

Occupational Health & Safety Issues Associated with Management Bariatric (Severely Obese) Patients

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Summary The Guidelines recommend that each Health Service identifies health facilities within its boundaries for the management of bariatric (severely obese) patients, and that those health facilities identify, assess and control the OHS risks associated with bariatric patient management, and consolidate the results of the risk management process in a facility Bariatric Patient Management Plan. This Plan can then be activated when there is a planned or unplanned admission of a bariatric patient.

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**Guidelines for the Management
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1.0 About This Document

1.1	Managing Bariatric Patients	Guidelines for the Management of Occupational Health and Safety Issues Associated with the Management of Bariatric (Obese) Patients Copies may be obtained at http://internal.health.nsw.gov.au
1.2	Responsibility	Employee Relations Policy
1.3	Version	Version 1
1.4	Updates and Feedback	Feedback is welcome and should be addressed to the Manager, Employee Relations Policy, NSW Department of Health
1.5	Related NSW Health Policies	PD2005_224 Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Health Public Health Services PD2005_293 Design Series Health Facility Guideline Security and Safety 2003 PD2005_052 Health Facility Guidelines PD2005_409 NSW Health Workplace Health and Safety: Policy and Better Practice Guide PD2005_593 NSW Health Privacy Manual (Version 2) 2005 NSW Health Purchase and Supply Manual for Public Health Organisations 1994, as amended from time to time
1.6	Related Legislation	NSW Occupational Health and Safety Act 2000 NSW Occupational Health and Safety Regulation 2001 NSW Health Records and Information Privacy Act 2002 NSW Anti-Discrimination Act 1977
1.7	Additional References	<ul style="list-style-type: none"> • Taking Safety Seriously – A systematic approach to managing workplace risks in the NSW Public Sector – Policy and Guidelines 2nd edition (NSW Premiers Department 2002) • Queensland Health – Think SMART Patient Handling Package 2001 • Manual Handling Guide for Nurses, NSW Nurses’ Association and WorkCover NSW, September 1998 • Manual Handling Competencies for Nurses, NSW Nurses’ Association and WorkCover NSW, September 1998 • Implementing a Safer Patient Handling Program: An industry Guide for the Health and Community Services Sector (draft - WorkCover NSW) • Manual Handling Training Package for Nurses (draft – WorkCover NSW)

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1.7 Additional References (cont'd)

- Manual Handling Guide for Nurses (draft – WorkCover NSW)
- Risk Assessment Code of Practice 2001 (WorkCover NSW)
- Consultation Code of Practice 2001 (WorkCover NSW)
- Transferring People Safely: A Practical Guide to Managing Risk – Handling Patients, Residents and Clients in Health, Aged Care Rehabilitation and Disability Services, Worksafe Victoria 2002
- Queensland Health Employment Relations & Strategies WH&S Project Team – Large Patient Management Plan and Equipment Database October 2003

Websites

Department of Health

<http://internal.health.nsw.gov.au/pubs/violence/index.html>

New South Wales WorkCover Authority

<http://www.workcover.nsw.gov.au>

Victorian WorkCover Authority

<http://www.workcover.vic.gov.au>

National Occupational Health and Safety Commission

<http://www.noschc.gov.au>

Department of Veteran Affairs (USA) National Center for Patient Safety

<http://www.patientsafetycenter.com/TechResGuide/summary-02new.htm>

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2.0 Introduction

2.1 Purpose and Scope of Guideline

The purpose of this Guideline is to assist public health organisations and their relevant facilities to have a professional, appropriately sensitive and responsive plan in place to manage the special needs of bariatric patients and the staff who care for them. Implementation of this Guideline will assist public health organisations meet duty of care requirements to their patients, and occupational health and safety (OHS) risk management obligations to their staff.

A key objective of the Guideline is to ensure that those facilities who are likely to be called upon to provide services to bariatric patients have an effective and appropriate **Bariatric Patient Management Plan** in place that can be activated as necessary, when a bariatric patient presents. The Guideline should be read in conjunction with PD2005_224 *Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Health Public Health Services* and PD2005_409 *Workplace Health and Safety: Policy and Better Practice Guide*.

The Guideline:

- Defines a bariatric patient for the purposes of this document
- Provides advice to assist facilities implement risk controls to ensure professional management of bariatric patients and the safety of staff
- Includes detailed information to assist facilities develop and implement, as necessary, a Bariatric Patient Management Plan.

2.2 Bariatric Patient Management Plans

An appropriately developed Bariatric Patient Management Plan (Bariatric Plan) allows the facility to be in a state of preparedness to manage OHS and duty of care issues associated with both the planned and unplanned admission of bariatric patients. An effective Bariatric Plan will address access issues, accommodation, equipment requirements, communication needs, staffing levels and safe systems of work throughout the journey of the bariatric patient through the health system, from pre-admission activities, to any post discharge requirements eg community health care.

