Australasian Health Facility Guidelines

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

C.0006 - Safety and Security Precautions

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Australasian Health Facility Guidelines

Address: PO Box 1060, North Sydney NSW 2059
Website: http://www.healthfacilityguidelines.com.au
Email: webmaster@healthfacilityguidelines.com.au

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06 SAFETY AND SECURITY PRECAUTIONS

06.01 Introduction

PERFORMANCE REQUIREMENTS

Comply with the relevant Occupational Health and Safety (OHS) legislation, regulations, codes and policies within each jurisdiction, and with relevant safety regulations issued by individual Regulatory Authorities.

GENERAL

Safety and security issues are of prime importance as their neglect can generate considerable, yet avoidable, costs to healthcare facilities if patients, staff / contractors 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 to minimise capital and recurrent costs related to these. It also provides references to assist in accessing specific information e.g. in regard to the selection of duress alarms.

Refer to Part B - General Requirements, for further detailed information on OHS and sources of information. See also References and Further Reading in this section.

The focus on OHS legislation is the safety of all people in the workplace. Other safety aspects of the built environment are covered separately and may be found within general regulations such as the BCA and utility supply authorities.

Specific HPU processes, activities or materials are covered by regulations and may require specific design input, consultations, documentation and approvals regarding access, security, and labelling, warning alarm and communications systems. These may include:

- building maintenance, fixed walkways, ladders, hatches, window cleaning, roof safety, etc;
- plant rooms, substations, liquid gas storage, etc;
- electromagnetic interference, radiation, toxic materials, etc;
- helicopter landing areas, Police, Fire Brigade, etc;
- building services; and
- laboratories, radiotherapy, etc.

DESIGN ASPECTS

Design of a project may impact on the OHS of employees and the health and safety of others in the workplace including patients and visitors. These design issues are discussed in more detail in Part B under each HPU.

Design spaces so that manual handling risks are minimised giving particular attention to the following:

- slope / gradient of ramps;
- turning circles for equipment;
- size of rooms;
- placement of fittings e.g. toilets to ensure nurse access / assistance to patients;
- location of services and fittings;
- height and widths of doorways;
- floor coverings and changes in floor levels;
- location, size and configuration of storage spaces; and
- fitting of door closers and door holders.

Note 1: Where subject to regulation, it may be necessary to increase minimum dimensions or to decrease slopes in specific cases e.g. turning circles and ramps.

Note 2: Ramps, if required for general use by BCA or DDA, can constitute a potential OHS manual handling risk for transporting patients or goods. Minimum required gradients should be reduced where assistive devices such as bed movers or tugs are used. Alternatively provide a lift. See Section 710 - Ramps.

Note 3: Refer to Section 790 - Patient Handling and Lifting and Section 790 - Goods Handling.

Ergonomics requires matching the workplace design and layout to the human form including its physical and cognitive capabilities. Examples of this include:

- height, depth and width of counters and workbenches including taking into account any equipment that may be used on the bench;
- positioning of bedpan racks;
- positioning of viewing panels in doors;
- positioning of light switches, door handles and handrails / grabrails;
- ensuring correct height of monitors;
- push / pull forces for doors and similar items;
- ability to accommodate bariatric patients who may need oversized equipment;
- overhead head hoist facilities for bariatric patients including positioning;
- design of units for people with dementia; and
- clarity of signage and directional cues in accordance with BCA and Standards.

Refer: to Section 730 - Ergonomics.

Selection of furniture, fittings and equipment (FF&E) should reduce risks to employees and others. Consider the compatibility of different types of FF&E with each other. Examples of these considerations include:

- drop down grab rails in ensuites / bathrooms to allow staff access to patient;
- infill grabrails in mental health units;
- compatibility of hoists with beds;
- emergency access to bathrooms / toilets / ensuites; and
- tamper proof airconditioning outlets and light fittings in mental health units.

Then designing public access throughout the facility, issues to be addressed include control methods for access / egress, restrictions signage and monitoring.

Further detailed security issues include:

- ability to observe waiting areas;
- application of Crime Prevention Through Environmental Design (CPTED) principles;
- location of car parks, pathways to and from car parks, and staff entries including provision of parking for afternoon and night staff;
- lighting;
- organisation of HPUs 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 so staff can effectively summon assistance;

- location and installation of CCTV systems;
- location and installation of intercom systems and call buttons;
- design of waiting rooms and risk free furniture; and
- provision of escape routes.

Ensuring patient and visitor safety may require designing the facility to minimise risks for patients who may be confused, disoriented or have cognitive or sensory impairment. It may also require consideration of patients who may be behaviourally disturbed or at risk of attempting self harm. Examples include:

- design of stairwells and balustrades to reduce risk of accidental or deliberate falls e.g. avoid open vertical shafts between stair flights, bridge walkways, etc;
- design of rooms to accommodate bariatric patients and the equipment needed to provide them with healthcare;
- design of doors including hinges in mental health unit and dementia / aged care unit patient rooms;
- choice of glazing methods and materials;
- choice of light fittings and the provision of dimmed direction lighting between bed and ensuite;
- consideration of infection control issues;
- choice of flooring type for the elderly to reduce slips, trips, and injury from falls;
- design of floor finish junctions, borders, patterns and colours to avoid causing frustration and confusion; and
- design of signage.

06.02 Floor Finishes

Safety Issues to be considered in the selection of floor finishes are covered above and in Section 710 - Finishes - Floor Safety.

Refer also to TS-7 Floor Coverings in Healthcare Building (NSW Health & CHAA, UNSW 2009)

06.03 Glazing

PERFORMANCE REQUIREMENTS

Comply with the requirements of the BCA, with the relevant security Acts and regulations within each jurisdiction and with the recommendations of AS/NZS ISO 31000 (Stds Aust 2009).

Based on the security risk assessment and risk mitigation plan, particularly for sites listed under the national CI (critical infrastructure) listing. Consider blast rated external glazing for Emergency Departments and ICU.

Design glazing in accordance with AS1288 (Stds Aust 2006a) as applicable to public buildings including glazing in balustrades, windows, doors, partitions, screens, etc.

For all internal and external glazed panels subject to possible breakage including doors, sidelights, windows, balustrades, etc, comply with the following standards:

- AS/NZS2208: Safety Glazing Materials in Buildings (Stds Aust 1999a);
- AS1288: Glass in buildings-Selection and installation (Stds Aust 2006a);
- AS Handbook 125: The glass and glazing handbook (Stds Aust 2007);
- AS2047: Windows in buildings - Selection and installation (Stds Aust 1999). As entrance areas can be the site for aggressive incidents, provide all of these with safety glazing.

Glazing including mirrors in emergency departments, drug and alcohol units, mental health units and community mental health facilities or other high risk departments should be safety glazing or an equivalent product such as a custodial care product. This should be selected to meet the specific user requirements e.g. holding rooms, seclusion rooms. Refer to individual HPU for details.

Safety glazing should 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 glazing in paediatric, acute mental health, emergency units, community health and other high risk departments.

Glazing should be selected to prevent the following risks:

- patients accessing out of bounds areas;
- patients absconding;
- patients self harming e.g. cutting or ingesting fragments; and
- preventing staff from reaching a safe place.

Safety glazing materials include toughened, laminated, wired glass, or combinations of these (bullet resistant), plastic materials (polycarbonates), films, etc. Some of these are defined in AS/NZS2208 (Stds Aust 1999a). Mirrors, lights, etc for custodial use are available where a similar risk is identified.

Refer to: Section 710 - Interior Glazing and Windows.

06.04 Hazardous Substances, Dangerous Goods, and Glutaraldehyde

PERFORMANCE REQUIREMENTS

Comply with the relevant legislation within each jurisdiction, with the relevant regulations and policies of each regulating authority and with the appropriate industry guidelines.

HAZARDOUS SUBSTANCES AND DANGEROUS GOODS

This section does not extend to the management issues relating to these materials except where the built environment or management practices affect each other. Materials that form part of the building fabric, fit-out or come under general household categories are also outside the scope. Other parts of the AusHFG cover specific materials as they relate to specific departments, materials or processes e.g. radiotherapy, pathology, laboratory processes, medical gas storage, waste holding, etc.

Hazardous substances comprise radiological sources, harmful biological materials, and hazardous chemicals. The number and types of materials applicable to healthcare facilities are extensive and are covered only in general terms and by the provision of appropriate reference to primary sources.

Dangerous goods are covered by The Dangerous Goods (Storage and Handling) Handling Regulations and are subject to a United Nations international classification system with nine classes. They may be corrosive, flammable, explosive, oxidizing or reactive with water and are subject to the HAZCHEM code and identification for emergency personnel.

