360 INTENSIVE CARE - GENERAL

INDEX

INTRODUCTION

Preamble

360 .1.00 Intensive Care Units provide critical care to patients with life threatening illness or injury. They provide a concentration of clinical expertise, technological and therapeutic resources which are coordinated to care for the critically ill patient.

The clinical infrastructure and staff profiles reflect the complex nature of the monitoring and therapeutic interventions undertaken to provide the necessary physiological and psychosocial support required.

General

360 .2.00 The nature and extent of Intensive Care type facilities may vary greatly from hospital to hospital, and will depend upon the Operational Policies for each facility. In many instances, no Intensive Care facility will be provided at all.

360 .3.00 In small hospitals, more Intensive Care may be provided in the form of Intensive Nursing Care or High-Dependency Nursing Care beds, within or attached to General Inpatient Units. In these cases, few of the requirements for an Intensive Care Unit will be applicable. The exact level of provision will be established by the Operational Policy.

360 .4.00 Because of their unique requirements, no attempt is made here to suggest standards for all varieties of Specialty Units that may be found in the larger medical facilities. As far as applicable, these standards shall be used. Adaptations, adjustments, and additions shall be made as needed for the functional needs of staff and patients with special consideration for access and inclusion of necessary auxiliary services.

Policy Statement

360 .5.00 The Intensive Care Unit is an integral component of the hospital and, in a broader sense, the critical care system. Demand for Intensive Care Services continues to rise, in part due to increased complexity of treatment. It is anticipated that this trend will continue.

The level of Intensive Care Service provided will vary across sites according to the role delineation of the service and the broader services available at the hospital.

During the planning process it is recommended that planning teams review the following documents:

+ Intensive Care Service Plan, NSW Health, 2001;

+ Intensive Care Strategic Directions - A Framework for the NSW Health System, NSW Health, 1999;

+ NSW Metropolitan Critical Care Plan, NSW Health, 1996;

+ NSW Rural Critical Care Plan, NSW Health, 1998;

+ Better Practice Guidelines for Bed Management, NSW Health, 1998.

Levels of Service/Role Delineation

360 .6.00 LEVELS OF SERVICE/ROLE DELINEATION

There are two key descriptions of role delineation and level of service for Intensive Care Units (ICU). The relationship between the two descriptions is shown in the table below.

The accommodation requirements of the ICU will vary according to its prescribed level of service. The level of service will be determined according to the 'Minimum Standards for Intensive Care Units' (1) and the 'NSW Health Guide to the Role Delineation of Health Services' (2).

There is alignment between the role descriptions contained in these two Guidelines, and it is recommended they be referred to during the planning process for more detailed information.

Minimum Standards (FICANZCA):	NSW Health Role Delineation:
Level 1	Level 4
Level 2	Level 5
Level 3	Level 6

The NSW Health Role Delineations for Intensive Care for Level 2 and 3 Units correspond most closely to requirements of a high dependency service.

A specialist Paediatric Intensive Care Unit equates to a Level 6 (Level 3 FICANZA) intensive care in terms of planning requirements.

(1) Minimum Standards for Intensive Care Units, Joint Faculty of Intensive Care Medicine, Australian and New Zealand College of Anaesthetists and Royal Australasian College of Physicians, June 2003.

(2) Guide to the Role Delineation of Health Services, Third Edition, NSW Health Department, 2002.

Operational Models

360 .7.00 APPLICABLE MODELS

There are four broad models of intensive care applicable within Australia:

360 .8.00 1. COMBINED CRITICAL CARE

The first model is of a combined critical care area encompassing High Dependency Unit, Intensive Care and Coronary Care, usually 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'. These Units may or may not have a dedicated specialist in Intensive Care, but should have an appropriately qualified director who is responsible for ensuring quality assurance, mortality audit and appropriate standards and guidelines for the management of patients.

360 .9.00 2. COMBINED GENERAL INTENSIVE CARE

Larger hospitals and some tertiary hospitals may find it appropriate to combine all patient subgroups within a dedicated Intensive Care Area with the Unit accepting patients with any Intensive Care problem including post-op trauma, neurosurgery, thoracic or cardiothoracic surgery and general medical patients. These Units will usually have a combination of intensive care and high dependency beds, and again, flexibility of medical and nursing workforce is a major consideration in the configuration.

This model offers the advantage that in hospitals where the sub-specialty case load is limited, staff are exposed to a general range of intensive care problems rather than being sent to wards at times when there is no sub-specialty work. Cross fertilisation of education and protocols allows more efficient running when case loads are low within Sub-Specialty Units.

