NSW HEALTH

THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY · AUSTRALIA

NSW Health Facility Guidelines

Part C - Design for Access, Mobility, OHS and Security

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10 INTRODUCTION

INTRODUCTION AND GENERAL REQUIREMENTS

Purpose

10 .1.00 This section of the Guidelines draws together a range of issues that guide the detailed planning of Health Care Facilities. Part B of these Guidelines covers the briefing and planning issues that result from the translation of health service delivery requirements into a brief for a physical facility.

This section looks in more detail at specific issues guiding the development of the detailed physical design for a facility. The first section sets out a range of planning issues that are applicable to the physical design of any Health Care Facility.

It recognises the framework of authority requirements, industry standards, codes and manuals that apply to every project.

The information is presented so that it may be used as a starting point for the work of a designer, as information for the users involved in a project, and as a checklist for assessment of design. It is not intended to replace the professional skill, knowledge and judgment of an experienced designer in the development of a Health Care Facility.

Content

10 .2.00 This section contains information regarding physical planning models and policies that are believed to contribute to the procurement of well designed Health Care Facilities.

It includes space standards and dimensions for commonly occurring building elements, guidelines for designing for disabled access and an outline of signage requirements for Health Care Facilities.

Occupational Health and Safety (OHS) issues are then covered in terms of avoiding or minimising design practices that often contribute to hazardous or harmful features in the built environment. Finally, design practices that enhance the security of people, premises and property are outlined in accordance with NSW Health policies.

PHYSICAL PLANNING

Planning

705 .1.00 Planning of Hospitals and Health Care Facilities requires an understanding of the appropriate relationships between the various components as well as an understanding of site constraints and conformity with various codes and guidelines.

A thorough assessment of the service planning requirements for the proposed project should be made prior to commencing capital planning.

705 .2.00 This section includes a number of planning models that have been designed in NSW Health capital works projects.

705 .3.00 Good planning relationships can :

+ 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;
+ Maximise safety, security, OHS and Infection Control.

Planning Models

705 .4.00 The design of Health Care Facilities has evolved around a number of workable Planning Models. These can be seen as templates, prototypes or patterns for the design of new facilities. Typically each model will best suit a certain facility size and site condition.

None of these models override the need for compliance with relevant statutes (such as OHS, planning, building regulations, etc) and government policy.

705 .5.00 The planning team must define a clear model of operation for the facility. This should be readily described in a simple and clear flow diagram. Planning teams are encouraged to seek planning relationships that can satisfy more than one operational model, rather than satisfy limited, unusual or temporary operational policies.

705 .6.00 Requirements for proximity to other components or for independent access to a Unit will govern the planning relationships for each facility. The need for future expansion or change of function should also be reasonably anticipated in all designs.

705 .7.00 The following general planning models and design notes are used to promote good planning, efficiency and flexibility for the design of health facilities in NSW.

Planning Principles

705 .8.00 FLEXIBLE DESIGN

In health care, Operational Policies change frequently. The average cycle may be as little as five years. This may be the result of management change, government

policy, turnover of key staff or change in the market place. By contrast, major Health Care Facilities are typically designed for 30 years, but may remain in use for more than 50 years.

If a major hospital is designed very tightly around the Operational Policies of the day, or the opinion of a few individuals (who may leave at any time), then a significant investment may be at risk of early obsolescence.

Flexible Design refers to planning models that can not only adequately respond to today's Operational Policy but have the inherent flexibility to adapt to a range of alternative, proven and forward looking policies.

At the macro level, many of the commonly adopted Hospital Planning Models have proved flexible in dealing with multiple Operational Policies.

At the micro level, designers should consider simple, well proportioned, rectangular rooms with good access to simple circulation networks. Interior features should not be achieved by creating unnecessary complexity.

705 .9.00 ROOMS SHARED BETWEEN UNITS

This concept refers to models that allow for changes in operating mode as a function of management rather than physical building change. For example, two Inpatient Units can be designed back to back so that a range of rooms can be shared. The shared section may be capable of isolation from one or the other Inpatient Unit by a set of doors. This type of sharing is commonly referred to as Swing Beds. It represents a change to the size of one Inpatient Unit without any need to expand the unit or make any physical changes. This is also an example of flexible design.

Designers should consider issues such as compatibility of use, access to Treatment Rooms, Utility Rooms, storage, etc and the supervision of patients when using Swing Rooms.

The same concept can be applied to a range of Health Planning Units to achieve greater flexibility for the management of these units.

705 .10.00 OVERFLOW DESIGN

Some functions can be designed to serve as overflow for other areas that are subject to fluctuating demand. For example, Waiting Areas for different services can be collocated; Procedure Rooms can be equipped to provide capacity for emergency operating needs; day and ambulatory care areas can be adapted for overnight use in emergencies such as those relating to natural disasters.

705 .11.00 STAGED USAGE

Health Care Facilities of all sizes may be subject to fluctuating demand. It is desirable to implement a Staged Usage policy to close off certain sections when they are not in use. This allows for savings in energy, maintenance and staff costs. It also concentrates the staff around patients and improves communication. In designing for staged usage or progressive shutdown, designers must ensure:

+ None of the requirements of these Guidelines are compromised in the remaining open sections;

+ The open sections comply with other statutory requirements such as fire egress;

+ The open patient care sections maintain the level of observation required by these Guidelines;

+ In the closed sections, lights and airconditioning can be shut off independently of other areas;

+ The closed sections are not required as a thoroughfare for access to other functions;

+ Nurse Call and other communication systems can adapt to the shutdown mode appropriately;

+ The shutdown strategy allows access to items requiring routine maintenance;

+ A section can be isolated to facilitate the outbreak of infectious diseases.

705 .12.00 ZONING FOR HOURS OF OPERATION

The design should, where appropriate, collocate Functional Units with similar operating hours to allow easy shutdown of larger floor areas or even whole floors after hours. This can bring significant benefits in operating costs, particularly in the areas of light and power, airconditioning and security. Safe transit routes through the facility must be retained, and staff shall not be required to traverse closed areas after hours.

Planning teams should take particular care to ensure that staff are not working in isolation after hours, ie 24 hour zones within 8 hour zones. The reverse situation is preferably also avoided.

705 .13.00 OPEN ENDED PLANNING

A Health Care Facility designed within a 'finite' shape, where various departments and functions are located with correct internal relationships, may look and function very well at first; however, any expansion will be difficult. Some expansion requirements can be accommodated in new external buildings with covered links; but over time the site will become complicated with random buildings and long walkways.

The opposite of this scenario is to use planning models and architectural shapes that have the capability to grow, change and develop additional wings (horizontally or vertically) in a controlled way.

The configuration of the circulation system, both vertical and horizontal, on which all functions depend, is critical to the success of Open Ended Planning. Some of the concepts involved in Open Ended Planning Policies include:

+ Major corridors should be located so that they can be extended outside the building;

+ As far as possible, HPUs should have one side exposed to the outside to permit possible expansion;

+ If a critical HPU must be internal, it should be adjacent to other areas that can be relocated, such as large stores or administration areas;

+ Avoid HPUs that are totally land-locked between corridors;

+ External shapes should not be finite;

+ External shapes should be capable of expansion;

+ Finite shapes may be reserved for one-off feature elements such as Main Entrance Foyer;

+ Roof design should consider expansion in a variety of directions;

+ Stairs should not be designed to block the end of major corridors;

+ The overall facility flow diagram should be capable of linear or radial expansion whilst keeping all the desirable relationships intact;

+ Fixed internal services such as plant rooms, risers, service cupboards should be placed along major corridors rather than in the centre of HPUs.

Open Ended Planning Policies can be applied to entire facilities as well as individual HPUs.

Planning Principles

705 .14.00 MODULAR DESIGN

This is the concept of designing a facility by combining well designed standard components. For example a designer may create a range of Patient Bedrooms, a range of utility rooms and other common rooms that are based on a regular grid such as 300 or 600mm. These rooms can then be combined to create larger Planning Units such as an Inpatient Unit. The Inpatient Unit can then be used as a module and repeated a number of times as required.

This approach has many benefits. Modules can be designed only once, to work very well. No redesign is necessary to adjust to different planning configurations. Instead the plan is assembled to adapt to the modules. Errors in both design and construction can therefore be minimised.

Modular Design should not necessarily be seen as a limitation to the designer's creativity, but a tool to achieve better results. Designers are encouraged to consult with clients and user groups to agree on ideal modules, then adopt them across all HPUs.

In practice, especially in refurbished facilities, it is common for the 'ideal module' to be adjusted to suit the particular circumstances.

705 .15.00 SINGLE HANDING

It is common design practice to design identical and adjoining planning modules in mirror image. Typical examples include Operating Theatre Suites and Patient Bedrooms with Ensuite. This may be cost effective due to the sharing of plumbing services and circulation spaces.

Single Handing refers to situations where mirror image (Handing) may not be necessary or appropriate.

In areas requiring a high level of staff training, such as in Operating Suites, it may be more appropriate to 'hand' all key rooms in identical manner. This makes the task of staff training easier.

For example, a staff member entering any Operating Room, regardless of its location and approach from corridor, will find the service panel on the left, X-Ray viewer on the right and the door to the Sterile Stock Room in the front.

At a micro level, medical gases may always be located to the left side of patients bedhead regardless of the direction of approach. A similar situation may apply to the layout of Consult/Exam Rooms to allow for right-handed examination of a patient.

Note: Planning teams should consider and evaluate the benefits of Single Handing on a case by case basis.

Planning Policies

705 .16.00 UNIVERSAL DESIGN

This concept is similar to Modular Design. Universal Design refers to Modules (or standard components) designed to perform multiple functions by management choice.

For example, a typical Patient Single Bedroom can be designed to suit a variety of disciples including Medical/ Surgical/ Maternity and Orthopaedics. Such a room can be standardised across all compatible Inpatient Units. This will permit a change of use between departments if the need arises. Such Universal Design must take into account the requirements of all compatible uses and allow for all of them. The opposite of this policy is to 'specialise' the design of each component to the point of inflexibility.

Other examples of Universal Design are as follows:

+ Universal Operating Rooms which suit a range of operations;

+ Bed cubicles in Day Surgery which suit both Pre-operative and Post-operative Care;

+ Offices that are standardised into only a limited number of types for example 9 m2 and 12 m2;

+ Toilets may all be designed for disabled access or as unisex.

The main point of Universal Design is to resist unnecessary variation in similar components, where the change in functionality can be accommodated in one standard design.

Efficiency Guidelines

705 .17.00 GENERAL

The concept of efficiency refers to the ratio between nett functional areas and circulation space. Simplistic guidelines on efficiency tend to be misleading and should not be applied to vastly different functional briefs.

It is more appropriate to allocate different circulation percentages for generically different Planning Units. Such a guide has been provided under the Schedule of Circulation Areas in this section.

Inadequate circulation allowance in briefing documents is not recommended. It can result in undue pressure on designers to reduce sizes and therefore functionality. It must also be noted that the circulation percentages are a guide only. They apply to the Planning Units included in these Guidelines under Generic Schedules of Accommodation.

705 .18.00 NETT FUNCTIONAL AREAS

In briefing documents, Nett Functional Areas represent the sum of individual room areas without any corridors.

If areas are measured off the plans, then the following measurement method will apply:

+ External wall thickness is excluded;

+ Internal wall thicknesses and columns are included;

+ Wall thickness is divided equally between adjoining rooms;

+ Corridor walls are allocated to adjoining rooms;

+ Passing service risers and service cupboard are excluded.

705 .19.00 GROSS DEPARTMENTAL AREAS

Gross Departmental Areas are calculated by adding the Nett Functional Areas and departmental corridors. These are corridors that are entirely within one department (or Planning Unit).

In calculating the departmental corridors the following should be taken into account:

+ Service cupboards and passing risers are excluded;

+ Corridor wall thicknesses are excluded as these are included in room areas;

+ Columns are included;

+ Fire stairs are excluded;

+ Lifts and lift shafts are excluded.

705 .20.00 TRAVEL

705 .20.00

'Travel' represents arterial corridors that connect the Units. Travel is required to allow passage from one Unit to another without going through the internal corridors of another Unit. A target of 10-12.5% is appropriate for Travel in a hospital of one to three storeys.

In calculating travel, the following should be considered:

+ Wall thicknesses are excluded as these are part of the Gross Departmental Areas;

+ Fire stairs are included once for each floor to floor connection;

+ External wall thicknesses are included;

+ Lift shafts are excluded;

+ Service cupboards are excluded.

705 .21.00 ENGINEERING

Engineering refers to the area of plant rooms and other service areas. In calculating the Engineering allowance the following areas should be included:

+ Service cupboards;

+ Lift motor rooms;

+ Service shafts and risers.

Lift shafts should be excluded. The target of 10-12.5% applied to Gross Departmental Areas may be used for a typical one to three storey hospital building.

705 .22.00 DEPARTMENT SIZES

The actual size for a department will depend upon its role as set out in the Service Planning and supporting Operational Policies and the organisation of services within the hospital. Some functions may be combined or shared provided that the layout does not compromise safety standards and medical and nursing practices.

Note: Departmental sizes also depend on design efficiency. For guidelines on this subject refer to Efficiency Guidelines - Schedule of Circulation Areas in this section.

705 .23.00 ROOM SIZES

Room sizes may require adjustment in response to current or predicted usage and F,F & E requirements. For example, the size of equipment may change over time and this needs to be considered in determining room sizes for specific purposes.

705 .24.00 SCHEDULE OF CIRCULATION AREAS

The following Circulation Areas are recommended as a starting point for briefing typical Health Planning Units (HPUs). Clearly circulation percentages will vary as a result of the configuration of the Unit, including the use of a ‘racetrack’ arrangement or double loaded corridors.

The figures given are a guide only to circulation requirements for an HPU. The actual spatial allocation will depend on the role delineation of the service, the re-use of existing buildings and the skill of the individual designer.

The provision of appropriate area for circulation requirements will be tested during the preliminary design phases; both under and over provision of circulation space should be avoided.

DEPARTMENT	CIRC'N - %	NOTES

ADMINISTRATION	20	
ALLIED HEALTH	25	
AMBULATORY CARE	32	
BIOMEDICAL ENGINEERING	20	
CATERING UNIT	25	
CENTRAL STERILE SUPPLY	20	
CHAPEL	10	
CHILD CARE	20	
CLEANING/HOUSEKEEPING	10	
CLINICAL INFORMATION	15	
CORONARY CARE	35	
DAY ONCOLOGY	30	
DAY PROCEDURES UNIT	35	
DENTAL	20	
EDUCATION & TRAINING	15	
EMERGENCY UNIT	40	
ENDOSCOPY UNIT	35	
ENGINEERING & MAINTENANCE	15	
INPATIENT UNITS	32	
INTENSIVE CARE	40	
LAUNDRY	10	
LINEN SERVICE	10	
LONG TERM CARE	32	
MEDICAL IMAGING	35	
MORTUARY	20	
NUCLEAR MEDICINE	30	
OBSTETRIC UNIT	35	
OPERATING UNIT	35-40	
OUTPATIENT UNIT	20	Class 5
OUTPATIENT UNIT	25	Class 9A
PAEDIATRIC/ADOLESCENT	32	
PATHOLOGY	25	
PHARMACY	25	
PSYCHIATRIC UNIT	32	
PUBLIC AMENITITES	10	
RADIOTHERAPY	30	
REHABILITATION INPATIENT	32	

RENAL DIALYSIS	32
STAFF ACCOMMODATION	10
STAFF AMENITIES	10
SUPPLY UNIT	10
WASTE MANAGEMENT UNIT	20

705 .25.00 SCHEDULE OF ALLOWANCES FOR TRAVEL AND ENGINEERING (from TS13)

The allowance for travel and engineering should be determined in conjunction with the planning team to take account of the requirements of the specific project.

Although these are previously discussed separately in this document, where no other information is available the allowance for combined travel and engineering should be as follows:

TRAVEL & ENGINEERING	AREA %
ONE STOREY	20
TWO STOREY	23
THREE STOREY	25
FOUR STOREY	28

Corridors

710 .1.00 The requirements set out in this section for corridor widths should be regarded as the minimum required. These requirements take into account the need to allow for the safe movement of trolleys, beds, wheelchairs and other mobile equipment, including the passing of such equipment and situations where oversized additional equipment such as bed extensions are in use, or when other equipment is attached.