Hazardous Materials and Dangerous Goods are covered by individual industry material safety data sheets (MSDS). These include information on characteristics and safe handling.

The management of these materials in healthcare facilities, involves transportation, storage, use and disposal of hazardous materials and controlled waste. This includes the security aspects of fire, accident, and unauthorized removal / misuse. These issues are all comprehensively covered by legislation, standards and Codes of Practice available from the relevant Safety Authority.

06.05 Noise Reduction

PERFORMANCE REQUIREMENTS

Comply with the relevant legislation within each jurisdiction.

Design and construction should address 'hearing conservation' aspects of the work environment. The occupied floor area (OFA) should be designed to maintain internal noise levels at an appropriate level in accordance with Indoor Environment Quality (IEQ) requirements or recommendations.

The major design issues to consider include:

- design workplaces to minimise the occupants' exposure to noise. Noisy machines and activities should be remote or isolated from other work areas;
- provide acoustic enclosures to noisy equipment where practicable;
- provide noisy work areas such as workshops with acoustically absorbent ceilings or other means to reduce the amount of noise impacting on other staff working nearby;
- ensure that checking noise levels of equipment is an integral part of equipment selection/ purchasing procedures;
- consider the impact of ultrasonic noise generation, and provide effective solutions. Refer to AS/ NZS 2243.5 (Stds Aust 2006c).

Note 1: Acoustic separation for privacy reasons is a different subject covered separately in these guidelines.

Note 2: 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.

Note 3: The building and mechanical services design should achieve ambient internal noise levels in accordance with Table 1 of AS/NZS 2107 (Stds Aust 2000b).

Note 4: Noisy environments can exacerbate the risk of client aggression, anxiety and cause discomfort. Quiet, low stimulus areas should be provided in emergency departments and in mental health, aged care, maternity and in paediatric units.

Refer also to Section 710 - Floor, Wall and Floor Finishes, and to Sound Control for Improved Outcomes in Healthcare Settings (Joseph & Ulrich 2007).

06.06 Insect Control

External doors that open directly into food preparation areas and that are used for service deliveries or regular access should 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, should not be used as the only means of insect control.

For flyscreen requirements to door and window openings refer to Section 710 Building Elements - Doors, and Windows. Flyscreens are generally required to all opening windows used for ventilation.

06.07 Patient Handling and Lifting

PERFORMANCE REQUIREMENTS

Comply with the relevant sections of OHS legislation within each jurisdiction and with the relevant regulations and policies of each regulating authority.

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 and selection of FF&E including beds should be addressed.

Particular attention should be given to OHS risk reduction in the manual handling issues relating to bariatric patients and to adequately provide for the needs of these patients.

The BCA addresses questions of access for people with disabilities but it does not consider the extra needs of access for people with disabilities who require assistance or for the accompanying carers.

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

- facilitate the implementation of operational and other policy procedures that effectively eliminate or reduce the need for patient handling and double handling e.g. door and corridor widths should allow for a patient's bed to travel with them rather than require 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 should be considered including space requirements for the use and storage of bariatric equipment.
- adequately provide for the accommodation, movement and treatment of bariatric patients.

To comply with OHS legislative requirements, manual handling decisions should be taken in consultation with employees e.g. direct care staff and business unit managers in order to achieve the best risk management solutions and a unity of commitment.

Consider manual handling needs during the design phase for bedrooms and ensuites designed for the use and treatment of bariatric patients including the installation of overhead hoists and storage for bariatric equipment.

Refer to:

National Code of Practice for the Prevention of Musculoskeletal Disorders from Performing Manual Tasks at Work (Australian Safety and Compensation Council, 2007a).

Also refer to References and Further Reading for regulation and policy within each jurisdiction and to Part F - Project Implementation for FF&E.

06.08 Soft Furnishings

PERFORMANCE REQUIREMENTS

Ensure that soft furnishings comply with the relevant safety and environmental legislation and other relevant policies within each jurisdiction, including infection control, hygiene, cleaning, procurement, whole of life costs and risk management policies.

Soft furnishings in the internal built environment include mattresses, curtains, bed, cubicle and shower screens, upholstery, finishes, and wall and floor coverings including tracks, fittings, sealants or adhesives.

Certain materials emit internal air pollutants in the form of Volatile Organic Compounds (VOC). To reduce the detrimental impact on occupant health select only materials that meet recommended benchmarks for low VOC content or emissions.

The BCA Section C Fire Resistance covers fire hazard properties including floor materials, floor coverings, wall or ceiling lining materials. Soft furnishings are only covered under this context. They are not included under Non-Combustible Materials which deals with sheet lining materials.

Consider the special safety risk factors and duty of care issues associated with acute mental health and aged care behavioural units. Consult with appropriate staff representatives.

Fabric should be capable of withstanding standard healthcare laundry treatment without losing its inherent properties.

06.09 Goods Handling

LOADING DOCKS

Loading docks should be designed to provide a level surface for loading / unloading. Match average tailgate heights and allow for vehicles with both end and side goods access. Proprietary lift / platforms whether built-in or mobile may overcome problems with extreme vehicle cargo floor height disparities.

Canopy clearance heights including services and projections should allow for maximum vehicle heights and for overhead dumpster operations. Vehicle height warning notices and overhead horizontal swing bars should be provided.

06.10 References and Further Reading

GENERAL

This Section should be read in conjunction with current versions of the following documents or web documents. The list is not inclusive and additional references are provided within the text and by the core reference document. It includes references for Safety.

AUSTRALASIAN

ARPANSA 2008, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) - Legislative Framework, Australian Radiation Protection and Nuclear Safety Agency. Plus various recommendations and Codes of Practice available from: www.arpansa.gov.au

Australian Building Codes Board 2009, The Building Code of Australia, Australian Government, State and Territory Governments of Australia.

Australian Council for Safety and Quality in Health Care (ACSQHC) 2005, Preventing falls and harm from falls in older people: Best practice guidelines for Australian hospitals and residential aged care facilities, ACSQHC.

Australian Safety and Compensation Council ASCC (formerly NOHSC), www.ascc.gov.au

Australian Safety and Compensation Council 2007a, National Code of Practice for the Prevention of Musculoskeletal Disorders from Performing Manual Tasks at Work, Commonwealth of Australia.

Australian Safety and Compensation Council 2007b, National Standard for Manual Tasks, Commonwealth of Australia.

Australian Safety and Compensation Council 2009, Hazardous Substances Information System, Safework Australia.

CSIRO 2009, Management of Chemical Hazards, CSIRO2009.

Department of the Environment and Heritage 2004, Chemical Information Gateway Department of the Environment and Heritage.

NOHSC 1994a, NOHSC 1008: Approved Criteria for Classifying Hazardous Substances, National Occupational Health and Safety Commission, Commonwealth of Australia.

NOHSC 1994b, List of Designated Hazardous Substances [NOHSC: 10005 1994], 2nd ed., National Occupational Health and Safety Commission, Commonwealth of Australia.

NOHSC 1994c, National Code of Practice for the Control of Workplace Hazardous Substances: National Occupational Health and Safety Commission, Commonwealth of Australia.

New Zealand Department of Labour 2005, Workplace Health and Safety Strategy for New Zealand to 2015, Department of Labour.

Parliament of New Zealand 1992, Health and Safety in Employment, Act 1992 (HSE Act).

Safe Work Australia 2009, Safe Work Australia.

Worksafe New Zealand 2009, ACC WorkSafe Cycle, Accident Compensation Council.

INDIVIDUAL JURISDICTION

ACT

ACT Parliamentary Council 2004, Occupational Health and Safety Regulation 1991, Government of the Australian Capital Territory.

ACT Parliamentary Council 2009, Occupational Health and Safety Act 1989, Canberra.

ACT Workcover 2000, Guidance on the Safe Moving of Clients, Occupational Health and Safety Council.

ACT Workcover 2004, Occupational Health and Safety Act 1989: A Guide for Users, Government of the Australian Capital Territory.

TAMS n.d., Waste Management and Hazardous Materials, Department of Territory and Municipal Services, Canberra

NEW SOUTH WALES

NSW Health 2001, Policy Directive 2005_224: NSW Public Health Services - Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents, NSW Health.

NSW Health 2005a, Guideline 2005_070: Occupational Health & Safety Issues Associated with Management Bariatric (Severely Obese) Patients, NSW Health.

NSW Health 2005b, Policy Directive 2005_351: Provision of First Aid Facilities and Personnel, NSW Health.

NSW Health 2005c, Policy Directive 2005_409: Workplace Health and Safety: Policy and Better Practice Guide, NSW Health.

NSW Health 2006, Policy Directive 2006_010: Guidelines for the Safe Use of Hazardous Substances and Dangerous Goods, NSW Health.

