an armed hold-up

If a Cashier is provided within the Admissions Unit, the following shall also be considered:

- security glazing shall be provided at the Cashier's counter; an after-hours chute may be required
- a fire proof safe shall be located within the Cashier area and sufficient in size to hold adequate cash; it shall be concealed visually from patients, visitors and others.

If Admissions Unit is located on the perimeter of the building, all external doors must be locked (preferably electronically) after hours and alarms installed which are linked to the Security unit.

For the Pre-admission Clinic, the following security issues shall be integrated in the design:

- duress alarms and emergency egress point shall be provided as required
- design shall permit entry and exit points from the Unit to have controlled access
- secured control for after-hours access
- restricted access from the waiting area to the rest of the Unit for patients and visitors
- Design shall maximise observation of waiting area for staff.



7.3.5 *Finishes*

Selection of materials in the Unit shall ensure durability particularly for heavy pedestrian utilisation.

Refer also to Part C of these Guidelines.

7.3.6 *Fixtures and Fittings*

If the Cashier is located within the Admissions Unit, then an appropriate barrier shall be provided to the Cashier's counter.

Depth of counters is recommended to be between 900mm to 1200mm and not exceeding 1400mm. The counter height shall be suitable for standing interactions at 850mm (+/- 20mm); high stools may be provided for staff. If a seated position is required, there shall be a section to be reduced to 720mm, with standard height chairs for staff and patients.

Refer also to Part C of these Guidelines.

7.3.7 *Building Service Requirements*

The following IT/ Communications systems shall be provided within an Admission Unit or Pre-admission Clinic:

- voice and data points for telephones and computers/ internet
- data provision for electronic medical records and patient management systems as required (optional)
- duress alarm system (in reception area, patient treatment areas, interview rooms etc.)
- access to a PACS system (if applicable in the Pre-admission Clinic only)

Emergency call facility for staff and patient shall be installed in all clinical areas such as patient toilets and bathrooms.

Refer also to Part C of these Guidelines.

7.3.8 *Infection Control*

Precautions shall be taken while handling body fluids of patients during the pre-admission process as the infection status may be unknown. Personal protective equipment, sharps containers, clinical waste spill kits must be provided. Training in first-aid and injury management procedures must be provided to staff for body substance exposure and sharps injuries.

Hand washing facilities for staff must be readily available. Disposable paper towels must always be provided at hand washing facilities.

Refer also to Part D for further information.

In terms of Waste Management, common clinical waste management shall be provided within the Pre-admission Clinic. Provision of sharps containers shall be in compliance to the Hospital's Infection Control Policy.

7.4 Components of the Unit

7.4.1 *General*

The Admission Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



7.4.2 *Non Standard Components*

INTERVIEW CUBICLE

Description and Function

An Interview Cubicle may be provided for private and confidential discussion with patients, as an open space, visually separated from adjacent spaces.

Location and Relationships

Interview cubicles may be provided as part of the Reception counter or in a separate area easily accessible to patients and staff.

Considerations

Privacy is a major consideration particularly acoustic privacy; partitions between cubicles should reduce sound transmission to adjacent spaces.

Access will be required for patients in wheelchairs.



7.5 Schedule of Accommodation

7.5.1 Admissions Unit Generic Schedule Of Accommodation

ADMISSIONS UNIT

ROOM / SPACE	Standard Component		Qty x m2				Remarks
WAITING	yes		1 x 20				
WAITING - FAMILY	yes		1 x 50				Refer to Note 1; may include play area
BAY - MOBILE EQUIPMENT	yes		1 x 6				For wheelchairs, may be accommodated in Main Entrance Area
RECEPTION / CLERICAL	yes		1 x 10				Space for up to two staff
OFFICE - WORKSTATION			1 x 6				
OFFICE - SINGLE	yes		1 x 9				Unit Manager
STORE - PHOTOCOPY / STATIONERY	yes		1 x 8				
STORE - FILES	yes		1 x 10				For storage of records
CASHIER	yes		1 x 9 optional				
STORE - PATIENT PROPERTY	yes		1 x 9				
BAY - STORAGE	yes		1 x 2				Cashier's safe
CUBICLE - INTERVIEW			2 x 6				For one-on-one discussions/interviews
INTERVIEW ROOM FAMILY / LARGE	yes		1 x 12 optional				Dependant on operational policies
TOILET - ACCESSIBLE	yes		2 x 5 optional				May share with another collocated FPU
TOILET - PUBLIC - MALE	yes		2 x 3 optional				
TOILET - PUBLIC - FEMALE	yes		2 x 3 optional				May share with another collocated FPU
DISCOUNTED CIRCULATION			20%				

PRE-ADMISSIONS UNIT

ROOM / SPACE	Standard Component		Qty x m2				Remarks
ENTRY / RECEPTION AREAS:							
WAITING	yes		1 x 30				Refer to Note 1;
WAITING - FAMILY	yes		1 x 25				Refer to Note 1
RECEPTION/CLERICAL	yes		1 x 10				Space for up to 2 staff
DISCOUNTED CIRCULATION			25%				
GENERAL PATIENT AREAS							
OFFICE - CONSULT	yes		2 x 12				Refer to Note 2



ROOM / SPACE	Standard Component		Qty x m2				Remarks
INTERVIEW ROOM – FAMILY / LARGE	yes		2 x 12				Dependent on operational policies. No dependent on
TOILET – ACCESSIBLE, PATIENT	yes		2 x 5				
DISCOUNTED CIRCULATION			25%				
CLINICAL PATIENT AREAS:							
TREATMENT ROOM	yes		1 x 14				
CHANGE CUBICLE - PATIENT	yes		1 x 4 optional				quantity dependent on size of Clinic
DISCOUNTED CIRCULATION			25%				
STAFF AREAS:							
OFFICE - WORKSTATION	yes		2 x 6				
STORE - PHOTOCOPY / STATIONERY	yes		1 x 8 optional				
STORE - FILES	yes		1 x 10				
STAFF ROOM	yes		1 x 15				Refer to Note 3
PROPERTY BAY – STAFF	yes		1 x 2				
STORE - EQUIPMENT	yes		1 x 14				
TOILET – STAFF	yes		2 x 3				
DISCOUNTED CIRCULATION			25%				
CLINICAL SUPPORT AREAS:							Only if clinical areas included in clinic
DIRTY UTILITY	yes		1 x 10				
CLEAN UTILITY	yes		1 x 12				
BAY – LINEN	yes		1 x 2				
CLEANER'S ROOM	yes		1 x 5				
DISCOUNTED CIRCULATION			25%				

Note 1:

Waiting areas may be shared with Main Reception in smaller Health Facilities. Actual size will be determined by the size of the unit and the projected number of people waiting at any one time. Allow 1.5 m2 per person/chair.

Note 2:

For anaesthetists, nurse specialists and allied health professionals. Number is dependent on size of the clinic. If ECGs are to be performed in the consult rooms, then the rooms will require space for equipment to be stored and used.

Please note the following:

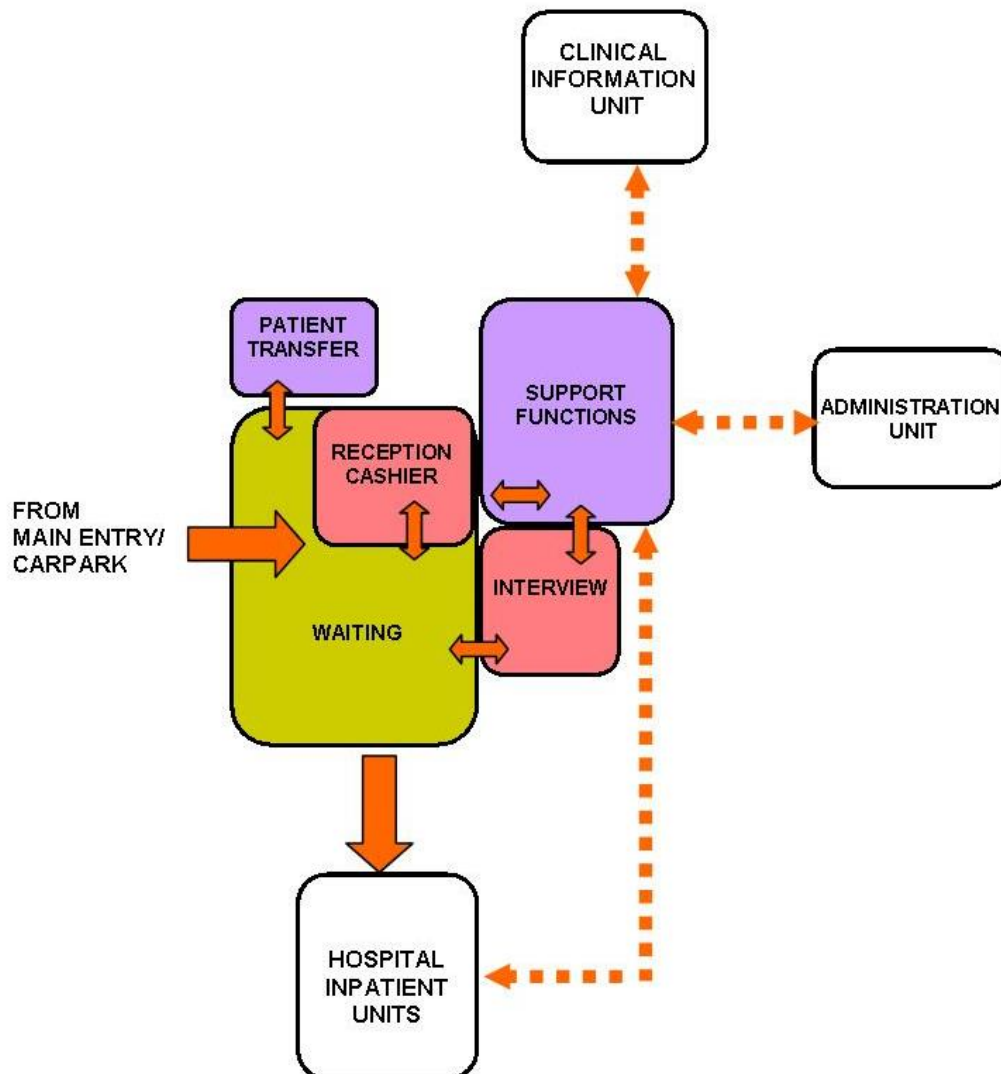
- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.



- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

7.6 Functional Relationship Diagram

7.6.1 Admissions Unit Functional Relationship Diagram



7.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities, The Facility Guidelines Institute, 2010 Edition.



8.0 Adult Mental Health Inpatient Unit

8.1 Introduction

8.1.1 Description

The Adult Acute Psychiatric Inpatient Unit provides assessment, admission and inpatient accommodation in a safe and therapeutic environment suitable for adult mental health patients and staff.

This section is applicable to:

- A stand alone Adult Acute Psychiatric Inpatient Unit or group of units
- A dedicated Adult Acute Psychiatric Inpatient Unit within a general hospital
- A number of dedicated Patient Bedrooms as an annexe to an Acute Inpatient Unit

The Operational Policy shall determine the size and function of the Adult Acute Psychiatric Inpatient Unit.

An Adult Acute Psychiatric Inpatient Unit shall comply with the requirements outlined for Inpatient Accommodation, but with the noted modifications or additions in this section.

8.2 Planning

8.2.1 Planning Models

Some patients may at times exhibit disturbed or high risk behaviour. Appropriate planning and use of materials (for example safety glass, low maintenance/ resilient surface etc) can achieve an environment where all patients can co-exist with minimal disruption to each other. The building should be able to accommodate patients of all levels of disturbance without taking on the characteristics of a jail.

Externally the principal concept of planning should be to integrate the new facility with its surrounds, and with the other buildings. Planning of external spaces must take into account the requirement for provision of a secure garden associated with the High Dependency area, and an open garden area for general use. The area should be based on 10 m² per person.

The design of external spaces, as for the building, should be domestic in nature, rather than formal or monumental. They should have the following features:

- The building should consciously have a front and a back
- It should provide opportunities for privacy, recreation and self expression
- It should provide opportunities for movement/ambulation both indoors and outdoors with unobtrusive environmental boundaries and with appropriate safety provisions
- Single rooms are recommended.

Rooms may be grouped into clusters that can be defined for distinct patient groups; each cluster of rooms should include a recreational space to allow for patient therapy and flexibility for a variety of patient categories.

Additional considerations include:

- Flexibility of space usage through consideration of a range of patient needs for personal and shared space
- Clearly defined patient residential areas readily identifiable by patients who may be disoriented or disturbed
- An effective balance between opportunities for patients' privacy and the need for staff to observe patient behaviours.

8.2.2 Functional Areas

The Adult Acute Psychiatric Inpatient Unit will consist of a number of functional areas or zones



as follows:

- Main Entry/ Reception / Clerical area
- Assessment/ Procedural area
- Staff Offices/ Administrative and management area
- Staff Amenities area
- Inpatient Area including outdoor areas
- Secure Area including secured courtyard

ADMINISTRATION AND OFFICE AREAS

The Unit Manager's Office should be located in, or directly adjacent to the patient area and in particular, the Staff Station.

There should be the capacity to control patient's access to administrative and office areas. There may be a requirement for a communication system between interview areas and the Staff Station to signal the need for assistance. There should be provision for a Secure Store as part of the Group/View Room to house audio-visual equipment.

ADMISSIONS AREA

The Admissions area will comprise an Admission Office, general purpose Interview Room and Examination Room and will be used by nursing, allied health and medical staff to interview relatives/ patients. Examination and consultation of patients will be carried out in these areas. Duress alarms are required in all these areas.

The Admissions Area should be directly screened from the Waiting Area. Noise transmission between these rooms and the waiting area should be reduced to a minimum so that conversations are not overheard.

DAY ROOMS

At least two separate social spaces shall be provided, one for quiet activities and one appropriate for noisy activities.

DRUG DISPENSING / STORAGE

The Drug Distribution Station shall include extra provision for security against unauthorised access.

ECT FACILITIES

ECT procedures should be undertaken in the Day Procedures Unit, ECT Suite or Operating Unit.

ENSUITES

Each bedroom in the open unit is to have its own ensuite. There are a number of configurations - inboard, outboard and between rooms. The latter option is preferred as it maximises bedroom use and patient observation. The inboard option provides privacy and dignity but should be used with caution for the following reasons:

- a narrow passage may be created at the entrance to the bedroom that may limit observation through the door vision panel
- blind spots may be created inside the bedroom, facilitate barricading
- staff attending any emergencies in the room must enter in single file

The door to ensuites should open in a way to avoid creating a blind spot when open or - with inboard ensuites - enable the ensuite door and bedroom door to be tied together to create a barricade. Ensuite doors are to be lockable by staff when needed and have a privacy latch that can be opened by staff in an emergency.

ENTRY AREAS

The Entrance provides direct access to the unit for patients referred for admission arriving either with relatives, via police or ambulance and alternative access to the unit for patients arriving via the Emergency Unit of the main hospital.

Provision should be made for a gun safe that allows Police to deposit firearms when they are



in attendance at the Inpatient Unit.

The Emergency Entrance should be capable of direct approach by ambulance/ police vehicles and should have sufficient shelter to allow transfer of patients in shelter from the elements. The Entrance should have an airlock capable of accepting an ambulance trolley with ease.

There should be provision for an intercom between the Emergency Entrance and the Staff Station.

The Entrance Area zone of the building should attempt to break down the 'threshold' feeling of many institutional buildings, while maintaining a sense of direction to the approach.

GROUP THERAPY AREA

Space for group therapy shall be provided. This may be combined with the quiet Day Room provided that an additional 0.7 m² per patient is added and a minimum room area of 21 m², enclosed for privacy, is available for therapy activities.

SECURE AREA -HIGH DEPENDENCY/ SECLUSION/ INTENSIVE CARE

The High Dependency/ Intensive Care bedrooms must be lockable and able to be opened from the corridor should a patient attempt to blockade themselves in the room. Doors require a viewing panel, positioned to ensure that should the glass be broken or removed, a patient cannot put an arm through and operate the door lock. High Dependency bedrooms may be accessible to both the low dependency and high dependency sections of the unit. The High Dependency/ Intensive Care Areas will require access to a Seclusion Room.

These zones should be capable of secure separation from the remainder of the unit. There should be defined areas for male and female patients

The High Dependency Unit, for client and staff safety purposes, should back onto the Staff Station to ensure easy visibility of the interior of the High Dependency Unit and rapid response in times of patient emergency. Patients in this area will require access to a secured courtyard.

INPATIENT AREAS

Single bedrooms

An external outlook coupled with high ceilings adds to the perception of light and space and is a positive contribution to treatment. There should be no 'blind spots' in the rooms particularly any created by open doors and the rooms should be key-lockable from the outside.

Doors should be able to be opened from the corridor should a patient attempt to blockade him/herself in the room. Door viewing panels are optional in open unit bedrooms and will be dependent on the Unit's Operational Policy.

Low wattage night light over the bed space for use by staff when carrying out night time observations of patients should be considered.

Acoustic treatment to bedrooms is required to minimise transference of noise between adjoining bedrooms. Please refer Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

Whilst domestic-style beds may be preferred for ambience, consideration should be given to occupational health and safety issues of staff attending to low height beds.

TWO BED ROOMS

Two bed rooms may be included in the General Inpatient Zone providing an option for sharing, or provide accommodation of a mother and child. They can however be restrictive, result in the disruptive movement of patients to other rooms in order to accommodate new admissions and are generally not recommended.



OCCUPATIONAL THERAPY AREA

Each Adult Acute Psychiatric Inpatient Unit shall contain 1.5 m² of separate space per patient for Occupational Therapy with a minimum total area of 20.0 m².

The space shall include provisions for:

- Hand-washing
- Workbenches
- Storage
- Displays.

Occupational Therapy Areas may serve more than one Inpatient Unit.

8.2.3 *Functional Relationships*

The Adult Acute Psychiatric Inpatient Unit should be located with ready access to the Emergency Unit, Main Entry and service and support areas including Catering Unit, Cleaning/ Housekeeping, Linen Handling, Waste Management and Supply Unit.

8.3 Design

8.3.1 *Environmental Considerations*

ACOUSTICS

Acoustic treatment should be applied to the following areas:

- Day Areas such as patient living, dining and activities areas
- Patient Bedrooms including high dependency, intensive care and seclusion rooms
- Consulting Rooms
- Admission Areas.

In acoustically treated rooms, return air grilles should be acoustically treated to avoid transfer of conversations to adjacent areas. Door grilles to these areas should be avoided. For guidance regarding acoustic materials please refer Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

WINDOWS AND GLAZING

Wherever possible, the use of natural light is to be maximised.

For glazing, graduate the impact resistance of the glass from toughest at lower level to weakest at high level.

In areas where damage to glass may be expected, avoid larger pane sizes. Smaller panes are inherently stronger for a given thickness than larger panes.

Where toughened glass is used it should be treated with a protective film to ensure glass is held together when broken. Laminated / toughened glass of various thicknesses should be installed dependent upon the likelihood of patient injury or building damage.

All windows and observation panels shall be glazed with safety glass. Polycarbonate is not recommended due to surface scratching which will reduce visibility over time.

Where windows are openable, effective security features such as narrow windows that will not allow patient escape, shall be provided. Locks, under the control of staff, shall be fitted.

8.3.2 *Space Standards and Components*

SIZE OF UNIT

The schedule of accommodation has been developed for typical 20 and 30 Bed Adult Acute Psychiatric Inpatient Units. For alternative configurations, allocate space for key areas according to the following guide:

- Lounge/dining/activity areas - Secure Observation - 7.5m² per person
- Lounge/dining/activity areas - General - 5.5m² per person
- Outdoor areas (courtyards and terraces) - Secure - 10m² per person



- Outdoor areas (courtyards and terraces) - General - 5m² per person
- Courtyard and Terrace - minimum area - 20m²
- Consultation rooms - 1 per 5 beds
- Examination/assessment rooms - 1-2 per unit

8.3.3 *Safety and Security*

Security within the facility and the surrounding outdoor area, related to patient movement requires careful consideration and may include use of video surveillance and motion sensors. The security of access for staff, community and domestic service deliveries should also be considered.

The design should assist staff to carry out their duties safely and to supervise patients by allowing or restricting access to areas in a manner which is consistent with patient needs/skills. Staff should be able to view patient movements and activities as naturally as possible, whenever necessary.

Controlled and/or concealed access will be required as an option in a number of functional areas. Functionally the only difference between an open and a closed (locked) area in their design should be the provision of controls over the flow to, from and throughout the facility. Such controls should be as unobtrusive as possible.

A communication system which enables staff to signal for assistance from other staff should be included.

8.3.4 *Finishes*

The aesthetics are to be warm and user-friendly wherever possible.

Refer also to Part C of these Guidelines.

8.3.5 *Fixtures and Fittings*

Fixtures and fittings should be safe and durable.

Generally, all fixings should be heavy duty, concealed, and where exposed, tamper proof. Fittings, including hooks, curtain tracks, bathroom fittings, should be plastic where possible, and have a breaking strain of not more than 15kgs.

Fittings should avoid the potential to be used either as a weapon or to inflict personal damage. Paintings, mirrors and signage should be rigidly fixed to walls with tamper proof fixings.

Mirrors shall be of safety glass or other appropriate impact resistant and shatterproof construction. They shall be fully glued to a backing to prevent availability of loose fragments of broken glass.

Holland blinds, Venetian blinds and curtains should be avoided in patient areas. Curtain tracks, pelmets and other fittings that provide potential for patients to hang themselves should be avoided or designed so that the potential is removed.

8.3.6 *Building Services*

Avoid exposed services, for example, sink wastes which may be easily damaged.

Light fittings, smoke detectors, thermal detectors and air-conditioning vents to higher dependent areas, particularly Seclusion Rooms, should be vandal proof and incapable of supporting a patient's weight.

8.4 Components of the Unit

The Adult Acute Psychiatric Inpatient Unit will consist of a combination of Standard Components and Non-Standard Components.



Provide the Standard Components as identified in the Schedule of Accommodation and to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets .

8.4.1 Non Standard Components

SITTING AREA (PICU)

Description and Function

A small sitting area may be provided for the use of patients, external to secure bedroom areas for PICU patients. Sitting areas need to be under direct observation of staff.

Location and Relationships

Locate in the PICU secured zone, adjacent to the bedroom, with direct observation of staff.

Considerations

Furniture is to be soft, foam type to prevent harm to patients and avoid being used as an implement.



8.5 Schedule of Accommodation

8.5.1 Adult Mental Health Inpatient Unit Generic Schedule Of Accommodation

Schedule of Accommodation for an Adult Mental Health Inpatient Unit with 20 Beds and 30 Beds. This SOA is applicable to Levels 4 to 6.

ENTRY / RECEPTION / INTERVIEW

ROOM/ SPACE	Standard Component				20 Beds Qty x m2	30 Beds Qty x m2	Remarks
					16 Open 4 Secure	24 Open 6 Secure	
MAIN ENTRY/ RECEPTION							
ENTRY LOBBY / AIRLOCK	yes				1 x 10	1 x 10	Optional
RECEPTION	yes				1 x 10	1 x 12	
PHOTOCOPY	yes				1 x 8	1 x 8	
FILE STORE	yes				1 x 10	1 x 10	
WAITING	yes				1 x 20	1 x 30	
WAITING - FAMILY	yes				1 x 25	1 x 25	May include Child Play area
TOILET - ACCESSIBLE	yes				1 x 5	1 x 5	
CONSULTATION / INTERVIEW ROOM	yes				4 x 14	6 x 14	Plus 2m2 for 2nd door. Based on 1 per 10 beds excluding PICU
MEETING ROOM (& REVIEW BOARD)	yes				1 x 20	1 x 30	Also used for Group/Family Therapy

GENERAL (OPEN) UNIT

ROOM / SPACE	Standard Component				16 Beds Qty x m2	24 Beds Qty x m2	Remarks
PATIENT / FAMILY AREAS:							
1 BED ROOM – MENTAL HEALTH	yes				14 x 28	12 x 28	
2 BED ROOM – MENTAL HEALTH	yes				1 x 28	1 x 28	Optional. May be 2 extra single rooms.
ENSUITE – MENTAL HEALTH	yes				15 x 5	23 x 5	
SECLUSION / QUIET ROOM	yes				1 x 14	1 x 14	Optional room in General Care Zone
BAY - HANDWASHING	yes				4 x 1	6 x 1	
DINING ROOM	yes				1 x 30	1 x 50	Overall size of recreational areas based on 5.5m2 per Person; may be resized.
PANTRY (WITH SERVERY COUNTER)	yes				1 x 8	1 x 8	
LOUNGE / ACTIVITY AREA	yes				1 x 30	1 x 50	
MULTIFUNCTION ACTIVITY AREA	yes				1 x 30	1 x 40	
GYMNASIUM	yes				1 x 20	1 x 20	Optional
COURTYARD	yes				1 x 100	1 x 150	Based on 5m2 per person



ROOM / SPACE	Standard Component				16 Beds Qty x m2	24 Beds Qty x m2	Remarks
LAUNDRY- SELF-CARE	yes				1 x 6	1 x 8	Lockable; may be located near bed clusters.
BAY – LINEN	yes				2 x 2	3 x 2	
STORE – PATIENT PROPERTY	yes				1 x 10	1 x 14	
BATHROOM	yes				1 x 15	1 x 15	Optional
TOILET - STAFF	yes				1 x 3	1 x 3	

CLINICAL SUPPORT AREAS (SHARED WITH SECURE UNIT & PICU) GENERAL (OPEN) UNIT

ROOM / SPACE	Standard Component				20 Beds Qty x m2	30 Beds Qty x m2	Remarks
CLINICAL SUPPORT AREAS:							
STAFF STATION	yes				1 x 16	1 x 20	Sized to enable a design that can oversee all sub-units. May be necessary to sub-divide if this improves surveillance.
OFFICE – CLINICAL / HANDOVER	yes				1 x 12	1 x 12	
MEDICATION / TREATMENT ROOM	yes				1 x 16	1 x 16	Includes spatial allowance for Resuscitation Trolley (1m2) & Exam Couch (3m2).
DIRTY UTILITY	yes				1 x 10	1 x 10	
STORE - EQUIPMENT	yes				1 x 12	1 x 16	
BACK- OF- HOUSE:							
CLEANER'S ROOM	yes				1 x 5	1 x 5	Includes recycling bins
DISPOSAL ROOM	yes				1 x 10	1 x 10	
STORE GENERAL	yes				1 x 9	1 x 9	

OBSERVATION (SECURE) UNIT

ROOM / SPACE	Standard Component				4 Beds Qty x m2	6 Beds Qty x m2	Remarks
WAITING - SECURE	yes				1 x 6	1 x 6	Shared with PICU. Include Safe for Police Firearms
EXAM / ASSESSMENT ROOM	yes				1 x 15	1 x 15	Shared with PICU
ENSUITE SHOWER / TOILET	yes				1 x 5	1 x 5	Shared with PICU
1 BEDROOM - MENTAL HEALTH	yes				4 x 28	6 x 28	
TOILET - PATIENT	yes				2 x 4	3 x 4	
SHOWER – PATIENT	yes				2 x 4	3 x 4	
BAY HANDWASH	yes				2 x 1	3 x 1	
LOUNGE / DINING ROOM	yes				1 x 30	1 x 45	Based on 7.5m2 per person
MULTIFUNCTION ACTIVITY AREA	yes				1 x 28	1 x 32	
SECLUSION ROOM	yes				1 x 15	1 x 15	



ROOM / SPACE	Standard Component				4 Beds Qty x m2	6 Beds Qty x m2	Remarks
SECURED COURTYARD	yes				1 x 40	1 x 60	Based on 10m2 per person
TOILET STAFF	yes				1 x 3	1 x 3	

PSYCHIATRIC INTENSIVE CARE UNIT (PICU)

ROOM / SPACE	Standard Component				6 Beds Qty x m2	8 Beds Qty x m2	Remarks
PSYCHIATRIC INTENSIVE CARE UNIT (PICU)							Optional in Tertiary Service only
1 BEDROOM	yes				6 x 28	8 x 28	Sub-divided into "pods" each with its own sitting area.
TOILET - PATIENT	yes				3 x 4	4 x 4	May be combined and shared between bedrooms
SHOWER - PATIENT	yes				3 x 4	4 x 4	May be combined and shared between bedrooms
BAY - HANDWASH	yes				3 x 1	4 x 1	Recessed in corridor
SITTING AREA					6 x 3	8 x 3	Combine as appropriate depending on bedroom arrangements
QUIET / SECLUSION ROOM	yes				1 x 14	1 x 14	
DINING / ACTIVITIES ROOM	yes				1 x 25	1 x 30	Lounge / Dining / Activity in total based on 7.5m2 per person
MULTIFUNCTION ACTIVITY ROOM	yes				1 x 23	1 x 23	Includes 3m2 of storage
MEETING (INTERVIEW) ROOM					1 x 12	1 x 12	Optional; may also be used as Family Room
EXAM / ASSESSMENT ROOM	yes				1 x 12	1 x 12	Optional
BAY - LINEN (LOCKED)	yes				2 x 2	2 x 2	
STORE - GENERAL	yes				1 x 9	1 x 9	
STORE - PATIENT PROPERTY	yes				1 x 6	1 x 6	
SECURED COURTYARD	yes				1 x 60	1 x 80	Based on 10m2 per person. May combine with Secure area
TOILET - STAFF	yes				2 x 3	2 x 3	
DISCOUNTED CIRCULATION					35%	35%	

STAFF OFFICES & AMENITIES

ROOM / SPACE					6 Beds Qty x m2	8 Beds Qty x m2	Remarks
OFFICE - SINGLE 12M2 (DIRECTOR)	yes				1 x 12	1 x 12	
OFFICE - SINGLE 12M2 (NURSE MANAGER)	yes				1 x 9	1 x 9	
OFFICE - SINGLE 12M2 (PSYCHIATRIST)	yes				1 x 12	1 x 12	
OFFICE - SHARED - MEDICAL STAFF	yes				1 x 12	2 x 12	No. determined by Staff Establishment
OFFICE - SHARED - NURSING STAFF	yes				1 x 12	2 x 12	No. determined by Staff Establishment
OFFICE - SHARED - ALLIED HEALTH	yes				1 x 20	2 x 12	No. determined by Staff Establishment



ROOM / SPACE					6 Beds Qty x m2	8 Beds Qty x m2	Remarks
STORE - PHOTOCOPY STATIONERY	yes				1 x 8	1 x 8	
MEETING ROOM	yes				1 x 20	1 x 30	
STAFF ROOM	yes				1 x 15	1 x 20	
PROPERTY BAY – STAFF	yes				1 x 2	1 x 2	
SHOWER STAFF	yes				1 x 1	1 x 2	
TOILET STAFF	yes				2 x 3	2 x 3	
DISCOUNTED CIRCULATION					30%	30%	

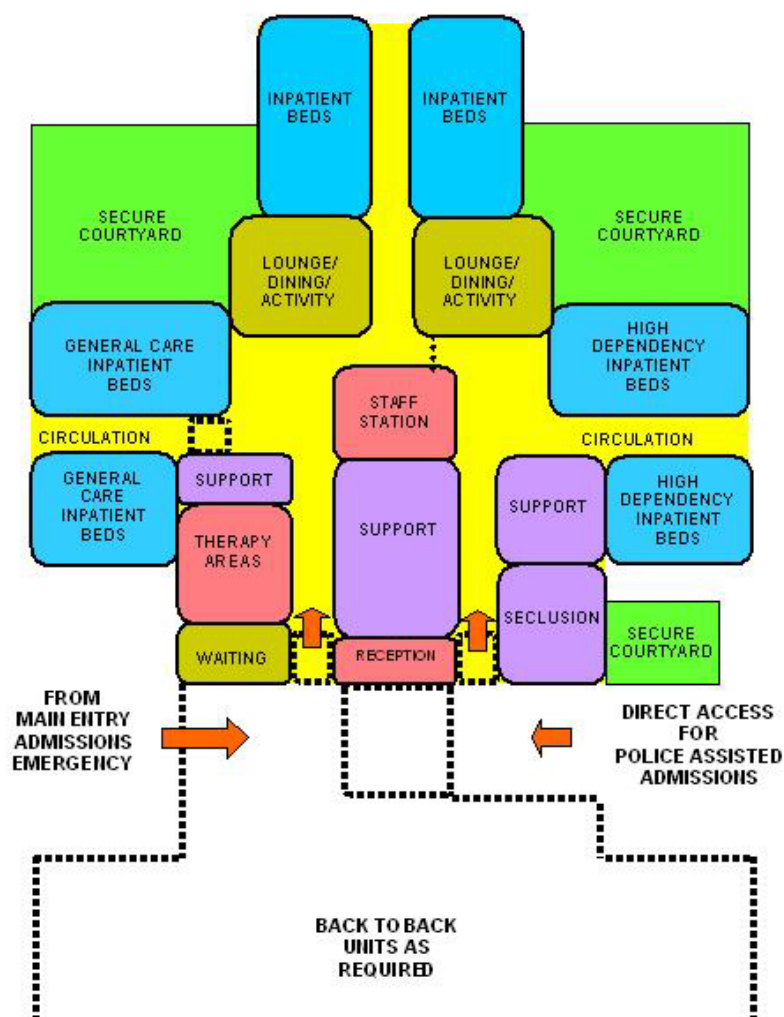
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



8.6 Functional Relationship Diagram

8.6.1 Adult Mental Health Inpatient Unit Functional Relationship Diagram



8.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.
- Department of Human Services: Aged Community & Mental Health Division, Acute Psychiatric Inpatient Unit - 25 Beds Generic Brief, 1996.



9.0 Blood Bank

9.1 Introduction

9.1.1 General

The Blood Bank provides licensed facilities for the collection, storage, processing and distribution of human blood and blood components, in accordance with the National Blood Policy, 2002, under the administration of the Central Drugs Standard Control Organisation (CDSCO) India.

The range of services provided in the Blood Bank include:

- Collection from donors and donor management; this may include
 - autologous blood – collection from a patient for transfusion to themselves at a later date
 - apheresis which involves donation of plasma only or blood elements such as platelets only while the other blood elements are transfused back into the patient at the time of collection
- Blood storage
- Blood grouping and compatibility testing or cross-matching
- Testing for transmissible diseases.

9.2 Planning

9.2.1 Operational Models

Blood Bank services may be provided according to the following models and will be dependent on the Role Delineation and the Operational Policy of the facility:

- A dedicated Unit within a hospital
- A Unit collocated with a Pathology Laboratory Unit
- A stand-alone facility, providing services to regional facilities and hospitals.

This FPU addressed the stand-alone facility, either provided within a hospital or free standing.

HOURS OF OPERATION

The Blood Bank generally operates during business hours for collection and routine laboratory services, but offers a 24 hour service for deliveries.

9.2.2 Functional Areas

Blood Bank will consist of the following Functional Areas:

- Reception area with donor waiting and access to public toilets.
- Patient/ Donor areas including:
 - Patient screening room for medical examination of patients prior to donor procedures
 - Blood collection; the collection area shall have a staff work bench, chairs and couches for donors and hand washing facilities
 - Rest and recovery area for patients following blood donation procedures with provision for patient refreshments prior to the patient departure
- Preparation/ Processing area including:
 - Blood Storage including refrigerators and freezers
 - Processing laboratory areas which may include preparation, serology, infectious serology and apheresis
 - Support areas, including clean-up, sterilising, storage areas for reagents and supplies used in the process, general supplies and disposal facilities for contaminated waste
- Staff Areas including:
 - Office for the Manager



- Secure Records storage, which may be collocated with Reception
- Access to Staff Room and Change Rooms with lockers and Toilets.

RECEPTION/ WAITING

Patients will be received and registered at the Reception desk. Waiting areas provided should be suitable for a range of occupants including space for wheelchairs and prams. Waiting areas will require good access to public amenities.

PATIENT/ DONOR AREAS

Patient/ Donor areas will include a patient consult room with an examination couch for patient assessment and interview. Collection areas will require comfortable blood collection chairs or couches, staff handwashing facilities and a staff work area. Refreshments will be served to donors after phlebotomy procedures and the patient will be under staff observation before leaving the Unit. Patient/ donor areas will require access to emergency and resuscitation equipment including suction and oxygen.

PREPARATION AND PROCESSING AREA

Blood processing laboratories will require the following considerations:

- Laboratories must be secure with restricted access for dedicated staff only
- Laboratory workbenches with space for equipment such as microscopes, appropriate chemical analysers and centrifuge/s
- Access to services at the workbench including power and sinks with hot and cold water; which may be used for the disposal of non-toxic fluids
- Hand basins with paper towel and soap fittings for staff hand-washing.

Refer to Non-Standard Components, Preparation and Processing Laboratory Areas in this FPU for specific requirements related to the Processing and Preparation Areas.

SUPPORT AREAS

Laboratory areas will require a Clean-up Room for washing of laboratory glassware. Sterilising facilities will be dependent on the provision of single use sterile stock and the alternative arrangements for sterilisation of articles in a Sterile Supply Unit.

Storage will be required for blood, blood components, reagents, consumable and disposable stock, general stock and equipment used in the Unit and should be sized according to the amount of stock to be accommodated.

STAFF AREAS

Records storage will be required for blood bank activities involved in the collection, storage testing and distribution of blood and blood products. An Office will be required for the Medical Officer managing the Unit. A write-up and recording area should be available for medical and technical staff.

Staff will require access to a Staff room for meals and recreation. Change Rooms with toilets and handbasins should be available for staff in Laboratory areas that are provided with overalls and protective clothing.

9.2.3 *Functional Relationships*

The Blood Bank located within a hospital facility will require good functional relationships to Units that need frequent deliveries of blood such as the Operating Unit and Intensive Care Units.

The stand-alone Blood Bank will require good access for donors and rapid access to transport services for blood deliveries to hospital facilities.



9.3 Design

9.3.1 General

LOCATION:

The Blood Bank must not be located close to open drains, sewage, public toilets, animal houses or any unhygienic surroundings. The facility must prevent the entry of flies, insects and rodents; mesh screens may be provided as necessary.

9.3.2 Space Standards and Components

SIZE OF UNIT

The Blood Bank Unit shall have a minimum floor area of 100m² and an additional 50m² for preparation of blood products. The Unit should be sized according to the level of service provided.

9.3.3 Finishes

All floors and walls in processing areas must be smooth, impervious to fluids and easily cleaned.

9.3.4 Fixtures & Fittings

The Blood Bank laboratory areas will include special equipment with installation and services provided including power, data, water according to comply with authority regulations and manufacturer's specifications. Refer to Guidelines for Blood Banks, CDSCO, for further information, in References and Further reading at the end of this FPU.

Blood refrigerators and freezers will require continuous temperature monitoring to maintain desired temperatures and alarms when temperature is not reached or exceeded. Alarms should be automatically recorded.

9.3.5 Building Services

AIR CONDITIONING

Blood Collection, Preparation and Laboratory areas should be air-conditioned with the ability to maintain air temperature between 20^o Centigrade to 25^o Centigrade. Sterile manufacturing areas will require HEPA filtered, positive pressure air supply in accordance with licensing regulations. Refer to Guidelines for Blood Banks, CDSCO, India.

HYDRAULIC SERVICES

Drains must be sized appropriately and where connected to a sewer, must have traps installed to prevent back flow.

ELECTRICAL SERVICES

Blood storage equipment must be provided with a 24 hour essential power supply. A back-up generator will be required.

Laboratory areas will require effective lighting to work areas.

9.3.6 Infection Control

Infection Control is important in this Unit. Strict infection control measures are required within the unit to protect laboratory staff from potentially contaminated body fluids (blood, plasma) and to ensure aseptic environment for manufacture and packaging of blood products, preventing cross infection. Measures will include:

- Handbasins for staff handwashing in patient donor areas and processing laboratories
- Use of laboratory clothing in laboratories



- Use of laminar flow biosafety cabinets in laboratories; processing and filling areas must be separate
- Separate area for handling of contaminated samples
- Proper handling of contaminated waste
- Sharps containers and clinical waste collection and removal.

9.4 Components of the Unit

9.4.1 Introduction

The Blood Bank will consist of a combination of Standard Components and Non-Standard Components. Standard Components must comply with details in Standard Components described in these Guidelines. Refer to the Standard Components Room Data Sheets and Room Layout Sheets.

9.4.2 Standard Components

Provide the Standard Components as identified in the Schedule of Accommodation. Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

9.4.3 Non-Standard Components

PREPARATION AND PROCESSING LABORATORY AREAS

Description and Function

Processing and Laboratory areas include Serology, Infectious Serology, Plasma Apheresis. In these areas the following procedures are undertaken:

- Pre-transfusion testing of samples for general serology and infectious diseases such as hepatitis B and C, HIV and malarial parasites
- Blood grouping
- Cross matching or compatibility testing
- Apheresis, Plasmapheresis, Platelet pheresis, Leucapheresis procedures, according to the operational policies and scope of service of the Unit; prior to pheresis procedures haemoglobin, haematocrit and blood count testing is undertaken
- Quality control testing procedures

Manufacturing of blood products requires separate enclosed areas with air locks at the entry, in accordance with licensing regulations. A separate testing area is required for infectious samples. Manufacturing Laboratories will be HEPA filtered and positively pressured clean environments.

Location and Relationships

Preparation, processing and manufacturing areas should be located with ready access to blood storage and wash up areas.

Considerations

Separate storage refrigerators are required for tested and untested blood within the Preparation and Laboratory areas.

Processing, manufacturing and packaging of blood will require a laminar air flow bench or unit in a clean environment.

Laboratory areas should have restricted access for authorised staff only.



BLOOD STORAGE

Description and Function

The Blood Store provides for the secure, temperature controlled storage of blood and blood components in refrigerators or freezers for access by authorised staff only.

Location and Relationships

Within the Blood Bank, the Blood Store should be located with ready access to the blood collection and processing areas. Externally, ready access is required to Pathology Unit, Emergency Unit, Operating Unit and Critical Care areas. Consideration shall be given to blood storage location in relation to external after-hours access and security.

Considerations

The blood storage refrigerators shall be secured, accessed by authorised staff only, and equipped with temperature monitoring and alarm signals. Alarms and controls should be located to ensure easy staff control. The blood refrigerators / freezers will require an essential power supply.



9.5 Schedule of Accommodation

9.5.1 Blood Bank Generic Schedule of Accommodation

Schedule of Accommodation for a Stand-alone Blood Bank suitable for Level 4 and 5/6 facilities

RECEPTION/ PATIENT/DONOR AREAS

ROOM/ SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
RECEPTION/CLERICAL	RECL-10-IN RECL-12-IN				1 x 10	1 x 12	
WAITING	WAIT-10-IN WAIT-15-IN				1 x 10	1 x 15	For 5 persons (Level 4); 10 persons (Levels 5/6)
CONSULT / SCREENING	CONS-IN				1 x 14	1 x 14	
BLOOD COLLECTION BAY/S	BLDC-5-IN				2 x 9	4 x 9	For couch or collection chair
REST/ RECOVERY BAY/S	BLDC-5-IN similar				2 x 5	4 x 5	With comfortable chairs
BAY - BEVERAGE	BBEV-OP-IN				1 x 4	1 x 4	For patient/ donor refreshments
BAY – HANDWASHING TYPE B	BHWS-B-IN				2 x 1	2 x 1	Collection and Rest areas
PATIENT TOILET – ACCESSIBLE	WCAC-IN				1 x 5	1 x 5	May share adjacent facilities if close
STORE – FILES	STFS-8-IN STFS-10-IN				1 x 8	1 x 10	For statutory records

PREPARATION/ PROCESSING AREAS

ROOM/ SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
PREPARATION/ PROCESSING LABORATORY	PTHLB-MOD-IN similar				1 x 15	1 x 25	
SEROLOGY LABORATORY	PTHLB-MOD-IN similar				1 x 10	1 x 20	
INFECTIOUS SEROLOGY LABORATORY	PTHLB-MOD-IN similar				1 x 15	1 x 20	Separate, enclosed Negative pressure
PLASMA APHERESIS	PTHLB-MOD-IN similar				1 x 10	1 x 20	
BLOOD STORAGE / DESPATCH	BLST-IN similar				1 x 10	1 x 15	
CLEAN-UP/STERILISATION	CLUP-P-IN				1 x 12	1 x 15	Sterilisation area may be Separate if required
CLEANER'S ROOM	CLRM-5-IN				1 x 5	1 x 5	
DISPOSAL ROOM	DISP-8-IN DISP-10-IN				1 x 8	1 x 10	Waste holding
STORE – GENERAL	STGN-9-IN STGN-16-IN				1 x 9	1 x 16	Consumable and general stock



STAFF AREAS

ROOM/ SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
OFFICE – SINGLE PERSON MANAGER	yes				1 x 12	1 x 12	
OFFICE – 2 PERSON SHARED	yes					1 x 12	Write-up, for medical/ Technical staff, as required
CHANGE – STAFF (MALE/ FEMALE)	CHST-10-I CHST-14-I				1 x 10	1 x 14	Includes shower, toilet, basin and lockers
STAFF ROOM	SRM-15-I SRM-20-I				1 x 15	1 x 20	May be shared Includes beverage facilities
CIRCULATION					25%	25%	

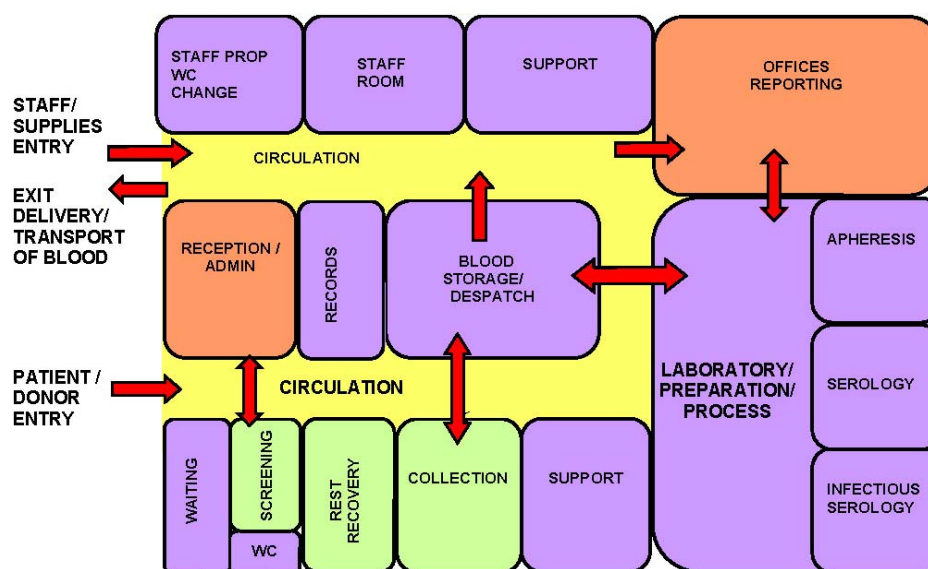
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

9.6 Functional Relationship Diagram

9.6.1 Blood Bank Functional Relationship Diagram

The Functional relationships diagram below demonstrates the optimum internal relationships between functional areas within the unit.



9.7 References and Further Reading

- Part A5 – Guidelines for District Hospital, Indian Public Health Standards, 2012 refer to http://www.healthdesign.com.au/ihfg/india-v1.1U/part_a5_district_hospital.pdf
- Central Drug Standard Control Organisation, Director General of Health Services, Ministry of Health and Family Welfare, Government of India, Guidelines for Blood Banks; 2012, refer to <http://www.cdsc.nic.in/forms/list.aspx?lid=1642&ld=1>
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2014 Edition.
- Laboratory Design Guide, 3rd Edition; Brian Griffin, Architectural Press, Elsevier UK, 2005
- Building Type Basics for Research Laboratories, Daniel Watch. New York, NY: John Wiley & Sons, Inc., 2001.
- CRC Handbook of Laboratory Safety, 5th Edition, A. K. Furr. Boca Raton, FL: CRC Press, 2000.



10.0 Catering Unit

10.1 Introduction

10.1.1 Description

The Catering System shall provide food service for staff, inpatients, outpatients, and ambulatory patients as appropriate. The patient food service will include catering for the special dietary needs of patients, food service to VIP rooms and provision of nourishment and snacks between scheduled meal services. Provision of food services for visitors and staff may include cafeterias, kiosks, or vending machine dispensing areas, particularly for after-hours access.

Food service facilities and equipment shall comply with these Guidelines and other appropriate codes for food services.

10.2 Planning

10.2.1 Planning Models

ON SITE PREPARATION

The Catering Unit may be designed to accommodate a Cook-Serve food preparation system.

Cook-Serve refers to the process where food, fresh or frozen is prepared, cooked, plated and served immediately. Variations of the Cook-Serve process include:

- Hot plating, delivery and serving
- Delivery of hot bulk food, then plating and serving.

Food preparation systems require space and equipment for receipt, storage, preparing, cooking and baking.

OFF SITE PREPARATION

If food is prepared off site or in a remote location on the hospital campus, then the following will apply:

- Briefed requirements under this section (Catering) may be reduced as appropriate
- Provide protection for food delivered to ensure it maintains freshness, retains temperature and avoids contamination.

If delivery is from outside sources, provide protection against the weather. Provisions must be made for thorough cleaning and sanitising of equipment to avoid mixing soiled and clean items. If food is brought in from a remote part of the hospital site, all connections must be under cover and reasonably weather protected.

10.2.2 Functional Areas

The Catering Unit may include the following Functional Areas:

- Food preparation areas
- Cooking facilities
- Plating areas
- Dishwashing and pot washing areas
- Refrigerator/s, cool rooms and freezers of adequate size to store perishable foodstuffs
- Storage areas for dry goods
- Parking and cleaning areas for food distribution trolleys
- Staff Dining Room



- Access to staff amenities

Note: Preparation of food referred to above does not necessarily involve cooking on site. Food may be prepared off site, then reheated and served on site.

FOOD DISTRIBUTION:

A cart distribution system shall be provided with spaces for storage, loading, distribution, receiving, and sanitising of the food service carts.

The cart traffic and the cleaning and sanitising process shall be designed to eliminate any danger of cross-circulation between outgoing food carts and incoming, soiled carts. Cart traffic shall not be through food processing areas.

The distribution service must ensure food is delivered to the patient hot or cold as required.

GARBAGE DISPOSAL:

Provision shall be made for regular wet and dry garbage storage, removal and disposal in accordance with Waste Management Guidelines. All garbage, and in particular wet garbage, shall be stored in sealed bins. Provision shall be made for the storage and cleaning of bins.

In large Hospitals or catering facilities, the following are highly recommended:

- Refrigerated wet waste storage.
- Special equipment to reduce the water content of wet waste.

STAFF AMENITIES:

Staff toilets and locker spaces shall be provided for the exclusive use of the catering staff. These shall not open directly into the food preparation areas, but must be in close proximity to them.

STORAGE:

Food storage components shall be grouped for convenient access from receiving and to the food preparation areas. All food shall be stored clear of the floor. The lowest shelf shall be not less than 300 mm above the floor or shall be closed in and sealed tight for ease of cleaning.

Storage space for at least a four day supply of food shall be provided. Separate space will be required for refrigerated (cold and frozen) storage, dry foods storage and crockery, utensils and cutlery storage.

Catering facilities in remote areas may require proportionally more food storage facilities than needed for the four days recommended depending on the frequency and reliability of deliveries.

SUPPLIES RECEIVAL:

An area shall be provided for the receiving and control of incoming food supplies such as a loading dock. This area shall be separated from the general loading dock areas used for access to garbage areas and body holding rooms.

The receiving area shall contain the following:

- A control station
- A breakout for loading, un-crating, and weighing supplies.
- These areas may be shared with clean dock areas.



10.2.3 *Functional Relationships*

EXTERNAL

The Catering Unit has a strong functional relationship with

- Loading dock for deliveries
- Waste disposal area
- All Inpatient Units
- Staff Dining areas (these may be centrally located or dispersed throughout the complex)

INTERNAL

Within the Catering Unit the food preparation areas and food cooking areas are central to the operation of the Unit and have a strong functional link to all support areas required including dry stores, cold storage, freezer storage, plating, dishwashing and pot washing.

10.3 Design

10.3.1 *General*

Design of the Catering Unit should allow for a unidirectional work flow from receipt of produce and supplies to storage, food preparation, cooking, plating and food delivery to inpatient units and servery areas. This flow should not conflict with the return of used food carts and equipment to a receival area, then to dishwashing and storage areas.

10.3.2 *Environmental Considerations*

NATURAL LIGHT

Wherever possible, the use of natural light is to be maximised for the benefit of staff working in the Unit.

ACOUSTICS

Dining areas tend to be noisy and will require acoustic treatment, particularly to walls adjoining other departments.

Provide acoustic treatment to dishwashing areas.

Refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

ERGONOMICS

The Catering Unit should be designed with consideration to ergonomics to ensure an optimal working environment. Aspects for consideration will include height of benches and height of equipment in constant use such as food processing, cooking equipment and storage areas including cool rooms, particularly storage for bulky and heavy supplies.

Refer to Part C of these Guidelines for further information

10.3.3 *Safety and Security*

To prevent accidents, all internal kitchen doors shall have clear glazing to the top half.

All electrical equipment should have emergency shut off switches to prevent overheating.

10.3.4 *Finishes*

All tables, benches and other surfaces on which food is prepared or handled shall be covered in a smooth impervious material.

Floor finish must be a non slip surface with no crevices and easily cleaned.

Refer also to Part C of these Guidelines.

10.3.5 *Fixtures and Fittings*

Refrigerators, freezers, ovens and other equipment that is thermostatically controlled will require temperature monitoring to maintain desired temperatures and alarms when



temperature is not reached or exceeded. Alarms should be automatically recorded.

Movable equipment including food service delivery trolleys will require heavy duty locking castors.

10.3.6 Infection Control

Staff Hand washing basins shall be provided in all clean-up, preparation, cooking, serving areas of the Unit. Basins should be hands-free operation with paper towel and soap dispensers. Mirrors should not be installed over basins.

Refer also to Pat D of these Guidelines.

10.3.7 Building Service Requirements

Under-counter conduits, piping, and drains shall be arranged to not interfere with cleaning of the equipment or of the floor below the counter.

INSECT CONTROL

In new Hospitals the kitchen may not open directly to the outside; an air lock shall be provided between the kitchen and external areas. A section of hospital corridor may be used as an air lock. In existing kitchens being refurbished, any door leading directly from the kitchen to the outside shall be fitted with a fly screen door with a self closer.

10.4 Components of the Unit

10.4.1 General

The Catering Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

10.4.2 Non Standard Components

DISHWASHING

Description and Function

The Catering Unit will provide separate stainless steel sinks and drainers or equipment for washing of dishes, utensils and cutlery. The area shall also provide space for receiving, scraping, rinsing, sorting and stacking of soiled tableware.

Location and Relationships

Dedicated crockery, utensil and cutlery washing (warewashing) facilities shall be located as far as practical from the food preparation and serving area. It is recommended that where practical, a warewashing space be located in a separate room or alcove.

Considerations

Warewashing facilities shall be designed to prevent contamination of clean wares with soiled wares through cross-traffic. The clean wares shall be transferred for storage or use in the Dining Area without having to pass through food preparation areas.

The Dishwashing area requires the following finishes:

- Walls and ceiling that are smooth, impervious and easily cleanable
- Floors that are impervious and non-slip

Commercial type washing equipment is recommended.

FOOD PREPARATION AREAS

Description and Function



Food preparation areas are provided as discrete areas for separation of food types. The areas will include benches, sinks, shelving and mobile trolleys for utensils. Ready access to boiling water units and ice dispensing machines will be required.

Location and Relationships

Food preparation areas will be located with ready access to storage areas and refrigeration for food supplies and to cooking areas.

Considerations

The food preparation areas require a temperature controlled environment. Equipment required for food preparation may include food processors, slicers, mixers, cutters; special power may be required according to manufacturer's specifications; safety considerations may include power cut-off to items of equipment.

POT WASHING

Description and Function

The Catering Unit shall provide separate stainless steel sinks and drainers or equipment for washing of pots.

Location and Relationships

Pot washing sinks or equipment shall be located with ready access to preparation and cooking areas and may be co-located with dishwashing areas.

Considerations

The Potwashing area requires the following finishes:

- Walls and ceiling that are smooth, impervious and easily cleanable
- Floors that are impervious and non-slip

Pot scrubbing facilities are required that incorporate emergency manual warewashing facilities in the event of equipment failure.

SERVERY

Description and Function

The Servery provides an area for plating and serving food with facilities for keeping food warm or cool.

Location and Relationships

The Servery may be located with close access to the Catering Unit and adjacent to Staff Dining Areas.

Considerations

The Servery will require the following finishes:

- Walls and ceiling that are smooth, impervious and easily cleanable
- Floors that are impervious and non-slip

The Servery will require the following fittings and fixtures:

- A workbench with an impervious top and splashback
- A single or double bowl stainless steel sink set in the benchtop supplied with hot and cold reticulated water, lever action or automatically activated taps
- A disposable glove dispenser
- A handbasin, with liquid soap and paper towel dispensers

STAFF DINING ROOM



Description and Function

The Staff Dining Room provides an area for staff dining and relaxation. The Room shall provide space for all staff potentially requiring sit down dining space during any single shift.

Note: Staggered dining sessions is an acceptable way of reducing the size of this room.

The minimum area for a Staff Dining Room shall be 1.25 m² per person dining at any one time or 9.5 m² whichever is the greater.

A Vending machine area may be provided for afterhour's access to prepared food and snacks. The Vending machine area maybe located within the Dining Room with security considerations to prevent access to the Catering Unit after hours.

Location and Relationships

The Staff Dining Room should be located in a staff only, discreet area of the facility with direct access to a circulation corridor. It should have ready access to the Catering Unit. Access to an external dining area is desirable.

Depending on Operational Policy of the hospital, a combined public/ staff Dining Area may be provided located close to the entrance area.

Considerations

The Dining Room should incorporate the following:

- External windows
- Dining tables and chairs
- Telephone within or adjacent to the room for staff use

Acoustic privacy may be required to adjoining areas. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

TROLLEY/ CART WASH

Description and Function

An area shall be provided for stripping, washing and disinfecting of trolleys and carts.

Location and Relationships

The Trolley Wash area should be located remotely from the food preparation and storage areas. It should have ready access to the trolley return and parking areas.

Considerations

The trolley washing area will require:

- Smooth, impervious and easily cleanable surfaces to walls and ceiling
- Impervious and non-slip finishes to the floor
- Hot and cold water outlets.



10.5 Schedule of Accommodation

10.5.1 Catering Unit Generic Schedule of Accommodation

The Schedule of Accommodation for a Catering Unit for Level 4 to 6, providing an on-site 'Cook-Serve' food preparation service.

ROOM / SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
ENTRY / AIRLOCK	yes				1 x 6	1 x 6	
ENTRY / TROLLEY RETURN					1 x 15	1 x 20	
TROLLEY STRIPPING					1 x 15	1 x 25	
DISHWASHING					1 x 30	1 x 55	
TROLLEY / CART WASHING					1 x 15	1 x 20	
COOLROOM - DAIRY / VEGETABLE	yes				2 x 6	4 x 10	Separate cool rooms for dairy/produce
COOLROOM - MEAT	yes				2 x 6	3 x 10	Allow for separation of food storage
DRY STORE					2 x 8	2 x 15	
STORE - TABLEWARE	yes				1 x 6	1 x 15	Crockery, utensils, linen; refer to Store-General
COOLROOM - FREEZER	yes				2 x 6	3 x 10	Allow for separation of food items
FRUIT / VEGETABLE STORE	yes				2 x 8	1 x 15	Refer to Store-General (similar)
PREPARATION – DIETS / VIP					1 x 8	1 x 20	May be reduced if cooking is off-site
PREPARATION - MEAT					1 x 8	2 x 10	May be reduced if cooking is off-site
PREPARATION - PASTRY					1 x 8	1 x 25	May be reduced if cooking is off-site
PREPARATION - VEGETABLE					1 x 8	1 x 20	May be reduced if cooking is off-site
PREPARATION - COLD FOOD					1 x 8	1 x 20	
PLATING / TRAY PREPARATION					1 x 35	1 x 35	
COOKING					1 x 35	1 x 110	
POT WASHING					1 x 15	1 x 25	
DISCOUNTED CIRCULATION					optional 25%	optional 25%	system is used

STAFF AND SUPPORT AREAS

ROOM / SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STAFF DINING					1 x 75 optional	1 x 100 optional	Allows 60/ 80 persons, may be located remotely
SERVERY					1 x 12 optional	1 x 20 optional	
VENDING MACHINE AREA	yes				1 x 3 optional	1 x 10 optional	After hours service



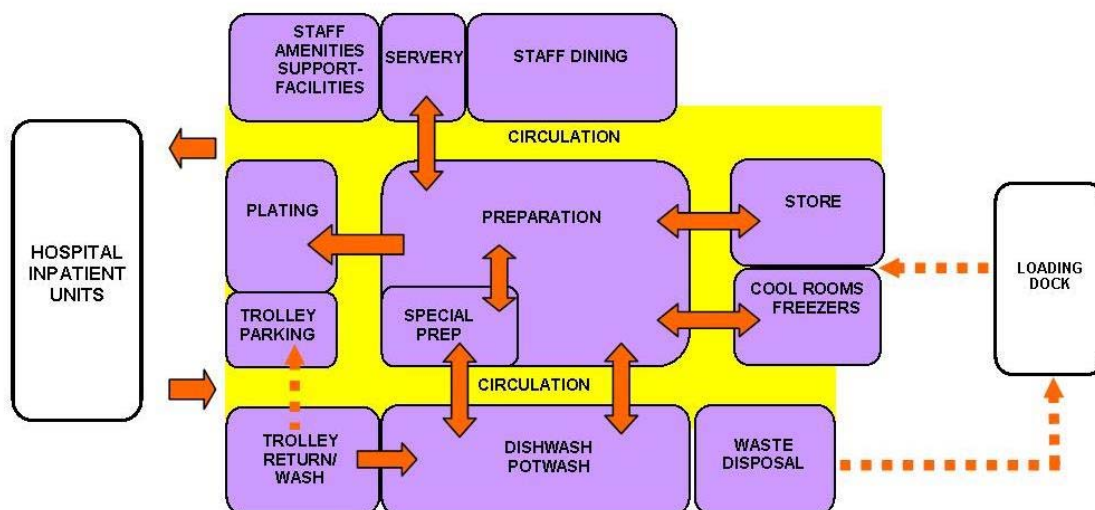
ROOM / SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
OFFICE – SINGLE PERSON 9m2	yes				1 x 9	1 x 12	Manager

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

10.6 Functional Relationship Diagram

10.6.1 Catering Unit Functional Relationship Diagram



10.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



11.0 Child & Adolescent Mental Health Unit

11.1 Introduction

11.1.1 Description

The Child Acute Mental Health Inpatient Unit provides short term acute inpatient mental health assessment and treatment of children up to 10 to 12 years of age and adolescents up to 16 - 18 years where community approaches have proven (or are likely to prove) inadequate.

The design, layout and functionality of Child and Adolescent Mental Health Units should meet the developmental needs of their age group. Notably, the Child and Adolescent Unit should enable active family involvement in daily care, treatment and program activities including family admission and residence where appropriate.

The patients in each unit will have a broad range of mental health problems and disorders and challenging behaviours that must be managed safely and effectively. The layout and design of the Child and Adolescent units will need to accommodate children and young people at varying stages of social, emotional and intellectual development. Young people in the Adolescent Unit will have families and others involved in their care who should feel welcome in the unit.

The unit may admit and treat patients who have:

- A risk of self injury
- A risk of self neglect
- A risk of injury to others
- A severe affective disorder
- Psychosis including early onset schizophrenia
- Pervasive developmental disorders
- Anorexia nervosa and related eating disorders
- Severe anxiety disorders
- Obsessive compulsive disorder
- Tourette's syndrome
- Co-morbid drug and alcohol problems
- Severe family relationship difficulties.

11.2 Planning

11.2.1 Models of Care

Models of care include:

- Children and adolescents together in a fully integrated unit, with separate programs and activities for relevant age groups; this arrangement optimises staffing and enables efficient use of resources;
- Children and adolescents in the same unit but separate “zones” designed to cater for their differing needs; they should operate as two discrete service types with separate functional areas, programs and activities although co-location allows sharing of facilities
- Inclusion of a secured dedicated unit collocated with a paediatric precinct to allow children to participate in activities with other children such as school and play therapy
- Collocation of a Day Unit to minimise the need for hospitalisation; the Day unit would provide for day activities and close down at night.

11.2.2 Functional Areas

The Unit will cater for both male and female patient and family members as required. The Unit should provide Bedrooms that can accommodate family members in a bed sitting arrangement with a separate bedroom to the child, with a shared Ensuite.



Support areas required in Child/ Adolescent Units will include:

- Multipurpose Group Therapy/ Activity rooms that can also be used for education purposes
- Large Interview Rooms to accommodate families
- Outdoor space for recreation activities.
- Storage for general ward equipment, occupational therapy equipment and a range of age appropriate, therapy, sport and recreation equipment in each setting.

Office accommodation should be located in a non-patient area of the unit with secured access/ egress.

ASSESSMENT/ MEDICATION ROOM (MAY BE A SHARED FACILITY):

The Unit will include a suitably equipped room for physical/ neurological examinations which will also contain locked cupboards for dressings, medications and emergency equipment in keeping with legislative requirements. The Room will require two entry/ exit doors.

EXTERNAL RELAXATION/ ACTIVITIES AREAS

Each unit will require discrete and separate outdoor relaxation areas.

These areas will not be locked but access to and from the units should be only from the respective unit and easily observed and monitored by staff. Staff should however be able to prevent access to these areas at night. A common external activity area may be shared if units are co-located.

HIGH DEPENDENCY / INTENSIVE CARE UNIT (ADOLESCENT UNIT ONLY):

The Adolescent Unit will require a lockable high dependency unit consisting of at least one seclusion room and toilet/bath/ shower room opening onto a locked lounge area which has direct access to an external secure courtyard separate to other external recreation areas. Entry to this area directly from outside the unit will be required for police assisted admissions or where a young person is highly disturbed and at immediate risk of harm to themselves or others.

PATIENT BEDROOMS

Single Patient Bedrooms shall be provided, each with an Ensuite. The patient bedroom doors must be able to be unlocked from the outside, even if locked on the inside. It is advisable to have the capacity to restrict the access to the Ensuite.

The fittings and furniture include:

- Built-in wardrobe
- Built-in desk
- Pinboard for photos and posters.

Fittings must not provide opportunities for self harm and are to have a breaking strain of less than 15 kg. Blinds to external windows are to be within double glazing. Chairs should be light weight and flexible.

Services will include the following:

- Two power outlets - RCD protected
- Staff alarm system.
- Medical gases will not be required.

PATIENT ENSUITES

An Ensuite shall be provided to each bedroom to comply with Standard Components Ensuite - Mental Health. The fittings must not provide opportunities for self harm and are to have a breaking strain of less than 15 kg.



PARENT/ FAMILY/ CARER BEDROOMS

Bedrooms for parents or other family members should include a double bed and a single bed and be of sufficient size to allow a fold away cot for very young children. A shared Ensuite to enable parents/ carers to look after their child accommodated in another room should be available to each parent/ family/ carer bedroom.

RECEPTION/ ENTRY AREA

The entrance to each unit should be readily observable from the nursing station/office and should incorporate a greeting/ waiting area for family, friends and others which is separated from all other functional areas on the units. The area should assist staff to prevent unauthorised entry to the unit and to provide a safe and therapeutic environment for children, adolescents and family members, (passive observation of the patient activity / recreation area from the ward office / nurses station is desirable).

OFFICE ACCOMMODATION

Offices and workstations shall be provided according to the Operational Policy and staffing establishment. The office area should be located in the 'patient free' area of the unit. Administrative and office areas may be shared with adjacent units.

11.2.3 *Functional Relationships*

The Child and Adolescent Acute Psychiatric Inpatient Units shall have functional relationships with the following units, services and organizations:

- Emergency Unit
- Paediatric Inpatient Unit
- Paediatric Outpatient services
- Diagnostic Pathology Unit
- Allied Health Unit
- Early childhood services
- Child and family support services
- Community services including day programs
- Drug treatment services
- Adult Psychiatric Services
- Adolescent medical units.

11.3 Design

11.3.1 *General*

The Child and Adolescent Psychiatric Unit should be located on the ground floor.