The overriding principle in setting the minimum corridor width is the need to allow for a workable width that, in the event of an emergency evacuation procedure, does not impede egress.

Designers should note that the Building Code of Australia (BCA) also specifies minimum corridor widths for Patient Care Areas. The requirements of these Guidelines for certain areas may be higher than the BCA as Fire Safety is not the only focus of these Guidelines.

Most large Hospital Health Planning Units include a range of patient and staff only corridors. If staff-only areas are clearly designated by planning and are not required for patient access, then the guidelines for patient corridors do not apply.

All corridor widths are clear of hand rails and/or crash rails. It is recommended that for design purposes (and considering construction tolerances) 100 mm be allocated to each hand rail.

710 .2.00 In areas where patient beds, trolleys and stretchers will be moved regularly, such as Inpatient Units, Operating Units, Birthing Units and Intensive Care Units, the minimum clear corridor width shall be 2100 mm.

The recommended corridor width in areas where there is frequent bed and trolley movement is 2200 mm, to accommodate the safe turning of trolleys and beds to ensure staff and patient safety, including situations where additional equipment such as bed extensions are in use, or when other equipment is attached.

Even at this dimension, special consideration must be given to the width of doorways into adjacent rooms and widening corridors at the entry to the affected rooms to accommodate turning trolleys and beds.

Corridor widths in the above areas may be considered at lesser dimensions where an existing building is utilised, but special design and planning detail must be incorporated to overcome the problems of congestion and the potential risk to patients and staff in an emergency evacuation.

Note: In any event, the corridors may not be narrower than that required by the BCA for Patient Care Areas.

710 .3.00 In areas where irregular trolley or bed movement is expected, corridor widths can be reduced to 1800 mm. Special consideration must be given to the door widths to ensure the movement of trolleys or beds from corridor to adjacent rooms is not restricted including situations where additional equipment such as bed extensions are in use, or when other equipment is attached.

710 .4.00 In Outpatient Units and areas not routinely used for patient transportation on trolleys or stretchers, the corridor widths may be reduced to 1200 mm.

Note 1: Designers should note that the areas subject to this clause must be capable of being classified as Class 5 under the BCA.

Note 2: This width only applies to corridors used by patients. Staff only corridors are excluded from this requirement.

Corridors

710 .5.00 In areas where there is no patient transportation requirement and where corridor runs are no longer than 12 metres, such as a corridor spur to a group of offices, corridor widths of 1200 mm are acceptable.

710 .6.00 Corridor widths of less than 1200mm are unacceptable in patient care areas, except where forming part of an existing facility, and where written approval has been obtained for the lesser width.

710 .7.00 The width of major inter-departmental corridors and public corridors generally shall be as wide as is deemed necessary for the proposed traffic flow, but shall not be less that 2100 mm, with a recommended width of 2200mm.

Generally, fire compartment doors should be held open by magnetic door hold-open devices, connected to the fire alarm system. This is to ensure that these doors do not impede travel, create manual handling risks or create line of sight risks under normal circumstances.

Note: In these Guidelines, the inter-departmental corridors are referred to as 'travel'.

710 .8.00 The minimum requirements for Health Care Facility corridors are summarised in the following table:

LOCATION	BCA CLASS	Trolley Movement	Min Clear Width	Rec Clear	Hand Rails	Wall Protection	Notes
PATIENT CARE AREAS (EXAMPLES)							
OPERATING, EMERGENCY, INPATIENT, BIRTHING, ICU	9a	Patients - Freq/regul	2100	2200	Yes	Yes	Consider door widths into adj rms, wider corridors at entry pts for turning trolleys/beds.
MEDICAL IMAGING, AMBULATORY CARE	9a	Patients - Occas/reg	1800	2100	Yes	Yes	Door widths to ensure movt of trolleys/beds from corridors to adj rooms is not restricted.
AMBULATORY CARE/ OUTPATIENTS	9a	Patients - Rarely/Ne	1800	1800	Yes	Yes	Part of Acute Care facility.
OUTPATIENTS/COMMUNITY HEALTH/CONSULTING ROOMS	5	Patients - Never	1200	1200	Yes	Yes	Separated in accordance with BCA req'ts from acute facility, or stand alone.
STAFF AREAS							
OFFICES	5	None	1200	1200	No	No	Corridor length to be less than 12m.
AMENITIES	5	None	1200	1200	No	No	Corridor length to be less than 12m.
OTHER AREAS							
INTER-DEPARTMENTAL CORRIDORS	9a	Services & Patients	2100	2200, but depends	Yes	Yes	
HOTEL SERVICES EG KITCHEN, LAUNDRY, STORES		Services	1800	2100	No	Yes	Major eg connecting to other units, large traffic flow.
HOTEL SERVICES EG KITCHEN, LAUNDRY, STORE		None	1200	1500	No	Yes	Minor - within unit.

710 .9.00 Notes:

1. Minimum clear width is set by the BCA for fire egress purposes; the minimum width recommended by these Guidelines will generally exceed that set by the BCA for other reasons including the safe movement of patients on trolleys and safe staff work practices.

2. Where hand rails are required, these should be installed in accordance with AS1428.

3. Where indicated, wall and corner protection should be provided to suit the likely traffic flow.

4. 'Clear corridor width' means clear, unobstructed widths. Items such as hand rails, drinking fountains, hand basins, telephone booths, vending machines and

portable/mobile equipment of any sort shall not reduce the minimum width or impede traffic flow.

Ramps

710 .10.00 Ramps may also be required as part of general facility circulation. Ramps for disabled access are covered under 'Disability Access'.

Ramps for disability access are frequently used for general access and for moving beds, ambulance trolleys and other equipment between different levels. They should therefore be designed accordingly.

They should have the required slope, width and turning circles based on the size and weight of an occupied bed plus space for passing. In this situation, ramps may need to be wider, have bigger turning circles and sometimes have lower gradients than those needed for wheelchairs.

Ceiling Heights

710 .11.00 The minimum ceiling height in occupied areas shall be 2400 mm, but consideration should be given to the size (aesthetic consideration) and use of the room. 2700 mm is considered a more appropriate ceiling height in work areas, eg Therapy Rooms, Conference Rooms, Intensive Care (open plan), Kitchens, etc. Ceiling heights in Ensuites can be reduced to 2250 mm where required, to accommodate building services, structure etc.

710 .12.00 The minimum ceiling height in areas such as corridors, passages and recesses shall be 2400 mm. In portions of remodelled existing facilities, the corridor ceiling height may be reduced to 2250 mm, but only over limited areas such as where a mechanical duct passes over a corridor.

710 .13.00 In areas where access is restricted, eg, drinking fountain recess, a minimum ceiling height of 2250mm is acceptable.

710 .14.00 Rooms with ceiling mounted equipment, such as X-Ray Rooms and Operating Rooms or other rooms where ceiling-mounted patient lifting devices are fitted may require increased ceiling heights. Heights should comply with equipment manufacturers' recommendations. The most common ceiling height in such areas is 3000 mm.

710 .15.00 Minimum ceiling (soffit) heights of external areas such as entry canopies, ambulance entries and delivery dock canopies should suit the requirements of the vehicles expected to use them. Special consideration should be given to the impact of whip aerials fitted to emergency vehicles, or specialist emergency vehicles designed and fitted to transport bariatric (obese) patients, which may result in increased vehicle height and width.

710 .16.00 Ceiling and door heights in Plant Rooms are to suit the equipment and allow safe access for service, maintenance and future replacement of equipment. A minimum recommended ceiling height is 2400 mm.

710 .17.00 Installation of overhead patient hoists in some patient rooms may require reinforcement of the ceiling support structure. This should be noted in the project brief.

In addition, information provided by equipment manufacturers should be reviewed in terms of the needs of particular items of equipment for passage through full height door openings eg to ensuite bathrooms; or that may affect the positioning of bed screen tracks or other such fixtures in Multiple-Bed Rooms.

Doors

710 .18.00 DOOR TYPES

AUTOMATIC DOORS

Automatic sliding doors may be used in high traffic areas. They may also be used successfully in areas where 'hands-off' access is necessary, such as entries to an Operating Unit. Where installed, they are to satisfy the requirements of emergency egress and to close at a rate that provides sufficient time for disabled and frail patients and visitors to enter/exit.

They should not be used in areas where access control is required.

710 .19.00 SLIDING DOORS

Sliding doors are not recommended, but may be used subject to compliance with the BCA and mandatory requirements.

These Guidelines DO NOT recommend the use of sliding doors in Health Facilities due to hygiene concerns, maintenance problems and potential for locking in place.

Cavity sliders may not be used in the following areas:

+ Planning Units containing Patient Care Areas or Treatment Areas;
+ Planning Units containing sterile equipment;
+ Planning Units containing patient diagnostic equipment;
+ Catering Facilities;
+ Laboratory Areas;
+ Mental Health Facilities.

Surface mounted sliding doors may be used subject to the requirements of access in emergency situations.

Sliding doors, if used should be of solid core or metal frame type to resist warping. Sliding doors should have tracks on top and bottom to ensure safety of operation.

710 .20.00 DOOR SWING

Doors must not open into a zone which impedes the manoeuvring of patients/residents, nor swing out into a circulation area in a manner that might obstruct traffic flow or reduce the required corridor width.

However, doors may be required to swing out or in both directions for reasons of patient safety eg patient bedrooms in Mental Health Units, for reasons of staff safety such as in Consultation Rooms, or where they form part of an escape route.

710 .21.00 DOORS IN THE PATH OF FIRE EGRESS

All doors on the path of fire egress shall be single or double swing type. These shall comply with the requirements of the BCA. (Note: if such doors also form part of a fire or smoke compartment, they shall maintain those properties in the closed position).

Fire doors linked to hold-open devices controlled by smoke detectors reduce impediments to safe patient/resident handling and should be used where possible. (VIC WorkCover, 1999)

Sliding doors may only be used for exit doors in accordance with BCA restrictions and requirements.

Doors

710 .22.00 DOORS - SECURITY

All perimeter doors should be locked and access restricted to one or the minimum necessary points in the building especially at night.

For design standards refer to Security - Building Elements - Doors, in these Guidelines.

710 .23.00 DOORS USED BY PATIENTS

Doors to rooms likely to be used by patients without staff assistance should be single or double swing type.

Swing doors should generally open from corridors and distribution spaces into rooms. However doors that should open out include:

+ Doors to small patient ensuites;

+ Doors to disabled toilets and showers;

+ Doors to small change cubicles;

+ Doors in areas accessed by mental health patients to prevent patients locking/barricading themselves in the room.

Doors required to enable emergency access shall open out or open in both directions. Refer to 'Doorswing'.

710 .24.00 DOOR OPENINGS

Clear door openings between two sections of a corridor or from one corridor to another shall be as specified by the BCA for doors in the path of fire egress. In effect, for the purpose of these Guidelines all corridors are on the path of egress.

Note: In Class 9a Patient Care Areas, the minimum door width for doors on the path of egress is the corridor width less 250 mm.

710 .25.00 The minimum dimensions of clear door openings to Inpatient Bedrooms in new areas shall be 1200 mm wide and 2030 mm high, to ensure clearance for the movement of beds. Existing doors of lesser dimensions may be considered acceptable where function is not adversely affected and replacement is impractical.

710 .26.00 Door openings need to be high enough to allow access for equipment likely to be used such as IV poles, fracture frames and electric beds. Generally, 2040 mm high (standard door opening) will suffice. In special circumstances, this may be increased to 2400 mm high.

Consideration should be given to the weight of the door to ensure that it is easy to open and close as full height doors can be relatively heavy. (VIC WorkCover 1999)

710 .27.00 In general, clear door openings to rooms that may be accessed by stretchers, wheeled bed stretchers, wheelchairs or handicapped persons, shall be a minimum of 900 mm. For situations such as hoists and shower trolleys 1000 mm is the minimum recommended. Designers should review the manufacturer's recommendations for the equipment selected, consider the need to cater for future equipment design changes and design in a reasonable safety margin for these.

710 .28.00 While these Guidelines are intended to facilitate access by personnel and mobile equipment, consideration must be given to the size of furniture and special equipment that is to be delivered via these access ways.

For example, plant room door openings should allow for safe access for maintenance,

service and replacement of equipment.

710 .29.00 EMERGENCY ACCESS

Certain rooms that are used by patients shall be equipped with doors and hardware that will permit emergency access from outside the room.

These rooms can be defined broadly as rooms that:

+ Are used independently by patients;

+ Have only one door;

+ Are smaller than 6 m2;

+ Have less than 2.5 m of clear space behind the single door;

+ Form Patient Bedrooms, Bathrooms and Ensuites in Mental Health Facilities;

+ Form secure rooms in Mental Health Facilities.

When such rooms have only one opening and if the door normally opens inwards, in case of emergency, the staff must be able to open the door outwards without any need to use a key, Allen key or special device.

The use of retractable doorstops within flat metal door frames together with coin operated door snibs is recommended. The snib can be opened with a coin while the door can be opened outward by simply pushing the doorstop into the frame.

710 .30.00 MENTAL HEALTH SECURE ROOMS

In Mental Health Secure Rooms, the following configuration is recommended:

+ One standard door, opening in plus;

+ One adjacent door minimum 450 mm wide, opening out, ie one and one half doors that form an opening 1270 mm - 1370 mm wide.

+ Both doors with external locks and no internal handles;

+ Door locks to ‘fail safe’ in case of fire;

+ Doors and frames should be of solid construction with multiple hinges and multiple locking points. Viewing panels should be constructed from non-breakable material with concealed fixings.

Note: Alternative operational policy may be considered whereby all staff carry a key that will operate doors to mental health secure areas and thereby control egress from these areas in a fire situation.

710 .31.00 DOOR HANDLES

GENERAL

The following considerations shall be given to the particular hardware requirements and special fittings needed for certain areas:

DOOR HANDLES GENERALLY

In areas where staff frequently pass doors, the shape of the door handle should be selected so that it is does not catch on pockets of overalls or other clothing. Handles with a full return are recommended.

Lever handles are recommended for hinged doors and ‘D’ pulls for sliding doors.

Handles should be located at an appropriate height to enable staff to easily open doors whilst supporting or manoeuvring patients/residents.

MENTAL HEALTH

Door handles in a Mental Heath Unit shall prevent self-harm by not providing a supporting point. This can usually be achieved by using recessed, concealed or flush hardware. Alternatively, specially formed knobs are available which do not allow 'grabbing'.

PAEDIATRIC ROOMS

In Paediatric Rooms consideration should be given to providing two sets of door handles; one at high level and one at low level.

LOCKS

Door handles may incorporate locks, snibs, push buttons and indicators. Designers and specifiers should consider flexible hardware systems where the functionality of the door may be changed without necessarily changing the hardware.

The type of locking function shall be appropriate for the use of the room. In any event, the locking device shall prevent a person being inadvertently locked in a room.

Security locks such as ‘proximity’ and swipe card systems may be required for controlled access areas.

PUSH / PULL PLATES

In many instances a door lock or latch is not necessary. Rooms that do not require locking may work well with only push/pull plates and a self closer. Push/pull plates are recommended in rooms that are used frequently by staff holding objects in their hands. Dirty Utility Rooms are a good example.

710 .32.00 DOOR GRILLES AND UNDERCUTS

The Heating, Ventilation and Air Conditioning (HVAC) design may require door grilles or undercuts. These are usually required for return air, makeup air or pressure relief.

Door grilles or undercuts may be used in areas that do not compromise the requirements of the BCA and other requirements of these Guidelines.

Door grilles or undercuts may not be used in the following locations:

+ Areas with a particular air-pressurisation scheme Isolation Rooms;

+ Room requiring acoustic isolation;

+ Rooms requiring radiation shielding;

+ Fire Doors and Smoke Doors.

Door grilles should not be used in any patient accessible areas in Mental Health Facilities, due to the potential for door grilles to suffer impact and damage, or to be used as a weapon.