NSW Health 2009, Personel / Workforce - Occupational Health and Safety, NSW Health.

State Government of New South Wales 2000, Occupational Health and Safety Act 2000.

WorkCover NSW 2003, Codes of Practice - Hazardous Substances List, WorkCover Authority of NSW.

NORTHERN TERRITORY

Northern Territory Department of Justice 2007, Workplace Health and Safety Act 2007, Northern Territory of Australia.

Northern Territory Department of Justice 2008, Workplace Health and Safety Regulations, Northern Territory of Australia.

QUEENSLAND

State Government of Queensland 2008, Workplace Health and Safety Regulation 2008, Office of the Queensland Parliamentary Counsel.

State Government of Queensland 2009, Workplace Health and Safety Act 2008, Office of the Queensland Parliamentary Counsel.

Workplace Health and Safety Queensland 2001, Manual Tasks Involving the Handling of People Code of Practice 2001, Queensland Department of Justice and Attorney-General.

Workplace Health and Safety Queensland 2007, Guide to the workplace health and safety obligations of designers of structures, Queensland Department of Employment and Industrial Relations.

Workplace Health and Safety, Queensland 2010a, Manual Tasks Code of Practice 2010, Queensland Department of Justice and Attorney-General.

Workplace Health and Safety, Queensland, 2010b, Hazardous materials, Queensland Department of Justice and Attorney-General.

SOUTH AUSTRALIA

SafeWork SA n.d., Safework SA, Government of South Australia.

State Government of South Australia 2009, Occupational Health, Safety and Work Regulations 1995 (Version 2009), South Australia Attorney-General's Department.

State Government of South Australia 2010, Occupational Health, Safety and Welfare Act 1986 (version 2010), South Australia Attorney General's Department.

TASMANIA

State Government of Tasmania 1995, Workplace Health and Safety Act 1995.

State Government of Tasmania 1998, Workplace Health and Safety Regulations 1998.

Workplace Standards Tasmania 1999, Annonated Workplace Health and Safety Regulations 1998, Workplace Standards Tasmania.

VICTORIA

State Government of Victoria, Occupational Health and Safety (Manual Handling) Regulations 1999.

Worksafe Victoria 2000, Manual Handling (Code of Practice No 25), Worksafe Victoria.

Worksafe Victoria 2005a, Designing Safer Buildings and Structures, Worksafe Victoria.

Worksafe Victoria 2005b, Manual handling - Risk management in a large organisation.

Worksafe Victoria 2007, Designing Workplaces for Safer Handling of People, Worksafe Victoria.

WESTERN AUSTRALIA

State Government of Western Australia 1984, Occupational Safety and Health Act 1984, West Australian Department of Commerce.

State Government of Western Australia 1996, Occupational Safety and Health Regulations 1996, Department of Commerce.

State Government of Western Australia 2006, Code of practice: Violence, Aggression and Bullying at Work, Commission for Occupational Safety and Health, Department of Commerce.

WA Health 1991, OP 0111/91: Control of Workplace Hazardous Substances - National Model Regulations, Western Australia Department of Health.

WA Health 1999, OP 0953/99: Management and Use of Hazardous Substances in Health Department Workplaces, Western Australia Department of Health.

WA Health 2007a, Guidelines for Engineering Services, Western Australia Department of Health.

WA Health 2007b, Western Australia Health Facility Guidelines for Infection Control, Government of Western Australia.

Worksafe WA 2000, Code of Practice: Manual Handling, Commission for Occupational Safety and Health.

Worksafe WA Commission 2003, General duty of care in Western Australian workplaces, Commission for Occupational Safety and Health.

STANDARDS

ARPANSA 2008, ARPANSA Home: Australian Radiation Protection and Nuclear Safety Agency.

Australian Council for Safety and Quality in Health Care (ACSQHC), 2005, Preventing falls and harm from falls in older people: Best practice guidelines for Australian hospitals and residential aged care facilities, ACSQHC.

Stds Aust 1997, AS 4485: Security for health care facilities, SAI Global.

Stds Aust 1999, AS 2047/Amdt 2-2001: Windows in Buildings - Selection and installation, SAI Global.

Stds Aust 1999a, AS/NZS 2208:1996/Amdt1:1999: Safety glazing materials in buildings, SAI Global.

Stds Aust 2000a, AS2021: Acoustics - Aircraft noise intrusion - Building siting and construction, SAI Global.

Stds Aust 2000b, AS/NZS 2107: Acoustics - Recommended design sound levels and reverberation times for building interiors, SAI Global.

Stds Aust 2001, AS/NZS 4801: Occupational health and safety management systems - Specification with guidance for use, SAI Global.

Stds Aust 2003, AS/NZS 4187: Cleaning, disinfecting and sterilizing reusable medical and surgical instruments and equipment, and maintenance of associated environments in health care facilities, SAI Global.

Stds Aust 2004a, AS 1940/Amdt 2-2006: The storage and handling of flammable and combustible liquids, SAI Global.

Stds Aust 2004c, AS 2430.3: Classification of hazardous areas - Examples of area classification, SAI Global.

- AS 2430.3.1: General
- AS 2430.3.3/Amdt 1-2007: Flammable Liquids

Stds Aust 2004d, AS 4332/Amdt 1-2005: The Storage and Handling of Gascylinders, SAI Global.

Stds Aust 2005, AS/NZS 1269: Occupational Noise Management, SAI Global.

Stds Aust 2006a, AS 1288/Amdt 1-2008: Glass in buildings - Selection and installation, SAI Global.

Stds Aust 2006b, AS 1216: Class labels for dangerous goods, SAI Global.

Stds Aust 2006c, AS/NZS 2243: Safety in Laboratories Set, SAI Global.

- AS/NZS 2243.3-2002/Amdt 1-2003: Safety in Laboratories - Microbiological aspects and containment facilities.
- AS/NZS 2243.4-1998: Safety in Laboratories - Ionizing Radiations.
- AS/NZS 2243.5-2004: Safety in laboratories - Non-ionizing radiations - Electromagnetic, sound and ultrasound.
- AS/NZS 2243.8-2006: Safety in Laboratories - Fume cupboards.
- AS/NZS 2243.9-2009: Safety in Laboratories - Recirculating fume cabinets.

Stds Aust 2007, AS Handbook 125: The glass and glazing handbook, SAI Global.

Stds Aust 2008, AS/NZS 1596: Storage and Handling of LP Gas, SAI Global.

Stds Aust 2009, AS/NZS ISO 31000: Risk Management, SAI Global.

Stds Aust 2010, AS 2436: Guide to noise and vibration control on construction, demolition and maintenance sites: SAI Global

Stds Aust 2010a, AS 1428 (Set): Design for Access and Mobility, SAI Global.

Stds Aust 2010b, AS 2436: Guide to noise and vibration control on construction, demolition and maintenance sites, SAI Global.

GLUTARALDEHYDE

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

Department of Labour 1992, The Safe Occupational Use of Glutaraldehyde in the Health Industries, Health and Technical Services, Department of Labour, New Zealand.

Ecospecifier 2009, Ecospecifier: Products, Knowledge, Solutions, www.ecospecifier.org/

Green Building Council Australia 2009, Healthcare V1, Green Star, www.gbca.org.au/rating-tools/green-star-healthcare-v1/1936.htm

NSW Health 2005, Policy Directive 2005_108: Policy and Guidelines for Safe Use of Safe Handling of Glutaraldehyde in NSW Public Health Care Facilities, NSW Health.

State Government of Queensland 2000, Environmental Protection (Waste Management) Policy, Office of the Queensland Parliamentary Counsel.

OTHER

Joseph, A & Ulrich, R 2007, Sound Control for Improved Outcomes in Healthcare Settings, The Center for Health Design, www.healthdesign.org/research/reports/documents/CHD_Issue_Paper4.pdf

06.11 Definition

PERFORMANCE REQUIREMENTS

Conduct security risk assessments in accordance with:

- the legislation, policies, and guidelines of each jurisdiction or agency
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a).
- AS4485.1: Security for healthcare facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required - subject to the approval of each jurisdiction or agency:

- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

GENERAL

Complete a security risk assessment with subsequent corrective action prior to the occupation of new, renovated or refurbished facilities.

INTRODUCTION

This section is limited to physical design and infrastructure. Content relating to security management procedures is generally excluded except where these subjects interrelate.

Security risks can arise from two main sources:

- internal risks - human and non-human
- external risks - human and non-human.

Ensure that ‘design for terrorism’ strategies are followed for all buildings subject to this classification. Refer to the relevant legislation, regulations, codes and policies within each jurisdiction.

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 e.g. from vandalism of security lighting, CCTV and graffiti
- high insurance costs and cost of replacing or replacing stolen or damaged facility property.