The following design issues are mandatory requirements:

- Access to the Unit must not be through other units, also the unit must not form a thoroughfare to any other unit
- Bedrooms should provide a comfortable domestic environment with comfortable, robust furniture and furnishings
- All glazing must be a grade of safety glass suitable for mental health applications
- Where co-located, the Child and Adolescent Acute Psychiatric Inpatient Units should allow full independent operation and separation while enabling common use of appropriate facilities
- Rooms and equipment need to meet the therapeutic and educational requirements of the patient group, with provisions for video conferencing in at least one large family Meeting Room and video recording in at least one Interview Room or wet and dry Therapy/ Play Room.
- The Entry areas to both Units require a Visitors' Toilet - Disabled with baby change facilities and a Waiting Area in close proximity.
- Design elements incorporating additional security measures should not be evident to the casual observer.



11.3.2 *Environmental Considerations*

ACOUSTICS

Acoustic treatment should be applied to the following areas:

- Day Areas such as patient living, dining and activities areas
- Patient Bedrooms including high dependency, intensive care and seclusion rooms
- Consulting Rooms
- Admission Areas.

In acoustically treated rooms, return air grilles should be acoustically treated to avoid transfer of conversations to adjacent areas. Door grilles to these areas should be avoided. . Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

WINDOWS AND GLAZING

Wherever possible, the use of natural light is to be maximised.

For glazing, graduate the impact resistance of the glass from toughest at lower level to weakest at high level.

In areas where damage to glass may be expected, avoid larger pane sizes. Smaller panes are inherently stronger for a given thickness than larger panes.

Where toughened glass is used it should be treated with a protective film to ensure glass is held together when broken. Laminated / toughened glass of various thicknesses should be installed dependent upon the likelihood of patient injury or building damage.

All windows and observation panels shall be glazed with a grade of safety glass suitable for mental health applications. Polycarbonate is not recommended due to surface scratching which will reduce visibility over time.

Where windows are openable, effective security features such as narrow windows that will not allow patient escape, shall be provided. Locks, under the control of staff, shall be fitted.

11.3.3 *Space Standards and Components*

Provide space for key areas according to the following guide:

- Lounge/ Activities areas for social activities, 3.5 m² per patient minimum
- Activities/ Dining areas, 5.5 m² per patient, minimum.
- Separate Dining area 1.5m² per patient.
- Courtyard and Terrace - minimum area - 20m²
- Outdoor areas (courtyards and terraces) - General - 5m² per person

11.3.4 *Safety and Security*

The entry to the Child and Adolescent Acute Psychiatric Inpatient Units should have a direct view of the Reception / Staff Station. Security features are required at all entrances and exits. These may include electronic locking, intercoms, and video surveillance.

A separate secured entry may be required for patients arriving with a police escort (applicable to Adolescent Units only).

All Meeting, Counselling, Group Therapy, Family Therapy and Review Board Meeting rooms require two means of egress and a duress alarm.

11.3.5 *Fixtures and Fittings*

Furniture should be robust but light weight and designed to minimise damage or injury if thrown.

Fixtures and fittings should be safe and durable and avoid the potential to be used either as a weapon or to inflict personal damage.



Generally, all fixings should be heavy duty, concealed, and where exposed, tamper proof. Fittings, including hooks, curtain tracks, bathroom fittings, should be plastic where possible, and have a breaking strain of not more than 15kgs.

Paintings, mirrors and signage should be rigidly fixed to walls with tamper proof fixings.

Mirrors shall be of safety glass or other appropriate impact resistant and shatterproof construction. They shall be fully glued to a backing to prevent availability of loose fragments of broken glass.

Holland blinds, Venetian blinds and curtains should be avoided in patient areas. Curtain tracks, pelmets and other fittings that provide potential for patients to hang themselves should be avoided or designed so that the potential is removed.

11.3.6 Building Services Requirements

Avoid exposed services; for example, sink wastes which may be easily damaged. Refer to Part E of these Guidelines for further information.

11.4 Components of the Unit

The Child and Adolescent Acute Psychiatric Inpatient Unit will consist of a combination of Standard Components and Non-Standard Components. Provide the Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

11.4.1 Non-Standard Components

PLAY THERAPY ROOM

Description and Function

A Play Therapy Room shall be provided for 'regressive' therapies such as artwork, doll play and clay modelling. The room shall be designed with the young child 10-12 years in mind.

Location and Relationships

The Play Therapy Room should be located within the patient treatment / therapy zone of the Unit.

Considerations

Fittings, fixtures and equipment will include:

- Bench, open under
- Storage cupboards for materials
- Whiteboard
- Chairs
- Hand basin with soap and paper towel fittings.

Finishes should be smooth and easily cleaned, flooring should be vinyl.

RECREATION / DAY AREA

Description and Function

A Recreation / Day area shall be provided for a wide range of activities including watching TV, listening to music, computer and other activities.

Location and Relationships

The area requires ready access to the secured courtyard and must be overseen from the Staff Station.



Considerations

Fittings and furniture should be suitable for children up to 10-12 years, for teenagers up to the age of 18 and visiting family members.

QUIET/TIME OUT ROOM:

Description and Function

The unit will require a room to be used for quiet time/ time out for agitated and distressed children. The room will be lockable and permit observation by staff while providing privacy to the room occupant.

Location and Relationships

The room should be located in an area that will minimise disruption to unit activities. The room should have ready access to a toilet and washing facilities close by that does not require traversing the unit.

Considerations

The room will be very plain and simple with unbreakable fittings. The room will be similar to Lounge- Patient, suitable for mental health areas. Television, DVD and CD players are not permitted in this room,



11.5 Schedule of Accommodation

11.5.1 *Child & Adolescent Mental Health Unit Generic Schedule of Accommodation* Schedule of Accommodation for a Child & Adolescent Acute Mental Health for Levels 5/6

ENTRY / RECEPTION / INTERVIEW

ROOM / SPACE	Standard Component					Level 5/6 Qty x m2	Remarks
ENTRY LOBBY / AIRLOCK	yes					1 x 8	
WAITING	yes					1 x 20	
WAITING - FAMILY	yes					1 x 25	
PLAY AREA - PAEDIATRIC	yes					1 x 20	
TOILET- DISABLED / BABY CHANGE	yes					2 x 5	
CONSULTATION ROOM	yes					2 x 28	

PATIENT / FAMILY AREAS (8 BEDS)

ROOM / SPACE	Standard Component					8 Beds Qty x m2	
1 BEDROOM - MENTAL HEALTH	yes					6 x 28	
ENSUITE – MENTAL HEALTH	yes					6 x 5	
1 BEDROOM – LARGE	yes					2 x 28	For bariatric patients and/or a child and parent
ENSUITE - SUPER	yes					2 x 6	Standard domestic bath (optional) and raised shower bath for small children.
BATHROOM	yes					1 x 10	Standard domestic bath (optional) and raised shower bath for small children
MEDICATION / TREATMENT ROOM	yes					1 x 16	Includes spatial allowance for Resuscitation Trolley (1m2) & exam couch (3m2).
BAY- HANDWASHING	yes					2 x 1	1 per 4 beds
MULTIPURPOSE ROOM	yes					1 x 20	Classroom, crafts, magistrate sessions. Include lockers for patients' personal items/ work
RECREATION / DAY AREA						1 x 42	Recreation/Dining Areas based on 7m2 per person x 6
PLAY THERAPY ROOM						1 x 12	
DINING ROOM	yes					1 x 30	Assumes 8 patients plus 4 family members
PANTRY / KITCHEN	yes					1 x 12	Collocated with Dining Room
QUIET / TIME OUT ROOM						1 x 9	
COMPUTER ROOM	yes					1 x 12	
STORE – PATIENT PROPERTY	yes					1 x 6	
LAUNDRY - SELF-CARE	yes					1 x 6	Optional



ROOM / SPACE	Standard Component					8 Beds Qty x m2	
GYMNASIUM	yes					1 x 20	Optional
PARENT LOUNGE	yes					1 x 12	
COURTYARD	yes					1 x 40	Based on 5m2 per person

HIGH DEPENDENCY UNIT (4 BEDS)

ROOM / SPACE	Standard Component					4 Beds Qty x m2	Remarks
WAITING - SECURE						1 x 8	Entry area
EXAMINATION /ASSESSMENT	yes					1 x 16	
STAFF BASE	yes					1 x 10	Optional depending on planning layout
SECLUSION ROOM	yes					1 x 15	
1 BEDROOM – MENTAL HEALTH	yes					4 x 28	
PATIENT TOILET	yes					2 x 3	
PATIENT SHOWER	yes					2 x 3	
BAY HANDWASH	yes					1 x 1	
LOUNGE / DINING / ACTIVITY	yes					1 x 30	7.5m2 per person
COURTYARD	yes					1 x 40	10m2 per person

CLINICAL SUPPORT AREAS

ROOM / SPACE	Standard Component					Level 5/6 Qty x m2	Remarks
BAY - LINEN	yes					1 x 2	
DIRTY UTILITY	yes					1 x 10	
STAFF STATION	yes					1 x 14	
OFFICE – CLINICAL / HANDOVER	yes					1 x 9	
STORE - EQUIPMENT	yes					1 x 14	
STORE - GENERAL	yes					1 x 9	
CLEANER'S ROOM	yes					1 x 5	
DISPOSAL ROOM	yes					1 x 8	
DISCOUNTED CIRCULATION						32%	

OFFICES & STAFF AMENITIES

ROOM / SPACE	Standard Component					Level 5/6 Qty x m2	Remarks
OFFICE - CLINICAL DIRECTOR	yes					1 x 15	



ROOM / SPACE	Standard Component					Level 5/6 Qty x m2	Remarks
OFFICE - PSYCHIATRIST	yes					1 x 9	
OFFICE - NURSE MANAGER	yes					1 x 12	
WORKSTATION - NURSING STAFF	yes					4 x 6	
WORKSTATION - ALLIED HEALTH	yes					4 x 6	
WORKSTATION - CLERICAL	yes					1 x 6	
WORKSTATION - VISITING PROFESSIONALS	yes					2 x 6	
MEETING ROOM	yes					1 x 25	
STORE – PHOTOCOPY / STATIONERY	yes					1 x 8	
STAFF ROOM	yes					1 x 20	With Beverage Bay
STAFF PROPERTY BAY	yes					1 x 4	
SHOWER - STAFF	yes					1 x 2	
TOILET - STAFF	yes					2 x 3	

DAY UNIT

ROOM / SPACE	Standard Component					Level 5/6 Qty x m2	Remarks
RECEPTION	yes					1 x 12	
STORE – PHOTOCOPY / STATIONERY	yes					1 x 8	
STORE - FILES	yes					1 x 8	
WAITING	yes					1 x 40	
WAITING - FAMILY	yes					1 x 25	
CHILD PLAY	yes					1 x 15	
TOILET / BABY CHANGE - ACCESSIBLE	yes					1 x 5	
TOILET – PUBLIC	yes					2 x 3	
CONSULT ROOM	yes					4 x 14	No. to be determined by Service plan
OBSERVATION ROOM	yes					1 x 6	One-way observation window
STORE - GENERAL	yes					1 x 9	
DISCOUNTED CIRCULATION						35%	

Please note the following:

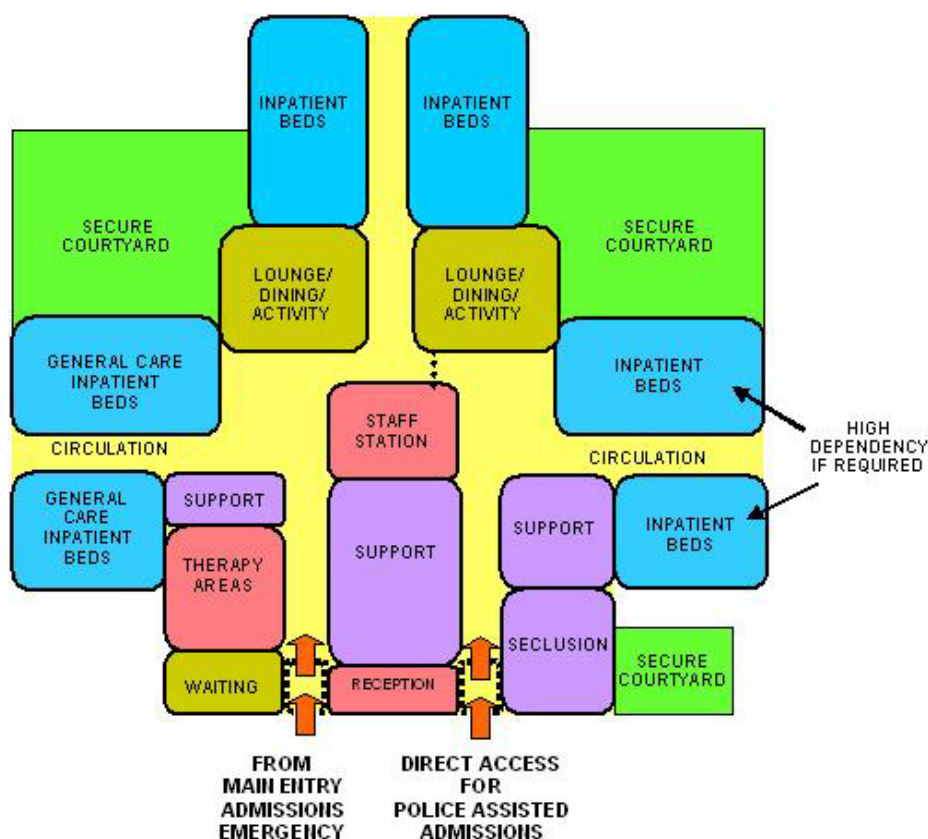
- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to



each unit and may provide scope to reduce duplication of facilities.

11.6 Functional Relationship Diagram

11.6.1 Child & Adolescent Mental Health Unit Functional Relationship Diagram



11.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



12.0 Cleaning & Housekeeping Unit

12.1 Introduction

12.1.1 Description

The Cleaning and Housekeeping Unit is responsible for maintaining the cleanliness of the facility in all areas including Inpatient Units and all public areas.

The Cleaning Service may be contracted or in-house. In addition to the Cleaner's Rooms already requested in the specialist Units, others may be required throughout the facility to maintain a clean and sanitary environment.

12.2 Planning

A typical hospital Cleaning/ Housekeeping Unit comprises the following:

- Manager's Office
- Cleaner's Meeting/ Briefing room
- Cleaner's Equipment / Supply Store
- Cleaner's Sign-on Bay

The above facilities are not mandatory. When provided, these should be sized adequately for the number of staff and the amount of equipment stored.

12.2.1 Functional Areas

Facilities shall be provided to clean and sanitise trolleys serving the Cleaning/ Housekeeping Unit, Catering Unit, and Linen Services. These facilities may be centralised or departmentalised. Storage areas are required for bulk cleaning materials, consumable supplies and equipment. Storage areas may be shared with the Supply Unit.

12.2.2 Functional Relationships

The Cleaning/ Housekeeping Unit should be located in a service area of the facility with ready access to the Waste Management Area, the Loading Dock and Laundry/ Linen Handling areas.

12.3 Components of the Unit

The Cleaning/ Housekeeping Unit will consist of a combination of Standard Components and Non-Standard Components. Standard Components must comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets. Provide the Standard Components as identified in the Schedule of Accommodation.

Non-standard components

Provide the Non-Standard Components as identified in this section.

BAY - SIGN-ON

Description and function

A recessed area is required for staff to sign-on, check and record rosters. The Sign-on Bay shall be a minimum of four m2.

Location and relationships

The Sign-on Bay should be located in a discreet area with ready access to staff entry area and circulation corridor. It may also be located close to the Unit Manager's Office.



Considerations

The Sign-on Bay will require the following fittings and services:

- bench at standing height
- pinboard for display of rosters (or computer for computerised rosters)
- computer terminal (optional)
- power and data outlets for computers as required



12.4 Schedule of Accommodation

12.4.1 Cleaning & Housekeeping Unit Generic Schedule of Accommodation

Schedule of Accommodation – Cleaning / Housekeeping Unit to service a Hospital at levels 1 to 6

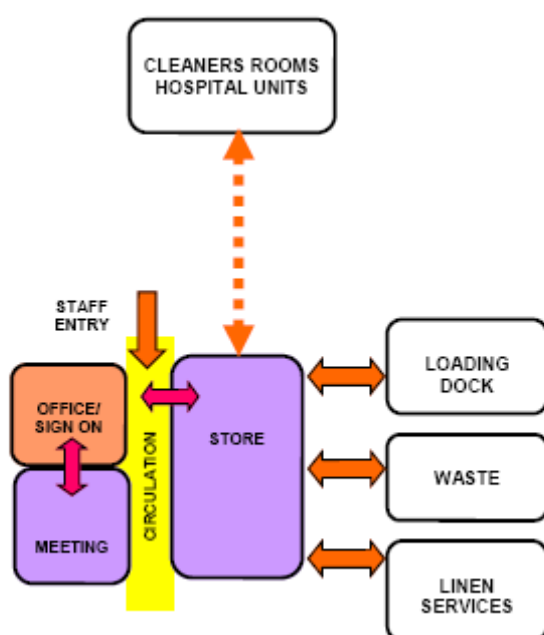
ROOM / SPACE	Standard Component	Level 1/2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY - MOBILE EQUIPMENT	yes			1 x 12 optional	1 x 12 optional	1 x 12 optional	
BAY - SIGN ON				1 x 4 optional	1 x 4 optional	1 x 4 optional	May be collocated with Office – Single Person
OFFICE - SINGLE PERSON 12M2	yes				1 x 12 optional	1 x 12 optional	For Manager
STORE - CLEANER'S	yes	1 x 12	1 x 12	1 x 12 optional	1 x 12 optional	1 x 12 optional	
DISCOUNTED CIRCULATION		10%	10%	10%	10%	10%	

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

12.5 Functional Relationship Diagram

12.5.1 Cleaning & Housekeeping Unit Functional Relationship Diagram



12.6 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



13.0 Community Health Unit

13.1 Introduction

This Guideline is a resource to assist with the planning, design and construction of a Community Health Centre (CHC). It must be read in conjunction with generic requirements and Standard Components, which are described in other parts of these Guidelines. Community Health Centres may also contain facilities that are more fully covered by other unit specific Guidelines e.g. Outpatients Unit and Rehabilitation.

13.1.1 Description

Community Health facilities can range from single rooms to multi-functional clinics and can either be integrated within a Hospital Facility or could be a stand-alone building. Specific requirements for the Facility are determined by the range of services to be provided.

13.1.2 Function

The primary role of a Community Health Centre is to facilitate the delivery of health care services to clients, whilst also providing suitable facilities to meet the working needs of staff. Activities undertaken include counselling, therapy, health education, community support and group programmes. Community Health Services are typically delivered in a community based rather than hospital based setting. A Community Health Centre may be the physical base for a service rather than where the service is delivered or a combination of both. Some Community Health Services could also be provided in an Outpatients facility. This will be dictated by the Services plan for the facility.

13.1.3 Services Provided

Services that may be included in a Community Health Centre include:

PRIMARY HEALTH CARE

- Allied Health services including Physiotherapy; Occupational Therapy; Podiatry; Chiropractic; Social work; Speech pathology; Psychology; Audiology; Health Education (eg Asthma, Diabetes); Multicultural health services; Primary medical services (GPs and nurse practitioners);
- Outpatients and post-acute care services;
- Antenatal / Postnatal clinics;
- Aged Care services
- Chronic disease management services;
- Continence services;
- Counselling services (eg Bereavement, Adolescents, Problem Gambling, Generalist);
- Child assessment, early childhood services, youth and family health services;
- Child Protection Services (including developmental issues, early intervention services and child protection counselling);
- Dietetics & Nutrition
- Dental services;
- Family planning;
- HIV/AIDS services;
- Home nursing services & Outreach Medical Clinics;
- Men's health services;
- Palliative care and Rehabilitation services
- Sexual Health & Sexual Assault services;
- Women's health services.



13.2 Planning

13.2.1 *Operational Models*

HOURS OF OPERATION

The Community Health Unit will generally operate up to 12 hours per day, 5 days per week with some specific services available 24 Hours a day. There is an increasing trend towards 'extended hours' services. Outreach services (eg community nursing) may be provided over weekends and public holidays. Out of hours access may be required on a planned basis for community groups, voluntary organisations or other specific activities.

FLEXIBILITY

As the demand for services vary over time within a Community Health Unit, a flexible accommodation model is recommended. Opportunities for sharing resources and facilities within the unit should also be examined. e.g. Reception and Waiting Areas, Interview and Treatment Rooms. If shared spaces are maximised, it reduces the need for potentially under-utilised special purpose rooms. Similarly, Operational policies should also consider sharing equipment. Location of equipment within the unit is important and easy access to equipment for specific purposes is highly recommended. The design of the unit should ensure that there are ample opportunities for expansion and adaptation for future use.

13.2.2 *Operational Policies*

Operational policies should be clearly articulated as it can have major impact on facility management and the capital and recurrent costs of health facilities. Operational policies may vary depending on various factors and it is recommended that users of the unit define their own operational policies.

STAFFING LEVELS

Staffing levels will vary for each CHC, depending on Operational Policies, services provided, availability of staff, case mix and activity levels.

13.2.3 *Planning Models*

LOCATION

The location of CHCs will vary, depending on the outcome of Service Planning at an Area Health Service level. Options for locating centres include:

- free standing in a community location;
- attached or included in the development of commercial facilities e.g. shopping centres;
- On the grounds of a hospital facility.

CONFIGURATION

The configuration of a CHC will depend on:

- Population profile
- Service mix
- Staff profile providing the services
- Relationship of the CHC with adjacent hospital facility

13.2.4 *Functional Areas*

FUNCTIONAL ZONES

Individual spaces combine to form zones or groups of spaces with a similar purpose. The relationship between zones is considered important to ensure that CHCs operate efficiently and effectively. A Community Health Centre can be subdivided into three key Functional Zones:

- Main Entry / Reception;



- Client Areas - activities and treatment including specialist areas such as Occupational Therapy, Physiotherapy, Cardiac, Dental facilities etc.
- Staff Areas.

CLIENT AREAS / SPECIALIST AREAS

Specialist clinical areas such as Occupational Therapy, Physiotherapy, Prosthetist, Orthotist, may be sited in close proximity to each other so that where possible they can share facilities such as outdoor treatment areas and splinting activities. Physiotherapy and Occupational Therapy staff should have visibility to the treatment areas from their offices. Direct access to an outdoor area from the clinical area is required for Occupational Therapy and Physiotherapy.

Occupational Therapy requires a relatively large treatment area to facilitate individual function activities, activities of daily living, evaluation of equipment needs and group therapeutic activities. If Physiotherapy is to be provided, an area is required to facilitate evaluation, therapeutic exercise and ambulation training. The treatment area needs to accommodate equipment such as electrotherapy machines, several plinths, gym equipment, mats, treatment tables, parallel bars and steps. A specifically designated area should be provided where electric treatment modalities are required for Physiotherapy. A suitable variety and number of counselling/interview rooms should be provided for use by psychologists, social workers and counsellors.

DENTAL FACILITIES

Depending on the CHC, there may be a specifically designated Dentistry Consulting Room or a sessional dentist and dental nurse may share accommodation with a Podiatrist. If Dental facilities are included, there will be a need for space for sterilising equipment, portable X-Ray and X-Ray developing equipment. Design of the area for decontamination and sterilising must comply with the relevant Australian Standard. Areas for Dentistry or Podiatry need to be investigated to allow room for specialised equipment including chairs.

The Dental Facilities should be located with ready access to the Main Entry and Waiting Areas. The Dental facilities must be acoustically isolated and it may be better to separate them from other areas. Please refer Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”. Access is required for patients using mobility aids such as walking frames or wheelchairs.

13.2.5 *Functional Relationships*

Where possible, Community Health Centres should be in a quiet location, with a pleasant outlook and maximum environmental benefits. A CHC should be located in an area that is accessible to the community by both public and private transport and in close proximity to other local resources. Ideally this location will adjoin other public amenities routinely used by the community e.g. shopping precinct, transport hub, library. It should be noted that a CHC services may be located over more than one site and in more than one community.

ACCESS

Off-street access for vehicles transporting clients must be provided. Easy access is required to Car Parking Areas and other Health Care Facilities on the site if provided. Some services may require a separate and discreet entry point. Ambulance access must be provided to the facility with trolley access to the Main Entry, Waiting and all Client Areas. All-weather vehicle drop-off points should be provided for easy access by clients who are elderly, frail, have limited mobility or who are wheelchair bound.

INTERNAL

The internal plan of the CHC must allow clients to easily move to and from treatment and activity areas, and enable efficient staffing. Optimum internal relationships include:

- Reception / Clerical Areas should have a clear view of Main Entry / Waiting Areas and be visible from adjacent Staff Areas. There should be easy access to stationery and medical records. The Reception Area should provide a barrier controlling access between Waiting



and Treatment Areas.

- Consultation / Examination / Interview Rooms should be easily accessible from the Main Entry / Waiting Area as well as the Staff Area;
- Meeting / Activity Rooms should be adjacent to the Main Entry / Waiting Area so they can be accessed after hours, with the rest of the centre safely secure.
- Staff areas must be designed so they allow staff to easily move between the Main Entry / Reception and Client Areas. Staff offices and amenities should be separate from Client and Public Areas to provide privacy and a quiet work area.

13.3 Design

13.3.1 *Parking*

Generally car parking will be provided for clients and staff. In particular, times of attendance for staff and overnight parking for health service vehicles will impact on requirements. Security issues need to be addressed when planning for after-hours parking. These issues will vary from site to site, and will need to be determined in accordance with Local Authority requirements.

13.3.2 *Disaster Management*

The potential role of Community Health Centres in a disaster management situation should be assessed. Attributes which make it potentially useful in a disaster situation include:

- large open spaces for disaster management or emergency accommodation;
- Consult / Interview Rooms for assessment of victims;
- Focal point in the community.

13.3.3 *Infection Control*

Consideration of Infection Control is important in the design of this Unit. Treatment spaces will be used for a variety of clients. It is possible that infectious patients will use the same treatment spaces as immuno-suppressed patients at different times on the same day. Standard precautions must be taken for all clients regardless of their diagnosis or presumed infectious status. Refer to Part D of these Guidelines for further information. Staff hand washing facilities, including disposable paper towels, must be readily available.

13.3.4 *Environmental Considerations*

ACOUSTICS

The CHC will require consideration of acoustic privacy including:

- Interviews with clients;
- Location noisy areas such as Public Waiting, Dental, Child Health Facilities;
- Meeting rooms for staff discussion
- Exclusion of distracting noises during client consultations

Solutions to be considered should include sound absorbing materials and sound isolating construction, separation of quiet areas from noisy areas etc. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

NATURAL LIGHT

Natural lighting is important for the wellbeing of patient and staff and assists in orientation of building users which leads to improved service outcomes. The use of natural light should be maximised throughout the Unit. Access to natural light is desirable and highly recommended.

PRIVACY

For the purpose of Patient privacy and confidentiality, it is important to consider the following:

- Confidentiality of client discussions and records;
- Provision of sub-waiting areas for clients wishing or needing to be separated;
- Location of windows and doors to ensure privacy of clients.



13.3.5 *Safety and Security*

The facility should provide a safe and secure environment for patients, staff and visitors while remaining a non-threatening and supportive atmosphere conducive to the delivery of services. The facility should cater to patients with varying levels of physical and mental capabilities. The facility, furniture, fittings and equipment must be designed and constructed so as to minimise risks of injury.

Adequate security should be provided to prevent violence and theft in Health Care Facilities. Internal spaces and zones should offer a high standard of security through grouping functions, controlling access and egress from the Unit and providing optimum observation for staff. The level of observation and visibility has security implications. Planning should allow for after hours access to Public Areas without compromising security of Staff Areas.

13.3.6 *Finishes*

INTERIOR DESIGN

The design of internal spaces with respect to furnishings, style, colour, textures, ambience, perception etc can assist in relaxing patients and preventing an institutional atmosphere. However, cleaning, infection control, fire safety, client service and the patient's perception of a professional environment must always be considered. Some interior spaces may have restrictions on colour due to the nature of its function such as clinical observation in treatment areas. Bold primary colours should be avoided in such areas

13.3.7 *Building Services Requirements*

Unit design should address the following Information Technology / Communications issues:

- Paperless records;
- Handheld computers, email & Paging and personal telephones replacing some aspects of call systems;
- Picture Archiving Communication System (PACS);
- Data entry including scripts and investigation requests;
- Bar coding of supplies and X-Rays / records.
- Data and communication outlets at regular intervals to enable electronic use of records.

NURSE CALL & ALARM SYSTEMS

The need for provision of a call system that allows clients and staff to alert other health care staff in a discreet manner at all times should be considered. A discreet duress alarm system will be required at all Reception Points and Client Treatment Areas, where a staff member may be alone with a client.

13.4 Components of the Unit

The Community Health Centre will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

13.4.1 *Non Standard Components*

Provide the Non Standard Components as described in this section, according to Operational Policy and service demand.

ENTRY CANOPY

Description and Function

An Entry Canopy is required to provide undercover access to the building from vehicles. Depending on the type of transportation vehicles expected at the facility, the canopy should be large enough to allow manoeuvring beneath it.

Location and Relationships



Provide at Main Entry.

MAIN ENTRY

Description and Function

The Main Entry to the facility should be clearly displayed through appropriate signage informing people where to proceed. The Entry may incorporate an airlock space and should have proper weather protection. Entry doors should cater to the physically handicapped and may require automatic doors for easy access.

Location and Relationships

This should be located adjacent to a vehicle set down point and readily accessible from the street and parking areas. Reception and Waiting Areas should be adjacent.

TREATMENT CUBICLE – PHYSIOTHERAPY/ OCCUPATIONAL THERAPY

Description and Function

Treatment cubicles provided for Physiotherapy and Occupational Therapy will comply with Standard Component Patient Bay – Non-Acute Treatment. Bays may be provided as enclosed rooms for additional privacy.

Location and Relationships

Treatment bays and rooms will require close access to waiting areas for patient access and plaster rooms and other treatment spaces for staff access.

Considerations

In addition to the provisions noted in Standard Components the following may be included:

- Plinth, adjustable height, some may be double size
- Mesh and pulleys for exercises to sides and ceiling space over the plinth



13.5 Schedule of Accommodation

13.5.1 Community Health Generic Schedule of Accommodation

The content and size of a Community Health Centre varies depending on the location, services provided and throughput. Community Health Services are categorised into six levels of service. However, these do not necessarily lead to different physical requirements.

A generic Schedule of Accommodation follows that lists generic spaces that can be combined to form a Community Health Centre. Sizes and quantity of each space will need to be determined on a case by case basis.

ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks *Optional
ENTRY / RECEPTION AREAS:							Note: All room sizes depend on size of service
BAY – WHEELCHAIR PARK	yes					1 x 4	Also for prams
ENTRY CANOPY						1 x 30	Allows for ambulance
MAIN ENTRY						1 x 12	Directly adjacent to Reception & Waiting Areas
PARENTING ROOM	yes					1 x 6	
PLAY AREA	yes					1 x 15	Should relate to Sub-Wait areas, especially for Child & Family services
RECEPTION	yes					1 x 20	Up to 4 staff, may include admin function, or connected with clerical/admin area
SUB-WAITING AREA	yes					1 x 60	Size & distribution depends on client numbers & mix.
TOILET - PUBLIC	yes					2 x 3	Near Waiting Area. May also be required for other areas
TOILET – ACCESSIBLE	yes					2 x 5	
WAITING - FAMILY	yes					1 x 50	20+ clients, prams, etc; info display; view from reception, adjacent to Child Play area
CLIENT AREAS:							
BAY / ROOM - BEVERAGE	yes					1 x 8	For conference & large meeting room
CONSULT ROOM	yes					4 x 14	multi-functional, programmed use;
MEETING ROOM – 9M2	yes					2 x 9	Up to 5 people. Possible interview function, eg mental health, D & A counselling, etc
MEETING ROOM – 12M2	yes					2 x 12	Suitable for childhood-related services, Family Therapy
MEETING ROOM - MEDIUM	yes					2 x 20	Up to 15 people; may include requirements for Telehealth.
MEETING ROOM - LARGE	yes					2 x 40	One with external access for after-hrs use; access to Telehealth, videoconference.
MEETING ROOM - CONFERENCE	yes					1 x 55	Ext access for a/hrs use.. Consider Telehealth requests
OBSERVATION ROOM	yes					2 x 9	One way window to small/medium meeting room
TREATMENT ROOM						1 x 14	Multi-functional, used on programmed basis; access from waiting areas



ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks *Optional
STAFF AREAS:							
BAY / ROOM - BEVERAGE	yes					1 x 4	Staff use
BAY - HANDWASHING	yes					4 x 1	Distributed as required
BAY - LINEN	yes					1 x 2	Need depends on operational policies
BAY - RESUSCITATION TROLLEY	yes					1 x 2	
CHANGE – STAFF (MALE / FEMALE)	yes					2 x 20	Size depends on staff numbers; separate Change Room for Male & Female
CLEANER'S ROOM	yes					1 x 5	Per 1000m2
CLEAN UTILITY	yes					1 x 14	Also for medications
DIRTY UTILITY	yes					1 x 12*	Optional provision
DISPOSAL	yes					1 x 8	
OFFICE – 4 PERSON SHARED	yes					1 x 20	Administration; may be connected with Reception
OFFICE – SINGLE PERSON 12M2	yes					1 x 12	Centre Manager; adjacent to Reception & admin areas.
OFFICE – SINGLE PERSON 9M2	yes					2 x 9	Depends on staffing & operational policies.
OFFICE - WORKSTATION	yes					1 x 6	For each clinical staff member; number & size depends on staffing profile.
SHOWER - STAFF	yes					2 x 3	OHS requirement In staff change rooms
STAFF ROOM	yes					1 x 25	May include library/resources; size depends on size of service.
STORE - EQUIPMENT	yes					2 x 20	No depends on qty of equipment r; physio , OT, mobility aids, medical
STORE - GENERAL	yes					2 x 9	Goods, non-sterile supplies, med supplies; central location
STORE - FILE(ACTIVE)	yes similar					1 x 30	Active medical records, secure, ready access from; Reception & clinical areas
STORE - FILE (ARCHIVE)	yes similar					1 x 60	Archived medical records, secure, may be remote from main work areas
STORE – MEDICAL GAS	yes similar					1 x 12	Safe & secure, various size cylinders, adequate ventilation; near loading & service areas
STORE – PHOTOCOPY / STATIONERY	yes					1 x 8	
TOILET - STAFF	yes					2 x 3	
SPECIALIST AREAS:							
PHYSIOTHERAPY -							
ASSESSMENT / TREATMENT ROOM	yes similar					1 x 14	Similar to Consult Room
CHANGE CUBICLE - PATIENT	yes					2 x 2	Mix of small/large depends on profile of clientele
CHANGE CUBICLE - ACCESSIBLE	yes					2 x 4	Mix of small/large depends on profile of clientele



ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks *Optional
GYMNASIUM	yes					2 x 30	For up to 6 patients/hour. Includes write-up area.
PLASTER ROOM	yes					1 x 14	
BAY - RESUSCITATION TROLLEY	yes					1 x 2	
SHOWER – PATIENT	yes					2 x 4	
TOILET - ACCESSIBLE	yes					2 x 5	
TREATMENT CUBICLE – OPEN						4 x 7	
TREATMENT CUBICLE – CLOSED						2 x 10	
OFFICE – WRITE-UP BAY	yes					2 x 3	Physio-adjacent to Treatment Areas
OCCUPATIONAL THERAPY -							
ADL KITCHEN	yes					1 x 12	
ADL BATHROOM	yes					1 x 12	
CONSULT ROOM - ASSESSMENT / TREATMENT	yes					1 x 14	
EQUIPMENT CLEANING	yes					1 x 12	
STORE - EQUIPMENT	yes					1 x 12	
TREATMENT ROOM - HAND SPLINTING	yes similar					1 x 25	Shared by physio; similar to Plaster Room
GYMNASIUM – PAEDIATRIC	yes similar					1 x 70	Includes storage and wet areas. Size dependent on service demand;
OFFICE – WRITE-UP BAY	yes					1 x 3	OT
SPEECH PATHOLOGY -							
OFFICE / CONSULT	yes					1 x 14	Combined office/ consult depends on unit policies
OBSERVATION	yes					1 x 9	
STORE - GENERAL	yes					1 x 10	Includes Resource Store
AUDIOLOGY -							
AUDIOLOGY TESTING ROOM	yes					1 x 20	Sound proof booth included in room
PODIATRY -							
PODIATRY TREATMENT ROOM	yes					2 x 14	To be shared where possible
CLEAN-UP ROOM	yes					1 x 10	
CARDIAC / PULMONARY -							
CONSULT STRESS TEST	yes					1 x 20	Includes write up and recovery areas
SHOWER / WC -PATIENT	yes					2 x 5	Use Ensuite – Standard
DENTAL -							
CLEAN UP / STERILISING	yes					1 x 8	



ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks *Optional
DENTAL SURGERY	yes					2 x 14	
DENTAL WORKROOM	yes					1 x 12	
OFFICE - WRITE-UP BAY	yes					1 x 6	
DENTAL X-RAY	yes					1 x 6	Storage and developing
PHARMACOTHERAPY - METHADONE UNIT							
DISPENSARY	yes similar					1 x 9	Similar to Pharmacotherapy Unit - Dispensing
DOSING AREA	yes similar					1 x 6	Similar to Pharmacotherapy Unit - Dosing
OFFICE – 3 PERSON SHARED	yes					1 x 15	
TOILET – PATIENT (MALE/ FEMALE)	yes					2 x 5	Specimen collection
WAITING AREA	yes					2 x 15	6 - 10 people
OTHER AREAS -							
SERVICE ENTRY / LOADING BAY	yes similar					varies	Needs for this and its size depends on the facility size; similar to Loading Dock
WASTE HOLDING AREA	yes similar					varies	Depends on size of facility; similar to Waste Compactor/ Recyclables

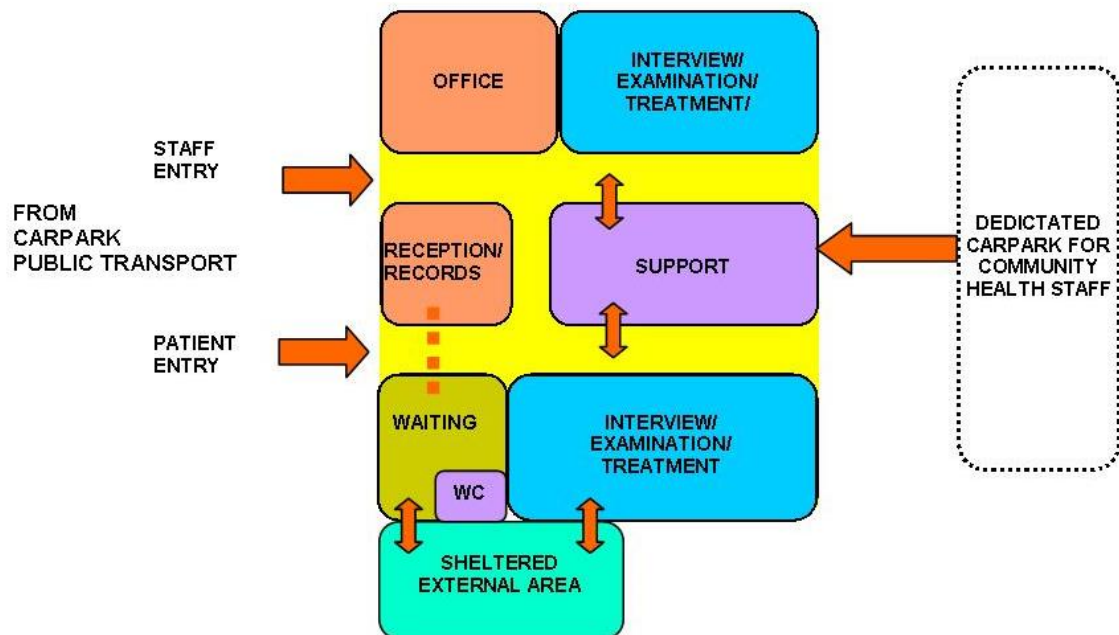
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



13.6 Functional Relationship Diagram

13.6.1 Community Health Functional Relationship Diagram



13.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



14.0 Day Surgery/ Procedure Unit

14.1 Introduction

14.1.1 Description

A Day Surgery/ Procedure Unit is where operative or endoscopic procedures are performed and admission, procedure and discharge occurs on the same date. It comprises one or more Operating Rooms, with provision to deliver anaesthesia and accommodation for the immediate post operative recovery of day patients.

The range of procedures that may be undertaken in a Day Surgery/Procedures Unit may include:

- Surgical procedures, particularly ENT, Dental, Plastic Surgery, Ophthalmology
- Endoscopy - gastrointestinal, respiratory, urology;
- Electroconvulsive Therapy (ECT) for psychiatric inpatients
- Day Medical Procedures including intravenous infusions and minor treatments

14.2 Planning

14.2.1 Operational Models

The range of options for a Day Surgery/ Procedure Unit may include:

- a stand alone centre, fully self contained
- a dedicated fully self-contained unit within a hospital
- a Unit collocated with a specialist clinical service such as Gastroenterology or Respiratory Medicine, within an acute hospital
- a Unit collocated with the Operating Unit with shared facilities.

If the facility is part of an Acute Care Hospital or other Medical Facility, services can be shared, as appropriate to minimise duplication.

14.2.2 Functional Areas

The Day Surgery/ Procedure Unit may consist of a number of Functional Zones:

- Entry/ Reception/ Administration and Waiting areas
- Perioperative Area (provides for admission on the day of surgery), including patient change areas, toilet and lockers
- Procedural Area
- Recovery Area (this may also include extended recovery areas where patients are discharged within 24 hours)
- Discharge Lounge
- Staff Amenities
- Day Medical Unit (if collocated).

ENTRY / RECEPTION/ WAITING AREAS

A covered entrance for picking up patients after surgery shall be provided. The Entry may be a shared Outpatient Facility and shall include:

- Reception and information counter or desk
- Waiting areas that allows for the separation of paediatric and adult patients, if organised
- Paediatric Services are provided
- convenient access to wheelchair storage
- convenient access to public toilet facilities
- convenient access to public telephones

ADMINISTRATIVE AREAS

General and individual offices shall be provided as required for business transactions, records



and administrative and professional staff. These shall be separate from public and patient areas with provision for confidentiality of records.

Enclosed office spaces shall be provided for:

- Administration and consultation
- Manager / Nurse Unit Manager as required

Offices are to comply with Standard Components.

CLINICAL RECORDS

A secure room shall be provided with provision for storage, recording and retrieval of clinical records. If geographically appropriate, and if the Day Procedures Unit is part of, or attached to, an acute hospital, the general clinical records facility might be used in lieu of a dedicated and separate room.

HOLDING AREA

A Holding Area may be provided where gowned patients enter after changing and wait for their procedure. Additional holding areas may be provided for seated patients before an operation or procedure. Such an area must have access to nurse call services.

The Pre-operative Holding area shall be provided with the following minimum requirements as appropriate to the proposed service:

- A patient trolley or patient seating
- Privacy screening
- Handbasins with liquid soap and paper towel fittings
- Patient nurse call/ emergency call buttons with pendant handsets and indicators
- Medical gases including oxygen and suction and power outlets to each bed

OPERATING/ PROCEDURES ROOMS

The design of the Operating / Procedure Rooms must allow for adequate space, ready access, free movement and demarcation of sterile and non sterile zones. Operating Rooms are to comply with Standard Components.

OPERATING ROOM/S FOR ENDOSCOPY

The number and operation of Operating Rooms for Endoscopy shall be as determined by the Service Plan.

Room size may vary, dependent upon:

- The use of video equipment
- Electrosurgical laser treatment
- Fluoroscopy
- Multiple endoscope activity
- Multiple observers
- The use of X-ray (image intensifying)

Where basic endoscopy is to be performed, the room size shall be no smaller than 36 m². Where video equipment is used the room size should be 42 m². Larger sizes, where possible, are recommended for flexibility and future developments. The ceiling height shall be 3000 mm.

Operating Rooms for Endoscopy shall be fitted out as for a Minor Operating Room, for example, it will be suitable for general anaesthetic with appropriate medical gases, power, lighting, air-conditioning and ventilation. Staff assistance call shall be provided. Consideration shall also be given to the special requirements of laser equipment

A clinical scrub up basin shall be provided outside the entrance to the Operating Room/s for Endoscopy.

Direct access to the Clean-up Room is recommended.



Impervious wall, floor and ceiling treatments are essential for ease of cleaning.

PATIENT CHANGE AREAS

Separate areas shall be provided where outpatients can change from street clothing into hospital gowns and be prepared for surgery, convenient to the Waiting Area. The patient change areas shall include Waiting Rooms and lockers. Design of Change Areas is to facilitate management of patient lockers, patient property and keys.

PERI-OPERATIVE UNIT

Where Day Procedures (day only surgical service) are provided within the same area as Inpatient Acute Surgery (shared facility), the design shall consider the need to separate the two distinct functions at the incoming side. The design shall also preclude unrelated traffic from the Day Procedures Unit and the Operating Unit.

PREPARATION ROOM

A Preparation Room may be required for patients undergoing certain procedures such as Endoscopy or Ophthalmology.

If included, the Preparation Room should include:

- Handbasin - Clinical
- Bench, and cupboards for setting up of procedures
- Adequate space for procedures equipment trolleys
- Examination couch
- Patient privacy screening

RECOVERY AREAS

In larger facilities it is often considered desirable to have a three stage recovery area. The first stage involves intensive supervision, the second stage has changing facilities in more casual surroundings and in the third stage, the patient is fully mobile and is awaiting discharge. Supervision of the patient is vital at each stage.

If Paediatric Surgery is part of the function, the Recovery Room shall provide for the needs of parents/attendants.

Recovery areas will require:

- Staff station with a centrally located resuscitation trolley
- Linen Bay
- Clean Utility
- Dirty Utility
- Store room

Stage 1 Recovery

The number of bed/trolley spaces in the Stage 1 Recovery Area will be dependent upon the nature of surgery or procedures performed as outlined in the Operational Policy and the proposed throughput. As a minimum, 1.5 bed/trolley spaces per Operating Room shall be provided.

Stage 2 Recovery

Stage 2 Recovery Room may be provided as required to accommodate:

- Patients who have regained consciousness after anaesthesia but require further observation
- Patients who have undergone procedures with local anaesthetic.



The patient is required to remain under observation until ready for discharge.

Stage 2 Recovery areas can be further described as follows:

- Stage 2A: Provision of patient trolley bays. Patients in this area may recover in recliners/chairs. A ratio of two chairs (minimum) to each Operating/ Procedure room, in addition to the above bed requirement, is considered appropriate.
- Stage 2B: Provision of patient recliners. This area is also referred to as a Discharge Lounge or Stage 3 Recovery. Patients are ambulant, dressed and may await discharge in comfortable chairs. The lounge will require access to patient refreshment facilities and patient toilets.

External windows are to be provided in Stage 2 Recovery

Minimum space requirement is three bed/ trolley/ chair spaces per Room and some comfortable seating for ambulant patients.

14.2.3 *Functional Relationships*

EXTERNAL

The Day Surgery/ Procedure Unit will have functional relationships with the following units

- Operating Suite;
- Pre-Admission Clinic;
- Transit Lounge.

AMBULANCE ACCESS

A discreet pick-up point, preferably under cover, shall be provided for the transfer of patients to and from the Day Surgery/ Procedure Unit.

CAR PARKING

Adequate car parking facilities with convenient access needs to be provided.

INTERNAL

Within the Unit, key functional relationships will include:

- Unidirectional patient flow from arrival at Reception, through holding, Procedure Rooms, Recovery rooms, then to the Peri-operative Unit, Inpatient Unit, Lounge areas and discharge to home;
- Separation of clean and dirty traffic flows
- Staff visibility of patient areas for patient supervision and safety

14.3 Design

14.3.1 *General*

Pre-operative and post-operative patient facilities can be located together as required.

14.3.2 *Environmental Considerations*

ACOUSTICS

Design should consider reduction of the ambient noise level within the unit, particularly waiting areas.

Acoustic privacy treatment will be required to:

- Consulting / interview rooms
- Operating/ Procedure Rooms

Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

NATURAL LIGHT

The design of the unit should incorporate external views and natural light as far as possible,



particularly to Waiting Areas, Pre-operative and Recovery areas.
It is recommended that external views and natural light are provided in staff areas such as Staff Rooms and Offices and areas where staff are confined to one location e.g. Reception, Clean-up Rooms.

When external views and natural light are provided in patient areas, care must be taken to minimise glare and ensure privacy is not compromised. Sun penetration should be controlled to exclude glare and heat gain or loss.

If Procedure Rooms include external windows, provision of controlled level of lighting during procedures may be required.

14.3.3 Safety and Security

Security measures will include the following:

- Controlled access to Procedural and staff areas
- Security and safe storage of drugs

14.3.4 Building Services Requirements

RADIATION SHIELDING

Radiation shielding to be recommended by AERB safety standards will be required in all procedure rooms where imaging will occur.

14.4 Components of the Unit

The Day Surgery/ Procedure Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

14.4.1 Non Standard Components

ENDOSCOPE STORE

Description and Function

The Endoscope Store may be provided to store a variety of cleaned and decontaminated and sterile endoscopes, ready to use.

Location and Relationships

The endoscope store will be located immediately adjacent to the endoscope processing room.

Considerations

Endoscopes will be stored in appropriately ventilated cabinets. Air supply to this room should be HEPA filtered to prevent contamination of clean endoscopes.



14.5 Schedule of Accommodation

14.5.1 Day Surgery / Procedure Unit Generic Schedule of Accommodation

Schedule of Accommodation follows and assumes a 2 room and a 4 room suite that may incorporate day surgery. The schedule will need to be amended in accordance with the requirements of the Service Plan.

Provision of Offices, Workstations and support areas will be dependent on the Operational Policy and service demand and may vary from the Schedule of Accommodation.

DAY SURGERY / PROCEDURES UNIT - Entry / Waiting / Reception / Administration

ROOM / SPACE	Standard Component				2 rooms Qty x m2	4 rooms Qty x m2	Remarks
PATIENT WAITING	yes				1 x 20	1 x 30	
PATIENT WAITING - FAMILY	yes				1 x 25	1 x 50	
TOILET - PUBLIC	yes				2 x 3	2 x 3	
TOILET - ACCESSIBLE	yes				2 x 5	2 x 5	Add baby change table as necessary
RECEPTION	yes				1 x 10	1 x 10	
CLERICAL WORKROOM					1 x 9	1 x 12	1 – 2 staff
STORE - PHOTOCOPY / STATIONERY	yes				1 x 8	1 x 10	1 and 2 staff respectively
STORE - FILES	yes				1 x 4	1 x 6	Include stationery recycle bin
OFFICE – SINGLE PERSON	yes				1 x 9	1 x 9	Unit Manager
OFFICE - SINGLE PERSON	yes					1 x 9	Day Procedure Unit Clinical Nurse Specialist
OFFICE - SHARED (MEDICAL AND NURSING WRITE-UP ROOM)	yes				1 x 12	1 x 20	2 and 4 workstations for visiting staff attending unit for sessions
MEETING / EDUCATION / GROUP ROOM	yes				1 x 12	1 x 15	

DAY SURGERY / PROCEDURES UNIT - PATIENT EXAM / PREP / WAITING

ROOM / SPACE	Standard Component				2 rooms Qty x m2	4 rooms Qty x m2	Remarks
CONSULT / EXAM / INTERVIEW ROOM	yes				1 x 12	2 x 12	May also be used for medical student training
SUB – WAITING (ENDOSCOPY)	yes				1 x 2	1 x 4	For bowel preps
PREP ROOM (GASTRO)					2 x 9	2 x 9	Bowel preps
ENSUITE (TO PREP ROOM)	yes				2 x 5	2 x 5	
PATIENT CHANGE / LOCKERS - MALE / FEMALE	yes				2 x 10	2 x 15	
PATIENT TOILET	yes				2 x 4	2 x 4	
ACCESSIBLE TOILET / SHOWER / CHANGE	yes similar				2 x 7	2 x 7	Similar to Toilet - Accessible
BAY - LINEN TROLLEY	yes				1 x 2	1 x 2	Gowns etc.
"CHANGED" WAITING - CHAIRS	yes				1 x 12	1 x 20	refer to Waiting-Sub



ROOM / SPACE	Standard Component				2 rooms Qty x m2	4 rooms Qty x m2	Remarks
"CHANGED" WAITING - TROLLEY BAY	yes similar				2 x 10	2 x 10	Similar to Patient Bay - Holding;
STAFF STATION	yes				1 x 10	1 x 14	To oversight changed waiting;

DAY SURGERY / PROCEDURES UNIT – PROCEDURES AREA

ROOM / SPACE	Standard Component				2 rooms Qty x m2	4 rooms Qty x m2	Remarks
OPERATING ROOM - GENERAL	yes				2 x 42	4 x 42	Able to rotate bed through 360 degrees; provide Operating Room-Minor if Operating Room-General not required
OPERATING ROOM - MINOR	yes				2 x 36 optional	4 x 36 optional	Able to rotate bed through 360 degrees
CLEAN-UP ROOM - SHARED SCOPE REPROCESSING	yes				1 x 12	1 x 16	If possible, direct access from Endoscopy Rooms
ENDOSCOPE STORE					1 x 4	1 x 6	Special cupboards
SCRUB BAY	yes				1 x 6	2 x 6	Shared between rooms
CLEAN-UP ROOM	yes					1 x 7	for surgical instruments processing
BAY - MOBILE EQUIPMENT	yes				2 x 2	4 x 2	X-ray units etc
BAY - LINEN	yes				1 x 2	1 x 2	

DAY SURGERY / PROCEDURES UNIT – RECOVERY

ROOM / SPACE	Standard Component				10 bays Qty x m2	20 bays Qty x m2	
STAFF STATION	yes				1 x 10	1 x 14	
CLEAN UTILITY	yes				1 x 9	1 x 12	
DIRTY UTILITY / DISPOSAL ROOM	yes				1 x 12	1 x 14	
RESUSCITATION TROLLEY BAY	yes				1 x 2	1 x 2	
BAY - LINEN TROLLEY	yes				1 x 2	1 x 2	
PATIENT BAY - RECOVERY STAGE 1 ENCLOSED	yes similar				1 x 12	1 x 12	Children; Neg/neutral air-conditioning for patients post-bronchoscopy.
PATIENT BAY - RECOVERY STAGE 1	yes				7 x 12	14 x 12	
PATIENT BAY – RECOVERY STAGE 2	yes				6 x 10	12 x 10	
BEVERAGE BAY	yes				1 x 4	1 x 4	
DISCHARGE LOUNGE (3 RD STAGE RECOVERY)	yes similar				1 x 18	1 x 36	Patient Lounge; screened chairs; 3sqm per chair
INTERVIEW ROOM	yes				1 x 9	1 x 9	
STORE - EQUIPMENT	yes				1 x 15	1 x 20	With power points for recharging pumps etc
DISCOUNTED CIRCULATION					35%	35%	



DAY SURGERY / PROCEDURES UNIT - STAFF AMENITIES

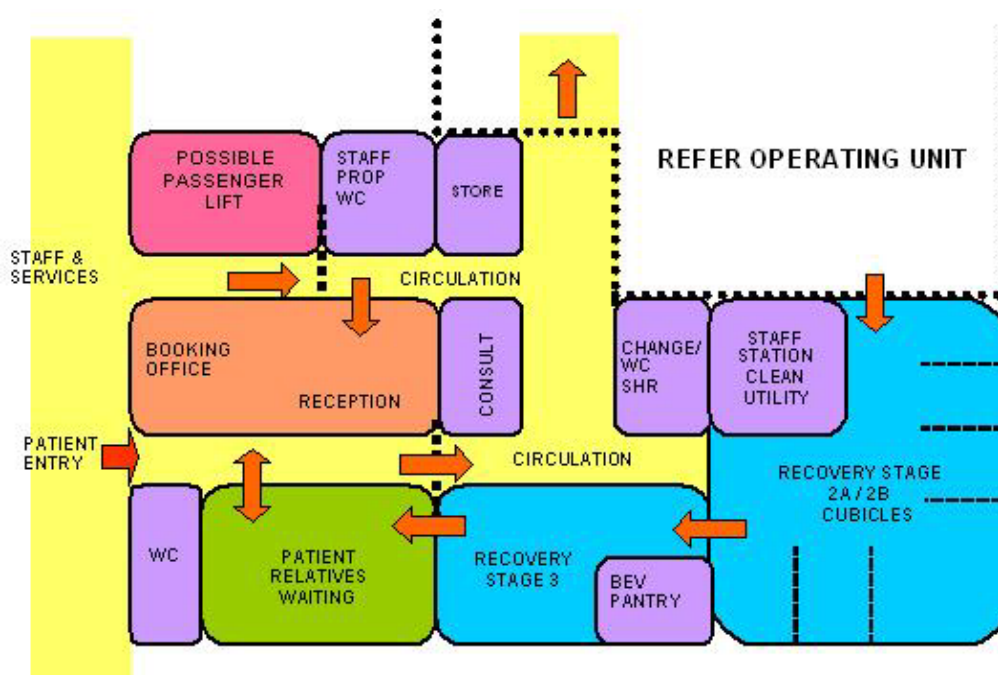
ROOM / SPACE	Standard Component				2 rooms Qty x m2	4 rooms Qty x m2	Remarks
STAFF LOUNGE / BEVERAGE	yes				1 x 24	1 x 30	
STAFF TOILET / LOCKERS - MALE	yes				1 x 10	1 x 14	Full lockers - adjust mix as required
STAFF TOILET / LOCKERS - FEMALE	yes				1 x 10	1 x 14	Full lockers - adjust mix as required

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

14.6 Functional Relationship Diagram

14.6.1 Day Surgery / Procedure Unit Functional Relationship Diagram



14.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



15.0 Dental Health Unit

15.1 Introduction

15.1.1 *Description*

Dental Units may be attached to hospital departments, for example Emergency Units or Outpatients Units, or may be a freestanding department. Refer to Operating Unit for dental surgery as a function of an operating suite.

15.2 Planning

15.2.1 *Functional Areas*

The Dental Unit will consist of the following Functional Areas:

- Reception Area and Waiting
- Office area for administrative and clerical activities
- Dental Surgery Rooms
- Support Rooms including Clean-up Room, Laboratory, Store, Sterilising, X-ray processing area and Plant areas
- Staff Amenities which may be shared with adjacent Units.

15.2.2 *Functional Relationships*

The Dental Unit in a hospital precinct may be located close to other Outpatients units. It should have ready access to Entry and Waiting areas and public amenities.

15.3 Design

15.3.1 *Environmental Considerations*

NATURAL LIGHT

Maximise provision of natural light to areas where staff spend a large proportion of their working day.

PRIVACY

Privacy must be considered to treatment rooms and where confidential conversations are likely to take place. Acoustic privacy will be required in dental surgery rooms, offices, meeting and interview rooms.

ACOUSTICS

Acoustic performance shall be high within the Unit, particularly dental surgery rooms, conference and meeting rooms. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

15.3.2 *Space Standards and Components*

ERGONOMICS

Refer to Part C of these Guidelines.

15.3.3 *Safety and Security*

The Dental Unit requires the following security considerations:

- The perimeter of the Unit shall be lockable
- Doors to all offices shall be lockable
- Rooms used for storing equipment and files must be lockable
- Provision of after-hours access and security for staff may be required.



15.3.4 *Finishes*

Refer to Part C of these Guidelines.

15.3.5 *Fixtures and Fittings*

Refer to Part C of these Guidelines and Standard Components for information of fixtures and fittings.

15.3.6 *Building Service Requirements*

Radiation protection requirements for Dental Surgery Rooms will require assessment by AERB. Compliance with any statutory authority regulations is required.

15.4 Components of the unit

15.4.1 *Introduction*

The Dental Unit will consist of a combination of Standard Components and Non-Standard Components. Standard Components must comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

15.4.2 *Non-Standard Components*

DENTAL PLANT ROOM

Description and function

The Dental Plant Room will accommodate equipment including water filtration equipment, silver water treatment system, dental suction plant and air compressors. The Plant Room shall be a minimum of six m². The size will be dependent on the amount of equipment to be accommodated and the layout.

Location and Relationships

The Plant Room should be located to minimise the impact of noise and heat generated by equipment accommodated within the room on adjacent areas. Access to the Plant Room though an external door is recommended as internal access may present noise issues.

Considerations

Services required for equipment may include compressed air, cold water and both single and three phase power. Additional requirements include floor wastes and tundishes for waste water, external exhausting for suction system air discharge and room ventilation. There may be a requirement to include a pit in the plant room floor to accommodate an air venturi for the suction system. Remote isolation switches for plant should be considered (the sterilizing room or reception are ideal locations) so plant can be easily shut down at the end of the day.

CHILD EDUCATION AREA

Description and function

A child education area may be provided to teach children teeth care and brushing techniques. The education area will consist of basins at child height and a mirror. The area may include more than one basin according to service requirements.

Location and Relationships

The child education area may be incorporated into a dental surgery room or as a separate within the Unit, with ready access to the Waiting areas.

Considerations

Provide warm water to the basins.



15.5 Schedule of Accommodation

15.5.1 Dental Health Unit Generic Schedule of Accommodation

Schedule of Accommodation for a Dental Unit with 2, 4 & 6+ chairs.

ENTRY / RECEPTION

ROOM / SPACE	Standard Component			2 Chairs Qty x m2	4 Chairs Qty x m2	6+ Chairs Qty x m2	Remarks
ENTRY - AIRLOCK	yes			1 x 9	1 x 9	1 x 9	Optional depending on location
RECEPTION	yes			1 x 10	1 x 12	1 x 20	
STORE - FILES	yes			1 x 6	1 x 8	1 x 10	Compactus or fixed shelving
STORE - PHOTOCOPIER / STATIONERY	yes			Share	1 x 8	1 x 8	
OFFICE – 2 PERSON, SHARED	yes				1 x 12	1 x 12	
WAITING	yes			1 x 20	1 x 30	1 x 40	Cold water dispenser;
WAITING - FAMILY	yes			1 x 10	1 x 15	1 x 20	Cold water dispenser
CHILD PLAY AREA	yes			Included in Waiting	1 x 10	1 x 15	Optional
BAY - WHEELCHAIR PARK	yes			Share	1 x 2	1 x 2	1 – 2 wheelchairs
TOILET - PUBLIC	yes			Share	2 x 3	2 x 3	
TOILET – ACCESSIBLE	yes			2 x 5	2 x 5	2 x 5	

TREATMENT AREAS

ROOM / SPACE	Standard Component			2 Chairs Qty x m2	4 Chairs Qty x m2	6+ Chairs Qty x m2	Remarks
DENTAL SURGERY – SINGLE	yes			2 x 14	2 x 14	3 x 14	
DENTAL SURGERY – SINGLE	yes				1 x 18	1 x 18	Bed access
DENTAL SURGERY - 2 CHAIRS	yes similar				1 x 40	1 x 40	Similar to Dental Surgery - Single
CHILD EDUCATION AREA				1 x 2	1 x 3	1 x 4	Optional; sink & mirror x 1, 2 & 3; may be incorporated into an open plan surgery
PATIENT BAY - RECOVERY	yes			1 x 20	1 x 20	1 x 20	
BAY - HANDWASHING, TYPE B	yes			1 x 1	1 x 1	1 x 1	Collocate with recovery
BAY - RESUSCITATION TROLLEY	yes			Share	1 x 2	1 x 2	

SUPPORT AREAS

ROOM / SPACE	Standard Component			2 Chairs Qty x m2	4 Chairs Qty x m2	6+ Chairs Qty x m2	Remarks
X-RAY PROCESSING (DARK ROOM)	yes			1 x 6	1 x 6	1 x 6	
DENTAL X-RAY , OPG	yes				1 x 7	1 x 7	
DENTAL LABORATORY	yes			1 x 8	1 x 20	1 x 30	



ROOM / SPACE	Standard Component			2 Chairs Qty x m2	4 Chairs Qty x m2	6+ Chairs Qty x m2	Remarks
INSTRUMENT PROCESSING	yes similar			1 x 10	1 x 12	1 x 30	Similar to Dental Clean-Up/ Sterilising
STORE - STERILE STOCK	yes			1 x 8	1 x 10	1 x 12	May be incorporated into instrument Processing
DIRTY UTILITY / DISPOSAL ROOM	yes			1 x 8	1 x 10	1 x 12	For fluids disposal, soiled linen holding etc
BAY - LINEN TROLLEY	yes			1 x 2	1 x 2	1 x 2	
STORE – GENERAL	yes			1 x 9	1 x 12	1 x 14	
CLEANER'S ROOM	yes			Share	1 x 5	1 x 5	
DENTAL PLANT ROOM				1 x 9	1 x 12	1 x 16	After hours access
GOODS RECEPTION / LOADING DOCK	yes				1 x 15	1 x 15	Space for one truck May be shared
OFFICE – SINGLE PERSON	yes			1 x 9	1 x 12	1 x 12	Senior Dentist
OFFICE - WORKSTATION	yes			2 x 6	4 x 6	6 x 6	Number to suit staff establishment
MEETING / TUTORIAL ROOM	yes				1 x 15	1 x 20	
STAFF ROOM	yes				1 x 24	1 x 30	
BAY - BEVERAGE	yes			1 x 4			
SHOWER - STAFF	yes				2 x 3	2 x 3	Optional
TOILET - STAFF	yes			2 x 3	4 x 3	4 x 3	
DISCOUNTED CIRCULATION				25%	32%	32-35%	

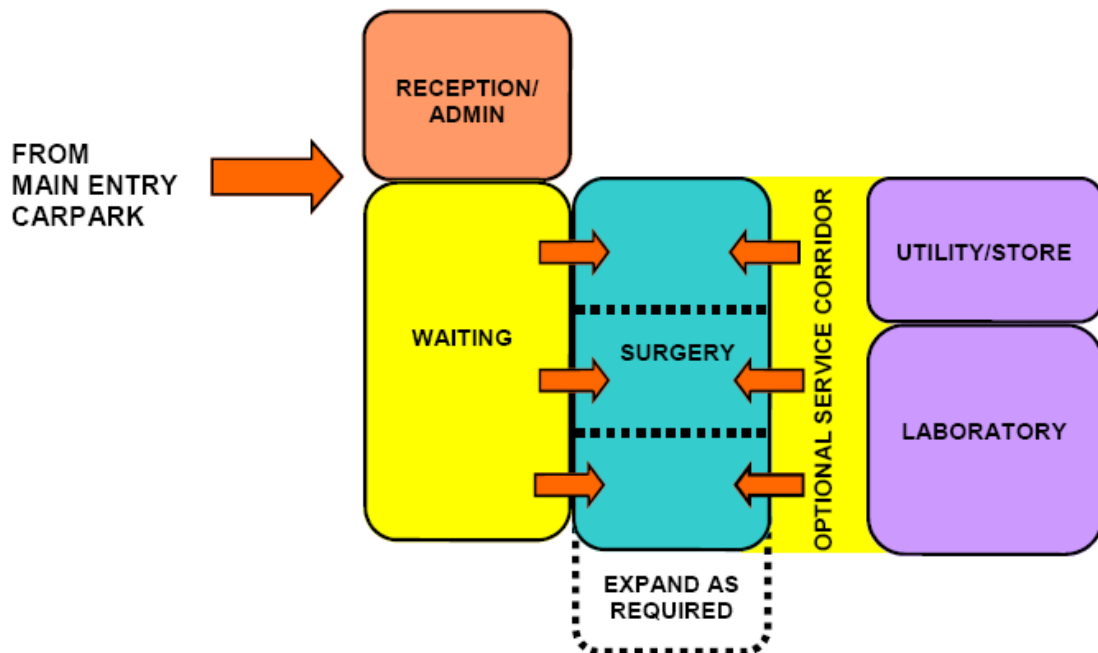
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



15.6 Functional Relationship Diagram

15.6.1 Dental Health Unit Functional Relationship Diagram



15.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



16.0 Emergency Unit

16.1 Introduction

16.1.1 Description

The function of the Emergency Unit is to receive, stabilise and manage patients (adults and children) who present with a large variety of urgent and non urgent conditions whether self or otherwise referred. The Emergency Unit also provides for the reception and management of disaster patients as part of the Unit's role within each region.