The following non-mandatory recommendations also apply to grilles and undercuts:

+ Door grilles are not recommended for areas used by people in wheelchairs due to potential impact and damage;

+ Door grilles are not recommended for bathrooms or ensuites;

+ Large undercuts close to bathroom showers are not recommended as they can result in water leaking or splashing outside to adjoining rooms;

+ As an alternative to a door undercut, designers may consider an inward sloping door slot approximately 200 mm above the floor to reduce water egress whilst providing the same functionality as a door undercut.

710 .33.00 HOLD-OPEN DEVICE

Door hold-open devices should also be considered for doors that should remain open, such as doors on main traffic routes and delivery doors.

The following requirements shall apply:

+ Hold-open devices shall be capable of activation and de-activation without any need for the staff to bend down, reach upwards or reach behind the door;

+ Hold-open devices shall not be fitted to doors where this compromises doors that are required to achieve a specific air pressurisation or isolation scheme by these Guidelines;

+ Hold-open devices shall not be fitted to the side of a door that may permit a disturbed patient to lock the door from inside, or where they may provide a potential hanging point for patients who are at high risk of self harm;

+ In areas frequently used by staff holding objects or pushing trolleys, the use of delayed action combined self closer/hold-open device is recommended;

+ Hold-open devices used for fire doors should be controlled by smoke detectors, or by activated fire alarms.

710 .34.00 SELF CLOSERS

Self closers are required for fire and smoke doors nominated in the BCA and shall comply with its requirements. This section covers other door types.

Self closers shall be provided for the following doors:

+ Doors required to achieve a certain airflow or air pressurisation scheme required by these Guidelines;

+ Entrance doors to any area nominated as a restricted area by these Guidelines including:

- Operating Unit;
- CSSU;
- Kitchen;
- Sterile Stock Room;
- Isolation Rooms;
- Birthing Rooms.

710 .35.00 Apart from the above doors, self closers are not required or encouraged. Over-provision of self closers can lead to unnecessary capital and maintenance costs. Door closers should not be fitted where they exacerbate or create manual handling risks, where they impede the movement of patients, or where they reduce the independence of patients.

710 .36.00 Self closers to the following rooms are discouraged:

+ Offices;

+ Patient Rooms;

+ Bathrooms and Ensuites;

+ Rooms used independently by people with disabilities;

+ Meeting Rooms and Interview Rooms;

+ Store Rooms - unless a hold-open device is fitted to allow for equipment movement in and out of the room.

710 .37.00 HARDWARE

Self closers shall be designed and installed to allow for the door to open at least a full 90 degrees. Allowance should be made for the nib space required for the self closer arm.

Self closers used in double doors shall be accompanied by suitable sequencer hardware to allow the doors to be closed in the right sequence.

Self closers that duplicate the functionality of a hold-open device may also be considered.

Observation Glass

710 .38.00 Glazed panels, installed in accordance with AS 1288 - Glass in Buildings - Selection and Installation, shall be provided in doors where visual observation for reasons of safety, security or patient observation is required.

However, in fire doors the size must comply with AS 1905.1 Components for the Protection of Openings in Fire Resistant Walls - Part 1 - Fire Resistant Door Sets.

The height of an observation panel should be determined to suit the majority of people using the room, including people in wheelchairs.

710 .39.00 Observation glass is recommended for doors in the following areas and situations:

+ Entry/Exit to Operating Rooms or Procedure Rooms;

+ Scrub Room to Operating Room;

+ Air-locks;

+ Clean and Dirty Utility;

+ Work Rooms frequently used by staff;

+ Rooms used to interview mental health or disturbed patients;

+ Rooms requiring an observation window but with no physical possibility of providing a window, such as Mental Health Secure Rooms;

+ Kitchens and Pantries.

710 .40.00 Observation glass is not recommended in the following areas:

+ Rooms requiring acoustic isolation;

+ Where patient or staff privacy is required, although safety requirements may need to be balanced against this in some situations.

Observation glass shall have a mechanism, device or material to obscure the glass in the following areas:

+ Patient Bedrooms to facilitate privacy where required;

+ Operating Rooms and Procedure Rooms where laser may be in use;

+ Rooms requiring X-ray or other radiation shielding;

+ Rooms requiring electromagnetic shielding (such as a Faraday Cage).

Observation glass may be semi-frosted in areas where a clear vision of the room is not required. This type of glass or applied film may suit rooms where the primary concern is to avoid danger to staff passing through the door and to enhance patient privacy. Semi-frosted glass is usually adequate to enable staff to avoid the danger. Semi-frosted glass is recommended in doors to the following rooms:

+ Clean Utility;

+ Dirty Utility;

+ Operating and Procedure Rooms;

+ Examination/Treatment Rooms.

The use of safety glass should be considered where there are potential risks for security, violence or self harm. Refer 'Safety Glazing'.

Handwash Facilities

710 .41.00 Hand basins need to be large enough and taps positioned in such a manner to prevent splashing on the floor creating a safety hazard.

710 .42.00 Location and arrangement of fittings for handwashing shall permit their proper use and operation. Particular care should be given to the clearances required for elbow action type handles. Non-thermal transmitting standard handles with effective finger grips are preferred. Heights are to suit the particular function, such as paediatric, disabled, and standard.

710 .43.00 Handwashing facilities shall be securely anchored to withstand an applied vertical load of not less than 115 kg on the front of the fixture.

Refer to section on ‘Infection Control’ for details of basin types and locations.

Windows

710 .44.00 All rooms occupied by patients or staff on a regular basis shall have glazed windows or doors to achieve external views and/or make use of direct or borrowed natural light, where practical. The height of window sills should enable patients in their beds or whilst sitting to see outside.

710 .45.00 All Patient Bedrooms shall have external windows overlooking external areas. An external area is defined as the perimeter space around a building as well as naturally ventilated and lit atriums and courtyards.

Note 1: It is also a requirement of the BCA that all overnight Patient Bedrooms must have an external window. This does not apply to the Operating Unit, Emergency Unit, and similar areas.

Note 2: Where possible, the provision of external windows to ICU and CCU bed areas is required by these Guidelines.

Note 3: For the purpose of this clause, an internal atrium with artificial ventilation will be accepted if it complies with BCA requirements.

710 .46.00 The requirement for windows to patient areas is summarised in the following schedule:

ROOM/SPACE			External	Alternativ	Alternativ	Required	REMARKS

			Window	es	es		
BEDROOM			Yes			Yes	
BIRTHING ROOM			Yes			Yes	
PATIENT BAY - CRITICAL			Yes	Skylight	Internal		CCU/ICU Bed Cubicle, Pre-op Cubicle
PATIENT BAY - NON ACUTE			Yes	Skylight		No	
PATIENT BAY - ACUTE			Yes	Skylight		No	
NURSERY			Yes			Yes	
PATIENT LOUNGE			Yes	Skylight		Yes	
PATIENT ACTIVITY ROOM			Yes	Skylight	Internal	Yes	
PATIENT DINING			Yes			Yes	

Window Types

710 .47.00 WINDOW TYPES

In multi-level hospitals with ducted airconditioning systems, or in buildings in cyclone prone areas, it is not always possible or desirable to utilise openable windows. In these circumstances, fixed windows are acceptable, although access for external window cleaning should be considered.

Some openable windows should be provided to allow for ventilation in case of breakdown of mechanical ventilation systems such as airconditioning.

The use of openable windows may be regulated in this situation by the use of key operated openings managed by staff.

710 .48.00 Openable windows should have the provision to restrict the degree of opening. Locks should be heavy duty, affixed to both sides of the window and fixed securely through the frame with tamper-proof fixings. Window winders should be avoided.

710 .49.00 Top hung windows, also known as ‘awning’ or ‘hopper’ windows should not be used in multi-storey buildings because they can act as smoke/heat scoops from fires in storeys below.

710 .50.00 If it is considered undesirable to allow patients to open windows, for reasons such as avoiding potential problems with the central airconditioning, then the opening section of the windows should be operated with a lock or allen key held by the staff. See clause above.

Note 1: Any opening section of the window or door as described above shall be provided with a fly screen.

Note 2: The provision of opening windows also facilitates energy management and conservation as artificial lighting and airconditioning systems may not be necessary at certain times of the day and year. However, Infection Control requirements may override this - refer to Part D of these Guidelines.

Note 3: Window opening mechanisms should be selected to prevent persons from climbing in and out of windows. This applies particularly to areas that may accommodate children or persons with dementia or confusion, or mental illness.

Size

710 .51.00 WINDOW SIZES

The total area of required external windows and/or external glazed doors shall have a net glazed area of not less than 10 per cent of the floor area of the room concerned. An opening component equal to not less than five per cent of the floor area of that same room is considered highly desirable but not mandatory. These requirements together will ensure natural light and ventilation in the event of an electrical or air handling system failure.

Cleaning

710 .52.00 WINDOW CLEANING

Window cleaning shall be considered and appropriate provisions made. The selection of a cleaning method will depend on the type and location of openable window used.

For example:

+ Inward opening windows allow for the cleaning of the outside surface in a safe manner while standing inside the building;

+ With alternate outside opening windows it is possible to open one window to reach and clean the next window; however this type of window will require secure harness anchor points for the cleaner;

+ A window cleaning ledge or balcony may be provided only for window cleaning with no patient access. If no hand rail is provided, a continuous harness system shall be provided with a harness cable or rail that must reach a safe access point. See not below;

+ A window cleaning cradle that typically descends from the roof may be used. Cradles must be accessible from a safe position on the roof and comply with all safety legislation;

+ Extension arms may be used to clean windows that are one level above the ground or accessible from a terrace;

+ Health Service management may enter into a window cleaning contract with a contractor who uses a mobile Cherry Picker or other approved safe work practices and equipment.

Note: For safety reasons cleaning windows using a ladder is not recommended.

Note: Compliance is required with OHS Regulation Clause 56 on fall protection wherever window cleaning or other external building maintenance /construction or excavation work would put a person at risk of falling more than 2 m. The Code of Practice: Safe Work on Roofs Part 1 - Commercial & Industrial Buildings; Safety Guide: Use of Fall-Arrest Systems also apply. Refer to WorkCover NSW website: www.workcover.nsw.gov.au

Windows - Security

710 .53.00 WINDOW SECURITY

Entry through perimeter windows should be minimised.

For building design standards refer to Security - Building Elements - Windows, in these Guidelines.

Fixtures & Fittings

710 .54.00 SUMMARY

Fixtures and Fittings refer to items that are generally factory made or otherwise manufactured off-site then installed in the building. Some fixtures and fittings may be present at the time of the completion of the construction or renovation. Others may be installed at a later date. For the purpose of these Guidelines, all fixtures and fittings that are 'installed', that is, fixed to the building, are part of the building and subject to the requirements of these Guidelines. As such, they should comply with requirements of all parts, and in particular:

+ Ergonomics;

+ Human Engineering;

+ Safety Precautions;

+ Security;

+ Infection Control.

Selection of Fixtures and Fittings is covered in detail in a separate section of these Guidelines.

Note: The OHS Act and Regulation requires consultation with employees and the identification, assessment and control of risks when selecting, purchasing and installing FF&E.

Refer to 'Safety and Security Precautions' in this section of the Guidelines.

Finishes

710 .55.00 CEILINGS

Ceiling finishes have an impact on the aesthetics, acoustics and general atmosphere of a room. Selection of the finish must satisfy design, acoustics, fire protection and durability requirements. The effect of the ceiling finish on the level of lighting within a room must also be considered.

Part D of these Guidelines covers Infection Control issues. This section (Part C) covers issues which affect Access, Mobility, and Occupational Health & Safety Issues.

710 .56.00 SELECTING CEILING FINISHES

SUMMARY

The following issues should be considered when selecting a ceiling finish.

Surface durability and soil resistance are key considerations where ceilings may be damaged, or need to be kept clean. Other factors may include the need for effective noise reduction, light reflection, moisture resistance or the need to accommodate the support of heavy equipment such as medical imaging or other screening machines, patient lifters and other devices.

Generally ceilings should be easy to maintain and repair. They will generally be subjected to the cleaning protocols documented in the Operational Policies for the facility or for the specific Unit.

There are also increased demands for ceiling finishes to meet more exacting sustainable design criteria.

710 .57.00 RESISTANCE TO SURFACE DAMAGE

Ceilings in areas like corridors, emergency receiving areas and mental health units may need to withstand surface impact or other forms of abuse.

In any areas where inlaid ceiling panels frequently need to be removed for access, resistance to surface scratching is highly desirable.

Test results for the proposed finish that evaluate impact resistance, surface scratch resistance, resistance to mould and mildew, and even air diffuser soiling resistance, should be reviewed against the particular requirements for each location.

710 .58.00 INFECTION CONTROL

Although ceilings rarely become soiled with any hazardous matter and present

reasonably minimal infection risks, a smooth washable finish should be used in areas where splash spillage may occur, for example, Resuscitation Rooms in Emergency Departments, or Operating Rooms.

For further information regarding Infection Control refer to Part D of these Guidelines.

710 .59.00 USE OF ACOUSTIC FINISHES

Acoustic tiles or plasterboard may be used in areas where acoustic regulation is either desirable or critical, such as Operating Suite Support Areas, Interview Rooms, corridors, Waiting Rooms etc.

A cleaning problem may be generated due to the use of acoustic tiles in areas where splash spillage may occur and should be avoided.

710 .60.00 ACCESS TO SERVICES

Generally ceilings in areas other than Operating and Procedure Rooms should provide access to services. If access panels are used in procedural areas, they should be provided with an effective positive seal.

Suspended ceiling systems may be used where access to services is required and a smooth seamless finish is not vital.

In mental health units patients should be prevented from accessing services in ceiling spaces.

710 .61.00 AVOIDANCE OF DEFORMATION AND SAGGING

Sagging ceilings are often the result of moisture exposure in high humidity areas such as laboratories, kitchens, locker rooms, shower areas and indoor pools.

By avoiding where possible the following situations, the incidence of ceilings sagging may be reduced or removed:

+ Intermittent, seasonal use of facilities or long refurbishment, where HVAC systems might be shut down for extended periods;

+ Installation of ceiling systems prior to the activation of the HVAC system in new construction or renovation projects;

+ Attempted refreshment of indoor air quality by increasing the percentage of outside air that is circulating through a ventilation system.

710 .62.00 SUSPENDED AND EXPOSED GRID SYSTEMS

In a suspended, exposed grid ceiling system attention should be paid to the specification of the grid, especially in terms of corrosion resistance.

710 .63.00 FIRE RESISTANCE

Interior ceiling finishes for use in Health Care Facilities must meet the criteria for acceptable fire index figures required by the Building Code of Australia, in accordance with Australian Standard AS1530.

710 .64.00 FLOOR FINISHES

Floor finishes have an impact on various requirements of these Guidelines. Part D covers those aspects which affect Infection Control issues. This section (Part C) covers those aspects which affect Access, Mobility, Occupational Health & Safety issues.

Finishes

710 .65.00 Selection of floor coverings can impact on staff work practices in five main ways:

1. Cleaning/maintenance procedures eg too rough a surface may lead to arm and shoulder injuries in the use of a mop;

2. Manoeuvrability of equipment - including push/pull turning forces;

3. Risk of slipping or tripping;

4. Spread of flame and the density of smoke produced;

5. Fatigue on feet and legs (the types of shoes worn by staff should also be considered.) (Designing Workplaces for Safer Handling of Patients/Residents - VIC WorkCover 1999).

Fire safety compliance is also a special consideration. A 'duty of care' exists where professionals such as architects and interior designers are involved in the selection of products and responsibility must be addressed by purchasing officers and retailers/agents when purchasing replacement products.

Floor finishes also have a direct impact on the whole of life costs of any building where cleaning and maintenance is concerned. This is especially true in a Hospital. Low capital cost may result in high whole-of-life costs.

710 .66.00 SELECTING FLOOR FINISHES

SUMMARY

A number of issues should be considered and balanced when selecting the floor finish. Designers are encouraged to investigate alternative materials and if necessary organise for realistic onsite tests before making major decisions. The following clauses set out the issues to be considered.