2.3 Duty of Care to the Patients and Staff

The delivery of safe, quality health care to bariatric patients is intrinsically linked to the ability of the facility to provide a safe working environment for staff. An effectively developed and implemented Bariatric Plan will facilitate provision of professional and dignified health care for the bariatric patient and protect the safety of those providing that care.

2.4 Definitions

Bariatric Patient

An internationally accepted term applied to patients whose weight far exceeds recommended guidelines, and where body size restricts their mobility, health, or access to available services. Their weight increases morbidity and mortality, and causes numerous care challenges¹. (Morbidity refers to conditions inducing disease, and mortality refers to the increased likelihood of death².)

¹ adapted from: Hahler B (2002), *Morbid Obesity: A Nursing Care Challenge*, Medsurg Nursing Vol 11/No2 pp85-90

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2.4 Definitions (contin)

Bariatric Patient Management Plan

A document that outlines the facility's response to the planned or unplanned admission of a bariatric patient.

Facilities

For the purposes of this guideline, facility refers to any structures where public health care is provided.

Incident

Any unplanned event resulting in, or having a potential for injury, ill health, damage or other loss.

Manual Handling

Any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any object.

OHS Management System

That part of the overall management system which includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the OHS policy, and so managing the risks associated with the business of the organisation.

Patient

For the purposes of this document, refers to any person receiving health care on public health organisation property, in the home or in the community.

Physical Environment

The physical location where work is actually carried out, including the immediate surroundings.

Place of Work

Premises, or any other place where persons perform work, including community based work.

Public Health Organisations

Refers to Area Health Services, statutory health corporations and affiliated health organisations.

Risk

The chance of something happening that will have an impact on objectives. Risk is measured in terms of a combination of the consequences of an event and their likelihood of occurring

Risk Assessment

The overall process of risk identification, risk analysis and risk evaluation ie estimating the magnitude of risk and deciding what actions to take.

Risk Control

The part of risk management involving implementing policies, standards, procedures and physical changes to eliminate or minimise risks.

Risk Management

The process of identifying and managing risks to avoid exposure or loss.

² Blakiston's Gould Medical Dictionary, Fourth Edition

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2.5 OHS Legislation

For more information see:
PD2005_409 Workplace Health
and Safety: Policy and Better
Practice Guide

The *NSW Occupational Health and Safety Act 2000* (OHS Act) and the *NSW Occupational Health and Safety Regulation 2001* (the OHS Regulation) are the main pieces of legislation setting out workers' rights to a safe and healthy working environment.

The OHS Act requires employers to:

- Ensure that the workplace, and any plant or substance provided for use in the workplace, is safe and without risks to health. Plant includes equipment, machinery and appliances
- Ensure that safe systems of work are practiced, and that the environment is safe and without risks
- Provide necessary information, instruction, training and supervision of employees for the safe performance of their work
- Consult with employees to enable them to contribute to decision making affecting their health, safety and welfare at work
- Ensure that non-employees (eg patients, volunteers, visitors and contractors) are not exposed to risks to their health and safety in the workplace.

The OHS Act also requires employees to:

- Take reasonable care for the health and safety of people who are at the employer's place of work and who may be affected by the employee's acts or omissions
- Cooperate with the employer in their efforts to comply with health and safety requirements.

The OHS Regulation, which supports the OHS Act, requires employers to identify foreseeable workplace hazards, assess the risk of harm arising from those hazards, eliminate the hazards and where this is not reasonably practicable, implement appropriate control measures.

There are various offences and penalties, both financial and non-monetary, for non-compliance with the Act and Regulation, even if no-one has been injured. Penalties extend to employers, managers and employees.

2.6 Health Records and Information Privacy Act 2002 (HRIP Act)

The *Health Records and Information Privacy Act 2002* regulates the collection, use, storage and disclosure of personal health information, including the obligation for public health organisations to ensure that any information that is used is relevant, accurate, up to date, complete and not misleading. For more information see PD2005_362 NSW Health Privacy Manual.

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2.7 Ant-Discrimination Act 1977

The *Anti-Discrimination Act* provides for the making, conciliation and/or determining of complaints about unlawful discrimination. Under the Act, it is unlawful to discriminate on the grounds of race, sexual preference, transgender status, marital status or disability. The Act also addresses unlawful discrimination in specific areas, including employment, education, accommodation and the provision of goods and services. There may be the potential for bariatric patients to be inadvertently discriminated against on the basis of disability.

Discrimination can be direct, such as turning the patient away, or indirect, such as not providing the same level of service that other patients would receive.

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3.0 The Bariatric Patient

3.1 Introduction

Obesity has been recognised as a growing issue in the Australian population. This is reflected in the rising number of overweight and obese patients requiring use of ambulance and health services.

Bariatric patients often delay presenting to hospitals until their medical condition is urgent due to perceived discrimination or resentment by hospital staff, or because of embarrassment about their size, impaired mobility and limited transportation options³.