The disadvantage of this model is that many sub-specialty nursing and medical skills may be diluted, and potentially there may be access problems for Sub-Specialty Units when the general intensive care patient load is high.

360 .10.00 3. HOT FLOOR

The 'Hot Floor' model of Intensive Care collocates Sub-Specialty Intensive Care Units, usually encompassing cardiothoracic, trauma, neurosurgical and general intensive cares, with or without a co-located high dependency unit. Other Sub-Specialty Units such as non-invasive ventilation, burns, spinal, and hyperbaric oxygen therapy may be considered as adjuncts to a Hot Floor.

A more comprehensive Hot Floor model could include collocation of ICU with Theatres, 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. The Hot Floor model envisages one set of medical and nursing policies and procedures within one broad cost centre with common goods and services, porter services, orderly services, etc. Most equipment would be standardised across the Hot Floor avoiding duplicated education and minimising service costs.

The Hot Floor model has the advantage that practitioners, particularly nursing, may sub-specialise, allowing development of important sub-specialty nursing skills such as neurosurgical nursing. Rotation through the units allows all staff to experience different aspects of patient care and facilitates the spread of common techniques

such as CVVHD, novel monitoring, ICP monitoring, EEG monitoring, etc.

Because Sub-Specialty Areas within the Hot Floor still receive the bulk of their patients from various medical specialties, patients of sub-specialties rarely have their access to ICU beds blocked by other groups. This allows Specialist Units such as Neurosurgery to optimise patient throughput by effectively partially quarantining beds.

The principal disadvantages of a Hot Floor involves two issues. Firstly, the issue of managing a large cohort of nurses and doctors, and secondly the disadvantage of co-locating units if infection control were to become a major problem. This has been highlighted by the SARS outbreak in Asia in 2003. Clearly, there needs to be careful consideration when developing a Hot Floor of how to sub-segregate Units.

360 .11.00 4. SEPARATE INTENSIVE CARE UNITS

The fourth model encompasses a range of differentiated Intensive Care Units within an institution such as a separate General Intensive Care, a separate High Dependency Unit, a separate Cardiothoracic Intensive Care, a separate Neurosurgical Intensive Care, a separate Burns Intensive Care, a separate Trauma Intensive Care etc.

This model has the advantage of allowing different groups to control portions of the Intensive Care resources of a Hospital. For the Sub-Specialist Units within other units of the institution this can avoid the problems associated with bed blockages.

The model encourages the development of sub-specialty medical and nursing skills, however it has the disadvantages of duplicating management, policies and procedures. The problems of physical isolation can, at times, make it difficult to staff the Unit.

Sub-Specialty Units have the additional disadvantage that often new and innovative techniques are difficult to institute within the Sub-Specialty Intensive Care because of infrequent use.

It needs to be noted that as patient acuity increases, most Sub-Specialty Units are seeing more and more multi-system organ failure patients and general intensive care skills need to be enhanced within Sub-Specialty Units.

360 .12.00 GENERAL COMMENTS ON MODELS

In any of these models of ICU serious consideration should be given to developing extra bed capacity for a collocated High Dependency Unit, whether that Unit be spread within the ICU or be a separate Unit. By identically equipping HDU beds the future demands of Intensive Care can better be guaranteed, and potentially the high dependency parts of an ICU can be used to decant patients should there be an internal disaster or infection control issues.

It is clear that as the size of hospitals contracts and the general severity of illness of inpatients increases, many general nursing wards will also be looking after higher dependency patients with monitoring and more invasive modes of therapy, which will require higher nursing and medical skill mix and numbers. These patients will continue to be nursed in standard 15m2 1 Bed Rooms or 18m2 1 Bed Room - Specials as provided for a general ward.

Planning Models

360 .13.00 Two of the key factors that must be considered in the design of an Intensive Care Unit are the ability of staff to observe patients and the proximity of staff to patients. Decentralised Staff Stations/Observation Desks may sometimes be provided, often at a ratio of one per two beds.

The Unit should comprise a centrally located staff base, with adequate space for monitoring and resuscitation equipment, surrounded by patient care bed spaces, which enables staff to maintain visual contact with patients at all times.

A Unit should comprise a maximum cluster of 10 -12 beds with capacity for Isolation Rooms.

Generally a second staff station will be required for more than 12 beds.

Beyond these, clinical zone support facilities such as clean and dirty utilities, equipment and general storage should be in close proximity.

Zones for staff facilities and support areas for relatives should be on the periphery of the Unit.

For the psychological well being of patients and staff, natural light is highly desirable and patient privacy is essential.