710 .67.00 MOVEMENT OF OBJECTS

The floor finishes chosen should make the movement of such objects as trolleys, bed trolleys and wheelchairs sufficiently easy to minimise the potential for injury to staff.

The following should be considered when selecting floor finishes:

+ Floor finishes and equipment should be compatible. For example, wheeled equipment used on carpeted floors should have polyurethane wheels, while rubber wheels may suit vinyl surfaces. If both carpet and vinyl is to be used in clinical areas, then the wheeled equipment should be selected for the highest friction surface ie carpet;

+ Standard vinyl and similar products are the easiest materials for the movement of trolleys and wheelchairs;

+ Carpet, if used should be direct stick, commercial density with short piles, preferable loop piles; a 90/10 or 80/20 wool/nylon mix is recommended;

+ Flocked carpet should be considered where the 'look and feel' of carpet is desired with the ease of movement over vinyl;

+ Many hospital staff consider that it is harder to move objects over cushioned vinyl. However, cushioned vinyl may still be preferred to standard vinyl for its sound absorption qualities.

710 .68.00 NOISE GENERATION AND SOUND ABSORBTION

Carpet type finishes not only minimise noise generation, they also dampen the noise generated by other sources. Carpet is particularly effective in corridor areas outside Patient Bedrooms where a great deal of noise can be generated. This quality should

be balanced against the ease of movement by trolleys, bed trolleys and wheelchairs. Reduction in noise levels should not be at the expense of employee or patients safety.

Cushioned vinyl is also effective in minimising noise generation but it does not dampen other noises as effectively as carpet. Ceramic tiles, terrazzo and similar hard surfaces generate noise from walking staff and visitors.

710 .69.00 EASY ON THE FOOT

Surfaces such as carpet and vinyl, both standard and cushioned are considered easy to stand on for long periods of time. Most OHS experts consider surfaces such as ceramic tiles and terrazzo too hard to stand on for more than a few hours. These are therefore not recommended in hospital work areas. However, they may be used with caution in public areas such as foyers and courtyards, with appropriate slip resistance coefficients especially when wet.

710 .70.00 INFECTION CONTROL

Infection control issues play an important role in the selection of floor finishes. Refer to Part D Infection Control for further information.

710 .71.00 EASE OF CLEANING

Floor materials shall be easy to clean and have wear resistance appropriate for the location involved.

710 .72.00 MINIMISATION OF COMBUSTION HAZARDS

Floors in areas and rooms in which flammable anaesthetic agents are stored or administered to patients shall comply with AS 1169 - 1982 - Minimizing of combustion hazards arising from the medical use of flammable anaesthetic agents.

710 .73.00 CONDUCTIVE FLOORING

Conductive flooring may be omitted in anaesthetising areas where flammable anaesthetic agents will not be used and appropriate notices are permanently and conspicuously affixed to the wall in such areas and rooms. Otherwise, appropriate conductive flooring shall be provided.

710 .74.00 SELECTION AND INSTALLATION

Refer to VIC WorkCover, 1999 - 'Designing for Safer Handling of Patients/Residents'

ROOM	FACILITY	FLOOR FINISH
Bedrooms	Acute	Cushioned Vinyl or Carpet
	Aged Care	Carpet or cushioned vinyl.
	Rehabilitation	Cushioned Vinyl or Carpet
Bathrooms/ Ensuites	All	Non slip vinyl or epoxy
Corridors	Acute	Vinyl or Carpet
	Aged Care/ Rehabilitation	Carpet
Dining Rms	All	Vinyl or Carpet
Lounge Rms	All	Carpet

Notes:

1. A hazard can exist at the junction of different floor finishes (eg where vinyl meets carpet). At such points careful consideration needs to be given to low profile junction or diminishing strips, to facilitate use of wheelchairs and trolleys.

2. The use of different types of floor finishes in the one room (eg carpet and vinyl) should be avoided as it often results in varying floor levels (diminishing strips) and can create a feeling of unsure footing.

3. Unexpected changes in floor friction may create a greater risk of slipping.

4. Carpet should be low profile and securely attached to the floor structure to allow for easy movement of wheeled equipment and wheelchairs. However, this may contribute to fatigue, aches and pains for staff who walk or stand on the surface for long periods. Careful consideration needs to be given to reducing such impact whilst not impeding staff who are pushing/pulling equipment.

5. Shock absorbent underlays to carpet, or the use of cushioned vinyl may reduce stress on staff provided they do not make equipment difficult to move.

6. In aged care and rehabilitation environments, the continence of patients should inform decisions re floor finishes. Carpet may be considered where the sub floor surface is appropriately sealed and maintenance regimes permit its use.

7. Expansion and seismic joints shall be constructed to resist the passage of smoke.

710 .75.00 FLOOR SAFETY

In Order to reduce the risk of slips and falls, floor surfaces should comply with Aust/NZ Std AS/NZS 3661-1993 – 'Slip Resistance of Pedestrian Surfaces'.

710 .76.00 The choice of floor finish shall consider the slip resistance appropriate for different conditions. The following can be used as a guide:

+ Studded vinyl flooring balances slip resistance with ease of cleaning, and is suitable for wet areas such as patient showers where water, soap and body fat are present;

+ Conventional safety vinyl flooring suits wet areas without soap or body fat where trolley movement is also expected, such as Dirty Utility and CSSU Decontamination Areas;

+ Standard vinyl is suitable for dry areas where patients and staff are expected to wear shoes;

+ Standard vinyl - Textured is similar to standard vinyl but provides greater dry-condition slip resistance;

+ Stone and terrazzo are sometimes used in entrance foyer areas; however, when wet these finishes may present a danger to staff and visitors and in such circumstances proprietary non-slip chemical treatments shall be used to increase slip resistance.

710 .77.00 Floor finishes that are subject to traffic whilst wet such as showers and bathrooms, kitchens and similar work areas shall be capable of maintaining a non-slip surface.

Note: The same applies to dry floors subject to the presence of fine powder such as talcum powder.

710 .78.00 WALL FINISHES

GENERAL

Wall finishes are often the largest visual element in an area and thus can have an impact on the aesthetic appeal of the space. Selection of appropriate wall finishes may help create a non-institutional atmosphere; however other aspects such as the ease of cleaning, infection control, fire safety and patient care requirements are often higher priorities in terms of finish selection.

Part D of these Guidelines covers Infection Control issues. This section (Part C) covers issues which affect Access, Mobility, and Occupational Health & Safety Issues.

710 .79.00 SELECTING WALL FINISHES

SUMMARY

Wall finishes should be selected on the basis of:

+ Durability and resistance to impacts from furniture, trolleys, aggressive patients, etc;

+ Ease of cleaning and retention of appearance over time;

+ Fire resistance and flammability indices;

+ Requirements for infection control.

Interior wall finishes for use in health care buildings must meet the criteria for acceptable fire index figures required by the Building Code of Australia in accordance with Australian Standard AS1530.

Ceramic tiles are not recommended as a wall finish due to their potential to compromise infection control. They are also susceptible to damage from trolleys if cracked or broken, individual tiles may be difficult to replace.

710 .80.00 WALL PROTECTION:

Wall protection is recommended to improve the longevity and retain appearance of most wall finishes, particularly in Patient Care Areas, service corridors and other areas where wheeled furniture and other equipment may be used.

710 .81.00 SKIRTINGS

Skirtings provide vital protection from scuffing and marking by wheeled equipment, maintenance machinery and feet, but also can help provide a continuous barrier against bacterial penetration and the build up of contaminants.

Skirtings should be coved to form a radius along the floor/wall junction to provide a smooth and continuous transition between the horizontal and vertical surfaces. The skirting should be continuously welded to the floor material in the case of sheet vinyl and rubber materials, or be a continuation of the floor material itself, for example where ceramic tiles, compound applied coatings and vinyl sheet are used.

Coved skirting is required to continue up the wall to a minimum of 150 mm. The skirting can either be tapered at the top to provide a minimal horizontal dust catching edge, or it can be covered with a special feathered edge strip.

Skirtings may also be finished against the underside of cupboards or as an overhanging wall finish. In the case of vinyl wall finishes, these can either be welded to a vinyl floor finish, should their thickness be identical, or carried down over the upstand of the vinyl with an overlap of approximately 10-12 mm.

In the case of textile floor coverings an applied coved or feathered edge vinyl skirting is preferred to a timber skirting which may leave a gap at the junction or make a very sharp corner which may be difficult to clean without special cleaning equipment accessories.

Finishes

710 .82.00 CORNER GUARDS AND HAND RAILS

Corner guards, bumper rails and hand rails should be provided to protect against impacts in:

+ Inpatient, Outpatient and Public Circulation Corridors;

+ Support Services Corridors, Storage Bays, Equipment Rooms;

+ Any areas with trolley or bed traffic.

Each department should also be assessed individually for disabled staff and visitor requirements.

710 .83.00 SPLASH PROTECTION

Splash protection should be applied to walls in areas such as Labs, Formula Rooms, Beverage Bays, Kitchens, Bathrooms, Showers, Dirty Utility Rooms as well as around hand basins, scrub troughs and cleaners and laundry sinks.

710 .84.00 RADIATION PROTECTION

Radiation protection will depend on individual room requirements. Material used and the extent of radiation shielding should be determined by a Radiation Services consultancy and reviewed by an Accredited Consultant Radiation Expert (CRE).

710 .85.00 BENCH TOPS

Bench tops should be of a smooth, impervious finish with rounded corners, and resistant to damage and stains. Joins should be avoided if possible because they are difficult to keep clean. A range of products are suitable, eg laminates, synthetics and stainless steel. Consideration should be given to the use of the bench tops and the type of material most suitable to their task.

General

730 .1.00 The subject of Human Engineering covers aspects of the design that permit effective, appropriate, safe and dignified use by all people, including those with disabilities. It includes occupational ergonomics, which aims to fit the work practices, FF&E and work environment to the physical and cognitive capabilities of all people.

As the requirements of Occupational Health and Safety (OHS) and Anti-discrimination legislation will apply, this section needs to be read in conjunction with the section on Safety and Security in these Guidelines, in addition to OHS related guidelines.

The Australian Standard AS1428 series covers certain aspects of design for Access and Mobility for people with disabilities. These are often referred to in these Guidelines and should be followed in relevant areas. Human Engineering for able bodied persons also requires careful consideration. Some of the common issues are covered in this section.

730 .2.00 There is increased public awareness of barriers that make reasonable utilisation of facilities difficult or impossible for the physically impaired. A hospital facility will have a high proportion of occupants, patients and visitors, who are unable to function without some form of assistance. Some staff may also be impaired. To ensure minimum patient dependence on staff, consideration should be given to design provision for optimum patient independence and enhanced staff productivity.

Consideration must be given to the wide range of disabilities including:

+ Mobility impairment;
+ Visual impairment;
+ Hearing impairment;
+ Cognitive impairment eg patients with brain injury or dementia;
+ Mental illness.

In addition, cultural and literacy issues should also be considered as they can impact on access and safety.

730 .3.00 The design of buildings and services should acknowledge the needs of a wide range of users who may include:

+ Able bodied people;
+ Clients being assisted by one or more people (eg a reluctant mental health patient);
+ Clients/visitors with baby prams, carrying or walking with young children;
+ Staff pushing beds, patient trolleys, other wheeled equipment;
+ Clients/visitors with a walking frame or other walking aid such as a stick;
+ Clients/visitors with impaired vision;
+ Clients/visitors with literacy issues;
+ Staff who may have a permanent or temporary disability;
+ Maintenance staff needing access to plant.

Planning

730 .4.00 To minimise overall costs and to avoid the need for expensive modification of finished work, initial designs shall include specific consideration of the needs of the physically, visually, hearing and mentally impaired. The majority of requirements can be easily accommodated during the planning stage at little or no additional cost; modifications required at a later time may be prohibitively expensive or impractical.

Australian Standard 1428

730 .5.00 INTRODUCTION

The Australian Standard AS1428 - Design for Access and Mobility Parts 1, 2 & 3 cover the issues of access for people with disabilities. Particular attention is given to access ways and circulation. Continuous traffic paths are required for consistent linkages suitable for use by people using wheelchairs. Facilities should be provided for people with ambulatory disabilities and for people with sensory disabilities.

Parts of the AS1428 series are a mandatory requirement of the BCA and must be complied with. For these requirements refer to both the BCA and AS1428.

It is a requirement of these Guidelines that sections of a Health Care Facility designed for frequent use by people with disabilities should comply with the relevant sections of the AS1428 series. It is, however, not a requirement of these Guidelines that a facility must comply with every part of the AS1428 series in every area of the health facility. Parts of the Health Care Facility may be specialised for use by patients (or staff) with particular disabilities. In such areas, the needs of the most common disabilities shall be considered and allowed for.

'Specialisation' is not seen by these Guidelines as ‘non-compliance’ in relation to AS1428.

These Guidelines require that a minimum number of rooms be sized and designed for use by people with disabilities regardless of the anticipated number of patients with disabilities. These are covered in the relevant sections of the Planning Units in Part B. These Guidelines cover the everyday use of facilities by able bodied persons.

730 .6.00 DEPENDENT PATIENTS

AS1428 primarily considers access by people with disabilities who are independent. Consideration also needs to be given to access by people who are physically dependent and who may be assisted by one, two or more people and/or who may be transported on a bed or trolley.

These considerations will have significant implications for the slope, width and turning circles on ramps, width of doors and corridors, size of lifts and vehicle access.

Consideration of safe access by staff, patients and visitors who may be disabled or who may be assisting or transporting a person with a (permanent or temporary) disability is also a requirement of the Occupational Health and Safety Act 2000 and Occupational Health and Safety Regulation 2001 in that provision of safe premises and the identification, assessment and elimination/control of all risks are required.

Grab Rails

730 .7.00 The design, sizing and fixing of grab rails and hand rails is nominated in AS1428 - Design for Access and Mobility.

It is highlighted that the fixing of such supports 'shall be able to withstand a force of 1100N applied at any position and in any direction without showing visible signs of deformation or loosening of the fittings.' (VIC WorkCover 1999).

730 .8.00 Grab rails, hand rails, vertical adjustable shower supports, towel rails, soap holders, footrests and any other fixture that may be used for support, shall have sufficient anchorage and strength to resist the sustained concentrated load of a falling heavy human.

Grab Rails

730 .9.00 Consideration needs to be given to the design of grab rails in areas where patient self-harm may be an issue eg Emergency Departments and Mental Health Units. The use of grab rails as a hanging point should be prevented by appropriate in-fill design.

Ramps

730 .10.00 Where ramps are required for patient access, gradients are to comply with the requirements of the Building Code of Australia.

Ramps in other areas such as service roadways shall comply with good design practice and be suitable for the task. Australian Standards, wherever applicable, shall be used.

Ramps are necessary for general facility purposes such as moving beds, ambulance trolleys and other equipment between different levels.

Ramps therefore need to have slope, width and turning circles based on the size and weight of an occupied bed plus space for passing as a minimum. This means that ramps will be wider, have bigger turning circles and lower grades than needed for wheelchairs. Ramps that are suitable for bed movement will also be suitable for wheelchair access.

Staircases

730 .11.00 All open staircases pose a risk to patients, children and others who may fall through the centre of the stairwell. They may also be used by patients intending self harm.

The design of staircases and suspended walkways should recognise this issue and also the need to prevent the throwing of objects from them which may injure people at lower levels.

Hand rails should be designed to assist people with mobility problems and those who may be visually impaired.

Overview

730 .12.00 All facilities shall be designed and built in such a way that patients, staff, visitors and maintenance personnel are not exposed to avoidable risks of injury.

Badly designed recurring elements such as workstations and the layout of critical rooms have a great impact on the Occupational Health and Safety (OHS) of staff as well as the welfare of patients.

Designers should be vigilant to ensure that designing out one risk doesn't result in the introduction of another eg designing out a security risk doesn't result in a manual handling risk.

The field of Ergonomics covers some aspects of the design of objects for common use. However, research indicates that experts disagree on some aspects of ergonomic standards such as the best sitting posture or angle of view for monitors. On most ergonomics issues, however, there is broad agreement amongst the experts.