Therefore, it is of the utmost importance that bariatric patients are afforded the highest level of dignity and respect that the circumstances allow, when they are using the public health system. Providing a respectful and responsive service requires effective planning, a holistic and non-judgemental approach and a continuing mindfulness by those delivering care, of the special needs of, and significant challenges faced by, bariatric patients.

3.2 Identifying Bariatric Patients

International literature suggests that a bariatric patient is a patient who is obese and whose:

- Weight exceeds, or appears to exceed, the identified safe working load/weight capacity of standard hospital equipment such as electric beds, mechanical lifters, operating tables, shower chairs and wheelchairs
- Size restricts the use of standard furniture such as bedside chairs
- Weight and girth exceeds, or appears to exceed, the identified capacity of standard road ambulance service equipment
- Size restricts mobility
- Weight exceeds, or appears to exceed, the maximum weight that the air ambulance can accept (see Chapter 6, section 6.5).

As the above illustrates, both weight and size need to be considered in relation to management. For example, a patient may meet the weight restrictions of the air ambulance, but because of their girth, they may not be able to be accommodated on standard air ambulance stretchers eg short, very stout patient.

Similarly, there may be OHS and other issues associated with, for example, very tall patients, who are not classed as obese but who cannot be accommodated on standard hospital equipment or furniture.

Therefore, a flexible approach is required when implementing this guideline, and it is recommended that it be considered relevant to any patient who may require special needs, either for themselves or for the staff that care for them, because of their size, shape or weight.

³ Xtra Wise A publication for the Bariatric Medicine Field, the Meaning of Obesity in America; Implications in Planning Care, S Gallagher

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4.0 Risk Management and the Facility Bariatric Patient Management Plan

4.1 Introduction

To meet the key objectives of providing good health care and equity of access to that care for patients, all public health organisations should have a system in place for the management of bariatric patients. While bariatric patients are a minority (though increasing) population within the public health system, the consequences of being ill prepared for their management can be significant for both patient and staff.

The initial financial outlay needed to adequately equip facilities to meet the particular needs of bariatric patients and the staff who provide their care can be significant. Therefore public health organisations should utilise a risk management approach to determining those facilities within its boundaries that are the most appropriate to be designated for bariatric patient management.

Factors for consideration in determining those facilities will include:

- Facility size and staffing level
- Information gleaned from comprehensive consultation with all stakeholders, including the ambulance service, patient advocates, local communities and local community service organisations
- Range of specialist services provided by the facility
- Accessibility and physical design/layout of the facility
- Any modifications or activities already undertaken by the facility to meet the needs of bariatric patients
- Geographic location and maximum distance needing to be travelled
- History of bariatric patient admissions and trends
- Characteristics of the community the facility serves.

Key designated facilities can then be the focus of comprehensive bariatric patient risk management activities, and the development of facility Bariatric Patient Management Plans.

4.2 Facility Bariatric Patient Management Plans

Simply put, a Bariatric Patient Management Plan (Bariatric Plan) is a document that outlines the facility's response to the planned or unplanned admission of a bariatric patient, and is an efficient vehicle for pulling together and documenting the outcomes of the facility risk management process.

Having an effective Bariatric Plan in place that can be activated when a patient presents will enable the facility to:

- Manage both routine and emergency admissions quickly and effectively
- Provide safe systems of work when delivering patient care
- Manage the health needs of the bariatric patient in a safe, dignified and professional manner
- Ensure minimal delay in treatment and discharge, and efficient patient flow⁴

⁴ Medical Management and Nursing of the Morbidly Obese Patient, Position Paper by Jenny Becker A/Chief Nursing Officer, NSW Health, July 2003.

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- Minimise the risk of manual handling injuries to staff
- Prevent equipment breakages.

The facility Bariatric Plan is not to be confused with individual bariatric patient management plans that must be developed to meet the specific risks, treatment and care needs of a particular patient. However, an appropriate facility Bariatric Plan will inform and support the development of individual plans.

4.3 The Risk Management Process

Development of a facility Bariatric Plan will generally flow from, and be informed by, the risk management process. This process is based on the four steps of identifying hazards, assessing the risks associated with those hazards, eliminating or controlling these risks, as far as practical, and monitoring and reviewing implemented risk management strategies for ongoing effectiveness. In this case, the risks under consideration are the OHS risks to staff associated with the management of bariatric patients.

Effective risk control strategies benefit both patient and staff. Well planned admissions; responsive, clearly understood management, communication and consultation protocols; ready availability of suitable equipment and accommodation; and staff adequately trained and informed on bariatric patient management issues, special needs and challenges keep both staff and patients safe, and support the professional delivery of appropriate health care.

The four risk management steps need to be implemented in a systematic manner, and consider all stages of the patient's journey through the public health system. The process must at all times be mindful of the special physical and psychological needs of the bariatric patient, including the importance of maintaining their dignity and respect, and the appropriate level of involvement in their care.