Functional Areas

360 .14.00 PATIENT AREAS:

CLINICAL ZONE

This is the main hub of the Unit with all other zones radiating from it.

The Patient Care Zone contains patient bed spaces located in direct visual contact with the Staff Station. The Staff Station should contain space for charting and central monitoring, resuscitation equipment, storage of regularly used medication and viewing facilities.

Each patient bed space should contain individual medical services including bedside monitoring, call systems and handwashing facilities.

A number of the spaces should be adaptable to the nursing of infectious and immunocompromised patients.

STAFF AREAS:

STAFF AREA

A Staff Area should be located within close proximity to the Clinical Area, but with total privacy to Patient and Public Areas. Adequate Office Space, Staff Amenities and Tutorial and Reception Facilities should be provided, with the possibility of a space that could be provided or converted to provide overnight staff accommodation when necessary.

CLINICAL SUPPORT

The Clinical Support Area is dependent on the defined level of the ICU and its role within the Health Care Facility.

This area may contain Clean Utilities, X-Ray and Pathology Facilities. Where a vacuum tube system is to be used to transport pathology, pharmacy or documents, it should be located in this Area.

NON CLINICAL SUPPORT

While this Area contains the Dirty Utility and the majority of Storage Areas, it is common for some Mobile Equipment Bays to be located within the Clinical Area for easy access to frequently used equipment.

ENTRANCE RECEPTION:

This Public Area should be at the front of the Facility, with privacy from all Patient Areas. It should provide support facilities for families such as Beverage Areas, Waiting Lounges, Grieving Rooms and Interview Rooms. It is suggested that access and exit of patients from the Unit, be separate from these publicly accessible areas.

Functional Relationships

360 .15.00 EXTERNAL

The ICU should be a separate Unit within the hospital with easy access to the Emergency Unit, Operating Unit and Medical Imaging.

360 .16.00 LOCATION

The location shall be arranged to eliminate the need for through traffic.

360 .17.00 ANCILLARY SERVICES

Laboratory, Radiology, Respiratory Therapy, and Pharmacy Services should be available. These services may be provided from the central departments or from satellite facilities as required by the functional program.

360 .18.00 INTERNAL

PATIENT VISIBILITY

Staff should be able to see patients at all times, either directly or by indirect means such as video monitoring.

This approach permits the monitoring of patient status under both routine and emergency circumstances. Direct line of sight between the patient and the central Staff Station is preferable.

In ICUs with a modular design, patients should be visible from the respective Nursing Sub-Stations. Sliding glass doors and partitions facilitate this arrangement and increase access to the room in emergency situations.

360 .19.00 LIGHT AND WINDOWS

The environment provided should minimise stress to patients and staff. Therefore, natural light and views should be available from the Unit.

Windows are an important aspect of sensory orientation, and as many rooms as possible should have windows to reinforce day/night orientation.

Drapes or shades of fireproof fabric can make attractive window coverings and absorb sound. Window treatments should be durable and easy to clean. If drapes or shades are not a viable option, consider the use of tinted glass, reflective glass, exterior overhangs or louvres to control the level of lighting.

If windows cannot be provided in each room, an alternate option is to allow a remote view of an outside window or skylight.

360 .20.00 BEDSIDE MONITORING

Bedside monitoring equipment should be located in a position that makes it easy for staff to access and view the equipment, but does not interfere with their ability to see or physically access 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.

Functional Relationships

360 .37.00 STAFF WORK AREAS

The staff working area must include:

+ Adequate space for staff to work in comfort while maintaining visual contact with the patient;

+ Adequate space for patient monitoring, resuscitation equipment and medication storage areas (including a refrigerator);

+ Space for a mobile X-Ray machine;

+ X-Ray viewing facilities enabling simultaneous viewing of multiple X-Rays with space for X-Ray storage;

+ Adequate room for telephones and other communication systems, computers and data collection;

+ The storage of stationery;

+ Adequate space for a receptionist and/ or ward clerk.

DESIGN

Disaster Management

360 .21.00 Planning for all Units should consider each Unit's role in the local Disaster Management Plan.

As a key Unit, the ICU is likely to be important in any Disaster Management Plan.

Disaster planning is discussed in more detail in Part B of the Guidelines.

Environmental Considerations

360 .22.00 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.

360 .23.00 LIGHTING

Appropriate lighting, both general and task, is to be provided throughout the Intensive Care Unit. Refer to the TS11 for specific requirements.

Space Standards and Components

360 .24.00 INTERIOR DESIGN

Colour can be used to prevent an institutional atmosphere. Cleaning, infection control and the patients' perception of a caring environment should always be considered, but the main functional requirement is for staff to be able to observe the colour of the patients' skin.