It is not appropriate for any standard to be regarded as ideal for every person. It is also unreasonable to expect all items to be designed in such a way that they can be adjusted for all users.

Given these limitations, the role of ergonomics standards is to provide a reasonable and common base for design. It is strongly recommended that the actual design allows for modification where required to accommodate the special needs of staff.

The ergonomics standards included in these Guidelines are those commonly required in Health Care Facilities.

For items not covered in these Guidelines, it is highly recommended that the Australian Standard for Ergonomics is followed. Refer to the following:

+ SAA HB59 Handbook - Ergonomics - The Human Factor, A Practical Approach to Work Systems Design;

+ AS 3590.2 Screen Based Workstations, Part 2: Workstation Furniture.

Where a facility is designed for staff or patients with special needs, some deviation from these standards may be appropriate. In such circumstances, it is highly recommended that designers seek the opinion of specialist ergonomics experts or OHS professionals and obtain written advice.

Standards Table

730 .13.00 For simplicity, the Ergonomics standards are presented in a table form under several categories. All items should be regarded as high recommendations. Items which are required are clearly noted.

ITEM	COND'N	DEPTH MM	HEIGHT* MM	THICKNESS MM	REQ'D		REMARKS
WORK BENCH	Utility	600	900	32	No		No computer.
WRITING BENCH 1	Typing	900	720	max 50	No		CRT monitor.
WRITING BENCH 2	Typing	750	720	max 50	No		Flat monitor.
TOP COUNTER	Over bench	250	1150	20-32	No		750 reach.
SHELVING	Over 900h bench	350	1520-1820	20	No		2 shelves.
SHELVING	Over 720h bench	350	1370	20	No		2 shelves.
SHELVING UNIT	Full height	350-400	150-1820	20	No		7 shelves.
							* Bench heights should be raised to suit equipment to be accessed by staff.

Staff Station

730 .14.00 A Staff Station may be used for a variety of purposes including:

+ A clerical workstation;
+ Reception;
+ Staff Base;
+ Reporting Station or Sub-Station.

Part of a typical Staff Station is used as a workbench or workstation. For the ergonomic standards of these functions, refer to the appropriate sections of these Ergonomics Guidelines. The balance of the Staff Station standards are covered below.

High Counter

730 .15.00 This is used to shield objects, equipment and records from outside view. It may also provide a convenient writing surface for visitors and staff alike. A high counter is also referred to as Parcel Shelf or Service Counter. A high counter used for direct interaction between staff and visitors or patients should be designed to avoid the need for excessive 'reach' across the work surface.

However, in some instances additional width of the high counter top provides a safety barrier without the intimidating effects of security glass, polycarbonate or a security grille.

A high counter should be designed in such a way to permit the location of CRT type computer monitors whilst achieving an effective work surface width of 900 mm. Alternatively, the high counter should allow for the location of a flat panel display whilst achieving an effective work surface width of 750 mm.

The recommended height of the top counter used against a work surface designed at 720 mm above the floor is 1150 mm above the floor. This height will allow a typical person to gain sufficient privacy for work whilst being able to look over the top at visitors who are standing or sitting. The recommended height to the top counter used against a work surface designed at 900 mm to 1000 mm above floor level is between 1200 mm and 1250 mm above the floor level.

Care needs to be taken when determining counter design as high counters can make it difficult for staff and clients to communicate, especially where the client is of short stature, a child, in a wheelchair, or if the client or staff member is hearing impaired. This can exacerbate the risks of frustration and aggression. High and wide counters can also create ergonomic risks for staff, particularly short staff.

High-Low Design

730 .16.00 Where children or visitors using wheelchairs are expected at the Staff Station or Reception counters, a design incorporating a high section (for staff privacy) as well as a low section is highly recommended. The low section is typically at 720 mm above the floor or a height that matches the staff work surface.

Low Counter

730 .17.00 In some situations, a lower counter at which staff and patients sit, may be considered.

These have the advantage of creating a more intimate situation, and they are easily accessed by people of all heights and those who may be in a wheelchair. It has also been stated that people are less likely to become aggressive and physically threatening when they are seated.

Security Barriers

730 .18.00 In some situations it may be necessary to provide a security barrier at the counter. This may be in high quality polycarbonate security glazing such as 'Lexan' or one of a variety of similar glasses. In such situations, the barrier will include a vertical or

horizontal slot that is sufficient to allow the passage of sound and small objects. A slot of 125 mm is recommended. If a security barrier such as glass or polycarbonate is provided at a counter used for public interaction, then an intercom system shall be provided to amplify the sound for the hearing impaired.

At Pharmacy Dispensing counters, it may be necessary to pass larger objects from one side to the other. In such situations a two-way drawer or cupboard may be used. These should be lockable.

If the Staff Station or counter is the only barrier between a department and outside areas, it may be necessary to provide after-hours security. If a full height barrier such as security glass or polycarbonate has been provided as described, this may be sufficient. Alternatively, a lockable security grill or similar device should be provided. The grill or similar device should be operable by the staff from the normal standing height.

Workbench

730 .19.00 GENERAL

Workbenches may be designed for two typical work practices - sitting position or standing position. For example, some nursing staff prefer the workbench in a Staff Station to be used in the standing position whilst some staff prefer the sitting position. Both options are equally valid and acceptable. However, the ergonomic standards for the two will vary.

730 .20.00 SITTING POSITION

A workbench used in the sitting position should be at 720 mm above the floor. The typical minimum depth is 600 mm. This should be increased to 900 mm for the use of conventional CRT computer monitors or 750 mm for the use of flat panel computer displays.

730 .21.00 STANDING POSITION

This position suggests that the primary use of the work bench will be in the standing position. However allowance may be made for the use of this type of workbench while sitting.

If the bench is almost exclusively used in the standing position with a requirement for occasional typing, then the bench height of 1000 mm above the floor is recommended. If the bench is mostly used in the standing position with the occasional typing in the sitting position, then a bench height of 900 mm is recommended.

The first option (1000 mm) is most often requested for Staff Stations, Reporting Stations and smaller Reception counters. The second option (900 mm) is most often used in Utility Rooms, Laboratories, Beverage Bays, Kitchens and similar areas.

730 .22.00 FOOT SUPPORT

Shorter staff may use foot rests in the sitting position to lift the feet to the optimum ergonomic position. Chairs used at workbenches used in the standing position should have foot support rings and be height adjustable.

730 .23.00 BENCH SUPPORT

A workbench should be able to support the weight of people sitting on it in addition to any equipment located there. Although the practice of sitting on workbenches should be discouraged, the reality is that it may occur.

Computers

730 .24.00 GENERAL

Computers are used in a variety of ways. It is difficult to dictate a particular position to

suit all people. The following Guidelines represent the most typical preferences and standards.

Design of computer workstations should be considered in conjunction with planning for FF&E. Re-used computers may differ from new equipment, and the design of the workplace should respond to the actual equipment used.

730 .25.00 COMPUTER MONITOR

The type of monitor will dictate the depth of the work surface. Typically, conventional CRT (Cathode Ray Tube) monitors require greater depth to permit a comfortable distance from the users eyes. Most IT specialists believe that in the near future almost all CRTs will be replaced by economical flat panel displays using liquid crystal, gas plasma or similar technology. These will require less depth of work surface. They are also easier on the eye as they almost eliminate the flicker that is present in CRT monitors. If a choice is available, flat panel displays should be preferred to CRT monitors.

730 .26.00 MONITOR POSITION

Within the work surface depth defined in these Guidelines, the exact horizontal location of the monitor should be adjustable to suit different users. The vertical position of the monitor will depend on the height of the user. The best option is for an adjustable monitor arm. A cost-benefit analysis may be required to justify their use. A fixed monitor is acceptable. The angle of view to the centre of the monitor should be within a range defined by a horizontal line taken from the users eye down to 15 degrees depending on the user's preference.

730 .27.00 LAPTOPS

Laptop computers may be used as replacements for desktop computers. This type of computer is acceptable for occasional typing and is highly recommended for maximum space saving.

Note that laptops used for frequent or prolonged typing should be used with a docking station, and normal keyboard and mouse. Depending on the size and height of the laptop screen, a docking station with normal size monitor may also be required. Connection to data cabling for mainframe, intranet and internet access will still be required.

Security issues should be considered in the selection of laptops - their use in areas accessible to the public should be carefully considered.

Workstation - Typical

730 .28.00 These Guidelines apply to the typical 'L' shaped workstation as well as desks with or without a return.

A workstation intended for working, writing or typing while in a seated position should be 720 mm high.

If a computer with a conventional CRT type monitor is used, the depth of the main work surface containing the CRT should be 900 mm. If the CRT is positioned in the corner, the 900 mm depth is measured diagonally, and must allow for accommodation of the monitor to be used.

If a computer with a flat panel display is used, the depth of the main work surface containing the display should be 750 mm. This option is preferred due to the reduced need for the staff to 'reach' across the work surface.

The depth of the return to the main work surface may be between 450 mm and 750 mm with 600 mm being the optimum recommendation. This will allow for underbench storage and file or drawer units.

The optimum recommended configuration for a workstation includes one work surface of 750 mm wide, one work surface of 600 mm wide with the computer position in the

corner.

If a computer is positioned in the corner, then the corner should be angled with a minimum dimension of 400 mm wide.

The workstation should be designed to allow for adequate knee space. The space must be large enough so that the action of turning to use underbench units does not result in hitting the knees against these units.

One end of the workstation may be shaped to form a meeting table. For this purpose rounded edges are recommended.

If visitors are expected to sit across the workstation, then a modesty panel may be considered appropriate.

Workstations should have provision for safe cable management. The simplest system will involve an open tray under the work surface.

In proprietary workstations, GPOs and data points may be internally run with outlets above the work surface. Alternatively these outlets may be on the adjoining wall at a height of 550 mm above the floor level with access to the work surface via the cable tray and a plastic cable access cap.

Shelves

730 .29.00 GENERAL

The design of shelves should consider issues of depth, reach, spacing and strength. Shelves described in this section may be in the form of joinery shelf units, strip shelving, upright book cases, metal racks or similar devices. These standards also apply to shelves within a cupboard.

730 .30.00 DESIGN CRITERIA

DEPTH (front to back):

The recommended depth for shelves below a workbench is the approximate full width of the bench. The recommended average depth for wall mounted shelves is 350 mm. This will suit wall cupboards in Utility Rooms or over workstations. If a door is provided over the shelf unit, then 350 mm will be the total depth.

The recommended depth of shelves for medical records shelving units is 400 mm. This depth also allows for metal dividers.

REACH and SPACING:

A shelf may be installed as low as 150 mm above the floor or as high as 1810 mm above the floor. Any surface above 1810 mm should be regarded as inaccessible without the use of a safe step ladder.

The recommended starting point for wall mounted shelves above a work surface designed at 720 mm above the floor is 1370 mm above the floor. This brings the underside of the shelf to 650 mm above the desk.

The recommended starting point of wall mounted shelves above a work surface designed at 900 mm - 1000 mm above the floor is 1520 - 1600 mm above the floor. This brings the underside of the shelf to 1500 - 1580 mm above the floor.

Clearance of shelves above a workbench should be a minimum of 600 mm clear to accommodate, where required, computer monitors that should be set at an appropriately ergonomic height for users.

A typical Medical Records storage unit will be a joinery or metal unit 2100 mm high with seven shelves starting from 150 mm above the floor and finishing with a top shelf at 1800 mm.

The recommended depth for wall shelves used for the storage of linen is 450 mm spaced 400 mm apart vertically.

Where possible and practical, all shelving should be adjustable. Typically the first and last shelf in a joinery unit will be fixed.

Note: In heavy use areas of hospitals, the conventional metal pins inserted into joinery walls often fail. In such situations, proprietary metal strips are recessed into the joinery walls to hold shelf support pins.

STRENGTH:

Shelves must be designed to suit the weight of the objects most likely to be stored upon them. It should be noted that adjustable shelves are not as strong as fixed shelves. Additional strength may be gained by using thicker and stronger material or by providing an edge downturn.

DISABLED ACCESS:

Shelves designed for use by disabled patients or staff should comply with the requirements of AS 1428 Parts 2 or 3 as appropriate. It should be noted that this is not a mandatory requirement of these Guidelines to comply with the ergonomics standards of AS 1428 Parts 2 or 3 for all areas and all users.

General

750 .1.00 Appropriate and comprehensive signposting shall be provided for all Health Care Facilities. Signposting shall clearly identify staff, patient and visitor areas, and draw attention to restricted areas.

Signs are often the first line of defence against intruders because they define those areas where persons are allowed to enter.

750 .2.00 The preferred lettering style is 'Helvetica Medium' upper and lower case generally. Upper case only is recommended for the building Main Entry Sign.

750 .3.00 Internationally recognised symbols (pictograms) in lieu of room titles are acceptable.

750 .4.00 Sizes of letters in relation to reading distances, mounting heights, etc, shall comply with the relevant standards.

Refer to the NSW Health TS2 - Signposting for Health Care Facilities for further information.

EXTERNAL SIGNS

External Directional Signs

750 .5.00 External directional signs shall have white reflective letters on a blue background. The signs shall preferably be of steel or aluminium construction.

External Illuminated Signs

750 .6.00 External illuminated signs for an Emergency Department shall have white letters on a red background.

External illuminated signs for the Main Entry and Night Entry shall have white letters on a blue background.

Note: Emergency Department is referred to as Emergency Department in these Guidelines. The sign, however should refer to 'Emergency'.

Road Markings

750 .7.00 Road markings such as parking bays, arrows, symbols and instructions should be white generally, blue for disabled and yellow for restricted zones.

Street Signs

750 .8.00 Street signs shall be in accordance with the requirements of the Local Council and/or the appropriate section of the state roads and traffic authority. Accreditation Standards require that the facility has street directional signs sufficient to enable it to be easily located from the major access road in the area.

The entry to the Emergency Unit should be clearly signposted by an illuminated sign that is visible from the main entry points to the Hospital site.

Bed Numbers

750 .9.00 Bed numbers shall be shown outside the Patient Bedroom. There shall be one number per bed.

In Bedrooms with more than one bed, all bed numbers or the range of numbers should be shown on the sign outside the room for example:

+ Beds 78 & 79 or;

+ Beds 78 to 81.

In Bedrooms with more than one bed, the bed number shall be displayed at the bedhead also.

Bed numbers outside the room must be clearly visible from the corridor and not be obscured by other objects or wall returns.

The provision of a room number is optional. When provided, it should not visually compete with the bed numbers.

Patient Information

750 .10.00 It is no longer recommended that signs display information about a patient, such as patient details, doctor identification and special instruction at the patient bedhead or in a visible place within the Patient Bedroom.

This is considered inappropriate due to the requirement for the privacy of patient records. Designers and managers wishing to install patient information holders in the rooms are advised to fully consider the impact on patient privacy.

Door Signs

750 .11.00 DOOR NUMBERS

Door/Frame Numbering or tags may be required by the management as part of an asset and maintenance register. This is a separate or in addition to room signage designating the function or the room. Door numbering is not mandatory. Unlike room signs, door numbering may be small and unobtrusive.

Room Signs

750 .12.00 Non-illuminated, internal and external room-function identification signs located on doors require the following considerations:

+ The format used should allow easy replacement of the sign or sign inset when the room function changes;

+ It may be appropriate to deliberately omit signs on certain doors used only by staff;

+ Special notes may be installed to identify rooms with restricted access to certain rooms or departments.

Note 1: Vinyl-cut signs have proved to be a practical and economical option and can be changed easily over time. However removing them can damage some surfaces.

Note 2: Some signs using removable slats can be easily stolen unless a locking cap is used.

Note 3: Door signs in general are not mandatory.

Exit Signs

750 .13.00 Exit signs shall be installed in accordance with relevant codes.

Directional and Area Identification Signs

750 .14.00 DIRECTIONAL SIGNAGE

Non-illuminated directional and area identification signs should be as follows:

+ Ceiling or wall mounted;

+ Text on contrasting background - dark lettering on light background preferred;

+ A guide for the patient or visitor until they reach a room or door sign for the intended destination;

+ Not obscure other critical ceiling fixtures such as emergency lighting or fire exit signs.