4.4 Consultation

Consultation with staff is a key requirement in the OHS legislation, and is a pivotal activity during all steps of the risk management process, across all stages of the patient's journey. Staff are most likely to know the risks associated with their work and may be in the best position to suggest effective controls.

Therefore, the views of staff and their representatives in relevant work areas, both clinical and non-clinical, should be sought, valued and considered when identifying and assessing risks, identifying and implementing control measures, and during the development of Bariatric Plans. OHS and risk management staff, OHS Committees, learning and development practitioners, patient liaison officers, patient advocates, patient safety officers, mental health and clinical quality personnel should also be included in any consultation. Consultation with the NSW Ambulance Service will be necessary when implementing a risk management approach, and when developing facility Bariatric Plans.

Consultation with other stakeholders will also be necessary. Community groups advocating on behalf of, or representing the needs of larger patients should be able to help ensure that their views are considered during the risk management process, and are reflected as far as practical, in any resulting facility Bariatric Plan.

For more information see WorkCover NSW publication 'Consultation Code of Practice 2001'.

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4.5 Identifying and Assessing Hazards

It is also important that cultural issues are considered during the risk management process. Therefore consultation should also include Aboriginal Liaison Officers, Managers of Aboriginal Health and Multicultural Health.

Useful information can also be gained by sensitively talking to current, or regular bariatric inpatients who may be able to provide relevant information.

The literature suggests that those suffering from obesity are more likely to be admitted with respiratory distress, heart conditions, renal failure and/or diabetes, and that many admissions will be unplanned.

The literature also suggests that significant risk management issues for staff and patient alike will include:

- Building design (access/egress, floor surfaces, furniture/fittings, accommodation etc)
- Patient transport (to, from and within facilities)
- Manual handling
- Availability of appropriate equipment
- Facility emergencies eg fire, emergency evacuation etc
- Follow up care in the community.

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For more information on OHS risk management see WorkCover NSW publication Risk 'Assessment Code of Practice 2001'.

A number of standard activities will assist facilities to identify and assess related hazards and risks.

These activities include:

- Identifying, as far as possible, the frequency or percentage of bariatric patients admitted or treated and the percentage of those admissions that were planned, unplanned or emergency admissions
- Identifying any peak periods during the year for bariatric patient treatment and/or admissions
- Identifying whether bariatric patient admission rates have increased, decreased or remained stable over the last three to five years
- Consulting with staff and other key stakeholders on key areas likely to be utilised by bariatric patients, and what they think are the main hazards/issues that need managing during the various stages of the bariatric patient's hospital stay
- Reviewing relevant hazard and incident reports eg slips, trips and falls, manual handling/body stressing, equipment failures/inadequacies, environmental concerns, transportation issues
- Reviewing any relevant patient complaints
- Observing tasks being performed when providing care to bariatric patients, in as wide a variety of settings as possible
- Inspecting all areas likely to be utilised by bariatric patients during their stay eg medical imaging, cardiology laboratories, peri-operative areas, CCU/ICU, ward areas, the morgue, to identify any building design, access/egress, treatment and accommodation issues
- Undertaking an equipment audit to determine the safe working load of relevant hospital equipment, furniture and fittings eg manual handling equipment; diagnostic equipment; equipment involved in the emergency and routine treatment, management, transport and accommodation of patients etc, and the capacity of these and other relevant equipment to be effectively used in the management of bariatric patients
- Identifying potential scenarios of bariatric patients presenting in a variety of circumstances eg fractures, critical condition, cardiac arrest
- Reviewing past experiences of managing bariatric patients within the facility
- Identifying issues associated with delivering care to bariatric patients in the community
- Talking to other facilities regarding their experiences managing bariatric patients.

The hazards and related issues identified through the above process will then need to be reviewed and prioritised, so that appropriate action to address the matters can commence. It is useful to develop a table or register of the matters raised, in order of priority, as a starting point for discussion on how the issues might be addressed.

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4.6 Eliminating or Controlling the Risk

Some simple questions around significant identified hazards that will assist facilities assess and prioritise action areas include:

- How often, and how many, people will be exposed to the hazard?
- How serious are the risks associated with the hazard?
- How likely is it that these risks will be realised?

The greater the numbers exposed, the greater the risks associated with the exposure. The greater the likelihood that the risks may be realised, the greater priority this hazard becomes for the facility.

Once the hazards have been prioritised for action, appropriate strategies to eliminate, or control the risks posed by these hazards need to be determined and implemented. As mentioned earlier, consultation with key staff and other stakeholders will be an integral part of this process.

Key risk controls are likely to include:

- Building modification to address design, furniture and fittings, accommodation, floor surfaces, space limitations or access/egress concerns
- Provision of appropriate transportation vehicles, equipment and protocols (internal and external)
- Provision of appropriate lifting equipment and protocols
- Modification of existing equipment/access to additional equipment
- Development of bariatric specific emergency management and evacuation plans
- Development of bariatric specific admission, discharge and community care protocols
- Provision of appropriate instruction, information and training for staff.