PURPOSE AND SCOPE

Minimise and, where possible, eliminate foreseeable risks associated with the facility design.

Identification of potential areas of risk and options for risk control should be addressed during the planning, design and construction phases of a healthcare facility project in order to achieve a safe, functional and affordable solution.

Adopt the planning and design standards outlined in the clauses that follow as the recommended standard to be achieved.

However it is recognised that in a number of circumstances, departure from these 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 subsequent departmental approval process within each jurisdiction.

Within each jurisdiction the relevant legislation including Protective Security Manuals (PSM), take precedence over these guidelines. Note: PSM define the base level of security for all government buildings.

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

06.12 Recurrent Costs

Consider the issue of recurrent costs in the context of the provision of an appropriately designed and constructed safe working environment in a healthcare facility. Safety and security issues should be addressed during the planning process and security risk assessment, and incorporated into the design of the facility.

If the planning and design process follows the requirements of this guideline and an appropriate level of consideration of safety and security issues is undertaken, there should be no significant increase in recurrent costs. In fact, addressing and minimising security risks should be expected to reduce costs.

Recurrent costs are also increased by 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.

06.13 Crime Prevention through Environmental Design

Crime Prevention Through Environmental Design (CPTED) is a situational crime prevention strategy that focuses on the design, planning, structure and use of a built environment or space. CPTED has benefits beyond crime prevention.

It aims to influence the behaviours of people to improve the desired use of a place whilst minimising the undesired use or the undesired behaviours of a person within that place.

By employing appropriate design and place management principles, the opportunity and consequences of unwanted behaviours may be eliminated or reduced.

To implement CPTED principles on a project, refer to the specific policies applicable within that jurisdiction.

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 - 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 e.g. paths, roads, fences, lines of lighting, signs, gardens, gates, locks and doors. This should make it clear where people can and can't go, and more difficult for criminals to reach potential victims and targets.
- Space Management - is linked to territorial reinforcement. It ensures that space is well used and maintained e.g. by coordination of activity and rapidly repairing vandalism or graffiti.

Note: The application of CPTED and other situational crime prevention strategies is a cost effective strategy in reducing unwanted behaviour and improving the desired behaviour and use of the space.

The Police Local Area Command where a new / refurbished facility is located should be consulted on the CPTED implications of the proposed design in all stages of planning.

Note: Some jurisdictions may mandate or recommend the use of government security risk assessors for design assessments.

06.14 Internal Security Risks

PERFORMANCE REQUIREMENTS

Conduct security risk assessments in accordance with:

- the legislation, policies, and guidelines of each jurisdiction or agency
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a)
- AS4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).
- the following are recommended for use as required - subject to the approval of each jurisdiction or agency:
- AS4485.2: Security for health care facilities - Procedures guide (Stds Aust 1997c)
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

CLIENT RELATED VIOLENCE

Design is a key factor in the prevention and management of client related violence. It is particularly relevant for high risk areas such as:

- mental health inpatient units;
- community mental health centres;
- emergency departments / units, including prisoner holding facilities;
- drug and alcohol units / methadone clinics;

- aged care units;
- brain injury and rehabilitation units;
- any location where staff may work alone in isolation or for extended hours; and
- any area where child protection or domestic violence may be an issue e.g. paediatric inpatient, maternity and birthing units.

The prevention and management of client related security risks has implications for the design of units and the selection of FF&E. For example consider:

- perimeter security - doors and windows, entrances, the property perimeter including fences and access control;
- controlling access to the buildings, individual HPU and rooms; and
- ensuring rooms can be locked where utensils, tools, surgical instruments, etc are kept - especially if these may be taken and used as a weapon.

In kitchen / beverage, utility and staff rooms, and in departments such as emergency, consider:

- cash handling and transit routes - see note 1 below;
- location of shops, vending machines and banking facilities;
- avoiding areas where staff work alone, in isolation or for extended hours - see note 2 below;
- location and design of car parks - see note 3 below;
- 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 - see note 4 below;
- visibility and lines of sight; and
- cultural requirements influencing the size of personal space, privacy of groups or the need for a patient to have an escort. The use of a facility by some cultural groups may have implications for the size and design of waiting rooms, consultation rooms, palliative care units, mortuary viewing rooms and similar areas.

Notes:

1. Cash handling should be treated according to the outcome of the security risk assessment and treatment plan e.g. use of cash collection agencies to reduce the security risk.
2. State and agency specific guidelines cover staff working in isolation.
3. Car park design around the precinct of the emergency and ICU departments should be considered in relation to terrorism related risks.
4. Obscuring e.g. sand blasting treatments may be required for glazing where determined by the security risk assessment.

Fittings, fixtures, furnishings and furniture should not facilitate attempts at self harm - hanging, asphyxia, ingestion, cutting - or as a weapon against others.

Risk items may include: picture frames with glass face or sharp edges, IV poles, furniture / door handles, hooks, hydraulic fixtures / fittings, curtains / blinds including cords / tracks, building trim or similar items.

In high risk mental health and custodial areas, light fitting types and performance ratings should be fit for purpose. Properties include resistance to impact and tamper / weather proofing. Fittings that appear less institutional plus anti-ligature and custodial grade fittings are available as required.

INTERIOR ENVIRONMENT

In addition to functional design principles there are a number of other design strategies that should be considered for high risk areas. These include the use of:

- calming colours and soft furnishings;
- diversion opportunities e.g. TV, paintings, water features, views;
- use of calming textures and lighting;
- appropriate placement of seating in accordance with personal space requirements.

The methods employed should be based on professional and evidentially based advice applicable to the specific user group.

Advice on risk control strategies is included in each specific HPU. However the specific requirements for projects within each jurisdiction should be followed.

06.15 Security Risk Management

PERFORMANCE REQUIREMENTS

Conduct security risk assessments in accordance with:

- the legislation, policies, and guidelines of each jurisdiction or agency;
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a); and
- AS4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required subject to the approval of each jurisdiction or agency:

- AS4485.2: Security for health care facilities - Procedures guide (Stds Aust, 1997c); and
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

Areas of potential threat should be identified by consulting with employees and user groups, managers, the OHS committee, security personnel and the Police Local Area Command Crime Prevention Officer.

This coordination should occur during all stages of the planning, design, construction and occupation phases to ensure that all issues are adequately addressed and funded.

Known high risk areas have been listed above. However there is a potential for violence in any part of the facility including indoor or outdoor environments.

The planning process, having identified and documented the relevant risks, should 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 its location and all of the circumstances that are appropriate to that facility. This process should include consultation with a wide range of stakeholders.

In undertaking the risk analysis and the risk management process, consider the differences between remote / rural facilities and metropolitan facilities.

Issues such as response times to violent events should be addressed not only by the facility design but also by operational policies.

In some rural and remote areas lengthy Police response times may directly influence the design and safe minimum size of a facility. The minimum number of staff required for patient restraint can only be provided if adequate staffing levels are available and this is determined by bed numbers or other measures of facility size and throughput.

Patient safety is similarly dependant on adequate staffing in terms of the capacity for rapidly responding to medical emergencies and multiple high triage level presentations.

06.16 Design for Security

PLANNING AND DESIGN

The issue of security is raised throughout the guidelines in areas such as hardware and external lighting. However, give consideration to the overall solution. For example facility size should be sufficient to warrant safe minimum staffing levels that require a minimum of four staff and no staff working alone or in isolation.

Good initial planning and detailed design are needed to overcome the main problems.To be avoided are opportunities for concealment and unauthorised access.To be managed appropriately are the containment and management of certain categories of patients and incidents.

Ensure that safe circulation is provided within the facility including external circulation, circulation within and connecting departments, and links between buildings, preferably enclosed, for the safe transit of patients and staff.

This can only be achieved if the security coordinator is consulted at all stages of the project including planning, design, pre-occupation and post occupation. It is difficult and costly to design-out or rectify security risks if security has not been thoroughly considered in the planning, design and occupation phases.

Note: Occupational violence prevention, emergency response, fire safety, ergonomics, health and safety, etc, are covered in other sections of this document.These should be included in an integrated assessment / review process.

SECURITY PROCEDURES

A healthcare facility, even without an emergency department, is often functioning for 24 hrs per day. Visitors and staff enter and leave the building at all times often on an informal and unscheduled basis. After hours or at night there is greater potential for unauthorised entry into the building. At these times, attacks on visitors and staff are more likely to occur especially when they are walking to and from car parks, bus stops or other transport.

The work environment may increase or decrease the risks associated with occupational violence and aggression depending on a range of issues, which are set out in the next clause.

Address the following issues with respect to security in every healthcare facility:

ENTRY / EXIT ISSUES

Manage access to various areas and departments including:

- by relatives / visitors;
- by clients / patients; and
- entry of personnel visiting or working within the hospital.