Serious consideration should be given to the provision of alternate low level signs in Braille in Hospital Entrance Foyers leading to major departments and lifts. Although this is not a mandatory requirement, it may become a requirement of the Disability Discrimination Act (DDA) in the future. It is recommended that such signs be installed immediately above the hand rail required by AS1428.

FIRE SERVICE SIGNS

General

750 .15.00 Fire services signs shall be installed in accordance with the following:

+ Fire Extinguishers: AS 2444 - (1990) Portable Fire Extinguishers Selection and Location;

+ Fire Hose Reel Cabinets: Signposting on cabinet doors shall be 50 mm high white letters on a contrasting background, to read 'Fire Hose Reel', or if equipment is together in a single cabinet, 'Fire Equipment';

A pictogram (or pictograms) in accordance with international standards is also an appropriate alternative.

+ Hydrants: AS 2419 Part 1 (1988) 'Fire Hydrant Installations, Systems Design, Installation and Commissioning'.

MISCELLANEOUS SIGNS

General

750 .16.00 Miscellaneous signs, illuminated and non-illuminated are to be provided as required. These could include illuminated 'X-ray Room in Use' signs. The colours used should meet the requirements of the relevant code or regulating authority.

SAFETY

Introduction

790 .1.00 Safety and security issues are of prime importance as their neglect can generate considerable yet avoidable costs to Health Care Facilities if patients, staff or visitors are injured, or property is damaged or stolen. This section provides advice on the design of facilities to facilitate safety and security and minimise capital and recurrent costs. It also provides references for where specific information, such as on the selection of duress alarms, can be found.

790 .2.00 OHS ACT 2000

Section 8 of the Occupational Health and Safety (OHS) Act 2000 requires employers to ensure the health, safety and welfare of employees and others in the workplace. In complying with this requirement, the legislation demands that employers provide safe premises, work environment and plant. Note that the definition of 'plant' in OHS legislation includes any machinery, equipment or appliance and could be regarded to include furniture, fittings and equipment.

Employers are also required by the OHS Act 2000 to consult with employees on OHS and welfare matters. This includes consulting with employees when changes that may affect the health, safety or welfare of employees are proposed to premises or plant. Consultation must also occur during risk assessment and when decisions are being made on how to eliminate/control risks.

In effect this means that consultation with employees must occur prior to and during the course of planning and designing new premises or refurbishments, and prior to the purchase of FF&E.

Detailed information on how to consult can be found in the WorkCover Code of Practice 'OHS Consultation'.

790 .3.00 OHS REGULATION 2001

The OHS Regulation 2001 requires employers to identify hazards, assess risks arising from those hazards, and eliminate or control those risks. The Project Team, in consultation with employees, must therefore aim to identify, assess and eliminate/control any risks associated with the design of a facility and proposed FF&E prior to finalisation of the plans. This is consistent with the OHS Act requirements (as outlined above) to provide safe premises and plant.

790 .4.00 DESIGN ASPECTS

Design aspects of a project that may impact on health safety and welfare of employees and the health and safety of others in the workplace (eg patients and visitors) include:

+ Design of spaces so that manual handling risks are minimised giving particular attention to things such as:

- Slope (gradient) of ramps;
- Turning circles for equipment;
- Size of bathrooms;
- Placement of fittings (eg toilets so that nurse access to the patient is possible);
- Size of rooms;
- Location of services and fittings;
- Height and widths of doorways;

- Floor coverings;

- Changes in floor levels;

- Location, size and design of storage spaces;

- Fitting of door closers and door holders.

+ Ergonomics, ie matching of workplace design and layout to the human form and physical and cognitive capabilities. Examples are:

- Height, depth and width of workbenches;

- Taking into account any equipment that may be used on the bench;

- Positioning of pan and glove racks;

- Positioning of viewing panels in doors;

- Positioning of light switches and door handles;

- Height of monitors;

- Push/pull forces;

- Ability to accommodate very obese (bariatric) patients who may need oversized equipment;

- Design of reception counters;

- Design of geriatric units for people with dementia;

- Clarity of signage and directional cues.

+ Selection of FF&E to reduce risks to employees and others including compatibility of different types of FF&E with each other. Examples of these are:

- Drop down grab rails in Ensuite Bathrooms to allow staff access to patient;

- Infill grab rails in Mental Health Units;

- Compatibility of hoists with beds;

- Emergency access to bedrooms and bathrooms/toilets/ensuites;

- Tamper proof air conditioning outlets and light fittings in Mental Health Units.

+ Security issues such as:

- Access control;

- Ability to observe Waiting Areas;

- Application of CPTED (crime prevention through environmental design) principles;

- Location of car parks and staff entries (including provision of parking for afternoon and night staff);

- Lighting;

- Organisation of HPU so that staff are not working in isolation especially when 8-hour operational areas close down for the day;

- Design of reception counters;

- Choice of glazing;

- Location of security office;

- Location and installation of duress alarms in high risk areas and where staff may work alone in isolation;

- Location and installation of CCTV;

- Location and installation of intercoms;

- Design of waiting rooms;

- Provision of escape routes;

- Location of service panels;

- Resistance of building materials to assault.

+ Patient and visitor safety including designing the facility to minimise risks for patients who may be confused, disoriented or have cognitive or sensory impairment and patients who may be behaviourally disturbed or at risk of attempting self harm. Examples include:

- Design of stairwells to reduce risk of falls (either accidental or deliberate);

- Design of rooms to accommodate very obese patients and the over-sized equipment needed to provide them with health care;

- Design of doors (hinges) in mental health unit and dementia/aged care unit patient rooms;

- Choice of glazing.

- Choice of light fittings.

+ Infection control.

These design issues are discussed in more detail in each Unit Specific Guideline.

References and Further Reading

790 .5.00 Resources available include:

+ Design Guideline for Security;

+ Designing Workplaces for Safer Handling of Patients/Residents, WorkCover Vic, 1999;

+ Hoist selection checklist (under review);

+ Bed selection checklist (under review);

+ Better Practice Guide: Occupational health and safety;

+ Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Public Health Services, Circular 2001/111, NSW Health, 2001;

+ Protecting People and Property: NSW Health Policy and Guidelines for Security Risk Management in Health Facilities, Circular 2003/92, NSW Health, 2003; (available from www.health.nsw.gov.au/audst/manuals/protecting-people-property.pdf);

+ Zero Tolerance Response to Violence in the NSW Health Workplace, Circular 2003/48, NSW Health, 2003;

+ Occupational Health and Safety Act 2000;

+ Occupational Health and Safety Regulation 2001;

+ DS36 NSW Health Guidelines Safety and Security, Circular 2003/13, NSW Health,

2003;

+ OHS Consultation: Code of Practice 2001, WorkCover Vic, 2001;

+ Australian Standard AS4485.1 - 1997 Security for Health Care Facilities (Part 1 - General Requirements);

+ Australian Standard AS4485.2 - 1997 Security for Health Care Facilities (Part 2 - Procedures Guide).

Floor Finishes

790 .6.00 Safety Issues to be considered in the selection of floor finishes are covered under 'Floor Finishes - Floor Safety'.

Glazing

790 .7.00 Glazing shall be in accordance with Australian Standard 1288 as applicable to public buildings except that:

+ All glazing in balustrades shall comply with Part 1 Section 4.3.9 of the above standard, irrespective of the area or support of the glazing;

+ Fully framed glazing to windows, doors partitions and screens, designed so that any part of the glass is less than 750 mm above the finished floor level, shall have such part glazed with safety glazing materials as defined under Clause 1.3.3 and in accordance with the size requirements of table 4.1 of the above standard.

790 .8.00 Doors, sidelights, borrowed lights and windows in which the glazing extends to within or below 450 mm above the floor, and are subject to possible breakage, shall be glazed with safety glass that will not create dangerous cutting edges when broken. Refer to AS 2208 - Safety Glazing Materials for Use in Buildings (Human Impact Considerations).

Notwithstanding this, all entrance areas shall be glazed with safety glazing as these spaces can be the site for aggressive incidents.

Glazing in Emergency Departments, Drug and Alcohol Units, Mental Health Units and Community Mental Health Facilities should be safety glazing - refer to specific Health Facility Guidelines for each of these Units.

790 .9.00 Safety glass shall also be used for wall openings in activity areas such as recreation and exercise rooms and for shower screens, internal doors and full height windows, including those in Paediatric, Acute Mental Health and Emergency Units.

Glutaraldehyde Use

790 .10.00 For detailed design and ventilation requirements for the use of glutaraldehyde in health care settings, refer to:

+ Australian Standards for Laboratory Fume Cabinets;

+ AS/NZS 2243.8:2001 : Safety in Laboratories - Fume cupboards;

+ AS/NZS 2243.9:2003 : Safety in Laboratories - Recirculating fume cabinets;

+ NSW Health Circular 97/61 'Policy and Guidelines for the Safe Use of Glutaraldehyde in NSW Public Health Care Facilities' (currently under review).

Noise Reduction

790 .11.00 The design and construction should address Hearing Conservation aspects of the work environment. The major design issues to be considered include:

+ Workplaces should be designed to minimise the occupant's exposure to noise; noisy machines and activities should be remote or isolated from other work areas;

+ Noisy equipment should be acoustically enclosed where practicable;

+ Noisy work areas such as workshops should have acoustically absorbent ceilings to reduce the amount of noise other staff working nearby are exposed to;

+ Noise levels of equipment should be an integral part of equipment selection/purchasing procedures;

+ Consideration should be given to the impact of ultrasonic noise generation. (Refer to AS 2243 - Part 5).

790 .12.00 Note: Acoustic separation for privacy reasons is a different subject covered separately in these Guidelines.

Note: 'Nuisance' noise is also an issue as it can degrade patient comfort and impair staff function, even though it may not be of a sufficient level to cause hearing loss.

Noisy patient environments may also exacerbate the risk of aggression.

Insect Control

790 .13.00 External doors that open directly into food preparation areas and are used for service deliveries or regular access shall be fitted with air curtains, flexible doors or an equal control system to restrict the ingress of insects. Flyscreen doors, which can be propped open, and electronic insect traps within the kitchen, are not suitable as the only means of insect control.

For flyscreen requirements to door and window openings refer to 'Building Elements - Doors, and Windows' in these Guidelines. Flyscreens are generally required to all openable windows.

Patient Handling and Lifting

790 .14.00 Poor workplace and FF&E design are major contributing factors to staff and patient injuries, especially in patient rooms, toilets, bathing areas and corridors. These injuries are costly and preventable. Poor design may also increase patient dependency and negatively impact on productivity.

Restricted space may lead to constrained and awkward postures during handling tasks, and poor workplace design may lead to unnecessary or double handling of patients/residents. The design of FF&E including beds is also an issue.

The BCA addresses questions of access for independent disabled people, but it does not consider the extra needs of access for disabled people who require assistance or for the carers of disabled people.

790 .15.00 Given the requirements of OHS legislation to provide safe premises and plant, and to identify, assess and eliminate/control risks, the design of facilities should:

+ Facilitate the implementation of operational and other policies that aim to eliminate or reduce the need for patient handling and double handling, eg door and corridor widths should allow for a patient's bed to travel with them rather than force repeated transfers from bed to trolley;

+ Accommodate the storage and safe use of manual handling aids including patient hoists, commodes, wheelchairs, walking belts, slide sheets and patient scales. The quantity and size of equipment, functional space for use of equipment and storage close to proximity of use must be considered.

790 .16.00 To be consistent with OHS legislative requirements, these decisions should be taken in consultation with employees, eg direct care staff and business unit managers, in order to achieve the best solutions and a unity of commitment.

Patient Handling and Lifting

790 .17.00 For more details regarding functional requirements and operational issues in regard to patient handling, refer to the VIC WorkCover 'Designing Workplaces for Safer Handling of Patient/Residents' and to the section of these Guidelines that deals with FF&E.

Also refer to NSW Health Circular 2001/111 'Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Public Health Services'.

Soft Furnishings

790 .18.00 Certain plastics and materials, in quantities, are known to produce large amounts of toxic gases. The use of these plastics and materials in mattresses, upholstery, floor coverings, curtains and other items, shall be avoided as far as practical.

790 .19.00 Cubicle screens, bed screens and curtains/window treatments shall be non-combustible or rendered flame retardant and shall comply with the Building Code of Australia, Section C1.10.

The fabric should be capable of withstanding Hospital standard laundry treatment without losing its fundamental properties.

SECURITY

Definition

790 .20.00 INTRODUCTION

Security risks can arise from two main sources:

+ Internal security risks - eg client and visitor related violence;

+ External risks - eg those who enter the premises/grounds with criminal intent such as thieves, vandals and those who plan to commit violent acts.

790 .21.00 OHS legislation demands that all risks of violence be identified, assessed and eliminated/controlled. It also makes good financial sense to address security risks.

The impact of security incidents can be considerable in human and financial terms and include:

+ Workers compensation claims;

+ Public liability claims;

+ Adverse publicity and reputation;

+ Personal costs to staff and visitors from theft and vandalism;

+ Recruitment and retention costs;

+ High maintenance costs, eg from vandalism of security lighting, CCTV and graffiti;

+ High insurance costs and cost of replacing stolen facility property.

790 .22.00 Effective planning and design is required to minimise and, where possible, eliminate foreseeable risks associated with the facility design.

This Guideline expands the principles for a safe and secure workplace as outlined in 'Protecting People and Property: NSW Health Policy and Guidelines for Security Risk Management in Health Facilities (2003/92)', 'Effective Incident Response: A Framework for Prevention and Management in the Health Workplace (2002/19)' and the 'NSW Health Zero Tolerance Response to Violence in the NSW Health Workplace (2003/48)'. This Guideline is complementary to these three documents.

PURPOSE AND SCOPE

These Guidelines are intended to assist in the identification of potential areas of risk and options for risk control that must be addressed during the planning, design and construction phases of a Health Facility Project.

They are directed towards the achievement of a safe, functional and affordable solution to the planning and design of Health Care Facilities.

The planning and design standards outlined in the section that follows should be regarded as the recommended standard to be achieved.

It is however recognised that in a number of circumstances, departure from the Guideline requirements will be necessary to meet operational requirements or to manage any unusual risks that might be specific to a particular circumstance or location. As for other departures from these Guidelines, these will normally be subject to documented justification and the subsequent Departmental approval process.

It should be noted that the Department cannot exempt facility capital developments from legislative requirements such as planning, environmental protection, OHS and discrimination laws.

Recurrent Costs

790 .23.00 The issue of 'recurrent costs' should be considered in the context of the provision of an appropriately designed and constructed safe working environment in a Health Care Facility. That is, the safety and security issues should be addressed during the planning process and incorporated into the 'structure' of the facility. If the planning and design process follows the requirements of this Guideline and undertakes an appropriate level of consideration of safety and security issues, there should be no significant increase in recurrent costs. In fact, addressing and minimising security risks may be expected to reduce costs.

Designers and managers need to recognise that recurrent costs also include injuries to staff, patients or other persons, or damage to property that may arise from poor design. In the case of safety and security issues, this includes the direct and indirect costs associated with crime and violence.

Crime Prevention Through Environmental Design

790 .24.00 Crime Prevention through Environmental Design (CPTED) is a situational crime prevention strategy that focuses on the design, planning and structure of cities and neighbourhoods. It aims to reduce opportunities for crime by employing design and place management principles that minimise the likelihood of essential crime ingredients from intersecting in time and space.

790 .25.00 NSW Health has developed the document DS36 'Health Facility Guideline - Safety and Security' (C2003/13) as part of its health building design and technical guideline series. Its purpose is to assist health facility planners and designers minimise security and safety risks by providing appropriately designed and built facilities, work spaces, building services and systems based on CPTED principles. The information it contains may also assist members of user groups during the construction and consultation process.

790 .26.00 CPTED is primarily accomplished through the work of architects, engineers, builders, landscape gardeners and those who develop purchasing procedures.