Care must be taken to ensure light reflected onto the patient does not impair the ability of staff to judge the condition of patients. Extremes of colour should be avoided, especially yellow/orange tones.

Environmental Considerations

360 .25.00 NATURAL LIGHT

The use of natural light should be encouraged throughout the unit as this contributes to both staff and patient morale, and is considered likely to improve patient outcomes in an ICU.

In particular, where possible, bed room areas should have access to natural light and outlook.

Infection Control

360 .26.00 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.

Refer Part D of these Guidelines.

360 .27.00 Whether the diagnosis or infectious status of patients is known or unknown, standard precautions should be used for all patients at all times.

Refer Part D of these Guidelines.

Space Standards and Components

360 .28.00 BEDS AND COMPLEMENT

Beds in an Intensive Care Unit may be arranged in clusters of up to 12 beds. Each cluster or group of beds shall have access to the minimum support facilities including:

+ Staff Station (generally 1 per 12 beds or part thereof);
+ Clean Utility;
+ Dirty Utility;
+ Store Room/s;
+ Patient Ensuites;
+ Patient Bathroom;
+ Linen Storage;
+ PPE Bays/Storage;
+ Disposal Room;
+ Pathology Area;
+ Offices;
+ Support facilities that may be shared between clusters of beds.

Space Standards and Components

360 .29.00 BED SCREENS

Each patient bed space shall have provision for visual privacy from casual observation by other patients and visitors. Bed screens are recommended for open-plan ICU spaces. Blinds or curtains are recommended for cubicle areas or dedicated Patient Bedrooms.

360 .30.00 BED SPACING/CLEARANCES

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.

360 .31.00 To facilitate resuscitation procedures without restricting movement of staff, beds, and equipment, the available minimum clear distance between the head of the bed and any fixed obstruction or wall and between the foot of the bed and the bed screen shall be 900 mm.

360 .32.00 When an open plan arrangement is provided, a circulation space or aisle of 2200 mm minimum clear width shall be provided beyond dedicated cubicle space.

360 .33.00 Separate cubicles and Single Patient Bedrooms including Isolation Rooms, shall have minimum dimensions of 3900 mm in either direction.

360 .34.00 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.

Building Service Requirements

360 .35.00 CORRIDORS

Beds and trolleys within ICU are large and carry valuable and sensitive equipment, and patients who are severely ill.

The size of the basic ICU bed is often enlarged by the addition of monitors, drips and several staff, making movements more difficult than in other areas of the Hospital.

It is important that adequate circulation space is provided for the safe and efficient movement of these trolleys and beds.

Part C of these Guidelines provides information on the required corridor widths etc for Health Care Facilities.

360 .36.00 OBSERVATION WINDOWS

To assist staff observation of patients in cubicles or Single Patient Rooms, observation windows, conveniently placed to ensure unobstructed vision from the Staff Station, are recommended.

Finishes

360 .38.00 GENERAL

Refer Parts C and D of these Guidelines.

Consideration should be given to the impact of finishes, surfaces and fittings etc on patients and staff;

Slippery floors, protrusions or sharp edges, stability and height of equipment or fittings

are all potential hazards and thus should be considered in the design of the facility.

360 .39.00 CLEANING

+ All surfaces should be hard wearing and easily cleaned;

+ All patient surfaces should be washable;

+ Cleaning policies and infection control policies of the Facility should be considered when choosing suitable surfaces.

+ Layouts, fittings, furnishings, floor coverings and detailing will have a significant impact upon the ease of cleaning and the maintenance of the Unit. The design and detailing of the Unit, including height of ledges, nooks, provision of coved skirtings, should facilitate cleaning.

360 .40.00 FLOOR FINISHES

In most Patient Care Areas sheet vinyl is the most appropriate floor finish because of ease of cleaning. In some areas carpet reduces noises from trolleys and traffic, but it increases cleaning time and cost.

Wherever there is a change in floor covering eg vinyl to carpet, there should not be a change in floor level.

360 .41.00 WALL PROTECTION

Wall protection will be required wherever there is potential damage from beds, trolley etc and for hygienic reasons around hand washing facilities.

Fittings & Fixtures

360 .42.00 WORK SURFACES AND BENCHES

All work surfaces and benches should be smooth and impervious, refer to Part C for further information.

Safety and Security

360 .43.00 A list of Safety and Security issues to be considered in the design of the Unit is attached to this document. Refer also to Part C of these Guidelines for general OHS requirements.