Manage movement of staff between various areas and departments including:

- recording access to sensitive areas such as pharmacies, mortuaries and medication/clean utility rooms;

Manage entry to facility grounds e.g. as appropriate prevent after hours access to and through the grounds by pedestrians and vehicles to minimise unauthorised entry and vandalism.

PATIENT SAFETY AND SECURITY

Address issues of patient safety and security by:

- reducing triggers for conflict with patients and relatives e.g. through design of waiting rooms, reception areas, signage;
- minimising the risk of illegal removal of babies and children from maternity and paediatric units;
- managing wandering and/or absconding patients from emergency departments, aged care, paediatric and mental health units;
- management and supervision of hydrotherapy pools;
- management of mental health and other behaviourally disturbed patients - provide safe areas for containment and observation, adequate personal space, prevention of patients absconding e.g. proximity alarms and low stimulus environments; and
- managing risks associated with the security of Police and Corrections.

Officer weapons and equipment

- managing the security of prisoners;
- managing the risk of contraband such as drugs, alcohol or cigarette lighters being brought into high risk units such as acute mental health units; and
- management of the security of acute mental health units in accordance with the recommendations and policies within each jurisdiction - e.g. in NSW - Mental Health Sentinel Events Review Committee.

STAFF SAFETY AND SECURITY

Address issues of staff safety and security associated with:

- admission of patients especially where close contact occurs with the patients being admitted and their relatives, and where conflict may occur;
- the risk of violence from non-custodial, alcohol or drug affected parents;
- visitors;
- working after hours;
- working in isolation;
- movement of staff between various areas and departments especially after hours;
- staff movement around hospital sites e.g. to and from public transport, car parks, staff accommodation and movement between buildings;
- clinical state of patients;
- access to assistance and support from colleagues;
- ability to observe patients and others, and provide early intervention; and
- access to alarms and the provision of personal duress alarms or fixed alarms as appropriate.

SECURITY OF PROPERTY

In terms of security of property, address the following issues:

- location of public telephones in retail areas;
- cash handling;

- furniture, fittings and equipment;
- furniture in waiting areas;
- computer, high tech, AV equipment, etc;
- personal effects - staff;
- personal effects - patients;
- access control;
- intruder / door alarms;
- car park security; and
- CCTV with digital recording.

SECURITY AND CONFIDENTIALITY OF RECORDS AND FILES

Address security and confidentiality in regard to:

- medical records;
- financial records;
- employee files;
- medico-legal files; and
- computer networks, infrastructure, systems, and hardware.

SECURITY OF DRUGS AND OTHER SUPPLIES

Address the security of drugs and other supplies especially in regard to:

- dangerous drugs and drugs of addiction
- radioactive substances
- storage and bulk storage of hazardous materials
- other supplies / stores
- electronic access to pharmacies and other drug storage areas / cupboards to enable access monitoring
- CCTV surveillance with digital recording of sensitive areas.

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.

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.

Give consideration to any additional facility requirements that result in a secure and safe environment for staff, patients and visitors.

06.17 Building Elements

PERFORMANCE REQUIREMENT

Conduct security risk assessments for building elements with reference to:

- the legislation, policies, and guidelines of each jurisdiction or agency;
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a); and
- AS4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required - subject to the approval of each jurisdiction or agency:

- AS4485.2: Security for health care facilities - Procedures guide (Stds Aust, 1997c); and
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

ACCESS CONTROL

In consultation with staff and key stakeholders, all Health Services should ensure that all reasonably foreseeable security risks associated with access to workplaces are identified and assessed. These should be eliminated where reasonably practicable, or effectively controlled.

Effective access control measures include:

- securing perimeters, including doors, windows, rooflights, access hatches, etc;
- controlling access to the land on which the facility is situated e.g. fences, roads, traffic and pedestrian access and flow;
- providing safe access and exit especially after hours and during emergencies;
- controlling access to vulnerable areas;
- ensuring accessible building envelope elements are not readily removable or breakable; and
- provision of electronic access control and monitoring as applicable, in preference to traditional locking systems.

Specific access control measures include:

- instituting staff identification systems that allow members of the organisation to be identified and combining this with card key entry systems;
- access system head end software and hardware for user administration;
- restricted keying system to prevent duplication with protocols to manage keys;
- restricted keying systems to defined areas on a need to access assessment basis, to avoid multiple area access; and
- clear signage.

Note: Budget mechanical keypad locks are not regarded as providing adequate security as combination codes can be passed on and are not secure.

DOORS

Ensure that all opening external building perimeter doors are lockable.

Perimeter doors should meet the following building design standards:

- be fitted with a quality single cylinder lockset that complies with fire regulations. Refer: AS4145.2 - Locksets and hardware for doors and windows - Mechanical locksets for doors and windows in buildings (Stds Aust 2008b);
- 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 or 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 fail to close properly, ‘door open too long’ (DOTL), 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;

- electronic locks on staff only access doors;
- electronic access to sensitive areas e.g. pharmacies and other drug storage areas / cupboards;
- CCTV and adequately lighting to all after hours public entries and exits; and
- video / CCTV intercoms to all after hours restricted entries to allow screening of members of the public presenting at the door.

Fire isolated exit doors should meet the requirements of the BCA.

The glazing in doors and door screens should comply with AS/NZS 2208/Amdt 1 - Safety Glazing Materials in Buildings (Stds Aust 1999a) for safety; and for security be designed to prevent the breakage and removal of glazing to obtain entry. See also Section 710 - Window Security and 790 - Glazing.

WINDOWS

Openable windows create security problems. These include the need to address glazing requirements, appropriate locking, the ability of people outside looking in to private areas and the potential to facilitate break-ins.

All opening windows and doors to the building envelope should be provided with key operated locks either mechanical or electronic.

Minimise entry through perimeter windows 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; and
- fitting security grilles provided fire evacuation is not compromised.

Ensure that glazing, in addition to complying with AS 1288 - Glass in Buildings - Selection and Installation (Stds Aust 2006c):

- for safety, complies with AS/NZS2208/Amdt 1 - Safety Glazing Materials in Buildings (Stds Aust 1999a); and
- for security, is designed to prevent the breakage and removal of glazing to obtain entry.

See also Section 710 - Window Security and 790 - Glazing.

Note: The application of security film is not recommended as a durable or effective solution.

Note: Sites identified as Critical Infrastructure (CI) sites may need to use blast resistant glass.

SCREENS AND GRILLES

Generally, operable external windows, vents and doors should be fitted with flyscreens. Doorways that are used on a regular basis such as service and main entrances need not be flyscreened but should be fitted with a self- closing device.

Other exceptions to the above are windows in multi-storey or fully air- conditioned buildings that are used for service access or that pivot / swing / tilt for cleaning purposes.

Security grilles, and appropriate impact resistant glass and/or an electronic security system, as indicated by a risk assessment, should be installed wherever high security areas have external windows. This includes pharmacy stores and workrooms, medical records stores and other areas that are not occupied 24/7.

Special consideration should be given to the design of counters in areas where the protection of staff from violence or criminal acts is required.

Design issues should include the provision of glazed screens, pass through documents / currency trays, and communication systems. Consider the design of doors / hardware, viewing panels and partitions / ceilings adjacent to counters.

The design should respond to the anticipated types, levels and sources of violence including projectiles such as liquids, objects and firearms. It may be necessary to seek advice from the Police or an independent security consultant.

Refer to:

- AS/NZS 2208/Amdt 1: Safety Glazing Materials in Buildings (Stds Aust 1999a); and
- AS/NZS 2343: Bullet-Resistant Panels and Elements (Stds Aust 1997a).

Security screens to doors should be locked so as to prevent unauthorised entry from outside the building or facility. Where security screen doors are used in clinical or residential aged care areas, a risk assessment should be carried out to determine if these should be locked to prevent patients absconding, with fire exits controlled electronically or by staff. Security screens should not compromise an emergency exit.

06.18 Key Areas for Security Provision

The following notes are supplemented by a detailed risk analysis and response in the individual HPU in Part B.

Comply with:

- the legislation, policies, and guidelines of each jurisdiction or agency
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a)
- AS4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required - subject to the approval of each jurisdiction or agency:

- AS4485.2: Security for health care facilities - Procedures guide (Stds Aust, 1997c)
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

ENTRY / EXIT

Minimise public access points and control access to all areas of the workplace.

Ideally visitors should have access to one main entrance. Security should be placed at this entrance if necessary, in particular for after hours use.

The use of bollards should be considered to prevent criminal access by vehicles (ram-raids) or other malicious use in locations identified through the process of risk assessment e.g. emergency department, entry foyer ATMs. The provision of bollards should not create OHS or other issues.