The four main CPTED principles are:

+ 'Territorial reinforcement' which stimulates community ownership and policing. It includes maintaining the space so that it has a clean and well cared for appearance, using actual and symbolic territorial markers such as signage and site maps and the location of activities to avoid conflict;

+ 'Surveillance' through supervision by those who overlook or pass through spaces. It includes effective sightlines between public and private space, effective use of lighting and paths to group people, landscaping, strategic positioning of buildings and activities, and use of CCTV;

+ 'Access control' through physical and symbolic barriers that attract, channel or restrict pedestrian and vehicle movement, eg paths, roads, fences, lines of lighting, signs, gardens, gates, locks and doors. Making it clear where people can and can't go makes it more difficult for criminals to reach potential victims and targets;

+ 'Space management' which is linked to territorial reinforcement. It ensures that space is well used and maintained, eg by coordination of activity and rapidly repairing vandalism or graffiti.

790 .27.00 The Crime Prevention Officer in the Police Local Area Command where a new/refurbished facility is located should be consulted on the CPTED implications of the proposed design. This would initially occur in the early stages of planning, ie at the concept stage.

Internal Security Risks

790 .28.00 CLIENT RELATED VIOLENCE

Design is also an issue for the prevention and management of client related violence. It is particularly important for high risk areas such as:

+ Mental Health Inpatient Units;

+ Community Mental Health Centres;

+ Emergency Departments;

+ Drug and Alcohol Units/Methadone Clinics;

+ Aged Care Units;

+ Brain Injury and Rehabilitation Units;

+ Any location where staff may work alone in isolation;

+ Any area where child protection may be an issue, eg Paediatric Wards, Maternity Wards and Birthing Units.

790 .29.00 The prevention and management of client related security risks has implications for the design of Units, and the selection of FF&E, such as:

+ Perimeter security (doors and windows, entrances, property perimeter including fences and access control);

+ Control of access to the buildings, individual HPU and rooms;

+ Cash handling and transit routes;

+ Location of shops and banking facilities;

+ Avoidance of areas where staff work alone or in isolation;

+ Location and design of Car Parks;

+ Location, design and lighting of access routes to Car Parks, bus stops, and between entrances and the street;

+ Provision of duress alarms, intruder alarms, proximity alarms and CCTV;

+ Design of Reception Areas;

+ Design of Consultation Rooms, Treatment Rooms, Triage Areas and Staff Stations to avoid entrapment points;

+ Design and location of Staff Stations;

+ Glazing;

+ Visibility and lines of sight;

+ Cultural issues such as the size of personal space, privacy of groups such as Muslim women and the need for a patient to have an escort, eg the use of a facility by Muslim women may have implications for the size and design of Waiting Rooms, Consultation Rooms and the like.

790 .30.00 Advice on risk control strategies is included in each specific unit section - this has been drawn from the NSW Health Safety and Security Guideline.

Security Risk Management

790 .31.00 Areas of potential risk should be identified from consultation with employees, managers, the OHS committee, security personnel and the Police Local Area Command Crime Prevention Officer. This coordination must occur during the preparation of the Project Feasibility Plan and the Project Definition Plan to ensure all issues are adequately addressed and funded. Known high risk areas have been listed above though there is potential for security risks and violence in any part of a facility including indoor and outdoor environments.

790 .32.00 Having identified and documented the relevant risks the planning process must then eliminate or minimise those risks through suitable planning and design solutions.

It is not intended that these Guidelines will identify all risks in all facilities. Planners, designers and managers are expected to undertake a detailed risk analysis of their facility, taking into account the location, all of the circumstances that are appropriate to that facility, and should include consultation with a wide range of stakeholders.

790 .33.00 In undertaking the risk analysis and the risk management process, facility managers and planners should take into account the differences between remote/rural facilities and metropolitan facilities. Issues such as response times to violent events must be addressed not only by the facility design but also by Operational Policies.

Design for Security

790 .34.00 The issue of security is raised throughout the Guidelines in areas such as hardware and external lighting. However, consideration shall also be given to the overall solution with good initial planning and detail design to overcome the principal problems of concealment of, and ease of access by the undesirable element, and containment of certain categories of patients.

Facility design should ensure that the space allocation for safe and secure circulation within and between Units is efficient and appropriate for the functional activities of the space, having regard to the allowance provisions defined in the relevant schedule of accommodation.

790 .35.00 A Health Care Facility, even without an Emergency Department, is often functioning for 24 hours per day. Visitors and staff enter and leave the building at all times, often on an informal and unscheduled basis. At these times, there is greater potential for unauthorised entry into the building and attacks on visitors and staff when walking to and from car parks and bus stops, especially at night.

790 .36.00 The work environment may increase or decrease the risks associated with

790 .36.00 occupational violence and aggression depending on a range of issues, which are set out in the following section.

790 .37.00 The following issues with respect to security should be addressed in every Health Care Facility:

ENTRY/EXIT ISSUES

+ Management of access to various areas and departments;

+ Managing access of relatives/visitors;

+ Managing access of clients;

+ Managing entry of personnel visiting or working within the hospital;

+ Managing entry to facility grounds, eg 'no through' access for pedestrians and vehicles to minimise unauthorised entry and vandalism.

PATIENT SAFETY AND SECURITY

+ Reduction of triggers for conflict with patients and relatives eg through design of Waiting Rooms, Reception Areas, signage;

+ Minimise the risk of illegal removal of babies and children from maternity and paediatric units;

+ Management of patient 'wandering' from Rehabilitation, Aged Care Units and Emergency Departments;

+ Manage and supervise hydrotherapy pools;

+ Mental health and other behaviourally disturbed patients - safe areas for containment and observation, personal space, means of preventing absconding (eg proximity alarms);

+ Manage risks associated with the security of police and Corrections Officer weapons and equipment.

STAFF SAFETY AND SECURITY

+ Admitting patients (close contact with public being admitted and relatives);

+ Management of conflict with patients and relatives;

+ Risk of violence from non-custodial, alcohol or drug affected parents/visitors;

+ Working after hours;

+ Working in isolation;

+ Staff movement around hospital sites, eg to and from public transport, Car Parks, staff accommodation etc;

+ Clinical state of patient;

+ Access to assistance and support from colleagues;

+ Ability to observe patients and others, and provide early intervention;

+ Access to alarms.

SECURITY OF PROPERTY

+ Location of public telephones in retail areas;

+ Cash handling;

+ Furniture, fittings and equipment ;

+ Waiting Area furniture;

+ Computer, high tech, AV equipment etc;

+ Personal effects - staff;

+ Personal effects - patients;

+ Access control;

+ Intruder alarms;

+ Car Park security.

SECURITY AND CONFIDENTIALITY OF RECORDS AND FILES

+ Medical records;

+ Financial records;

+ Employee files;

+ Medico-legal files.

SECURITY OF DRUGS AND OTHER SUPPLIES

+ Dangerous drugs and drugs of addiction;

+ Other supplies/stores.

These issues are addressed on a Unit specific basis within the relevant sections of these Guidelines. A checklist is also provided for each Unit to assess the response of the building brief to each issue listed.

790 .38.00 In determining specific requirements and design, the impact of new technology and clinical work practices should be reviewed in relation to safety and security prior to adoption.

790 .39.00 Consideration shall be given to any additional facility requirements that result in a secure and safe environment for staff, patients and visitors.

Building Elements

790 .40.00 ACCESS CONTROL

All Health Services must ensure, in consultation with staff and key stakeholders, that all reasonably foreseeable security risks associated with access to workplaces are identified, assessed and eliminated where reasonably practicably or effectively controlled.

790 .41.00 Effective access control involves:

+ Securing perimeters, including doors and windows;

+ Controlling access to the land on which the facility is situated (eg fences, roads, traffic and pedestrian access and flow);

+ Providing safe access and exit especially after hours and during emergencies;

+ Controlling access to vulnerable areas;

+ Clear signage;

+ Instituting staff identification systems that allow members of the organisation to be identified.

For details of an effective access control system refer to 'Protecting People and Property: NSW Health Policy and Guidelines for Security Risk Management in Health Facilities' and to DS36 'NSW Health Guideline Safety and Security' (C2003/13).

790 .42.00 DOORS

All openable external building perimeter doors shall be lockable. Perimeter doors should meet the following building design standards:

+ Be fitted with a quality single cylinder lockset that complies with fire regulations (refer to Australian Standard AS4145.2-1993/Amat 1-1996 Locksets - Mechanical locksets for doors in buildings);

+ Have a metal frame or have a strip of metal securely mounted to the frame from the top to the bottom of the lock-side, with allowance for the lock tongue to be inserted;

+ Have protected hinge pins in order to resist removal by either replacing the existing hinges with fixed pin, security butt hinges or having dog bolts installed to prevent pins being removed;

+ Have entry alarms or warning buzzers fitted to doors that need to remain unlocked or open or to indicate that someone has entered the area;

+ Have alarms fitted to doors that are normally externally locked to signal when the doors are chocked open or fail to close properly.

Fire isolated exit doors should meet the requirements of the Building Code of Australia.

After hours public entry points should be access controlled and fitted with video/CCTV intercoms to allow screening of members of the public presenting at the door.

Glazing in doors and panels beside doors must be resistant to breakage and not shatter on impact.

790 .43.00 WINDOWS

Opening windows create security problems. These include glazing, locks, ability for people outside to look in and the potential to facilitate break-ins. All openable external building perimeter windows and doors shall be lockable.

Entry through perimeter windows should be minimised by the use of options such as:

+ Reinforcing windows to resist unauthorised entry;

+ Using heavy gauge glass bricks or laminated glass panels (in areas which require natural light but no ventilation) that are securely mounted in the frame;

+ Permanently closing unused windows by fixing with bolts or screws;

+ Fitting key operated locks to all other windows;

+ Applying film to glass to resist breakage or fit safety glass as per design guidelines.

790 .44.00 SCREENS AND GRILLES

Generally, openable external windows, vents and doors shall be fitted with flyscreens. Doorways that are used on a regular basis such as service and main entries, need

not be flyscreened but shall be fitted with a self-closing device. Other exceptions to the above are windows, in multi-storey or fully airconditioned buildings, that are used for service access, or pivot/swing/tilt for cleaning purposes.

790 .45.00 Security grilles, and appropriate impact resistant glass or an electronic security system should be installed wherever high security areas have external windows, such as Pharmacy Stores and Workrooms; and Medical Records Stores.

790 .46.00 Security flyscreened doors, where installed, shall not compromise emergency exit.

Key Areas for Security Provision

790 .47.00 The following notes are supplemented by a detailed risk analysis and response in the unit specific sections of these Guidelines.

790 .48.00 ENTRY/EXIT

The workplace design should minimise public access to all areas of the workplace.

Ideally, visitors should have access to one main entrance and security should be placed at this entrance if necessary.

However, support services such as emergency response teams should have maximum access to all areas of the workplace to facilitate their intervention in emergencies.

Staff should also have ready access to exits as escape routes if an aggressive incident occurs.

All staff, including sessional specialists and casual staff, should be provided with training on aggression minimisation and emergency response procedures.

790 .49.00 EMERGENCY DEPARTMENT

In hospitals, security should also be provided adjacent to the Emergency Department. Emergency Departments should be designed to allow secure separation of Treatment Areas from Public Areas.

Security barriers may include glass fronted counters and access doors with card or keypad access.

In Emergency Units the provision of video security is highly recommended.

Any ambulance entrance should have the same level of security protection as the main entrance.

Duress alarms should be provided - fixed alarms for counter staff, and mobile location finding alarms for staff who do not work in a fixed location, eg clinicians.

790 .50.00 RECEPTION/WAITING AREAS

Reception and Waiting Areas should be easily identifiable and accessible to patients and visitors. The design and layout should provide reception staff with a clear view of all persons in the Waiting Area. The activities of clinical staff should not be visible from the Waiting Room or Reception Area.

790 .51.00 Personal space is especially important in Waiting Areas particularly in Emergency Departments where clients are more stressed. Cultural differences are also an issue for consideration - consider local demographics.

There is some evidence which indicates that persons experiencing high tension need greater interpersonal distance than others. Reception Areas should be spacious and quiet with comfortable seating. Seating should be either individual or bench type. To reduce boredom, activities such as television, toys, books and games should be provided. Public telephones should be provided to enable ready communication with friends, relatives and employers.

790 .52.00 Furniture should be attractive and comfortable, but should be selected with regard to its safeness and the possibility that it may be used as a weapon. Colour is an important factor and should be selected for its calming rather than stimulating qualities. Climate control will help maintain a comfortable and calming environment. Easy access to amenities such as phones, water and snack dispensers, and public toilets is important to enhance comfort and reduce stress levels.

Seating should be spaced to allow room for baby strollers, wheelchairs and mobility aids. It should also be selected and spaced to allow for bariatric people to sit comfortably.

To reduce the incidence of vandalism or client frustration, Waiting Areas should be clean and well-maintained with all fittings in working order.

790 .53.00 In Emergency Departments, unless a glass barrier is provided, counters should be high enough to discourage an adult climbing over them. They should also be wide enough to make it difficult for a client to strike a staff member.

The design should also be ergonomically sound so desks or counters do not introduce new risks. For example, while inquiry desks can be designed to be wide enough to make it difficult for a client to strike a staff member or high enough to make it difficult to climb over, this will not protect a staff member from a thrown object, and may introduce manual handling risks from constantly having to lean forward.

It should be noted that high counters can also increase client frustration as it can make communication more difficult, especially where a client is of short stature or in a wheelchair.

Risk analysis should be used to determine the most appropriate design strategies to control security risks.

Vertical partitions should be provided to the extent required, to allow for some privacy when people are discussing private matters with staff. Each counter should be provided with a duress alarm system.

A well designed screen that does not impede communication should be installed in high risk areas such as Emergency Departments, Drug and Alcohol Units and Mental Health Areas. Appropriately placed openings or slits should be provided for communication or passage of documents.

790 .54.00 The ends of the Reception counter should be closed to prevent clients walking into Staff Areas. Entry doors should be full height and fitted with security access. A one-way viewing panel will enhance security of these doors.

790 .55.00 TREATMENT/INTERVIEW AREAS

Separate sound insulated rooms should be provided to isolate distraught or emotionally disturbed patients, families or friends; people with acute behavioural disturbance; and intoxicated or very noisy people.

790 .56.00 Treatment, Interview, Meeting and Consultation Rooms that are likely to be used by Mental Health or disturbed patients should be fitted with two doors on different walls to allow easy escape by staff. One door should lead in from the public area and the other from a corridor, staff or public area.

Doors should open outwards where possible to facilitate quick exit of staff.

790 .57.00 Treatment and Interview Rooms that may be used by Mental Health or other potentially behaviourally disturbed patients should be connected to a location finding mobile duress alarm system. Fixed duress alarms are not recommended as they may be out of reach when an incident occurs and they can be interfered with by patients or others. Glass viewing panels should be on at least one door to allow observation by colleagues.

790 .58.00 PHARMACY

As part of the risk management process for the Pharmacy Area, the following risk control strategies should be considered:

+ Constructing walls, floor and ceilings of the pharmacy out of solid material, with as few windows as possible;

+ Extending walls, where practicable, to the underside of the floor slab above to prevent any intrusion over the wall;

+ Reinforcing windows on the perimeter walls to prevent entry; existing windows may be reinforced with shatter resistant film or by replacing the glass with laminated glass;

+ Incorporating laminated glass windows into the design of the front of the pharmacy to enable staff to carry out transfer operations with safety, while maintaining communication with staff and patients;

+ Designing a two door entry approach (ie one door for the public and hospital staff to access glass transaction windows and a separate door for the entry of pharmacy staff to the pharmacy);

+ Incorporating provision for closing off open areas at the front of the pharmacy when closed, (eg by a locked door from the corridor or locked shutter doors);

+ Fitting doors to the pharmacy with quality single cylinder dead locks to comply with fire regulations and where practicable locks are to be key code or card operated externally and fitted with either a turn snib or handle internally to enable occupants to escape in emergencies;

+ Ensuring doors are kept closed and locked to restrict entry;

+ Installing an intruder alarm system that meets Australian Standard AS2201 and incorporates a duress alarm/s to enable staff to activate the alarm in the event of an emergency;

+ Restricting access to the pharmacy to authorised staff only and controlling this by:

- Fitting single cylinder key, code or card operated dead locks to perimeter doors;

- Having a restricted keying system fitted to the locks in order to prevent duplication of keys;

- Strictly regulating the issue of keys, codes or cards at all times, including provision for after hours access;

- Keeping doors closed and locked to restrict entry;

- Installing closed circuit television monitors at access doors to screen entry of personnel and record any access to the pharmacy after hours.