Building Service Requirements

360 .44.00 GENERAL

ICU is a highly serviced area, relying on a number of mechanical and electrical systems for its effective operation.

TS11 provides detailed information on building services for Health Care Facilities.

360 .45.00 AIRCONDITIONING

The Unit shall have appropriate airconditioning that allows control of temperature, humidity and air change.

360 .46.00 CLOCKS

The accurate tracking of time within the Intensive Care Unit is critical.

A wall clock should be visible in all Clinical Areas and Waiting Areas. Times displayed in all areas must be synchronised. Clocks in resuscitation areas require the

facility to track elapsed time (one for each bed).

See Room Data Sheets and Room Layout Sheets for more detail.

360 .47.00 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.

Some types of communication, such as personnel tracking and non-emergency calls, may best be accomplished using visual displays, such as numeric or colour-coded lights, which eliminate unnecessary noise.

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.

360 .48.00 DURESS ALARMS

Should be provided in accordance with NSW Health Policy. Refer Part C of these Guidelines.

360 .49.00 EMERGENCY CALL

All Bed Spaces and Clinical Areas, including Toilets and Bathrooms, should have access to an Emergency Call System so staff can summon urgent assistance. The Emergency Call System should alert to a central module situated adjacent to the Staff Station, as well as to the Staff and Tutorial Rooms. The Nurse Call / Emergency Call System to comply with AS 3811.

360 .50.00 MONITORING

Each Unit should contain an approved patient monitoring system, with visual display for each patient at a central monitoring point, generally the Staff Station. Monitors with high/low alarm and the capability to provide hard copies of displays are recommended.

More information is provided in the Room Data Sheets and Room Layout Sheets.

360 .51.00 NURSE CALL

Facilities must provide a Call System that allows patients and staff to alert nurses and other health care staff in a discreet manner at all times.

Nurse Call Systems must be designed and installed to comply with AS 3811 - Hard wired Patient Alarm Systems.

DURESS ALARMS

Should be provided in accordance with NSW Health Policy. Refer Part C of these Guidelines.

COMPONENTS OF THE UNIT

General

360 .52.00 This section must be read in conjunction with Part B Standard Components, Room Data Sheets and Room Layout Sheets. The following text describes only specific requirements not covered by these other documents.

Standard Components

360 .53.00 Provide the Standard Components as identified in the Generic Schedule of Accommodation. Provision of Offices, Workstations and support areas will be dependant on the Operational Policy and service demand and may vary from the Schedule of Accommodation, however, room sizes should remain consistent. See also Planning Models and Functional Areas.

Non-Standard Components

360 .54.00 Provide the Non Standard Components as described in this section, according to Operational Policy and service demand.

Patient Areas

360 .56.00 PATIENT BAY - CRITICAL - ENCLOSED

DESCRIPTION AND FUNCTION

An enclosed room with similar functions and needs to the Patient Bay Critical (above). The room is enclosed to provide privacy and separation for the patient. This room is effectively an Isolation Room Class S. Refer Part D of these Guidelines.

LOCATION AND RELATIONSHIPS

Within a group of not more than 12 within easy observation of the Staff Station.

360 .57.00 PATIENT BAY - CRITICAL - ENCLOSED - ISOLATION CLASS N

DESCRIPTION AND FUNCTION

A 1 Bed Isolation Room will provide accommodation for patients requiring isolation, such as infectious, toxic or immunocompromised patients. In some instances, the room may also be used for disturbed patients.

Refer Part D Infection Control.

LOCATION AND RELATIONSHIPS

Isolation Rooms should be clustered and located away from the Unit entrance.

Staff Areas

360 .58.00 BAY - BLANKET WARMING

DESCRIPTION AND FUNCTION

A Bay to accommodate a machine for the storage and warming of blankets.

LOCATION AND RELATIONSHIPS

The Blanket Warming Bay should be located close to the bed bays but not impeding clear access to patients and equipment.

360 .59.00 EQUIPMENT CLEANUP / SUB PATHOLOGY

DESCRIPTION AND FUNCTION

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.

LOCATION AND RELATIONSHIPS

Accessible from all areas of the Unit.

360 .60.00 OVERNIGHT ROOM

DESCRIPTION AND FUNCTION

An Overnight Room if provided for on-call staff to sleep when they are unable to leave the Unit due to the need to care for a patient.

LOCATION AND RELATIONSHIPS

The Overnight Room should be located in a quieter part of the Unit away from noise and activity.

360 .61.00 RESPIRATORY/BIOMEDICAL WORKROOM

DESCRIPTION AND FUNCTION

A Respiratory/Biomedical Workroom is an area for the repair maintenance and calibration of both respiratory and Biomedical equipment, and as a work base for anaesthetic and biomedical technicians when visiting the Unit. This area will typically be occupied intermittently by 1 or 2 persons.