However, support services such as emergency response teams should have maximum access to all areas of the workplace to assist their intervention in emergency incidents. This should be facilitated by the keying system. The use of electronic card key access is preferable to manual key systems.

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.

In aged care, behavioural, paediatric and acute mental health units, locking to doors in egress routes for patient safety considerations such as prevention of absconding should be subject to risk assessment to determine the method to be used. Refer to Section 710 - Mental Health Facilities Fire Egress.

EMERGENCY DEPARTMENT

Provide an additional security office adjacent to the Emergency Department.

Ensure secure separation of treatment areas from public areas and that utility rooms are secure including storage of sharps, etc. There should be secure / restricted access to adjacent staff areas.

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

Provide CCTV with DVR at entrances and waiting areas, and notices advising, or displays indicating that CCTV is operating.

Provide an ambulance entrance with the same or higher level of security protection as the main public entrance.

Provided duress alarms in the form of fixed alarms for counter staff and mobile location finding alarms for staff who do not work in a fixed location e.g. clinicians, wards-persons, cleaners, security officers.

Note 1: A secure, quiet, low stimulus, sound attenuated area for the management of patients who may be behaviourally disturbed, noisy or at risk of absconding should be provided. As patients can remain in this area for a long period of time, a securely located TV monitor that can be controlled by staff should be considered.

Note 2: A gun safe located in a private room off the ambulance entry should be provided for police use. Provide for four weapons with one separately lockable compartment for each weapon. Consult with local area commander regarding specifications and requirements.

Refer to Emergency Dept Security, Section 5 in AS4485.2: Security for health care facilities (Stds Aust 1997c).

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.

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.

Persons experiencing high levels of tension may need greater interpersonal distance between themselves and others.

Reception areas should be spacious and quiet with comfortable seating. Seating should be either individual or bench type with the option of floor attachment - see following clause.

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.

In areas identified by risk assessment, furniture should be attractive and comfortable, but should be selected with regard to safety (injury from design features), and security (possible use as a weapon). Seating, whether bench, individual chair or combined unit, should be attached to the floor.

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 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.

All waiting rooms should be provided with CCTV with DVR and have clear anti-violence signage.

Unless a glass barrier is provided, Emergency Department 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 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 thrown objects or liquids, and may introduce manual handling risks as a result of the staff member constantly having to lean forward.

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

Use risk analysis to determine the most appropriate design strategies to control security risks.

Provide vertical partitions to the extent required, to allow for some privacy when people are discussing private matters with staff, and provide each counter 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. Provide appropriately placed openings or document transfer trays for communication or passage of documents.

The ends of the reception counter should be closed to prevent client entry into staff areas. Entry doors should be full height and fitted with security access. A one-way viewing panel or the provision of a video intercom with remote door unlocking from reception and/or the staff station will enhance security of these doors.

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.

Treatment, interview, meeting and consultation rooms that are likely to be used by clients should be fitted with two doors on different walls to allow easy escape by staff in the event of an incidence. The rooms should be designed so that the client is not positioned in a way that obstructs staff access to a door.

One door should lead in from the public area and the other from a corridor, staff or public area. Where possible, ensure that doors open outwards to assist staff to exit quickly.

Treatment and interview rooms that may be used by patients at risk of violent or aggressive behaviour should be subject to a risk assessment to determine the best system for duress alarms according to the clinical need. Fixed duress alarms may be out of reach when an incident occurs or interfered with by patients or others. Connection to a location finding mobile duress alarm system eliminates this risk. Provide glass viewing panels to doors, or to at least one door to a room, to allow observation by colleagues.

PHARMACY

As part of the risk management process for the Pharmacy Area, consider the following risk control strategies and implement as required:

- construct walls, floor and ceilings of the pharmacy out of solid material, or reinforce partitions or ceilings with security mesh
- provide as few windows as possible
- extend walls, where practicable, to the underside of the floor slab above to prevent any intrusion over the wall
- reinforce 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
- incorporate 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
- design a two door entry approach i.e. 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.

- provide the ability to secure open areas at the front of the pharmacy after hours e.g. by a locked door from the corridor or locked shutter door.
- fit doors to the pharmacy with quality single cylinder dead locks to comply with fire regulations; where practicable locks should be key code or card operated externally, and fitted with either a turn snib or handle internally to enable occupants to escape in emergencies.
- ensure doors are kept closed and locked to restrict entry
- install an intruder alarm system that complies with Australian Standards and incorporates a duress alarm/s to enable staff to activate the alarm in the event of an emergency.

Restrict access to the pharmacy to authorised staff only and control this by:

- fitting single cylinder key, code or card operated dead locks to perimeter doors
- fitting a restricted keying system 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
- fitting key card electronic locks on drugs cupboards containing dangerous or addictive drugs.

Refer to AS4485.2: Security for health care facilities - Section 12 Pharmacy and Pharmaceuticals Security (Stds Aust 1997c).

CAR PARKING

Where staff parking is provided under or within close range of the workplace, this area should be well lit and protected from the elements where possible. In high-risk areas monitor car parks using security personnel or cameras.

RISK CONTROL STRATEGIES

Implement the following security measures as identified by risk analysis, or as standard security measures where applicable:

- provide, where practicable, afternoon and night shift staff with designated, controlled parking spaces as close as possible to the facility with direct line of sight to the building, and 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 e.g. 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;
- provide CCTV or CCTV/DVR surveillance;
- display signs in car parks reinforcing theft awareness e.g. park smarter, lock it or lose it;
- display signs that advise that regular patrols are undertaken and CCTV monitoring is in place;
- landscape design should eliminate elements that provide concealment for intruders and provide maximum visibility, particularly near routes and entries;

- ensure single and multi-storey car parks have good lighting, emergency telephone or intercoms direct to security staff or switchboard. Refer to AS 1158: Lighting for roads and public spaces (Stds Aust 2010);
- ensure as few dark corners and support columns in the design as possible;
- allow flexibility to close some sections, entrances and exits during low traffic periods;
- provide approved locks on exits intended for emergency exit only;
- ensure frequent patrols by security staff;
- restrict parking of delivery vehicles restricted to designated spaces only;
- ensure a secure overnight car park with good lighting and regular security patrols is provided for facility vehicles. A fenced compound or lock-up garage is preferable; and
- provide security for bicycles and motorcycles e.g. 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.

Refer to AS4485.2: Security for health care facilities, Section 5 Car Park Security and Control (Stds Aust 1997c).

LOADING DOCKS

Goods delivery, loading and unloading areas and entries / exits should be well lit. Security provisions such ASCCTV and controlled access should prevent unauthorised entry to the facility through these areas.

06.19 Building Services

PERFORMANCE REQUIREMENTS

Ensure that security risk assessment for building services comply with:

- the legislation, policies, and guidelines of each jurisdiction or agency
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a)
- AS4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required - subject to the approval of each jurisdiction or agency:

- AS4485.2: Security for health care facilities - Procedures guide (Stds Aust 1997c)
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a). Note: Building services in general should comply with Part E or the engineering services policies and guidelines issued by individual jurisdictions as applicable.

SECURITY EQUIPMENT AND SYSTEMS

The provision of systems should consider the following:

- closed circuit television (CCTV);
- digital video recording (DVR);
- pan tilt zoom cameras programmed by the DVR to carry out surveillance rounds;
- head end PC for interface into security system and regularly backed up;
- files for software restore functions;
- easily upgradeable security hardware / software;

- serviceability of hardware - availability of replacement equipment and access to technicians;
- central monitoring with response protocols;
- adequately sized flat screen monitors;
- dedicated monitoring room or staffed location for monitoring purposes; and
- uninterrupted power supply (UPS) for security system.

SECURITY LIGHTING

As part of the facility security risk management process ensure that internal and external lighting is sufficient to eliminate, where reasonably practicable, or control security related risks and meet the relevant Australian Standards.

Security lighting should be appropriate for the intended purpose. Where CCTV cameras are installed, white light may be required to achieve correct colour rendering and improve ability to identify persons and activities, while sodium discharge (yellow) lamps may be used to reduce incidence of graffiti.

Provide security lighting (internal and external) to improve security in the vicinity of the light, and to assist CCTV functionality.

External security lighting should be vandal resistant and mounted to restrict tampering.

Design posts for security lights so that they do not provide a ladder or foothold to allow access to the light fitting.

Ensure security and safety lights are connected to the essential services supply.

Locate lights to gain the maximum benefit and coverage, while complying with the relevant requirements of AS4282: Control of the obtrusive effects of outdoor lighting (Stds Aust 1997b).

For external security and safety lighting provide lighting levels to AS4485.1 (Stds Aust, 1997c) to ensure safe access / egress from the workplace including footpaths / accessways and car parking areas.