790 .59.00 PARKING

Staff parking should be provided under or within close range of the workplace. The area should be well lit and protected from the elements. In high risk areas the Car Park may need to be monitored by security personnel or cameras.

Key Areas for Security Provision

790 .60.00 Risk control strategies to be considered include:

+ Provide, where practicable, afternoon and night shift staff with designated, controlled parking spaces as close as possible to the facility in a well lit, easily observed area connected to the facility by well lit paths;

+ Ensure entry to designated staff parking areas in dual purpose car parks is controlled by gates in the afternoon and night (eg boom gate could be left up in the morning and put down about 1-2 hours before afternoon shift commences so they are operated by staff pass cards). Exit boom gates should operate automatically (i.e. after a certain time a card is needed to enter but exit can occur any time);

+ Ensure vehicle entry to car parks is by automated gates or doors, via camera and intercom, or by passing through an entry/exit gate staffed by security personnel;

+ Display signs in car parks reinforcing theft awareness (eg park smarter, lock it or lose it);

+ Display signs that advise that regular patrols are undertaken and CCTV monitoring is in place;

+ Ensure landscaping is done in a way to provide minimal protection for intruders eg dark spots or hiding places;

+ Ensure single and multi-storey car parks have:

- Good lighting (refer to AS 1158.3.1 and the NSW Guidelines for Security Risk Management in Health Facilities);

- Emergency telephone or intercoms direct to security staff or switchboard;

- Landscaping which leaves the area open and does not intrude on line of sight;

- As few dark corners and support columns in the design as possible;

- Flexibility to close some entrances and exits during low traffic periods;

- Approved locks on exits intended for emergency exit only;

- Frequent patrols by security staff;

+ Restrict the parking of delivery vehicles to designated spaces;

+ Ensure facility vehicles are parked in a secure overnight car park with good lighting and regular security patrols. A fenced compound or lock-up garage is preferable;

+ Provide security for bicycles and motorcycles (ie lockers or storage areas, a stationary rack that secures the frame and both wheels without a chain, or a stationary object the user can lock the frame and wheels to with their own cable chain and lock).

790 .61.00 LOADING DOCKS

Goods delivery, loading and unloading areas should be well lit, protected from the weather and their security ensured. In particular entry to the facility by unauthorised personnel in these areas should be prevented.

Building Services

790 .62.00 LIGHTING

As part of the facility security risk management process, Health Care Services must ensure, in consultation with staff and key stakeholders, that internal and external lighting is sufficient to eliminate, where reasonably practicable, or control security related risks and meet the relevant Australian Standards.

790 .63.00 Security lighting is both internal and external lighting that is used to improve security in the vicinity of the light. The external lighting system recommended for Health Care Facilities uses luminaries of the High-Pressure Sodium (HPS) type.

790 .65.00 External security lighting should be installed in vandal resistant containers and mounted to restrict tampering (eg too high up to be readily broken)

790 .66.00 Posts for security lights should be designed in such a way that they do not provide a 'ladder' or foothold to allow access to the light fitting

790 .67.00 Ensure security lights are connected to an electrical circuit separate to that of the main facility

790 .68.00 Locate lights to gain the maximum benefit and coverage

790 .69.00 Provide lights bright enough to ensure a safe entry to and safe exit from the workplace (including footpaths/accessways), and provide acceptable levels of light in car parks.

Lighting should avoid creating dark spots, be sufficiently bright to deter crime and provide sufficient light to allow facial recognition and prevent slips, trips and falls. Where the facility does not have dedicated on-site parking, consultation on street lighting should occur with local councils.

790 .70.00 Ensure lighting used meets Australian standards AS1680 series, AS1158 series (including 1158.3.1), AS4485.1 and AS2890 where applicable.

790 .71.00 Determine the needs of areas requiring special lighting treatment (eg Entrance Foyers, Emergency Departments, Staff Entry and Exit points, Pharmacies and Car Parks).

790 .72.00 Ensure a back up generator is available, where practicable, to ensure continuity of electrical supply for security lighting.

790 .73.00 ALARM SYSTEMS

As part of the facility security risk management process, Health Services must establish their requirements for alarm systems (eg duress and intruder alarms) to ensure that staff members, patients, and Health Service assets are secure. A regular review of all alarm systems must occur as part of the risk management process.

Refer to 'Protecting People and Property: NSW Health Policy and Guidelines for Security Risk Management in Health Facilities', Circular 2003/92, NSW Health, 2003.

790 .74.00 In assessing the requirement for alarms, Health Services should consider the following issues:

+ Potential for violence against staff;

+ The type of work being carried out by staff;

+ Staff working in isolation;

+ Cash handling;

+ Goods and equipment stored in the area;

+ Level of external security risks;

+ Level of internal security risks;

+ Exits that may be left open by staff or patients;

+ The security needs of 'at risk' patients such as wandering elderly patients in wards, mental health patients, or children at risk of unauthorised removal from the facility;

+ Potential for use of emergency exits (eg fire escapes) by thieves to remove assets;

+ Potential for break in via doors and/or windows to remove assets;

+ Potential for break into and theft of vehicles.

790 .75.00 In assessing the requirement for alarms Health Services should consult with staff working in or using relevant areas or facilities such as:

+ Mental Health Services;

+ Emergency Departments;

+ Pharmacy and other drug storage areas;

+ Women's Health and Maternity Units;

+ Youth Health units;

+ Sexual Assault Units;

+ Cash handling and storage areas;

+ Isolated facilities/units;

+ Car Parks and grounds;

+ Vehicles (eg ambulances);

+ Alcohol and other drugs services;

+ Aged Care Wards/Dementia Units/Brain Injury Units/Rehabilitation Units;

+ Community Services.

790 .76.00 INTRUDER ALARM

Intruder alarm systems are highly recommended for parts of Hospitals as well as Day Procedure Units that are closed after-hours.

Intruder alarm systems are required in the following areas:

+ Pharmacy Units where dangerous drugs (schedule 8) are kept;

+ All Satellite Pharmacy Rooms where dangerous drugs (schedule 8) are kept;

+ All drug safes where dangerous drugs (schedule 8) are kept;

+ Mortuary areas where bodies are stored;

+ External doors or windows to Baby Nurseries including NICU;

+ Clinical Records Unit and any remote archival areas.

790 .77.00 Many different intruder alarm systems are available. The required intruder alarm systems shall be equal to or better than, in terms of coverage and functionality the following:

+ Reed Switches for doors and windows;

+ Movement detectors to cover spaces that can be used for access.

A required intruder alarm should adequately indicate the location where security has been breached. The acceptable systems may indicate the location by:

+ A local audible alarm;

+ A remote indicator panel with a readout;

+ A security signal sent to a monitoring base, 24 hour Security Room or Staff Station computers;

+ A general audible alarm and security pager signal indicating the location on pagers carried by a security officer and other staff;

+ Another system with equal or better functionality;

+ One or more of the above in combination, especially where 24hour security offices or staff stations are not available.

790 .78.00 In larger facilities with sophisticated nurse call systems it is advisable to integrate the security systems including the intruder alarm, duress alarm and video with the nurse call system.

Nurse call and pager systems should generate different noises and signals for different events.

Ideally, the system will send a security signal to a dedicated Security Office or the 24 hour Staff Stations. The signal as well as video surveillance images may be seen on standard computer monitors that also pinpoint the location of the intrusion.

It should be noted that staff should never investigate an intruder alert alone.

790 .79.00 The relevant requirements from the Australian Cabling Regulations, Australian Standards and International Electro-Technical Commission standards should be incorporated into all aspects of commissioning, installing, activating and maintaining intruder alarms:

+ Intruder alarm systems - Systems installed in client's premises (AS 2201.1 - 1998);

+ Intruder alarm systems - Monitoring centres (AS 2201.2 - 2001);

+ Intruder alarm systems - Detection devices for internal use (AS2201.3 - 1991);

+ Intruder alarms systems - Wire-free systems installed in client's premises (AS 2201.4 - 1990);

+ Intruder alarm systems - Alarm transmission systems (AS 2201.5 - 1992);

+ Alarms systems. Part 2: Requirements for intruder alarm systems. Section Two: Requirements for detectors - General (IEC 60839-2-2 Ed. 1.0b);

+ Alarm systems. Part 2: Requirements for intruder alarm systems. Section Two: Requirements for infra-red beam interruption detectors in buildings (IEC 60839-2-3 Ed 1.0b);

+ Alarm systems. Part 2: Requirements for intruder alarm systems. Section Four:

Ultrasonic Doppler detectors for use in buildings (IEC 60839-2-4 Ed 1.0b);

+ Alarm systems. Part 2: Requirements for intruder alarm systems. Section Five: Microwave Doppler detectors for use in buildings (IEC 60839-2-5 Ed 1.0b);

+ Alarm systems. Part 2: Requirements for intruder alarm systems. Section Six: Passive infra-red detectors for use in buildings (IEC 60839-2-6 Ed 1.0b);

+ Alarm systems. Part 2: Requirements for intruder alarm systems. Section Seven: Passive glass-break detectors for use in buildings (IEC 60839-2-7 Ed 1.0b).

790 .80.00 DURESS ALARM

A duress alarm system is a signal for assistance sent by a person(s) who is under attack or threatened by the situation they face. The main purpose of the alarm will be to:

+ To seek assistance for staff who may be directly exposed to a threat of violence;

+ To indicate inappropriate or aggressive behaviours by visitors or patients.

790 .81.00 A duress alarm system should be installed in all high risk areas including:

+ All Staff Stations;

+ All Reception Counters;

+ Consultation and Treatment Rooms where there is a risk of aggression from behaviourally disturbed patients;

+ Mental Health Inpatient Units and Community Health Centres;

+ Emergency Units;

+ CADE and Aged Care Units;

+ Drug and Alcohol Units;

+ Brain Injury Units;

+ Anywhere that staff work alone or in isolation;

+ Areas where child protection may be an issue;

+ Carparks and grounds.

790 .82.00 There are two generic types of duress alarms recommended for use:

FIXED

This type of duress alarm is intended to call for discreet assistance without causing local alarm to the aggressor or others who may be present. The signal is sent to a Remote Security Office or 24 hour Staff Station, and to pagers carried by response staff.

Fixed alarms may be used in well defined areas where there is no or little opportunity for an aggressor to get between a staff member and the alarm button, and the person works from a static position (eg where staff are behind a screen such as a pharmacy distribution window or behind a counter). Fixed alarms may not be appropriate for areas accessible to patients and the public (eg corridors, as mischievous tampering with alarms may occur).

MOBILE

Mobile duress alarms may be used where the staff member is mobile in the course of

their work in areas such as Wards or Emergency Departments where there is a risk of being confronted by aggressive behaviour.

Mobile duress alarms should be worn attached to the clothing (eg clipped to a pocket or belt). They should not be worn around the neck.

Mobile duress alarms for use within a facility and the immediate area should comply with all relevant Australian and regulatory requirements including Austel approvals, AS2201 and AS3000 as an absolute minimum especially in relation to installation, servicing and wiring of all equipment and systems.

The device sends a signal to a Remote Security Office or 24 hour Staff Station and to pagers carried by at least 3 response staff. The device is automatically activated if the staff member collapses to the floor. The system must indicate the location of the staff member at the time of the signal activation.

Location finding mobile alarms shall be provided to all staff who work in medium to high risk environments and who do not work in a fixed position eg porters, nurses, medical officers.

790 .83.00 VIDEO SECURITY

Video security should be considered for all areas that may be used after-hours. Video security is required in the following areas:

+ Emergency Unit after hours patient entrance;

+ Ambulance Bay after hours entrance;

+ Any entrance used for access to a Birthing Unit after hours;

+ Any other entrance that is used for the above purposes after-hours;

+ Corridors, courtyards and Secure Rooms in an Acute Psychiatric Unit which can not be adequately observed from a Staff Station;

+ Other Units where access control is desirable eg Intensive Care Unit, Paediatric Inpatient Unit and Maternity Inpatient Unit.

790 .84.00 The video security system required at entrance points shall have the following features:

+ Show those who intend to enter with their facial features being recognisable;

+ Include an intercom system to communicate with those who intend to enter;

+ Provide a remote signal to open the door.

790 .85.00 The video security system required in Psychiatric Units shall have the following features:

+ Adequately cover hidden areas;

+ Camera protected and discrete;

+ The direction of the camera should not be obvious.

790 .86.00 The monitoring point for video security may be a dedicated Security Office or a 24 hour Staff Station. The duress response should be discussed with staff working in the vicinity of video security.

790 .87.00 The need to escort the person seeking entry to their destination should be considered in the implementation and operation of a video/intercom entry system.

790 .88.00 Note: The provision of video security at the main entrance of Hospitals is highly recommended.

790 .89.00 Specifications to be included:

+ Colour;

+ Digital;

+ CCTV used for monitoring patients eg in acute mental health units should not record.

+ Lighting and clarity of picture;

+ Requirements for video recording.

Property

790 .90.00 GENERAL

To minimise the risk to property, all attractive portable items (calculator, cameras, tape recorders, laptop computers, PDAs etc) should be stored separately in locked areas. Only designated staff should have access to these areas.

The following areas require specific attention.

790 .91.00 CATERING

Ensure that external doors can be locked at all times, with only one exit point that is visible to the Catering Officer. Fire Exit doors should only be able to be opened from the inside, and should have a buzzer alarm that activates when opened.

790 .92.00 STORES

Locate, as far as practical, Stores away from public areas and Change and Lunch Room Areas.

Restrict entry/exit to the Store to only one door. The Supply Officer needs to be able to see the door from his/her office. Fire exit doors must only be able to be opened from the inside and have an alarm that activates when opened.

Ensure that stocks held in areas are securely stored and not easily accessible to patients and unauthorised staff. Where possible, ward stores need to be locked and accessible only to the nurse or unit manager or their delegate.

790 .93.00 PATIENTS' PROPERTY

Provide a means of securing individual wardrobe lockers or closets for clothing (if lockers are provided).

790 .94.00 STAFF PROPERTY

Ensure that staff are provided with a lockable storage area (eg locker or cupboard) for safe keeping of their property.

Ensure Car Parks have good lighting to deter theft and vandalism.

Medical Gases

790 .95.00 Ensure access to any storage areas is restricted by use of doors, barriers and signs.

Sources are to be secured against unauthorised removal, tampering, vandalism and misuse.

The requirements of the Dangerous Goods Act and Regulations may apply to the design of locked areas and provision of signage.

Radioactive Substances

790 .96.00 Ensure stores (including waste stores) are properly marked with approved warning signs, and regulations regarding their use are posted at access points.

Ensure access to any storage areas is restricted by use of doors, locks, barriers and signs. Sources are secured against unauthorised removal and tampering. `

Mail and Other Deliveries

790 .97.00 Health Services should establish a screening point for all mail, that is, a central processing point for all mail for the workplace. At which point in the process mail passes through this central area, between arrival and delivery to the relevant officer, will vary according to the size and function of the workplace.

Part C - Access, Mobility, OHS and Security

No	Item	Yes	No
8.0	**Floors**		
8.1	Are the floor finishes for each room and corridor aand ppropriate for the usage of the area?	☐	☐
8.2	Do the floor finishes specified have the appropriate slip resistance level?	☐	☐
9.0	**Acoustics**		
	Is the design capable of compliance with the Acoustic guidelines?	☐	☐
10.0	**Security**		
10.1	Are all external perimeter doors lockable?	☐	☐
10.2	Are security provisions in Entry, Carparking, Reception and Waiting areas appropriate?	☐	☐
10.3	Are duress alarms provided to the specified areas?	☐	☐

Checked and certified by:

Name: _____ Date: _____

Company: _____

Position _____

Signature: _____