Appendix 1 provides an example of a simple facility risk management plan to address a number of risks in clinical areas.

4.7 Developing the Bariatric Plan

As identified earlier, the Bariatric Plan will usually flow from the risk management process. A multidisciplinary approach will be needed to develop the facility Bariatric Plan, and consultation with stakeholders will be crucial to the effectiveness of the Plan.

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Bariatric Plans as a minimum should address the following issues:

- General principles eg dignity and respect for patients, safe environment for patients and staff etc
- Ambulance communication and transportation protocols
- Admissions protocols
- Accommodation and personal care needs
- Internal transportation pathways and protocols
- Manual handling and patient lifting equipment needs
- Manual handling and patient lifting protocols
- Other equipment needs (diagnostic etc)
- Equipment storage and access
- Key contacts and their roles/responsibilities
- Emergency evacuation
- Discharge protocols
- When the patient dies
- Provision of follow up care in the community
- Other matters relevant to the particular facility
- Monitoring and regular review of the Plan.

Relevant facilities should convene a multi-disciplinary working party or steering committee of key stakeholders to oversight the development of the Plan so as to ensure that all the key issues are covered. This group may also identify related staff instruction, information and training needs, oversight piloting and roll out of the Plan, and be responsible for its ongoing monitoring and regular review.

As with the risk management process, consultation with those groups identified in section 4.4 will need to be ongoing during the development of the Plan.

In addition, consultation with the following groups will also be necessary, as appropriate:

- A broad range of specialties such as emergency, medical imaging, endocrine, dietetics, psychology, surgery, anaesthetics, intensive care, community health, geriatric medicine, physiotherapy, occupational therapists, risk management, purchasing and procurement, engineering, morgue etc
- Local diagnostic test providers (if the facility cannot currently test or accommodate a bariatric patient in, for example, the imaging department)
- Local funeral homes and morticians
- Community services providers.

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4.8 Overview of the Remaining Chapters

The remainder of this document provides information on the following:

- Building design issues
- Transporting bariatric patients
- Admission protocols
- Manual handling issues
- Equipment needs
- Emergency evacuation
- Discharge protocols and follow up care.

This information may be used to assist with the identification, assessment and control of risks to staff associated with bariatric patient management, and to develop the facility Bariatric Plan.

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5.0 Building Design Issues

5.1 Introduction

The design, layout, access/egress points, floor coverings, furniture and fittings of facilities may all potentially impact on the ability to effectively manage bariatric patients, and/or the way in which care is delivered.

Those conducting a risk assessment around building design issues will need to identify key areas (admissions area, emergency department, wards, diagnostic areas, accommodation etc) likely to be used by bariatric patients, and the pathways likely to be taken to/from these areas. Particular attention should be paid to access and egress points to these areas and the facility itself. Potential problems can then be identified and solutions canvassed.

5.2 Building Design Risk Assessment

A key aspect of this risk assessment is to physically inspect the relevant pathways and areas likely to be used. This inspection should be done by staff with a good understand of risk management principles and how they might relate to bariatric patient management. The inspection team should include clinical, manual handling and risk management/OHS personnel:

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The NSW Health Facility Guidelines are under an ongoing review, which includes consideration of the needs of bariatric patients in the design of new or refurbished facilities.

Things the team will need to look for will include:

- Space constraints within facility access/egress points (doorway widths), corridors and ramps, especially when manoeuvring a bariatric trolley or bed around a corner. Specified routes for areas commonly accessed by bariatric patients may need to be mapped out, particular corridors designated free of all other equipment eg storage trolleys etc and viewing mirrors installed to help manoeuvre beds/trolleys around corners.
- Space constraints in elevators/lifts. There may need to be specifically identified elevators eg goods elevator for movement of bariatric patients between floors.
- Space constraints in treatment areas. Those areas identified earlier as being more likely to be accessed by bariatric patients, particularly in emergencies eg ED, ICU/CCU, renal wards etc need to be looked at in terms of their ability to accommodate the patient, and provide the appropriate care.
- Space constraints in accommodation areas. Greater turning circles are required for equipment such as bariatric wheelchairs and commodes, and this is especially important in bedroom/ward areas, change cubicles, bathrooms and toilets. Doorways and their swing may impede proper access, and designated, appropriately modified bathroom/toilet areas may need to be established with enough room for patients to be able to manoeuvre themselves. There will need to be sufficient room to accommodate assisting staff or to deliver emergency care.
- Floor coverings and gradients. Some floor coverings create a drag when pushing heavy trolleys/wheelchairs eg some types of carpet, while gradients can also increase push/pull forces and the risk of injury to patients or staff. Access ways of least resistance to key areas should be identified and communicated.
- Weight capacity of specific fixtures eg toilets, sinks, hand rails that may be leaned on etc.