LOCATION AND RELATIONSHIPS

A Respiratory/Biomedical Workroom shall be accessible from all areas of the Unit.

360 .62.00 STORE - DRUG

DESCRIPTION AND FUNCTION

A Drug Store is a room for storage of drugs and medications. Secure storage and facilities for dispensing of medications is required.

LOCATION AND RELATIONSHIPS

A Drug Store shall be located central to the Unit - easily accessible from Staff Station and Bed Bays, with observation of entry from Staff Station for security purposes.

360 .63.00 STORE - RESPIRATORY

DESCRIPTION AND FUNCTION

For storage of respiratory equipment used in the ventilation of patients.

LOCATION AND RELATIONSHIPS

This Store should be located centrally within the Unit.

Schedule of Accommodation

360 .64.00 A Generic Schedule of Accommodation for Units at Levels 3, 4, 5, and 6 follows.

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		Level 2/3	Level 4	Level 5	Level 6	REMARKS
			Qty x m2	Qty x m2	Qty x m2	Qty x m2	* Optional Provision; FPU - Functional Planning Unit - qty determined by service needs.
ENTRANCE / RECEPTION AREA -							
MEETING ROOM - 12M2	yes			1 x 12			
MEETING ROOM - MEDIUM	yes				1 x 15	1 x 15	
TOILET - PUBLIC	yes		Shared	1 x 3	1 x 3	1 x 3	
WAITING	yes		1 x 15	1 x 15	1 x 15	1 x 15	Calculated at 1.2m2 per able-bodied person, 1.5m2 per wheelchair occupant.
DISCOUNTED CIRCULATION			25%	25%	25%	25%	
PATIENT AREAS -							
ANTEROOM	yes		4	4	4	4	FPU - use for 1 Bed Rooms - Isolation Class N (neg pressure ventilation)
BATHROOM	yes		1 x 15*	1 x 15*	1 x 15*	1 x 15*	Inclusion depends on operational policy of unit.
BAY - LINEN	yes		1 x 2	1 x 2	2 x 2	2 x 2	
BAY - RESUSCITATION TROLLEY	yes		1 x 2	1 x 2	2 x 2	2 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		6	6	6	6	FPU; sizes for 'full assistance', ie 2 staff plus medical equipment.
PATIENT BAY - CRITICAL	yes		20	20	24	24	FPU; group of not more than 12,within easy observation of Staff Station.
PATIENT BAY - CRITICAL HIGH DEPENDENCY	yes		20	20	20	20	FPU; group of not more than 12,within easy observation of Staff Station.
PATIENT BAY - CRITICAL ENCLOSED (CLASS S ISOL)	similar		20	20	25	25	FPU; group of not more than 12,within easy observation of Staff Station. Class S Isolation.
PATIENT BAY - CRITICAL ENCLOSED (CLASS N ISOL)	similar		20	20	25	25	FPU; clustered, located away from Unit entrance.
DISCOUNTED CIRCULATION			40%	40%	40%	40%	
STAFF AREAS -							
BAY - BLANKET WARMING					1 x 1*	1 x 1*	Inclusion depends on operational policy of unit.
BAY - HANDWASHING	yes		1	1	1	1	FPU; Refer Part D for numbers & location.
BAY - MOBILE EQUIPMENT	yes		1 x 4	2 x 4	3 x 4	3 x 4	Locate in quiet low traffic areas.
BAY - PPE	yes		1	1	1	1	FPU; Refer Part D for numbers & location.
BAY/ROOM - BEVERAGE	yes				1 x 4	1 x 4	
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	1 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 CLEANUP / SUB PATHOLOGY	yes		1 x 8	1 x 8	1 x 18	1 x 18	
MEETING - LARGE	yes		Shared	Shared	1 x 20	1 x 20	Education/Resource - may include Library, 24 hr access req'd; perimeter of unit.
MEETING - MEDIUM/LARGE	yes		Shared	1 x 15	1 x 30	1 x 35	Seminar/Training - alternative location for Library; 24 hr access req'd; perimeter of unit.
OFFICE - CLINICAL/HANDOVER	yes				1 x 12*	1 x 12*	Inclusion depends on operational policy of unit. Close to Staff Station.
OFFICE - SINGLE PERSON 9M2	yes				1 x 9	1 x 9	Senior Nurse Manager
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 encl office.
OFFICE - SINGLE PERSON 12M2	yes				1 x 12	1 x 12	Medical Director
OFFICE - WORKSTATION	yes		5.5	5.5	5.5	5.5	Registrars - workstation/s, open plan or in encl office. No. determined by staffing.
OFFICE - WORKSTATION	yes			5.5	5.5	5.5	CNC/Educator- workstation/s, open plan or in shared office. No. determined by staffing.
OFFICE - WORKSTATION	yes					5.5	Research - workstation/s, open plan or in shared office. No. determined by staffing.
OFFICE - WORKSTATION	yes			5.5	5.5	5.5	Secretarial - workstation/s, open plan or in shared office. No. determined by staffing.
OFFICE - WORKSTATION	yes		5.5	5.5	5.5	5.5	General - workstation/s, open plan or in shared office. No. determined by staffing.
OVERNIGHT ROOM						1 x 12	Registrar, needs access to bathroom facilities eg Staff Change.
RESPIRATORY/ BIOMEDICAL WORKROOM					1 x 20*	1 x 20*	Inclusion depends on operational policies of unit.
SHOWER - STAFF	yes		Shared	Shared	1 x 2	1 x 2	
STAFF ROOM	yes		1 x 12	1 x 15	1 x 35	1 x 35	
STAFF STATION	yes		1 x 12	1 x 18	1 x 25	2 x 25	
CHANGE - STAFF - FEMALE	yes		Shared	1 x 8	1 x 20	1 x 30	Includes toilets, showers, lockers; size depends on staffing per shift.
CHANGE - STAFF - MALE	yes		Shared	1 x 8	1 x 20	1 x 25	Includes toilets, showers, lockers; size depends on staffing per shift.
STORE - DRUG			1 x 10*	1 x 10*	1 x 10*	1 x 10*	Inclusion depends on operational policy of unit.
STORE - EQUIPMENT	yes		1 x 15	1 x 15	1 x 20	1 x 20	
STORE - FILE	yes					1 x 10	
STORE - GENERAL	yes		1 x 20	1 x 20	1 x 25	1 x 25	
STORE - PHOTOCOPY/ STATIONERY	yes		1 x 5	1 x 5	1 x 10	1 x 12	
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%	