It is recommended that Hospitals that do not provide an Emergency Service display a prominent exterior sign at the main entrance stating this and giving the location of the nearest Hospital with an Emergency Service.

16.2 Planning

16.2.1 Operational Models

The Emergency Unit may be configured in a number of models that may influence facility design including

FAST-TRACK

Specific patient groups may be assessed and treated via a separate 'fast' track to other EU presentations. This may occur at the triage point, or immediately after triage but in a separate zone. Patient types suitable for this area may include contagious diseases, minor injuries, ambulatory paediatrics. Assessment and treatment may be carried out in Consult / Examination rooms.

GROUPING BY PATIENT ACUITY

Patients of similar acuity (urgency) or staff intensity may be treated in the same zone. Facilities for this model will include separate areas for resuscitation, acute monitored beds, acute non monitored beds and ambulatory treatment spaces. There may be separate entry-points (or triage points) for the different areas. Staff may be separately allocated to different areas for each shift, and may require separate Staff Stations and private workspace.

GROUPING BY SPECIALTY

Patients may be managed in different areas according to the specialty of service they require e.g. acute treatment, complex investigation, complex discharge planning, or paediatrics. Patients may be triaged from a central arrival point, or from separate ambulance and ambulant entry points. Within each Functional Area, patients would be prioritised according to acuity. In this model, separate staffing for each area is required, which would also include separate workspaces for staff.

OTHER SPECIAL FUNCTIONS

Short Stay Wards /Emergency Medicine Unit/ Observation Units may be located adjacent or incorporated into the Emergency Unit. This may allow sharing of administrative, staff and support facilities.

16.2.2 Functional Areas

An Emergency Unit may include the following Functional Areas:

ENTRANCE / RECEPTION / TRIAGE:

- Receiving of patients and visitors and administration
- Assessment for patients



PATIENT TREATMENT AREAS:

- Assessment and treatment areas including Resuscitation, Acute Treatment bays/ rooms, Seclusion Room and Decontamination Facility, Paediatric patient areas, Procedure Rooms
- Short-Stay Ward/ Emergency Medicine Unit/ Observation Unit;
- Primary Care Area - for patients with low acuity conditions;
- Stepdown Area - for patients awaiting test results, considered safe, but requiring observation prior to admission or discharge.

STAFF AND SUPPORT AREAS

- Clean and Dirty Utility Rooms
- Store rooms
- Linen
- Waste Holding/ Cleaners rooms
- Staff amenities, administrative and teaching functions;
- Ambulance facilities.

The main aggregation of clinical staff will be at the Staff Station in the Acute Treatment/ Resuscitation Area. This should be the focus around which the other clinical areas are grouped. The Entrance/Reception Area is the focus of initial presentation.

- In addition to standard treatment areas, some departments may require additional, specifically designed areas to fulfil special roles, such as:
- Management of paediatric patients
- Management of major trauma patients
- Management of psychiatric patients
- Management of patients following sexual assault
- Extended observation and management of patients
- Undergraduate and postgraduate teaching
- Transport and retrieval services
- Telemedical referral/ consultation service

ENTRANCE AREA

The entrance to the Emergency Unit must be at grade-level, well-marked, illuminated, and covered. It shall provide direct access from public roads for ambulance and vehicle traffic, with the entrance and driveway clearly marked. A ramp shall be provided for pedestrian and wheelchair access.

The entrance to the Emergency Unit shall be paved to allow discharge of patients from cars and ambulances. Temporary parking should be provided close to the entrance.

WAITING AREA

The Waiting Area should provide sufficient space for waiting patients as well as relatives/ escorts. The area should be open and easily observed from the Triage and Reception areas. Seating should be comfortable and adequate. Space should be allowed for wheelchairs, prams, walking aids and patients being assisted. There should be an area where children may play.

Support facilities, such as a television should also be available. Fittings must not provide the opportunity for self harm or harm towards staff. Waiting Areas shall be negatively pressured.

From the Waiting Area there must be access to:

- Triage and Reception Areas
- Toilets
- Baby Change Room
- Light refreshment facilities which may include automatic beverage dispensing machines
- Telephone and change machines



- Health literature

It is desirable to have a separate Waiting Areas particularly for children. Child play areas will provide equipment suitable for safe play activities, including a television. It shall be separated for sound from the general Waiting Rooms and must be visible to the Triage Nurse. The area should be monitored to safeguard security and patient well being.

RECEPTION / CLERICAL AREAS

The Reception Area is required to accommodate:

- Reception of patients and visitors
- Registration interviews of patients
- Collation of clinical records
- Printing of identification labels.

The counter should provide seating and be partitioned for privacy at the interview area. There should be direct communication with the Reception / Triage area and the Staff Station in the Acute Treatment / Observation Area.

The Reception/Clerical Area should be designed with due consideration for the safety of staff. This area requires a duress alarm.

RECEPTION / TRIAGE

The Reception / Triage and Staff Station shall be located where staff can observe and control access to treatment areas, pedestrian and ambulance entrances, and public waiting areas. This area requires a duress alarm.

The Emergency Unit should be accessible by two separate entrances: one for ambulance patients and the other for ambulant patients. It is recommended that each entrance area contains a separate foyer that can be sealed by remotely activating the security doors. Access to Treatment Areas should also be restricted by the use of security doors. The Ambulance Entrance should be screened as much as possible for sight and sound from the ambulant patient entrance. Both entrances should direct patient flow towards the Reception/Triage Area.

The Reception / Triage area should have clear a vision to the Waiting Room, the children's play area (if provided) and the ambulance entrance. The Reception / Triage Area may perform observations and provide first aid in relative privacy.

ACUTE PSYCHIATRIC EMERGENCY CARE AREA

The patient who is suffering from an acute psychological or psychiatric crisis has unique and often complex requirements. An Emergency Unit should have adequate facilities for the reception, assessment, stabilisation and initial treatment of patients presenting with acute mental health problems.

It is not intended that this be used for prolonged observation of uncontrolled patients. The main purpose of such an area is to provide a safe and appropriate space to interview and stabilise patients. Acute mental health presentations have the potential to disrupt the normal operation of an Emergency Unit. Conversely, the busy environment of an Emergency Unit may not be conducive to the care of patients with acute mental health crises.

Patient flows should be separated where possible to maximise privacy and minimise disruption. A separate secure entrance for use by community emergency mental health teams and police may be desirable. Patients should be continuously observable by staff either directly or via closed circuit television

The designated area should be within close proximity of other continuously staffed areas of the department, with ready access to assistance when required, As far as possible, the facility should not contain objects that could be thrown at staff. There should be two separate exits to



allow the exit of staff if one exit is blocked. The exit doors should open outwards, and should be lockable from the outside but not from the inside. If a window is incorporated, any drapes or blinds shading the window should be operable from outside. All areas should have easily accessible duress alarms.

As far as possible, the area should be free of heavy or breakable furniture, sharp or hard surfaces which could injure an uncontrolled patient, and should incorporate tamper resistant electrical fittings. It should also incorporate interior design features that promote calmness, such as muted colours and soft furnishings and appropriate lighting. Patient tracking devices may enhance security.

The Acute Psychiatric Emergency Care Area should be separate enough from adjacent patient care areas to allow privacy for the mental health patient and protection of other patients from potential disturbance or violence. There should be acoustic and visual separation from adjacent clinical areas, but ready access for staff in the event of an urgent need for intervention. The incorporation of sound-insulating material is recommended. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

Ideally the Acute Psychiatric Emergency Care Area facility should contain at least two separate but adjacent areas:

Interview Room (Mental Health)

This room should have two exit doors, swinging outward and lockable from outside, to allow for the escape of staff members when one exit is blocked.

One door should be large enough to allow a patient to be carried through it. Consideration should be given to installing a solid door with safety viewing glass.

The Interview Room should also be:

- Shielded from external noise
- Furnished with only soft furnishings with no hard edges
- Designed in such a way that observation of the patient by staff outside the room is possible at all times; this may be backed up with closed circuit television for the safety of staff
- Arranged to ensure that patients have no access to air vents or hanging points
- Fitted with a smoke detector
- Fitted with duress alarm at each exit.

Examination/ Treatment room (Mental Health):

The Examination/Treatment Room should be immediately adjacent to the Interview room. It should contain adequate facilities for physical examination of the patient, however the inclusion of unnecessary and easily dislodged equipment should be avoided.

If operational policy dictates that intravenous sedation is to occur in this area, it should contain the appropriate facilities and monitoring equipment, mounted out of reach of a potentially violent patient. It should contain the minimum of additional fittings or hard furnishings that could be used to harm an uncontrolled patient. It should be of sufficient size to allow a restraint team of five people to surround a patient on a standard Emergency Unit bed and should be at least 12 m² in floor area.

ACUTE TREATMENT AREAS

Acute Treatment Areas are used for the management of patients with acute illnesses.

Requirements are as follows:

- Areas to fit a standard mobile bed
- Storage space for essential equipment
- Space to allow monitoring equipment to be housed
- Minimum space between beds is 2.4 m
- Each treatment area must be at least nine m² in area



All Treatment Areas, including Triage, require the following:

- Service panel
- Examination light; the examination light must be a high standard focused light with a power output of 30,000 lux, illuminate a field size of least 150 mm and be of robust construction
- Wall mounted sphygmomanometer
- Shelving
- Waste bins and sharps containers
- Patient call and emergency call facilities

PATIENT TOILETS/ SHOWERS

In an Emergency Unit the following Patient Toilet/ Ensuite facilities will be required, (separate Male and Female):

- Up to eight treatment bays – two Patient Toilets/ Ensuite, one each for male/ female
- Between nine and 20 treatment bays – four Patient Toilets/ Ensuite, two each for male/ female
- Between 21 and 40 treatment bays – six Patient Toilet/ Ensuite, three each for male/ female
- More than 40 treatment bays – eight Patient Toilet/ Ensuite, four each for male/ female
- At least two of the above Toilets/ Ensuities to be Accessible for wheelchairs, one each for male/ female.

CONSULTATION AREAS

Consultation Room/s are to be provided according to Unit size and requirements for examination and treatment of ambulant patients. Consult Rooms are to comply with Standard Components - Consult Room.

CONSULTATION - OUTPATIENTS

If an Outpatient Consultation Service is to be provided according to the service plan, the following facilities shall be provided:

- Entrance and Reception; this may be a shared facility with the hospital or other specialty departments
- Waiting Area may be shared
- Consulting / Examination room/s
- Treatment Room/s
- Nurses Office; dependent upon the size of the outpatient service
- Medical Laboratory / Utility Room; the size and type of this facility will be determined by the size of the outpatient service and whether or not shared facilities are available within the hospital
- Dirty Utility / Disposal Room
- Staff Room; may be shared with the hospital
- Toilets and Change Rooms; may be shared with the hospital
- Storage; as required
- Cleaner's Room; may be shared with the hospital
- Environmental Requirements; special attention is to be given to the visual and acoustic privacy of patients when being interviewed and also to the quality of light when being examined (the latter requires adequate natural light or colour corrected artificial lighting or task lighting)
- Miscellaneous: construction, finishes, design for disabled access, parking, signposting etc., shall be in accordance with the other relevant sections of these Guidelines.

DECONTAMINATION AREA

An Isolation Room should be available for patients who are contaminated with toxic substances. In addition to the requirements of an Isolation Room, this room must:

- Be directly accessible from the ambulance bay without entering any other part of the unit
- Have a flexible water hose, floor drain and contaminated water trap.



LABORATORY AREA

A designated area for performing laboratory investigations such as arterial blood gas analysis and microscopy should be considered in Units of Levels 5 or 6.

PHARMACY / MEDICATION AREA

A Pharmacy / Medication area is required for the storage of medications used within the Emergency Department. Entry should be secure with a self-closing door. The area should be accessible to all clinical areas and have sufficient space to house a refrigerator, which is essential for the storage of heat sensitive drugs.

RESUSCITATION AREA

The Resuscitation Room/ Bay is used for the resuscitation and treatment of critically ill or injured patients. The Resuscitation Room/ Bay requires:

- Space to fit a specialised resuscitation bed
- Space to ensure 360 degree access to all parts of the patient for uninterrupted procedures
- Circulation space to allow movement of staff and equipment around the work area
- Space for equipment, monitors, storage, wash up and disposal facilities
- Appropriate lighting and equipment to hang IV fluids
- Maximum possible visual and auditory privacy for the occupants of the room and other patients and relatives
- Easy access from the ambulance entrance and separate from patient circulation areas
- Easy access to the Acute Treatment/Observation area from the Staff Station
- A full range of physiological monitoring and resuscitation equipment
- Workbenches, storage cupboards, handbasins, X-ray viewing facilities (or digital electronic imaging system) and computer access
- Solid partitions between this and other areas are recommended.

Each Resuscitation Bay should be equipped with:

- Service panel, service pendants or pods to maximise access to patients
- Physiological monitor with facility for ECG, printing, NIBP, SpO₂, temperature probe, invasive pressure, CO₂ monitor
- A light similar to a small, single arm operating light
- Resuscitation patient trolley
- Wall mounted diagnostic set (ophthalmoscope/ auroscope)
- Overhead IV track

Imaging facilities should include:

- Overhead X-ray
- X-ray screening (lead lining) of walls and partitions between beds
- Resuscitation trolley with X-ray capacity

STAFF STATION

The Staff Station should have an uninterrupted vision of the patients. It should be centrally located and be constructed as an enclosed area to ensure confidential information can be conveyed without breach of privacy and to provide security to staff, information and privacy. The use of sliding windows and adjustable blinds can be used to modulate external stimuli and a separate write-up area may be considered.

SHORT STAY WARD / EMERGENCY MEDICAL UNIT (EMU)

This facility may be provided either within or adjacent to the Emergency Unit for the prolonged observation and ongoing treatment of patients who are planned for subsequent discharge (directly from the EU). Patients may be kept in this Unit for diagnosis, treatment, testing or for medical stabilisation.

The length of stay in the Unit is generally between 4 and 24 hours, although Unit policy may require longer stays.

The Unit may also be situated separately to the Emergency Unit, although functionally linked.



According to the service plan, dedicated beds for short stay are separately designated and staffed. The types of patients planned to be admitted to this Unit will determine the number and type of beds provided, and the design of associated monitoring and equipment. Staff Stations, work and storage and other support areas will need to be available and may be shared if the unit is located physically close to other treatment areas.

16.2.3 Functional Relationships

The design should allow for rapid access to every space with a minimum of cross traffic. There must be close proximity between the Resuscitation / Acute Treatment areas for non-ambulant patients, other treatment areas for non-ambulant patients and other treatment areas for ambulant patients, so that staff may be relocated at times of high workload. Visitor and patient access to all areas should not traverse clinical areas. Protection of visual, auditory and olfactory privacy is important whilst recognising the need for observation of patients by staff.

The Emergency Unit will require ready access to the following key functional areas:

- Medical Imaging Unit
- Operating Unit - rapid access is highly desirable for surgical emergencies
- Coronary Care Unit
- Pathology / Blood Bank Unit
- Clinical Records Unit
- Inpatient Accommodation Unit
- Pharmacy Unit - proximity is required
- Outpatients (if an outpatient service is provided adjacent to the Emergency Unit)
- Mortuary

CLINICAL RECORDS

Access to clinical records is required so that patients' previous medical histories are obtainable without delay. A system of mechanical or electronic clinical record transfer is desirable to minimise delays and labour costs.

Access to clinical records must be available 24 hours per day.

MEDICAL IMAGING

The Medical Imaging Unit should have a general X-ray table and upright X-ray facilities. It is possible to provide Medical Imaging as a satellite facility within the Emergency Unit. Additionally, an overhead gantry in the resuscitation area may be provided. The presence/absence of a film processor is dependent upon close proximity to the main Medical Imaging Department or the use of digital radiology. Immediate access to CT scanning, Ultrasound and Nuclear Medicine modalities will enhance the Emergency Unit's effectiveness. A system of electronic display of imaging is desirable.

PATHOLOGY

Rapid access to Pathology services is highly desirable to minimise turnaround times for laboratory investigations. Mechanical or pneumatic tube transport systems for specimen and electronic reporting of results are recommended.

Point of care access for electrolyte and blood gas analysis is highly desirable.

PHARMACY

Proximity to the Pharmacy Unit is desirable to enable prescriptions to be filled by patients with limited mobility.

16.3 Design

16.3.1 General

LOCATION AND DESIGN

Decisions regarding the site location have a major influence on the eventual cost and operational efficiency of the Emergency Unit staff. The site of the Emergency Unit should, as much as possible, maximise the choices of layout. In particular, sites of access points must be



carefully considered.

The Emergency Unit should be located on the ground floor for easy access. It should be adequately signposted

16.3.2 Car Parking

Car parking should be close to the Entrance, well lit and available exclusively for patients, their relatives and staff. Parking areas should be available close to the Emergency Unit for urgent call in staff.

Undercover car parking should be available for:

- Appropriate number of ambulances which will be determined by the case load and the availability of ambulance access to other parts of the hospital for non emergency patients
- Taxis and private vehicles that drop off/pick up patients adjacent to the ambulance entrance.

16.3.3 Signage

The emergency unit should be clearly identified from all approaches. Signposting that is illuminated is desirable to allow visibility at night. The use of graphic and character displays such as a white cross on a red background is encouraged.

16.3.4 Environmental Considerations

ACOUSTICS

Clinical Areas should be designed to minimise the transmission of sound between adjacent treatment areas.

The following areas will require acoustic consideration:

- Consult/ Interview and triage areas for discussions / interviews with clients;
- Seclusion and psychiatric assessment rooms
- Treatment and Procedure Rooms;
- Waiting areas
- Staff Stations

Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

NATURAL LIGHT

The use of natural light should be maximised throughout the Unit. Natural lighting contributes to a sense of wellbeing and assists orientation of patients and visitors and minimises staff disorientation.

16.3.5 Infection Control

Handbasins for hand-washing should be available within each treatment area and should be accessible without traversing any other clinical area. All handbasins in clinical areas should be of surgical type with hands-free activation (Type A). Dispensers for non sterile latex gloves should be available in the vicinity of each handbasin and each treatment area.

Refer to Part D- Infection Control for ratios of basins required in clinical areas.

ISOLATION ROOMS

At least one negative pressure Isolation Room should be provided in Units in Level 5 & 6. The need for additional negative pressure Isolation Rooms shall be determined by the infection control risk assessment. Refer to Infection Control Part D.

16.3.6 Space Standards and Components

BED SPACING

In the Acute Treatment Area there should be at least 2.4 metres of clear floor space between



beds. The minimum length should be three metres.

CORRIDORS

In general, the total corridor area within the department should be minimised to optimise the use of space. Where corridors are necessary, they should be of adequate width to allow the cross passage of two hospital beds without difficulty. There should be adequate space for trolleys to enter or exit any of the Consulting Rooms, and to be turned around. Standard corridors should not be used for storage of equipment.

Note: Refer to Part C - Space Standards & Dimensions for corridor standards.

16.3.7 *Safety and Security*

The Emergency Unit receives a large number of patients and their visitors, many of whom may be distressed, intoxicated or involved in violence. The hospital has a duty of care to provide for the safety and security of employees, patients and visitors. Both policies and structures should be in place to minimise injury, psychological trauma and damage or loss of property. The precise details of security features should be designed in conjunction with a security risk assessment for the specific site.

The location of an office for security personnel near the entrance should be considered. This room should be positioned so that it allows Security Staff a clear view of the Waiting Room, Triage and Reception Areas. Immediate access to these areas is essential. Remote monitoring of other areas in the department by CCTV and of staff duress/personal alarms should also occur from this area.

PERIMETER ACCESS CONTROL

Ambulatory and Ambulance entrances should be separate, with electronically operated locks. Access from the Waiting Areas to the treatment areas should be controlled. There should be restricted access from the remainder of the hospital into the Emergency Unit.

RECEPTION / TRIAGE AREAS

The interface between the Waiting Areas and the Reception / Triage Areas should be carefully designed so as to permit communication and reassurance to distressed patients or visitors, yet provide safety and security for staff.

Counters should be of sufficient height and depth to minimise the possibility of them being jumped over or reached over.

The Reception Area should be elevated so that staff may sit at eye level with standing patients or visitors. The Reception / Triage area should have an unobstructed view of the entire Waiting Area.

Fixed and/or personal duress alarms should be positioned in suitable areas as suggested by the security risk assessment.

Uniformed security personnel may be required at very short notice to assist with a safety or security issue.

Relatively secluded or isolated areas should be monitored electronically (for example, by closed circuit television), with monitors in easily visible and continuously staffed areas.

16.3.8 *Finishes*

WALL PROTECTION

Hospital beds, ambulance trolleys, and wheelchairs may cause damage to walls. All wall surfaces in areas which may come into contact with mobile equipment should be reinforced and protected with buffer rails or similar.



FLOOR FINISHES

The floor finishes in all patient care areas and corridors should have the following characteristics:

- Non-slip surface
- Impermeable to water, body fluids
- Durable
- Easy to clean
- Acoustic properties that reduce sound transmission. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”
- Shock absorption to optimise staff comfort but facilitate movement of beds

Office/s, Tutorial Rooms, Staff Rooms, Clerical Areas and the Distressed Relatives' Room should be carpeted.

16.3.9 *Building Service Requirements*

COMMUNICATIONS

Emergency Units are high volume users of telecommunications and information technology. Telephones should be available in all offices, at all staff stations, in the clerical area and in all consultation and other clinical rooms. The use of multi-function, wireless communication devices should be considered. Additional phone jacks should be available for the use of facsimile machines and computer modems where required. A dedicated telephone to receive admitting requests from outside medical practitioners is desirable. A cordless phone or phone jack should be available for access to patients' beds.

An electronic Emergency Unit Information System may be installed to support clinical management, patient tracking and departmental administration. Sufficient terminals should be available to ensure that queuing does not occur, even at peak times. Workspace design should include sufficient bench-widths or suitable suspension devices for terminals, keyboards, drives and printers. Additional computer terminals, software and peripheral devices should be installed to enable other departmental functions

An intercom or public address system that can reach all areas of the Emergency Unit should be considered. Public telephones with acoustic hoods should be available in the Waiting Area. A direct line to a taxi company is desirable. Direct telephone lines bypassing the hospital switchboard should be available for use in internal and external emergencies or when the hospital PABX is out of service.

The Staff Station should have a dedicated inward line for the ambulance and police services. There should be facsimile lines in clerical areas as well as between the ambulance service and the Emergency Unit, including incoming aeromedical transport.

NURSE CALL

All patient spaces and clinical areas, including beds, toilets, bathrooms, treatment areas, patient day areas and lounges should have access to an emergency call facility so staff can summon urgent assistance. The emergency call facility should alert to a central module situated adjacent to the Staff Station, as well as to the Staff and Tutorial rooms.

TELEMEDICINE

Emergency Units using telemedicine facilities should have a dedicated, fully enclosed room with appropriate power and communications cabling provided. This room should be of suitable size to allow simultaneous viewing by members of multiple service teams and should be close to the Staff Station.

16.4 Components of the Unit

The Emergency Unit will consist of a combination of Standard Components and Non Standard Components. Provide Standard Components to comply with details in Standard Components



described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

16.4.1 *Non Standard Components*

COMMUNICATIONS ROOM - AMBULANCE

Description and Function

The Ambulance Communications Room is occupied by up to three ambulance officers to communicate between major hospital centres and the ambulance service for coordination of Ambulance movements. The communications base is also a critical co-ordination centre in the event of a disaster.

Location and Relationships

The room should be immediately adjacent to the Ambulance entry of the Emergency Unit with direct line of sight to incoming ambulance vehicles and the parking bays.

Considerations

The room will include:

- Workstation benches and chairs for 3 persons
- Telephones, computer and radio communications systems



16.5 Schedule of Accommodation

16.5.1 Emergency Unit Generic Schedule of Accommodation Schedule of Accommodation for an Emergency Unit Levels 1 to 6.

ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks *Optional
ENTRANCE / RECEPTION:							
ENTRY AIRLOCK	yes	Shared	Shared	Shared	1 x 10	1 x 10	
RECEPTION	yes	Shared	Shared	Shared	1 x 20	1 x 20	Staff to be able to observe & control access Entries and Treatment Areas
WAITING	yes	Shared	Shared	1 x 24	1 x 60	1 x 120	Open, observed from Triage & Reception; play area for children, access to outdoors preferable
WAITING FAMILY	yes	1 x 25	1 x 25	1 x 25	1 x 25	1 x 25	
PLAY AREA	yes	Shared	Shared	1 x 3	1 x 10	1 x 10	Defined area adjoining waiting area, or adjacent to paediatric treatment areas
PARENTING ROOM	yes	Shared	Shared	Shared	1 x 6	1 x 6	Accessible from waiting areas
BAY – PHONE / VENDING MACHINES	yes	Shared	Shared	1 x 2	1 x 5	1 x 5	Accessible from waiting areas
BAY – WHEELCHAIR / TROLLEY HOLD	yes	1 x 2	1 x 2	1 x 8	1 x 12	1 x 12	
COMMUNICATIONS BASE AMBULANCE						1 x 12	
AMBULANCE TRIAGE	yes					2 x 12	
TRIAGE CUBICLE				2 x 9	3 x 9	4 x 9	Includes write up space Qty according to service plan
MEETING ROOM - 12M2	yes				1 x 12	1 x 12	For staff to interview/meet with family & friends of patients
MEETING ROOM - 9M2	yes	Shared	Shared	Shared	1 x 9	1 x 9	For staff to interview/meet with family & friends of patients
TOILET - PUBLIC	yes	Shared	Shared	2 x 2	4 x 2	4 x 2	
TOILET - ACCESSIBLE	yes	1 x 5	1 x 5	1 x 5	1 x 5	1 x 5	May also include facilities for baby change
DECONTAMINATION SHOWER	yes	1 x 8	1 x 8	1 x 8	1 x 8	1 x 8	Check Local Authority requests for waste water detention requirements
DISCOUNTED CIRCULATION		30%	30%	30%	30%	30%	
TREATMENT AREA:							
PATIENT BAY - RESUSCITATION	yes				1 x 16	4 x 16	Qty according to service plan
PATIENT BAY - ACUTE TREATMENT	yes				4 x 12	8 x 12	Qty according to service plan
PATIENT BAY - NON ACUTE TREATMENT	yes				6 x 10	12 x 10	Qty according to service plan
PATIENT BAY - TREATMENT / RESUSCITATION	yes	1 x 16	1 x 35	1 x 35			Single room sized for 2 trolleys for resuscitation & general treatment - Level 2 & 3 only
TREATMENT ROOM	yes				2 x 14	6 x 14	FPU. Multi functional - forensic/sexual assault, gynaecology, etc



ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks *Optional
TREATMENT ROOM - SECURE ASSESSMENT	yes	Shared	Shared	Shared	1 x 14	2 x 14	FPU. Use for Mental Health patients – secure containment/ assessment. Also for gen use.
PATIENT BAY - ACUTE TREATMENT - PAEDIATRIC					2 x 10	6 x 10	
PLAY AREA	yes	Shared	Shared	Shared	1 x 8	1 x 8	
TREATMENT ROOM - PAEDIATRIC	yes				1 x 14	1 x 14	
ANTEROOM	yes				1 x 6	2 x 6	Accessible/ adjacent to Isolation Room
1 BED ROOM - ISOLATION (CLASS N)	yes				1 x 15	2 x 15	FPU. Enclosed Treatment Bays with negative pressure ventilation for isolatable infections
TOILET - PATIENT	yes				1 x 4	2 x 4	FPU
PROCEDURE ROOM	yes				1 x 20	2 x 20	Similar to other Treatment Bays, acoustic & visual privacy required; qty according to service plan
PLASTER ROOM	yes				1 x 14	2 x 14	Splint & crutch store to be included in, or accessible to the plaster room
STORE - CRUTCH	yes				1 x 1	2 x 1	Close to Plaster Room
X-RAY ROOM	yes				1 x 30*	1 x 30*	May not be required if ED near Imaging. Alternative may be gantry over Resuscitation Bays in L5 & 6.
BAY - PATHOLOGY	yes				1 x 1	2 x 1	
SHOWER – PATIENT	yes	2 x 4	2 x 4	2 x 4	4 x 4	6 x 4	Quieter part of unit, but accessible from treatment bays and rooms
TOILET - PATIENT	yes	2 x 4	2 x 4	2 x 4	4 x 4	6 x 4	
BAY - HANDWASHING	yes	1 x 1	1 x 1	2 x 1	4 x 1	8 x 1	1 Handwash Bay per 4 Treatment Bays
DISCOUNTED CIRCULATION		40%	40%	40%	40%	40%	
SUPPORT AREAS:							
STAFF STATION	yes	Shared	Shared	1 x 6	1 x 20	1 x 30	2m2 per staff; may store trolleys, resuscitation equipment, disposables, drugs, etc. Ref Note 2.
X-RAY VIEWING & REPORTING	yes				1 x 12	1 x 12	
CLEAN UTILITY	yes	Shared	Shared	1 x 4	1 x 12	1 x 12	
DIRTY UTILITY	yes	Shared	Shared	Shared	1 x 10	1 x 10	
STORE - GENERAL	yes	Shared	Shared	Shared	1 x 20	1 x 20	
STORE - EQUIPMENT	yes	Shared	Shared	Shared	1 x 20	1 x 20	
STORE - DISASTER EQUIPMENT	yes				1 x 8	1 x 8	
BAY - MOBILE EQUIPMENT	yes	Shared	Shared	1 x 4	1 x 4	2 x 4	
BAY - MOBILE EQUIPMENT (XRAY)	yes		1 x 2	1 x 2	1 x 2	1 x 2	
BAY / ROOM - BEVERAGE	yes	Shared	Shared	Shared	1 x 8	1 x 8	



ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks *Optional
BAY - LINEN	yes	Shared	1 x 2	1 x 2	1 x 2	1 x 2	
STORE - DRUG	yes	Shared	Shared	Shared	1 x 5	1 x 5	
DISPOSAL	yes	Shared	Shared	Shared	1 x 8	1 x 8	
CLEANER'S ROOM	yes	Shared	Shared	Shared	1 x 5	1 x 5	
BAY - RESUSCITATION TROLLEY	yes	Shared	1 x 2	1 x 2	1 x 2	1 x 2	Rapid emergency access required & from this area to patient areas; prefer adjacent to Staff Station
DISCOUNTED CIRCULATION		25%	25%	25%	25%	25%	

SHORT STAY WARD / EMERGENCY MEDICINE UNIT

ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
PATIENT BAY - NON ACUTE TREATMENT	yes				4 x 10	6 x 10	
ANTEROOM	yes				1 x 6	1 x 6	Accessible/ adjacent to Isolation Room
1 BED ROOM - ISOLATION ROOM (CLASS N)	yes				1 x 15	1 x 15	
ENSUITE	yes				1 x 5	1 x 5	For Isolation Room
TOILET – PATIENT	yes				2 x 4	2 x 4	
SHOWER – PATIENT	yes				2 x 4	2 x 4	
STAFF STATION	yes				1 x 12	1 x 15	
BAY - LINEN	yes				1 x 2	1 x 2	
BAY - HANDWASHING	yes				1 x 1	2 x 1	
DIRTY UTILITY - SMALL	yes					1 x 8	
DISCOUNTED CIRCULATION		30%	30%	30%	30%	30%	

PRIMARY CARE AREA

ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
CONSULT ROOM	yes	1 x 14	1 x 14	1 x 14	2 x 14	4 x 14	Qty determined by service plan
CONSULT - SEXUAL ASSAULT	yes				1 x 14	1 x 14	Use for sexual assault consultations, may also be used for general purposes
ENSUITE	yes	1 x 5	1 x 5	1 x 5	1 x 5	1 x 5	For one consult room or for consult room - sexual assault, where provided
CONSULT – ENT / OPHTHALMOLOGY	yes				1 x 14	1 x 14	
CONSULT - DENTAL	yes					1 x 14*	Determined on need/activity
PATIENT BAY – ACUTE TREATMENT (NEBULISER)	yes				1 x 4*	1 x 4*	Nebuliser chair area; inclusion determined on need/activity
BAY - LINEN	yes			1 x 2	1 x 2	1 x 2	



ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
BAY - HANDWASHING	yes				1 x 1	1 x 1	
STAFF STATION	yes				1 x 10	1 x 12	2sqm per staff; may store trolleys, resuscitation equipment, disposables, drugs, etc. Refer Note 1
DISCOUNTED CIRCULATION		30%	30%	30%	30%	30%	

STAFF AREAS

ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STAFF ROOM	yes	Shared	Shared	Shared	1 x 20	1 x 30	1.5m2 per staff member
CHANGE - STAFF - FEMALE	yes	Shared	Shared	Shared	1 x 14	1 x 14	Includes toilets, showers, lockers; calculation for max staff per shift; overview access from Reception/Entrance
CHANGE - STAFF - MALE	yes	Shared	Shared	Shared	1 x 12	1 x 12	Includes toilets, showers, lockers; calculation for max staff per shift; overview access from Reception/Entrance
OFFICE - SINGLE PERSON 9M2	yes				2 x 9	4 x 9	NUM + Secretary, CNC, CNE, depending on level of service
OFFICE - SINGLE PERSON 9M2	yes				1 x 9		Staff Specialist
OFFICE - SINGLE PERSON 12M2	yes				1 x 12	1 x 12	Director
OFFICE - 2 PERSON SHARED	yes				1 x 12	3 x 12	Registrars
OFFICE - 3 PERSON SHARED	yes					4 x 15	Staff specialist, general use
MEETING – MEDIUM / LARGE	yes	Shared	Shared	Shared	1 x 15	1 x 30	
MEETING - 12M2 / MEDIUM	yes	Shared	Shared	Shared	1 x 12	2 x 15	
LIBRARY					1 x 3*	1 x 3*	Optional - add to another space
STORE - PHOTOCOPY / STATIONERY	yes	Shared	Shared	Shared	1 x 8	1 x 8	
DISCOUNTED CIRCULATION		20%	20%	20%	20%	20%	

AMBULANCE SERVICE

ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
RECEPTION	yes		1 x 5	1 x 5	1 x 5		
WASH - UP ROOM / BAY	yes		1 x 20	1 x 20	1 x 40		optional
OFFICE - SINGLE PERSON 9M2	yes		1 x 9	1 x 9	1 x 9		
OFFICE - SHARED	yes	1 x 12	1 x 15/20	1 x 15/20	1 x 15/20		2 - 4 people sharing
STAFF OVERNIGHT ACCOMMODATION	yes		1 x 25	1 x 25	1 x 25		
STORE - GENERAL	yes		1 x 15	1 x 15	1 x 15		
ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks



STORE - DRUG	yes		1 x 5	1 x 5	1 x 5		
ROOM / SPACE	Standard Component	Level 1 Qty x m2	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STAFF ROOM	yes	Shared	Shared	Shared	Shared		
CHANGE - STAFF	yes	Shared	Shared	Shared	Shared		
DISCOUNTED CIRCULATION		15%	15%	15%	15%		

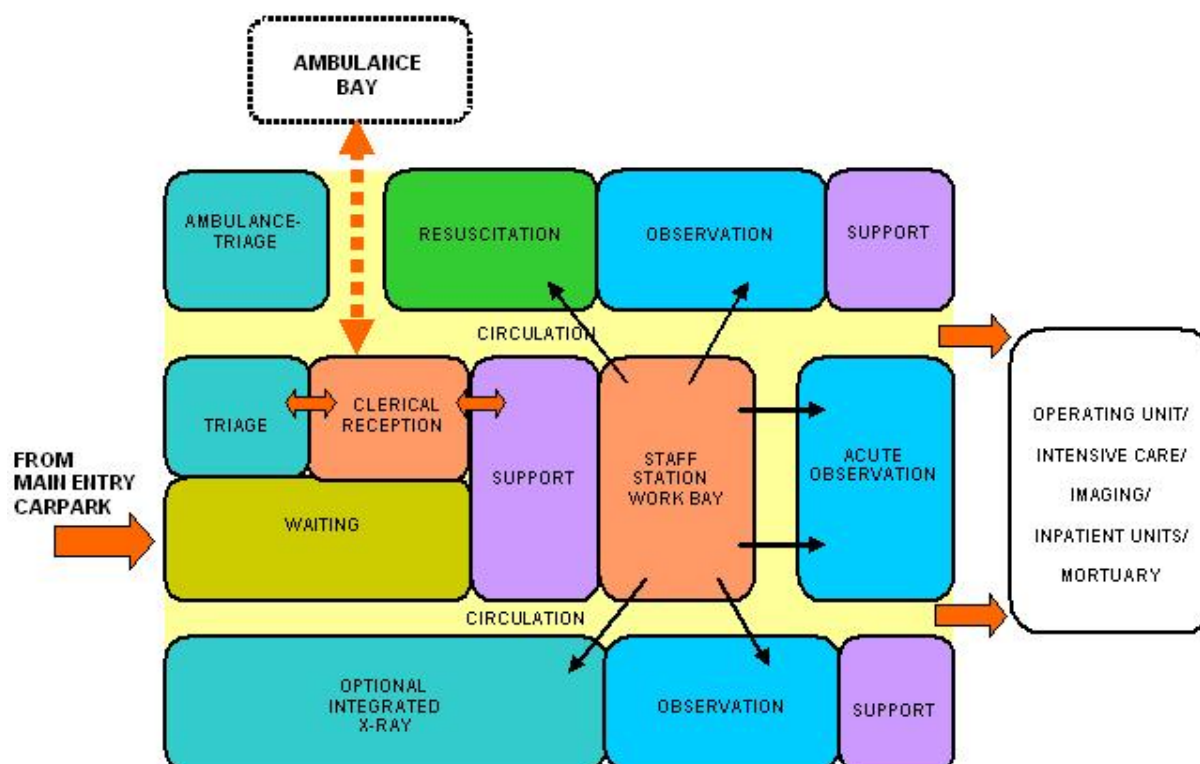
Note 1: Staff Station should be located centrally within Treatment Area, preferably with direct oversight of Resuscitation Bays. Direct access required to treatment spaces. It may be raised for uninterrupted vision of the patients. It may be partially enclosed to ensure that confidential information can be conveyed without breach of privacy and to provide security to staff and confidential information.

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

16.6 Functional Relationship Diagram

16.6.1 Emergency Unit Functional Relationship Diagram



16.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



17.0 Engineering & Maintenance Unit

17.1 Introduction

17.1.1 General

All facilities, no matter how large or small, will require environmental support services in the form of:

- Maintenance services
- Engineering
- Cleaning services
- Waste disposal
- Gardening services
- Storage

17.1.2 Description

A Maintenance Service shall be provided. It may be in-house or contracted, with an on-call repair service. The complexity of the services provided by the facility will dictate the nature and extent of the Maintenance Service required. The Maintenance Service is provided to effect preventative maintenance and repairs to all elements of the facility, from the building fabric to items of specialist equipment.

Areas that require a 24 hour per day, 7 day per week 'on-call' maintenance service are:

- Medical gases and suction systems
- Lifts
- Fire systems
- Bio-electronic equipment
- Any life-support systems
- Emergency power systems
- Boiler plant
- Telecommunications systems including PA, EWIS and Nurse Call

The potential life threatening nature of the failure of any of the above systems justifies a 24 hour service.

17.2 Planning

17.2.1 Functional Areas

The Engineering and Maintenance Unit may consist of the following Functional Areas dependent on the Operational Policy and service demand:

- Workshop areas which may include separate areas for carpentry, mechanical, plumbing and electrical services
- Storage areas for all specialty services/trades including paint, gardening and flammable liquids
- Office area for administrative and clerical activities
- Staff amenities which may be shared

ELECTRONICS WORKSHOP

A separate workshop may be provided specifically for the storage, repair and testing of electronic and other medical equipment. The amount of space and type of utilities will vary with the type of equipment involved and types of service and maintenance contracts used.

ENGINEER'S OFFICE

If on-staff, an Engineer's Office shall be provided with file space and provision for protected storage of facility drawings, records and manuals.



GARDENER'S FACILITIES

A room or shed shall be provided for the storage of all the necessary gardening equipment and material. Depending upon the size of the grounds team provision of a Head Gardener's office, hand-washing facilities, toilet and showering facilities should be considered.

STORAGE AREAS

A storage room shall be provided for the storage of building maintenance supplies. Storage for solvents and flammable liquids shall comply with relevant statutory requirements.

WORKSHOP AREAS

A general maintenance Workshop shall be provided for repair and maintenance. Sufficient space is required for a workbench, drill press, angle grinder, stainless steel trough, tool peg board, storage cabinets. Floor space is also required for the standing of equipment during repairs. Adequate lighting, power and ventilation are required. Note: If Maintenance Services are externally contracted, then a Workshop is not required. Maintenance workshops incorporating carpentry, metal fabrication, plumbing, refrigeration or other noise generating trades shall be acoustically isolated from non-maintenance areas. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

17.2.2 *Functional Relationships*

The Engineering & Maintenance Unit should be located on the ground floor to facilitate delivery and despatch of heavy items of equipment. Access to a loading dock is desirable. The Unit will require ready access to all areas of the hospital and in particular, to plant rooms and areas. Depending on the size of the Unit and the Operational Policy, considerable noise and fumes may be generated by the Unit and care should be taken in locating the Unit relative to other units such as Inpatient Accommodation Units.

17.3 Components of the Unit

17.3.1 *Standard Components*

The Engineering and Maintenance Unit will consist of Standard Components. Provide Standard Components to comply with details in Standard Components in these Guidelines. Refer also to Standard Components Room Data Sheets.



17.4 Schedule of Accommodation

17.4.1 Engineering & Maintenance Unit Generic Schedule of Accommodation

The following Generic Schedule of Accommodation is for a typical Engineering & Maintenance Unit in a Level 4 Hospital with 120 Beds and a range of diagnostic and treatment facilities. This schedule assumes that all services are provided in-house.

Note: For maximum functionality, some of the workshop areas should be combined into one large area.

ROOM / SPACE	Standard Component				Level 4 Qty x m2	Remarks
FLAMMABLE LIQUID STORE	yes				1 x 2	Or Steel Cupboard
GARDENING STORE	yes				5 x 5.5 optional	
OFFICE - SINGLE PERSON 12M2	yes				1 x 12	If Engineer on staff
PAINTER'S STORE	yes				1 x 9 optional	
PLAN FILE - STORAGE	yes				1 x 12 optional	
WORKSHOP - CARPENTRY	yes				4 x 6.5 optional	Including storage
WORKSHOP - MECHANICAL	yes				4 x 6.5 optional	Including storage
WORKSHOP - PLUMBING	yes				4 x 6.5 optional	Including storage
DISCOUNTED CIRCULATION					15%	

SHARED AREAS

ROOM / SPACE	Standard Component				Level 4 Qty x m2	Remarks
BAY - CLEAN-UP	yes				1 x 3	
STAFF ROOM	yes				1 x 30	
TOILET - STAFF	yes				2 x 2	

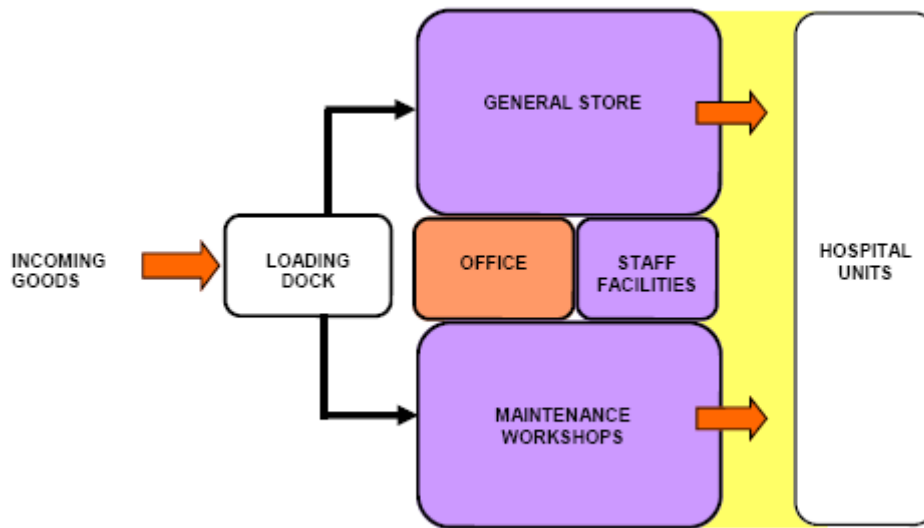
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



17.5 Functional Relationship Diagram

17.5.1 Engineering & Maintenance Unit Functional Relationship Diagram



17.6 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



18.0 Hospital Morgue

18.1 Introduction

18.1.1 Description

The Hospital Morgue is a facility for the viewing and/or identification of a body and the temporary holding / storage of bodies prior to transfer to a Mortuary.

The needs of hospital staff, relatives of the deceased and attendant authorised persons should be considered in the design, layout and functionality of the unit to provide a safe and private environment.

The design must address the following:

- number of bodies to be stored;
- method of storage i.e. refrigerated cabinets, cool room, freezing capacity;
- separation of entries for families to view/identify bodies, and
- delivery of bodies from inside the hospital and external delivery (if applicable).

18.2 Planning

18.2.1 Operational Model

HOURS OF OPERATION

Working hours will be on a routine eight hours per day, five days per week. Work times are assumed 8.00am-5.00pm. The Hospital Morgue Unit will also be accessible to authorised personnel 24 hours per day, 7 days per week.

18.2.2 Model of Care – Body Holding

Two options are available as follows:

- Walk-in cool room for individual trolleys; or
- Bank of refrigerated cabinets.

Consideration should be given to the following:

- security of bodies;
- isolation and bariatric needs; and
- expected length of time for retention of bodies.

There are two types of morgue cold chambers:

- positive temperature +2/+4°C (the most common type),
- negative temperature -15°C/-25°C (used by forensic institutes for the storage of bodies that have not yet been identified).

18.2.3 Planning Models

The Unit should be located in the same building as the main health facility away from any public area to ensure that is appropriately screened from visibility.

It should be located at ground level to allow easy and discrete access to deliver and/or remove bodies via an exit lobby.

18.2.4 Functional Areas

The Hospital Morgue Unit will consist of the following Functional Areas depending on the size of the facility and the Operational Policy:

- Entry Lobby / Administration / Exit Lobby;
- Body Holding Area;
- Waiting / Viewing Area;



- Staff Area.

ENTRY LOBBY / ADMINISTRATION / EXIT LOBBY

The Entry and Exit Lobbies form part of a single space with direct access to the Body Holding Area. The area should include

- hand basin;
- workstation for body registration and removal details;
- parking space for the transport trolley;
- parking space for a hoist / elevating trolley.

BODY HOLDING AREA

The Body Holding Area provides refrigerated space for the temporary storage of bodies. The area should allow for the following:

- Separate spaces / cabinets should be allowed for isolation;
- Manoeuvring space in front of refrigerated cabinets to insert/withdraw the trays;
- 3 square metres is required for a body on a loose tray or trolley in a cool room.

WAITING / VIEWING AREA

The area should allow for the following:

- Discrete entrance away from the main hospital to the Waiting Area for relatives, police and others;
- Direct visibility into the adjoining Viewing Area.

STORAGE

The area should allow for the following dedicated areas:

- Lockable storage area for the deceased's personal effects;
- Clean linen area;
- Cleaning materials and agents;
- Used linen collection area;
- Plastic body bags and sealing machine area.

STAFF AREA

The area should allow for the following:

- Staff areas comprising of office, workstations, meeting / teaching rooms and amenities;
- Office for use by the pathologist and police.

18.2.5 *Functional Relationships*

EXTERNAL

Mortuary / Holding facilities shall be accessible through an exterior entrance and shall be located to avoid the need for transporting bodies through public areas. It should also be located in close proximity to Anatomical Pathology laboratories and relevant clinical areas for transportation of laboratory specimens.

INTERNAL

The Waiting Area and Viewing Area should be collocated however there should be no access to other sections of the Morgue for viewers.

Entry Lobby, Exit Lobby and Administrative Area form part of a single area.



18.3 Design

18.3.1 Accessibility

EXTERNAL

Morgue Unit is to have separate access as follows:

- direct access from the Hospital for delivery of the body;
- direct but separate and discreet access for relatives of the deceased from all relevant areas of the hospital to Morgue waiting / viewing area;
- adequate access for funeral directors for vehicle parking and discrete, weather protected, facilities for the collection of bodies;
- adequate access for ambulances delivering bodies;
- adequate access for police vehicles.

INTERNAL

The Body Holding Room is to have direct access to/from:

- the hospital corridor for use by staff;
- Viewing Room;
- discreet access from body hold / cool room to hearse and ambulance parking bays.

18.3.2 Infection Control

Bodies stored in the Morgue which may contain infectious diseases that must be contained.

Cleaned instruments and materials shall be re-circulated under normal procedures through the Sterile Supply Unit or autoclaved within the Morgue Unit. The unit shall be designed to control infection utilising the following:

- layout designed to minimise cross contamination in work areas;
- provision of a small wash-down / disposal / booting area;
- provision of an adequate number of hand wash facilities;
- provision of appropriate cleaning, waste storage and waste disposal;
- use of suitable materials and finishes;
- specimen storage facilities;
- first aid facilities;
- adequate isolation of space and ventilation systems which present potential hazard.

18.3.3 Environmental Considerations

GENERAL

The Morgue Unit needs to be designed to provide staff with sufficient space, working surfaces and appropriate equipment to safely carry out their duties.

INTERIOR DESIGN

The interior design of the Morgue Unit shall have due consideration for the following as primary items of design:

- infection control;
- cooling and ventilation.

ACOUSTICS

Acoustic design shall ensure that conversations in adjoining rooms cannot be overheard by relatives in the viewing area. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

18.3.4 Space Standards and Components

ERGONOMICS

The Morgue Unit shall be ergonomically designed to any potential avoid injury to staff, patients, visitors or maintenance personnel.



ACCESS AND MOBILITY

Where necessary the layout shall comply with the requirements of the Americans with Disabilities Act (ADA) Accessibility Guidelines for Building Facilities.

18.3.5 *Safety and Security*

SAFETY

The interior design of the Morgue Unit shall consider the impact of finishes, surfaces and fittings on safety including the following:

- floor covering selection;
- adequate drainage;
- protection from protrusions or sharp edges;
- stability and height of equipment or fittings;
- adequate protection against infection and any other hazards;

SECURITY

The security aspects of the Morgue Unit shall consider the following:

- deceased bodies;
- valuables left on the body;
- specimens removed during autopsy;
- staff personal belongings and security;
- access and egress, particularly after hours.

18.3.6 *Finishes*

Refer also to Part C of these Guidelines.

CEILING FINISHES

Ceilings must be washable, impermeable and non porous.

FLOOR FINISHES

Floor finishes shall be non-slip for all wet areas or areas subject to water. It should be impervious, easy to clean, sealed with coving at the edges and have adequate drainage. Drains should be fitted with appropriately filtered traps for ease of hosing down.

WALL FINISHES

Wall surfaces in the body holding area should be washable and/or scrubbable.

18.3.7 *Fixtures and Fittings*

Refer also to Part C of these Guidelines AND Standard Components for Fixtures and Fittings.

- The equipment layout of the Morgue Unit shall ensure:
- adequate provision for operation and maintenance;
- provision of services as required;
- door sized to allow for delivery and removal of the equipment;
- design for the required heat loads;
- Adequate provision for weight loads.

SAFETY SHOWERS AND EYE WASHES

Provide safety shower and eye wash or eye / face wash equipment.

18.3.8 *Building Service Requirements*

Refer also to Part E of these Guidelines.



AIR-CONDITIONING, HEATING and VENTIALATION

The temperature of the body holding area should be maintained within a comfortable range not exceeding 20-21°C. The ventilation system should be isolated from other ventilation systems by being designed to minimise the spread of odours and airborne pathogens.

ALARMS

The operating temperatures of all cooled and freezing facilities should be continuously monitored and fitted with alarms which are activated when the temperature exceeds a predetermined level.

LIGHTING

Provide adequate lighting in all areas.

POWER SUPPLY

Provide protective covers to power supply outlets to protect outlets from wetting. Provide an emergency back-up system for the power supply to the refrigeration, high priority equipment and illumination.

18.4 Components of the Unit

18.4.1 *Standard Components*

The Hospital Morgue Unit will contain Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



18.5 Schedule of Accommodation

18.5.1 Hospital Morgue Generic Schedule of Accommodation

Schedule of Accommodation for a Level 4 Unit assuming a 9 body hold store.

ROOM / SPACE	Standard Component				Level 4 Qty x m2	Remarks
WAITING	yes				1 x 20	
WAITING FAMILY	yes				1 x 25	
VIEWING ROOM	yes				1 x 8	1 morgue trolley plus 2 persons
TOILET - ACCESSIBLE	yes				2 x 5	Optional for relatives if available nearby
AIRLOCK - ENTRY	yes				1 x 6	
OFFICE - WORKSTATION	yes				1 x 6	Bench for administration duties plus lockable cupboard for valuables
BAY – MOBILE EQUIPMENT	yes				1 x 4	Morgue trolley parking
BAY - HANDWASH TYPE B	yes				1 x 1	
BAY - STORAGE 3M2	yes				1 x 3	General and linen
MORTUARY EXIT LOBBY	yes				1 x 7	
BODY HOLDING ROOM	yes				1 x 30	Assumes 9 body hold cabinet (3x3 tiers), hoist, access to cold room store for maintenance
STAFF TOILET	yes				2 x 3	
CLEANERS ROOM	yes				1 x 5	
DISPOSAL ROOM	yes				1 x 8	
SHOWER - STAFF	yes				2 x 2	
CIRCULATION %					20	

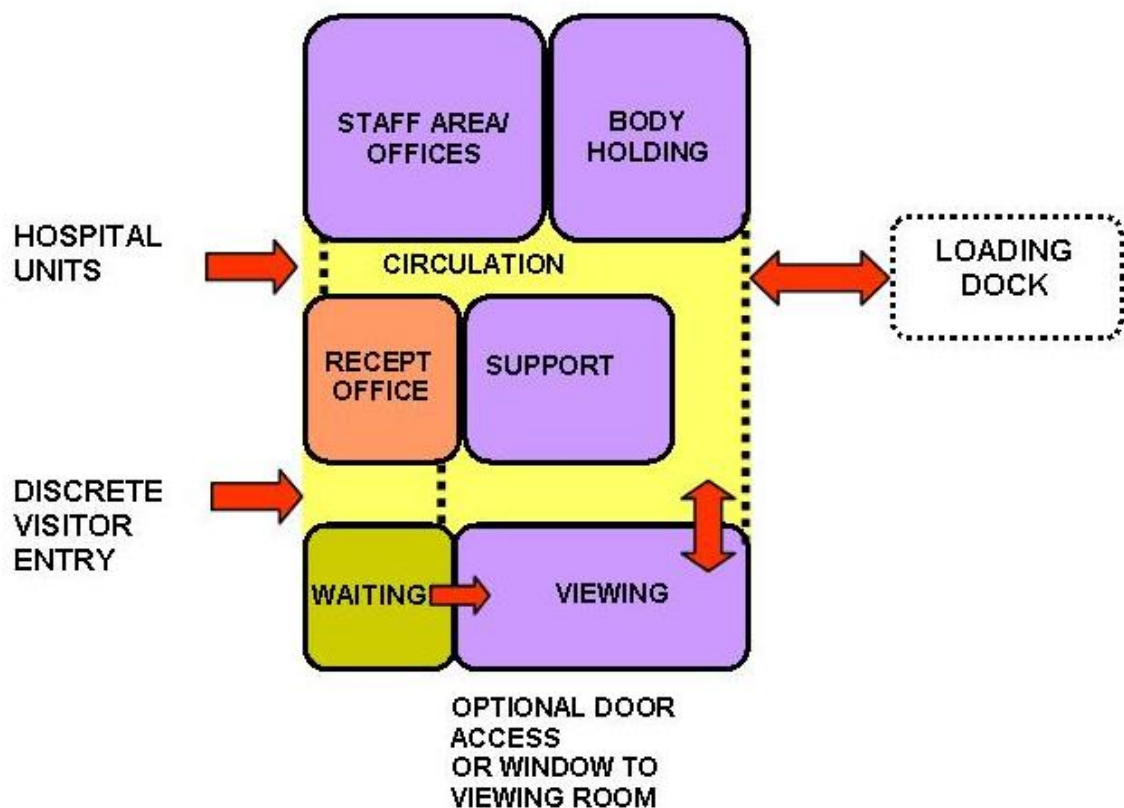
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



18.6 Functional Relationship Diagram

18.6.1 Hospital Morgue Functional Relationship Diagram



18.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



19.0 Inpatient Accommodation Unit

19.1 Introduction

19.1.1 General

The prime function of the Inpatient Unit is to provide appropriate accommodation for the delivery of health care services including diagnosis, care and treatment to inpatients.

The Unit must also provide facilities and conditions to meet the needs of patients and visitors as well as the workplace requirements of staff.

19.1.2 Description

The Inpatient Accommodation Unit is for general medical and surgical patients. In larger health facilities this Unit includes specialist medical and surgical patients, for example, cardiac, neurology/ neurosurgery, integrated palliative care and obstetric patients. Patients awaiting placement elsewhere may also be accommodated in this type of facility.

19.2 Planning

19.2.1 Models of Care

Models of Care for an Inpatient Unit may vary dependent upon the patients' acuity and numbers of, and skill level of the nursing staff available.

Examples of the models of care that could be implemented include:

- patient allocation
- task assignment
- team nursing
- case management
- primary care (comprehensive range of generalist services by multidisciplinary teams that include not only GPs and nurses but also allied health professionals and other health workers) or
- a combination of these

The physical environment should permit of a range of models of care to be implemented, allowing flexibility for future change.

LEVELS OF CARE

The levels of care will range from highly acute nursing and specialist care (high dependency), with a progression to intermediate care prior to discharge or transfer (self care).

Patients requiring 24 hour medical intervention or cover will generally not be nursed or managed within a general inpatient unit.

19.2.2 Planning Models

BED NUMBERS AND COMPLEMENT

Each Inpatient Unit may contain up to 32 patient beds and shall have Bedroom accommodation complying with the Standard Components.

For additional beds up to 16 as an extension of a standard 32 bed Unit, this may be permitted with additional support facilities in proportion to the number of beds, for example 1 extra Sub Clean Utility, Sub Dirty Utility and storage.

For additional beds of more than 16, additional support facilities for a full unit (32 beds) will be required, located to serve the additional beds.

The preferred maximum number of beds in an acute Inpatient Unit in Maternity or Paediatric



Units is 20-25 beds.

A minimum of 10 % of the total bed complement may be provided as Single Bedrooms in an Inpatient Unit used for overnight stay for Isolation of patients. The current trend is to provide a greater proportion of single bed rooms largely for infection control reasons.

SWING BEDS

For flexibility and added options for utilisation it may be desirable to include provisions for Swing Beds. This may be a single bed, a group of beds that may be quickly converted from one category of use to another. An example might be long-stay beds which may be converted to acute beds.

At any given time, swing beds are part of an Inpatient Unit in terms of the total number of beds and the components of the unit. For example:

- Ward A + Swing Beds = One Inpatient Unit as per these Guidelines.
- Alternatively: Ward B + the same Swing Beds = One Inpatient Unit as per these Guidelines.

Facility design for swing beds will often require additional corridor doors and provision for switching patient/ nurse call operation from one Staff Station to another. Security is also an issue, for example, converting General/Medical beds to Paediatric beds.

UNIT PLANNING OPTIONS

There are a number of acceptable planning options for Inpatient Units including:

- Single Corridor; Patient and support rooms are clustered along a single corridor
- Double Corridor – racetrack; patient rooms are located on the external aspects of the space and support rooms are clustered in the central areas in a racetrack configuration
- Combinations: - L, T & Y shaped corridors, patient rooms are located along external aspects, support areas may be located in a central core area

19.2.3 *Functional Areas*

The Inpatient Accommodation Unit will comprise the following Functional Areas or zones:

- Patient Areas - areas where patients are accommodated or facilities specifically serve patients
- Staff Areas - areas accessed by staff, including utility and storage areas
- Shared Areas - areas that may be shared by two or more Inpatient Units

19.2.4 *Functional Relationships*

EXTERNAL

Principal relationships with other Units include:

- Easy access from the Main Entrance of a facility
- Inpatient Units must not be located so that access to one Unit is via another
- Ready access to diagnostic facilities such as Medical Imaging and Pathology
- Ready access to Emergency and Critical Care Units
- Surgical Units require ready access to Operating/ Day Procedures Units
- Ready access to staff amenities.

INTERNAL

Optimum internal relationships include:

- Patient occupied areas as the core of the unit
- The Staff Station and associated areas need direct access and observation of Patient Areas
- Utility and storage areas need ready access to both patient and staff work areas
- Public Areas should be on the outer edge of the Unit
- Shared Areas should be easily accessible from the Units served



19.3 Design

19.3.1 Environmental Considerations

ACOUSTICS

The Inpatient Unit should be designed to minimise the ambient noise level within the unit and transmission of sound between patient areas, staff areas and public areas.

Consideration should be given to location of noisy areas or activity away from quiet areas including patient bedrooms and selection of sound absorbing materials and finishes.

Acoustic treatment will be required to the following:

- patient bedrooms,
- interview and meeting rooms
- consult rooms
- staff rooms
- toilets and showers

Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

NATURAL LIGHT

The use of natural light should be maximised throughout the Unit. Natural light must be available in all bedrooms.

OBSERVATION AND PRIVACY

The design of the Inpatient Unit needs to consider the contradictory requirement for staff visibility of patients while maintaining patient privacy. Unit design and location of staff stations will offer varying degrees of visibility and privacy. The patient acuity including high dependency, elderly or intermediate care will be a major influence.

Factors for consideration include:

- use of windows in internal walls and/or doors
- location of beds that may affect direct staff visibility
- provision of bed screens to ensure privacy of patients undergoing treatment;
- location of sanitary facilities to provide privacy for patients while not preventing observation by staff.

19.3.2 Space Standards and Components

ROOM CAPACITY AND DIMENSIONS

Maximum room capacity shall be eight beds, although six is preferred.

Minimum dimensions, excluding such items as ensembles, built-in robes, alcoves, entrance lobbies and floor mounted mechanical equipment shall be as follows:

ROOM TYPE	WIDTH	LENGTH
SINGLE BED ROOM	3450 mm	3600mm
TWO BED ROOM	3450 mm	5600 mm
FOUR BED ROOM	6100 mm	5600 mm
SIX BED ROOM	6500 mm	6750 mm

Minimum room dimensions are based on overall bed dimensions (buffer to buffer) of 2250 mm long x 1050 mm wide. Minor encroachments including columns and hand basins that do not interfere with functions may be ignored when determining space requirements

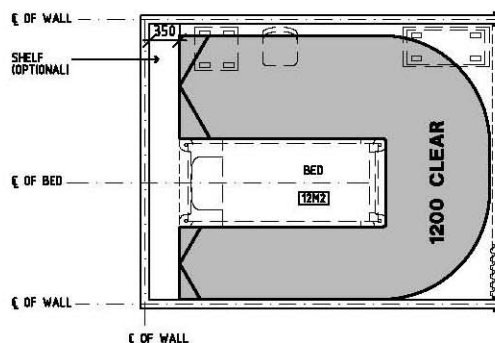
BED SPACING / CLEARANCES

Bed dimensions become a critical consideration in ascertaining final room sizes. The dimensions noted in these Guidelines are intended as minimums and do not prohibit the use of larger rooms where required.

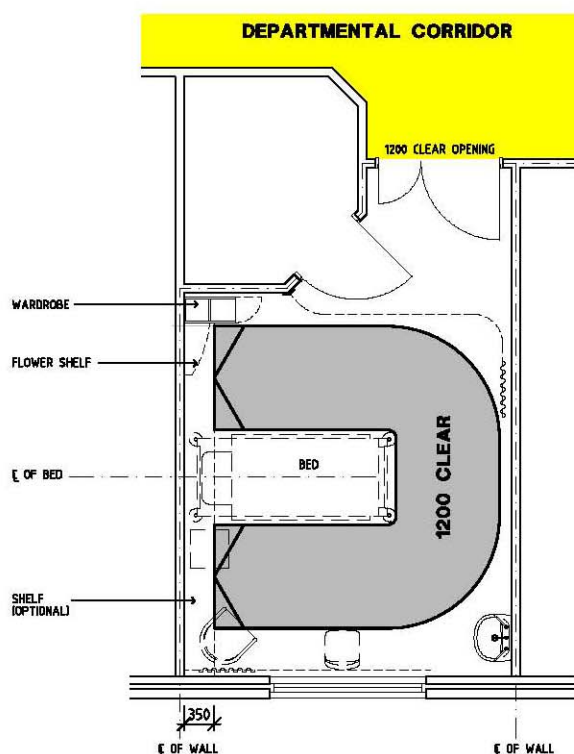


In bed rooms there shall be a clearance of 1200 mm available at the foot of each bed to allow for easy movement of equipment and beds. This is represented diagrammatically below:

 **NO FIXED OBJECTS IN CLEAR CIRCULATION ZONE**



1. TYPICAL BED BAY



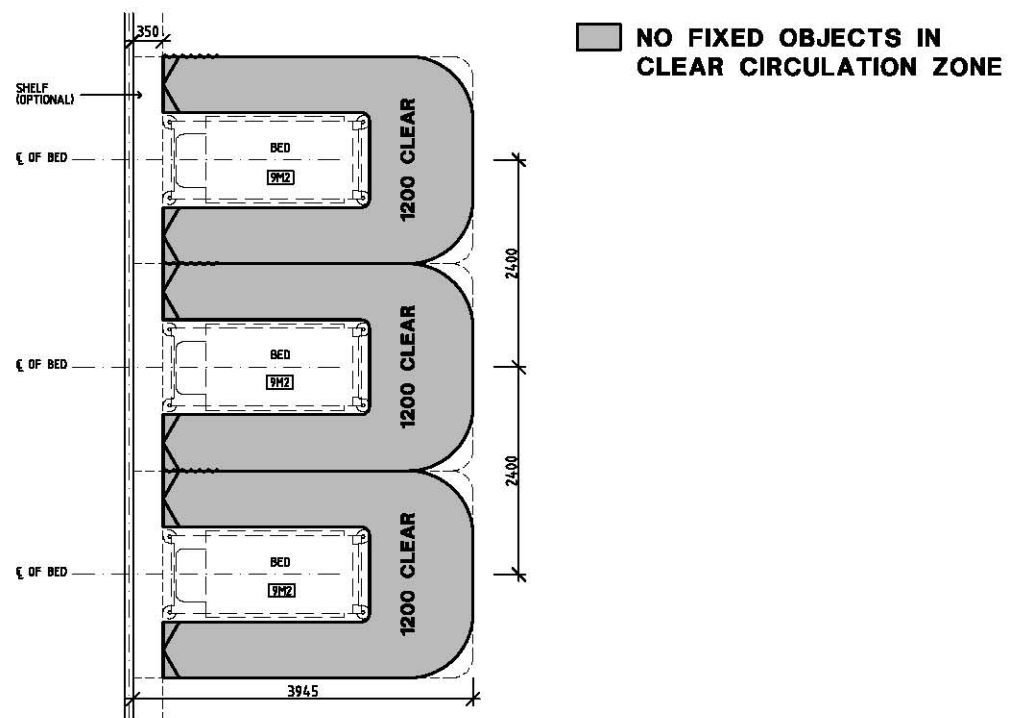
2. TYPICAL BED ROOM

In multiple-bed rooms, the minimum distance between bed centre lines shall be mm.

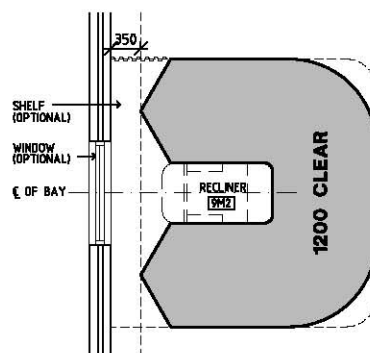
Paediatric bedrooms that contain cots may have reduced bed centres, but consideration must be given to the spatial needs of visiting relatives. To allow for more flexible use of the room the 2400 mm centre line is still recommended. Consider allowing additional floor area within the room for the children to play.