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6.0 Ambulance Transportation of Bariatric Patients

6.1 Introduction

Transporting a bariatric patient can pose significant challenges for both road and air ambulance. Road ambulances often respond to emergency calls from bariatric patients, unaware of their size and weight. This can delay the patient transfer from the home to the vehicle and ultimately the hospital. Ambulance officers may be required to call for additional assistance in lifting the patient into the ambulance or may be obliged to call for a multipurpose ambulance, based in Sydney, to manage patient transportation. These are limited in number and the distance they travel can delay response time.

If the hospital is not prepared for admission of the bariatric patient the ambulance is delayed further and can remain unavailable for other emergencies for significant periods of time.

6.2 Consultation and Communication Protocols

Facilities need to consult with the ambulance service to develop communication protocols and supporting procedures in relation to the transportation of bariatric patients. Effective planning in this area will facilitate the safe and timely management of the patient, and the safety of staff.

Issues for discussion will include:

- Determining the most appropriate facilities within a particular geographical area to manage the needs of bariatric patients, particularly in terms of service provision and availability of appropriately trained staff and equipment, rather than automatic transport to the closest facility. This is of significant relevance in rural area. Depending on the circumstances, the patient may need to be stabilised at the closest facility prior to transfer to a designated facility
- Reaching agreement on communication protocols regarding the ambulance service notifying facilities as far in advance as possible that they are transporting a bariatric patient and relevant information about that patient, to enable the facility to activate its Bariatric Plan and to ensure appropriate preparation of equipment and staff to adequately manage the patient. This will also allow for the release of ambulance crew to attend to other calls expeditiously
- Identifying equipment and related training needed to receive and transport patients from ambulance trolley/stretchers to bed and the role of ambulance staff in the internal transport of non-ambulant bariatric patients
- Determining a backup plan for the safe management of a bariatric patient if a hospital goes 'Code Red' and it is considered safe to transfer the patient to an alternative facility
- Protocols for arranging inter-hospital bariatric patient transport (road and air).

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6.3 Inter-facility Transfers

A range of issues will need to be considered if a bariatric patient needs to be transferred to another facility. In particular, it must be ensured that adequate information is provided to the ambulance service when the transport booking is made, particularly in relation to the patient's weight, size and shape as appropriate, degree of mobility and ability to assist those providing care. Similar information should be forwarded to the receiving facility, as well as some agreement on time of arrival of the patient, so that appropriate plans can be made/activated for the patient's admission and management.

Failure to provide such information can lead to significant delays in both transporting the patient, and in being able to discharge the patient on arrival at the facility.

When booking the ambulance, the facility should give as much notice as possible, and consider ambulance resources by recognising the need for flexibility about patient collection times. The patient should be ready for transfer at the agreed time, with appropriate patient care ie pressure care, bathing etc having been attended.

6.4 Multipurpose Ambulance

If in doubt about the ability of being able to manage a bariatric patient in a standard ambulance, the facility should seek advice from the local ambulance service, as it may be necessary to book the multipurpose ambulance.

The multipurpose ambulance is a large truck equipped with extra wide seating, chemical, biological and radiological suits and a Megalift (reinforced, extra wide stretcher with additional handles). They are in high demand for the transportation of bariatric patients within NSW, and are required to attend chemical, biological and radiological incidents. They may also respond to emergency calls on route.

These vehicles may also act as an intensive care retrieval service when the patient is, for example, fully ventilated and will not fit in an air ambulance aircraft due to width. Therefore facilities may need to negotiate with the ambulance service to ensure that trips are coordinated to maximise the use of the vehicle. Travelling time in an emergency can be crucial and bookings may be changed as priorities change.

Unless there is an urgent medical indication for transfer, they should be avoided at night or on weekends, when staff is at a minimum. However, if the multipurpose ambulance is delayed and arrives during night shift, night staff should be appropriately prepared to receive the patient eg suitable staff numbers, location/availability and use of lifting and transportation equipment etc.

The usual ambulance booking system should be used when booking the multipurpose ambulance.

6.5 Air Ambulance

Transporting bariatric patients via air ambulance raises a number of issues that will need to be considered. Strict aviation rules and regulations govern the weight limitations of patient loading mechanisms, restraining equipment, and the aircraft's weight capacity.

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In rare circumstances, the patient's body morphology may also affect whether the patient can be air transported. Due to the narrow aircraft stretcher a patient may meet the weight restrictions but be unable to fit within the stretcher due to their girth (ie they may be very rotund).

Because of these restrictions, a significant number of bariatric patients cannot be accommodated. Instances have occurred where the air ambulance has been called and on arrival the patient is 20 kilos or more above the weight advised by the facility. In such situations the aircraft is forced to return to base without the patient, and the multipurpose ambulance called, all leading to significant delays in the patient's transfer.

Therefore, the importance of providing as much information on the patient's weight and size to air ambulance as possible cannot be overemphasised. Where staff are unable to establish the patient's weight, a realistic estimate of the patient's weight should be made.