Functional Relationships

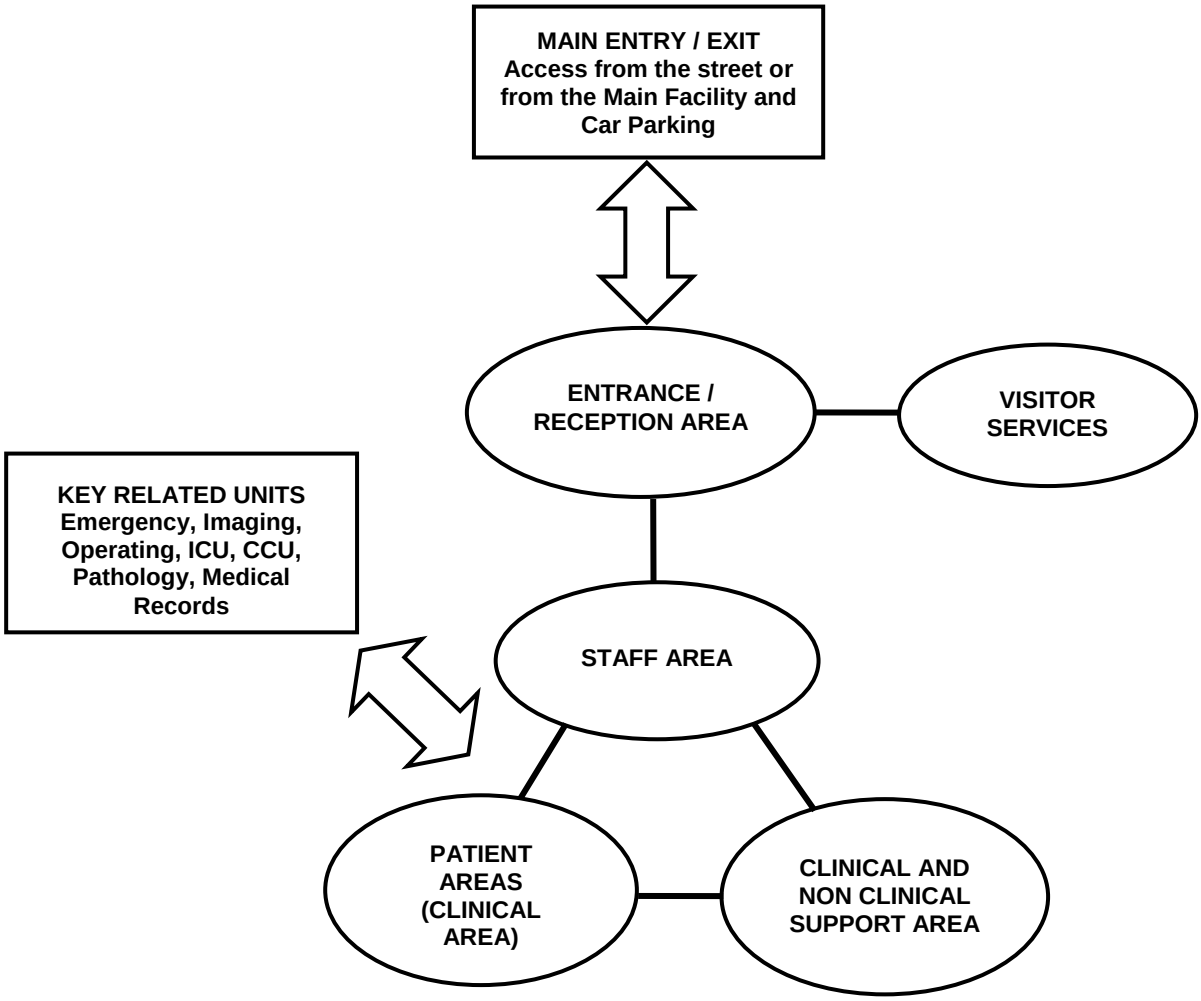
360 .65.00 A diagram showing key functional relationships is attached.