The clearance required around beds in multiple-bed rooms and chair spaces is represented diagrammatically below:



3. TYPICAL OPEN PLAN BED BAYS



4. TYPICAL CHAIR SPACE

19.3.3 Access, Mobility & OH&S (Occupational Health & Safety)

Patient wheelchair access bedrooms and ensuites should enable normalisation of activity for wheelchair dependant patients, as opposed to patients who are in a wheelchair as a result of their hospitalisation.

19.3.4 Infection Control

HAND BASINS

Hand-washing facilities shall not impact on minimum clear corridor widths. At least one is to be conveniently accessible to the Staff Station. Handbasins are to comply with Standard Components - Bay - Hand-washing and Part D - Infection Control.



ISOLATION ROOMS

At least one 'Class S - Standard' Isolation Room shall be provided for each 32 bed Inpatient Unit. At least one 'Class N - Negative Pressure' Isolation Room shall be provided for each 100 beds in facilities of level 4 and above. These beds may be used for normal acute care when not required for isolation.

19.3.5 *Safety and Security*

An Inpatient Unit shall provide a safe and secure environment for patients, staff and visitors, while remaining a non-threatening and supportive atmosphere conducive to recovery.

The facility, furniture, fittings and equipment must be designed and constructed in such a way that all users of the facility are not exposed to avoidable risks of injury.

Security issues are important due to the increasing prevalence of violence and theft in health care facilities.

The arrangement of spaces and zones shall offer a high standard of security through the grouping of like functions, control over access and egress from the Unit and the provision of optimum observation for staff. The level of observation and visibility has security implications

DRUG STORAGE

Each Inpatient Accommodation Unit shall have a lockable storage area or cupboard containing:

- Benches and shelving
- Lockable cupboards for the storage of restricted substances
- A lockable steel cabinet for the storage of drugs of addiction
- A refrigerator, as required; to store restricted substances, it must be lockable or housed within a lockable storage area
- Space for medication trolley

Note: Storage for dangerous drugs must be in accordance with the relevant legislation.

19.3.6 *Finishes*

Finishes including fabrics, floor, wall and ceiling finishes, should be selected with consideration to infection control, ease of cleaning and fire safety, while avoiding an institutional atmosphere.

In areas where clinical observation is critical such as bedrooms and treatment areas, colour selected must not impede the accurate assessment of skin tones.

19.3.7 *Fixtures & Fittings*

BED SCREENS

In multiple-bed rooms, visual privacy from casual observation by other patients and visitors shall be provided for each patient. The design for privacy shall not restrict patient access to the entrance, toilet or shower.

CURTAINS / BLINDS

Each room shall have partial blackout facilities (blinds or lined curtains) to allow patients to rest during the daytime.

19.3.8 *Building Services Requirements*

INFORMATION TECHNOLOGY/ COMMUNICATIONS

Unit design should address the following Information Technology/ Communications issues:

- Paperless records



- Hand-held computers
- PACS
- Paging and personal telephones replacing some aspects of call systems
- Data entry including scripts and investigation requests
- Email
- Bar coding for supplies and X-rays / Records.

NURSE CALL

Hospitals must provide an electronic call system that allows patients and staff to alert nurses and other health care staff in a discreet manner at all times.

19.4 Components of the Unit

19.4.1 *Standard Components*

The Inpatient Unit will consist of Standard Components which must comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets



19.5 Schedule of Accommodation

19.5.1 Inpatient Accommodation Unit Generic Schedule of Accommodation

Schedule of Accommodation for a 30 Bed Unit at all RDS Levels follows. Although categorised by level of service, this does not necessarily lead to different physical requirements.

The Schedule of Accommodation lists generic spaces that form an Inpatient Unit. Quantities and sizes of some spaces will need to be determined in response to the service needs of each unit on a case by case basis.

ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks
1 BED ROOM	yes					1 x 15	Mix and no. depend on service demand
1 BED ROOM - LARGE	yes					1 x 18	Optional
1 BED ROOM - ISOLATION	yes					1 x 15	Class N or P + associated Anterooms; as required by service demand
1 BED ROOM - VIP	yes					1 x 30	Optional; Provide according to demand
2 BED ROOM	yes					2 x 25	Mix and no. depend on service demand
4 BED ROOM	yes					1 x 42	Mix and no. depend on service demand
6 BED ROOM						4 x 44	Mix and no. depend on service demand
ENSUITE - STANDARD	yes					6 x 5	For 1 Bed, 2 Bed & 4 Bed Rooms
ENSUITE - SUPER	yes					1 x 6	Locate with 1 Bed Room - Special
ENSUITE - VIP	yes					2 x 8	Provided for VIP rooms
LAUNDRY - PATIENT	yes					1 x 6	Specialist areas eg Mental Health, Rehab; or where required by service demand
LOUNGE - PATIENT	yes					1 x 20	Provided 1 per 60 beds, or shared between 2 units
TOILETS / SHOWERS - PATIENT (MALE/ FEMALE)	yes					2 x 25	Shared facilities 2 x WC; 2 x SH

STAFF AREAS

ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks
BAY - BEVERAGE ENCLOSED	yes					1 x 5	
BAY - HANDWASHING	yes					4 x 1	In addition to basins in patient rooms; Refer to Part D
BAY - LINEN	yes					2 x 2	Qty & location to be determined for each facility
BAY - MEAL TROLLEY	yes					1 x 4	Dependent on catering operational policies
BAY - MOBILE EQUIPMENT	yes					1 x 6	Qty, size & location depends on equipment to be stored; locate in staff area
BAY - PPE	yes					4 x 1	As required for Isolation Room/s. Refer Part D
BAY - RESUSCITATION TROLLEY	yes					1 x 2	



ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks
CLEANER'S ROOM	yes					1 x 5	Include separate cupboard for dry goods
CLEAN UTILITY	yes					1 x 4	Includes medication storage
DIRTY UTILITY	yes					1 x 14	2 may be required to minimise travel distances
DISPOSAL ROOM	yes					1 x 8	Optional
MEETING ROOM - 12M2	yes					1 x 12	Optional
OFFICE – CLINICAL / HANDOVER	yes					1 x 12	
OFFICE - SINGLE PERSON 12M2	yes					2 x 12	NUM office, plus for clinical personnel
PROPERTY BAY - STAFF	yes					1 x 4	Number of lockers depends on staff complement per shift
STAFF STATION	yes					1 x 14	May include ward clerk Size, location to be confirmed
STORE - EQUIPMENT	yes					1 x 20	Staff access area Size depends on equipment stored
STORE - GENERAL	yes					1 x 12	Size as per service demand & operational policies

SHARED AREAS

ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks
MEETING - MEDIUM	yes					1 x 20	Tutorial. Shared by 2 units
OFFICE - SHARED 3 PERSON	yes					1 x 15	CNC, Nurse Educator, Registrars, as per service demand
STAFF ROOM	yes					1 x 18	Includes Beverage area
TOILET - PUBLIC	yes					2 x 3	Shared by 2 units. Access to disabled toilet also required
TOILET - STAFF	yes					2 x 3	
TREATMENT ROOM	yes					1 x 14	May be required in specialist units, or shared by >1 unit. Depends on service demand
DISCOUNTED CIRCULATION						32%	

SUPER VIP SUITE

ROOM / SPACE	Standard Component					All RDLs Qty x m2	Remarks
1 BED ROOM - SUPER VIP	yes					1 x 50	Provide according to service demand
ENSUITE - SUPER VIP	yes					1 x 20	Provide according to service demand
STORE – EQUIPMENT	yes					1 x 10	Provide according to service demand
PANTRY - SUPER VIP	yes					1 x 20	Provide according to service demand
LOUNGE / DINING - SUPER VIP	yes					1 x 40	Provide according to service demand
FAMILY / CARER ROOM	yes					1 x 33	Provide according to service demand
ENSUITE - VISITOR	yes					1 x 5	Provide according to service demand

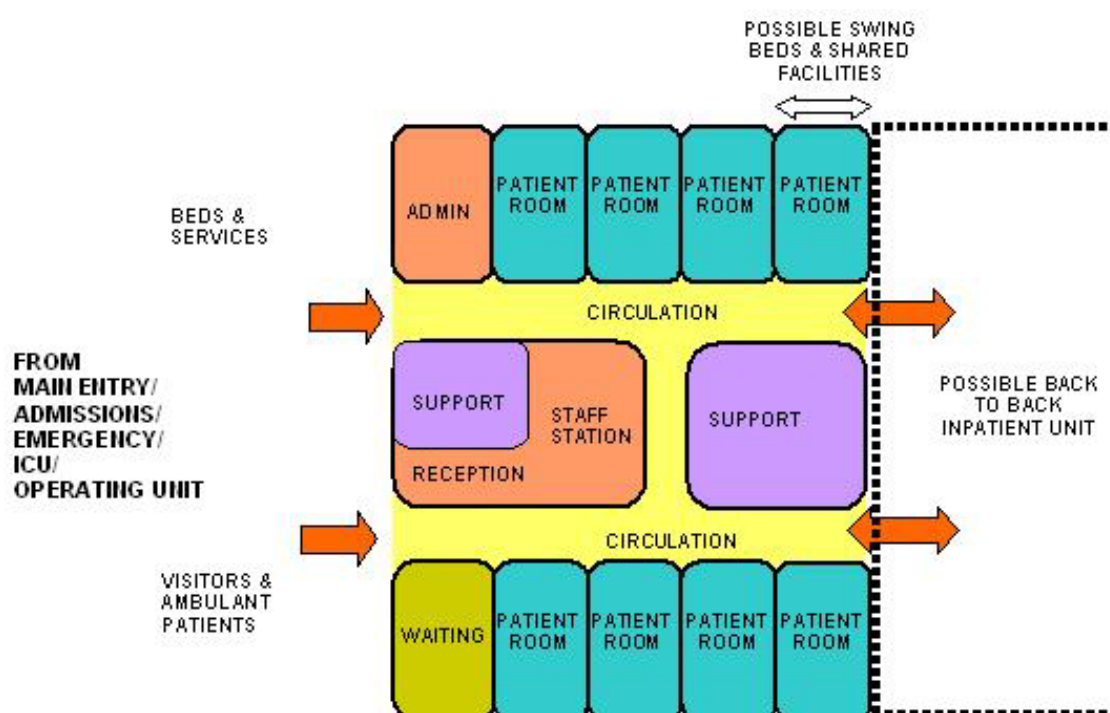


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19.6 Functional Relationship Diagram

19.6.1 Inpatient Accommodation Unit Functional Relationship Diagram



19.7 References and Further Reading

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- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



20.0 Intensive Care Unit

20.1 Introduction

20.1.1 Description

Intensive Care is a dedicated unit for critically ill patients who require invasive life support, high levels of medical and nursing care and complex treatment. The intensive care unit provide a concentration of clinical expertise, technological and therapeutic resources which are coordinated to care for the critically ill patient.

20.2 Planning

20.2.1 Operational Models

The level of Intensive Care available should support the delineated role of the particular hospital. The role of a particular ICU will vary, depending on staffing, facilities and support services as well as the type and number of patients it has to manage.

There are a number of operational models applicable to intensive care units including:

COMBINED CRITICAL CARE

The Combined Critical Care may include a High Dependency Unit, Intensive Care and/or Coronary Care, often located in a rural or regional hospital where flexibility of bed utilisation is important. This will allow short and medium term intensive care patients to be managed appropriately when required, and at other times, the Unit may be used for the more common cardiology or high dependency patients. These Units have lower medical and nursing demands, and will usually be staffed on a nurse/patient ratio of significantly less than 'one to one'.

COMBINED GENERAL INTENSIVE CARE

In this model the Intensive Care consists of all patient specialties such as cardiothoracic surgery, orthopaedics, neurosurgery, and general medical patients. These Units will usually have a combination of intensive care and high dependency beds.

This model may be adopted where there are limited numbers of sub-specialty critical patients. The disadvantage of this model is that if the general intensive care is fully occupied, critical sub specialty cases may need to remain in standard inpatient units for treatment.

HOT FLOOR

The 'Hot Floor' model of Intensive Care can be colocated with specialty Intensive Care Units such as cardiothoracic, neurosurgical and general intensive care and may include a high dependency unit.

A comprehensive 'Hot Floor' model may include collocation of ICU with Operating Unit, Emergency, CCU and parts or all of Medical Imaging. The Hot Floor model has the principal advantage of collocating services, avoiding duplication and with a single management structure, allows a more efficient medical and nursing overview.

Advantages of the Hot Floor model include:

- enables standardisation of equipment across the Hot Floor avoiding duplication and minimises service costs
- assists practitioners particularly medical and nursing to develop expertise in the specialties
- prevents access blockage to general ICU beds optimising patient throughput

The disadvantages of a Hot Floor involve:

- the management of a large group of nurses and doctors



- infection control risks including cross infection of patients in co-located units

SEPARATE INTENSIVE CARE UNITS

This model covers a range of specialty Intensive Care Units provided as disconnected units in separate locations, with an independent management structure for each unit.

Advantages of this model include:

- may help to avoid bed blockages by allowing different groups to control the Intensive Care resources
- encourages the development of sub-specialty medical and nursing skills

Disadvantages include duplication of management, policies and procedures and physical isolation of units that may make staffing more difficult.

20.2.2 *Functional Areas*

The Intensive Care Unit will consist of the following Functional Areas:

- Reception/ Waiting Areas
- Patient Treatment Areas including patient beds, ensuites and treatment rooms
- Support Areas including Utility Rooms, Store Rooms, Linen, Disposal Room, Cleaner's Room, Pantry
- Administrative / Office Areas
- Staff Amenities Areas.

ENTRY/ RECEPTION/ WAITING AREAS

As determined by the size of the ICU and hospital operating policy, a Reception and visitor's / relatives' Waiting Areas shall be provided immediately outside the entry to the ICU, but away from patient and staff traffic areas. It is desirable that this room has provision for a drink dispenser, radio, television and comfortable seating. An Interview Room and a separate area for distressed relatives should be available.

BIOMEDICAL WORKSHOP

Dependent upon the size and intended use of the ICU, a dedicated electronic and pneumatic equipment maintenance service may have to be accommodated within the hospital or a 24 hour on-call emergency service made available. This same service would cover the Operating, Emergency and Medical Imaging Units.

If a dedicated workshop is provided, its location should be in an area that is equally accessible to all of the above mentioned departments. The facility should have a degree of sound-proofing and be accessible from a non-sterile area.

LABORATORY FACILITIES

All ICUs must have available 24-hr clinical laboratory services. When this service cannot be provided by the central hospital Laboratory, a satellite laboratory within or immediately adjacent to, the ICU must serve this function. Satellite facilities must be able to provide minimum chemistry and haematology testing, including arterial blood gas analysis.

OVERNIGHT ACCOMMODATION

Depending upon the availability of nearby commercial accommodation, consideration should be given to the provision of overnight accommodation for relatives and staff, preferably near the unit. This will be dependent upon the size and intended function of the ICU. A motel type bed-sitter level of provision is recommended.

SPECIAL PROCEDURES ROOM

A Special Procedures Room shall be provided if required by the Operational Policy.

If a special Procedures Room is required, it should be located within, or immediately adjacent to, the ICU. One special Procedures Room may serve several ICUs in close proximity. Consideration should be given to ease of access for patients transported from areas outside



the ICU.

Room size should be sufficient to accommodate the necessary equipment and personnel. Monitoring capabilities, equipment, support services, and safety considerations must be consistent with those services provided in the ICU proper. Work surfaces and storage areas must be adequate enough to maintain all necessary supplies and permit the performance of all desired procedures without the need for staff to leave the room.

STAFF FACILITIES

A Staff Lounge shall be provided within the unit for staff to relax and prepare beverages. Inclusion of a window to the outside is desirable. A Library/ Reference area with an appropriate range of bench manuals, textbooks and journals for rapid access 24 hours a day should be available within the Intensive Care Unit.

STORAGE AREAS

Mobile equipment such as cardiopulmonary resuscitation trolleys and mobile X-ray, that are used and located within the ICU, shall have storage areas that are out of traffic paths but conveniently located for easy access by staff. Consideration should be given to the ever increasing amount of equipment used in the unit.

20.2.3 *Functional Relationships*

The ICU should be a separate unit within the hospital with easy access to the Emergency Unit, Operating Unit and Medical Imaging.

The location shall be arranged to eliminate the need for through traffic.

20.3 Design

20.3.1 *Patient Treatment Areas*

Patients must be situated so that healthcare providers have direct or indirect visualization, such as by video monitoring, at all times. This approach permits the monitoring of patient status under both routine and emergency circumstances. The preferred design is to allow a direct line of vision between the patient and the central Staff Station. In ICUs with a modular design, patients should be visible from their respective nursing substations.

Sliding glass doors and partitions facilitate this arrangement and increase access to the room in emergency situations

BEDSIDE MONITORING

Bedside monitoring equipment should be located to permit easy access and viewing, and should not interfere with the visualisation of, or access to the patient. The bedside nurse and/or monitor technician must be able to observe the monitored status of each patient at a glance. This goal can be achieved either by a central monitoring station, or by bedside monitors that permit the observation of more than one patient simultaneously. Neither of these methods are intended to replace bedside observation.

Weight-bearing surfaces that support the monitoring equipment should be sturdy enough to withstand high levels of strain over time. It should be assumed that monitoring equipment will increase in volume over time. Therefore, space and electrical facilities should be designed accordingly.

20.3.2 *Environmental Considerations*

ACOUSTICS

Signals from patient call systems, alarms from monitoring equipment, and telephones add to the sensory overload in critical care units. Without reducing their importance or sense of urgency, such signals should be modulated to a level that will alert staff members, yet be rendered less intrusive.



For these reasons, floor coverings that absorb sound should be used while keeping infection control, maintenance, and equipment movement needs under consideration. Walls and ceilings should be constructed of materials with high sound absorption capabilities. Ceiling soffits and baffles help reduce echoed sounds. Doorways should be offset, rather than being placed in symmetrically opposed positions, to reduce sound transmission. Counters, partitions, and glass doors are also effective in reducing noise levels. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

NATURAL LIGHT

Natural light and views should be available from the Unit for the benefit of staff and patients. Windows are an important aspect of sensory orientation, and as many rooms as possible should have windows to reinforce day/ night orientation. If windows cannot be provided in each room, an alternate option is to allow a remote view of an outside window or skylight.

20.3.3 *Space Standards And Components*

Where an open plan arrangement is provided, bed spaces shall be arranged so that there is a clearance of at least 1200 mm from the side of the bed to the nearest fixed obstruction (including bed screens) or wall. At the head of the bed, at least 900 mm clearance shall be allowed between the bed and any fixed obstruction or wall.

When an open plan arrangement is provided, a circulation space of 2200 mm minimum clear width shall be provided beyond dedicated cubicle space.

Separate cubicles and Single Patient Bedrooms including Isolation Rooms, shall have minimum dimensions of 3900 mm x 3900 mm.

20.3.4 *Finishes*

In all areas where patient observation is critical, colours shall be chosen that do not alter the observer's perception of skin colour.

20.3.5 *Fixtures & Fittings*

CLOCKS

An analogue clock/s with a second sweep hand shall be provided and conveniently located for easy reference from all bed positions and the Staff Station.

BEDSIDE STORAGE

Each patient bed space shall include storage and writing provision for staff use.

WINDOW TREATMENTS

Window treatments should be durable and easy to clean. Consideration may be given to use of double glazing with integral blinds, tinted glass, reflective glass, exterior overhangs or louvers to control the level of lighting.

20.3.6 *Infection Control*

HANDBASINS

Clinical Hand-washing Facilities shall be provided convenient to the Staff Station and patient bed areas. The ratio of provision shall be one clinical hand-washing facility for every two patient beds in open-plan areas and one in each patient Bedroom or cubicle.

ISOLATION ROOMS

At least one negative pressure Isolation Room per ICU shall be provided in Level 5 and 6 facilities. Entry shall be through an airlock. Clinical hand-washing, gown and mask storage, and waste disposal shall be provided within the airlock. An Ensuite - Special, directly accessible from the Isolation Room, shall also be provided.



All entry points, doors or openings, shall be a minimum of 1200 mm wide, unobstructed. Larger openings may be required for special equipment, as determined by the Operational Policy.

20.3.7 Building Service Requirements

MECHANICAL SERVICES

The unit shall have appropriate air conditioning that allows control of temperature, humidity and air change.

Refer to Part E of these Guidelines for the specific requirements for Mechanical and Electrical provision.

COMMUNICATIONS

All ICUs should have an intercommunication system that provides voice linkage between the Staff Station, Patient Modules, Staff-Overnight Stay Rooms, Conference Rooms, and Staff Lounge. Supply Areas and the Visitors' Lounge / Waiting Room may also be included in the system. When appropriate, linkage to key departments such as Blood Bank, Pharmacy, and Clinical Laboratories should be included. In addition to a standard telephone service for each ICU, which should provide hospital-wide and external communications capabilities, there should be a mechanism for emergency internal and external communications when normal systems fail.

20.4 Components of the unit

20.4.1 Standard Components

The Intensive Care Unit will consist of Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets



20.5 Schedule of Accommodation

20.5.1 Intensive Care Unit Generic Schedule of Accommodation

Schedule of Accommodation for Units at Levels 3, 4, 5, and 6 follows.

The Schedule of Accommodation lists generic spaces that form an Intensive Care Unit. Quantities and sizes of some spaces will need to be determined in response to the service needs of each unit on a case by case basis.

ROOM / SPACE	Standard Component		Level 2 & 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ENTRANCE / RECEPTION AREA:							
MEETING ROOM - 12M2	yes			1 x 12			
MEETING ROOM - MEDIUM	yes				1 x 15	1 x 15	
TOILET - PUBLIC	yes		Shared	2 x 3	2 x 3	2 x 3	
WAITING	yes		2 x 10	1 x 15	1 x 20	1 x 30	1.2m2 per able-bodied person; 1.5m2 per wheelchair occupant;
WAITING FAMILY	yes		1 x 20	1 x 25	1 x 30	1 x 50	
DISCOUNTED CIRCULATION			25%	25%	25%	25%	
PATIENT AREAS:							
ANTEROOM	yes		1 x 6	1 x 6	2 x 6	4 x 6	use for 1 Bed Rooms - Isolation Class N (Negative Pressure Ventilation)
BATHROOM	yes		1 x 16*	1 x 16*	1 x 16*	1 x 16*	* Inclusion depends on operational policy of unit
BAY - LINEN	yes		1 x 2	1 x 2	2 x 2	4 x 2	
BAY - RESUSCITATION TROLLEY	yes		1 x 2	1 x 2	1 x 2	1 x 2	
BAY / ROOM - BEVERAGE	yes		1 x 4	1 x 4	1 x 5	1 x 5	5m2 allows for enclosed room
ENSUITE	yes		1 x 6	1 x 6	2 x 6	4 x 6	size for 'full assistance', ie 2 staff plus medical equipment
PATIENT BAY – CRITICAL	yes		2 x 16	4 x 16	6 x 16	8 x 16	group of not more than 12, within easy observation of Staff Station
PATIENT BAY - CRITICAL	yes		2 x 24	4 x 24	6 x 25	8 x 25	group of not more than 12, within easy observation of Staff Station
PATIENT BAY - CRITICAL ENCLOSED (CLASS S ISOLATION)	yes		1 x 25	2 x 25	4 x 25	12 x 25	group of not more than 12, within easy observation of Staff Station
PATIENT BAY - CRITICAL ENCLOSED (CLASS N ISOLATION)	yes		1 x 25	1 x 25	2 x 25	4 x 25	clustered, located away from Unit entrance
DISCOUNTED CIRCULATION			40%	40%	40%	40%	
STAFF AREAS:							
BAY - BLANKET WARMING	yes				1 x 1*	2 x 1*	Inclusion depends on operational policy of unit
BAY - HANDWASHING	yes		1 x 1	2 x 1	3 x 1	6 x 1	
BAY - MOBILE EQUIPMENT	yes		1 x 4	2 x 4	3 x 4	4 x 4	Locate in quiet low traffic areas



ROOM / SPACE	Standard Component		Level 2 & 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY - PPE	yes		1 x 1	1 x 1	1 x 1	2 x 1	
BAY / ROOM - BEVERAGE	yes				1 x 6	1 x 6	
CLEANER'S ROOM	yes		1 x 5	1 x 5	2 x 5	2 x 5	
CLEAN UTILITY	yes		1 x 12	1 x 12	2 x 12	2 x 12	
DIRTY UTILITY	yes		1 x 10	1 x 10	1 x 10	2 x 10	
DISPOSAL	yes		1 x 8	1 x 8	1 x 8	2 x 8	Inclusion depends on bed numbers & waste management policies
EQUIPMENT CLEAN-UP / SUB PATHOLOGY	yes similar		1 x 8	1 x 8	1 x 18	1 x 18	Similar to Clean-Up Room, 12m2
MEETING - LARGE	yes		Shared	Shared	1 x 20	1 x 20	Education/Resource - may include Library; 24 hr access perimeter of unit
MEETING - MEDIUM / LARGE	yes		Shared	1 x 15	1 x 30	1 x 35	Seminar/Training / Library; 24 hr access; perimeter of unit
OFFICE - CLINICAL / HANDOVER	yes				1 x 15	1 x 15	Inclusion depends on operational policy of unit. Close to Staff Station
OFFICE - SINGLE PERSON 9M2	yes		1 x 9	1 x 9	1 x 9	1 x 9	NUM
OFFICE - SINGLE PERSON 9M2	yes		1 x 9	1 x 9			Staff Specialist
OFFICE - 2 PERSON SHARED	yes				1 x 12	1 x 12	Staff Specialists - 2 x workstations, may be open plan or in enclosed office
OFFICE - SINGLE PERSON 12M2	yes				1 x 12	1 x 12	Medical Director
OFFICE - WORKSTATION	yes		2 x 6	4 x 6	6 x 6	8 x 6	Registrars - workstation/s, open plan or in enclosed office. No. determined by staffing
OFFICE - WORKSTATION	yes		2 x 6	2 x 6	2 x 6	2 x 6	CNC/Educator- workstation/s, open plan or in shared office. No. determined by staffing
OFFICE - WORKSTATION	yes		1 x 6	1 x 6	2 x 6	2 x 6	Research - workstation/s, open plan or in shared office. No. determined by staffing
OFFICE - WORKSTATION	yes		1 x 6	1 x 6	2 x 6	2 x 6	Secretarial - workstation/s, open plan or in shared office. No. determined by staffing
OFFICE - WORKSTATION	yes		1 x 6	1 x 6	2 x 6	2 x 6	General - workstation/s, open plan or in shared office. No. determined by staffing
OVERNIGHT STAY - BEDROOM	yes					1 x 12	
OVERNIGHT STAY - ENSUITE	yes					1 x 4	
RESPIRATORY / BIOMEDICAL WORKROOM	yes similar				1 x 20*	1 x 20*	Inclusion depends on operational policy of unit;
SHOWER - STAFF	yes		Shared	Shared	1 x 3	1 x 3	
STAFF ROOM	yes		1 x 15	1 x 18	1 x 30	1 x 35	
STAFF STATION	yes		1 x 12	1 x 18	1 x 25	2 x 20	
CHANGE - STAFF - FEMALE	yes		Shared	1 x 10	1 x 20	1 x 35	Includes toilets, showers, lockers; size depends on staffing per shift



ROOM / SPACE	Standard Component		Level 2 & 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
CHANGE - STAFF - MALE	yes		Shared	1 x 10	1 x 20	1 x 25	Includes toilets, showers, lockers; depends on staffing
STORE - DRUG	yes		1 x 5*	1 x 10*	1 x 10*	1 x 10*	Inclusion depends on operational policy of unit
STORE - EQUIPMENT	yes		1 x 15	1 x 20	1 x 25	1 x 30	
STORE - FILE	yes					1 x 10	
STORE - GENERAL	yes		1 x 16	1 x 20	1 x 20	1 x 30	
STORE - PHOTOCOPY / STATIONERY	yes		1 x 8	1 x 8	1 x 10	1 x 10	
STORE - RESPIRATORY	yes					1 x 20*	Inclusion depends on operational policy of unit
STORE - STERILE STOCK	yes			1 x 15	1 x 30	2 x 30	
X-RAY VIEWING & REPORTING	yes				1 x 12*	1 x 12*	Inclusion depends on operational policy of unit
DISCOUNTED CIRCULATION			25%	25%	25%	25%	

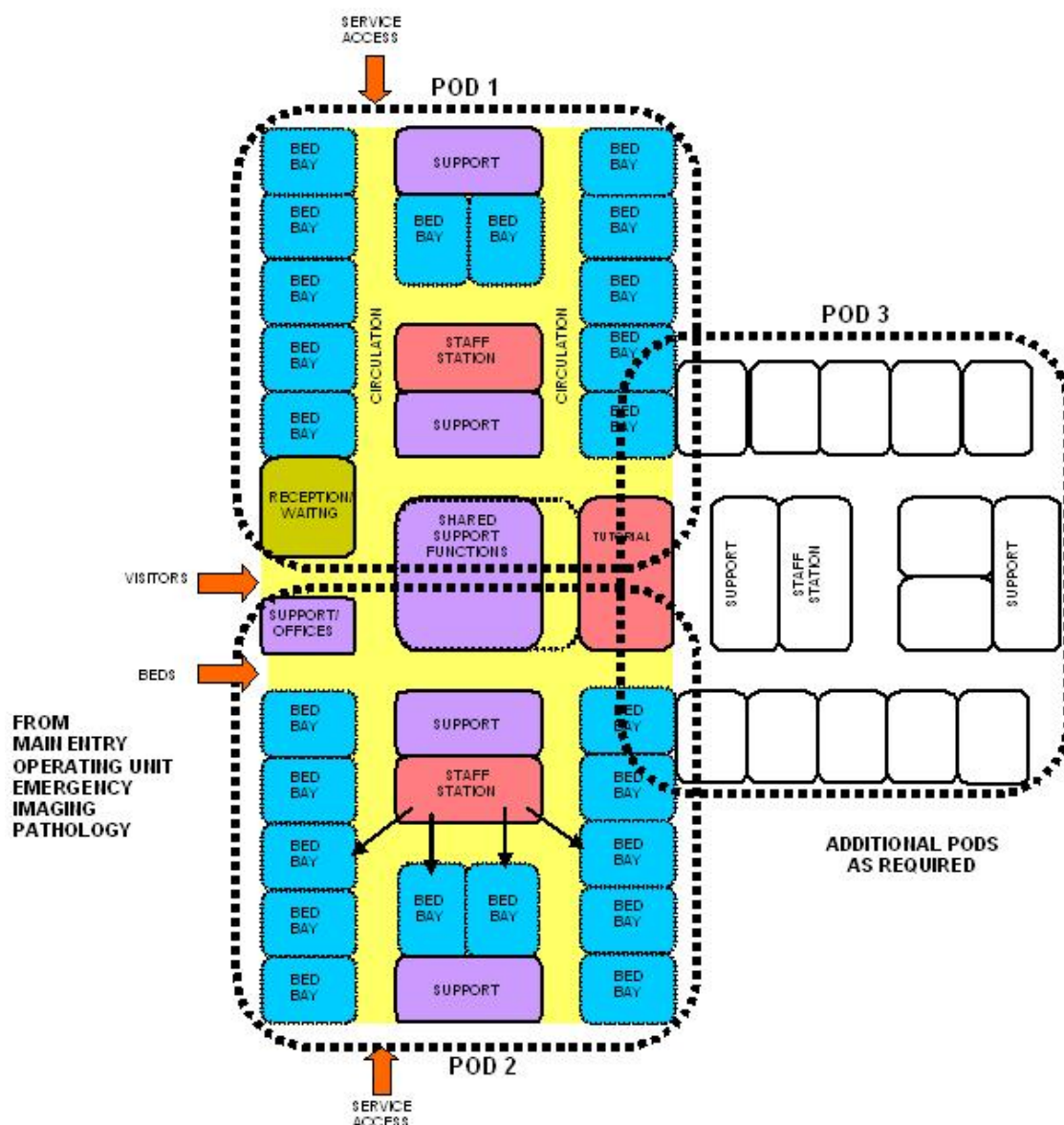
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



20.6 Functional Relationship Diagram

20.6.1 Intensive Care Unit Functional Relationship Diagram



NOTE: MAX 12 BEDS PER POD

20.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Health Department Western Australia, Private Hospital Guidelines, 1998.



21.0 IVF Unit (Fertilisation Centres)

21.1 Introduction

21.1.1 Description

The IVF Unit will provide facilities for In vitro fertilisation (IVF) procedures. IVF is one of several Assisted Reproductive Techniques (ART) used to help infertile couples to conceive a child. The procedure involves removal of eggs (mature Oocyte or Ovum) from the woman's ovary. Ova are then fertilised with sperm in a laboratory procedure (in vitro). If fertilisation occurs, a fertilised ovum, after undergoing several cell divisions, is transferred to the mother for normal development in the uterus, or frozen for later implantation.

The IVF laboratory may use Intracytoplasmic Sperm Injection (ICSI) in the process of IVF.

Services provided by the IVF Unit include:

- Patient consultation and interview on an outpatient basis
- Pre treatment assessment
- Blood collection
- Semen collection
- Artificial insemination
- Ovarian stimulation therapy
- Ultrasound examination
- Oocyte (egg) collection
- Embryo culture
- In vitro / ICSI fertilisation
- Cryopreservation
- Embryo transfer
- Recovery
-

21.1.2 Licensing Of Unit

IVF Units (Fertilisation Centres) in the region may require licensing according to the requirements of pertaining laws of the land. Please refer to local licensing laws for additional information on the licensing process for IVF Units.

21.2 Planning

21.2.1 Planning Models

The IVF Unit may be developed as:

- a stand-alone unit
- a dedicated Unit within a general hospital

21.2.2 Functional Areas

The IVF Unit may consist of a number of Functional Zones:

ENTRY/ CONSULT ZONE:

- Entry/ Reception and waiting areas
- Administration/ Records
- Interview Room/s
- Consult/ Examination/ Treatment Room/s
- Ultrasound room/s
- Collection Room/s with Ensuite shower and Toilet
- Public Toilets



PATIENT PROCEDURAL ZONE:

- Operating Room/s for oocyte (egg) collection and re-implantation
- Recovery areas
- Change areas and toilets for staff and patients

LABORATORY ZONE:

- Laboratories (Embryology, IVF, ICSI, Andrology, Genetics)
- Cryopreservation facilities
- Gas Bottle Store

STAFF AND SUPPORT ZONE:

- Clean-up and Disposal room
- Store rooms and Sterile store
- Offices, meeting rooms, staff room
- Sterilising area: if the IVF unit is a stand-alone building, dedicated sterilising facilities will be required

ENTRY/ RECEPTION

The Entry and Reception provides the first point of contact for clients. Waiting areas should be calm, comforting and relaxing. They should be divided for gender separation.

COLLECTION ROOM(S)

Collection room(s) should be discreet and private, enclosed rooms for collection of sperm samples.

OPERATING ROOM(S)

Operating room(s) will include equipment and facilities for egg collection and embryo transfer, under local anaesthetic. Operating rooms will require adjacent Patient and Staff Change Rooms, scrub sink and patient toilet facilities.

LABORATORIES

Strict protocols for handling and labelling patient specimens in all laboratory areas are required. Laboratory areas should be zoned in a restricted staff access only area.

EMBRYOLOGY/ IVF/ ICSI LABORATORY

The embryology laboratory provides facilities for the handling, preparation, culture and storage of human gametes (sperm and oocytes). Due to the sensitive nature of its functions, the embryology laboratory should be located in a secure and sterile area away from the outpatient/ clinic facilities but in close proximity to the procedure room where the oocytes (eggs) are collected. The laboratory is responsible for identifying oocytes in ovarian fluid, culturing these eggs with the partner's sperm, and embryo examination prior to embryo implantation into the patient.

The ICSI (Intracytoplasmic Sperm Injection) laboratory involves the process of injecting a single sperm into the nucleus of the egg using a microscopic needle without affecting the viability of the egg. The zygote (fertilised egg) is then monitored until it starts to divide forming a small cluster of cells known as the blastocyst (in approximately 5 days in the lab) which is then reimplanted to form an embryo.

ANDROLOGY LABORATORY

The Andrology laboratory performs the evaluation, testing, preparation and storage of sperm specimens. Diagnostic procedures include:

- semen analysis determine sperm count, motility, viability and morphology,



- preparation of sperm for fertilization and Intrauterine Insemination (IUI) and thawing of frozen specimens.

GENETICS LABORATORY

The Genetics Laboratory undertakes cytogenetics studies of the embryo cells, particularly the nucleus which contains the chromosomes that carry genes and their DNA to determine the status of the embryo after IVF and before re-implantation, also referred to as Pre-implantation Genetic Diagnosis (PGD).

This process can also identify and diagnose abnormalities and genetic diseases that may accompany the pregnancy by the use of sophisticated techniques such as Fluorescence In-Situ Hybridization (FISH) or Polymerase Chain Reaction (PCR).

CRYOPRESERVATION FACILITIES

Facilities for cryopreservation will include a separate room for storage of reproductive cells (gametes, zygotes and embryos) in liquid nitrogen storage tanks. Strict protocols on the method of storage and specimen labelling are required for this process (refer to local regulations and licensing laws).

21.2.3 *Functional Relationships*

EXTERNAL

The IVF Unit may have a close working relationship with

- Pathology Laboratories
- Pharmacy
- Medical Imaging

The IVF Unit should be ideally located on the Ground floor. If located on an upper floor, there must be a stretcher carrying lift available.

INTERNAL

Within the IVF Unit the following relationships are significant:

- Laboratory areas should be located with a direct adjacent relationship to the Operating rooms for egg collection and re-implantation
- Laboratories should be located in a separate zone away from the outpatient/ consult area and secured.
- Sperm Collection rooms have a close functional relationship with the Andrology Laboratory; specimens require rapid transfer to the laboratory to avoid deterioration.
- Office areas should be separate from the treatment and laboratory zone

21.3 Design

21.3.1 *General*

The design of the unit should create a pleasant, reassuring atmosphere for patients whilst retaining the necessary functional requirements associated with clinical spaces and laboratories. Ideally, waiting areas should be divided into several small 'Family Waiting' zones or 'nooks' to allow partners or close relatives to wait in relative privacy.

Consideration may be given to a private and discreet entry area for patients, away from general public view.

21.3.2 *Environmental Considerations*

NATURAL LIGHT

Natural light is highly desirable where achievable, particularly for laboratory areas where staff will spend a majority of their time.



PRIVACY

Privacy is essential for confidential conversations and interviews and will minimise stress and discomfort for patients.

Patient privacy and confidentiality can be enhanced by provision of private interview rooms for personal discussions between staff and patients.

ACOUSTICS

Confidential patient information is exchanged between patients and staff, therefore the Interview, Consult, Collection and Treatment rooms should be acoustically treated to maximise privacy.

In acoustically treated rooms, return air grilles should be acoustically treated to avoid transfer of conversations to adjacent areas. Door grilles and undercuts to these areas should be avoided. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

21.3.3 Space Standards and Components

Laboratories and storage areas shall be sized to suit the design requirements of the equipment to be used, to provide a safe working environment and to allow the effective movement of staff.

ERGONOMICS

Laboratories should be designed with consideration to ergonomics to ensure an optimal working environment. Aspects for consideration will include height of benches and chairs, height of equipment in constant use such as microscopes and bio-safety cabinets. Refer also to Part C of these Guidelines.

21.3.4 Safety and Security

Zones within the Unit will require access control to prevent unauthorised access, particularly laboratory areas, cryopreservation areas and staff office areas.

A separate room or a fume hood should be available for procedures requiring use of fixatives.

21.3.5 Finishes

Floor finishes should be appropriate to the function of the space. Consideration must be given to the appearance and quality of environment required e.g. non-institutional, acoustic performance, slip resistance, infection control, movement of trolleys and maintenance.

Laboratory, Storage and Procedural areas should have vinyl or similar impervious floors; patient recovery areas and staff offices may be carpeted.

Ceiling and wall finishes, laboratory cabinetry and bench tops must be easily cleaned.

Refer also to Part C and D of these Guidelines.

21.3.6 Fixtures and Fittings

Critical items of equipment including incubators and liquid nitrogen storage should be temperature alarmed and monitored.

21.3.7 Building Service Requirements



Laboratories will require air conditioning with controlled humidity and temperature to provide an environment that minimises staff distraction and fatigue.

Procedure rooms will require temperature regulation to assist in maintaining patient temperature at 37 degrees C and prevent deterioration of oocytes.

Power supplies to critical equipment such as incubators, refrigerators, biosafety cabinets should be on emergency supply with generator back-up.

21.3.8 Infection Control

All assisted reproductive techniques involve handling of biological material and therefore pose a potential infection control risk to staff and to other patients' reproductive cells (gametes, zygotes, embryos).

Strict infection control measures are required within the unit to protect laboratory staff from potentially contaminated body fluids (follicular fluid etc) and to ensure aseptic environment for reproductive cells, preventing cross infection. Measures will include:

- Handbasins for staff handwashing in all patient areas and laboratories
- Use of laboratory clothing in laboratories
- Use of theatre clothing in procedure rooms
- Use of laminar flow biosafety cabinets in laboratories (a Class II cabinet should be available for handling of contaminated samples)
- Sharps containers and clinical waste collection and removal.

21.4 Components of the Unit

The IVF Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

21.4.1 Non Standard Components

COLLECTION ROOM

Description and Function

The Collection Rooms are private and enclosed rooms used for collection of sperm specimens from patients.

Location and Relationships

The Collection rooms have a close functional relationship with the Andrology laboratory; rapid delivery of specimens is required to prevent cell deterioration. The Collection rooms will require an Ensuite shower / toilet.

Considerations

The rooms should include

- comfortable seating
- handbasin and fittings including soap and paper towel dispenser
- TV, DVD player
- acoustic treatment
- a pass-through hatch for specimens.

IVF/ICSI LABORATORY

Description and Function

Refer to Functional Areas for a description and functions of the IVF/ICSI laboratory. The space



will be enclosed for specialty laboratory functions.

Location and Relationships

The IVF/ICSI Laboratory should be located with a direct relationship to the Operating Room/s for oocyte collection and reimplantation. A pass-through hatch from the Laboratory to each Operating Room is recommended.

Staff change and handwash areas should be located at the laboratory entry.

Considerations:

Fittings and Equipment to be located in this laboratory will include:

- Laboratory benches and storage units
- Laminar flow IVF workstation cabinets
- Benchtop microscopes, inverted microscope, stereomicroscope
- CO2 Incubators
- Electrical pipettes
- Variable pipettes
- Fyrite analyser (CO2 and O2 gas analyser)
- Laboratory refrigerator
- Handbasin and staff change area at entry

Laboratory equipment will require emergency power, temperature monitoring and alarms. The construction of the lab should ensure aseptic and optimal handling of reproductive tissue during all stages of the process. Air conditioning for the Laboratory will include HEPA filters, controlled humidity (20%) and controlled temperature (22 – 24 degrees C). Access to the laboratory should be limited.

ANDROLOGY LABORATORY

Description and Function

Refer to Functional Areas for a description and functions of the Andrology laboratory. The laboratory will include benches and storage units for examination of specimens. The space will be enclosed for specialty laboratory functions.

Location and Relationships

The Andrology Laboratory has a close working relationship with the IVF/ICSI Laboratories. The Collection Room/s should be located in close proximity.

Considerations

Fittings and Equipment to be located in this laboratory will include:

- Laboratory benches and storage units
- Laminar flow IVF workstation cabinets
- Benchtop microscopes
- Automatic sperm analysing units
- CO2 Incubators
- Electrical pipettes
- Variable pipettes
- Mackler cell
- Fyrite analyser (CO2 and O2 gas analyser)
- Laboratory refrigerator
- Handbasin and staff change area at entry

Laboratory equipment will require emergency power, temperature monitoring and alarms. The construction of the lab should ensure aseptic and optimal handling of reproductive tissue during all stages of the process. Air conditioning for the Laboratory will include HEPA filters, controlled humidity (20%) and controlled temperature (22 – 24 degrees C).



Access to the laboratory should be limited.

GENETICS LABORATORY

Description and Function

Refer to Functional Areas for a description and functions of the Genetics laboratory. The functions may be included in the IVF/ ICSI Laboratory.

Location and Relationships

The Genetics Laboratory has a close working relationship with the IVF/ ICSI Laboratory.

Considerations

Fittings and Equipment to be located in this laboratory will include:

- Laboratory benches and storage units
- Laminar flow IVF workstation cabinets
- Benchtop microscopes
- Laboratory refrigerator
- Handbasin and staff change area at entry

Laboratory equipment will require emergency power, temperature monitoring and alarms. The construction of the lab should ensure aseptic and optimal handling of reproductive tissue during all stages of the process.

Air conditioning for the Laboratory will include HEPA filters, controlled humidity (20%) and controlled temperature (22 – 24 degrees C).

Access to the laboratory should be limited.

CRYOPRESERVATION STORE

Description and Function

Storage room for liquid nitrogen tanks containing frozen gametes. Nitrogen tanks should be stored in an enclosed space in case of nitrogen leakage.

Location and Relationships

The Cryopreservation storage area should be located in close proximity to the Laboratory areas, in an area with controlled access.

Considerations:

A monitoring system is required for low levels of liquid nitrogen in the storage tanks and for high levels of nitrogen in the air.

Strict Cryopreservation protocols are required and will include:

- infection control (minimising the risk of cross contamination of frozen gametes, zygotes and embryos)
- Labelling, packaging and documentation of tissue frozen

Provide controlled access to the room.

STERILISING/ PACKING

Description and Function

An area where cleaned and dried instruments are sorted, assembled into sets, packaged, and then sterilised in an autoclave.

Location and Relationships

The Sterilising/ Packing Room will be located adjacent to the Clean-up Room where the



instruments are cleaned and decontaminated.

Considerations:

Fittings and Equipment located in this room will include:

- Handbasin
- Benches and cupboards
- Instrument packing table
- Heat sealing device
- Autoclave
- Cooling trolleys

The room requires a defined unidirectional workflow for instruments from clean to sterile and then to sterile store. Sterile stock should not be stored in this room to avoid the potential for mixing unsterilized instrument sets with sterile sets.



21.5 Schedule of Accommodation

21.5.1 IVF Unit (Fertilisation Centres) Generic Schedule of Accommodation

Schedule of Accommodation for an IVF Unit in a Hospital at Levels 5 and 6.

ROOM / SPACE	Standard Component				Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ENTRY / CONSULTING AREA:							
RECEPTION / CLERICAL	yes				1 x 15	1 x 15	
PHOTOCOPY / STATIONERY	yes				1 x 8	1 x 8	
STORE - FILES	yes				1 x 8	1 x 8	
WAITING	yes				1 x 20	1 x 30	
WAITING FAMILY	yes				1 x 25	1 x 30	
TOILET- VISITORS, ACCESSIBLE	yes				2 x 5	2 x 5	Located adjacent to Waiting
INTERVIEW ROOM - FAMILY	yes				2 x 12	3 x 12	
CONSULT / EXAMINATION / TREATMENT ROOM	yes				3 x 15	4 x 15	
COLLECTION ROOM					2 x 6	2 x 6	Semen samples
ENSUITE	yes				2 x 5	2 x 5	Adjacent to semen Collection Rooms
BLOOD COLLECTION BAY	yes				2 x 5	2 x 5	
ULTRASOUND ROOM	yes				1 x 14	1 x 14	
PATIENT PROCEDURAL AREA:							
OPERATING ROOM - GENERAL	yes				1 x 42	2 x 42	
PATIENT CHANGE CUBICLE	yes				1 x 4	2 x 4	1 adjacent to each Procedure Room
PATIENT TOILET	yes				2 x 3	3 x 3	1 adjacent to each Procedure Room; 1 adjacent to Recovery
CHANGE - STAFF (MALE / FEMALE)	yes				2 x 10	2 x 14	
SCRUB UP	yes				1 x 6	1 x 10	Maybe shared between 2 procedure room
PATIENT BAY - RECOVERY	yes				2 x 10	4 x 10	
BAY - HANDWASHING , TYPE B	yes				1 x 1	2 x 1	
BAY - BEVERAGE	yes				1 x 5	1 x 5	
BAY - LINEN	yes				1 x 2	1 x 2	
BAY - RESUSCITATION TROLLEY	yes				1 x 2	1 x 2	
CLEAN UTILITY	yes				1 x 8	1 x 10	
DIRTY UTILITY	yes				1 x 8	1 x 10	
STAFF STATION	yes				1 x 5	1 x 10	



ROOM / SPACE	Standard Component				Level 5 Qty x m2	Level 6 Qty x m2	Remarks
STORE - GENERAL	yes				1 x 8	1 x 10	
DISCOUNTED CIRCULATION					35%	35%	

LABORATORY AREAS

ROOM / SPACE	Standard Component				Level 5 Qty x m2	Level 6 Qty x m2	Remarks Size will be dependant on equipment to be located and function
IVF/ ICSI LABORATORY					1 x 40	1 x 50	
ANDROLOGY LABORATORY					1 x 30	1 x 40	
GENETICS LABORATORY					1 x 15	1 x 20	PGD functions
CRYOPRESERVATION STORE					1 x 30	1 x 40	
STORE - GAS BOTTLE	yes				1 x 10	1 x 15	
CHANGE-STAFF (MALE /FEMALE)	yes				2 x 6	1 x 6	Includes toilets and change facilities
DISCOUNTED CIRCULATION					35%	35%	

SUPPORT AREAS

ROOM / SPACE	Standard Component				Level 5 Qty x m2	Level 6 Qty x m2	Remarks
CLEAN-UP ROOM	yes				1 x 10	1 x 12	
CLEANERS ROOM	yes				1 x 5	1 x 5	
DISPOSAL ROOM	yes				1 x 5	1 x 8	
STERILISING / PACKING					1 x 15	1 x 20	Locate adjacent to Clean-up
STORE - STERILE STOCK	yes				1 x 8	1 x 12	

STAFF AREAS

Provision of Offices, Workstations and staff areas will be dependant on the Operational Policy and staffing establishment.

ROOM / SPACE	Standard Component				Level 5 Qty x m2	Level 6 Qty x m2	Remarks
MEETING ROOM - MEDIUM	yes				1 x 20	1 x 30	
OFFICE - MANAGER	yes				1 x 12	1 x 12	
OFFICE - SINGLE PERSON	yes				1 x 9	1 x 9	Physician
OFFICE - SINGLE PERSON	yes				1 x 9	1 x 9	Nursing
OFFICE - 4 PERSON SHARED	yes					1 x 20	Multi-purpose
OFFICE - WORKSTATION	yes					1 x 6	Medical Records Clerk
SECURITY ROOM	yes					1 x 10	Security guard
STAFF ROOM	yes				1 x 15	1 x 20	



21.7 References and Further Reading

- Revised Guidelines for good practice in IVF laboratories; Magli, M.C. et al, Human Reproduction Vol 23, No 6, 1253-1262, 2008
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Clinical and Laboratory Standards Institute (CLSI) (www.clsi.org) "Laboratory Design; Approved Guideline," 2nd edition. GP18-A2. Vol 27, No.7. Wayne, PA:CLSI, 2007.



22.0 Linen Handling Unit

22.1 Introduction

22.1.1 Description

Linen handling involves the collection of dirty linen, sorting, washing folding and storage of clean linen for supply to inpatient and Outpatients units.

Linen processing may be done within the hospital facility, or off-site in a commercial or shared laundry, depending on the Operational Policy. Each facility shall have provisions for storage and exchange of clean and soiled linen for appropriate patient care.

22.2 Planning

22.2.1 Functional Areas

As a minimum, the following elements shall be provided:

- A separate room for receiving and holding soiled linen until ready for pick up or processing
- A central, clean linen storage and issuing room/s that has the central storage capacity sufficient for the efficient operation of the hospital, in addition to the linen storage required at individual patient units
- Trolley storage areas with separate storage of clean and soiled linen trolleys out of traffic paths
- A clean linen inspection and mending room or area, located on or off the site, as part of the main linen service, as determined by the system identified in the hospital's Operational Policy
- Hand-washing facilities shall be provided in each area where soiled linen is handled.

LAUNDRY OFF-SITE

If linen is processed outside the building, provisions shall be made for:

- A service entrance, protected from inclement weather, for loading and unloading of linen
- An area for pick-up and receiving.

LAUNDRY ON-SITE

If linen is processed in a laundry facility which is part of the hospital, the following shall be provided:

- Laundry processing room with commercial type equipment that can process at least a seven day supply within the regular scheduled work week
- Storage for laundry supplies
- Employee hand-washing facilities in each separate room where clean or soiled linen is processed and handled
- Arrangement of equipment shall permit an orderly work flow with a minimum of cross traffic
- Convenient access to Staff Amenities, usually shared facilities
- Compliance with all of the relevant statutory requirements and regulations is required.

22.2.2 Functional Relationships

The linen exchange area should be situated to allow direct access to and from hospital units through corridors, passages, covered ways, etc. and have or be adjacent to, an external doorway.

22.3 Components of the unit

The Laundry/ Linen Handling Unit will consist of a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data



Sheets.

22.3.1 Non Standard Components

LINEN INSPECTION AND MENDING

Description and Function

The Linen Handling Unit may include a Linen Inspection and Mending room to examine clean linen and assess for repairs, particularly sheets, wraps and uniforms. Linen examination is undertaken on a large flat surface. Sewing machines may be available for linen repair. If an external linen service is provided, linen inspection and repair may be undertaken off-site.

Location and Relationships

If included, the Linen Inspection and Mending will be located adjacent to the Clean Linen Handling area. The mending area may be located within the room.

Considerations

Linen examination benches or tables may include lighting to the bench surface and a high level of overhead lighting to aid identification of tears and holes in linen.

Other requirements may include

- Ironing facilities
- Tables for folding
- Racks for hanging linen items.



22.4 Schedule of Accommodation

22.4.1 Linen Handling Unit Generic Schedule of Accommodation

Schedule of Accommodation for Linen Handling Unit providing an exchange linen service only, in a Hospital at Levels 2 to 6

ROOM / SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
LINEN HOLDING - CLEAN	yes	1 x 15	1 x 30	1 x 45	1 x 80	1 x 30	adjust size to suit
LINEN HOLDING - SOILED	yes	1 x 12	1 x 20	1 x 30	1 x 40	1 x 60	adjust size to suit
INSPECTION / MENDING				1 x 15 optional	1 x 15 optional	1 x 15 optional	May be provided off-site by the Linen Service provider
LAUNDRY - DOMESTIC	yes similar	1 x 6	1 x 6	1 x 10	1 x 10	1 x 10	For staff use; similar to Laundry - Hospital
OFFICE - SINGLE PERSON 9M2	yes				1 x 9	1 x 9	Unit Manager or Supervisor
TROLLEY STORAGE	yes similar		1 x 15	1 x 15	1 x 20	1 x 20	Similar to Store - Equipment
DISCOUNTED CIRCULATION		10%	10%	10%	10%	10%	

SHARED AREAS

ROOM / SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
LOADING DOCK	yes	1 x 20	1 x 20	1 x 20	1 x 25	1 x 25	Shared with other service units

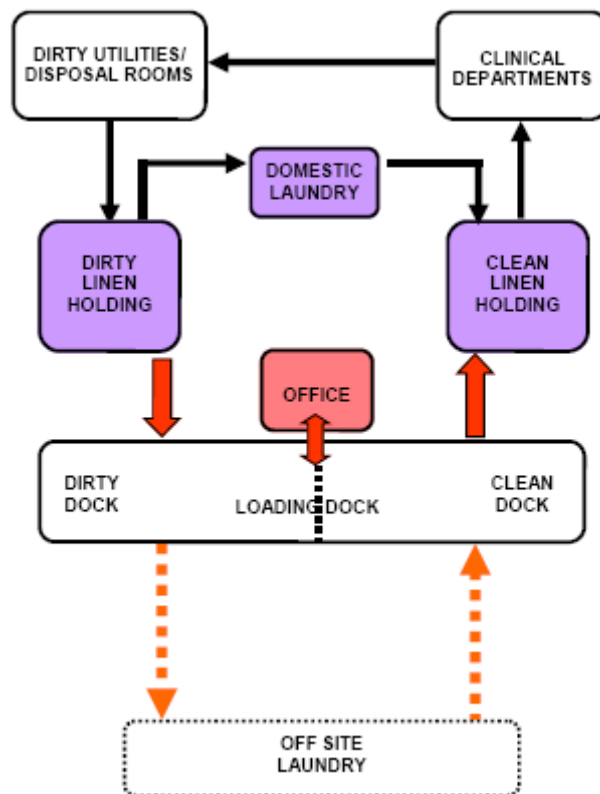
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



22.5 Functional Relationship Diagram

22.5.1 Linen Handling Unit Functional Relationship Diagram



22.6 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



23.0 Main Entrance Unit

23.1 Introduction

23.1.1 Description

The Main Entrance Unit provides for the following functions:

- Entry to the hospital
- Drop off and collection area
- Patient reception
- Patient and visitor enquiries
- Way finding

23.2 Planning

23.2.1 Functional Areas

The Main Entrance shall include the following features:

- Reception desk, which may be shared with Admissions Unit
- Waiting Area, which may be shared with Admissions and other adjacent hospital units
- Holding area for wheelchairs.

The provision of the following features is optional:

- Airlock to the entrance lobby
- Undercover drop-off and collection point.
- Florist
- Kiosk / Coffee Shop
- Gift Shop / Newsagent
- Retail Pharmacy
- ATM / Banks or agencies
- Hairdresser
- Others as considered viable

23.2.2 Functional Relationships

The Main Entrance may be co-located with the Admissions Unit to share Reception and Waiting Areas. Ready access to Public Amenities is required.

23.3 Design

23.3.1 Environmental Considerations

ENTRY AREA

The entrance shall be at grade level, sheltered from inclement weather, and accessible to the disabled.

SIGNPOSTING

Particular attention must be given to signposting the Main Entrance and the hospital for the disabled. Relevant guideline requirements for disability are to be applied.

23.4 Components of the unit

The Main Entrance Unit will consist of a combination of Standard Components and Non-Standard Components.



Provide Standard Components to comply with details in Standard Components in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

23.4.1 Non Standard Components

LOBBY

Description and Function

The Entrance lobby is the Main Entrance arrival point for patients and visitors to the facility. The Lobby will direct visitors to the Reception area and provide waiting areas and public amenities. The size of the Lobby will be determined by the functions to be accommodated and the volume of persons through the area.

Location and Relationships

The Lobby adjoins the Entry Airlock, Main Reception and Waiting areas. Close access to public amenities is required. The Lobby will have direct access to circulation corridors and lifts providing the thoroughfare to hospital units. The lobby should preferably be in close proximity to the drop off/ collection area.

Considerations

Security features provided in this area may be discreet and not noticeable to the observer, including CCTV, security room, and controlled access points.

The Lobby will require:

- Effective signage to direct visitors and staff
- Selection of floor finish to reduce the risk of slips and falls to visitors, patients and staff
- Storage areas for wheelchairs.

RETAIL AREAS (FLORIST, KIOSKS, NEWSAGENT, PHARMACY ETC)

Description and Function

The Lobby area may include a number of retail areas for the convenience of patients, staff and visitors to the facility. The size and requirements of each shop will be dependent on the service provided. Local authority regulations may apply to provision of services such as Coffee Kiosks and Pharmacy.

Location and Relationships

Retail areas will require good public access, and ready access to public amenities.

Considerations

Retail areas will require:

- Security features including lockable perimeter doors
- Signage to shop fronts
- Provision for display of wares
- Services to be provided according to type of retail store



23.5 Schedule of Accommodation

23.5.1 Main Entrance Unit Generic Schedule of Accommodation Schedule of Accommodation for a Main Entrance Unit for Level 3-4

ROOM/ SPACE	Standard Component			Level 3 Qty x m2	Level 4 Qty x m2		Remarks
AIRLOCK	yes similar			1 x 12	1 x 25 optional		Adjust size to suit requirements
BAY – MOBILE EQUIPMENT	yes			1 x 4	1 x 4		
LOBBY				1 x 30	1 x 50		
WAITING	yes			1 x 20	1 x 50		
WAITING – FAMILY	yes			1 x 25	1 x 50		
RETAIL- FLORIST SHOP				1 x 25	1 x 30		Optional; Size will depend on service plan
RETAIL - COFFEE KIOSK				1 x 25	1 x 30		Optional; Size will depend on service plan
RETAIL - SHOP/NEWS AGENT				1 x 25	1 x 30		Optional; Size will depend on service plan
RETAIL- PHARMACY				1 x 25	1 x 30		Optional; Size will depend on service plan
BAY - ATM	yes			1 x 2	1 x 4		
DROP OFF/COLLECTION AREA				1 x 75	1 x 100		External; size will depend on expected number of cars & space available
DISCOUNTED CIRCULATION				10%	10%		

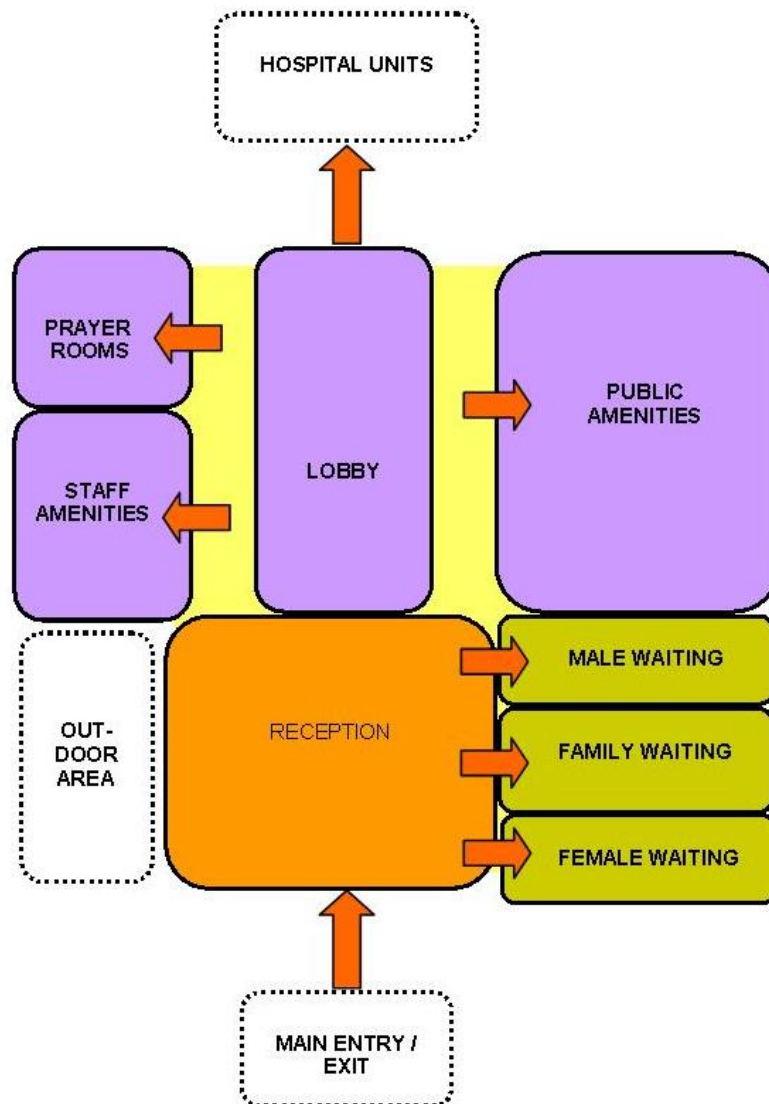
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



23.6 Functional Relationship Diagram

23.6.1 Main Entrance Unit Functional Relationship Diagram



23.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



24.0 Medical Imaging Unit- General

24.1 Introduction

24.1.1 Description

The Medical Imaging Unit is a discrete unit of the hospital which provides for General X-ray diagnostic investigations. Depending on the level of service the unit may also provide for diagnostic screening (fluoroscopy), ultrasound, mammography, computed tomography (CT) or interventional radiographic procedures.

The Medical Imaging Unit may be co-located with or incorporate other specialties including Nuclear Medicine, Angiography, MRI, and PET Units.

24.2 Planning

24.2.1 Planning Models

The layout of a Medical Imaging Unit should be developed in compliance with manufacturer's recommendations, because area requirements may vary from machine to machine. Since technology changes frequently and from manufacturer to manufacturer, rooms should be sized larger to allow upgrading of equipment in the future.

PRIVATISATION OF SERVICES

Increasingly Medical Imaging services are being delivered as a privately owned and operated service. This option needs to be identified early in the planning process as there may be considerable spatial, design and cost implications.

OFF-SITE SERVICES

In smaller hospitals that cannot justify a full Medical Imaging Unit, access to off-site services is an important consideration in the planning phase, in particular, the selection of the site.

24.2.2 Functional Areas

The Medical Imaging Unit may consist of the following Functional Areas depending on the Operational Policy and service demand:

- Reception and Waiting Areas
- Imaging and screening rooms with access to patient change areas and toilets
- Support areas including preparation areas, storage, disposal and utility rooms
- Film processing areas - both daylight and darkroom areas as required; alternatively, medical imaging may be based on a filmless digital imaging system with its own equipment and storage requirements
- Film storage areas
- Viewing and Reporting areas
- Administrative and Office areas
- Staff Amenities areas including Staff Room, Staff Change Rooms and Toilets and access to Meeting Rooms

CLEAN UTILITY/ PREPARATION AREAS

The Clean Utility / Preparation Room shall provide for preparation and mixing of contrast media, storage of medications and sterile supplies. The Clean Utility / Preparation Room, if conveniently located, may serve any number of rooms. The Clean Utility / Preparation Room shall comply with requirements identified in Standard Components - Clean Utility. When pre-prepared media is used, additional storage shall be provided for the media

FILM PROCESSING AREAS

Film processing if required shall be located convenient to the Imaging Rooms and to the quality control area and will normally involve daylight processing equipment. A Darkroom may be provided for specialised processing if required. The Darkroom, if provided will require



special attention to lighting and ventilation.

If the Medical Imaging Unit operates with a filmless, digital imaging system, the appropriate areas for image processing and printing will be required according to the type of system installed.

FILM STORAGE

For digital imaging applications, there will need to be an area for the PACS (Picture Archiving and Communications System) archive storage units.

A room with cabinets or shelves to file hard copies of patient film shall be provided, located close to the Reception/ administration area. Archived film may be stored outside the Imaging Unit, but must be properly secured to protect films against loss or damage.

GENERAL RADIOLOGY / TOMOGRAPHY

Each General will include an upright Bucky stand for chest films. Where volumes are low, OPG, Mammography and Tomography may be added to the General room equipment. This will necessitate a slightly larger room. Tomography is becoming less used with the advent of CT but may be required/ preferred by a Urology service. The necessary attachments may be incorporated into a General Room.

At least one General X-ray room must be sized and located to facilitate transfer of patients from Emergency Unit, if a dedicated room in the EU is not provided.

ORTHOPANTOMOGRAPHY (OPG)

OPG is a method of obtaining films of the upper and lower teeth-bearing jaws that supports Trauma, Dental and Facio maxillary services. This equipment may be incorporated into a General Room, a separate bay or within the Dental Unit.

MAMMOGRAPHY

Mammography imaging may be included for diagnostic purposes. It should be sized to allow prone positioning for some interventional biopsy procedures. Mammography should be located adjacent to an Ultrasound Room for fine needle biopsies. Change Rooms should be discreet and access to an Interview Room will be required.

ULTRASOUND

Ultrasound imaging is used in a variety of specialties including Obstetrics, Medicine, Surgery, Cardiology and Vascular Surgery. Ultrasound rooms may be provided within the specialty departments or within the Medical Imaging Unit. One ultrasound room should be sized to allow for interventional procedures. There must be access to a toilet and drinking water for ultrasound procedures that require the patient to have a full bladder.

FLUOROSCOPY

Fluoroscopic/radiographic imaging procedures involve administration of contrast media to the patient, serial repositioning of the patient and the timed use of a fluoroscopic imaging system. The Fluoroscopy room will require a preparation room for barium preparation and an adjacent toilet / shower, accessed from inside the room and from the external corridor.

With the general decline in use of barium contrast studies and advances in equipment technology, fluoroscopy and angiography may be combined in one room. The room must be equipped for anaesthesia.

DIGITAL SUBTRACTION ANGIOGRAPHY (DSA).

Simple angiography involves injection of a radiographic contrast agent into blood vessels so that vascular structures are enhanced and revealed together with surrounding bony and soft tissue structures. This procedure is used for simple peripheral studies and can be done on a fluoroscopy table.