Determining whether additional assistance will be needed to transport the patient between facility and craft will also be necessary ie will additional ambulance and/or ground staff, and/or specialist equipment be required at either end.

The maximum weight that aircraft can currently accommodate are:

- Fixed wing/aeroplane 150 kilos
- Rotary/helicopter 135 kilos
- Royal Flying Doctor Service aeroplane 120 kilos

The usual ambulance booking system should be used for discussing the ability of the air ambulance to manage the patient, and for booking an air ambulance.

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7.0 Admission Protocols

7.1 Planning for Bariatric Patient Admissions

Like most patients, bariatric patients may present as planned, unplanned or emergency admissions, or as a result of an ambulance transfer from another facility. Because of their unique needs, and the needs of staff providing their care, facilities need to plan for the full range of presentations, and put appropriate admission protocols in place to ensure the timely admission of bariatric patients to hospital, especially in an emergency, and the safety of staff.

7.2 Pre- Elective Admissions Planning

The following points will need to be considered when developing pre-admission and admission protocols for the effective management of bariatric patients:

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- **Patient details and medical history** – ensure all relevant information is obtained from referring clinicians; that the patient's weight is a standard information item routinely collected by admissions departments and included on pre-admissions forms and that medical files include an up to date weight. It may be necessary to contact the referring medical practitioner to seek any further information necessary to facilitate admission
- **Patient communication protocols** – patients identified as being of a size or weight that may need special requirements should be contacted prior to admission to (sensitively) determine if they use bariatric equipment at home, their degree of mobility and the level of assistance that may be required during their hospital stay, and to be advised of any special admission arrangements
- **Internal communication protocols** – need to ensure that relevant personnel are notified of the pending admission; factors such as how long the patient will be in hospital, their physical health, medical condition/s, necessary medical tests, treatment to be received, procedures to be undertaken etc will determine what personnel need to be informed; may include NUM, manual handling coordinator, physiotherapist, occupational therapist, theatre, medical imaging and ICU/CCU staff, risk management staff etc so the facility can adequately prepare
- **Physical location of the admissions office** – needs to be accessible by the patient, or an alternate location may need to be identified; ensure that appropriate scales are available to weigh the patient on admission
- **Suitable accommodation** – ensure that appropriately sized bedroom and bathroom, including adequate access, are available, with enough room for staff to store and utilise lifting and other equipment, identify any necessary modifications to accommodate the patient (a four bed ward may need to be identified for bariatric use as necessary)
- **Equipment requirements** – determine equipment needs, safe working loads, availability and location (see Chapter 8)
- **Emergency evacuation equipment requirements** – when determining suitable accommodation requirements, consideration should be given to emergency evacuation needs, therefore, where appropriate and possible, accommodation on the ground floor and/or close to facility exists may better facilitate emergency evacuation of bariatric patients
- **Instruction, information and training requirements** – use of lifting equipment, manual handling etc
- **Furniture requirements** – bed, chairs, commode etc of suitable size and safe working load for the patient
- **Staff requirements** - trained staff numbers potentially necessary to assist with patient transportation and management
- **Patient access to and transportation within the facility** – what areas will they need to access and what areas will they need to pass through to get there, what modes of transport will they need.

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Predetermined staff eg manual handling co-ordinator, manual handling assessment team, occupational therapist, OHS manager, duty manager etc should be identified to advise and coordinate pre-admission activity in relation to bariatric patient management. These staff members may also provide advice on any additional risk management activities that may be necessary in relation to the needs of the individual patient eg risk assessment activities following admission.

7.3 When the Patient is Admitted

If the identified issues are adequately addressed and appropriate protocols communicated to all stakeholders, then accepting and admitting the patient should flow smoothly as it should largely be about activating relevant activities identified as part of the pre-admission planning process.

These will include:

- Admissions clerk or designated person contacting key identified staff (see above), and notifying the receiving ward
- Weighing the patient if possible
- Providing suitably sized identification bracelets or determining other forms of identification if they are not available
- Provision of identified equipment and storage areas
- Provision of appropriate staff
- Transporting and settling the patient in appropriate accommodation
- Performing a patient risk assessment so that an individually tailored patient management plan can be developed.

As special equipment and unique safe work procedures are required when managing bariatric patients, it is recommended that these be discussed in an open and respectful fashion with the patient and their family on admission. Care plans should be presented in such a way that the patient has the opportunity for input. This will minimise concerns and assist the patient to feel in control and comfortable during their stay in hospital.

This discussion also provides an opportunity for the hospital to explain the facility's policy in relation to the use of lifting devices. This should be explained in a way that maintains the patient's dignity, and that presents the benefit to the patient (less likely to sustain injuries from a fall) as well as staff (less likely to sustain manual handling injuries). The NSW Health brochure 'You and Your Health Service' may form the vehicle for such discussion.