Install lighting to eliminate dark spots, and ensure light levels that will deter criminal acts, allow facial recognition and assist in preventing slips, trips and falls. Where the facility does not have dedicated on-site parking, consultation regarding street lighting should occur with the relevant authority.

Ensure lighting used meets the relevant parts of AS1680 series (Stds Aust 1998b), AS1158 series (Stds Aust 2010), AS4485.1 (Stds Aust 1997c) and AS2890 (Stds Aust 2009c) where applicable.

Determine the needs of areas requiring special lighting treatment e.g. entrance foyers, emergency departments, staff entry and exit points, pharmacies and car parks and any area where CCTV is used.

ALARM SYSTEMS

As part of the facility security risk management process, health services should establish their requirements for alarm systems e.g. duress and intruder alarms to ensure that staff members, patients and health service assets are secure.This should include a formal commissioning process with documentation e.g. points lists, functional descriptions and operational manuals provided at handover.

Ensure that a regular review of all alarm systems occurs as part of the risk management process. This should include a formal and documented testing and maintenance regime.

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 e.g. fire escapes by thieves to remove assets;
- potential for break in via doors and/or windows to remove assets; and
- potential for break into and theft of vehicles.

Ensure alarm systems are connected to uninterrupted power supply (UPS) circuits/battery backup, with alarm system back up capability.

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 unit;
- youth health units;
- sexual assault units;
- cash handling and storage areas;
- isolated facilities / units;
- car parks and grounds;
- vehicles e.g. ambulances;
- alcohol and other drugs services;
- aged care wards / dementia units / brain injury units / rehabilitation units; and
- community services.

INTRUDER ALARM

Intruder alarm systems are highly recommended for parts of healthcare facilities that are closed after hours.

The provision of intruder alarm systems should be based on security risk assessments to AS/NZS ISO 31000 (Stds Aust 2009a) and 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 and paediatric units; and
- Clinical Records Unit and any remote archival areas.

Many different intruder alarm systems are available. The required intruder alarm systems have at least the following provisions, in terms of coverage and functionality:

- reed switches for doors and windows
- movement detectors to cover spaces that can be used for access.

If required intruder alarm should adequately indicate the location where security has been breached. Acceptable systems may indicate the location by:

- a local audible alarm subject to loudness having no adverse effect on patients, or increasing intruder aggression;
- a remote indicator panel with a readout;
- a security signal sent to a 24 hour monitoring base or Security Room, or to Staff Station computers;
- a general audible alarm and security pager signal indicating the location on pagers carried by nominated staff;
- another system with equal or better functionality; and
- one or more of the above in combination, especially where 24 hour security offices or staff stations are not available.

The integration of nurse call systems with security systems including the intruder alarm, duress alarm and video with the nurse call system, is recommended for both large and smaller facilities e.g. Multi Purpose Service (MPS) units.

Nurse call and pager systems should generate a different noise and signal for different events.

Ideally the alarms will transmit the location of the duress / intrusion to alphanumeric pagers / alarm transceivers carried by staff. In a small facility such as a MPS, this may be transmitted to all staff. In a larger facility, the signal would be transmitted to response staff and managers in charge of the facility / shift.

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

Both intruder alarm activated CCTV/ DVR and internet capability for central monitoring should be considered for inclusion as necessary. It should be noted that staff should never investigate an intruder alert alone.

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.

DURESS ALARM

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

- 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.

Systems should notify a 24 hr central processing unit and directly notify response staff (minimum of three recommended) with the location of the alarm, and locate the call source to within 5m (indoors) and 10m (outdoors).

Duress alarms may be integrated into a combined communications system, as previously noted. This is particularly valuable in smaller facilities where staffing levels are comparatively low and staff may occasionally work alone.

The effectiveness of the duress alarm system will depend on the adequacy of the installation, adequate training, policies, procedures, testing and maintenance programs and the capacity for response.

Conduct a security risk assessment to AS/NZS ISO 31000: Risk Management (Stds Aust 2009a) to determine the need for and type of duress alarm systems to be installed, including higher risk areas such as:

- all staff stations;
- all reception counters;
- consultation and treatment rooms where there is a risk of aggression from behaviourally disturbed patients;
- pharmacies, cash handling and other areas determined as being high risk;
- mental health inpatient units and community health centres;
- emergency departments / units;
- confused and disturbed elderly (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;
- car parks and grounds; and
- areas presenting a target for robbery e.g. pharmacy, cash handling, ATMs, etc.

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 hr 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 e.g. 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 e.g. corridors as mischievous tampering with alarms may occur.

Call button or pendant locations should be standardized for use by different staff members and visiting staff and should acknowledge possible changes in room layout.

Where applicable buttons should be placed out of sight to avoid aggressive behaviour caused when staff are seen to activate the alarm. For safe operation call buttons, wall and concealed, should be raised and not be flush with the plate or surrounding surface.

Note: AS/NZS 3811: Hard wired patient alarm systems (Stds Aust 1998a) provides for incorporation of a patient activated duress function.

MOBILE

Mobile duress alarms may be used where the staff member is mobile in the course of their work in areas such as inpatient units or emergency departments where there is a risk of being confronted by aggressive behaviour.

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

Ensure that mobile duress alarms for use within a facility and the immediate area comply with AS4607: Personal response systems (Stds Aust 1999c). This standard references other legal, regulating and insurance requirements.

The device should send a signal to a Remote Security Office or 24 hr Staff Station, and to pagers carried by at least three response staff. The device is automatically activated if the staff member collapses to the floor

(man down capability). The system should indicate the location of the staff member at the time of the signal activation.

Provide location finding mobile alarms to all staff who work in medium to high risk environments and who do not work in a fixed position e.g. nurses, medical officers.

For detailed information refer to the guidelines and policies within each jurisdiction or agency e.g. NSW Health: Protecting People and Property (NSW Health 2005c).

CLOSED CIRCUIT TELEVISION (CCTV)

PERFORMANCE REQUIREMENTS

Provide CCTV and DVR capability on the basis of security risk assessments to AS/NZS ISO 31000 (Stds Aust 2009a), and comply with the legislation and policies of each jurisdiction or agency.

Refer to AS/NZS 4806 Closed Circuit Television (CCTV) (Stds Aust 2008c) for information relating to the installation and use of systems for remote monitoring and security surveillance.

This standard references AS2201 (Stds Aust 2008a) and ISO standards covering control centres and other related legislation guidelines covering broadcasting, evidence, privacy and OHS.

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;
- any locked area where access is granted by a staff member without the ability to view the person requesting access;
- other areas identified by a risk assessment as requiring a duress alarm;
- corridors, courtyards and secure rooms in the Acute Mental Health Unit which cannot be adequately observed from a staff station; and
- other units where access control is desirable e.g. Intensive Care Unit, Paediatric Inpatient Unit and Maternity Inpatient Unit.

The video security system provided at entrance points should 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; and
- provide a remote signal to open the door.

The video security system provided in mental health units should have the following features:

- adequately cover hidden areas;
- camera protected and discreet;
- the direction of the camera should not be obvious; and
- required signage to indicate use of surveillance.

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

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.

Note: The provision of video security at the main entrance of a health facility is highly recommended.

System specifications should be based on a security risk assessment to AS/NZS Handbook 167 (Stds Aust 2006a) and should consider:

- colour;
- digital video recording capability (8 channel minimum) linked via LAN to interface with computers in identified areas;
- protection of individual rights with the use of CCTV / DVR used for monitoring / recording patients e.g. in acute mental health units; and
- lighting and clarity of picture.

Note 1: Consider also new communication technologies e.g. leaky wire/aerial, locally operated networks and interchange ability with other systems.

06.20 Property

PEFORMANCE REQUIREMENT

Ensure that security risk assessments comply with:

- the legislation, policies, and guidelines of each Jurisdiction or Agency;
- AS/NZS ISO 31000: Risk Management (Stds Aust 2009a); and
- AS 4485.1: Security for health care facilities - General requirements (Stds Aust 1997c).

The following are recommended for use as required - subject to the approval of each jurisdiction or agency:

- AS4485.2: Security for healthcare facilities - Procedures guide (Stds Aust 1997c); and
- AS/NZS Handbook 167: Security Risk Management (Stds Aust 2006a).

GENERAL

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

The following areas require specific attention.

CATERING

Ensure that external doors can be locked at all times, with only one exit point that can be visually monitored by the Catering Officer. Fire Exit doors should only be opened from the inside, and should have an audible alarm.

STORES

Locate, as far as practical, the Stores away from public areas, change and lunch room areas.

Restrict entry / exit to the Store to only one door that can be visually monitored from the Supply Officer’s office. Fire exit doors should only be opened from the inside and should have an alarm that activates when opened.