With DSA, a contrast agent is administered directly, via a catheter, into an artery close to the area to be examined. The subtraction of a pre-contrast mask suppresses interfering structures



from the image so that the arteries become clearly defined. This process enables a full spectrum of vascular and non-vascular procedures including angiography, angioplasty, arterial and venous stents, biopsy and drainage procedures, and biliary and urologic procedures.

COMPUTERISED TOMOGRAPHY (CT SCANNING)

Refer to the Standard Component for CT Scanning. A Control Room may service 2 rooms. The room may need to be serviced for general anaesthesia. A bed/ trolley bay adjacent to each room is required for staff to observe waiting patients.

MAGNETIC RESONANCE IMAGING (MRI)

MRI will require a dedicated area or suite for access control and protection of/from the magnet (fringe field), and preparation/nursing support areas.

Requirements include:

- Interview room for patient consents and explanations in close proximity
- storage for MRI-compatible (non-ferrous) equipment
- lockers for patient property that may interfere with or be damaged by the magnet such as credit cards and keys.

Careful consideration must be given to the location of the MRI in order to minimise the provision and cost of shielding required including the following:

- MRI should not be located under a helipad or next to a sub-station
- floor / slab must be structurally capable of carrying the weight of the MRI
- good external access is required for the installation of the MRI; a removable side panel may be more cost effective than dismantling a RF shielded door
- room size and shape must be able to contain the 5 Gauss magnetic field with the room and consideration should be given to the needs for future 3T MRIs
- access control needs to be included to ensure only authorised staff enter the MRI room
- locate away from moving ferrous objects which can interfere such as lifts, cars moving through car parks, construction sites
- ensure that emergency equipment such as fire extinguishers and medical gas bottles in the vicinity are not made of magnetic iron.

ENDOSCOPIC RETROGRADE CHOLEOPANCREATOGRAPHY (ERCP)

ERCP is a diagnostic procedure for examination of the biliary and pancreatic ducts system and may be a therapeutic intervention for removal of gall stones etc. It is a procedure used by gastroenterologists, and may be performed in the Medical Imaging Unit or in an Endoscopy Unit.

24.2.3 *Functional Relationships*

The location of the Medical Imaging Unit, if provided, is variable. Consideration must be given to its proximity to Accident and Emergency, and to the Operating Unit where dedicated in-theatre X-ray is not provided. The requirement for an Outpatient X-ray Service may also dictate where in the facility it is located. In most instances, a compromise between travelling distance for inpatients (minor role) and convenience for outpatients (major role) will be made.

24.3 Design

24.3.1 *Construction Standards*

Special attention is to be given to the following in the design of a Medical Imaging Unit:

- Structural support for equipment including equipment mounted to ceilings
- Level floor for equipment positioning and safe patient movement
- The impact on room space of large diameter electrical cable support tray (in floor and surface mounted)
- Equipment ventilation
- Procedure timing (clocks)
- Task lighting/dimming
- Room blackout, as required.



- Construction Standards for a Medical Imaging Unit include the following:
- Provision for cable trays, ducts or conduits should be made in floors, walls, and ceilings as required.
- Ceiling heights may be higher than normal.
- A lay-in type ceiling should be considered for ease of installation, service, and remodelling.

STANDARDS & CODES

Radiological facilities are to comply with relevant State legislation, regulations and statutory requirements.

24.3.2 *Environmental Considerations*

ACOUSTICS

Acoustic privacy should be provided in all imaging rooms, interview rooms and particularly in reporting areas. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

LIGHTING

Provide indirect and dimmable lighting required in all examination rooms for patient comfort.

Ceiling mounted shadowless lighting is required in CT and Angiography imaging rooms.

PRIVACY

Visual patient privacy is an important consideration to be addressed in the design of imaging rooms and waiting spaces. Privacy screens will be required to imaging and screening rooms.

24.3.3 *Infection Control*

Hand-washing facilities shall be provided for each Imaging Room, located within or outside the entry to the room. Refer to Part D - Infection Control: Handwashing Facilities for a discussion on the types of basins suitable for this area.

24.3.4 *Space Standards and Components*

Rooms shall be sized to suit the design requirements of the equipment to be used, to provide a safe working environment and to allow the effective movement of staff and patients.

Ceiling heights shall suit the equipment, but shall not be less than 3000 mm for ceiling tube mount installations.

Special consideration should also be given to the width and height of doorways to ensure delivery and removal of equipment is not impeded or prevented, and that patient trolley and bed movement is not hampered.

24.3.5 *Building Service Requirements*

RADIATION PROTECTION

Most Medical Imaging requires radiation protection. Plans and specifications will require assessment for radiation protection by AERB. The radiation protection assessment will specify the type, location and amount of radiation protection required according to the final equipment selections and layout. Radiation protection requirements shall be incorporated into the final specifications and the building plans.

COMMUNICATIONS

Nurse call system

Nurse call buttons shall be located in or near change cubicles, patient-use toilets, showers and at every holding/ recovery bay.

Staff Assist and Emergency Call buttons are required in all Imaging rooms, Holding and Recovery areas



Annunciator panels in corridors must be located for optimum viewing.

Voice/ data communications

Voice/ data installation may include:

- Voice / data cabling for phones and computers
- Dictation system for reporting and / or voice recognition system
- High speed network for digital and CR equipment
- PACS
- Patient or Medical Records Systems
- Radiology Information System ideally linked to the Patient Information System
- Conferencing facilities

24.4 Components of the unit

The Medical Imaging - General Unit will consist of a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

24.4.1 *Non Standard Components*

DIGITAL (PACS) REPORTING AREA

Description and Function

PACS reporting areas will include Radiologist workstations for viewing and reporting on procedures using high resolution (LCD) monitors on which images can be manipulated. A minimum of two linked monitors are required, occasionally four screens are provided.

In addition to the reporting monitors, a dedicated computer will be required for access to the Patient Information System and a system for dictating reports. .

Location and Relationships

Locate in a quiet area with ready access to the imaging rooms. Several workstations may be located in one room but will need to be visually and acoustically separated.

Considerations

The reporting area will require:

- Ergonomic design of the workstation to accommodate the monitors.
- adequate ventilation and temperature control to individual spaces to minimise risk of monitor failure
- individual cubicle lighting (dimable)
- Acoustic measures to ensure quality of voice recordings. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"



24.5 Schedule of Accommodation

24.5.1 Medical Imaging-General Generic Schedule of Accommodation

Schedule of Accommodation for a Medical Imaging Unit - General for Level 2-6

ENTRY/RECEPTION/CLERICAL AREAS

ROOM/ SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
PUBLIC WAITING	yes	1 x 20	1 x 20	1 x 30	1 x 30	1 x 40	
FAMILY WAITING	yes	1 x 10	1 x 10	1 x 20	1 x 20	1 x 50	
BAY – DRINKING FOUNTAIN	yes	1 x 1	1 x 1	1 x 1	2 x 1	2 x 1	Optional Vending bay may be added
CHILD PLAY AREA	yes	1 x 8	1 x 8	1 x 10	1 x 10	1 x 20	Adjacent to Family waiting
PATIENT TOILET – ACCESSIBLE	yes	1 x 5	1 x 5	1 x 5	2 x 5	2 x 5	
PUBLIC TOILET	yes	2 x 3	2 x 3	4 x 3	4 x 3	6 x 3	
RECEPTION	yes	1 x 9	1 x 9	1 x 12	1 x 12	1 x 15	
CLERICAL WORKROOM		1 x 9	1 x 10	1 x 15	2 x 20	2 x 20	
CURRENT FILM STORAGE		1 x 20	1 x 30	1 x 50	1 x 70	1 x 100	Depends of facility requirement
BAY – MOBILE EQUIPMENT	yes	1 x 4	1 x 4	1 x 6	2 x 6	2 x 6	Depends of facility requirement
BAY – WHEELCHAIR/TROLLEY PARK	yes	1 x 5	1 x 5	1 x 6	1 x 10	1 x 12	
TRANSPORT STAFF WORKBASE/ TROLLEY PARK				1 x 4	1 x 6	1 x 8	

SUPPORT AREAS

ROOM/ SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
CLEANER'S ROOM	yes	shared	1 x 5	1 x 5	1 x 5	2 x 5	
HARDCOPY DIGITISER ROOM				1 x 6	1 x 6	2 x 6	
PACS SERVER ROOM			1 x 10	1 x 12	1 x 20	1 x 30	
STORE – GENERAL	yes similar	1 x 9	1 x 9	1 x 12	1 x 12	1 x 15	
STORE – FILM/ CASSETTES/PLATES	yes similar	1 x 9	1 x 9	1 x 12	1 x 12	1 x 15	
OPTICAL DISCS STORAGE ROOM		1 x 9	1 x 9	1 x 12	1 x 12	1 x 15	
PACS OPERATION/MANAGEMENT TEAM		1 x 9	1 x 9	1 x 12	1 x 12	1 x 15	



GENERAL X-RAY & FLUOROSCOPY (SCREENING)

ROOM/ SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
PATIENT BAY HOLDING	yes	2 x 10	2 x 10	4 x 10	4 x 10	4 x 10	For level 5& 6 refer to
BAY – LINEN	yes	1 x 2	1 x 2	1 x 4	1 x 4	1 x 6	
ROOM/ SPACE	Standard Component	Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
GENERAL X-RAY ROOM	yes	1 x 30	1 x 30	2 x 30	2 x 30	3 x 30	
PATIENT CHANGE	yes	2 x 2	2 x 2	4 x 2	4 x 2	6 x 2	
PATIENT CHANGE – ACCESSIBLE	yes	2 x 4	2 x 4	2 x 4	4 x 4	4 x 4	
CHANGED WAITING – MALE/FEMALE	yes	1 x 18 optional	1 x 18 optional	1 x 24	1 x 24	1 x 30	
PATIENT LOCKER BAY	yes	1 x 4	1 x 4	1 x 8	1 x 8	1 x 16	
COMPUTED RADIOLOGY (CR) PROCESSING				1 x 20	1 x 30	1 x 40	
DARK ROOM	yes	1 x 6	1 x 6	1 x 8	1 x 8	1 x 10	
SCREENING ROOM (FLUOROSCOPY)	yes		1 x 36	1 x 36	1 x 36	2 x 36	
CONTRAST MEDIA PREPARATION ROOM/BAY			1 x 5	1 x 5	1 x 5	2 x 5	
PATIENT TOILET –	yes		1 x 6	1 x 6	1 x 6	2 x 6	May include shower
PATIENT TOILET – ACCESSIBLE	yes		1 x 5	1 x 5	1 x 5	2 x 5	
BAY- RESUSCITATION TROLLEY	yes		1 x 2	1 x 2	1 x 2	2 x 2	

ULTRASOUND, MAMMOGRAPHY & C.T SCANNING

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
SUB WAITING	yes		2 x 6	2 x 6	2 x 10	2 x 12	
ULTRASOUND ROOM	yes		1 x 12	2 x 12	2 x 12	3 x 12	
PATIENT CHANGE	yes		2 x 2	2 x 2	4 x 2	4 x 2	
PATIENT CHANGE – ACCESSIBLE	yes		2 x 6	2 x 6	4 x 6	4 x 6	
MAMMOGRAPHY ROOM	yes			1 x 16	2 x 16	3 x 16	
PATIENT CHANGE – MAMMO.	yes			1 x 2	2 x 2	3 x 2	
MAMMOGRAPHY PROCESSOR				1 x 6	1 x 6	2 x 6	
ULTRASOUND/MAMMOGRAPHY PREP ROOM/LAB				1 x 9	1 x 9	2 x 9	
C.T SCANNING ROOM	yes		1 x 45	1 x 45	2 x 45	2 x 45	
C.T CONTROL ROOM	yes		1 x 12	1 x 12	1 x 12	1 x 12	Shared between 2 rooms
C.T COMPUTER ROOM	yes		1 x 12	1 x 12	2 x 12	2 x 12	Optional



ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
SUPPORT AREAS							
PATIENT CHANGE	yes		2 x 4	2 x 4	4 x 4	4 x 4	
PATIENT CHANGE – ACCESSIBLE	yes		2 x 4	2 x 4	4 x 4	4 x 4	
PATIENT HOLDING	yes		2 x 8	2 x 8	4 x 8	4 x 8	
CLEAN UTILITY/PREP ROOM	yes			1 x 8	1 x 10	1 x 12	
BAY – LINEN TROLLEY	yes		1 x 1	1 x 1	2 x 1	2 x 1	
BAY – RESUSCITATION TROLLEY	yes		1 x 2	1 x 2	2 x 2	2 x 2	

ANGIOGRAPHY/DSA

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ANAESTHETIC INDUCTION ROOM	yes			1 x 15	1 x 15	1 x 15	Optional
SCRUB-UP/GOWNING	yes			1 x 6	1 x 6	1 x 6	
STERILE STOCK/SET-UP ROOM	yes			1 x 16	1 x 18	1 x 24	
ANGIOGRAPHY ROOM	yes			1 x 42	2 x 42	3 x 42	
CONTROL ROOM – SINGLE	yes			1 x 14	shared	shared	Shared between 2 procedure rooms
CONTROL ROOM – SHARED	yes				1 x 24	1 x 24	
COMPUTER EQUIPMENT	yes			1 x 6	2 x 6	3 x 6	
REPORTING ROOM	yes			1 x 8	1 x 12	1 x 16	
BAY – RESUSCITATION TROLLEY	yes			1 x 2	1 x 2	2 x 2	
STORE – FILMS/CDs/VIDEOS				1 x 6	1 x 8	1 x 8	

MRI

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY – HANDWASHING (TYPE A)	yes			1 x 1	1 x 1	1 x 1	
MRI SCANNING ROOM	yes			1 x 42	1 x 42	2 x 42	
MRI CONTROL	yes			1 x 10	1 x 10	1 x 10	Shared between 2 MRI rooms
MRI COMPUTER ROOM	yes			1 x 10	1 x 10	2 x 10	
OFFICE/REPORTING	yes			1 x 9	1 x 9	2 x 9	
PATIENT CHANGE	yes			2 x 2	2 x 2	4 x 2	
PATIENT LOCKER	yes			1 x 4	1 x 4	1 x 8	



ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
SUB-WAITING	yes			1 x 20	1 x 30	1 x 50	
PATIENT TOILET	yes			2 x 2	2 x 2	4 x 2	
BAY – RESUSCITATION TROLLEY	yes			1 x 2	1 x 2	2 x 2	

PATIENT HOLDING/ RECOVERY AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
PATIENT BAY – HOLDING/RECOVERY	yes			4 x 9	6 x 9	8 x 9	to be shared
STAFF STATION	yes			1 x 10	1 x 10	1 x 15	
CLEAN UTILITY	yes			1 x 10	1 x 10	1 x 12	
BAY – LINEN TROLLEY	yes			1 x 1	2 x 1	4 x 1	
BAY – RESUSCITATION TROLLEY	yes			1 x 2	1 x 2	2 x 2	
DIRTY UTILITY – SUB	yes			1 x 8	1 x 10	1 x 12	
DISPOSAL ROOM	yes			1 x 8	1 x 8	2 x 8	
STORE – EQUIPMENT	yes			1 x 9	1 x 12	2 x 12	
DISCOUNTED CIRCULATION				35%	35%	35%	

STAFF OFFICES & REPORTING AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
OFFICE – SINGLE 12M2 (DIRECTOR)	yes			1 x 12	1 x 12	2 x 2	
OFFICE – SINGLE 9M2 (RADIOLOGIST)	yes			1 x 9	1 x 9	2 x 9	
OFFICE – SINGLE 9M2 (RADIOGRAPHER)	yes			1 x 9	1 x 9	2 x 9	
OFFICE – SINGLE 9M2 (NURSE MANAGER)	yes			1 x 9	1 x 9	1 x 9	
OFFICE – WORKSTATION	yes			2 x 6	4 x 6	6 x 6	Qty will depend on service plan
DIGITAL (PACS) REPORTING STATION				2 x 6	4 x 6	6 x 6	Qty will depend on service plan

STAFF AMENITIES

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
FILM LIBRARY/STUDY				1 x 10	1 x 15	1 x 20	
QUIET STUDY ROOM					1 x 9	1 x 9	Optional
STORE – PHOTOCOPY/STATIONERY	yes				1 x 8	1 x 10	
MEETING ROOM – SMALL/MEDIUM	yes				1 x 15	1 x 20	



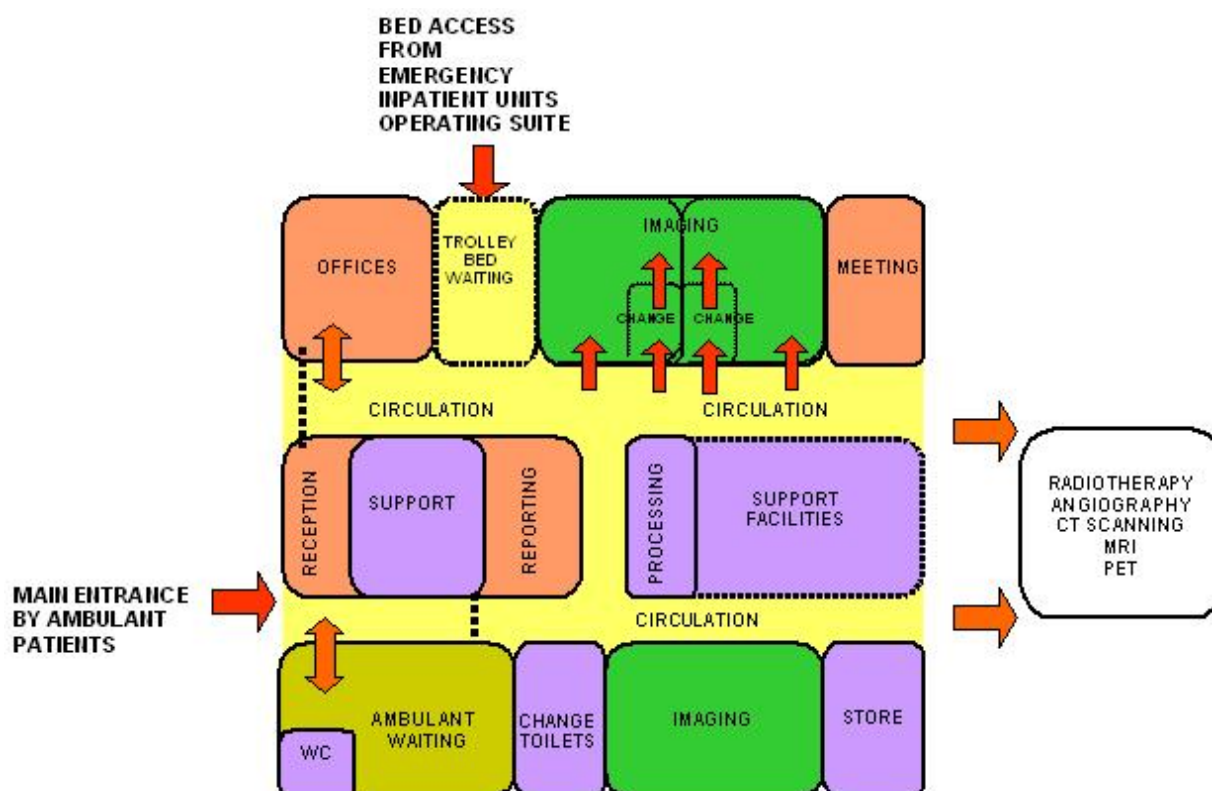
ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
MEETING ROOM – LARGE	yes				2 x 15	2 x 20	
STAFF ROOM	yes			1 x 30	1 x 30	1 x 40	
STAFF PROPERTY	yes			1 x 4			
STAFF SHOWER	yes			2 x 2			
STAFF TOILET	yes			2 x 3			
STAFF CHANGE – MALE/FEMALE	yes				2 x 14	2 x 14	Separate male/female areas includes shower/toilets/locker

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

24.6 Functional Relationship Diagram

24.6.1 Medical Imaging-General Functional Relationship Diagram



24.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



25.0 Medical Records Unit

25.1 Introduction

25.1.1 Description

The function of the Medical Records Unit is the development and maintenance of health information systems involving the following:

- Retrieval, assembly, sorting and distribution of records for and to the wards and other patient units.
- Transcription / typing service for outpatient letters, discharge summaries and operation reports
- Classification (clinical coding) of diseases and procedures for inpatient admissions using an International Classification of Diseases
- Provision of information to management and other authorised staff for purposes such as planning, utilisation review, quality Assurance, casemix studies and research
- Quality assurance of the medical record to ensure standards are met.

The purpose of the Medical Records Unit is to provide for the secure maintenance, storage and retrieval of confidential clinical records. Provision should be made for 24 hour availability of clinical records either by a computerised or manual system.

A Health Facility must provide appropriate secure record storage and retrieval to ensure patient confidentiality at all times.

A Health Facility must store all patient related administrative, historical and medical records in a fire rated construction as indicated in local bylaws.

25.2 Planning

25.2.1 Operational Policies

GENERAL

Comprehensive examples of the issues on which unit decision-makers will be required to develop specific operational policies are listed below:

- A centralised record system should be maintained for all inpatient, emergency and outpatient/day patient attendances. Where a centralised system is not possible, the existence of a sub-file must be flagged to allow retrieval of the sub-file for patient care or medico-legal purposes.
- A unit numbering system will be used which will provide a single identifying number for every patient who presents to the Hospital i.e. the Medical Record Number (MRN). The MRN will be issued at the time of first admission or attendance and will be used for all subsequent admissions and treatment. Patient identification / registration must comply with Patient Registration standards.
- Accurate and up-to-date Patient Administration Systems will be maintained and information relating to patient movements will be updated as soon as the Department is notified.
- Terminal digit filing will be used in both active storage and secondary storage
- Correctly completed requests for each record leaving the unit will be required. The tracking of medical records will be facilitated by the use of bar coding on the record folder
- Information will only be released to a third party with the patient's authority except if required for continuing patient care, or according to hospital operational policy.
- Medico-legal reports and subpoenas will be prepared in accordance with the Confidentiality Policy and relevant NSW Health Policy Directives.
- Medical records will be retrieved from secondary storage after hours only if deemed clinically necessary and staff may be accompanied by a security officer if necessary.
- A centralised dictating system utilising the telephone system may be used.



- Transcription of discharge summaries, operation reports and outpatient letters may be carried out in the Unit.

The record management system chosen will also require consideration of operational policies related to implementation of new technologies; cabling for departments; integration with existing communications systems; location of workstations; space and security requirements; air conditioning requirements and the transition process to be utilised when moving from one system to another.

STORAGE

Medical records must be kept for at least 10 or 15 years after last attendance or official contact or access by or on behalf of patient, or until the patient attains the age of 25 years, depending on Peer Hospital Group category. If a commercial company is used to dispose of the records they should provide certification to confirm confidentiality. Records must be stored in a fire-rated construction as indicated in the local building bylaws. Note that sprinklers should NOT be installed.

STAFFING LEVELS

The Staff Establishment in a Unit based on hard copy files will include the following:

- Health Information Managers - a Unit Head of Department and additional professional staff depending on size of Unit
- Clinical coders
- Medical typists
- Administrative staff.

25.2.2 *Planning Models*

LOCATION

Location may depend on whether or not a pneumatic or mechanical automated records transport system is to be installed and the departments to which it is linked. The decision to include such a system will strongly influence the external functional relationships of the Unit with the Outpatients Clinic area, in particular and may reduce the importance of direct access to the Emergency Unit. It must be located so as to provide natural light and - if possible - views to staff who occupy the area during the working day. Planners must consider possible future uses of the unit envelope for such time as an electronic record system has evolved with consequent reduction in staff and diminishing storage needs. The Unit should be considered as "soft" space into which an adjoining unit could expand or a new unit established. Secondary storage ideally will be readily accessible to minimise time wasted in access.

BUILDING DESIGN

If a ground level location cannot be achieved, structural engineers must be consulted to calculate the weight of the records in order to ensure appropriate floor reinforcement.

25.2.3 *Functional Areas*

Rooms, areas, or offices for the following personnel and/or functions shall be provided:

- Medical Records Administrator/ coding personnel
- Review and Dictation
- Sorting and Recording
- Microfilming of records, if applicable
- Record Storage, active and archived

ENTRY / RECEPTION / ADMINISTRATION

A single controlled point of entry to the Medical Records Unit for the reception of visitors and staff. A temporary storage area will be required for returned files or files awaiting delivery to



departments. A small amount of waiting will be required. The optimum location for the offices for medico-legal staff is the Reception area with dual access from the Waiting Area and from inside the Unit. Entry doors should have a buzzer and key card or similar for secure access for authorised staff. For units that run a 24 hour service, a peep hole in the door and/or a camera/intercom is required for after-hours access. Access will be required within this area to Dictating / Research Cubicles so that visiting staff do not have to traverse the Unit.

TRANSCRIPTION

This area will provide the medical transcription service. Staff should be located in a quieter area of the unit but within close proximity to the dictating and general assembly/sorting area. Consideration should be given to the acoustic treatment of this area as staff need to listen to transcription machines, however staff should not be totally separated from the other department activities. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

CLINICAL CODING

Coding requires an even greater degree of concentration to ensure accuracy so a quiet area is essential. Each coder will need a filing bay to store files awaiting attention plus storage for coding and reference manuals.

OFFICES

The staff side of the Reception Desk is a convenient location for offices for Health Information Managers to allow easy access for visitors to the Unit.

PHOTOCOPYING / PRINTING

Dedicated, acoustically-treated and ventilated space is required. This space may also be used for generating bar code labels etc. This may also include stationery storage. Locate with ready access to the medico-legal offices that generate a large amount of photocopying. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

ASSEMBLY & SORTING

An open plan area used for the processing activities associated with the filing and preparation of the medical records for clinics, admissions etc. including workstations and sorting tables. Each records officer will need a records storage bay and a trolley at or in close proximity to their workstation. Storage will be required for:

- records awaiting sorting and assembly
- records awaiting filing
- newly assembled records
- Note that records awaiting medico-legal attention will be stored in the Medico-Legal Office

As this area will be the major activity area of the Unit, it should have natural daylight. This area should be located with direct access to the filing storage areas and Photocopy & Stationery Store.

SHELVING & AISLES

The most common and suitable method to file active medical records is on fixed metal shelving units (bays). Archived files may be stored in a compactus but a compactus is not recommended for active files as it can be dangerous and inconvenient if a number of staff wish to access files at the same time. Standard bays are usually 900mm wide and 300mm deep.

Regardless of the number of shelves in each bay (may be 7), the highest shelf should be accessible by a short member of staff using a library stool - usually six levels of shelving. Step ladders are not recommended. Maximum height should be 2175mm. A minimum width of 750mm per aisle between facing bays must be provided; however for efficient retrieval of records, 900mm is recommended as it allows space for trolleys, library stools and for staff to pass each other in the aisles. The main access aisle/s should be at least 1500mm wide to allow for trolleys passing each other, and for exit in the event of fire.



25.2.4 *Functional Relationships*

GENERAL

In a traditional, “hard copy” environment, the critical relationship is with the Emergency Department for immediate record retrieval. Less critical is the relationship with Outpatients/ Ambulatory Care Units as files are usually pulled and delivered to the Units prior to clinic sessions. However, distances for transport of heavy records do need to be considered.

It is also useful to locate the Unit to encourage medical staff access to unwritten discharge summaries and for ease of access for record review etc. In a paperless environment, there will probably be no critical relationships except for staff wanting to access records still in hard copy for research purposes etc.

ARCHIVE FILE STORE

All the records requiring storage should meet the statutory requirements beyond the 5 year active storage period. There are a number of advantages for keeping non-active medical records readily accessible and available. Two of these are:

- Time saving for staff;
- Easy access for refiling.

If storage space is a problem and microfilming or scanning of inactive records is being considered, a special room for microfilming will need to be planned. The optimum solution is to locate the archival store within the Unit itself or directly underneath connected by a stairway. It is not often practical to include the space for all the records in a prime clinical area. Consideration should be given to locating the records in a low activity area of the hospital and at the same time remain secure, dry and free from vermin, silverfish and other insects likely to attack the paper. Fire sprinklers should NOT be installed.

25.3 Design

25.3.1 *General*

One main entry and exit for all staff and records is required to ensure the security and confidentiality of the unit and the medical record is maintained.

25.3.2 *Environmental Considerations*

ACOUSTICS

Refer to Appendix 2 of these Guidelines.

NATURAL LIGHT

Essential in general work areas.

25.3.3 *Space Standards and Components*

ERGONOMICS

Refer to Part C of these Guidelines.

25.3.4 *Safety and Security*

Shelving and workbenches must meet Occupational Health & Safety Standards.

Due to the confidential nature of the documents being handled in the Unit, careful consideration must be given to the security of the unit. The unit should be secure at all times to protect the records against loss, damage or use by unauthorised personnel. There must also be adequate security for staff and visitors should not be able to enter the department proper without being let in by the receptionist. The counter should be designed so that it would be difficult/ impossible to climb over. The required level of security can be achieved by limiting Unit entry / exit points to one (1) equipped with access control - keyed or electronic. All other egress points should be locked and / or locally alarmed. Well signed, local alarms are a strong



deterrent to unauthorised egress but the system must be overridden in the case of fire alarm activation in the area. Hospital policy may require a security officer to accompany non medical records staff in the department where records are required after hours.

OPTICAL DISC SECURITY

Once a document is scanned, it cannot be lost or tampered with. By storing the original set of disks and using duplicates as working copies, complete sets of records are maintained at all times. The second issue is security of access to the confidential records on the optical disk system. If a full system is implemented, terminals would be located throughout the Hospital. This could pose problems for security of the information being accessed and displayed on these terminals. This means that safeguards must be put in place to prevent viewing of images by unauthorised persons. System access and security systems must have multi-dimensional passwords that can avoid unauthorised intrusion into the system and particular records.

25.3.5 *Finishes*

WALL PROTECTION

Provide wall protection to all areas where trolleys are in use.
Refer also to Part C of these Guidelines.

CEILING AND FLOOR FINISHES

Refer also to Part C of these Guidelines.

25.3.6 *Fixtures and Fittings*

Refer to part C of these Guidelines and to the Room Data Sheets (RDS) and Room Layout Sheets (RLS) for further detailed information

25.3.7 *Infection Control*

Refer to Part D of these Guidelines for further information.

25.3.8 *Building Service Requirements*

INFORMATION TECHNOLOGY/ COMMUNICATIONS

In addition to the usual hospital communication systems, the Medical Records Unit has particular needs. These include the need for remote dictating from the administrative and clinical areas to a central dictating unit. Communication systems may include:

- office phones
- two-way intercom between designated staff areas or public address system in large units
- phone between the archival and main unit (if archives located off site or not adjacent to the main Medical Record Unit)
- computer networking systems associated with the Medical Record technology

DURESS ALARM SYSTEM

Locate duress alarms at Reception.

LIGHTING

Overhead lighting in the records store must run parallel to the direction of the filing bays to ensure adequate lighting of each aisle.

FLOOR LOADING

Structural engineers must be consulted to calculate the weight of the records in order to ensure appropriate floor reinforcement if a ground level location cannot be provided.



25.4 Components of the Unit

The Medical Records Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

25.4.1 *Non Standard Components*

RECORD PROCESSING AREA

Description & Function

An open plan area used for the processing activities associated with the filing and preparation of medical records for clinics, admissions etc. It will incorporate parking for medical record transport trolleys. (Number and dimensions will need to be ascertained). This area may have “zones” for assembled files ready for issue and records waiting to be refilled. The area will need workstations and sorting tables.

Location & Functional relationships

This area should have direct access to the filing storage areas.

Considerations

At least part of this area should have access to natural light as it will be the major activity area of the department.

DICTATION CUBICLES

Description & function

The dictating area will be used by medical staff and others to view and research medical records as well as dictating and completing the discharge summaries.

Location & functional relationships

The cubicles should be located on the perimeter of the unit adjacent to but inside the reception area.

Considerations

The number of cubicles will depend on usage and the cubicles may be self contained or in an open plan office in which case cubicle partitions will be required. The auditory separation of personnel is preferred as extraneous noise will be distracting to the person dictating.



25.5 Schedule of Accommodation

25.5.1 Medical Records Unit Generic Schedule of Accommodation

Schedule of Accommodation for a Medical Records Unit at Levels 3/4 and 5/6 follows. Levels are assumed to provide the necessary support to the hospital overall.

WORK AREAS

ROOM/ SPACE	Standard Component			Level 3/4 Qty x m2		Level 5/6 Qty x m2	Remarks
RECEPTION	yes			1 x 10		1 x 20	
WAITING - SUB	yes			1 x 8		1 x 12	
MEETING (INTERVIEW) ROOM - SMALL	yes			1 x 9		1 x 9	
RECORD PROCESSING				1 x 25		1 x 50	Main work area
BAY – MOBILE EQUIPMENT	yes			1 x 9		2 x 6	Trolleys
REVIEW / DICTATION CUBICLES				1 x 9		1 x 20	
RECORDS STORE - ACTIVE	yes similar			1 x 80		1 x 200	Area assessment needs to include circulation between aisles
OFFICE - SINGLE PERSON 9M2	yes					1 x 9	For Health Information Deputy Manager
OFFICE – SINGLE PERSON	yes			1 x 9		1 x 12	For Health Information Manager
OFFICE - WORKSTATION	yes			2 x 6		6 x 6	For Health Information Management staff; no. As per Staff Establishment
OFFICE – MEDICO LEGAL	yes			1 x 9		1 x 12	12sqm = 2 staff
OFFICE - WORKSTATION (TYPING)	yes			2 x 6		4 x 6	No. determined by staff establishment and operational policy
OFFICE- WORKSTATION (CODING)	yes			1 x 6		2 x 6	Quiet environment; no. determined by staff establishment
STORE - GENERAL	yes			1 x 9		1 x 12	
RECORD PROCESSING AREA - SCANNING				1 x 20		1 x 20	Optional, depending on policy
STORE – PHOTOCOPY / STATIONERY	yes			1 x 8		1 x 8	

STAFF AREAS

ROOM / SPACE	Standard Component			Level 3/4 Qty x m2		Level 5/6 Qty x m2	
MEETING ROOM - MEDIUM	yes			share		1 x 15	Unit meetings
PROPERTY BAY - STAFF	yes			1 x 4		1 x 4	
BAY- BEVERAGE	yes			1 x 4		1 x 5	After-hours use
TOILET - STAFF	yes			2 x 3		2 x 3	Particularly for after-hours access
DISCOUNTED CIRCULATION				15%		15%	Refer Active File Store
RECORDS STORE - ARCHIVE				Project specific		Project specific	May be remote

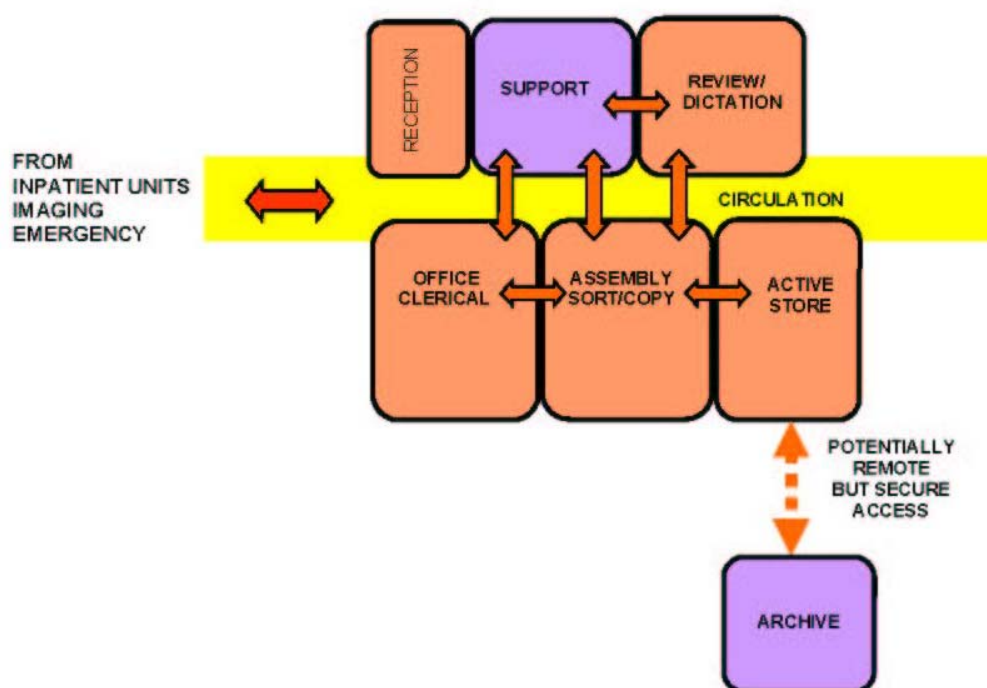


Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

25.6 Functional Relationship Diagram

25.6.1 Medical Records Unit Functional Relationship Diagram



25.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005 <http://www.healthdesign.com.au/vic.dghdp/>



26.0 Mobile Unit

26.1 Introduction

26.1.1 Description

A mobile unit may be described as any mobile, transportable or re-locatable structure intended to provide shared medical services to the community on a permanent or temporary basis. Mobile units are usually pre-manufactured and equipped with services and transported to the desired location for operation. The size of the units is restricted by transportation guidelines and therefore usually low occupancy facilities. A mobile unit does not necessarily have to be on wheels as long as it can be de-mounted and transported easily.

26.2 Planning

26.2.1 Planning Models

Mobile units generally cater to low occurrence services that may complement services already being provided by a hospital facility. It may also be a service that requires expensive capital investment and thus shared by a community, locality or region. The types of services provided by a mobile unit may depend on the level of services being provided at the main hospital or facility. Some examples of Mobile units are:

- Mobile Hospital/ Dispensary
- Mobile Imaging unit
- Mobile Breast Screening unit

26.2.2 Operational Policies

Operational policies will largely depend on the Operational policies adapted by the related departments or the main hospital facility that the mobile unit is affiliated to. It is important that staff working in the mobile unit have input in its working.

26.2.3 Functional Relationships

LOCATION AND ACCESS

Access to and from the unit should be given proper consideration so as to take into account staff and patients. The location of the unit should preferably be in close proximity to its related department or its patient base. Proper consideration needs to be given with respect to turning radius, parking and service access to the mobile unit.

For mobile MRI units, gauss fields of various strengths generated by the equipment shall be considered; both for the environmental and interference effects. Radio frequency interference shall be considered when planning a site. MRI mobile units shall consider providing adequate access for cryogen-servicing of the magnet.

PARKING AND DROP-OFF ZONES

Sites shall provide hazard-free drop-off zones and adequate parking for patients.

26.2.4 Functional Areas

ENTRANCE/ RECEPTION

Protection from the elements during transport to and from the mobile unit shall be provided. This can be achieved by providing permanent or temporary patient/ staff walkways.

WAITING AREAS

The facility shall provide waiting space for patient privacy as close to the unit docking area as possible. The facility shall provide patient/staff toilets as close to the unit docking area as possible.



CLINICAL AREAS

The clinical areas should have easy access to the relevant departments and other critical resources required to provide the services. The internal planning of the unit should provide patient and staff direct access to services located in the mobile unit. Patient access should adhere to disability, privacy and safety guidelines. Adequate hand wash basins should be provided according to infection control guidelines.

26.3 Design

26.3.1 *Environmental Considerations*

Mobile units should adhere to local environment laws and regulations as may apply. Natural light may be desirable in patient areas depending on the type of services being provided. Exhaust from mobile units should be directed away from patient areas.

26.3.2 *Space Standards and Components*

Stairs and landings to and from mobile units should comply with local construction codes. Ramps are required for handicapped access and should comply with Disability guidelines. Depending on the planning of the unit, handrails should be provided for patient safety and comfort.

CONSTRUCTION STANDARDS

The design and construction of mobile units will be according to the applicable construction codes and subject to approval and testing by the relevant authority. The mobile unit will adhere to all patient/ staff safety regulations relating to fire safety, Occupation health and safety and AERB approved radiation protection.

26.3.3 *Safety and Security*

FIRE PROTECTION

Manual fire extinguishers shall be provided in accordance Life safety codes. Fire detection, alarm, and communications capabilities shall be installed and connected to facility central alarm system on all new units in accordance with relevant Life safety codes.

26.3.4 *Finishes*

Interior finish materials should be fire retardant or non-combustible. Colours can be used to enhance patient experience. Refer to Part C of these guidelines for restrictions on use of specific colours for specific services.

26.3.5 *Building Services Requirements*

ELECTRICAL & HEATING VENTILATION AIR CONDITIONING

Main switchboards and panels should be located in accessible location for maintenance but away from high traffic areas. They should be located in dry ventilated areas free from explosive flames and corrosive elements. Receptacles should be water proof if they are located externally and should be sufficient for various tasks to be performed. Air-conditioning, heating, ventilating, ductwork, shall be installed in accordance with local construction codes.

TELECOMMUNICATION AND INFORMATION SYSTEMS

Locations for terminating telecommunications and information system devices shall be located within easy access to authorized personnel. Special air conditioning and voltage regulation shall be provided when recommended by the manufacturer.

LIGHTING

Consideration shall be given to the special needs of the elderly. Excessive contrast in lighting levels that makes effective sight adaptation difficult shall be minimized. Approaches to buildings and parking lots and all occupied spaces shall have lighting fixtures that can be illuminated as necessary.



27.0 Nuclear Medicine Unit

27.1 Introduction

27.1.1 Description

The Nuclear Medicine Unit provides facilities for the administration of radiopharmaceutical agents to patients and patient imaging for diagnostic purposes and for treatment. The Nuclear Medicine Unit may be provided within the Medical Imaging Unit or as a freestanding Unit. The Unit may or may not include a Radiopharmacy Laboratory. The size of a unit in terms of numbers and type of cameras will be determined by the service plan and clinical needs.

27.2 Planning

27.2.1 Model of Care

The model of care will depend on level of services provided as defined in the service plan and the presence or otherwise of PET as a sub-component of the Nuclear Medicine Unit.

In large centres, it will be a discrete unit. If there are only one or two gamma cameras, it may be a discrete sub-unit of Medical Imaging.

All units will have a Hot Laboratory (Hot Lab). Large centres may or may not include a Radiopharmacy Laboratory that will prepare its own radiopharmaceuticals for general use.

27.2.2 Planning Models

LOCATION

A ground floor site is preferred but if this cannot be achieved, consideration should be given to units above, below and adjoining the proposed location with regard to radiation shielding requirements, the weight of equipment and associated shielding and access for equipment and radioactive isotopes.

The Unit should not act as a thoroughfare to other units of the healthcare facility.

UNIT LAYOUT

Staff and patient flows in the Unit are critical to ensure that patients, staff and visitors are not exposed to radiation as a result of travel through or adjacent to areas occupied by dosed patients and scanning rooms. Effective layout can also reduce the need for costly radiation shielding.

Layout should address the need for separation of areas particularly patient and staff corridors and entry areas for outpatients and inpatient on beds / trolleys.

If provided, the Bone Density Room should be located near the entry to the Nuclear Medicine Unit to ensure patients do not unnecessarily cross areas of radioactivity. The Bone Densitometry room should be located away from dosed patients by distance or shielding to avoid interference to the Bone Density Unit from high ambient radiation levels.

27.2.3 Functional Areas

The Nuclear Medicine Unit consists of the following functional areas:

- Reception / Administration
- Waiting areas for outpatients and inpatients, including toilets
- patient holding, observation and recovery area
- treatment areas including gamma camera rooms, specialised scanning imaging rooms (SPECT, PET, PET/CT, bone densitometry), stress testing facilities
- support areas including utilities, staff station
- Hot Lab / Radioactive Waste Store
- staff areas including offices and amenities



- teaching and research facilities (Tertiary Centres)

PATIENT WAITING

Waiting areas should allow separation of dosed and undosed patients, particularly as some patients may need to wait for 45 minutes after dosing for uptake. It is also preferable to separate dosed patients from relatives and visitors to the unit which may include young adults, pregnant women and children. Dosed patients should have access to drinking water and toilet facilities without having to access general waiting areas.

Outpatients should be separated from inpatients for privacy reasons with separate entrances.

PATIENT HOLDING, OBSERVATION AND RECOVERY AREA

An area will be required for patient holding, recovery and observation including the following:

- a dedicated inpatient entry
- curtained bed / trolley bays for holding, observation and recovery; the configuration of the overall space should permit both dosed and un-dosed patients to be held safely
- a small staff station with hand basin
- support rooms including Dirty Utility, Linen Bay, Sterile Stock Store
- Resuscitation trolley (trolley may be located near the Stress Testing Room).

GAMMA CAMERA

The gamma camera is a device used in Nuclear Medicine to image gamma radiation emitting radioisotopes to view and analyse images of the human body or the distribution of medically injected, inhaled, or ingested radionuclides emitting gamma rays, producing a two dimensional image.

The gamma camera consists of one or more flat crystal planes (detectors) optically coupled to an array of photomultiplier tubes, the assembly is known as a "head", mounted on a gantry. The gantry is connected to a computer system that both controls the operation of the camera as well as acquisition and storage of acquired images. The gamma camera room will require a control area and radiation screening as assessed by AERB Consultants.

SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY (SPECT)

SPECT is a nuclear medicine tomographic imaging technique using gamma rays, similar to the conventional gamma camera planar imaging system that is able to provide true 3D information. This information is typically presented as cross-sectional slices through the patient, but can be freely reformatted or manipulated as required.

To acquire SPECT images, the gamma camera is rotated around the patient. Projections are acquired at defined points during the rotation, typically every 3-6 degrees. In most cases, a full 360 degree rotation is used to obtain an optimal reconstruction. The time taken to obtain each projection is also variable, but 15-20 seconds is typical. This gives a total scan time of 15-20 minutes.

A SPECT camera may be combined with a computerised tomography (CT) unit to form a hybrid system and fusion imaging of the physiology and anatomy of the area/s being scanned. SPECT/CT requires a separate control room and radiation screening in accordance with CT requirements.

VIEWING AND REPORTING AREA

A dedicated room with dimmable lighting will be required for viewing and reporting on scans. Each workstation should accommodate imaging screens, computers for access to imaging and patient information systems, writing and shelving space for reference materials. The number of reporting stations will depend on service level, number of scanning rooms and the staff establishment.

HOT LAB / DISPENSARY AND RADIOACTIVE WASTE STORE

Radioactive radiopharmaceuticals are stored and prepared ready for administration to the patient in the Hot Lab. A lead screen barrier is required for the dispensary area. The



Dispensary should be located adjacent to the patient dosing room.

A radioactive waste storage area may also be incorporated into or adjacent to this space. Provide radiation shielding as advised by AERB Consultants. The Waste Store will require a sink and basin with hands-free taps for hand washing and equipment decontamination.

RADIOPHARMACY

The Radiopharmacy is used for preparation, compounding, quality control and dispensing of radiopharmaceuticals for diagnosis and treatment. Radiopharmaceuticals are radioactive isotopes attached to pharmaceutical substances.

Only designated units will have an in-house Radiopharmacy laboratory where cold kits are prepared; these may be used in-house or supplied to other Nuclear Medicine Units.

Many nuclear medicine units (e.g. private practices) may receive a daily delivery of the radiopharmaceutical already prepared and dispensed as individual patient doses. Other isotopes / radionuclides (e.g. gallium, thallium) are delivered weekly or monthly as required, pre-packaged into individual doses for dispensing.

STORAGE - EQUIPMENT & SUPPLIES

Storage is required for:

- collimators and scanning phantoms, within the scanning rooms.
- mobile equipment such as wheelchairs, trolleys, lifters and ultrasound scanners, may be located in equipment bays
- Technegas unit and large argon cylinder/s that may be located in an equipment bay ; the Technegas unit and trolley is taken to patients in holding bays or in the camera rooms for patient to inhale Tc99m
- Medical consumables and smaller equipment items
- sterile stock
- stationery
- records/ files.

27.2.4 *Functional Relationships*

The Nuclear Medicine Unit should be located with ready access to the Medical Imaging Unit, PET Unit if provided, Emergency Unit, Operating Unit and Critical Care areas. It requires easy access for ambulant patients and beds/ stretchers.

27.3 Design

27.3.1 *Construction Standards*

Construction Standards for a Nuclear Medicine Unit include the following:

- Flooring shall be adequate to meet load requirements for equipment, patients, and personnel.
- Floors and walls should be constructed of materials that are easily decontaminated in case of radioactive spills.
- Walls should contain necessary support systems for either built-in or mobile oxygen and vacuum, and vents for radioactive gases.
- Provision for cable trays, ducts or conduits should be made in floors, walls, and ceilings as required.
- Ceiling height should be a minimum of 3 metres.
- Ceiling mounted equipment should have properly designed rigid support structures located above the finished ceiling.
- A lay-in type ceiling should be considered for ease of installation, service and future remodelling.



27.3.2 *Environmental Considerations*

ACOUSTICS

Acoustic treatment will be required to the following areas:

- SPECT/CT scanning rooms (hybrid units may be noisy)
- Viewing / reporting room
- Consulting rooms

Refer also to acoustic requirements in Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

NATURAL LIGHT

Natural light is desirable in all patient areas, staff room and staff offices. Lighting level in reporting rooms needs to be adjustable. External windows provided in scanning and uptake rooms should be assessed by an AERB Consultant for shielding requirements.

27.3.3 *Safety and Security*

The Nuclear Medicine Unit shall include a safety shower with an eyewash station for use in the event of radioactive spills.

27.3.4 *Finishes*

Floor finishes and junctions should be smooth, impervious and non-absorbent in case of radiation spills.

27.3.5 *Building Service Requirements*

RADIATION PROTECTION

Plans and specifications will require assessment for radiation protection by an AERB consultant, as required by the appropriate state authorities. The radiation protection assessment will specify the type, location and amount of radiation protection required according to the final equipment selections and layout. Radiation protection requirements shall be incorporated into the final specifications and the building plans.

Radiation shielding will be required to a number of areas as advised by AERB Consultants including:

- Reception and rooms adjacent to dosed patient rooms
- Dosing/ Consult Exam rooms
- Hot Lab/ Dispensing room/ Radiopharmacy
- Pre-scan uptake rooms/ dosed waiting areas, patient toilets
- Cardiac Stress Testing Room
- Scanning Room/s
- Post scanning waiting areas
- Bone Densitometry Room

HYDRAULIC SERVICES

Ceiling spaces above gamma cameras and specialty scanning units should not be used for hydraulic services or air-conditioning ducts, to avoid damage to equipment from leakages.

The need for delayed holding tanks within the Nuclear Medicine Unit will require assessment by the AERB Consultant.

MECHANICAL SERVICES

Additional cooling and ventilation will be required to Scanning Rooms and associated computer equipment rooms as the equipment is sensitive to excessive ambient heat. Some scanners may require chilled water for cooling. Large temperature changes (greater than 40°C per hour) within scanning rooms need to be avoided to reduce the risk of crystal fracture in gamma cameras. Additional air extraction or exhaust may be required to Camera Room/s where ventilation agents such as Technegas are administered.



General air conditioning inpatient and staff areas needs to be adjustable for patient and staff comfort; the temperature of the Unit should not exceed 25°C.

Smoke detectors in treatment rooms should be sensitive to radiation.

Hot Lab room air should be negatively pressured and exhausted, not recirculated. The Hot Lab may include a fume cabinet which will require exhausting.

Rooms in which Technegas is used should be negatively pressured to the rest of the Unit.

27.4 Components of the Unit

The Nuclear Medicine Unit will contain a combination of Standard Components and Non-Standard Components, according to the Level of Service. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

27.4.1 *Non-Standard Components*

SPECT AND SPECT/CT SCANNING ROOM -

Description and Function

The SPECT and SPECT/CT Scanning rooms will be used for patient imaging procedures using a SPECT camera or combined SPECT/CT hybrid system. Installation of equipment should be in accordance with manufacturer's recommendations. Room size may vary according to the equipment selected

Location and Relationships

Scanning rooms require ready access from dosing rooms and dosed patient waiting areas. Scanning rooms may be collocated with shared Control rooms to enable monitoring of two rooms simultaneously.

Considerations

- Floor structure should support the equipment weight.
- Uninterruptible power supply is required to the cameras and associated computer modules to prevent data loss and/or damage during power surges or loss of supply
- Power to patient areas shall be body protected to protect against electric shock
- Individual room temperature and humidity control is required.
- Lighting should be placed to avoid lights shining directly into the patient's eyes and should be dimmable.
- Radiation shielding will be required according to assessment by the AERB Consultant
- Bed / trolley access is required to the room
- Fixtures, fittings and equipment within the room will include:
- Collimator rack/s for a range of collimator sizes should be included; the collimator is a directional guide; the size and length of the collimator holes determine which gamma rays reach the detector in the camera; collimator racks vary according to the model / level of Gamma Camera.
- Patient ECG monitoring may be required in the room
- CCTV camera may be included (optional in SPECT/CT room).
- Lead apron rack and aprons will be required in the room or immediately adjacent.
- hand basin - Type B with paper towel and soap fittings
- Television, ceiling or wall mounted is optional.
- Bench and shelving for preparation and storage may be provided.

Services will include:

- medical gases - oxygen, suction, medical air on service panel
- nurse and emergency call system
- power outlets for patient equipment on the medical services panel and additional power on all walls



- computer data points on patient services panel, near gamma camera unit and in control areas.

STORE - RADIOACTIVE WASTE -

Description and Function

This room will store radioactive waste materials.

Location and Relationships

Ready access to the Hot Laboratory is required.

Considerations

Lead lining is required to ensure safe protection of radioactive materials.

BONE DENSITOMETRY ROOM -

Description and Function

Bone densitometry is a non-invasive procedure using a special x-ray scanning machine to determine bone density or strength. It is used to identify those at risk of developing osteoporosis and to monitor change in bone density.

Location and Relationships

The bone densitometry room maybe located within the radiology or nuclear medicine department.

Considerations

The room may have radiation shielding to walls and/or glazing as advised by AERB Consultant.



27.5 Schedule of Accommodation

27.5.1 *Nuclear Medicine Unit Generic Schedule of Accommodation* Schedule of Accommodation for a Nuclear Medicine Unit for Level 4-6

ENTRY/ RECEPTION AREA

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
RECEPTION	yes			1 x 10	1 x 10	1 x 15	
WAITING	yes			1 x 20	1 x 30	1 x 50	
MEETING ROOM – SMALL	yes			1 x 9	1 x 9	1 x 12	
OFFICE – SHARED	yes			1 x 12	1 x 12	1 x 15	
STORE – PHOTOCOPY/STATIONERY	yes			1 x 8	1 x 8	1 x 12	
STORE - FILES	yes			1 x 6	1 x 8	1 x 10	

PATIENT & SUPPORT AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
WAITING – UNDOSED	yes similar			1 x 12	1 x 12	1 x 20	
PLAY AREA – PAEDIATRIC	yes			1 x 6 optional	1 x 10	1 x 10	
PATIENT BAY – HOLDING	yes			2 x 9	3 x 9	8 x 9	
BAY - BEVERAGE	yes			1 x 4	1 x 4	2 x 4	
BAY – HANDWASHING	yes			1 x 1	1 x 1	2 x 1	
BAY – LINEN	yes			1 x 2	1 x 2	2 x 2	
BAY – RESUSCITATION TROLLEY	yes			1 x 2	1 x 2	1 x 2	
CLEANER'S ROOM	yes			1 x 5	1 x 5	1 x 5	
CONSULT ROOM	yes			1 x 12	2 x 12	4 x 12	
DIRTY UTILITY – SUB	yes			1 x 6 optional	1 x 8	1 x 10	
DISPOSAL ROOM	yes			1 x 6	1 x 8	1 x 10	May be shared at Level 4
STAFF STATION/CLEAN UTILITY	yes			1 x 6	1 x 8	1 x 10	
STORE – STERILE STOCK	yes			1 x 6	1 x 10	1 x 12	
PATIENT TOILET – ACCESSIBLE	yes			2 x 5	2 x 5	4 x 5	
PATIENT SHOWER	yes			2 x 4	2 x 4	4 x 4	
DISCOUNTED CIRCULATION				35%	35%	35%	



TREATMENT AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
GAMMA CAMERA ROOMS (WITH INTERNAL CONTROL)	yes			1 x 38	1 x 38	1 x 38	
SPECT SCANNING ROOM (WITH CONTROL ROOM)	yes similar				1 x 42	2 x 42	
SPECT/C.T SCANNING ROOM	yes				1 x 48	1 x 48	
SPECT/C.T SCANNING CONTROL ROOM	yes similar				3 x 6	4 x 6	
COMPUTER EQUIPMENT ROOM	yes			1 x 6	3 x 6	4 x 6	
STRESS TESTING	yes similar			1 x 10	1 x 20	1 x 20	
BONE DENSITOMETRY					1 x 12	1 x 16	
BAY – MOBILE EQUIPMENT	yes			1 x 6	2 x 6	4 x 6	
PROCEDURE ROOM	yes					1 x 20	Optional
VIEWING/REPORTING ROOM	yes			1 x 10	1 x 10	1 x 25	
DISCOUNTED CIRCULATION				35%	35%	35%	

HOT LABORATORY AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ENTRY LOBBY ISOTOPE DELIVERY	yes			1 x 4	1 x 4 optional	1 x 4 optional	Refer to Airlock
HOT LABORATORY (RADIOPHARMACY)	yes			1 x 10	1 x 12	1 x 12	
STORE – RADIOACTIVE WASTE	yes				1 x 20	1 x 20	
SHOWER – EMERGENCY	yes			2 x 1	2 x 1	2 x 1	Decontamination; privacy screened

STAFF SUPPORT AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
OFFICE – SINGLE PERSON 12M2	yes				1 x 12	1 x 12	Director
OFFICE – SINGLE PERSON	yes			1 x 9	1 x 9	1 x 9	Nursing Personnel
OFFICE – SINGLE PERSON	yes			1 x 9	2 x 9	4 x 9	Medical specialist etc; Qty depends on service plan
OFFICE – WORKSTATIONS	yes			3 x 6	4 x 6	6 x 6	Qty depends on service plan
MEETING ROOM	yes			1 x 10	1 x 15	2 x 20	Qty depends on service plan
STAFF ROOM	yes				1 x 30	1 x 40	
STAFF CHANGE – MALE/FEMALE	yes			2 x 10	2 x 15	2 x 20	Separate Male/female areas

Please note the following:

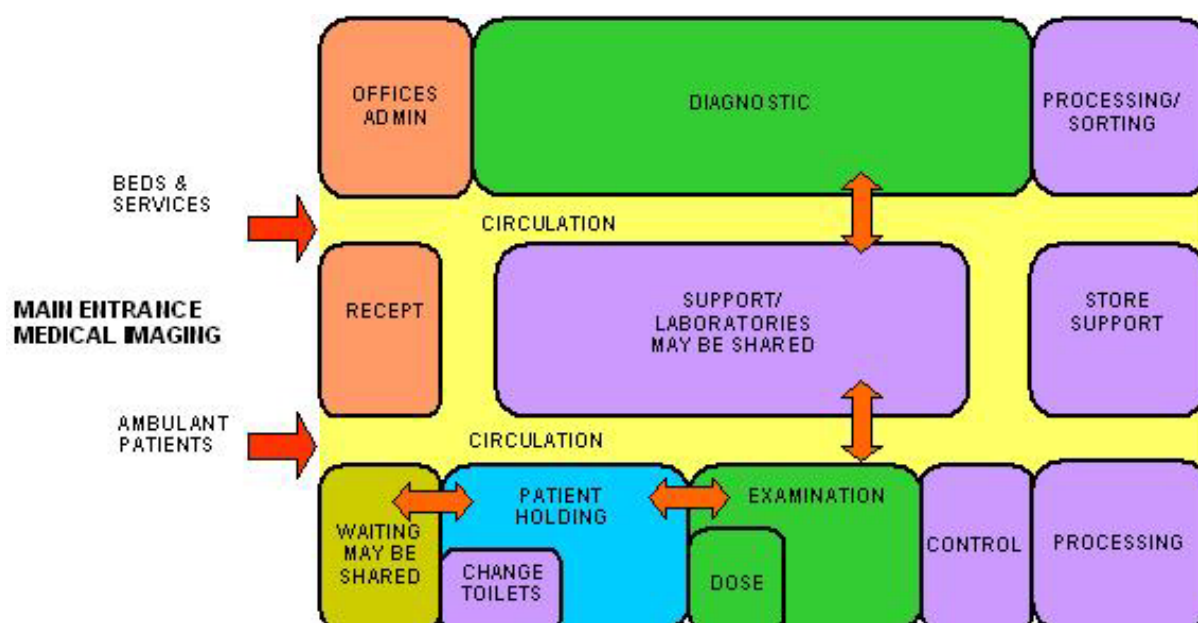
- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.



- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

27.6 Functional Relationship Diagram

27.6.1 Nuclear Medicine Unit Functional Relationship Diagram



27.7 References and Further Reading

- FGI (formerly AIA), Guidelines for Design and Construction of Health Care Facilities, 2010
- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- NHS, HBN 14-01, Pharmacy and Radiopharmacy, 2008
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- NHS Estates, HBN 6, Facilities for Diagnostic Imaging and Interventional Radiology, 2001



28.0 Obstetrics Unit

28.1 Introduction

28.1.1 Description

The Obstetric Unit is a discreet Unit providing facilities for the safe prenatal care, delivery and post natal care of mothers and their babies.

The number of birthing preparation rooms and the size of the associated service areas shall be as required by the proposed obstetrical workload as outlined in the Operational Policy.

The exact scope of the unit is described in the Role Delineation Level which allows for 4 different levels at which the unit can operate.

The description of the unit within this Guideline is based on a Level 4 unit which typically suits patients (both mothers and babies) with low to medium risk factors and associated complications. It caters for approximately 1000 deliveries per annum and is based on 24 patient beds, 4 birthing rooms and a special care nursery.

Within the unit, patients with specific needs will be taken into consideration through the creation of dedicated zones:

- Mothers having normal deliveries
- Mothers suffering from antenatal or postnatal complications, requiring acute maternity care
- Babies requiring minimal care
- Babies requiring care for complications arising from medium risk factors
- Babies requiring care for severe complications, in anticipation of a transfer to a Neonatal Unit of a higher delineation.

It is expected the Obstetric Unit, including the nursery, will be managed as one unit.

28.2 Planning

28.2.1 Planning Models

Obstetrics consists of the following processes:

- Labour
- Delivery/ Birthing
- Recovery
- Postnatal (or Post-Partum)
- Separate from these 4 processes, the baby infant nurseries

A traditional Obstetrical model is based on the patient being moved between areas dedicated to the individual processes. The preferred design for an Obstetric Unit however, particularly for smaller birthing centres, includes a number of self contained rooms fitted out to perform several of the processes, without the patient having to move according to the following:

- The design model combining labour, delivery and recovery in one room will be referred to as an LDR model. The patient is only moved from this room in case of complications (to the Caesarean section delivery room) or after recover, to an in-patient room.
- The design model combining all four processes will be referred to as LDRP model. Here the patient remains in one room for her entire stay.

Larger birthing centres may adopt a more traditional model where dedicated maternity in-patient beds are provided, combined with a separate birthing suite. If the birthing centre does not provide a stand alone Special Care Nursery or Neonatal Intensive Care Unit, a Level 1 nursery may be provided.



28.2.2 *Functional Areas*

The Obstetric Unit consists of the following functional areas:

- Reception and arrival area including provisions for visitors and administrative activities
- Inpatient areas for general mother care and for acute care (both antenatal and post natal)
- Birthing areas
- Neonatal Nursery area – General Care Nursery area
- Shared support and staff areas including facilities that can be shared between zones or Units.

The Obstetric Unit will require rapid access to Operating Unit for emergency Caesarean Section deliveries; the Operational Policy will determine the requirement for Operating facilities located within the Birthing Area.

RECEPTION AREA:

The reception is the receiving hub of the unit and should therefore ensure the security of the entire department through access control, duress alarm buttons as a minimum and baby tagging as a preferred option. Mothers, their supporters and members of the public will need to have good access to public phones and separate male/female toilet facilities, prayer rooms (a minimum of 1 prayer room per sex, per floor) and waiting areas. A separate waiting area for families should be provided too, preferably with a small play area for children. Considering the substantial volume of flowers and gifts delivered to the unit, secure holding space should be provided adjacent the reception.

The reception may be used for the registration of expectant mothers; alternatively this can occur within the maternity ambulatory care area. Good access from reception to the nursing administration offices and education areas is beneficial.

INPATIENT AREA:

The inpatient area shall cater for both antenatal and postnatal patients. Although the unit described under this section is based on 24 patient beds – preferably only single rooms, for acute care and mother care – the bed numbers and mix will ultimately be determined by specific service conditions such as patient demographics, operational policies, cultural issues etc.

Mother care areas shall be designed to suit mothers and babies who are well whereas the acute care area shall cater for antenatal patients, post natal patients with complications or simply for mothers recovering from Caesarean sections.

Patient rooms shall be grouped together in zones corresponding to their different levels of dependency. The more relaxed environment of mother care rooms can be located further away from the staff observation posts and the support areas whereas the more clinical acute care rooms shall be located to allow for effective staff observation and ease of access from the support areas.

With regards to the different type of rooms:

- Due to requirement for a high level of privacy, the use of double rooms should be avoided unless specifically requested by the operator.
- Subject to the level of service provided and the likelihood of contagious diseases in the population, a pair of adjoining negative pressure isolation rooms with anterooms shall be provided.

BIRTHING AREA:

The birthing area caters for all the processes surrounding the birth of a newborn: assessment, labour, delivery (with/without intervention), bonding between mother (and the greater family) and child, resting and recovery and finally, the transfer to an inpatient unit or a discharge in case of a community midwifery programme. Where the LDRP model is followed, obviously most of these processes will be taking place in one dedicated room.



An Obstetric Unit shall have:

- Birthing rooms, typically , LDR type
- At least 1 multi-purpose assessment room for consultations, examinations and if required, for delivery.
- Family/supporters facilities, allowing them to take part of the entire birthing process

If water birthing is included in the Operational Policy, the Unit will require access to a dedicated Bathroom. The Bathroom will require a large peninsular bath, with access to both sides of the bath. The Bathroom shall have a minimum area of 10 m² and comply with all other requirements noted in Standard Components - Bathroom.

Note: These Guidelines do not imply endorsement of Water Birthing as a safe or appropriate operational model.

NURSERY AREA:

A Level 1 nursery (General Care) could be provided as a supplementary area to the maternity inpatient area, under a level 3 or 4 Obstetrics Unit. The general care nursery will provide for the general care of healthy babies, such as:

- Feeding the baby
- Bathing, changing and weighing the baby
- Allowing the baby to sleep during the day in blacked out conditions
- Provide education to staff and parents
- Phototherapy
- Short term care, including the provision of assisted ventilation, for babies who suffer from complications and while they are waiting to be transferred to a neonatal intensive care unit/facility.

The general nursery should allow for cot spaces to comply with Standard Components; the clear space between the cots should be at least 1 metre. The number of cots will depend on the rooming-in policy of the facility and/or the statistics on how many mothers prefer/are able to proceed with rooming-in.

A Level 2 nursery (Special Care) will provide similar care as a Level 1 but also cater for premature newborns who are ill or who are simply recovering. Due to their prematurity and/or low weight, they will be cared for in humidicribs and bassinettes.

SHARED SUPPORT AND STAFF AREA:

Like elsewhere in the facility, sharing space, equipment and staffing should be promoted, both within the unit and with other units. Within the unit sharing of staff stations, support and waiting areas should be possible between the different zones. Toilet facilities, prayer rooms and educational spaces could be shared with other units. Obviously, where spaces are shared, the size should be increased proportionally.

OPERATING ROOM/S AND SUPPORT FACILITIES

If provided within the Obstetric Unit, Operating Room and support rooms shall have:

- Operating Room to comply with Standard Components – Operating Room, General; provision should be made for twin baby resuscitation areas within the operating room
- Scrub-up/ Gowning Bay to comply with Standard Components Scrub-up/ Gowning, 6 m²
- Clean-up Room
- Two Patient Bed Bays for Recovery for each Operating Room, to comply with Standard Components Patient Bay, Recovery Stage 1.

The time taken to travel to the Operating Room from the Birthing area ideally should not exceed three minutes. An assessment of the distance between the Birthing area and the Operating Rooms should be done taking into consideration the average speed of travel and whether lifts are involved including any delays associated with lift travel.