Checklists

360 .66.00 A security checklist is appended to this document. Refer also to Part C of these Guidelines for general requirements.

FUNCTIONAL RELATIONSHIP DIAGRAM - INTENSIVE CARE UNIT

The following diagram sets out the relationships between zones in an Intensive Care Unit:



SECURITY ISSUES TO BE CONSIDERED FOR INTENSIVE CARE UNIT

GENERIC SAFETY AND/ OR SECURITY RISKS	POTENTIAL SOLUTIONS
1. Ward area to house intensive care and coronary care patients.	1. Minimise entry and exit doors. 2. Security of entry via intercom and remote release button. 3. Staff entry via keypad or swipe card, this being a separate entry from visitors / relatives.

GENERIC SAFETY AND/ OR SECURITY RISKS	POTENTIAL SOLUTIONS
1. Relatives / Visitors	1. Good visibility from Staff Station to Ward. 2. Manage relatives/visitors admittance in the area by restricting visiting hours and/or number of visitors.
2. Patient files	1. Personnel working on these files must return them to a secure area after use or return to Medical Records Department 2. If any electronic files are produced, save in restricted area of hard drive.
3. Furniture fittings and equipment including Computers, Office and Medical Equipment	1. Non-removable 'Asset No.' on all equipment above a predetermined value. 2. Keep equipment in lockable area.
4. Drugs storage	1. Dangerous drug safe within the Clean Utility Area.
5. Hospital personnel safety	1. Staff working in this area to have knowledge of where the fixed duress system is located and/or use a mobile duress pendant. 2. Provision of an adequate waiting area for relatives/visitors that may be in the area 'out of hours'. This area to be able to be secured and monitored by staff.
6. Staff personal effects	1. Provision for lockers in staff areas and lockable desk drawer to keep small personal effects.

SECURITY CHECKLIST - ICU / CCU / HDU

RISK ISSUE	DESIGN RESPONSE
1. Has a CCTV System been considered to monitor the Waiting Area and/or access to the public access points in the Waiting Area ?	
2. How is 'after hours' access provided for patients and how is this access point monitored ?	
3. Has a secure 'barrier' been installed between staff and the waiting area to: (a) monitor the Waiting Area; and (b) provide staff contact with patients.	
4. Do staff have access to both fixed and mobile duress systems ?	
5. Is access to patient records restricted to staff entitled to that access ?	
6. Is a system implemented to prevent theft of equipment, files, personal possessions, etc ?	
7. Are drug safes installed in accordance with current regulations ?	
8. Is the Waiting Area furniture incapable of being utilised as a 'weapon'?	
9. How is after hours access provided for staff?	
10. How is this area secured during and after hours?	
11. Are there lockable storage areas available for specialised equipment?	
12. Is lockable furniture provided for storage of staff personal effects?	

DESIGN COMMENTARY/NOTES	DESIGN SIGN-OFF
	Name: …… Position: …….. Signature: …….. Date: …….. Name: …….. Position: …….. Signature: …….. Date: …….. Name: …….. Position: …….. Signature: …….. Date: ……..