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

Consider providing CCTV surveillance.

PATIENTS' PROPERTY

Provide a means of securing individual wardrobe lockers or closets for clothing where these are provided.

STAFF PROPERTY

Provide staff with a lockable storage area e.g. locker or cupboard for safe keeping of their property.

Ensure car parks have good lighting and CCTV coverage to deter assault, theft and vandalism.

06.21 Medical Gases

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. Design should comply with relevant Australian Standards and the regulations and policy of the regulating authority e.g. bulk oxygen storage.

The requirements of the Dangerous Goods Act and Regulations may apply to the design of locked areas and the provision of signage. Ensure adequate ventilation and relevant OHS provisions as required.

Refer to AS 1940: The storage and handling of flammable and combustible liquids (Stds Aust 2004), and to AS 2030 (Stds Aust 2009b) Parts 1 - 5 covering the storage and transport of compressed gases.

06.22 Radioactive Substances

Ensure stores including waste stores are properly marked with approved warning signs and that regulations regarding their use are posted at access points.

Ensure access to all storage areas is restricted by use of doors, locks, barriers and signs. Signs should be secured against unauthorised removal and tampering.

Security equipment required to protect Irradiator rooms should be endorsed by Security Construction and Equipment Committee, ASIO (SCEC) e.g. Type 1 alarm system (Australian Security Intelligence Organisation 2006).

Comply with Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Code of Practice for Security of Radioactive Sources (ARPANSA 2007).

06.23 Mail and Other Deliveries

Health services should screen all incoming mail at a central processing point for the workplace. The point at which mail passes through this central point between arrival and delivery to the relevant officer will vary according to the size and function of the workplace.

Access to mail should be controlled to prevent theft, unauthorised access to, or removal of mail, confidential or sensitive documents, or valuables.

Consider the training / testing of mail room staff and conduct a security risk assessment to address possible threat from handling and opening articles of mail e.g. contaminant control in mechanical ventilation systems.

Note: Specific mail screening and security risk treatments will apply to Critical Infrastructure (CI) listed sites.

Refer also to AS4485.2: Security of healthcare facilities - Section 4 Protection of Information (Stds Aust 1997c).

06.24 References and Further Reading

GENERAL

This Section should be read in conjunction with current versions of the following documents or web references. The list is not inclusive and additional references are provided within the text.

Subject matter is restricted to physical design and infrastructure, with engineering services covered separately.

AUSTRALASIAN

ARPANSA 2007, Security of Radioactive Sources: Code of Practice, Australian Radiation Protection and Nuclear Safety Agency.

Attorney-General's Department 2006, Australian Government Protective Security Manual, Attorney-General's Department.

Australian Council on Healthcare Standards 2006, EQuIP 4, Australian Council on Health Care Standards.

Australian Government Protective Security Manual 2006, (modified 2009), Attorney-General's Department.

Australian Security Intelligence Organisation 2006, Security Information Catalogue, ASIO.

Emergency Management Australia 2003, Handbook: Critical Infrastructure Emergency Risk Management and Assurance, Commonwealth of Australia.

Mayhew, C 2000a, Preventing Armed Robbery: A Practical Handbook, Violence in the Workplace, Australian Institute of Criminology, Canberra.

Mayhew, C 2000b, Preventing Client-Initiated Violence: A Practical Handbook, vol. 30, Research and Public Policy Series, Australian Institute of Criminology, Canberra.

Mayhew, C 2003, Preventing Violence against Health Workers, paper presented to WorkSafe Victoria Seminar on 13 May 2003.

INDIVIDUAL JURISDICTIONS

ACT

ACT Health 2006, Preventing and Managing Aggression and Violence in ACT Health: Quick Reference Guide, ACT Health, Canberra.

NSW

CHAA UNSW 2007, Wall and Floor Finishes for Wet Areas, Sydney: Centre for Health Assets Australasia, University of New South Wales.

NSW Health 2003, Design Series 36: NSW Health Guidelines Safety and Security, NSW Health.

NSW Health 2005a, Policy Directive 2005_234: Effective Incident Response Framework for Prevention & Management in the Health Workplace, NSW Health.

NSW Health 2005b, Policy Directive 2005_315: Zero Tolerance Response to Violence in the NSW Health Workplace, NSW Health.

NSW Health 2005c, Policy Directive 2005_339: Protecting People & Property: NSW Health Policy / Guidelines for Security Risk Management in Health Facilities, NSW Health.

NSW Health 2009, Personnel / Workforce - Occupational Health and Safety - NSW Department of Health, NSW Health.

NSW Health & CHAA UNSW, 2009, TS-7: Floor Coverings in Healthcare Buildings V1.1, NSW Health.

QUEENSLAND

Queensland Health 2004, Safety and Security Policy, Queensland Health.

SA

South Australia Health 2009, Security, South Australia Health.

State Government of South Australia 2002, Dangerous Substances Regulations, Attorney-General's Department.

VICTORIA

DHS Victoria 2008, Design Guidelines for Hospitals and Day Procedure Centres (DGHDP), Part E - Building Services and Environmental Design, Department of Human Services, Victoria.

WESTERN AUSTRALIA

WA Health 2007a, Guidelines for Engineering Services, WA Department of Health.

WA Health 2007b, Western Australia Health Facility Guidelines for Infection Control, Government of Western Australia.

STANDARDS

For the following standards, check for the most recent version prior to use. Dates shown were current at date of preparation of this document.

Stds Aust 1995, AS 4400: Personal privacy protection in health care information systems, SAI Global.

Stds Aust 1997a, AS 2343: Bullet Resistant Panels and Elements, SAI Global.

Stds Aust 1997b, AS 4282: Control of the obtrusive effects of outdoor lighting, SAI Global.

Stds Aust 1997c, AS 4485: Security for health care facilities, SAI Global.

- AS4485.1: General requirements
- AS4485.2: Procedures guide

Stds Aust 1998a, AS/NZS 3811: Hard-wired patient alarm systems, SAI Global.

Stds Aust 1998b, AS 1680: Interior lighting, SAI Global.

- AS 1680.1-1990: Interior lighting
- AS 1680.2.0-1990: Recommendations for specific tasks and interiors
- AS 1680.2.1-2008: Circulation spaces and other general areas

Stds Aust 1999a, AS/NZS 2208:1996/Amdt1:1999: Safety glazing materials in buildings, SAI Global.

Stds Aust 1999b, AS 4421-1996/Amdt1-1999: Guards and Patrols, SAI Global.

Stds Aust 1999c, AS 4607: Personal response systems, SAI Global.

Stds Aust 2001, AS 4145.3: Mechanical locksets for windows in buildings, SAI Global.

Stds Aust 2002a, AS3016: Electrical installations - Electric security fences, SAI Global.

Stds Aust 2002b, AS 3745: Emergency control organization and procedures for buildings, structures and workplaces, SAI Global.

Stds Aust 2002c, AS ISO 15489.1: Records management, SAI Global.

Stds Aust 2003a, AS 1725: Chain-link fabric security fencing and gates, SAI Global.

Stds Aust 2003b, AS 3555.1: Building elements - Testing and rating for intruder resistance - Intruder-resistant panels, SAI Global.

Stds Aust 2003c, AS 5040/Amdt 1-2007: Installation of security screen doors and window grilles, SAI Global.

Stds Aust 2004, AS 1940/ Amdt 2-2006: The storage and handling of flammable and combustible liquids, SAI Global.

Stds Aust 2006a, AS Handbook 167: Security Risk Management, SAI Global.

Stds Aust 2006b, AS 1216: Class labels for dangerous goods, SAI Global.

Stds Aust 2006c, AS 1288/Amdt 1-2008: Glass in buildings - Selection and installation, SAI Global.

Stds Aust 2006d, AS/NZS ISO/IEC 27001: Information technology - Security techniques -Information security management systems - Requirements, SAI Global.

Stds Aust 2008a, AS 2201(Set): Intruder alarm systems, SAI Global.

Stds Aust 2008b, AS 4145.2/Amdt 1-2009: Locksets and hardware for doors and windows - Mechanical locksets for doors and windows in buildings, SAI Global.

Stds Aust 2008c, AS 4806 (Set): Closed Circuit Television (CCTV), SAI Global.

Stds Aust 2008d, AS 5039: Security screen doors and security window grilles, SAI Global.

Stds Aust 2009a, AS/NZS ISO 31000: Risk Management, SAI Global.

Stds Aust 2009b, AS 2030.1-5: Gas Cylinders, SAI Global.

Stds Aust 2009c, AS/NZS 2890 (Set): Parking facilities, SAI Global.

Stds Aust 2010, AS/NZS 1158 (Set): Lighting for roads and public spaces, SAI Global.