28.2.3 *Functional Relationships*

EXTERNAL

The Obstetric Unit shall be located and designed to prohibit non-related traffic through the unit. When Birthing and Operating Rooms are in close proximity, access and service arrangements shall be such that neither staff nor patients need to travel through one area to reach the other.

It is highly desirable that, if an Intensive Care facility is to be provided for Obstetric use, it should be located as near as possible to the Obstetric Unit.

The unit should be in close proximity to:

- short term parking/drop off bay for dropping off expectant mothers
- hospital car parking and public transport access points
- flower delivery car parking bay
- ambulance transport parking bay
- helipad

INTERNAL

The entrance to the unit shall provide direct access to the reception area. Adjacent to reception, areas are required for waiting including families. From there, direct access to assessment/ consultation/ examination, nursery, inpatient and birthing areas shall be provided.

Direct access to a climate controlled internal garden or courtyard for mothers and their supporters would be beneficial. Refer to the attached Functional Relationship Diagram.

28.3 Design

28.3.1 *General*

The Obstetric Unit shall be located and designed to prohibit non-related traffic through the unit. When Birthing and Operating Rooms are in close proximity, access and service arrangements shall be such that neither staff nor patients need to travel through one area to reach the other. It is highly desirable that, if an Intensive Care facility is to be provided for Obstetric use, then it be located as near as possible to the Obstetric Unit.

28.3.2 *Environmental Considerations*

NATURAL LIGHT

Essential to all patient rooms (mothers and babies).

PRIVACY

Privacy is essential for both the assessment and birthing rooms. Avoid direct views into the room from the outside, both through the windows and through the door – i.e. do not provide viewing panels and a privacy curtain should be allowed for. Furthermore, the foot end of the bed should be facing away from the door or the access point.

ACOUSTICS

Within the nursery, sound absorption and insulation techniques should be applied to soften the noise created by crying babies and their support equipment. This however should not impede the quality of observation or ease of access between staff/support areas and the nursery.

Similar techniques should be applied to the birthing rooms, allowing mothers to give birth without disturbing other patients.

The unit in general should be isolated from disturbing sounds of traffic and sirens of ambulances, either through its strategic location or through applying sound absorption and



insulation techniques.

Refer to Part C of these Guidelines for more information.

28.3.3 *Space Standards and Components*

DOORS

Appropriately sized and located doors shall be provided for emergency bed transfer to the Birthing or Operating Units. Also refer to Part C of these Guidelines.

ERGONOMICS

Refer to Part C of these Guidelines for more information.

28.3.4 *Safety and Security*

The number of access points to the unit should be minimised. All entries should be under direct control of staff and while the daytime access is to be via the reception area, after hours access should give direct access to the birthing area. As a minimum, this entry point should be fitted out with video intercom and remote access hardware, allowing for 24 hours access for expectant mothers, support persons of patients in the In-patient area or parents of neonates.

All entry points should also be controlled through an Access Control System – a combination of reed switches, electric strike/magnetic locks and card readers. Card readers should be provided on both sides of these entry points and these only should be deactivated in case of an emergency.

To increase the safety of newborns even further, the use of electronic tagging should be promoted. This involves a combination of the infant wearing a tag around the ankle and sensor panels located at every access point to the unit (and perhaps the entire hospital).

All reception areas and staff stations to have duress alarm buttons in obscure but easily accessible locations.

Where lifting devices are used for the baths within the birthing rooms, special attention should be given to the storage and handling of this equipment.

To ensure the correct milk is provided to the right infant, breast milk storage freezers and fridges should be lockable or located within a lockable formula room with access restricted to staff only or to mothers under staff supervision.

28.3.5 *Finishes*

A homely, non-clinical ambience is preferred for the nursery and birthing rooms. Medical equipment and services should be easily accessible but concealed behind built in joinery or screens.

Colours should be chosen carefully to avoid an adverse impact on the skin colour of patients and neonates, particularly of jaundiced babies.

Refer to Part C of these Guidelines for more information on wall protection, floor finishes and ceiling finishes.

28.3.6 *Fixtures and Fittings*

Refer to Part C of these Guidelines, the Room Layout Sheets (RLS) and Room Data Sheets (RDS) for more information.



28.3.7 *Building Service Requirements*

LIGHTING

All High Dependency Care areas such as birthing suites (including bathroom/ ensuite), birthing/assessment rooms, nurseries and areas for the examination/resuscitation and bathing of babies are to have dimmable colour-corrected lighting.

HVAC

The birthing rooms and nurseries should be serviced by individual HVAC systems, allowing raising the temperature quickly to 25-27 degrees Celsius when a baby is born. The temperature control devices should be located within the room and should only be accessible to the staff.

COMMUNICATIONS

All new phone, data and staff/emergency call systems should be compatible with hospital wide systems already in use. Annunciator panels should be located in strategic points within the hospital circulation area and should be of the “non-scrolling” type, allowing all calls to be displayed at the same time. The audible signal of these call systems should be controllable to ensure minimal disturbance to patients at night.

28.3.8 *Infection Control*

Each birthing room should have a scrub basin. Each patient room should have a hand basin. Each pair of isolation rooms should have a hand basin outside.

Each nursery should have a hand basin at the point of entry, both for staff and parents. Within the nursery, minimum 1 hand basin should be provided per 6 cots and the distance between any point in the nursery to the closest basin should not exceed 6 metres.

The placenta is to be treated as contaminated waste and should be disposed of according to the correct waste management policy. Disposal using placental macerators is not appropriate and should be avoided. Freezer storage should be provided within the unit to allow for collection by the family, for cultural reasons.

28.4 Components of the Unit

28.4.1 *General*

The Obstetric Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

28.4.2 *Non Standard Components*

BATHING / EXAMINATION ROOM

Description and Function

This room is primarily used to teach parents baby bathing techniques and to examine the infant. Provide purpose-built baby baths for occupational health and safety reasons. Portable baths or bassinets may be used for demonstration purposes, generally within the patient room.

Location and Relationships

The Bathing/ Examination room may be provided as part of a nursery or a maternity inpatient unit.



Considerations

The room will require:

- Bench with inbuilt baby bath; consideration should be given to the bench height and the mounting of baby baths to ensure ease of access for staff and mothers
- Warm water supply to baby baths and sinks; controlled temperature range
- Overhead heating to baby bathing area (in addition to airconditioning to prevent babies becoming cold)
- Storage space for baby linen
- Baby scales and measuring equipment
- Lighting level in the baby bathing examination should permit the examination of baby skin tones



28.5 Schedule of Accommodation

28.5.1 *Obstetrics Unit Generic Schedule of Accommodation*

Schedule of Accommodation for an Obstetrics Unit for Level 3-6

BIRTHING UNIT

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ENTRY/RECEPTION AREAS							
RECEPTION	yes			1 x 10	1 x 12	1 x 12	
PUBLIC WAITING	yes		1 x 30	1 x 30	1 x 40	1 x 60	
WAITING - FAMILY	yes		1 x 15	1 x 15	1 x 30	1 x 50	
PLAY AREA - PAEDIATRIC	yes		1 x 2	1 x 2	1 x 4	1 x 8	Adjacent to family waiting
PUBLIC TOILET	yes		2 x 3	2 x 3	4 x 3	4 x 3	may be shared with other FPU
PUBLIC TOILET – ACCESSIBLE	yes		shared	shared	2 x 5	2 x 5	
BAY – WHEELCHAIR PARK	yes			1 x 4	1 x 6	1 x 8	

PATIENT & SUPPORT AREAS

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
			2 birthing	4 birthing	8 birthing	12 birthing	
EXAMINATION/ASSESSMENT (LDR BIRTHING ROOM)	yes			1 x 31	1 x 31	2 x 31	Includes store room; will act as back –up birthing room
BIRTHING ROOM (LDR)	yes		2 x 31	4 x 31	8 x 31	12 x 31	Includes store room; Qty per service plan
ENSUITE – BIRTHING ROOM	yes		1 x 7	3 x 7	5 x 7	8 x 7	
BATHROOM – BIRTHING ROOM	yes		1 x 10	2 x 10	4 x 10	6 x 10	if providing a bathroom, replace Ensuite
LOUNGE - PATIENT	yes			1 x 10	1 x 15	1 x 20	
STAFF STATION	yes		1 x 10	1 x 14	1 x 20	2 x 20	
OFFICE – CLINICAL HANDOVER	yes			1 x 12	1 x 12	2 x 12	
CLEAN UTILITY/MEDICATIONS	yes			1 x 12	1 x 12	2 x 12	
DIRTY UTILITY	yes			1 x 12	1 x 12	2 x 14	
DISPOSAL ROOM	yes		shared	1 x 8	1 x 8	2 x 8	
BAY – BLANKET WARMER	yes		1 x 1	1 x 1	2 x 1	2 x 1	
BAY – MOBILE EQUIPMENT	yes		1 x 4	1 x 4	2 x 4	2 x 4	
BAY – RESUSCITATION TROLLEY (ADULTS)	yes		1 x 2	1 x 2	2 x 2	2 x 2	
BAY - BEVERAGE – ENCLOSED	yes		shared	1 x 5	1 x 5	1 x 5	
CLEANER'S ROOM	yes		1 x 5	1 x 5	1 x 5	1 x 5	



ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STORE – GENERAL	yes similar		1 x 6	1 x 9	1 x 15	1 x 20	
STORE - EQUIPMENT	yes		1 x 10	1 x 14	1 x 20	1 x 25	

OPERATING ROOM (OPTIONAL)

For emergency C-Sections only. Each Operating Room will require the following:

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ANAESTHETIC INDUCTION ROOM	yes				1 x 15	1 x 15	Optional
CLEAN UP ROOM	yes				1 x 7	1 x 7	
OPERATING ROOM – GENERAL	yes				1 x 42	1 x 42	
SCRUB-UP/GOWNING	yes				1 x 8	1 x 8	
STERILE STOCK/SET UP	yes				1 x 12	1 x 12	
PATIENT BAY RECOVERY (STAGE -1)	yes				2 x 9	2 x 9	2 Patient bays
STAFF STATION	yes				1 x 9	1 x 9	
CLEAN UTILITY	yes				1 x 12	1 x 12	May be combined with staff station

SPECIAL CARE NURSERY

ROOM/ SPACE	Standard Component			Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STAFF STATION	yes			1 x 10	1 x 14	refer to NICU	
CLEAN UTILITY – SUB	yes			1 x 8	1 x 12		
BAY – MOBILE EQUIPMENT	yes			1 x 4	2 x 4		
CLEAN UP ROOM	yes			1 x 7	1 x 12		
DISPOSAL ROOM	yes			shared	1 x 8		
BAY – LINEN	yes			1 x 2	1 x 2		
BAY – HANDWASHING, TYPE B	yes			2 x 1	3 x 12		1 at entry; 1 per 4 cots min.
NEONATAL BAY – SPECIAL CARE	yes			4 x 10	8 x 10		
NEONATAL BAY – ICU RESUSCITATION	yes			1 x 14	1 x 14		
NEONATAL BAY - ISOLATION	yes similar				1 x 14		enclosed bay with basin
NEONATAL BAY – GENERAL CARE	yes			4 x 5	6 x 5		Qty will depend on service plan
STORE – EQUIPMENT	yes			1 x 6	1 x 14		
BATHING EXAMINATION				1 x 10	1 x 10		For baby
FEEDING ROOM	yes			1 x 7	2 x 7	refer to NICU	
FORMULA PREPARATION ROOM	yes			1 x 10	1 x 10		



Notes:

Level 3 consists of 4 cot bays (typical). Quantity of cot bays will be determined by service plan

Level 4 consists of 8 cot bays (typical). Quantity of cot bays will be determined by service plan

Level 5 & 6; refer to NICU (Neo-natal ICU)

STAFF OFFICES & AMENITIES

ROOM/ SPACE	Standard Component			Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
OFFICE – SINGLE PERSON	yes			1 x 12	1 x 12	1 x 12	Unit Manager
OFFICE – SINGLE PERSON	yes			1 x 9	2 x 9	3 x 9	Nurse educators, nurse specialists/ clinicians
OFFICE – 2 PERSON SHARED	yes				1 x 12	1 x 12	Medical/Nursing write up
STAFF CHANGE – MALE/FEMALE	yes			2 x 14	2 x 20	2 x 20	Separate Male/female areas includes toilets/shower/lockers
STAFF TOILET	yes			2 x 3 optional	2 x 3	2 x 3	in addition to toilets in change rooms
MEETING ROOM – MEDIUM/LARGE	yes			2 x 15	2 x 10	2 x 25	Qty to depend on service plan
STAFF ROOM	yes			1 x 20	1 x 30	1 x 50	
OVERNIGHT STAY	yes			1 x 10	1 x 10	1 x 10	Optional
OVERNIGHT STAY- ENSUITE	yes			1 x 4	1 x 4	1 x 4	Optional

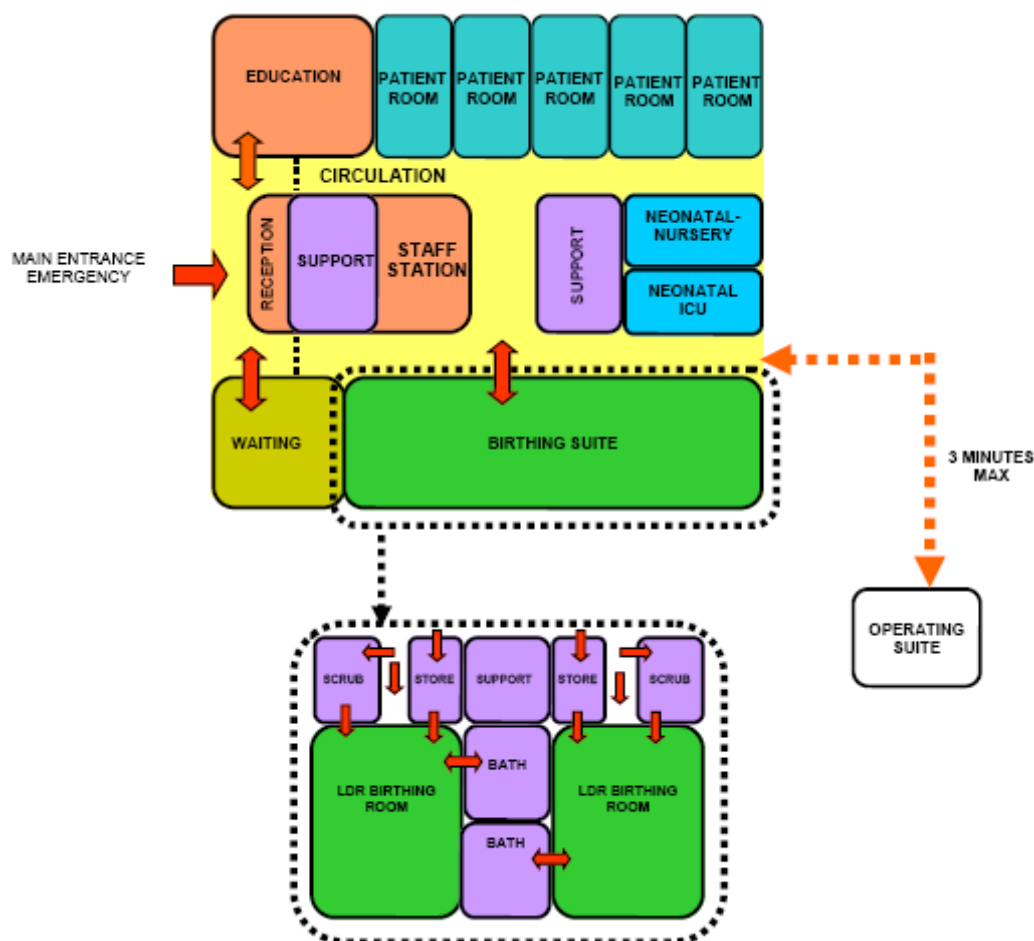
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



28.6 Functional Relationship Diagram

28.6.1 Obstetrics Unit Functional Relationship Diagram



28.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



29.0 Operating Unit

29.1 Introduction

29.1.1 *Description*

The Operating Unit provides a safe and controlled environment for the operative care of patients undergoing diagnostic/ surgical procedures under anaesthesia and peri-operative care including post procedure recovery.

29.2 Planning

29.2.1 *Operational Models*

Operation models include the following options:

INTEGRATED AMBULATORY CARE MODEL

This is a dedicated unit where patients access surgical and/or medical procedures and other complementary services on a planned day-only basis.

PERI-OPERATIVE MODEL

In this model patients have planned surgery and are admitted as a day-only or day-of-surgery admission in a dedicated facility. Surgery and 1st stage recovery is undertaken in the Operating Unit. Day-only cases are then transferred back to the facility for pre-discharge care. Day-of-surgery admissions may be transferred to an inpatient unit following recovery.

SHORT STAY SURGERY MODEL

This is a dedicated unit where patients have planned surgery as a day-only or overnight admission; patients are transferred to the Operating Unit for surgery and 1st stage recovery, and then returned to the facility. Post-operative stay is usually less than 48 hours.

SPECIALIST SURGEY MODEL

This model provides for a single specialty or compatible specialties such as ophthalmology, plastic surgery or urology. Patients are admitted and discharged on a day-only basis.

29.2.2 *Planning Models*

The Operating Unit shall be located and arranged to prevent non-related traffic through the suite.

The number of Operating Rooms and Recovery beds and the sizes of the service areas shall be based on the service plan and expected surgical workload. The size, location, and configuration of the surgical suite and support service departments shall reflect the projected case load and service plan of the Unit.

A number of planning models may be adopted including:

SINGLE CORRIDOR

The single corridor model involves travel of all supplies (clean and used) as well as patients (pre and post operative) in one main corridor. There is ongoing debate as to the suitability of this approach. However, this option is considered suitable provided:

- the main corridor is sufficiently wide in order to permit separation of passage of goods and services;
- handling of clean supplies and waste is carefully managed to avoid cross contamination

A major disadvantage of this planning model is that a patient awaiting surgery may be exposed to post operative patients



DUAL CORRIDOR or RACE TRACK

The Dual Corridor or 'Race Track' model allows for all the Operating rooms to be accessed from an external corridor for patients and directly from a central Set Up/Sterile Stock Room for sterile goods. This model aims to separate 'dirty' from 'clean' traffic by controlling the uses of each corridor.

In this design, there must not be cross traffic of staff and supplies from the decontaminated/soiled areas to the sterile/ clean areas.

In this model, stock and staff can be concentrated in one location, preventing duplication of equipment stock and staff.

CLUSTERS OF OPERATING ROOMS

In this model Operating Rooms may be clustered according to specialty, with a shared Sterile Stock and Set-Up Room for each group or cluster.

Disadvantages of this model include:

- additional corridor and circulation space required for corridors around clusters of rooms, which reduces the available space for stock;
- potential duplication of stock and additional staff requirements may result in increased operating costs

DEDICATED THEATRES WITH FIXED OR MOBILE EQUIPMENT

In this model Operating rooms are dedicated to specific types of surgery such as hybrid operating/ imaging rooms, urology, vascular, neurology or other specialties requiring specific equipment. This may be beneficial in larger suites where the case volume justifies specialisation, however, smaller suites may favour flexibility of Operating Room use. Fixed equipment can preclude the multifunctional use of the room.

TSSU/ CSSU

The Operating Unit is a major user of sterile stock and the location of the instrument processing area and sterile stock is of high importance.

There are two main options available for supply of sterile stock to the Operating Unit:

- a dedicated TSSU (Theatre Sterile Supply Unit) serving only the Operating Unit
- a CSSU (Central Sterile Supply Unit) that also serves other areas of the hospital.

The TSSU may be located within the Operating Suite or externally. It is preferable to locate the TSSU adjacent with direct access to the Operating Suite. The TSSU may also be located on another floor of the building connected by dedicated clean and used goods lifts.

The CSSU may be located in a service zone of the hospital. There is a strong functional link between the CSSU and the Operating Unit; efficient transport of stock to and from each unit will require careful planning.

29.2.3 *Functional Areas*

The Operating Unit consists of the following functional areas:

- Admissions and Reception Area for receipt and admission of patients to the Unit, with general overseeing of day to day operations, control of entry and exit from the Unit and completion of general administrative tasks
- Holding areas for holding and management of patients prior to their operation or procedure
- Operating Rooms area where procedures are carried out
- Support Areas including storage and management of stock and sterile supplies, disposal of waste and sterilisation of smaller items
- Recovery Areas where patients are assisted through the process of recovering from the effects of anaesthetic
- Administrative and Staff Areas including Change Rooms, Staff Room, Offices and administrative space for clinical staff.



DENTAL SURGERY

In addition to the standard operating room equipment and services (refer to Standard Component Operating Room), items considered essential for dental procedures are as follows:

- One compressed dental air outlet situated close to the service panels for medical gases, suction and electrical outlets, with the provision of a regulated bottle of appropriate compressed air as emergency backup or secondary use
- Facilities for dental X-ray.

LABORATORY AREAS

Depending on the service plan and unit policy, an area for preparation and examination of frozen sections may be provided. This may be part of the general Pathology Laboratory if immediate results are obtainable without unnecessary delay in the completion of surgery.

STAFF AMENITIES

Appropriate Change Rooms, toilet and showers shall be provided for male and female personnel (nurse, doctors and technicians) working within the Operating Unit. The Change Rooms shall contain adequate lockers, showers, toilets, handbasins and space for donning surgical attire and booting. Staff Change Rooms shall be arranged to encourage a one-way traffic pattern so that personnel entering from outside the surgical suite can change and move directly into the Operating Unit.

Alternatively, the entrance to the Change Rooms may be planned in direct view of a Staff Station at the entrance to the Operating Unit. The Change Room entrance door shall be provided with locks or electronic access devices to prevent the entry of unauthorised persons into the Operating Unit.

Notes:

- It is desirable but not mandatory to increase the number of facilities for female change rooms by approximately 30%
- In male change rooms 50% of toilets may be replaced with urinals
- Warm air hand dryers shall be avoided

FLASH STERILISING FACILITIES

A Flash Steriliser should be located in the unit, however, the use of this method of sterilising should be restricted to situations where a single instrument has been dropped and there is no sterile duplicate available. Flash sterilising is not suitable for processing of cannulated, complex instruments, suction and other tubing, textiles, paper or liquids.

STORAGE

Adequate Equipment Store room/s for equipment and supplies used in the Operating Unit shall be provided. Equipment Stores shall be provided at the minimum rate of 10 m² per Operating Room.

Note:

- Store Rooms do not necessarily require doors.
- Store Rooms are best designed in an elongated rectangular shape to allow easy access to all items.
- The design of the Operating Unit should allow for ease of access to the storage areas for delivery of Operating Unit consumables. Controlled access from an external corridor is highly desirable.

Mobile Equipment Bays shall be provided for equipment such as portable X-ray equipment, stretchers, trolleys, warming devices and mobile equipment. Mobile Equipment Bays shall comply with Standard Components and be provided at the minimum quantity of one per operating room. Equipment Bays are best designed as elongated rectangular shapes and may be combined for space efficiency.



BIOMEDICAL STORE/ WORKSHOP

An area for testing operating equipment may be included in the Operating Unit. This room may be collocated with a General Store, or a dedicated room for this purpose may be necessary. A direct corridor access to this room is recommended, with controlled access to the remainder of the Operating Unit

29.2.4 *Functional Relationships*

The Operating Unit requires close relationships with the following areas, particularly for urgent cases:

- Emergency Unit
- Intensive Care Units
- Obstetric Unit
- Helipad

Links between these Units and the Operating Unit should be rapid, direct and discreet; transit of severely ill patients to and from the Unit through public corridors should be avoided.

The Operating Unit has a direct operation link with the following Units:

- Peri-operative Unit/ Day Surgery
- TSSU/ CSSU

Other Units that have a close relationship include:

- Pathology;
- Imaging
- Obstetric/ Birthing Unit for Caesarean Section procedures

29.3 Design

29.3.1 *Environmental Considerations*

NATURAL LIGHT

The need for an external view from the Operating Room is an important consideration.

Provision of windows need to consider the following:

- vision from the Operating Room could be through a corridor, set up area or directly to the external environment
- many procedures require black-out
- there are heating, cooling and shading implications for windows in the Unit located on the outside of the building that may have an impact on the recurrent costs for maintenance and cleaning
- viewing windows from a corridor to the Operating Room can be useful for supervision and training purposes
- windows to Recovery, Staff Lounge and TSSU areas where staff spend a majority of their time, should be given a high priority.

29.3.2 *Finishes*

Operating Units shall have the following finishes:

- floors that are smooth, non-slip impervious material laid in a continuous washable material and graded where necessary to fall to floor waste; floor material that resists staining is recommended
- wall finishes which are seamless, impervious and washable
- ceilings which are smooth and impervious
- intersections of walls and architraves to be rendered watertight junctions.

In all areas where patient observation is critical such as Operating Room/s, Anaesthetic Room/s, Recovery Area/Room, Holding Area/Room, colours shall be chosen that do not alter the observer's perception of skin colour.



29.3.3 Infection Control

Infection control issues are paramount in the Operating Unit and require careful attention to planning models and separation of clean and dirty workflows. Refer to Part D Infection Control in these Guidelines for additional information.

29.3.4 Safety and Security

Access control is required to the patient and staff entry areas of the Operating Unit. Limiting the number of entries and locating the Reception area with direct overview of entry areas is highly desirable.

29.3.5 Building Services Requirements

MEDICAL GASES

Main storage of medical gases must be outside the facility and reticulated internally to gas outlets. Provision shall be made for additional separate storage of reserve gas cylinders necessary to complete at least one day's procedures.

29.4 Components of the Unit

The Operating Unit will consist of a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

29.4.1 Non Standard Components

PERFUSION ROOM

Description and Function

The Perfusion Room is for the preparation of perfusion equipment, and where set-up for cardiac procedures is undertaken.

Location and Relationships

The room will be located in close proximity to the Cardiac Operating Room/s and adjacent to a Perfusion Store.

Considerations

Room requirements may include:

- Heavy duty shelving for storage of perfusion fluids and equipment
- Computer workstation for a perfusion technician including power and data outlets
- Handwashing basin Type B with paper towel and soap fittings
- Bench, sink and cupboard unit for servicing of the perfusion machine



29.5 Schedule of Accommodation

29.5.1 *Operating Unit Generic Schedule of Accommodation* Schedule of Accommodation for an Operating Unit for Level 2-6

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
ADMISSIONS/RECEPTION AREA			1OR	2 ORs	4 ORs	12 ORs	
RECEPTION/CLERICAL	yes		1 x 9	1 x 12	1 x 12	1 x 15	May include space for porter
WAITING	yes		1 x 20	1 x 20	1 x 20	1 x 50	
MEETING ROOM				1 x 9	1 x 9	1 x 12	
PRE-OPERATIVE HOLDING AREA							
PATIENT BAY – HOLDING	yes		2 x 8	2 x 8	4 x 8	4 x 8	
OFFICE – WRITE UP BAY	yes			1 x 6	1 x 6	1 x 6	Staff work area based on 3m2 per person
STAFF STATION	yes					1 x 6	Reception area can be used levels 2-4
BAY – HANDWASHING	yes		1 x 1	1 x 1	1 x 1	1 x 1	Handicap accessible
BAY – LINEN	yes				1 x 2	1 x 4	1 per 16 spaces
BAY – BLANKET WARMER	yes				1 x 1	2 x 1	
CLEAN UTILITY	yes		1 x 6	1 x 6	1 x 8	1 x 8	For level 2-3 clean utility could be collocated with staff station
DIRTY UTILITY	yes				1 x 8	1 x 8	
OPERATING ROOMS AREA							
ANAESTHETIC INDUCTION	yes		1 x 15	2 x 15	4 x 15	10 x 15	1 per theatre
ANAESTHETIC INDUCTION – LARGE	yes similar					2 x 18	Optional
OPERATING ROOM – GENERAL	yes		1 x 42	2 x 42	4 x 42	6 x 42	
OPERATING ROOM - LARGE	yes					6 x 58 optional	Provide according to service demand
OPERATING ROOM – HYBRID X RAY	yes					1 x 42 optional	Provide according to service demand
OPERATING ROOM – HYBRID CATHETER LAB	yes					1 x 50 optional	Provide according to service demand
OPERATING ROOM – DIGITAL	yes					1 x 55 optional	Provide according to service demand
OPERATING ROOM – HYBRID C.T	yes					1 x 70 optional	Provide according to service demand
OPERATING ROOM VASCULAR/CARDIAC/IMAGING	yes					1 x 65 optional	Provide according to service demand
SCRUB-UP	yes		1 x 8	2 x 8	4 x 8	12 x 8	1 per theatre or larger bay shared between 2 theatres
EXIT BAY			1 x 8	2 x 8	4 x 8	12 x 8	1 per theatre
O.R SUPPORT AREA							
CLEAN UP	yes		1 x 15	1 x 15	2 x 15	6 x 15	1 per 2 theatres
FLASH STERILISING	yes		1 x 2	1 x 2	1 x 2	1 x 2	



ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
STORE – NON STERILE/DEBOXING	yes similar			1 x 20	1 x 30	1 x 40	based on 10-12 m2 per OR
STORE – STERILE STOCK	yes		1 x 12	1 x 24	1 x 44	1 x 120	
OPERATING ROOMS AREA			10R	2 ORs	4 ORs	12 ORs	
BAY – MOBILE EQUIPMENT	yes		1 x 3	1 x 3	2 x 3	12 x 3	1 per theatre; may be collocated
SET UP	yes			1 x 8 optional	2 x 8 optional	6 x 8 optional	Depends on Operational policy of the unit
STORE – MAJOR EQUIPEMENT	yes similar		1 x 30	1 x 30	1 x 40	1 x 75	
STORE – MINOR EQUIPMENT	yes similar			1 x 10	1 x 25	1 x 60	
ANAESTHETIC WORKROOM & BIOMEDICAL EQUIPMENT	yes			1 x 10	1 x 15	1 x 20	
ANAESTHETIC STORE	yes			1 x 15	1 x 20	1 x 35	
PERFUSION ROOM						1 x 20 optional	
STORE – PERFUSION	yes similar						
BAY – LINEN	yes		1 x 2	1 x 2	2 x 2	2 x 2	
BAY – FLUID/BLANKET WARMER	yes		1 x 2	1 x 2	2 x 2	2 x 2	
AUDIOVISUAL WORKROOM	yes similar					1 x 12	
CLEANER'S ROOM	yes		1 x 5	1 x 5	2 x 2	2 x 2	Provide 1 per 8 theatres
DISPOSAL	yes similar		1 x 10	1 x 10	1 x 10	2 x 10	
BLOOD STORAGE	yes		1 x 2	1 x 2	1 x 2	2 x 2	
BAY – PATHOLOGY	yes			1 x 9 optional	1 x 9 optional	1 x 9	
OFFICE – WRITEUP BAY	yes		1 x 6	1 x 6	2 x 6	2 x 6	

RECOVERY AREAS (STAGE 1)

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
			10R	2 ORs	4 ORs	12 ORs	
PATIENT BAY – RECOVERY	yes		2 x 9	4 x 9	8 x 9	24 x 9	2 bays per theatre
STAFF STATION – RECOVERY	yes		1 x 9 optional	2 x 9	2 x 12	2 x 20	
CLEAN UTILITY	yes similar		1 x 10	1 x 12	2 x 12	2 x 14	Direct access to recovery area
DIRTY UTILITY	yes similar		1 x 8	1 x 10	2 x 8	2 x 10	Direct access to recovery area
BAY – LINEN	yes		1 x 2	1 x 2	1 x 2	2 x 2	1 per 16 recovery bays
BAY – BLANKET/FLUID WARMER	yes		1 x 2	1 x 2	1 x 2	2 x 2	1 per 16 recovery bays
STORE – GENERAL	yes			2 x 6	2 x 6	2 x 10	
BAY RESUSCITATION TROLLEY	yes		1 x 1	2 x 1	2 x 1	2 x 1	
BAY - HANDWASHING	yes		1 x 1	1 x 1	2 x 1	4 x 1	



STAFF AREAS

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
MEETING ROOM – SMALL	yes					1 x 9	
STAFF CHANGE – MALE/FEMALE	yes		2 x 20	2 x 25	2 x 35	2 x 120	Includes showers & toilets separate male/female areas
STAFF TOILET	yes					2 x 3	addition to toilets in Staff change
DISCOUNTED CIRCULATION			35%	35%	40%	45%	
CLINICAL SUPPORT AREA							
OFFICE – SINGLE PERSON	yes		1 x 9	1 x 9	1 x 9	2 x 9	Clinical Nurse consultant
OFFICE – SINGLE PERSON 12M2	yes				1 x 12	2 x 12	Nurse manager
OFFICE – SINGLE PERSON	yes		1 x 9	1 x 9	3 x 9	3 x 9	Surgeon, anaesthetist nurse educator
OFFICE – 2 PERSON SHARED	yes				1 x 12	2 x 12 optional	
OFFICE – 3 PERSON SHARED	yes				1 x 15	2 x 15 optional	
MEETING ROOM – 12M2	yes			1 x 12 optional	1 x 12 optional	1 x 12 optional	According to staffing establishment
MEETING ROOM – MEDIUM/LARGE	yes				1 x 15	2 x 30	

PERIOPERATIVE AREA

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
ADMISSION RECEPTION AREAS							
RECEPTION/CLERICAL	yes		1 x 9	1 x 9	1 x 9	1 x 12	May be shared with theatre reception
CLERICAL SUPPORT/MEDICAL RECORDS	yes similar		1 x 9	1 x 9	1 x 9	1 x 12	may be shared at Operating unit/ambulatory care unit
PUBLIC WAITING	yes		1 x 20	1 x 50	1 x 50	1 x 100	
PUBLIC WAITING - FAMILY	yes		1 x 6	1 x 10	1 x 25	1 x 50	Lounge area for relatives of patients
PUBLIC TOILET	yes		2 x 3	2 x 3	4 x 3	4 x 3	
PUBLIC TOILET – ACCESSIBLE	yes		1 x 5	1 x 5	2 x 5	2 x 5	
WAITING – WARDSPERSON	yes similar			1 x 6	1 x 6	1 x 9	
PRE-OPERATIVE AREA							
PATIENT CHANGE CUBICLE	yes		2 x 2	4 x 2	6 x 2	8 x 2	
PATIENT CHANGE CUBICLE ACCESSIBLE	yes		1 x 4	1 x 4	2 x 4	2 x 4	
WAITING – CHANGED PATIENT	yes		1 x 20	1 x 20	1 x 50	1 x 50	
1 BED ROOM – ISOLATION	yes		1 x 18	1 x 18	2 x 18	2 x 18	
BAY – RESUSCITATION TROLLEY	yes		1 x 2	1 x 2	2 x 2	2 x 2	
CONSULT ROOM	yes		2 x 12	2 x 12	3 x 12	4 x 12	



ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
ENSUITE – ISOLATION ROOM	yes		1 x 5	1 x 5	2 x 5	2 x 5	
ANTEROOM	yes		1 x 6	1 x 6	2 x 6	2 x 6	
PATIENT BAY – HOLDING			2 x 8	4 x 8	8 x 8	12 x 8	Allow 2 bays per OR.
PATIENT PROPERTY BAY	yes		1 x 4	1 x 4	1 x 8	1 x 8	
BAY – HANDWASHING	yes		1 x 1	1 x 1	2 x 2	3 x 2	
SHOWER – PATIENT	yes		2 x 3	2 x 3	4 x 3	4 x 3	
TOILET – PATIENT	yes		2 x 3	2 x 3	4 x 3	4 x 3	
TOILET – PATIENT ACCESSIBLE	yes		1 x 5	1 x 5	2 x 5	2 x 5	
CLEAN UTILITY/MEDICATION	yes		1 x 10	1 x 10	1 x 12	1 x 12	
POST OPERATIVE AREA							
PATIENT BAY – RECOVERY (STAGE 2)	yes		2 x 9	4 x 9	8 x 9	12 x 9	
LOUNGE – RECOVERY (STAGE 3)	yes		1 x 20	1 x 30	1 x 60	1 x 180	Allow for 3 lounge chairs per OR at 5m2 per chair
STAFF STATION – RECOVERY	yes		1 x 9	1 x 9	1 x 12	1 x 16	
CLEAN UTILITY	yes		1 x 10	1 x 10	1 x 12	1 x 14	
DIRTY UTILITY	yes		1 x 10	1 x 12	1 x 14	1 x 14	May be shared
DISPOSAL ROOM	yes		1 x 8	1 x 8	1 x 10	1 x 10	May be shared
BAY – LINEN	yes		1 x 2	1 x 4	1 x 4	1 x 8	
BAY – BLANKET/FLUID WARMER	yes		1 x 2	1 x 4	1 x 4	1 x 8	
STORE – GENERAL	yes		1 x 6	1 x 8	1 x 10	1 x 20	
BAY – RESUSCITATION TROLLEY	yes		1 x 1	1 x 1	2 x 1	2 x 1	
BAY – HANDWASHING	yes		1 x 1	1 x 1	2 x 1	2 x 1	
MEETING ROOM – 9M2	yes			1 x 9	1 x 9	2 x 9	

STAFF AREAS

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
BAY - BEVERAGE	yes		1 x 3	1 x 3	1 x 6	1 x 6	
BAY - STAFF PROPERTY	yes		1 x 6	1 x 6	1 x 12	1 x 12	
BAY – PATHOLOGY	yes		1 x 5	1 x 5	2 x 5	2 x 5	
CLEANER'S ROOM	yes		1 x 5	1 x 5	2 x 5	2 x 5	
OFFICE – CLINICAL HANDOVER	yes		1 x 9	1 x 9	2 x 9	2 x 9	
OFFICE – SINGLE PERSON	yes		1 x 9	1 x 9	2 x 9	2 x 9	
STORE – GENERAL/EQUIPMENT	yes		1 x 12	1 x 14	1 x 14	1 x 20	



PRE-ADMISSION CLINIC

ROOM/ SPACE	Standard Component		Level 2 Qty x m2	Level 3 Qty x m2	Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
CONSULT ROOM	yes		2 x 12	2 x 12	3 x 12	4 x 12	
CLINICAL MEASUREMENT						1 x 12	May be provided in Consult room
OFFICE – SINGLE PERSON	yes		1 x 9	1 x 9	2 x 9	2 x 9	

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

29.6 Functional Relationship Diagram

29.6.1 Operating Unit Functional Relationship Diagrams

The relationships between the various components within an Operating Unit are best described by functional relationships diagrams. The requirements for infection control and patient management result in a number of planning 'models' that have proved successful through numerous built examples and many years of practice. Most Operating Unit plans are a variation of one of these 'models'.

A plan substantially based on one of these diagrams is 'deemed to satisfy' the requirements of these Guidelines. A plan that is significantly different to these diagrams should be carefully examined against all the individual requirements of these Guidelines, especially those of Infection Control to determine if it is acceptable.

In reviewing and using the enclosed Operating Unit flow diagrams, designers should carefully consider a number of issues:

- Each flow diagram represents a method of managing the patient access, clean/dirty flow, air pressurisation, sterilisation of dropped instruments etc.
- The diagrams are different but each addresses the issues involved in a satisfactory manner. Each option may suit a different management mode or building configuration.
- Designers are strongly cautioned against creating hybrid options by combining features of various diagrams. This may result in wrong clean/ dirty flows or other unacceptable features. If in doubt, designers should seek advice from specialist Operating Room consultants and Infection Control nurses.

The functional relationship diagrams in Enclosures 1 and 2 show base linear models. The models can be stretched to create the number of Operating Rooms desired. The support facilities required also grow with the number of Operating Rooms.

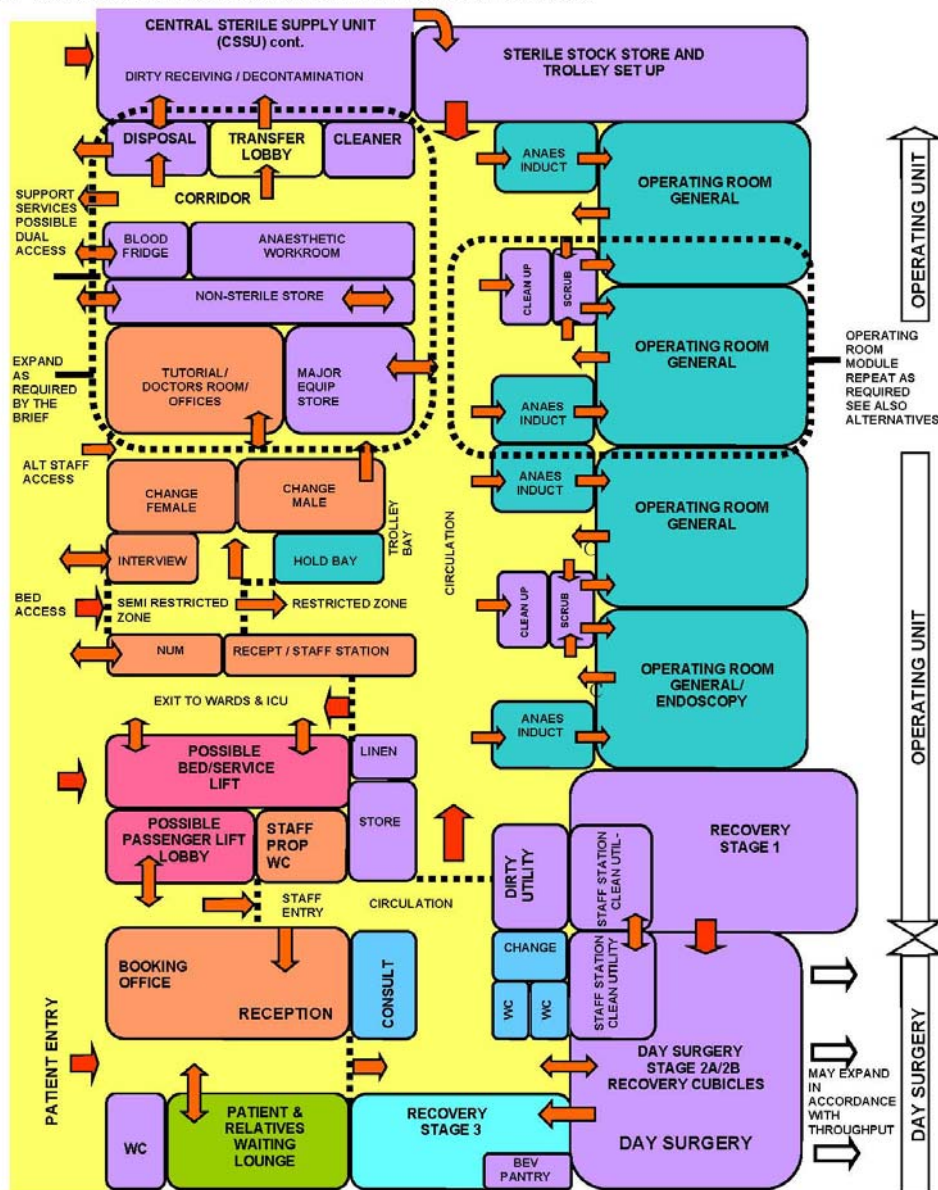
Each module includes the configuration of:

- Operating Rooms
- Anaesthetic Induction Rooms
- Scrub Bays or Rooms
- Sterile Stock Store / Set-up Room
- Clean-up Room
- Flash Sterilising Bay



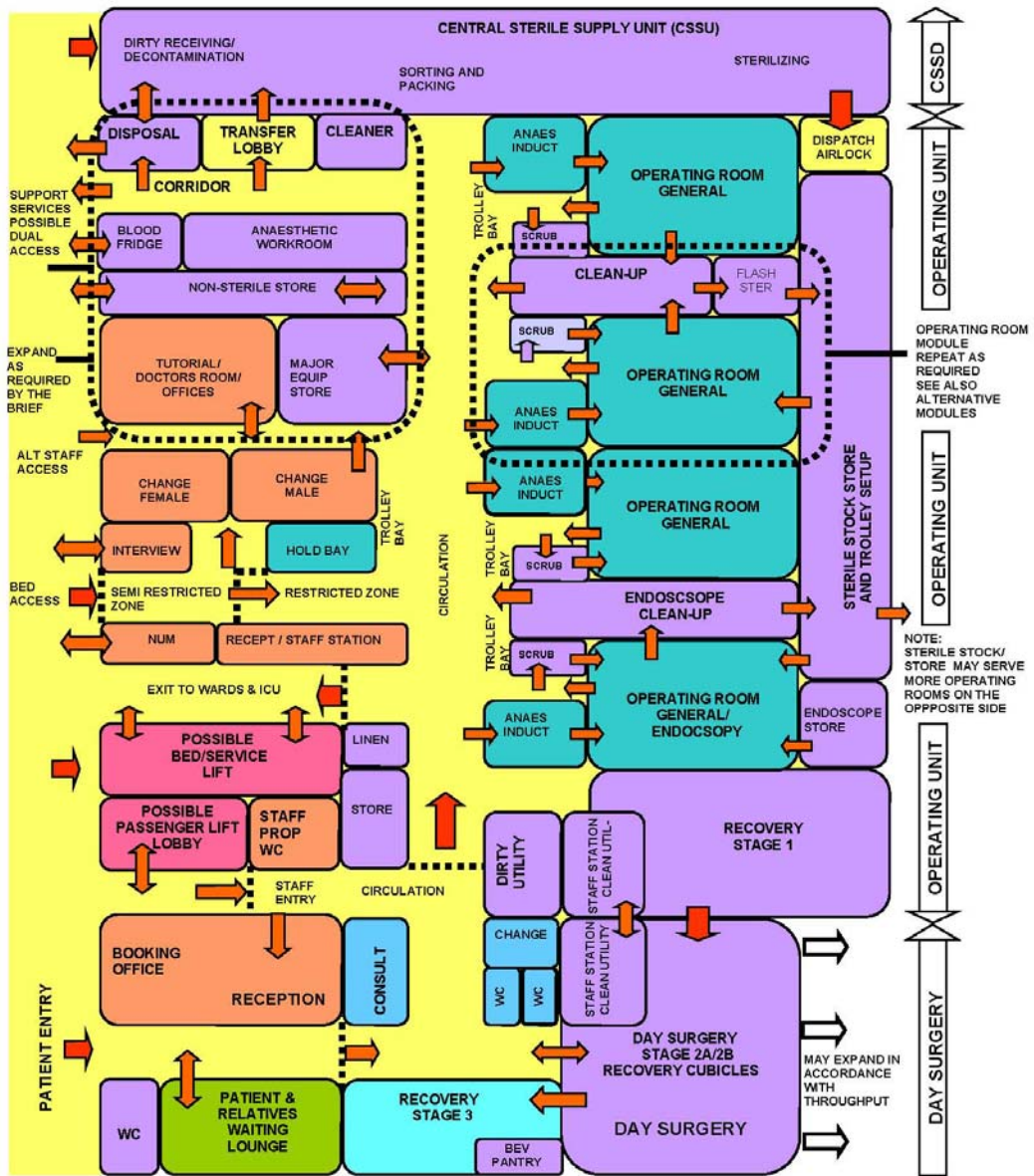
ENCLOSURE 1: SINGLE CORRIDOR MODEL

- NOTE 1 ONLY THE MOST IMPORTANT FUNCTIONS ARE SHOWN FOR CLARITY
 NOTE 2 CSSU MAY BE CONNECTED TO OPERATING SUITE VIA CLEAN/DIRTY HOISTS
 NOTE 3 IF STERILE STOCK IS REMOTE FROM OPERATING ROOM, A CASE CART SYSTEM SHOULD BE USED
 NOTE 4 ANAESTHETIC INDUCTION ROOM IS OPTIONAL AND MAY BE CONSIDERED A HOLDING ROOM



ENCLOSURE 2: DUAL CORRIDOR MODEL

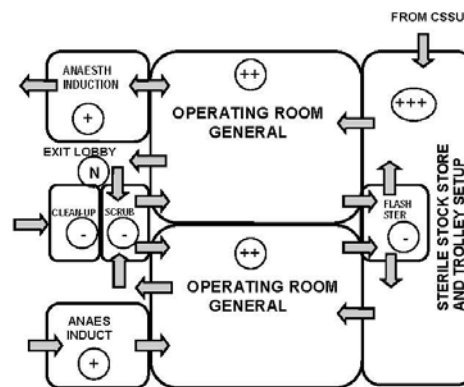
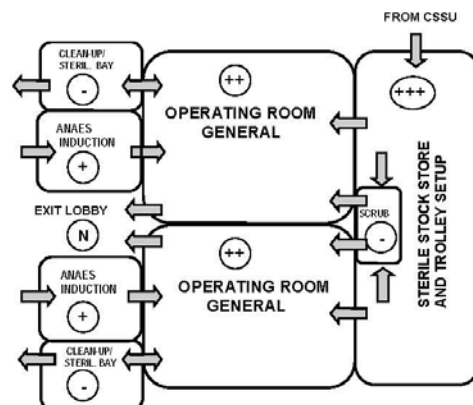
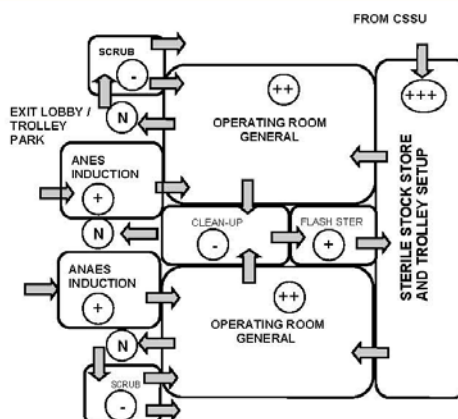
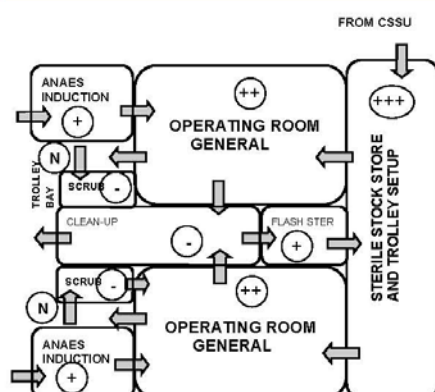
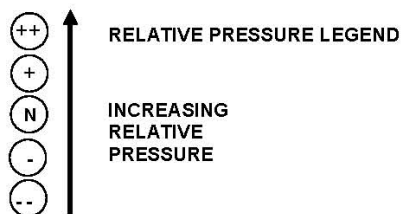
NOTE 1 ONLY THE MOST IMPORTANT FUNCTIONS ARE SHOWN FOR CLARITY
NOTE 2 CSSU MAY BE CONNECTED TO OPERATING SUITE VIA CLEAN/DIRTY HOISTS
NOTE 3 OPERATING ROOM MODULE MAY BE MIRRORED AGAINST STERILE STOCK STORE TO DOUBLE THE NUMBER OF OPERATING ROOMS
NOTE 4 ANAESTHETIC INDUCTION ROOM IS OPTIONAL AND MAY BE CONSIDERED A HOLDING ROOM



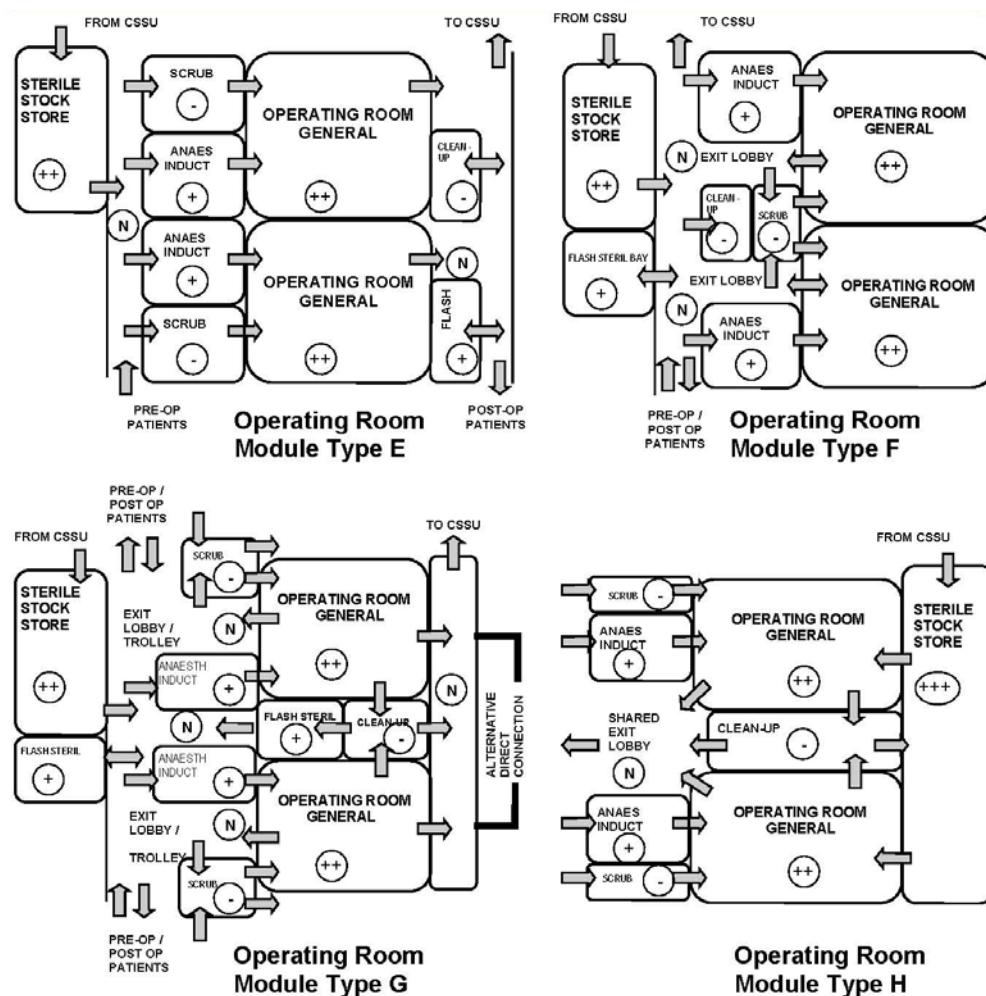
ENCLOSURE 3: OPERATING ROOM MODULES A, B, C & D WITH AIR PRESSURISATION

Legend:

- NOTE 1 ONLY THE MOST IMPORTANT FUNCTIONS ARE SHOWN FOR CLARITY
 NOTE 2 CSSU MAY BE CONNECTED TO OPERATING SUITE VIA CLEAN/DIRTY HOISTS
 NOTE 3 OPERATING ROOM MODULE MAY BE MIRRORED AGAINST STERILE STOCK STORE TO DOUBLE THE NUMBER OF OPERATING ROOMS
 NOTE 4 ANAESTHETIC INDUCTION ROOM IS OPTIONAL AND MAY BE CONSIDERED A HOLDING ROOM
 NOTE 5 AIR PRESSURISATION IS NOTED ACCORDING TO THE FOLLOWING LEGEND:



ENCLOSURE 4: OPERATING ROOM MODULES E, F, G & H WITH AIR PRESSURISATION



29.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



30.0 Outpatients Unit

30.1 Introduction

30.1.1 Description

Outpatients Unit refers to health care services provided on a same-day basis.

The following services may be accommodated in the Outpatients Unit:

- Multidisciplinary and specialist consultation and treatment clinics for medical and surgical sub-specialties
- Day-only Surgery
- Day-only Medical services (eg. Oncology and Haematology, Renal Dialysis)
- Dental
- General Practitioner Clinics
- Maternal and Child Health services
- Medical Imaging Services (eg. radiology, ultrasound and CT)
- Mental Health services
- Occupational Health
- Ophthalmology including Eyecare Centre
- Pathology collection and Urgent Testing service
- Pharmacy
- Radiotherapy
- Rehabilitation Therapy/ Allied Health services
- Telehealth

It is possible to provide the above health care services in independent Community Health Centres co-located or away from the Main Hospital. The Outpatients Unit will often include other retail/ commercial services and other government/ non-government agencies.

30.2 Planning

30.2.1 Operational Models

Operational policies for each health care facility may affect the planning of an Outpatients Unit. These may include:

- The normal operating hours of the facility
- Medical records management
- The selection of Outpatients services provided within the facility
- Sharing support facilities between various FPU's

30.2.2 Planning Models

There are various options for locating an Outpatients Unit including:

- a stand-alone facility in a community location
- a unit integrated within a commercial development (eg. shopping malls)
- a unit as part of a larger Hospital Facility

The configuration of an Outpatients Unit is dependent on the following factors:

- the location of the Unit (eg. stand-alone or integrated within a larger facility)
- the population which the unit will serve
- the types of service mix
- the level of staffing required for the Unit

30.2.3 Functional Areas

CORE UNIT

The Outpatients Unit may consist of a large number of sub-units. It may range in form from a small stand-alone unit to a large multi-disciplinary facility.



The Core Unit described in this Guideline would be appropriate for a small multidisciplinary unit or the primary core of a larger Unit as required by adding other peripheral units to suit the service plan of the subject facility.

UNIT FUNCTIONAL ZONES

The Core Unit consists of the three following key functional areas:

- Reception/ Admission Area
- Patient Areas including waiting and treatment
- Staff Areas

Additional units may also be added to form part of the following FPU:

- Dental Unit
- Interventional Cardiology
- Medical Imaging Services (eg. general radiology, ultrasound and CT)
- Occupation Health
- Ophthalmology
- Operating Unit
- Pathology collection and urgent testing service
- Pharmacy
- Renal Dialysis Unit

30.2.4 *Functional Relationships*

EXTERNAL

The Outpatients Unit may have working relationships with many other Units depending on the location of the Unit – either a free-standing facility or part of a larger facility.

The proximity of the following areas shall be considered when designing:

- Car Park / Drop off Zone
- Day Procedures / Surgery.
- Emergency
- Main Entry
- Medical Imaging
- Outpatients
- Pharmacy
- Pathology
- Transit Lounge

Considering the above, the Outpatients Unit is commonly located on the ground level within a multi-storey hospital.

INTERNAL

The internal planning of the Outpatients Unit shall be planned by considering the functional areas mentioned above.

Some of the critical relationships to be considered are as below:

- Flexibility in accommodating various types of use throughout different hours in the day;
- Sections of the Unit can be secured when not in use;
- Reception and Admission Area – this area must allow patients to move conveniently to and from the treatment areas and accommodate high volume of patients, support staff, care-takers and mobility aids;
- Patient Treatment and Waiting Area – must promote efficiency from the staff perspective and a pleasant environment for all patient types from regular patients with chronic conditions to those who may only visit a few times.
- Staff Area – staff must be able to move easily to and from the Treatment Area, and to and from the Reception/ Admission Area; a quiet area with privacy for the staff where they can



work without interruptions from patients and their accompanying relatives is recommended.

It is crucial for the three functional areas to work effectively together to allow for an efficient, safe and pleasant environment in a smaller unit, or to create the core of a larger, more complex unit.

30.3 Design

30.3.1 *General*

Design needs to accommodate all types of patients using the Unit, many of whom may be acutely ill. Provision shall be made for wheelchairs, mobility aids, families with children and prams within the Unit.

30.3.2 *Environmental Considerations*

NATURAL LIGHT

Where possible, the use of natural light shall be maximised within the Unit. Sufficient level of natural lighting can provide a sense of wellbeing for both staff and patients and is more likely to lead to better service outcomes.

Provision of a pleasant outlook and access to natural light can reduce discomfort and stress for patients.

PRIVACY

Staff observation of patients and patient privacy must be well-balanced within the Unit.

The following features shall be integrated to the design of the Unit:

- Doors and windows to be located appropriately to guarantee patient privacy and not compromise staff security.
- confidentiality of patient discussions and patient record

ACOUSTICS

The following functions require careful consideration of acoustic privacy:

- noisy areas like Public Waiting shall be located further away from the treatment spaces and staff areas
- interview areas with clients where confidential information will be discussed
- discussion areas for staff where confidential patient information will be shared
- consultation/ treatment areas where disturbing noise is likely to happen shall be located in acoustically treated rooms

30.3.3 *Space Standards and Components*

ACCESSIBILITY - EXTERNAL

Patients who visit an Outpatients Unit are usually acutely ill requiring treatments. Thus, there shall be a weatherproof vehicle drop-off zone with easy access for less-mobile patients and wheelchair bound patients.

ERGONOMICS

Various functions will be performed at each treatment space. Thus, care shall be taken to provide optimal ergonomic functionality by considering all the possible configurations at each treatment space.

Refer also to Part C of these Guidelines.

30.3.4 *Safety and Security*



Equipment, furniture, fittings and the facility itself shall be designed and constructed to prevent injuries to all users where possible.

A high standard of safety and security can be achieved by careful configuration of spaces and zones:

- control access/ egress to and from the Unit
- optimise visual observation for staff
- similar functions shall be co-located for easy staff management

Access to public areas shall be considered with care so that the safety and security of staff areas within the Unit is not compromised.

Refer also to Part C of these Guidelines.

30.3.5 Finishes

Floor and ceiling finishes shall be selected to suit the function of the space and promote a pleasant environment for patients, visitors and staff.

The following factors shall be considered:

- aesthetic appearance
- acoustic properties
- durability
- ease of cleaning
- infection control
- movement of equipment

Refer also to Part C and part D of these Guidelines.

30.3.6 Fixtures and Fittings

Refer to Part C of these Guidelines and Standard Components of individual rooms for information related to fixtures and fittings.

30.3.7 Building Service Requirements

It is vital to provide reliable and effective IT/ Communications service for efficient operation of the Unit. The following items relating to IT/ Communication shall be addressed in the design of the Unit:

- bar coding for supplies, x-rays and records
- data entry (eg. scripts and investigative requests)
- email
- hand-held computers
- PACS
- paging systems
- paperless patient records
- Patient Administration System (PAS)

Nurse Call and Emergency Call facilities shall be provided in all patient areas (eg. bed spaces, toilets and bathrooms) and clinical areas in order for patients and staff to request for urgent assistance. The individual call buttons shall alert to a central module situated at or adjacent to the Staff Station, Staff Room and Meeting Rooms within the Unit. The alert to staff members shall be done in a discreet manner at all times.

Provision of Duress Alarm System is required for the safety of staff members who may at times face threats imposed by clients/ visitors. Call buttons will be required at all reception/ staff station areas and consultation/ treatment areas where a staff may have to spend time with a client alone.

Refer also Part C of these Guidelines for further information.



INFECTION CONTROL

Infectious patients and immune-suppressed patients may be sharing the same treatment space at the different times of the same day. Standard precautions must be taken for all patients

Handwashing facilities for staff within the Unit must be readily available. Where a handwash basin is provided, there shall also be liquid soap and disposable paper towels provided.

For further details refer to PART D of these Guidelines.

30.4 Components of the Unit

30.4.1 *General*

The Outpatients Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

30.4.2 *Non Standard Components*

ENTRY CANOPY

Description and Function

If a direct and separate entry is provided to the Unit at street level, an Entry Canopy shall be provided. The canopy shall be sized appropriately to permit full protection of vehicles including cars, ambulances, taxis, and mini-vans from weather.

Location and Relationships

The Entry Canopy shall be located next to the Lobby/ Airlock if one is provided.

Considerations

Apart from weather protection, the heights and the design of structural support of the canopy shall permit easy manoeuvring of all vehicles entering this area.



30.5 Schedule of Accommodation

30.5.1 Outpatients Unit Generic Schedule of Accommodation

ENTRY / RECEPTION

ROOM / SPACE	Standard Component			8 Spaces Qty x m2	16 Spaces Qty x m2	24 Spaces Qty x m2	Remarks
ENTRY CANOPY				1 x 8 optional	1 x 8 optional	1 x 8 optional	
LOBBY / AIRLOCK	yes			1 x 4 optional	1 x 8 optional	1 x 12 optional	
RECEPTION / CLERICAL	yes			1 x 12	1 x 21	1 x 32	Based on 1.2m2 per person, 1.5m2 for wheelchairs. Modify to circumstances
CLERICAL SUPPORT / MEDICAL RECORDS	yes			1 x 9	1 x 12	1 x 12	2 Staff
WAITING AREA	yes			2 x 30	2 x 40	2 x 50	Generous waiting areas to accommodate patient overloads
WAITING AREA - FAMILY	yes				1 x 40	1 x 50	Shall include a Play Area Optional depending on service
TOILET – ACCESSIBLE	yes				2 x 5	2 x 5	Part of waiting space
TOILET – PUBLIC	yes			2 x 4	2 x 4	2 x 4	
PATIENT AREAS:							
1 BEDROOM (ISOLATION)	yes			2 x 18	2 x 18	2 x 18	Depending on service Demand. Optional
BAY – RESUSCITATION TROLLEY	yes				1 x 2	1 x 2	Or access to same
EXAM ROOM	yes			2 x 12	4 x 12	4 x 12	Qty depends on service plan
CONSULTATION ROOM	yes			1 x 14	2 x 14	2 x 14	Qty depends on service plan
ENSUITE - ISOLATION ROOM	yes			2 x 5	2 x 5	2 x 5	Depending on service Demand. Optional
LOUNGE - PATIENT	yes			1 x 15	1 x 20*	1 x 30	Optional
MEETING ROOM - MEDIUM	yes			1 x 20	1 x 30	2 x 30	May be shared Optional
MEETING ROOM – SMALL, 12M2	yes			1 x 12	1 x 12	2 x 12	
PATIENT BAY - ACUTE TREATMENT	yes			8 x 12	16 x 12	24 x 12	For longer procedures (day patients) eg Dialysis, Chemo Qty as per service plan
TOILET - PATIENT	yes			2 x 4	2 x 4	2 x 4	
TREATMENT ROOM	yes			1 x 14	2 x 14	2 x 14	

STAFF AND SUPPORT AREAS

ROOM / SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
STAFF AREAS:							
BAY - BEVERAGE	yes			1 x 4	1 x 4	1 x 4	
BAY - LINEN	yes			1 x 2	1 x 2	1 x 2	Includes storage for pillows over
BAY - PATHOLOGY	yes			1 x 3	1 x 3	1 x 3	



ROOM / SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BLOOD STORE	yes			1 x 2 optional	1 x 2 optional	1 x 2 optional	Bay
CLEANER'S ROOM	yes			1 x 5	1 x 5	1 x 5	
CLEAN UTILITY	yes			1 x 12	1 x 14	1 x 14	Includes medications, may also be used for pre-packaged cytotoxic drug storage
CYTOTOXICS ROOM	yes			1 x 8 optional	1 x 8 optional	1 x 8 optional	Required for Chemotherapy areas
DIRTY UTILITY	yes			1 x 14	1 x 14	1 x 14	Includes disposal room function
OFFICE - CLINICAL HANDOVER	yes			1 x 12	1 x 16	1 x 16	Staff work, handovers, etc
OFFICE - SINGLE PERSON 12M2	yes			1 x 12	2 x 12	2 x 12	Nursing and medical
PROPERTY BAY – STAFF	yes			1 x 4	1 x 4	1 x 12	
STAFF STATION	yes			1 x 14	1 x 20	1 x 20	
STORE – EQUIPMENT / GENERAL	yes			1 x 12	1 x 14	1 x 16	Combined
TOILET – STAFF	yes			1 x 3	2 x 3	2 x 3	
WATER TREATMENT ROOM	yes			1 x 12 optional	1 x 12 optional	1 x 12 optional	Where dialysis is provided
DISCOUNTED CIRCULATION				32%	32%	32%	

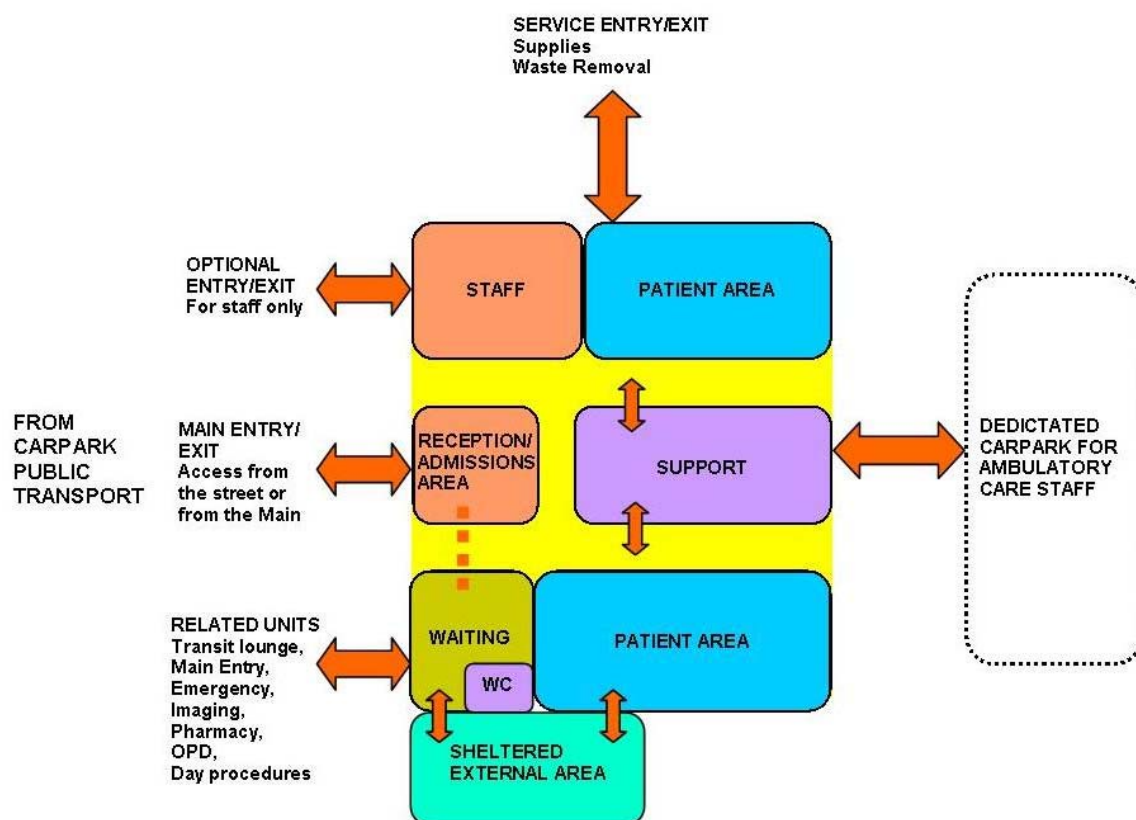
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



30.6 Functional Relationship Diagram

30.6.1 Outpatients Unit Functional Relationship Diagram



30.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



31.0 Pathology Unit

31.1 Introduction

31.1.1 General

The Pathology Unit provides facilities and equipment for the examination of body tissues and fluids, involving receipt of patient specimens, testing and issue of reports.

Pathology may be divided into specialist disciplines including (but not limited to):

- General Pathology - involves a mixture of anatomical and clinical pathology specialties in the one Unit
- Anatomical Pathology – involves the diagnosis of disease based on the microscopic, chemical, immunologic and molecular examination of organs, tissues, and whole bodies (autopsy); Anatomical pathology is itself divided in subspecialties including Surgical Pathology, Cytopathology and Forensic Pathology.
- Clinical/ Chemical Pathology involves diagnosis of disease through the laboratory analysis of blood and bodily fluids and/or tissues using the tools of Chemistry, Microbiology, Haematology and Molecular Pathology;
 - Haematology is concerned with diseases that affect the blood and the management of blood transfusion services;
 - Microbiology is concerned with diseases caused by organisms such as bacteria, viruses, fungi and parasites; clinical aspects involve control of infectious diseases and infections caused by antibiotic-resistant bacteria;
- Genetics/ Clinical Cytogenetics - a branch of genetics concerned with studying the structure and function of the cell, particularly the microscopic analysis of chromosomal abnormalities; molecular genetics uses DNA technology to analyse genetic mutations
- Immunology - a broad discipline that deals with the physiological functioning of the immune system and malfunctions of the immune system such as autoimmune diseases, hypersensitivities, immune deficiency and transplant rejection

31.2 Planning

31.2.1 Functional Areas

The Pathology Unit will consist of the following Functional Areas:

- Entry/ Reception area with patient waiting
- Specimen collection area including patient toilets (this area may also be located remotely in Ambulatory Care areas); the collection area shall have a workbench, space for patient seating and hand washing facilities
- Specimen Reception registration and sorting area
- Laboratories, which may include specialists laboratories
- Support areas, including Clean-up, Sterilisation area, Storage areas for reagents, appropriate storage for flammable liquids, general supplies, refrigerated storage for slides and reagents, disposal facilities for contaminated waste
- Refrigerated blood storage
- Staff Areas including Offices, Meeting Rooms, Staff Room, Lockers and Toilets

SPECIMEN RECEPTION

The Specimen Reception area is where specimens for analysis are received, sorted and held temporarily before despatch into laboratory areas. The area will require specimen registration facilities which may include computerised/ barcode systems, sorting benches and a holding area for specimens including refrigerated holding if required. Following registration, specimens are transported to the relevant laboratory or area for processing and reporting.

LABORATORIES

Laboratories will be provided according to the Role Delineation and Operational Policy and will require the following considerations:



- Laboratories must be secure with restricted access for dedicated staff only
- Laboratory workbenches with space for equipment such as microscopes, appropriate chemical analysers, incubator/s and centrifuge/s
- Access to vacuum, gas and electrical services at the workbench
- Sinks with hot and cold water; may be used for the disposal of non-toxic fluids
- Hand basin with paper towel and soap fittings for staff hand-washing
- Emergency shower and eye flushing devices; drainage to a separate holding area

Note: The size of the laboratory shall be appropriate to the function and provide a safe working environment.

31.2.2 Operational Models

Pathology Services may be provided according to the following models and will be dependent on the Role Delineation and the Operational Policy of the facility:

- On-site laboratory providing a comprehensive range of tests and services
- On-site provision limited to a stat laboratory for a limited range of urgent tests
- Off -site laboratory with services provided by an external laboratory on a contracted or other basis; the external laboratory may be a separate private business unit
- Networking of hospital laboratories across an area or region with varying arrangements for specialisation between laboratories

31.2.3 Functional Relationships

The Pathology Unit, if in-house, is best located adjacent to the areas that utilise the service the most such as the Operating and Obstetric Units. Collection areas may be located with close access to the Outpatients facilities.

31.3 Design

31.3.1 Environmental Considerations

If radioactive materials are employed, facilities shall be available for long-term storage and disposal of these materials. No special provisions will normally be required for body waste products from most patients receiving low level isotope diagnostic material.

31.3.2 Fixtures & Fittings

The Operational Policy shall describe the type and location of all special equipment that is to be wired, plumbed, or plugged in, and the utilities required to operate each.

31.3.3 Safety and Security

Chemical safety provisions including emergency shower, eye-flushing devices, and appropriate storage for flammable liquids shall be made.

31.4 Components of the Unit

31.4.1 Introduction

The Pathology Unit will consist of a combination of Standard Components and Non-Standard Components. Standard Components must comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

31.4.2 Standard Components

Provide the Standard Components as identified in the Schedule of Accommodation. Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.



31.4.3 *Non-Standard Components*

BLOOD STORE

Description and function

The Blood Store provides for the secure, temperature controlled storage of blood and other blood products for access by authorised staff only. The Blood Store should be a minimum of six m2.

Location and relationships

The Blood Store should be located with ready access to Pathology Unit, Emergency Unit, Operating Unit and Critical Care areas. Consideration shall be given to blood storage location in relation to external after-hours access and security.

Considerations

The blood storage refrigerators shall be secured, accessed by authorised staff only, and equipped with temperature monitoring and alarm signals. Alarms and controls should be located to ensure easy staff control. The blood refrigerators / freezers will require an essential power supply.



31.5 Schedule of Accommodation

31.5.1 Pathology Unit Generic Schedule of Accommodation Schedule of Accommodation for a Pathology Unit for Level 4

SPECIMEN COLLECTION

ROOM/ SPACE	Standard Component			Level 4 Qty x m2			Remarks
WAITING	yes			1 x 20			
RECEPTION/CLERICAL	yes			1 x 12			
SPECIMEN COLLECTION BAY				2 x 9			
STORE – PHOTOCOPY/STATIONERY	yes			1 x 8			
STORE – STERILE STOCK	yes			1 x 9			
PATIENT TOILET – ACCESSIBLE	yes			1 x 12			adjacent to specimen collection area
BAY – MOBILE EQUIPMENT	yes			1 x 4			For trolleys
BAY – HANDWASHING TYPE B	yes			1 x 1			

LABORATORY AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2			Remarks
SPECIMEN RECEPTION/SORTING/ PREPARATION	yes			1 x 20			Includes storage & dispatch
BLOOD STORE	ye			1 x 2			
PATHOLOGY LABORATORY GENERAL	yes			3 x 25			Haematology, Blood Bank Clinical Chemistry
LABORATORY – MICROBIOLOGY	yes			1 x 25			Separate room; negative pressure
CLEAN-UP/STERILISATION	yes			2 x 12			Sterilisation area may be separate
BAY – EMERGENCY SHOWER	yes			2 x 1			1 in each lab; privacy screened
STORE – FLAMMABLE LIQUIDS	yes			1 x 4			
STORE – EQUIPMENT	yes			1 x 14			
STORE – GENERAL	yes			1 x 9			
CLEANER'S ROOM	yes			1 x 5			
DISPOSAL ROOM	yes			1 x 8			
AFTER HOURS BLOOD STORAGE	yes			1 x 3			Could be located in the Operating Unit



STAFF AREAS

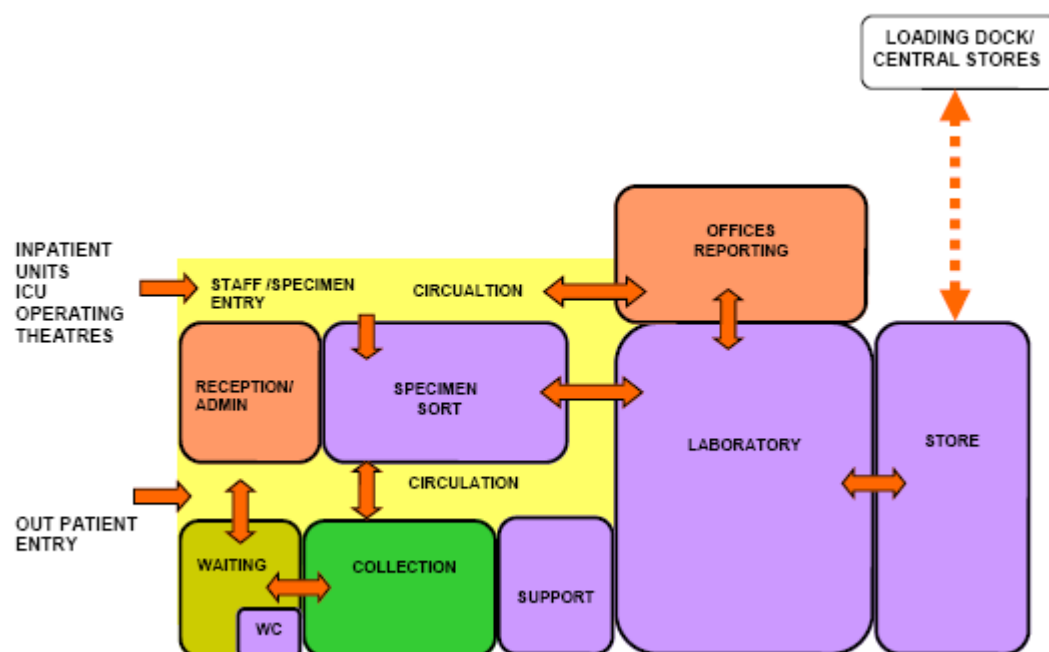
ROOM/ SPACE	Standard Component			Level 4 Qty x m2			Remarks
OFFICE – SINGLE PERSON MANAGER	yes			1 x 12			
OFFICE – 2 PERSON SHARED	yes			1 x 12			For Pathologists; qty will depend on staff establishment
MEETING ROOM, MEDIUM	yes			1 x 15			
ROOM/ SPACE	Standard Component			Level 4 Qty x m2			Remarks
BAY - BEVERAGE	yes			1 x 4			May be located in the meeting room
STAFF PROPERTY	yes			1 x 4			
STAFF SHOWER	yes			2 x 2			
STAFF TOILET	yes			2 x 3			
STAFF ROOM	yes			1 x 30 optional			Includes beverage facilities;
DISCOUNTED CIRCULATION				25%			

Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

31.6 Functional Relationship Diagram

31.6.1 Pathology Unit Functional Relationship Diagram



31.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Laboratory Design Guide, 3rd Edition; Brian Griffin, Architectural Press, Elsevier UK, 2005
- Building Type Basics for Research Laboratories, Daniel Watch. New York, NY: John Wiley & Sons, Inc., 2001.
- CRC Handbook of Laboratory Safety, 5th Edition, A. K. Furr. Boca Raton, FL: CRC Press, 2000.



32.0 Pharmacy Unit

32.1 Introduction

32.1.1 Description

The purpose of the Pharmacy Unit is to provide all inpatient and outpatient pharmacy services including dispensing, preparation of non-sterile and sterile commodities as required, conducting clinical trials as needed, reporting on adverse drug reactions and the provision of drug information and education.

The size and type of service to be provided in the Pharmacy Unit will depend upon the type of drug distribution system used, number of patients to be served, and extent of shared or purchased services. This shall be described in the Operational Policy of the Unit.

Facilities (including satellite, if applicable) and equipment shall be as necessary to accommodate the requirements of the Operational Policy. If unit dose procedure is used, provide additional space and equipment for supplies, packaging, labelling, and storage, as well as for the carts.

Relevant State and Federal statutory requirements are to be complied with.

32.2 Planning

32.2.1 Operational Models

A Pharmacy may extend its service from a single health care facility to outlying facilities. Specific design requirements for packing, storage and dispatch of goods shall be considered for different operational models.

UNIT DOSE SYSTEMS

The unit dosage system involves packaging of each dose of each medication for patients in a blister pack to provide easy and uniform medication dispensing. For a unit dosage system, the Pharmacy must include additional space and equipment for supplies, packaging, labelling and storage.

PRIVATE PHARMACY

If a private Pharmacy is also to be provided within the hospital's retail area, the hospital's operational policy shall determine the type of prescription drugs to be supplied by the private Pharmacy. It shall also study the impact it has on the main Pharmacy in relation to outpatient dispensing.

32.2.2 Planning Models

DEDICATED OUTPATIENT PHARMACY

In facilities where the main Pharmacy cannot be located in a position readily accessible to outpatients areas due to site constraints, then a separate Outpatient Pharmacy may be provided. This arrangement may result in duplication of services, equipment and support facilities.

SATELLITE PHARMACY UNITS

Satellite Pharmacy Units refer to a series of rooms/ suites in a hospital which is remotely positioned from the main Pharmacy and yet managed by the staff of the main Pharmacy. This may include for example, a dedicated Cytotoxic Unit within a Cancer Day Care Unit or an



After-hours Drug store.

UNIT/ DEPARTMENT-BASED PHARMACY AREAS

This refers to medication areas located within an Inpatient Unit and may include automated dispensing. Unit based facilities may be located within the Clean Utility or dedicated Medication Rooms in Inpatient Units. Facilities will include secured drug storage, refrigerated drug storage, space for medication trolleys and computer access for pharmacy personnel.

32.2.3 Functional Areas

The functional areas of a Pharmacy Unit may be sub-divided into two types – “restricted” and “accessible” as follows:

RESTRICTED AREAS

- Dispensing Areas which may include separate areas for inpatients and outpatients/ ambulatory care patients
- Preparation and manufacturing areas of non-sterile goods
- Active store for imprest stock storage, including assembly and dispatch areas with space allocated for trolley parking
- Bulk stores including unpacking area
- Secured stores for accountable drugs, refrigerated stores and flammable goods storage
- Dispatch area for deliveries to inpatient units
- Drug information areas
- Staff areas including Offices, Workstations, Meeting Rooms, Staff Room, Change and Toilets

ACCESSIBLE AREAS

- Reception and Waiting areas for outpatients; it is possible to share waiting areas with an adjoining unit
- Patient counselling and consult areas
- After-hours drug store for access only by authorised personnel and direct entry from outside the main Pharmacy Unit if located within; this room can also be located within a 24-hour zone of the hospital

OPTIONAL AREAS

Depending on the Role Delineation and Operational Policy, the Pharmacy may also include:

- Sterile Manufacturing, which may include sterile and cytotoxic manufacturing suites, along with support facilities including Anterooms, Change Rooms and Storage
- Facilities for clinical trials, which may include dispensing areas, secured storage and records area and workstations
- Extemporaneous manufacturing area which requires extra space for compounding products

STERILE PREPARATION AREA

Sterile preparation area refers to either Cleanroom facilities housing clean workstations fitted with laminar cabinets or other types of pharmaceutical isolators to meet relevant standard. This includes cytotoxic suites.

MANUFACTURING AREA

The following minimum elements shall be included if manufacturing is performed on-site:

- Bulk compounding area
- Provision of packaging and labelling area
- Quality control area.

DISPENSING STATIONS (AUTOMATED)

An automated Dispensing Station may be provided on an Inpatient or Critical Care Unit to dispense prescriptions for patients in that Unit. The Dispensing Station remains under the control of the Pharmacy Unit.



An automated Dispensing Station should be equipped with:

- Automated Dispensing units and refrigerated dispensing units as required; installation according to manufacturer's specifications
- Shelving for reference texts
- Lighting level adequate for drug preparation areas
- Hand-washing facilities in close proximity
- Bench for drug preparation adjacent to dispensing units

SATELLITE PHARMACY

A Pharmacy Unit Satellite is a room or unit in a hospital that is located remote from the Pharmacy Unit.

A Satellite Pharmacy requires:

- Bench and sink of stainless steel or other impervious material, supplied with hot and cold water
- Dispensing bench of stainless steel or impervious material; sized according to requirement for dispensing, labelling and packaging
- Computer workstations according to number of Pharmacists in the Satellite unit
- An area for counselling of clients about dispensed or other medicines so that privacy can be assured
- Adequate lighting and ventilation for drug preparation and dispensing
- Air temperature and humidity control suitable to the storage of drugs and medicines
- Handwashing basin and fittings.

The Satellite Pharmacy must be:

- Constructed to prevent unauthorised access by persons other than staff through doors, windows, walls and ceilings
- Fitted with a security intrusion detector alarm that is control room monitored to a central agency on a 24 hour basis.

STORAGE

The following minimum elements, in the form of cabinets, shelves, and/or separate rooms or closets, shall be included as required:

- Bulk storage
- Active storage
- Refrigerated storage
- Volatile fluids and alcohol storage with construction as required by the relevant regulations for substances involved
- Secure storage for narcotics and controlled drugs
- Storage for general supplies and equipment not in use.
- Storage for prescriptions and any documents required by relevant legislation

32.2.4 *Functional Relationships*

EXTERNAL

The Pharmacy Unit shall be located for convenient access, staff control, and security. Direct access to loading dock and bulk storage is required if not located within the main Pharmacy Unit.

INTERNAL

Access points provided for the following personnel/ purpose shall be carefully considered:

- Visitors to the Unit
- Pharmacy Staff
- Non-Pharmacy staff to collect prescriptions and medications
- Delivery and prescription collection for outpatients
- Supplies delivery

An interview room for outpatients when provided shall have dual access – separate entries from public area and staff area. Access shall be controlled from inside of the Pharmacy.



Corridors and door openings shall provide sufficient clearance for large items and equipment from bulk stores.

32.3 Design

32.3.1 *General*

Design may include provisions for barcode technology for patient prescription identification and tracking as well as electronic prescribing, which will require computer and scanning equipment including additional power and data outlets.

32.3.2 *Environmental Considerations*

NATURAL LIGHT

Natural light is highly desirable within the Unit as well as windows permitting outside views. However, such provisions shall not compromise the security of the Unit. Unauthorised entry and maintaining privacy of the operations of the Unit are the primary concerns in the design of the Unit. Windows shall not permit casual viewing from any adjacent public thoroughfare.

PRIVACY

Privacy shall be considered in patient consultation areas.

ACOUSTICS

Patient interview and counselling rooms will require acoustic treatment. Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

32.3.3 *Space Standards and Components*

ERGONOMICS

Storage systems selected within the Unit shall be accessible to all types of staff.

Refer also to Part C of these Guidelines.

32.3.4 *Safety and Security*

Pharmacy Units and Pharmacies are required to be constructed so as to be as secure as practicable from unauthorised access through doors, windows, walls and ceilings, and to be fitted with a security intrusion detector alarm which is control room monitored to a central agency on a 24 hour basis.

Security measures for consideration will include:

- Electronic door controls
- Movement sensors
- Duress alarms to Dispensing counters
- Security glazing or shutters to Dispensing counters

Accountable Drugs Stores/ Safe shall not be placed in a room positioned on the perimeter of the premises or adjoining a staircase.

32.3.5 *Finishes*

Wall protection shall be installed to prevent damage to walls caused by all types of trolleys.

Refer also to Part C of these Guidelines.

32.3.6 *Fixtures and Fittings*

Refer to Part C of these Guidelines and Standard Components for requirements related to fixtures and fittings.



32.3.7 *Building Service Requirements*

Refer to Part E of these Guidelines.

HVAC

All drug storage areas shall have temperature and humidity controls; internal room temperature shall be kept below 25°C.

32.3.8 *Infection Control*

Hand-washing facilities shall be provided within each separate room where open medication is handled. Sterile Suites must have scrub facilities.

Refer also to Part D of these Guidelines.

32.4 Components of the Unit

32.4.1 *General*

The Pharmacy Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

32.4.2 *Non Standard Components*

CLINICAL TRIALS DISPENSING

Description and Function

The Clinical Trials Dispensing area will include storage, dispensing, packaging, labelling and records holding for clinical trials drugs. The Clinical Trials facilities will be a separate area within the main Pharmacy.

Location and Relationships

Clinical Trials storage, preparation and dispensing will be located in a separate area within the Pharmacy, and will have ready access to patient Interview and Consultation rooms.

Considerations

Clinical Trials drugs/medications area will require the following considerations:

- Workspace with computer for Pharmacist
- Preparation bench and sink
- Lockable storage for clinical trials drugs, separate from other Pharmacy supplies
- Lockable records storage
- Staff Handwashing basin should be located in close proximity

ASEPTIC ROOM (STERILE MANUFACTURING)/ CYTOTOXIC ROOM (CYTOTOXIC MANUFACTURING)

Description and Function

The Aseptic Room and the Cytotoxic Room are Clean Rooms for manufacturing of medications in a sterile environment. The room will contain laminar flow cabinets and or isolators for sterile manufacturing. The room will be positive pressure and be accessed via an Anteroom.

An external outlook is desirable.

Location and Relationships

It shall be located on the perimeter of the facility with an external outlook with access via and Anteroom.



Considerations

The following features shall be considered while designing sterile manufacturing facility:

- Electronic door management system to prevent the opening of both doors in the Anteroom at the same time.
- Handwashing facilities shall be provided immediate outside the Aseptic (Clean) Rooms in adjoining Anteroom; hand basins are not to be located within the Aseptic (Clean) Rooms.
- Provide an intercom system shall be provided between Aseptic (Clean) Rooms and Anteroom
- High-resolution CCTV cameras for remote monitoring
- Comply with room requirements in relevant international Clean Room standards for sterile and cytotoxic manufacturing.

STORE - REFRIGERATION

Description and Function

This can be a room/ bay which consist of multiple refrigerators for storing specific medications. Alternatively, a commercial grade cool room can also be used.

Location and Relationships

This shall be located in proximity to assembly/ preparation area and other storage area within the Unit.

Considerations

Refrigerated storage areas in the Pharmacy will require the following considerations:

- all access doors (either to room or refrigerators) shall be lockable
- temperature monitoring system installed and connect to a centralised alarm/ warning system



32.5 Schedule of Accommodation

32.5.1 Pharmacy Unit Generic Schedule of Accommodation

Schedule of Accommodation for a Pharmacy Unit for Levels 3-6

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
MAIN PHARMACY							
WAITING	yes		1 x 10	1 x 10	1 x 20	1 x 20	
COUNTER – PHARMACY	yes		1 x 9	1 x 9	1 x 20	1 x 20	Includes shelving for scripts; dedicated staff entry
MEETING/INTERVIEW ROOM – SMALL	yes		1 x 9	1 x 9	1 x 9	1 x 9	
AFTER HOURS DRUGS STORE	yes			1 x 4	1 x 4	1 x 4	
OFFICE – SINGLE PERSON DRUG INFORMATION	yes		1 x 9	1 x 9	2 x 9	2 x 9	
OFFICE – SINGLE PERSON DIRECTOR	yes		1 x 9	1 x 9	1 x 12	1 x 12	
STORE –DRUGS	yes similar		1 x 5	1 x 5	1 x 10	1 x 10	High security storage safe for controlled substances
BAY – HANDWASHING	yes		2 x 1	3 x 1	4 x 1	4 x 1	
ASSEMBLY/PREPARATION	yes		1 x 6	1 x 10	1 x 20	1 x 30	Allow 3m2 per pharmacist station
STORE – GENERAL	yes			1 x 6	1 x 8	1 x 10	Dispensing supplies
OFFICE – WORKSTATION	yes		1 x 6	2 x 6	4 x 6	6 x 6	Qty depends on staffing establishment
COOL ROOM	yes				2 x 10	2 x 10	
STORE - REFRIGERATION			1 x 6	1 x 6			Bay with drug fridges
PREPARATION ROOM - NON STERILE (MANUFACTURING)	yes		1 x 12 optional	6 x 3	8 x 3	10 x 3	Based on 3m2 per person
DISPENSING - CLINICAL TRIALS					1 x 12 optional	1 x 12 optional	
GOODS RECEIPT			1 x 5	1 x 5	1 x 15	1 x 15	Could be located in Supply unit or receiving dock
STORE – BULK	yes similar		1 x 30	1 x 30	1 x 100	1 x 150	May include pallets; includes area for holding/dispatch
CLEANER'S ROOM	yes		1 x 5	1 x 5	1 x 5	1 x 5	
STORE – FILES	yes similar		1 x 8	1 x 8	1 x 10	1 x 20	including documents required by legislation
STORE – BULK I.V FLUIDS	yes similar				1 x 20	1 x 20	May be part of the Bulk store

STAFF AREAS

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
STORE – PHOTOCOPY/STATIONERY	yes			1 x 8	1 x 8	1 x 8	
OFFICE – WORKSTATION PHARMACISTS	yes			1 x 6	2 x 6	3 x 6	According to staff establishment
STAFF PROPERTY BAY	yes		2 x 2	2 x 4	3 x 4	4 x 4	
TOILET – STAFF	yes		2 x 3	2 x 3	4 x 3	4 x 3	
SHOWER STAFF	yes				2 x 2	2 x 2	for emergency use



ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
BAY - BEVERAGE	yes		1 x 4	1 x 4	1 x 4	1 x 4	Can be included in meeting room
STAFF ROOM	yes		1 x 20	1 x 20	1 x 40	1 x 40	includes beverage bay
MEETING ROOM	yes		shared	1 x 15	1 x 20	1 x 25	
DISCOUNTED CIRCULATION			25%	25%	25%	25%	

STERILE MANUFACTURING (FOR 2 ROOMS)

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
AIRLOCK	yes				2 x 8	2 x 8	
ANTEROOM	yes				1 x 8	1 x 12	For scrubbing and gowning
ASEPTIC CLEAN ROOM					1 x 20	1 x 20	Comply with international clean room standards
STAFF CHANGE – MALE/FEMALE	yes				2 x 8	2 x 8	Separate Male/female areas
CYTOTOXIC CLEAN ROOM					1 x 15	1 x 15	Comply with international clean room standards
OFFICE – WORKSTATION	yes				2 x 6	3 x 6	Qty determined by staff establishment
STORE – STERILE STOCK	yes similar				1 x 7	1 x 7	
DISCOUNTED CIRCULATION					25%	25%	

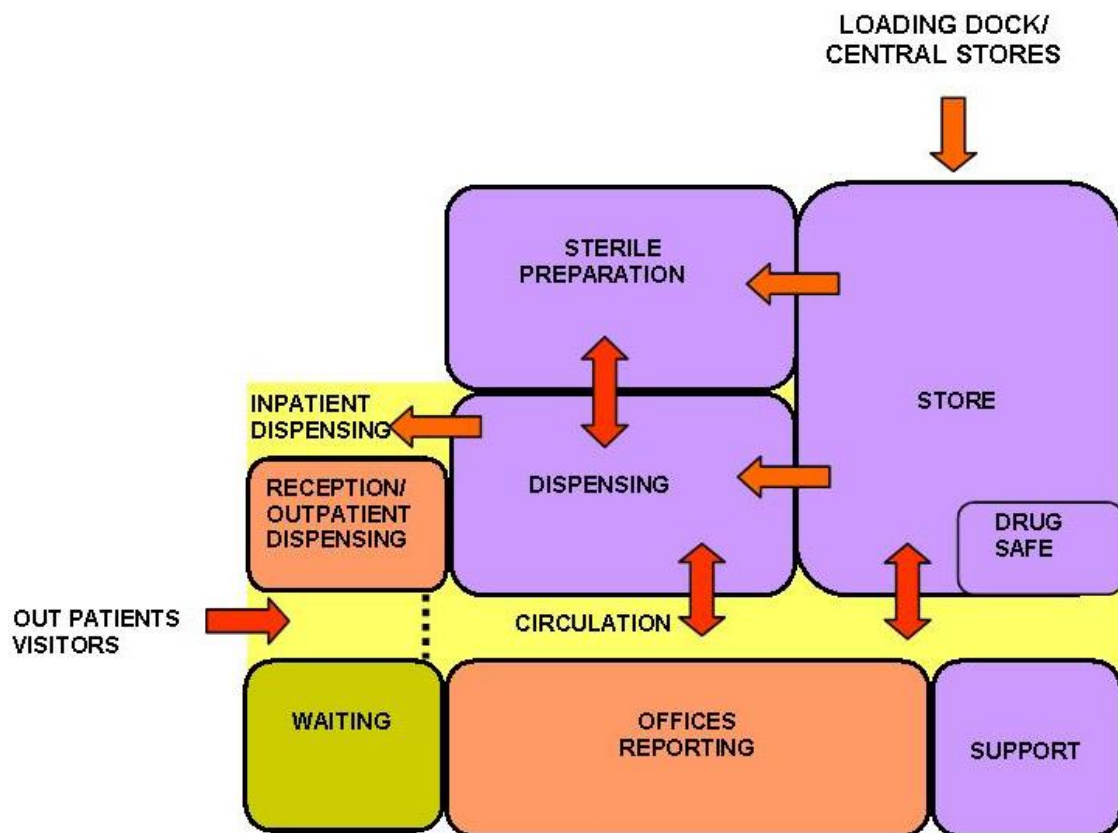
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



32.6 Functional Relationship Diagram

32.6.1 Pharmacy Unit Functional Relationship Diagram



32.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005
- Refer also to DHA website for local licensing requirements www.dha.gov.ae and MOH website www.moh.gov.ae for local approval procedures
- Healthcare Facilities Guidelines Planning Design Construction and Commissioning, DHA, 2009



33.0 Public & Staff Amenities Unit

33.1 Introduction

33.1.1 *Description*

The Amenities Unit shall provide facilities for the convenience and comfort of staff and visitors to the hospital. Some of the amenities may optionally be used by patients who are permitted to access other areas of the hospital.

33.2 Planning

33.2.1 *Planning Models*

Amenities may be provided in a uniform configuration to Main Entry areas, public areas, staff areas and every level of the hospital, to ensure ease of access and consistency in location.

33.2.2 *Functional Areas*

The Amenities Unit will consist of the following Functional Areas:-

- Public Toilets
- Staff Toilets
- Staff Change Rooms
- Disabled Toilets
- Bay for drinking water
- Prayer Rooms
- Ablutions Rooms

PUBLIC TOILETS

Public Toilets should be located in a discreet area with ready access to Lifts and Waiting Areas. Public facilities should include access to baby change and parenting rooms for baby feeding.

STAFF CHANGE ROOMS AND TOILETS:

Staff Change rooms will include staff showers and locker areas. Change rooms, toilets and locker areas shall be provided separately for Male and Female staff.

PRAYER ROOMS

Separate Male and Female Prayer rooms shall be provided, located in a discreet but accessible area. Provide Prayer Rooms on every level of the building. Refer to Section 4-Planning-Local Design Regulations for Design Considerations for Prayer Rooms; refer to Standard Components for additional Prayer Room requirements.

ABLUTIONS ROOMS

Ablutions Rooms shall be provided adjacent to Prayer Rooms for the appropriate washing of hands and feet.

33.2.3 *Functional Relationships*

Public and Staff Amenities should be located close to the Main Entrance with ready access to waiting areas and lifts. Amenities including Prayer Rooms will be required in public areas on every level of the hospital for ease of access.

33.3 Design

33.3.1 *General*

The design of amenities should create a pleasant atmosphere for staff and visitors to the



hospital, whilst retaining the necessary functional requirements.

Consideration should be given to private and discreet entry areas for toilets and ablutions facilities.

33.3.2 *Environmental Considerations*

NATURAL LIGHT

Natural light is highly desirable where achievable, particularly for Prayer Rooms.

PRIVACY

Privacy is essential for toilets and ablutions rooms, while providing ease of access.

ACOUSTICS

Acoustic treatment will be required to all Prayer Rooms, Toilet and Ablutions rooms. Please refer to Part C, 9.2 “Acoustic Solutions for Healthcare Facilities”

33.3.3 *Space Standards and Components*

Prayer Rooms, Change areas, Toilets and Ablutions rooms shall be sized to suit the numbers of persons requiring use of the facilities and allow safe and effective movement of people through the rooms.

SAFETY AND SECURITY

Staff Change and Locker areas shall be secured with electronic access.

FINISHES

Floor finishes should be appropriate to the function of the space. Toilets and ablutions facilities should be tiled or vinyl floors with a suitable non-slip finish.

Consideration must be given to the appearance and quality of environment required e.g. non-institutional, acoustic performance, slip resistance and infection control.

Wall finishes, cabinetry and bench tops must be easily cleaned.

Refer also to Part C of these Guidelines.

FIXTURES AND FITTINGS

Fittings and fixtures shall be robust and allow heavy usage in public and staff areas.

BUILDING SERVICE REQUIREMENTS

Amenities areas will require air conditioning with controlled humidity and temperature to provide a comfortable environment for visitors and staff.

33.4 Components of the Unit

33.4.1 *General*

Patient and Staff Amenities will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



33.4.2 *Non Standard Components*

BAY – DRINKING WATER

Description and Function

The Bay – Drinking Water provides a recessed area for a drinking water unit.

Location and Relationships

The bay will be located in public access areas close to Waiting areas.

Considerations

The Bay will include:

- Wall and floor finishes suitable for wet areas
- Drinking water fountain, with hydraulic connection to drinking water
- Fittings may include a dispenser for cups and waste bin.



33.5 Schedule of Accommodation

33.5.1 *Public & Staff Amenities Unit Generic Schedule of Accommodation* Schedule of Accommodation for a Public & Staff Amenities Unit for Levels 3-6

ROOM/ SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
PUBLIC AMENITIES							
PUBLIC TOILET	yes		2 x 4	2 x 4	4 x 4	4 x 4	
PUBLIC TOILET – ACCESSIBLE	yes		2 x 4	2 x 4	4 x 4	4 x 4	
STAFF AMENITIES							
STAFF CHANGE – MALE/FEMALE	yes		2 x 10	2 x 10	2 x 20	2 x 20	
STAFF TOILET	yes		2 x 3	2 x 3	2 x 3	2 x 3	
SHARED AREAS							
PRAYER ROOM	yes similar		1 x 30	1 x 30	1 x 50	1 x 50	size according to requirements
ABLUTIONS ROOM	yes similar		2 x 8	2 x 8	2 x 15	2 x 15	Separate Male/female areas
BAY – DRINKING WATER			1 x 1	2 x 1	3 x 1	4 x 1	
DISCOUNTED CIRCULATION			10%	10%	10%	10%	

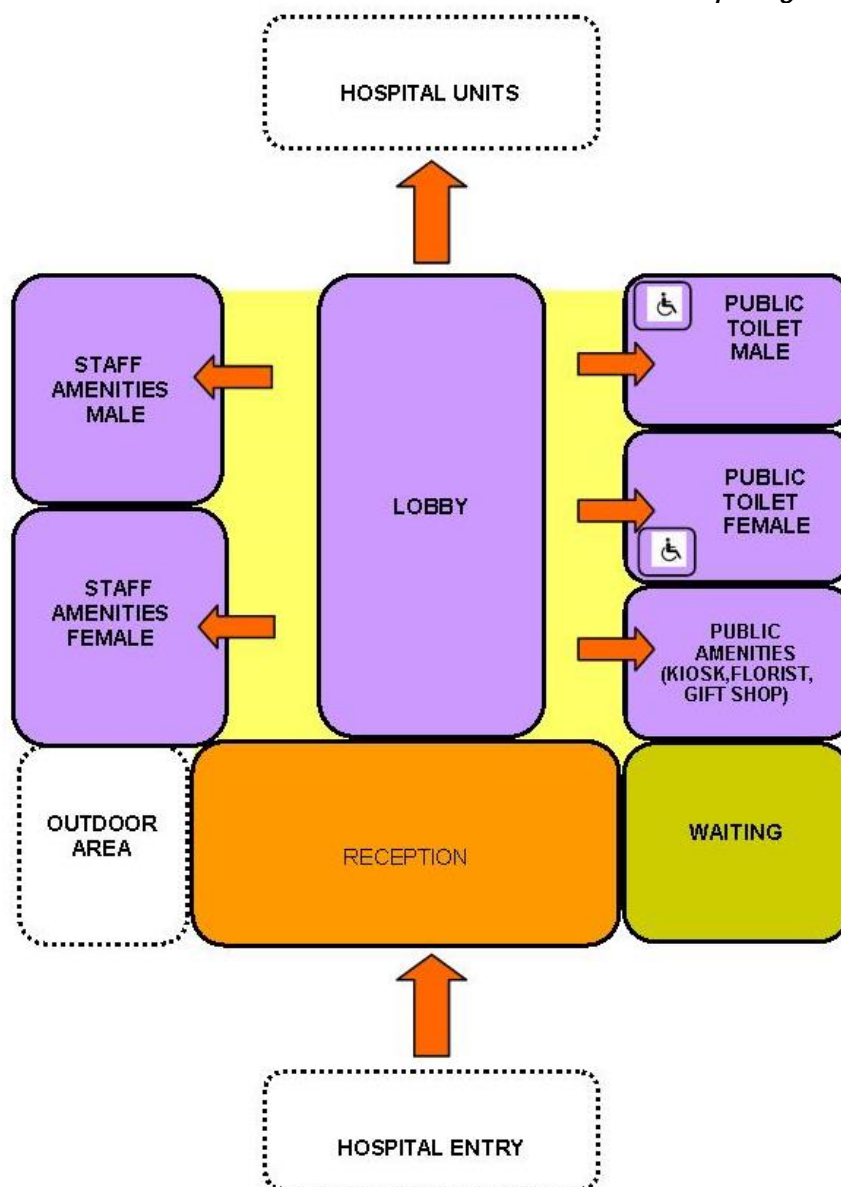
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



33.6 Functional Relationship Diagram

33.6.1 Public & Staff Amenities Unit Function Relationship Diagram



33.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



34.0 Radiation Oncology Unit

34.1 Introduction

34.1.1 Description

The purpose of the Radiation Oncology Unit is to provide facilities and equipment for treatment of patients using radioactive rays. The Radiation Oncology Unit may contain one or both electron beam therapy and radiation therapy. Although not recommended, a Simulation Room may be omitted in small linear accelerator facilities where other positioning geometry is provided.

Room sizes and specifications for a Radiation Oncology Unit should accommodate the equipment manufacturer's recommendations, as space requirements may vary from one machine to another and one manufacturer to another. Radiation Oncology may also be referred to as Radiotherapy or Radiation Therapy.

34.2 Planning

34.2.1 Functional Areas

The Radiation Oncology Unit may include the following Functional Areas:

- Reception, Waiting, administrative and records areas
- Patient treatment areas including Radiotherapy Bunkers, Treatment Planning, Simulation, Holding area, Patient Toilet
- Film processing and storage areas
- Support areas including Consult, Utilities, Cleaner's Room, Store, Disposal rooms
- Staff areas including Staff Station, Offices, Staff Change and Toilets.

SUPPORT AREAS

The following optional support areas may be required:

- Quality control area with illuminated X-ray viewing boxes
- Computer control area normally located adjacent to the Radiotherapy Room entry
- Dosimetry equipment area
- Hypothermia Room (may be combined with an Examination Room)
- Oncologist's Office (may be combined with Consultation Room)
- Physicist's Office (may be combined with Treatment Planning)
- Treatment Planning and Record Room.
- Provision shall be made for the following additional support areas for Linear Accelerator:
- Mould Room with exhaust hood and hand basin
- Block Room with storage (may be combined with the Mould Room).

34.2.2 Functional Relationships

The Radiation Oncology Unit should be located with ready access for ambulant patients and beds/trolleys. The Unit may be co-located with Medical Imaging Units. If intra-operative therapy is proposed, the Radiation Oncology Unit should be located close to the Operating Unit or with a direct link. A ground level location is preferred due to the weight of the equipment and shielding requirements, and for ease of installation and replacement.

34.3 Design

34.3.1 Building Service Requirements

CONSTRUCTION STANDARDS

The flooring for a Radiation Oncology Unit shall be adequate to meet the load requirements for equipment, patient, and personnel. Provision for cable ducts or conduits should be made in



the floors and ceilings as required. Ceiling mounted equipment should have properly designed rigid support structures located above the finished ceiling. The minimum recommended ceiling height is 3 metres. A lay-in type of ceiling should be considered for ease of installation, service, and remodelling.

RADIATION PROTECTION

Cobalt and linear accelerator rooms require radiation protection that may include concrete walls, floors and ceiling to a specified thickness. The radiation protection needs of the unit shall be assessed by an AERB consultant. This assessment is to specify the type, location, and amount of protection to be installed in accordance with final approved department layout and equipment selection. The radiation protection requirements shall be incorporated into the final plans and specifications.

34.4 Components of the Unit

34.4.1 *Introduction*

The Radiation Oncology Unit will contain Standard Components according to the Level of Service. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



34.5 Schedule of Accommodation

34.5.1 *Radiation Oncology Unit Generic Schedule of Accommodation* Schedule of Accommodation for a Radiation Oncology Unit for 2 & 4 Bunkers

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
AIRLOCK -- ENTRTY	yes				1 x 9	1 x 9	For stand alone units or direct entry
BAY – BEVERAGE - OPEN	yes				1 x 4	1 x 4	
WAITING	yes				1 x 30	1 x 50	
BAY - WHEELCHAIR	yes				1 x 4	1 x 6	1 trolley; 2-5 wheelchairs
TOILET – PUBLIC	yes				2 x 4	2 x 4	
TOILET – ACCESSIBLE	yes				1 x 5	1 x 5	
BAY – PUBLIC TELEPHONE	yes				1 x 4	1 x 4	
BAY – VENDING MACHINES	yes				1 x 5	1 x 5	
RECEPTION	yes				1 x 10	1 x 10	2 staff
OFFICE – 3 PERSON SHARED	yes				1 x 15	1 x 15	3 staff
STORE – FILES	yes similar				1 x 12	1 x 15	
STORE – PHOTOCOPY/STATIONERY					1 x 8	1 x 8	
MEETING ROOM SMALL	yes				1 x 12	1 x 12	Resource & education function
MEETING/INTERVIEW ROOM	yes				1 x 12	1 x 12	
VOLUNTEERS' ROOM	yes				1 x 12 optional	1 x 12 optional	

PLANNING ZONE

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
SUB WAITING –	yes				1 x 20	1 x 20	1 wheelchair space
PATIENT BAY - HOLDING	yes				1 x 10	1 x 10	
PATIENT TOILET - ACCESSIBLE	yes				2 x 6	2 x 6	
PATIENT CHANGE - ACCESSIBLE	yes				2 x 4	2 x 4	includes lockers
RADIOTHERAPY SIMULATOR ROOM	yes				1 x 50	1 x 50	
CONTROL ROOM	yes				1 x 14	1 x 16	
DARK ROOM	yes				1 x 6 optional	1 x 6 optional	
XRAY VIEWING/VIRTUAL SIMULATION	yes				1 x 9	1 x 14	PACS may be used
BAY – RESUSCITATION TROLLEY	yes				1 x 2	1 x 2	
OFFICE – WORKSTATION PLANNING	yes				8 x 6	12 x 6	Multiple workstations in open plan may be provided



ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
OFFICE – MANAGER, RADIATION THERAPY	yes				1 x 12	1 x 12	Qty per staffing establishment
OFFICE – RADIATION THERAPY EDUCATOR	yes				1 x 9	2 x 9	Qty per staffing establishment
OFFICE – R.T HEAD OF PLANNING	yes				1 x 9	1 x 9	Qty per staffing establishment
OFFICE – R.T HEAD OF TREATMENT	yes				1 x 9	1 x 9	Qty per staffing establishment
OFFICE – RADIATION THERAPISTS SIGN ON/WORK AREA	yes				1 x 12	1 x 12	Qty per staffing establishment
OFFICE - WORKSTATION – BOOKING CLERK	yes				1 x 6	2 x 6	Qty per staffing establishment
EQUIPMENT STORE	yes				1 x 9	1 x 12	
STAFF TOILET	yes				2 x 3	2 x 3	

APPLIANCE AREA

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
MOULD ROOM – FITTING	yes				1 x 10	1 x 10	
MOULD ROOM – WORKSHOP	yes				1 x 20	1 x 20	May be noisy
CLEAN-UP	yes				1 x 9	1 x 9	
STORE – GENERAL	yes				1 x 9	1 x 9	

MEDICAL PHYSICS

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
OFFICE – CHIEF PHYSICIST	yes				1 x 12	1 x 12	
OFFICE - WORKSTATION - PHYSICIST	yes				1 x 6	1 x 6	Qty per staffing establishment
PHYSICS LABORATORY	yes				1 x 25	1 x 40	
STORE – EQUIPMENT, PHYSICS	yes				1 x 12	1 x 20	
WORKSHOP - BIOMEDICAL	yes				1 x 40	1 x 50	
OFFICE - WORKSTATION BIOMEDICAL	yes				1 x 6	1 x 6	Qty per staffing establishment

RADIATION TREATMENT

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
SUB WAITING	yes				1 x 20	1 x 20	
CHANGE CUBICLES	yes				2 x 2	4 x 2	
CHANGE CUBICLE – ACCESSIBLE	yes				1 x 5	2 x 2	
PATIENT TOILET	yes				2 x 3	4 x 3	



ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
INTERVIEW ROOM	yes				1 x 9	2 x 9	Can be used for private waiting
BUNKER WAITING	yes				2 x 2	4 x 2	
RADIOTHERAPY BUNKER (LINEAR ACCELERATOR)	yes				2 x 150	4 x 150	See note 1 below
RADIOTHERAPY BUNKER CONTROL ROOM	yes				2 x 20	4 x 20	
OFFICE – SINGLE RADIOTHERAPY	yes				1 x 9	1 x 9	Deputy chief in large centres
WORKSTATIONS – SENIOR RADIOTHERAPISTS	yes				2 x 6	4 x 6	
BAY – WHEELCHAIR PARK	yes				3 x 4	5 x 4	
BAY - LINEN TROLLEY	yes				1 x 2	1 x 2	
STORE – EQUIPMENT	yes				1 x 10	1 x 12	

NOTE 1: 150m2 spatial allocation for one Linear Accelerator bunker includes maze and radiation shielding wall, bunker size depends on equipment selected and radiation shielding recommendation from AERB consultant.

BRACHYTHERAPY SUITE

ROOM/ SPACE	Standard Component					4 Bunkers Qty x m2	Remarks
BRACHYTHERAPY BUNKER	yes similar					1 x 130	Assumes permanent seed implantation; similar to Radiotherapy bunker
RADIOTHERAPY BUNKER CONTROL ROOM	yes					1 x 10	
SCRUB-UP	yes					1 x 6	
ANAESTHETIC INDUCTION ROOM	yes					1 x 15	Optional
PATIENT BAY – RECOVERY	yes					2 x 9	
HOT LAB - SEED STORE & LOADING	yes					1 x 9	

PATIENT OBSERVATION & NURSING CARE

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
STAFF STATION	yes				1 x 12	1 x 18	
MEETING/INTERVIEW ROOM	yes				1 x 12	1 x 12	
PATIENT BAY – HOLDING (MALE/FEMALE)	yes				2 x 9	4 x 9	
BAY – HANDWASH – TYPE B	yes				1 x 1	1 x 1	
BAY – P.P.E	yes				1 x 2	1 x 2	
PATIENT SHOWER	yes				2 x 4	4 x 4	



ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
BAY – LINEN TROLLEY	yes				1 x 2	1 x 2	
BAY - RESUSCITATION TROLLEY	yes				1 x 2	1 x 2	
OFFICE – SINGLE PERSON NURSE MANAGER	yes				1 x 9	1 x 9	
CLEAN UTILITY	yes				1 x 12	1 x 14	
DIRTY UTILITY	yes				1 x 12	1 x 14	
DISPOSAL ROOM	yes				1 x 8	1 x 8	May be combined with Dirty Utility
CLEANER'S ROOM	yes				1 x 5	1 x 5	
CONSULT/EXAM ROOMS	yes				4 x 14	8 x 14	Qty according to service plan
PROCEDURE ROOM	yes				1 x 20	1 x 20	
CLEAN-UP	yes				1 x 10	1 x 15	Include endoscope cleaning
OFFICE – WRITE-UP – SHARED	yes				1 x 12	2 x 12	Clinical reviews
SPECIMEN COLLECTION ROOM	yes				1 x 9	1 x 9	
PATIENT TOILET	yes				2 x 3	2 x 3	for specimen collection
CLINIC WAITING	yes				2 x 10	2 x 25	

GENERAL STAFF AREAS

ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
OFFICE - WORKSTATION DATA MANAGERS					3 x 6	6 x 6	
STORE – FILES					1 x 10	1 x 20	
OFFICE – SINGLE PERSON CLINICAL TRIALS MONITOR					1 x 9	1 x 9	
OFFICE – SINGLE PERSON BIOSTATISTICIAN					1 x 9	1 x 9	
OFFICE - WORKSTATION NURSE COORDINATOR					1 x 6	1 x 6	
OFFICE – SINGLE PERSON TEACHING FELLOW					1 x 9 optional	1 x 9 optional	
OFFICE - SHARED					1 x 12 optional	1 x 14 optional	
OFFICE – CLINICAL DIRECTOR					1 x 12	1 x 12	
OFFICE – DEPUTY DIRECTOR					1 x 9	1 x 9	
OFFICE – RADIATION ONCOLOGIST					1 x 9	1 x 12	
OFFICE - WORKSTATION					1 x 12	2 x 12	For administration staff
OFFICE – SHARED					1 x 12	1 x 12	2 staff
OFFICE - WORKSTATION MEDICAL TYPISTS					1 x 6	2 x 6	



ROOM/ SPACE	Standard Component				2 Bunkers Qty x m2	4 Bunkers Qty x m2	Remarks
OFFICE – SINGLE PERSON DATA MANAGERS	yes				1 x 2 optional	1 x 2 optional	
OFFICE – SINGLE PERSON I.T MANAGER	yes				1 x 2 optional	1 x 2 optional	
OFFICE – SINGLE PERSON MANAGER QUALITY ASSURANCE	yes				1 x 9	1 x 9	QA Manager
OFFICE – SHARED ALLIED HEALTH	yes				1 x 12	1 x 12	
MEETING – MEDIUM/LARGE	yes				1 x 20	2 x 20	
STAFF ROOM	yes				1 x 30	1 x 40	
STAFF PROPERTY	yes				1 x 6	1 x 12	
STAFF TOILET	yes				2 x 3	4 x 3	
STAFF SHOWER	yes				2 x 3	2 x 3	
CLEANER'S ROOM	yes				1 x 5	1 x 5	
OFFICE - WORKSTATION CANCER CARE COORDINATOR	yes				1 x 6	2 x 6	
OFFICE – SINGLE PERSON	yes				1 x 9	1 x 9	
OFFICE - WORKSTATION SPECIALIST CANCER NURSES	yes				1 x 6	2 x 6	
OFFICE - WORKSTATION PALLIATIVE CARE	yes				1 x 6	2 x 6	
DICOUNTED CIRCULATION					35%	35%	

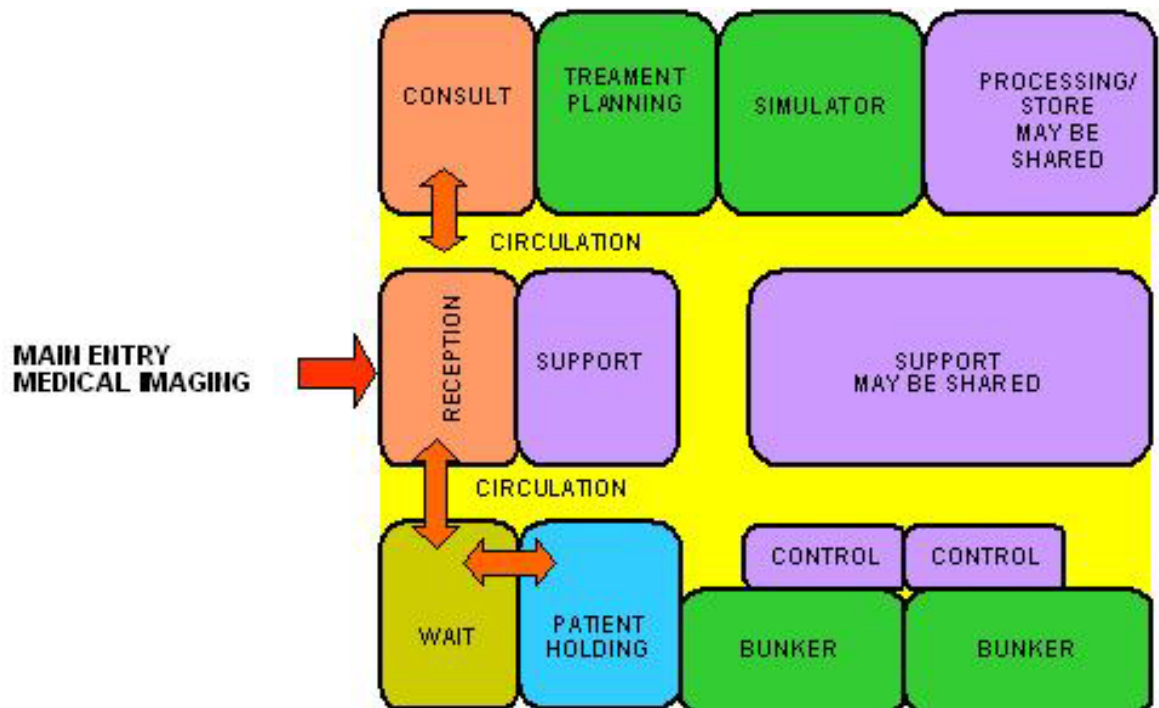
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



34.6 Functional Relationship Diagram

34.6.1 Radiation Oncology Unit Functional Relationship Diagram



34.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



35.0 Rehabilitation – Allied Health Unit

35.1 Introduction

35.1.1 Description

The Rehabilitation – Allied Health Unit provides a multi disciplinary rehabilitation service care in which the clinical intent or treatment goal is to improve the functional status of a patient with an impairment, disability or handicap.

Facilities for Physiotherapy and Occupational Therapy will vary greatly, ranging from large, purpose-designed, central facilities for inpatients and/or outpatients, to basic on-ward or bedside services. Extent, design and location of facilities will be affected by presence or otherwise of the following services (not inclusive):

- Rehabilitation Medicine
- Aged Care
- Spinal Cord Injury Service
- Orthopaedic Services
- Neurosciences - (Strokes, Multiple Sclerosis, Traumatic Brain Injuries etc)
- Amputees
- Hand Surgery / Plastic Services.

Speech Pathology plays a major role in Neonatal, Paediatric, ENT / Maxillofacial and neurological services; in the absence of these, Speech Pathology may be provided on a part-time basis. Children's Hospitals or major Paediatric Services generate their own specific spatial needs.

At higher Role Delineation levels it is possible that each discipline may have its own discrete department but every attempt should be made to co-locate the therapy units to maximise the potential for sharing and to facilitate multidisciplinary care. The rehabilitation services will be supported by full time Social Work services. At Level 4, Dietetics and Podiatry are generally provided as part time services and can be incorporated into the Unit. At Levels 5 & 6 they will have their own discrete Units and are excluded from the Schedule of Accommodation at those levels. Clinical Psychology and Neuropsychology also play an important role in some aspects of service provision and will need their own or access to office/treatment areas.

35.1.2 Patient Characteristics

All ages from children to the frail aged may be treated. Almost all patients attending for physiotherapy are physically incapacitated to some extent many of whom use wheelchairs or walking aids and - increasingly - motorised chairs that have implications for parking and recharging. Many patients may be disfigured (burns, throat surgery etc) and require a non-threatening, private environment. Patients may require access to interpreter services.

35.2 Planning

35.2.1 Operation Models

HOURS OF OPERATION

The Unit will generally operate during business hours Monday to Friday with after-hours on-call physiotherapy services available for inpatient units as required. Some departments may provide a limited service at evenings and weekends. If used for health education classes (e.g. antenatal classes), after-hours access will be required. If a hydrotherapy pool is part of the facility, this too may be made available to the community after hours and at week-ends and therefore careful consideration will need to be given to location, controlled access and security.



FLEXIBILITY

The facilities of the Unit will be utilised by inpatients and outpatients. It is expected that the majority of inpatients accommodated in the Rehabilitation Inpatient Unit will attend the Unit on a daily basis. The function of these two units is inter-related and the design of the Rehabilitation Unit could provide areas common to both units. As with other areas of health care, rehabilitation services are constantly evolving. This is manifest in terms of:

- Clinical development - many more categories of patient are able to be rehabilitated than was previously considered feasible
- Organisational development - the interrelationship of the various medical, nursing and allied health services that participate in the rehabilitation process is of paramount importance
- Technological development - advances in technology have developed techniques which will ultimately become routine aspects of rehabilitation. Such developments include kinematic analysis, electromyography and ergometry.

MODELS OF CARE

Traditionally the model of care has been one-to-one, therapist to patient. Increasingly an educative model is being used that assumes a staff to patient ratio of 1:4 or more and incorporates:

- Group sessions for peer support;
- Group exercise classes;
- Involvement of carers so that they can learn how much activity the patients can safely tolerate at home and how best to support them;
- Education programmes.

There may need to be separate areas for Respiratory and Cardiac Rehabilitation and general rehabilitation as the patients have differing needs and sometimes equipment. However this will depend on the number of sessions and every opportunity should be made to share areas between programmes.

SATELLITE UNITS

One of the problems of providing therapy services for inpatients within the Unit itself is transport to and from hospital units, particularly, for example, neuroscience patients whose attention span may be limited and who need a quiet environment. It also requires either a portering service or use of valuable therapist time in transport functions. If distance from inpatient units to the Rehabilitation therapy areas is considerable and throughput can justify, provision of a small satellite unit may be considered - mainly for physiotherapy - near the units most affected, usually Neuroscience & Orthopaedics. Or alternatively, a small therapy / multipurpose room in an inpatient unit may serve such a purpose.

HYDROTHERAPY

Whilst there are differing opinions as to the therapeutic benefits of hydrotherapy, a designated Rehabilitation service will probably require access to a hydrotherapy pool. However, in other circumstances, the need for a pool should be carefully considered as the cost per unit of treatment is high and conditions for which hydrotherapy is the only appropriate treatment are limited. Hydrotherapy pools should only be provided where patient numbers can be justified and where the pool is required for a minimum of four hours each days, five days a week. Utilisation of the pool may be extended by making the pool available to groups within the community for their use at times when it is not required for specific therapeutic purposes. Alternatively, use of a pool already established in the community may be used.

GAIT ANALYSIS LABORATORY

Quantitative gait analysis is useful in objective assessment and documentation of walking ability as well as identifying the underlying causes of walking abnormalities in patients with



cerebral palsy, stroke, head injury and other neuromuscular problems. The results of gait analysis have been shown to be useful in determining the best course of treatment in these patients. Equipment for gait analysis may be incorporated into a gymnasium.

OUTDOOR GAIT AREA

It is essential to provide mobility training on a range of uneven surfaces necessary for community integration.

35.2.2 *Operational Policies*

GENERAL

Depending upon the needs of the individual hospital, it may be decided that the Rehabilitation Allied Health Unit will provide the location for the hospital's Acute Therapy Services. If such a Policy is adopted it may be necessary to upgrade the accommodation to provide:

- Additional therapy spaces for general acute inpatient and outpatient therapy
- Additional group office space for physiotherapists to write up notes
- Additional staff amenities.

The Guideline defines functional spaces as discrete areas for defined activities. The Operational Policy of a facility may compel the design team to view the various functions and activities within the Unit from the framework of a team philosophy. Accordingly, patient flow would determine the definition of spaces rather than individual allied health discipline.

OUTPATIENTS VERSUS DAY PATIENTS

The original "Day Hospital" concept often accommodated patients for respite care; in modern units patients are admitted for treatment, not respite. Patients attending for a single treatment by a single therapist are classified as outpatients. Patients attending for a series of treatments by different therapists will be admitted as day patients where stay is in excess of 4 hours. This latter category will need an area for rest and refreshment between treatments.

MEDICAL RECORDS & X-RAYS

Assuming a hard copy system, it is usual for non-inpatient records to be kept in the Unit for the duration of treatment. For a hard copy system, x-ray viewing boxes will be required and films requested from the Medical Imaging Unit. When records become electronic, there will be direct data entry and design should indicate likely locations for computers and allow for appropriate power and cabling. Assuming a digital PACS system, X-ray films are available on screen so viewing monitors will be needed.

PATIENT LIFTING / TRANSFERS

Patient handling measures may include ceiling hoist systems for transfers from wheelchair to plinth, or mobile lifters. Mobile patient lifters will require bays with power for recharging. The Gymnasium should include additional space for holding lifting devices.

RECHARGING OF ELECTRICAL WHEELCHAIRS

Inpatients normally using electric wheelchairs or motorised chairs may need somewhere to park and recharge their equipment whilst in hospital. In inpatient and rehabilitation units where wheelchair use is significant, provide sufficient facilities to recharge patients' electric wheelchairs and motorised chairs overnight including power outlets. Ideally wheelchair parking areas should not impede corridor space.

SPECIFIC NEEDS IN INPATIENT UNITS

To avoid unnecessary transport to and from the main unit, space and facilities for ward-based therapy could be considered. Include but not confined to:

- 10m corridor length for walking tests



- Storage for equipment & mobility aids
- Ward-based treatment space larger than the area around a patient's bed
- Access to stairs for practising crutches
- Access to write-up area and storage of resource material.

STAFFING

The staffing operational policy assumptions made in this guideline are:

- Office space will be provided where required for clerical and allied health staff including workstations in open treatment areas for immediate documentation.
- “hot” desks will be available for students and visiting staff
- Staff wearing uniforms will arrive at the Unit in uniform however shower / change facilities will be required for comfort reasons as much of the work is labour-intensive.

The number of staff will depend on the needs of the individual hospital / service. Staff mix may include – either permanently or when required by referral:

- Director of Rehabilitation Medicine and/or the head of each therapy discipline
- Medical staff
- Nursing staff
- Physiotherapists
- Occupational therapists
- Social workers
- Speech pathologist
- Neuropsychologist (where brain impairment is an issue)
- Clinical psychologist (for treatment of complex behavioural disturbances)
- Prosthetists / Orthotists
- Aides
- Podiatrist
- Sport & Recreational Officers
- Dietitians
- Diversional Therapist
- Vocational Trainers
- Case Co-Ordinators
- Rehabilitation Engineers
- Clerical staff
- Housekeeper and cleaning staff
- Artisan and transport staff.
- Students of various disciplines

TEACHING

Most units will be involved with undergraduate and / or postgraduate training. Attendance will be variable. Students will need write-up space near the area of activity and numbers will need to be ascertained. Facilities will include a workstation for the supervisor and student lockers.

EMERGENCY EQUIPMENT

- Oxygen (wall panels or cylinders) for oxygen-dependent patients
- Cardiac monitor for cardiac patients
- Resuscitation trolley/s
- Medical gas service panels in selected locations for emergency use.

35.2.3 *Functional Areas*

The Rehabilitation – Allied Health services may include Dietetics, Hydrotherapy, Occupational Therapy, Physiotherapy, Podiatry, Psychology, Speech Pathology, and Social Work.

The Rehabilitation – Allied Health Unit will include the following Functional Areas:

- Entry, Reception and Waiting areas
- Patient accommodation areas including Lounge and Dining areas



- Patient Therapy areas which may be shared
- Support areas including Utilities, Cleaner's Room, Disposal, Pantry and Store Rooms
- Staff areas including Offices, Meeting Rooms, Staff Change and Toilets.

OCCUPATIONAL THERAPY:

Where an Occupational Therapy service is to be provided the following functions or facilities shall be allowed for:

- Therapy areas
- Office / Administrative areas
- Hand-washing facilities
- Availability of Accessible Toilet

PHYSIOTHERAPY:

Where a Physiotherapy service is to be provided the following facilities shall be allowed for:

- Individual treatment area or areas that provide for patient privacy
- Staff hand-washing facilities close to each treatment space; this may serve several treatment spaces
- An exercise area with facilities appropriate for the level of intended service
- Clean linen storage; in the form of built-in cupboards, cabinets or on mobile storage trolleys
- Storage for equipment and supplies
- Storage for soiled linen and waste
- Patient dressing and changing with secure storage of clothing and valuables, showering and toilet facilities
- Ice-making facilities to be available in or near the department
- Wall oxygen in patient waiting areas depending on service mode, and access to appropriate outdoor therapy areas.

ENTRY AREAS:

The entry canopy is required to provide dry access to the building. Design considerations include:

- Ensuring the covered area is large enough to allow vehicles such as taxis, buses, cars, and emergency vehicles to manoeuvre beneath it, and is structured to facilitate free concurrent traffic flow for multiple vehicles
- The use of clear roofing material to maximise natural light inside the building.

The external Entrance Area, best sited at ground floor level, is the first point of contact for members of the community and should display clear directions informing people where to proceed. Design considerations include:

- Vehicle access is required at all times
- Entry facilities should be suitable for people with disabilities, such as limited mobility and poor vision
- The entry can incorporate an airlock space and may have sensor or automatically opening doors to facilitate access.

PATIENT LOUNGE AREAS:

A Lounge Area is required for therapeutic and social purposes. These include reading, writing and watching television or videos. The Lounge, Kitchenette and Dining Areas may be combined in a large Multi-purpose Day Room or in separate but adjacent areas.

SERVICE AREAS:

The service entry is required so that deliveries to the facility do not have to pass through the main entrance of the building. It may also provide ambulance service access and egress in



emergency circumstances.

Design considerations include:

- An area large enough to allow vehicles including ambulances to turn and manoeuvre
- A large space with blank wall space for temporary storage of items such as linen or food trolleys, furniture or equipment for repair
- Access to soiled linen should only be available through the service entry or in large institutions separate zones may be available for the various utilities and deliveries
- Adequate infection control
- A loading bay that gives access for delivery staff and staff loading equipment and mobility aids into vehicles, located away from the client entry point.

WHEELCHAIR PARKING:

An area should be provided near the entrance for parking wheelchairs and electric scooters. The wheelchair parking area requires power outlets for recharging of electric wheelchairs and scooters when they are not in use. Cupboards may be provided over wheelchairs for additional storage.

35.2.4 *Hydrotherapy Pool*

The need for a hydrotherapy pool should be carefully considered. The cost per unit of treatment is high and conditions for which hydrotherapy is the only appropriate treatment are limited. Hydrotherapy pools should only be provided where patient numbers are appropriate and where the pool is required for a minimum of four hours per day, five days per week.

POOL SIZE

The recommended pool size is 7500mm x 4500mm. A rectangular shape is recommended, with the length of the pool generally one and a half times the width.

POOL DEPTH

To optimise the use of a pool for therapeutic purposes, consideration should be given to the average height of both the smallest users and the tallest users. The recommended minimum depth is 800mm at the shallow end and the maximum depth is 1500mm at the deep end

GRADIENT OF POOL FLOOR

The floor of the pool should contain no steps.

ENTRY TO POOL

Steps are the accepted method of entry and exit and can also provide functional training. Steps should be placed at the shallow end of the pool and should not intrude into the working area of the pool.

A hoist should be provided and placed at a depth where the therapist can stand and maintain body balance to float the patient off and on the hoist without difficulty.

TEMPERATURE

The water temperature should be maintained in the range of 30 to 35 degrees Celsius with an optimum temperature of 34-35 degrees for most conditions being treated. The ambient temperature should be lower than the water temperature for comfort of pool side staff and patients.

Humidity control needs to be provided to minimise condensation. A pool cover may be considered to assist in maintaining water temperature and to reduce heating costs.



REFLECTION

The lighting should allow the floor of the pool to be seen and should minimise reflection / glare off the surface of the water.

POOL SURROUNDS

Non-slip surfaces shall be used for the pool surrounds. Ample space should be provided around the pool for staff and patient movements as well as to provide space for patients who are waiting to enter the pool or relaxing after leaving the pool. The building structure, including all fittings, should be rust-proof.

CHANGE FACILITIES

Change facilities will be required for patients and staff; the size will be dependent upon the size of the pool and the expected number of users.

EMERGENCY CALL SYSTEM

Adequate emergency call points should be provided. Emergency call points should also be accessible from the concourse area and from within the pool.

PLANT ROOM

A Plant Room will be required for water treatment plant and any associated equipment.

FOOTBATHS/ SHOWERS

Footbaths, foot sprays or showers may be considered in the design of the pool area.

SECURITY

Security design should address:

- Personal security of patients and staff
- Property security of patients and staff
- Unit premises and equipment
- Emergency access and egress

STORAGE

Design should address the following storage requirements:

- Therapy equipment
- Consumables, and pool supplies
- Pool aids and exercise equipment
- Personal property of patient and staff

35.2.5 *Functional Relationships*

The most critical relationship in circumstances where Rehabilitation Medicine is an established service is with its own Inpatient Unit/s. However, consideration must also be given to necessary relationships with those units most utilising therapy services in terms of the logistics of patient travel and transport. In some instances there may need to be duplication of facilities. The Unit should have ready access to allied health units such as speech pathology, social work and the like where those units are not represented or located within the Unit itself. Physiotherapy areas will require ready access to Orthopaedic Clinics.

35.3 Design

35.3.1 *General*

The design philosophy of the Rehabilitation Unit should convey a friendly and inviting



environment and should encourage community members to utilise the available facilities for rehabilitation purposes. A non-institutional, safe and supportive environment needs to be promoted. Building design must be flexible and adaptable to enable the unit to cater for varying client and service needs.

Buildings should be designed to cope with a wide range of possible conditions. The aim is to provide an environment that will allow the maximum mobility possible for each person. The Rehabilitation Unit will include access for disabled persons.

35.3.2 Accessibility

EXTERNAL

If at ground floor unit with its own entry, an undercover set-down bay should be provided at the entrance to the Unit for those outpatients who arrive by bus or car and for return of loan equipment with parking for people with disabilities. Access to other units in the facility should be convenient and covered.

INTERNAL

The Unit should be accessible from the inside hospital's main entrance. Wheelchair access is required to all patient-accessed areas of the Unit. Access equipment is desirable.

PARKING

Drop-off and parking for people with disabilities is recommended.

35.3.3 Environmental Considerations

ACOUSTICS

The majority of the therapy areas of the Unit are open space. Further, the activities undertaken therein require hard, impervious flooring (timber or sheet vinyl) and generate noise. Other areas within the Unit require acoustic privacy in order to be effective or prevent embarrassment such as Respiratory Treatment Rooms and rooms used for women's health disorders. Account should be taken of the potential sources of noise within as well as from outside the Unit. Solutions to the various acoustic characteristics and requirements include:

- Use of curtains and other soft fabrics
- Use of solid core doors
- Co-locate potentially noisy areas
- Strategic positioning of storage areas to create a sound buffer
- Carpet in patient areas is not recommended.
- Speech Pathology rooms have specific requirements in order to operate effectively.

Please refer to Part C, 9.2 "Acoustic Solutions for Healthcare Facilities"

LIGHTING

Natural lighting is essential in large treatment areas such as gymnasiums and in Staff Rooms. Consideration should be given to lighting levels for patients who are visually impaired.

CLIMATE CONTROL

Good temperature control and ventilation in treatment areas as work can be arduous for both patients and staff. It is important to remember that certain patients such as those with spinal cord injuries are unable to regulate their body temperature. It is therefore imperative that the gymnasium is air-conditioned. Regardless of orientation, there must be means of sun control.



INTERIOR DESIGN

The rehabilitation process is often a long one with patients commencing attendance at the Unit as inpatients and continuing as outpatients. Consequently, the Unit should seek to provide a welcoming and supportive environment as it is essential that patients feel positive about returning to the Unit on a regular basis.

35.3.4 *Space Standards and Components*

Some examples of the average circulation space sizes required for ambulant people using the following mobility aids are:

- One person using a walking stick - 750 mm width
- One person using elbow crutches - 900 mm width
- One person using two walking sticks - 800 mm width
- One person using crutches - 950 mm width
- One person using walking frame - 900 mm width

35.3.5 *Safety & Security*

SAFETY

The patient population of this unit in particular requires special consideration in terms of safety as they will be at once disabled or incapacitated and yet are being encouraged to be mobile and self-sufficient. Every aspect of unit design with regard to finishes, surfaces and fittings must be assessed to determine the potential for accidents or hazards to both patients and staff. Sanitary facilities are where most accidents or mishaps occur, to both patients and staff. In particular, consider:

- Slippery or wet floors
- Protrusions or sharp edges
- Stability and height of equipment or fittings
- Choice of floor covering
- Handrails and wheelchair access are mandatory.
-

SECURITY

Security aspects should be considered for after hours access control if used by the general public for classes, eg hydrotherapy.

35.3.6 *Finishes*

It is essential that floor finishes are non-slip and do not create “drag” for patients using walking aids and wheelchairs.

Refer also to Part C of these Guidelines.

35.3.7 *Fixtures & Fittings*

Height of light switches need to abide by accessibility codes. Handrails on both sides of corridors are recommended.

Also refer to part C of these Guidelines and to the Room Data Sheets (RDS) and Room Layout Sheets (RLS) for further detailed information

35.3.8 *Building Services Requirements*

INFORMATION TECHNOLOGY AND MANAGEMENT

IT infrastructure must be compatible with overall hospital systems. There must be sufficient data points and power for computers and student laptops for direct entry of electronic records in the future and for viewing of digital images. (PACS).



DURESS ALARM SYSTEM

Locate at Reception and in Treatment Areas.

NURSE & EMERGENCY CALL SYSTEMS

Nurse call systems in all individual rooms and cubicles including those in Gymnasiums. Staff Assist and Emergency Call at regular intervals. Annunciators (non-scrolling) located in Reception, corridors, treatment areas and Staff Room.

35.4 Components of the Unit

35.4.1 *General*

The Rehabilitation – Allied Health Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.

35.4.2 *Non Standard Components*

ADL COMPUTER ROOM

Description and Function

The ADL Computer Room provides an area for activities of daily living (ADL) patient assessment and training for computer activities. A range of variable height computer desks will be included. Doors to this room are optional.

Location and Relationships

The ADL computer room may be located adjacent to the ADL Lounge or other ADL assessment areas.

Considerations

Provide adjustable height computer workstations with the following:

- A variety of desktop and laptop computers
- Printer and telephone
- Power and data outlets for each

BAY – DRINKING WATER

Description and Function

The Bay – Drinking Water provides a recessed area for a drinking water unit.

Location and Relationships

The bay will be located in public access areas close to Waiting areas.

Considerations

The Bay will include:

- Wall and floor finishes suitable for wet areas
- Drinking water fountain, with hydraulic connection to drinking water
- Fittings may include a dispenser for cups and waste bin.

OCCUPATIONAL THERAPY/ WORKSHOP ROOMS

Description and Function

The Occupational Therapy Rooms are large spaces provided to enable a range of static and dynamic activities to take place. The rooms may include space for table based activities, such



as upper limb activities or functional mobility activities such as woodwork or splinting activities in a workshop environment.

The Rooms area will be sized according to the number of patients to be accommodated, the activities to be undertaken and will be dependant on Operational Policy and service demand.

Location and Relationships

The Occupational Therapy area may be located adjacent to rehabilitation therapy areas, with ready access to waiting and amenities areas.

Considerations

Fittings and Equipment required in this area may include:

- Benches with inset sink, wheelchair accessible
- Shelving for storage of equipment or tools
- Tables, adjustable height
- Chairs, adjustable height
- Hand-washing basin with liquid soap and paper towel fittings
- Pinboard and whiteboard for displays
- Sufficient GPOs for equipment or tools to be used in activity areas

Workshop areas will require suitable air extraction and exhaust for woodwork activities.

OPTICAL SHOP

Description/ Function

An Optical Shop is where clients and patients can have eye tests and purchase prescribed spectacles. It has a combined clinical and retail function.

Location and Relationships

The Optical Shop shall be located near the main entry and among other retail outlets if provided within a larger facility. A glazed shop-front is recommended and shall be positioned next to the major traffic (main corridor).

Considerations

The following areas and functions shall be included in an optical shop:

- Large and well-lit open plan area with display cabinets including a small counter for cashier and paperwork
- A consult room for eye test including slit lamp, light box (or projector for projected image), handwashing basin, drug refrigerator etc.
- Workroom for fitting/ adjusting spectacles
- Facilities for disinfection, sterilisation and instruments reprocessing if required by the Operational Policy
- An office for the optometrist (or can be part of the consult room if sufficient space is provided)
- Storage for spectacles, patient records, stationery etc.
- Access to toilet facilities (can be shared if located in a larger premise)

PLANT ROOM – WATER TREATMENT

Description/ Function

The Water Treatment Plant Room is a lockable room for water treatment plant equipment used in the hydrotherapy pool and may include booster pumps and filters.

Plant equipment must be installed according to manufacturer's specifications.

Location and Relationships



The Water Treatment Plant Room should be located in close proximity to the Hydrotherapy Pool with easy access for staff to monitor and service the water treatment systems.

Considerations

Design Requirements include the following:

- Ventilation, exhaust and/or airconditioning must be designed to accommodate the heat loads of the specified equipment
- High level sound isolation is required to ensure noise generated from this room does not invade the pool area
- Structural Engineer's assessment must be sought for floor load bearing capacity with respect to water treatment plant equipment
- Service access will be required around the perimeter of all plant equipment
- The room will require drainage



35.5 Schedule of Accommodation

35.5.1 Rehabilitation – Allied Health Unit Generic Schedule of Accommodation Schedule of Accommodation for a Rehab – Allied Health Unit for Levels 4-6

ROOM/SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ENTRY/RECEPTION							
RECEPTION	yes			1 x 10	1 x 12	1 x 15	
STORE – PHOTOCOPY/STATIONERY	yes			1 x 8	1 x 8	1 x 8	
STORE – FILES	yes			1 x 4	1 x 6	1 x 10	
WAITING	yes			1 x 20	1 x 40	1 x 50	
BAY – PATIENT HOLDING	yes				2 x 10	4 x 10	
BAY – DRINKING FOUNTAIN				1 x 1	1 x 1	1 x 1	
BAY – PUBLIC TELEPHONE	yes			1 x 2	1 x 2	1 x 2	
BAY – STROLLER/WHEELCHAIR PARK	yes			1 x 4	1 x 4	2 x 4	
PATIENT TOILET	yes			1 x 4	1 x 4	2 x 4	
TOILET - ACCESSIBLE	yes			1 x 5	2 x 5	2 x 5	
OPTICAL SHOP				1 x 20 optional	1 x 30 optional	1 x 40 optional	

ALLIED HEALTH

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
AUDIOLOGY TESTING ROOM	yes			1 x 14	1 x 14	1 x 14	
AUDIOLOGY OBSERVATION ROOM	yes			1 x 9	1 x 9	1 x 9	
OFFICE/TREATMENT – SPEECH PATHOLOGY	yes			1 x 14	2 x 14	2 x 14	
OBSERVATION ROOM – SPEECH PATHOLOGY	yes			1 x 9	1 x 9	1 x 9	
STORE – SPEECH PATHOLOGY	yes			1 x 6	1 x 6	1 x 8	
OFFICE/CONSULT – CLINICAL PSYCHOLOGY	yes			1 x 14	1 x 14	1 x 14	Depends on service demand
OFFICE – DIETETICS	yes			1 x 9	1 x 9	1 x 12	
STORE – DIETETICS	yes			1 x 6	1 x 6	1 x 9	
OFFICE – SOCIAL WORKER	yes			1 x 9	1 x 9	1 x 12	
PODIATRY TREATMENT	yes			1 x 14	1 x 14	1 x 14	
GROUP ROOM	yes			1 x 15	1 x 15	1 x 20	



OCCUPATIONAL THERAPY

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
ADL BATHROOM	yes			1 x 12	1 x 12	2 x 12	
ADL LOUNGE	yes			1 x 12	1 x 12	2 x 12	
ADL BEDROOM	yes			1 x 15	1 x 15	2 x 15	
ADL COMPUTER ROOM				1 x 15	1 x 15	1 x 20	
ADL KITCHEN	yes			1 x 12	1 x 12	2 x 12	
ADL LAUNDRY	yes			1 x 8	1 x 8	2 x 8	
CLEAN-UP ROOM	yes				1 x 7	1 x 10	For returned loan equipment
SPLINT ROOM	yes				1 x 14	1 x 14	
OCCUPATIONAL THERAPY ROOM - LIGHT - ADULT				1 x 28	1 x 42	1 x 70	7m2 per patient
OCCUPATIONAL THERAPY ROOM - LIGHT - PAEDS					1 x 40	1 x 60	10m2 per patient
STORE – MATERIALS & EQUIPMENT	yes			1 x 12	1 x 14	1 x 25	
STORE – TIMBER & METAL	yes similar				1 x 20	1 x 25	If workshop is provided
STORE – EQUIPMENT (WHEELCHAIRS)	yes			1 x 10	1 x 15	1 x 20	

PHYSIOTHERAPY

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
GYMNASIUM	yes			1 x 80	1 x 120	1 x 160	6m2 per patient
STORE – GYM EQUIPMENT	yes			1 x 8	1 x 15	1 x 20	
BAY – WATER FOUNTAIN				1 x 1	1 x 1	1 x 1	Disabled access
OFFICE – WRITE UP BAY	yes			1 x 6	1 x 9	1 x 15	May be part of the Gym
TOILET – ACCESSIBLE	yes			2 x 5	2 x 5	2 x 5	Access from Gym
PATIENT BAY TREATMENT	yes			2 x 10	4 x 10	6 x 10	Non acute treatment; number depends on service demand
TREATMENT ROOM	yes			1 x 14	1 x 14	1 x 14	Respiratory & treatments that require privacy
BAY – MOBILE EQUIPMENT	yes			1 x 4	1 x 10	1 x 10	
BAY – HANDWASH – TYPE B	yes			2 x 1	4 x 1	6 x 1	
PLASTER/ SPLINT ROOM	yes			shared	1 x 14	1 x 14	
CLEAN UTILITY	yes			shared	1 x 14	1 x 14	
STORE – EXERCISE EQUIPMENT	yes			1 x 14	1 x 20	1 x 20	
DISCOUNTED CIRCULATION				30%	32%	32%	



HYDROTHERAPY

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
OFFICE – SINGLE PERSON	yes			1 x 9	1 x 9	1 x 9	Manager
OFFICE – WORKSTATION	yes			1 x 6	2 x 6	2 x 6	Qty according to staffing establishment
PATIENT SHOWER – MALE/ FEMALE	yes			2 x 3	2 x 6	2 x 10	Separate Male/Female areas adjacent to Pool concourse
POOL & CONCOURSE	yes			1 x 90	1 x 240	1 x 240	
STORE – HYDROTHERAPY POOL	yes			1 x 9	1 x 16	1 x 16	Pool equipment
PATIENT SHOWER – ACCESSIBLE	yes			2 x 5	2 x 5	2 x 5	
PATIENT TOILET – ACCESSIBLE	yes			2 x 5	2 x 5	2 x 5	
PATIENT CHANGE - MALE/ FEMALE	yes			2 x 10	2 x 24	2 x 24	
STAFF CHANGE – MALE/ FEMALE	yes similar			2 x 10	2 x 12	2 x 14	Similar to Change-Staff
PLANT ROOM – WATER TREATMENT				1 x 10	1 x 20	1 x 20	
DISCOUNTED CIRCULATION				20%	20%	20%	

SHARED CLINICAL SUPPORT AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
MEETING/ INTERVIEW ROOM	yes			1 x 12	2 x 12	2 x 12	
CONSULTING/ EXAMINATION ROOM	yes			1 x 14	2 x 14	2 x 14	
PLASTER/SPLINT ROOM	yes			1 x 14	1 x 14	1 x 14	
BAY – LINEN	yes			1 x 2	2 x 2	2 x 2	
BAY – RESUSCITATION TROLLEY	yes			1 x 2	1 x 2	1 x 2	
CLEAN UTILITY	yes			1 x 12	1 x 12	1 x 12	
DIRTY UTILITY – SUB	yes			1 x 8	1 x 8	1 x 8	
DISPOSAL ROOM	yes			1 x 8	1 x 8	1 x 8	
CLEANER'S ROOM	yes			1 x 5	1 x 5	1 x 5	

STAFF AREAS

ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
OFFICE – DIRECTOR	yes similar			1 x 12	1 x 12	1 x 12	
OFFICE – CHIEF OCCUPATIONAL THERAPIST	yes similar			1 x 9	1 x 12	1 x 12	
OFFICE – WORKSTATIONS – OT	yes similar			1 x 6	2 x 6	4 x 6	Qty depends on staffing establishment
OFFICE – CHIEF PHYSIOTHERAPIST	yes similar			1 x 9	1 x 12	1 x 12	



ROOM/ SPACE	Standard Component			Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
OFFICE – 2 PERSON SHARED (PHYSIO)	yes similar			1 x 12	1 x 12	1 x 12	
OFFICE – WORKSTATIONS – PHYSIO	yes similar			1 x 6	2 x 6	4 x 6	Qty depends on staffing establishment
MEETING ROOM	yes			1 x 15	1 x 20	1 x 25	
STAFF PROPERTY	yes			2 x 3	2 x 6	2 x 6	
STAFF ROOM	yes			1 x 20	1 x 36	1 x 40	
STAFF SHOWER	yes			2 x 3	2 x 3	2 x 3	
STAFF TOILET	yes			2 x 3	2 x 3	2 x 3	
DISCOUNTED CIRCULATION				25%	30%	30%	

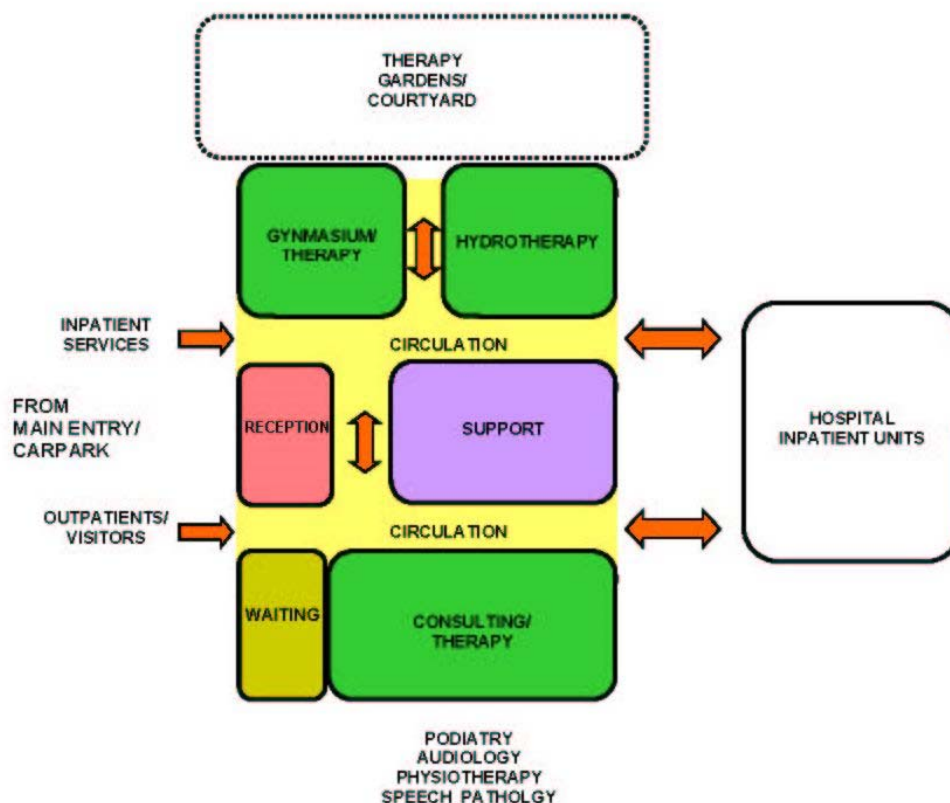
Please note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



35.6 Functional Relationship Diagram

35.6.1 Rehabilitation – Allied Health Unit Functional Relationship Diagram



35.7 References and Further Reading

- Guidelines for Design and Construction of Health Care Facilities, 2010 (Includes ANSI/ASHRAE/ASHE Standard 170-2008, Ventilation of Health Care Facilities); refer to Section 2.1 Common Elements for Hospitals (Ventilation Hoods) and Section 2.2 (Laboratory Services)
- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



36.0 Sterile Supply Unit (SSU)

36.1 Introduction

36.1.1 General

A Hospital must provide adequate facilities for cleaning, sterilisation and storage of equipment and instruments to ensure the care and safety of patients, and the safety of staff, at all times. The sterilisation process may be carried out entirely or partially on-site, the latter relying on an external supply source to regularly restock the hospital sterile goods store/s. The scale of operation can be small or large, dependent upon the requirements of the serviced departments, for example, an Operating Unit requires the services of a Theatre Sterile Supply Unit (TSSU) or a full Central Sterile Supply Unit (CSSU), whereas an Acute Inpatient Unit requires only a basic sterile supply service.

36.2 Planning

36.2.1 Operational Models

The size and role of the sterile goods supply service shall be clearly defined in the Operational Policy Statement. Operational policies will be drafted on project specific basis by users and staff of the Sterile Supply Unit, the Operating unit and all other relevant staff associated with this service.

36.2.2 Functional Areas

The Central Sterile Supply Unit will include the following functional areas or zones:

- Receiving Area where soiled articles for recycling are received on trolleys from Units throughout the facility
- Decontamination Area where all articles are sorted, rinsed, ultrasonically cleaned or mechanically washed then mechanically dried; this area may also include cleaning of the delivery trolleys
- Packing Area (Clean Workroom) where the clean instruments, equipment and other articles are sorted, counted and packaged for sterilising
- Sterilising and Cooling Area where sterilisers are loaded, set into operation and unloaded following completion of the sterilising cycle
- Despatch Area where sterile stock is held prior to despatch to Units in the facility; distribution trolleys may also be located in this area
- Administrative Areas including Offices or Workstations
- Staff Amenities which includes Staff Toilets, Change Rooms and Staff Rooms; these may also be shared with Operating Unit if convenient.

ADMINISTRATIVE AREAS

A separate room, or space within the Workroom, shall be provided for routine clerical/ administrative procedures. The provision of a separate office will depend upon the size of the unit/department. An area for write-up and storage of stationery and files shall be provided.

CLEAN WORKROOM / PACKING AREA

The Clean Workroom will provide packing tables and equipment for assembly of cleaned and dry instruments into sets, wrapped and sealed ready for sterilisation. The Clean Workroom shall be in a separate area to instrument preparation. Linen folding, where required, shall be carried out in a separate room, preferably the laundry. The air handling system shall be filtered or discharged direct to the outside to prevent lint build-up and related industrial and fire safety problems. High level supply and low level exhaust is the recommended airflow pattern, with localised high level extraction for heat removal only. Special attention shall be given to the height and depth of workbenches to allow staff to work sitting or standing. Views to the outside are considered highly desirable. A handwashing basin shall be provided at the perimeter of the room to avoid water contamination of wrapped instrument sets.



DISTRIBUTION

A distribution point, if required, shall be provided in the form of a staffed counter or stable door, or a pass through cupboard from the sterile store into an adjacent service corridor. No general access is allowed to the SSU.

RECEIVING AND DECONTAMINATION AREAS

The Receiving area will be used for return of used trolleys and instruments to the Unit for processing. The Decontamination area is where instruments are rinsed, ultrasonically cleaned if appropriate, washed/ decontaminated through instrument processing equipment and dried. Special instruments may be hand washed in this area.

STAFF AMENITIES

Showers, toilets and secure lockers for staff employed in this area shall be provided. These facilities shall be conveniently located and may be shared with the Operating Unit staff in cases where the Sterile Supply Department is attached to the Operating Unit. A lunch room can be a shared central facility outside the Sterile Supply Department. Access to a training room in close proximity to SSU for formal training activities is recommended. Facilities shall also be provided in the Change Room to store caps, overalls and footwear protection. 'Barrier' principles are observed when entering the unit.

STORAGE

A room shall be provided for the storage of processed sterile packs etc. Ventilation, humidity and temperature control is required. Supply air pressure shall be positive with respect to surrounding areas and the level of filtration shall equal or exceed that of the Operating Room. Storage cupboards shall be fitted with doors. A separate room shall be provided to store stock that is 'clean' but not sterile. Access to this room shall be provided from outside the unit for stocking, and from within the unit for drawing stock to process. Space shall also be provided for storing trolleys as required.

36.2.3 *Functional Relationships*

The Sterile Supply Unit (SSU) should be located with direct or close access to the Operating Unit. It should have ready access to Supply Unit and Linen Handling Unit for delivery of supplies. Access to the CSSU should be restricted to authorised personnel only. Refer also the Functional Relationships Diagrams in this section.

36.3 Design

36.3.1 *General*

The planning of the facility must provide for separate clean and dirty working areas with a defined unidirectional workflow that prevents cross contamination of items being processed.

36.3.2 *Communications*

A telephone or intercom system should be installed within the Clean Workroom and/or Office to allow communication with outside personnel and departments, without breaching the "clean barrier" regime.

36.3.3 *Finishes*

Floor finishes shall be easy to clean. Wet areas shall have a suitable non slip finish. Welded sheet vinyl, coved up the wall, is recommended. Wall finishes shall also be easy to clean, with special consideration for damage by trolleys. Windows, if provided, must be unable to be opened. The ceiling shall be of a flush type and sealed against the walls.



36.3.4 *Building Service Requirements*

AIR FILTRATION

Where the Sterile Supply Unit is attached to an Operating Unit, ventilation shall be provided by a treated air supply, with compliant air-conditioning systems and HEPA filters.

LIGHTING

Light fittings shall be fully recessed and selected to prevent dust and insects from entering. Light levels shall be not less than 400 lux.

SIGNAGE

Door signs are required to provide instruction as to the closed nature of the department and the limited access points for services.

36.4 Components of the Unit

36.4.1 *Introduction*

The Central Sterile Supply Unit will consist of a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets.

36.4.2 *Non-Standard Components*

Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

DECONTAMINATION

Description and function

The Decontamination area shall contain work space and equipment for sorting, decontamination and cleaning medical and surgical equipment, and for disposal of used/soiled material. It shall include hand-washing facilities. The Decontamination functions may also be provided in a Clean-Up Room. There will be a need to provide special types of cleaning equipment, dependent on the level of service, for example, ultrasonic cleaners, anaesthetic tubing washers and dryers.

Location and Relationships

The Decontamination area should be located between the Receiving area and the Clean Workroom/ Packing area.

Considerations

The Decontamination area will require the following finishes:

- Walls and ceiling that are smooth, impervious, and easily cleanable
- Floors that are impervious and non slip.

Fittings and fixtures located in this area will include the following:

- Stainless steel deep bowl sinks with tubing manifolds (air and water) and additional water outlets for water pistols
- Stainless steel benches
- Instrument and tubing washers/ decontaminators, according to service requirements
- Ultrasonic cleaner, according to service requirements
- Instrument and tubing dryers, according to service requirements
- Staff handwashing basin
- Exhaust air extraction over sinks and equipment doors.

CLEAN WORKROOM/ PACKING

Description and function



The Clean Workroom/ Packing area is where cleaned and dried instruments are removed from the decontaminating/ drying equipment, sorted, assembled into sets and packaged, ready for sterilising.

Location and Relationships

The Clean Workroom/ Packing area will be located between the Decontamination area and the Sterilising area, with a unidirectional workflow from contaminated to clean areas.

Considerations

Refer to Functional Areas above for inclusions in this room. Consideration should be given to ergonomics aspects of packing tables, adjustable height tables and equipment is recommended.

STERILISING AND COOLING

Description and function

The Sterilising and Cooling Area provides accommodation for sterilisers and parking space for steriliser and cooling trolleys. Following unloading of the steriliser, packs should not be handled until cool. Specialised sterilisers such as ethylene oxide, require separate installation and accommodation. Low temperature specialised sterilisers require separate installation according to manufacturer's recommendations. The size of the area will be dependent on the number and type of sterilisers installed.

Location and relationships

The Sterilising and Cooling area should be located between the Sorting and Packing area and the Despatch area. Special consideration shall be given to the location of the sterilisers. External access to a steriliser duct is highly desirable so that repairs or routine maintenance do not interfere with the activities within the Workroom. A duct enclosure can also minimise heat build-up within the Workroom. An exhaust over the front of the steriliser(s) shall also be considered, to extract both heat (cabinet) and steam (opening door).

Considerations

An exhaust over the front of the steriliser(s) shall be considered, to extract both heat (cabinet) and steam (opening door).



36.5 Schedule of Accommodation

36.5.1 Supply Unit Generic Schedule of Accommodation

Schedule of Accommodation for a Sterile Supply Unit for 2 & 4 Sterilisers

ROOM/SPACE	Standard Component				Qty x m2	Qty x m2	Remarks
					2 sterilisers	4 sterilisers	
RECEPTION	yes				1 x 9	1 x 12	
STORE – PHOTOCOPY/STATIONERY	yes				1 x 8	1 x 8	
OFFICE – MANAGER	yes				1 x 9	1 x 12	
LOAN EQUIPMENT STORE	yes				1 x 9 optional	1 x 12 optional	For loaned instrument sets from suppliers
RECEIVING AREA	yes				1 x 20	1 x 35	Return of used items
TROLLEY WASH	yes				1 x 8	1 x 15	Similar to Clean-up; may use automated trolley wash unit
DISPOSAL ROOM	yes				1 x 8	1 x 8	Access to external corridor
DECONTAMINATION					1 x 50	1 x 80	
CLEAN WORKROOM/ PACKING					1 x 50	1 x 80	
STERILISING – LOADING & COOLING					1 x 50	1 x 120	Includes Plant space
STERILISER – ETO					1 x 10 optional	1 x 10 optional	Low temperature – Ethylene oxide; free standing
STERILISER – LOW TEMPERATURE					1 x 6 optional	1 x 15 optional	Free standing; includes peracetic acid/ plasma types
STORE – STERILE STOCK	yes				1 x 20	1 x 40	For supplying hospital units
STORE – STERILE STOCK (O.R)	yes				1 x 40 optional	1 x 80 optional	Adjust to 10m2 per O.R; may be located in the Operating Unit
STORE – GENERAL	yes				1 x 12	1 x 20	Bulk goods receipt, de-cartoning; Linen
CLEANER'S ROOM	yes				1 x 5	1 x 5	Within unit
DISCOUNTED CIRCULATION					10%	10%	

STAFF AREAS

ROOM/SPACE	Standard Component				Qty x m2	Qty x m2	Remarks
					2 sterilisers	4 sterilisers	
STAFF TOILET	yes				2 x 3	4 x 3	
STAFF SHOWER	yes				2 x 2	4 x 2	
STAFF CHANGE – MALE/FEMALE	yes				2 x 14	2 x 20	includes lockers
STAFF ROOM	yes				1 x 28	1 x 40	
MEETING ROOM	yes				1 x 20 optional	1 x 30	
DISCOUNTED CIRCULATION					20%	20%	

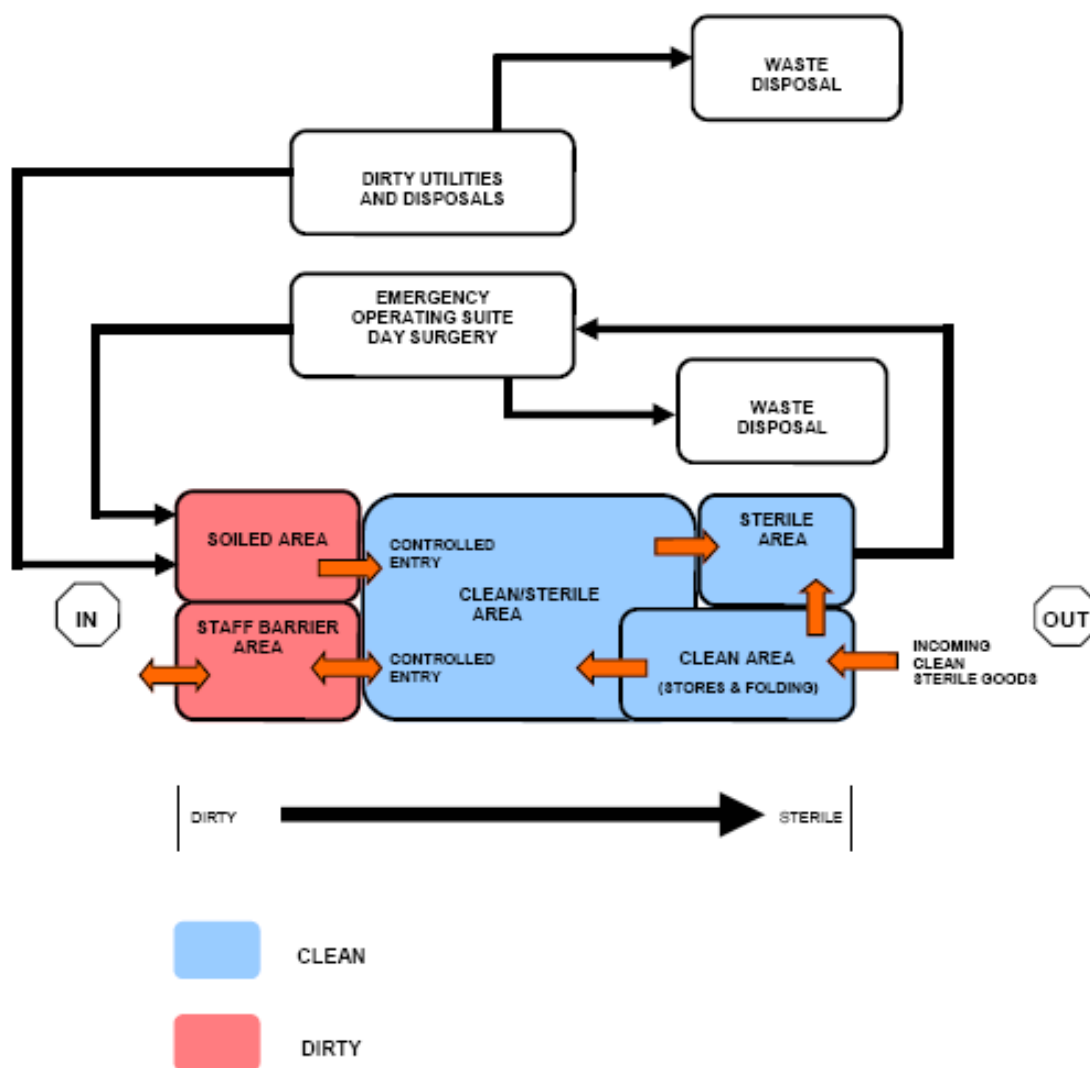


Please note the following:

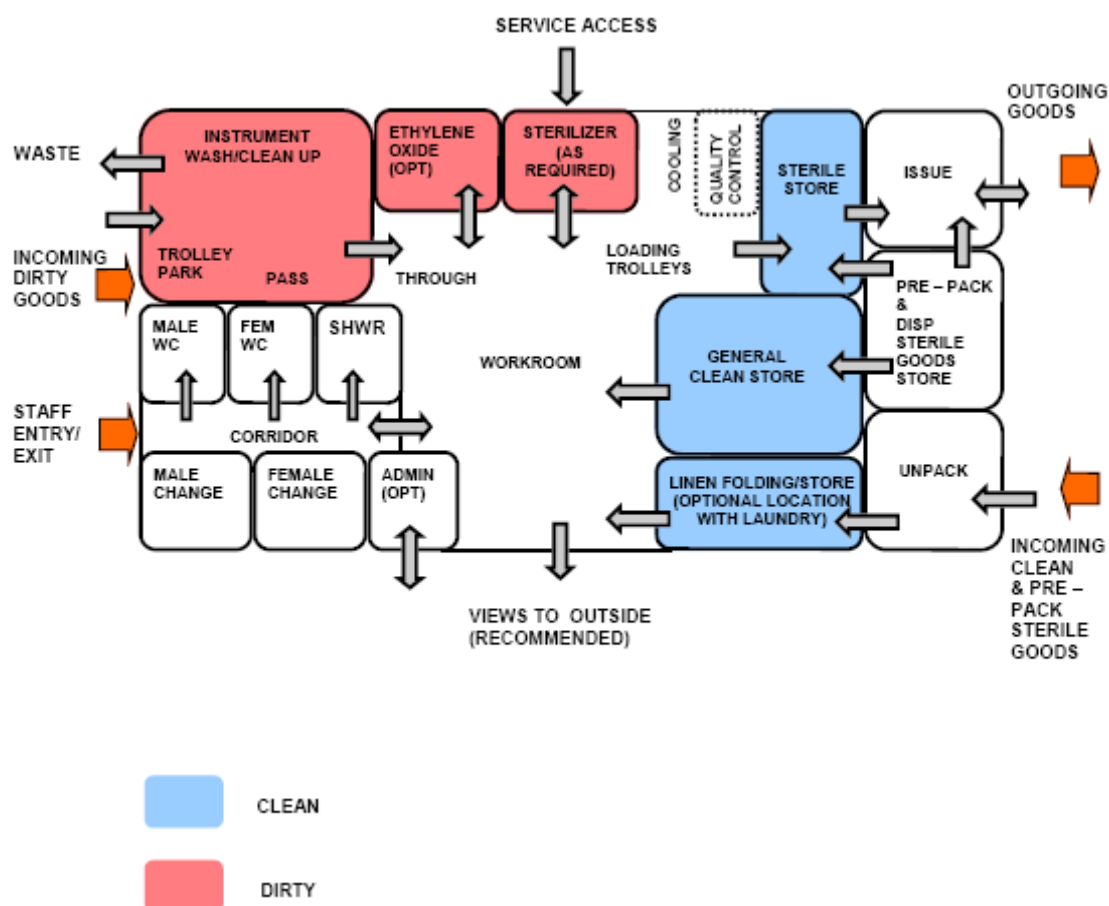
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- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

36.6 Functional Relationship Diagram

36.6.1 Sterile Supply Unit Functional Relationship Diagram (Flow Diagram)



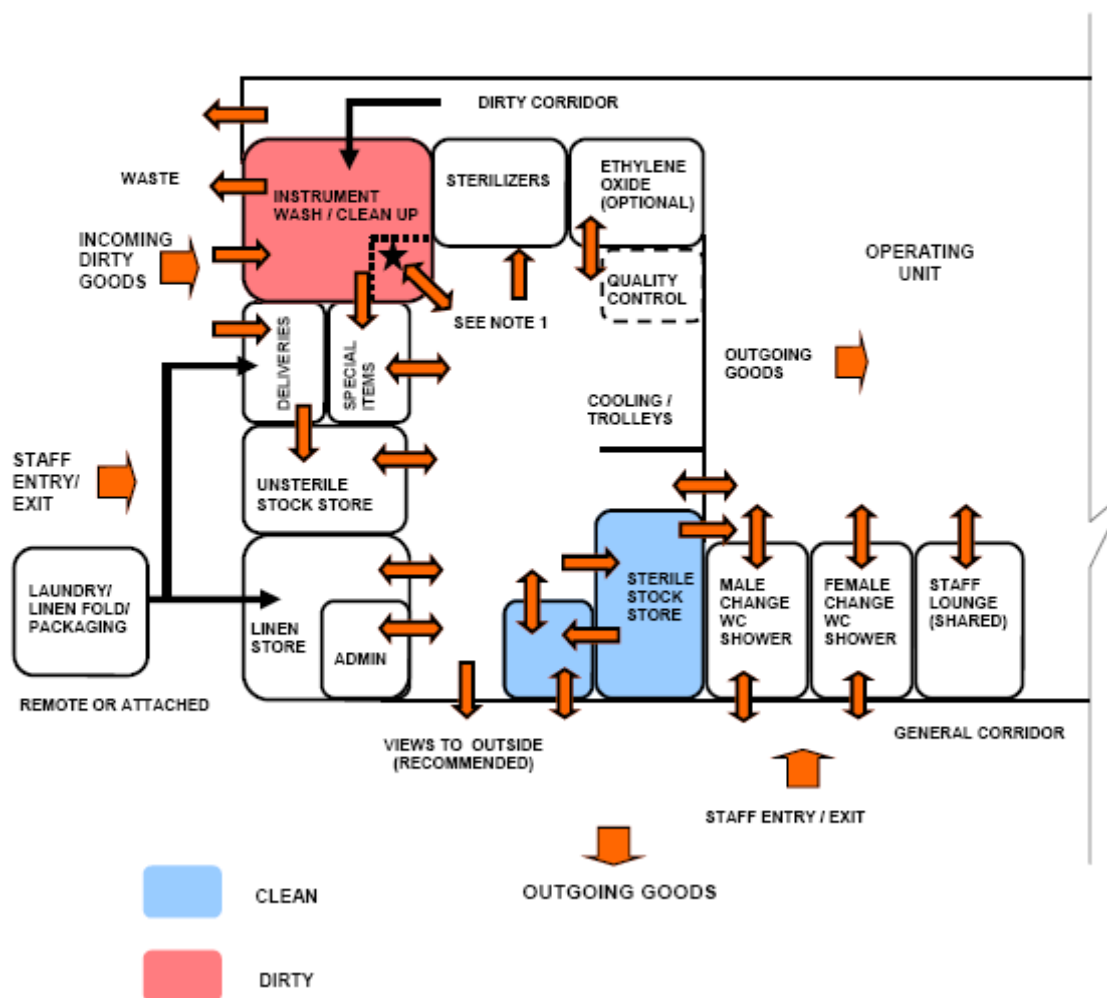
36.6.2 Sterile Supply Unit Functional Relationship Diagram (Base Model)



36.6.3 Sterile Supply Unit Functional Relationship Diagram (Integrated With Or)

NOTE 1 DIRECT ACCESS (OTHER THAN PASS THROUGH) BETWEEN INSTRUMENT WASH AND THE WORKROOM SHOULD BE RESTRICTED OTHER THAN IN SMALL FACILITIES WHERE DUPLICATION OF STAFF FOR BOTH "CLEAN" AND "DIRTY" AREAS IS NOT POSSIBLE

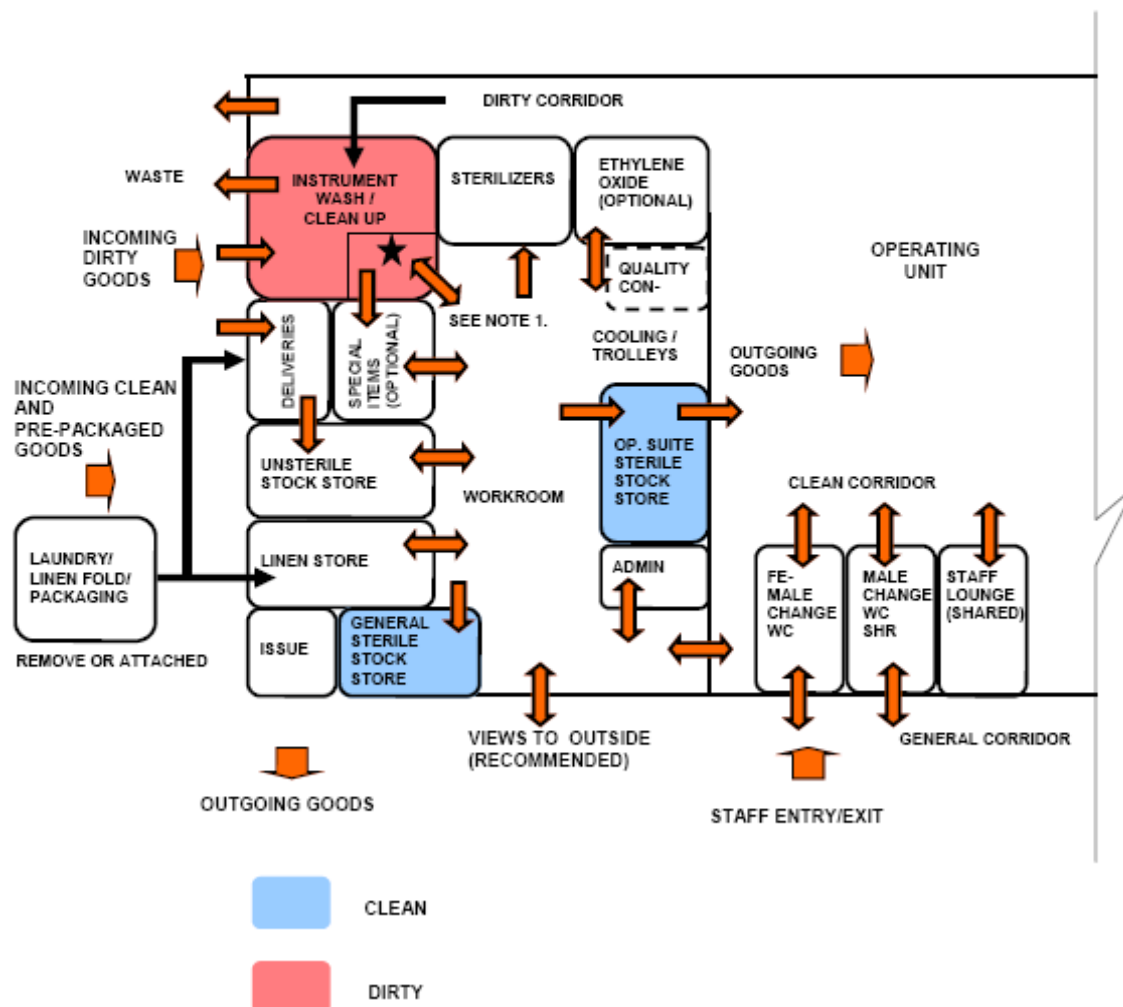
★ BARRIER ENTRY (SRUC - UP, GOWN, ETC PRIOR TO RE - ENTRY)



36.6.4 Sterile Supply Unit Functional Relationship Diagram (Alternate Model)

NOTE 1 DIRECT ACCESS (OTHER THAN PASS THROUGH) BETWEEN INSTRUMENT WASH AND THE WORKROOM SHOULD BE RESTRICTED OTHER THAN IN SMALL FACILITIES WHERE DUPLICATION OF STAFF FOR BOTH "CLEAN" AND "DIRTY" AREAS IS NOT POSSIBLE

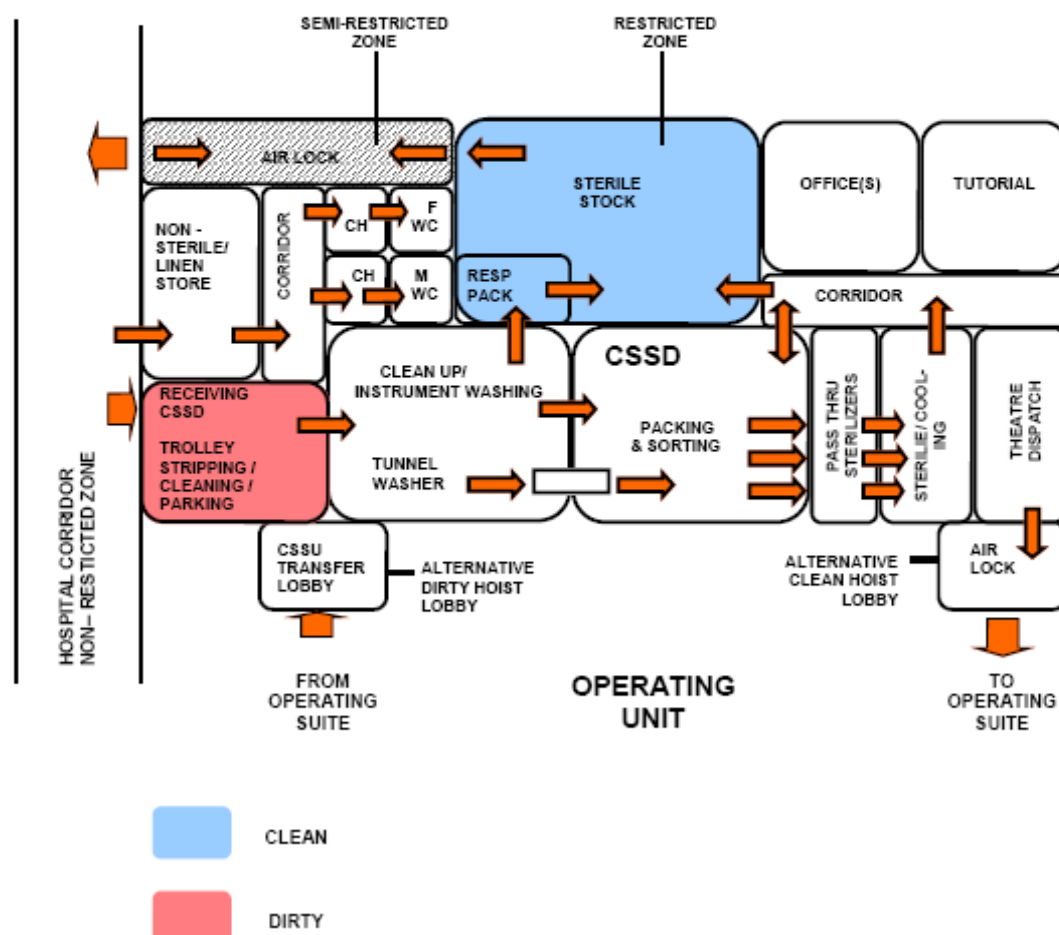
★ BARRIER ENTRY (SRUC - UP, GOWN, ETC PRIOR TO RE-ENTRY)



36.6.5 Sterile Supply Unit Functional Relationship Diagram (Simple Model)

NOTE 1 ONLY THE MOST IMPORTANT FUNCTIONS ARE SHOWN FOR CLARITY

NOTE 2 CSSU MAY BE CONNECTED TO OPERATING SUITE VIA CLEAN/DIRTY HOISTS
CSSU TRANSFER LOBBY MAY BE REPLACED WITH DIRTY HOIST LOBBY
THEATRE DISPATCH AIR-LOCK MAY BE REPLACED WITH CLEAN HOIST LOBBY



36.7 References and Further Reading

- Australian Standard 4187 - Cleaning, disinfecting and sterilising reusable medical and surgical instruments and equipment and maintenance of associated environments in Health Care Facilities
- National Standard for the Operation of Sterile Supply Service in Health Care Facilities produced by the National Consultative Council for Therapeutic Goods, (NCCTG).
- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



37.0 Supply Unit

37.1 Introduction

37.1.1 Description

The Supply Unit shall provide for the following functions:

- purchase and receipt of equipment and bulk medical supplies
- storage of bulk dry goods, consumables, intravenous fluids, drugs and flammable liquids
- storage of surplus hospital equipment and equipment awaiting repairs
- deliveries to hospital units for regular restocking of unit based supplies

37.2 Planning

37.2.1 Planning Models

Supply Unit will consist of a number rooms and areas for storing high volumes of goods, equipment and furniture as necessary. They may vary in sizes to suit the need of the Facility. These storage areas may be located within the Unit itself or away from the Unit.

37.2.2 Functional Areas

The Supply Unit may consist of the following Functional Areas:

- Loading Dock
- Receivals area
- Dispatch areas for stock awaiting collection
- Storage areas which may include bulk stores, palletted supplies, flammable stores, furniture and equipment, gas bottles and equipment for loan to outpatients
- Staff areas including Offices, Workstations and access to Staff Change and Toilets.

RECEIVALS AREA

- A dedicated Receivals Area shall be provided for the receipt, checking, sorting and temporary holding of incoming stock. The Receivals Area will require off street unloading facilities.
- The Receivals Area shall be located adjacent to the Loading Dock and with ready access to the Bulk Store.
- Security for incoming stock will require consideration. Visual control of the area from the Store Manager's office is recommended. The Receivals Area may include a workstation with computer.

STORAGE AREAS – EQUIPMENT FOR LOAN

- Additional storage areas for equipment for loan to patients and outpatients shall be provided in an amount not less than 5 percent of the total area of the Outpatient Facilities. This may be combined with and in addition to the general stores or be located in a central area within the Outpatient Unit. This storage requirement is generally for therapy equipment and mobility aids loaned to patients. A portion of this storage area may be provided off-site.

37.2.3 Functional Relationships

EXTERNAL

The Supply Unit may be located in a separate building on-site, but the preferred location is within the main building. A portion of the storage may be located off-site. Protection against inclement weather during transfer of supplies shall be provided. Fire protection and security are important considerations.



INTERNAL

- The Bulk Store is the primary storage area for all delivered supplies and store prior to distribution to various Hospital Units. It shall be located with ready access to the Loading Dock area. This area requires security and controlled access.

37.3 Design

37.3.1 General

Loading Dock shall be a covered area for transport access to service Units for delivery or collection of goods and shall be zoned into clean and dirty areas. This may be shared between a number of Support Service Units (eg. Catering Unit, Linen Handling, Supply Unit).

37.3.2 Environmental Considerations

NATURAL LIGHT

Provide natural light to office and staff areas where possible.

37.3.3 Space Standards and Components

ERGONOMICS

Consideration shall be given to the need for manual handling devices such as dock levellers.

Refer also to Part C of these Guidelines.

SAFETY AND SECURITY

All entrances and exits shall be secured. An intercom or call bell should be located at the dock entrance area to announce deliveries when doors are closed.

FINISHES

Wall protection shall be installed to prevent damage to walls caused by all types of trolleys.

Refer also to Part C of these Guidelines.

FIXTURES AND FITTINGS

Refer to Part C of these Guidelines and Standard Components for information of fixtures and fittings.

BUILDING SERVICE REQUIREMENTS

Refer to Part E of these Guidelines.

INFECTION CONTROL

Refer to Part D of these Guidelines.

37.4 Components of the Unit

37.4.1 General

The Supply Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



37.4.2 *Non Standard Components*

RECEIVALS AREA

Description and Function

Refer to Planning - Functional Areas for a description of Receivals area. Sufficient space shall be provided in this area for sorting and unpacking.

Location and Relationships

The Receivals area shall be located with direct access to the Loading Dock.

DISPATCH AREA

Description and Function

The Dispatch area will be used to hold stores that are ready to be collected by external contractors or delivered to hospital units.

Location and Relationships

The Dispatch area shall be located with direct access to the Loading Dock



37.5 Schedule of Accommodation

37.5.1 *Supply Unit Generic Schedule of Accommodation* Schedule of Accommodation for a Supply Unit for Levels 3-6

ROOM/SPACE	Standard Component		Level 3 Qty x m2	Level 4 Qty x m2	Level 5 Qty x m2	Level 6 Qty x m2	Remarks
DISPATCH AREA	yes		1 x 8	1 x 12	1 x 20	1 x 20	
LOADING DOCK	yes		1 x 12	1 x 20	1 x 30	1 x 30	May be shared with other back of house services
OFFICE – SINGLE PERSON	yes		1 x 12	1 x 12	1 x 12	1 x 12	For Unit manager
OFFICE - WORKSTATION	yes		1 x 6	1 x 6	2 x 6	4 x 6	Supply personnel.
PROPERTY BAY - STAFF	yes		1 x 4	1 x 4	1 x 12	1 x 12	
RECEIVALS AREA			1 x 8	1 x 12	1 x 20	1 x 20	
STORE – BULK	yes		1 x 140	1 x 180	1 x 220	1 x 260	Size according to requirements
STORE FLAMMABLE LIQUIDS	yes		1 x 9	1 x 9	1 x 9	2 x 9	
STORE – I.V. FLUIDS	yes		1 x 10	1 x 10	1 x 20	1 x 30	
STORE – MEDICAL GAS BOTTLES	yes		1 x 10 optional	1 x 10 optional	1 x 20 optional	1 x 30 optional	May be located externally at a secure location
STORE – DRUGS, SECURED	yes		1 x 5 optional	1 x 5 optional	1 x 8 optional	1 x 10 optional	May be located in the Pharmacy unit
STAFF TOILET	yes		2 x 3	2 x 3	4 x 3	4 x 3	
DISCOUNTED CIRCULATION			10%	10%	10%	10%	

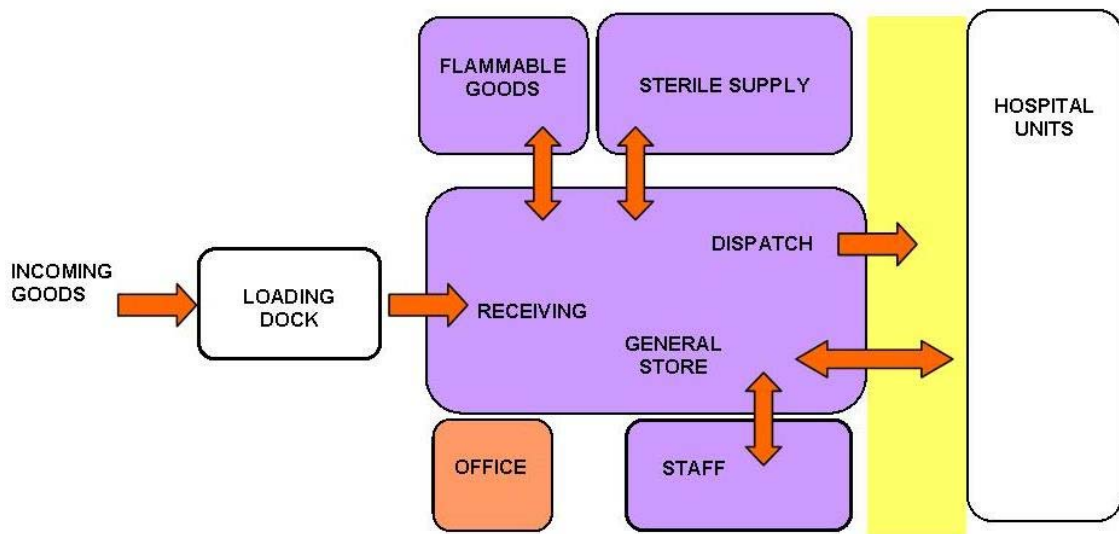
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- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the service plan and the policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and staffing establishment.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.



37.6 Functional Relationship Diagram

37.6.1 Supply Unit Functional Relationship Diagram



37.7 References and Further Reading

- Australasian Health Facility Guidelines. (AusHFG Version 3.0), 2009; refer to website www.healthfacilitydesign.com.au
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



38.0 Waste Management Unit

38.1 Introduction

A hospital must have a Waste Management Unit for storing waste and used linen. The Waste Management Unit shall have the following features:

- Located close to all functional areas
- Accessible from within the unit and externally
- Fitted with a deadlock
- Located away from food and clean storage areas
- Not accessible to the public.

38.2 Planning

38.2.1 Functional Areas

The Waste Management Unit will include the following Functional Areas:

- Enclosed dust free workstation with a workbench, telephone and computer outlet to undertake recording and reporting functions; it should have visual control of the waste handling facility
- General dry waste skip or compactor area with direct contractor access for removal; general waste may be compacted on site
- General wet waste holding area
- Loading Dock and area with provision for front load bins
- Clinical waste holding and cool room
- Paper and recyclable materials collection
- Clean bin storage area; a variety of bins need to be stored pending distribution to the hospital units
- Storage space for consumables such as plastic bin liners and cleaning materials; could be located adjacent to the Work Management Station.

▪

The following Functional Areas are optional requirements:

- An area for bin receiving with room for pull tug and cart trolley access and bin sorting may be required.
- A waste weighing and recording station, which includes a floor level digital weighbridge and bar code recorder, will be required if waste handling policy includes weighing and tracking.
- An upright freezer may be required to store tissue pending dispatch for incineration.

BULK WASTE MOVEMENT

The waste handling area will be frequently serviced by site and contractor's vehicles removing waste in carts and front loading bulk bins. It is important that adequate traffic access is provided for delivery and removal of all wastes. The access roads need to be adequate and turning areas uncongested. Noise levels may be significant during waste collection periods.

Bulk waste bin movement around the site and during the disposal process may require that the bins are accessed from a raised dock. A variable level platform may be considered as an option.

CLINICAL WASTE

Contaminated waste bins should be located in strategic collection points for each clinical section. These collection points need to be easily accessible to the staff responsible for disposing of wastes, as well as to those servicing the facility in removing and replacing the bins. Clinical waste bins are collected and held in an air conditioned room or coolroom in the



Waste Holding area for removal by external contractors.
Contaminated waste bins should not be accessible to the public and should preferably be out of sight in a secure area.

Separate colour-coded bins will be required for the disposal of sharps, human tissue, cytotoxic and radioactive materials.

Human tissue, cytotoxic and radioactive materials are only likely to occur in specific clinical units. Provision of receptacles and storage space for these materials will be required in the specific unit on an as-needed basis.

38.3 Design

38.3.1 Functional Relationships

Servicing of waste and linen storage areas should be undertaken via thoroughfares that avoid regular public, patients and staff facilities. Particular attention should be made to avoiding food handling and high profile public areas. A service lift devoted to materials movement within the hospital is highly recommended.

GENERAL

The Waste Management Unit should be designed to secure the material, reduce organic decomposition, contain odours and allow hygienic cleaning of storage areas and carts. Larger institutions may benefit from the installation of a mechanised bin washing facility. Liquid waste emanating from disinfection procedures may need to be stabilised before disposal in sewerage systems.

INFECTION CONTROL

Walls and floors in areas used for bin storage should be sealed to allow easy cleaning. Hand-washing facilities should be located adjacent to the waste collection area where clinical waste is handled.

BUILDING SERVICE REQUIREMENTS

Building service requirements for the Waste Management Unit will include the following:

- The temperature with the waste handling area should be maintained at a temperature that helps control odours; ideally a negative pressure environment should be provided to contain the spread of odours.
- The areas used to store waste materials need to be secure from vermin and rodent infestation.
- Hot and cold water outlets with a hose spray are the minimum requirements to be provided for cleaning waste holding areas and bins as required
- A high pressure wash down unit should be provided for the adequate cleaning of the area.
- Drainage from this area may include disinfectants, therefore liquid wastes may require special treatment prior to discharge.
- Walls and floors should be sealed to withstand the frequent wash downs and the floors graded to allow run off.

38.4 Components of the Unit

38.4.1 General

The Waste Management Unit will contain a combination of Standard Components and Non-Standard Components. Provide Standard Components to comply with details in the Standard Components described in these Guidelines. Refer also to Standard Components Room Data Sheets and Room Layout Sheets.



38.4.2 *Non-Standard Components*

INTRODUCTION

Provide the Non-Standard Components as identified in this section and in the Schedule of Accommodation, according to the Operational Policy and Functional Brief.

BIN WASHING AREA

Description & function

The Bin Washing Area will provide an area and facilities for washing of bins as required. Bins may be cleaned off-site by external waste removal contractors.

Considerations

Hot and cold water outlets with a hose spray are the minimum requirements to be provided for cleaning bins as required. Reticulated steam, pressure cleaning systems and air blow drying facilities may also be considered.



38.5 Schedule of Accommodation

38.5.1 Waste Management Unit Generic Schedule of Accommodation

Schedule of Accommodation for a Waste Management Unit for Levels 4-6

ROOM/SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
BAY – HANDWASHING TYPE B	yes				1 x 1	2 x 1	Refer to Part D
BIN WASHING AREA	yes				1 x 6 optional	1 x 20	May be omitted if washing is done by external contractors off-site
CLEAN BIN HOLDING	yes				1 x 15	1 x 30	Including sharps bins; refer to Disposal room; size according to requirements
CLINICAL WASTE COLLECTION	yes				1 x 20	1 x 40	Including sharps bins; air-conditioned room; refer to Disposal Room
COOLROOM – CLINICAL WASTE	yes				1 x 20 optional	1 x 30 optional	Room size according to requirements
GENERAL DRY WASTE COLLECTION	yes				1 x 40	1 x 120	Refer to Waste Compactor - recyclables
GENERAL WET WASTE COLLECTION	yes				1 x 30	1 x 40	Including sharps bins; refer to Disposal room; size according to requirements
PAPER & CARDBOARD WASTE COLLECTION	yes				1 x 15 optional	1 x 40	May be located in the General waste area including cardboard compactor
RECYCLABLE WASTE COLLECTION	yes				1 x 10 optional	1 x 40	May be located in the General waste area; Refer to Waste Compactor - recyclables
DISCOUNTED CIRCULATION					20%	20%	

SUPPORT AREAS

ROOM/SPACE	Standard Component				Level 4 Qty x m2	Level 5/6 Qty x m2	Remarks
OFFICE – SINGLE PERSON	yes				1 x 9	1 x 12	Manager
OFFICE - WORKSTATION	yes				1 x 6 optional	1 x 6	Waste service personnel
SHOWER - EMERGENCY	yes				1 x 1	1 x 1	Refer to Note 1
STAFF TOILET	yes				2 x 3	2 x 3	
DISCOUNTED CIRCULATION					20%	20%	

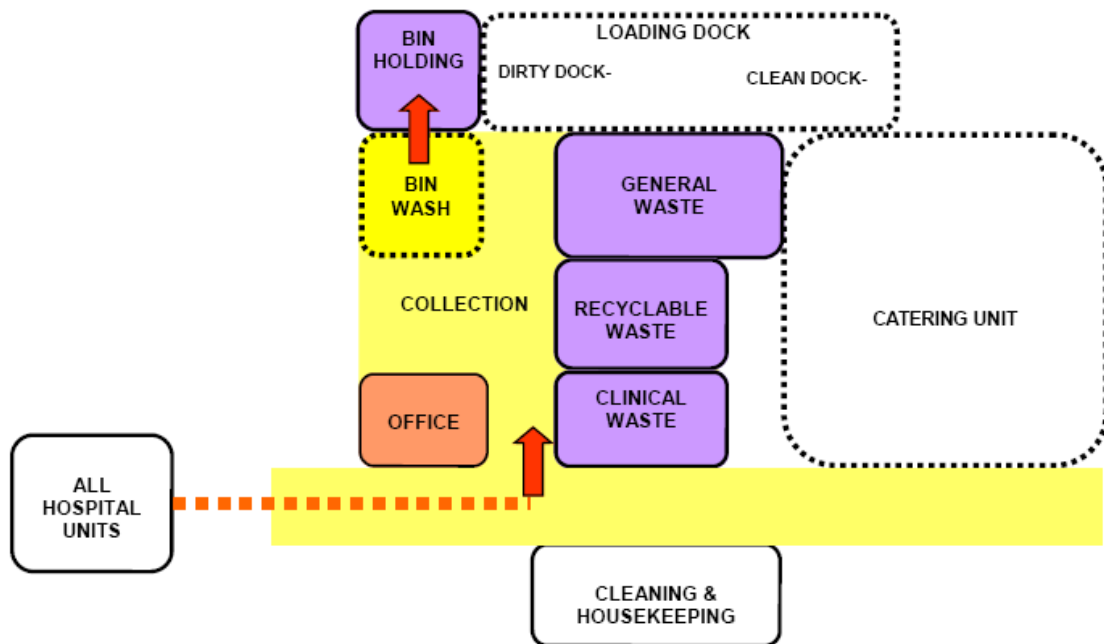
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38.6 Functional Relationship Diagram

38.6.1 Waste Management Unit Functional Relationship Diagram



38.7 References and Further Reading

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- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2010 Edition.
- Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services Victoria, 2005



39.0 Appendix A – Role Delineation Level Guide

Note: Appendix A attached overleaf.





The Indian Health Facility Guidelines recommends the use of **HFBS** “Health Facility Briefing System” to edit all room data sheet information for your project.

HFBS provides edit access to all HFG India standard rooms, departments, and more than 40 report templates.

HFBS Health Facility Briefing System



Briefing Module

The Health Facility Briefing System (HFBS) has numerous modules available via annual subscription. It suits healthcare Architects, Medical Planners, Equipment Planners Project Managers and Health Authorities.

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