7.4 Emergency Admission

As identified in Chapter 6, communications protocols should be in place between the facility and the ambulance service to ensure that as much notice as possible is given of the pending arrival, including notifying emergency department staff of the patient's approximate size, estimated weight and condition.

This allows the facility to activate its Bariatric Patient Management Plan in preparation for the arrival, particularly in ensuring that appropriate staff and equipment is available in the emergency department. Advance notice also allows for alternate plans to be activated if the hospital cannot handle the size of the patient or goes code red.

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7.5 Patient Alert Systems

Patient alert systems or 'file flagging' is not a new concept, and has been used for a variety of reasons including identifying patients with life threatening allergies, or unusual or difficult to manage medical conditions, so that prompt and effective management can be provided when the patient presents.

However, development and implementation of local file flagging policies and procedures will need to be done with due consideration of relevant legal requirements including anti-discrimination and privacy law, and maintaining the dignity of the patient. The focus should be on providing information that will allow for the efficient, effective and safe management of patients and the staff who provide their care.

From a practical perspective, any file flagging system needs to be supported by related management plans. If a file is flagged for any reason, the flag needs to be supported by an up to date, patient specific management plan that enables those managing the presenting patient to do so in a timely and effective manner.

For bariatric patients this may include identifying any special care and equipment requirements. If the management plan from the most recent previous admission is called up under the flag, it is important to ensure that the plan continues to be relevant, particularly if it has been some time since the last admission.

7.6 Bariatric Visitors

Another consideration for facilities is how to accommodate a bariatric visitor such as a parent wishing to stay overnight with their sick child. Provision of bed, chair and personal hygiene facilities will need to be addressed in terms of access, availability and safe working loads.

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8.0 Manual Handling During Hospitalisation

8.1 Introduction

Treatment and management of bariatric patients, wound management, pressure care, movement, mobilisation and patient transportation can pose significant manual handling challenges to staff. Cleaners may also need to move bariatric equipment when cleaning.

The OHS legislation requires that workplace manual handling risks must be identified, assessed and eliminated, or controlled as far as practicable. Under Clause 80 (3) of the OHS Regulation 2001 the employer must, as far as reasonably practicable, achieve effective risk control by means **other than team lifting**.

For more information on manual handling see NSW Health PD 2005_224 'Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Public Health Services and the 'OHS Regulation 2001'.

The focus should be on eliminating the need to manually lift, push and pull as far as practical, by better building, furniture, fixtures and equipment design; identifying and eliminating unnecessary transfers; providing appropriate, readily available, well maintained lifting and transportation equipment; training in how to safely use the equipment, and consistent reinforcement of their use. When manual handling is unavoidable, it must be planned in such a way as to minimise the chance of injury.

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8.2 Manual Handling Equipment

It is essential that staff have access to suitable equipment, especially manual handling equipment, and appropriate manual handling procedures. Ensuring that appropriate equipment is readily available will reduce injuries to staff and patients, allow for a more effective and responsive service, contribute to the patient's dignity and will reduce the number of staff required to manage the patient's care.

The public health organisation should consider how manual handling resources are to be allocated across facilities to manage bariatric patients. In rural areas, larger or base hospitals might be more appropriate as such facilities generally have access to a greater pool of staff and range of equipment, and more specialist services with which to manage such patients.

Appropriate equipment will include:

- An electric bed ready on patient arrival
- Hovermatt with suitable safe working load for ease of transfers
- Lifting equipment with a suitable SWL/capacity for the transfer to the bed
- Pressure care mattress, if appropriate.

In emergency situations where the patient presents via ambulance, it may be more appropriate for the patient to remain on the large ambulance stretcher while hospital treatment is commenced.

Communication protocols and supporting procedures need to be in place to ensure that:

- Appropriate equipment can be quickly provided to the emergency department in preparation to receive an ambulance patient
- Advance warning is given to areas within the hospital likely to receive the patient for further treatment eg the operating theatre so appropriate equipment can be sourced eg an operating table with a suitable safe working load etc.

8.3 Manual Handling Activities

A wide range of manual handling related patient care activities will need special consideration in relation to bariatric patients.

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Such activities will include:

- Patient transfers (bed-chair/chair-bed, bed-trolley/trolley-bed, to/from X-ray table, to/from operating table, to/from scan table etc)
- Transporting the patient throughout the facility
- Transporting the patient from bed to bathroom/ensuite
- Moving the patient from the floor after a fall
- Emergency evacuation of bariatric patients
- Repositioning in a wider bariatric bed (stretching/reaching as well as load risks)
- Managing heavy limbs during wound or pressure care
- Taking blood pressure readings or during IV cannulation (a limb may weigh up to 16kgs)
- Moving the patient forward during chest observations (may be unable to assist)
- Holding back adipose tissue eg stomach apron during wound care or when washing the patient
- Log rolling the patient (sharing loads unevenly due to the patient's shape)
- Commencing and ongoing mobilisation.

In addition, a variety of factors will impact on patient ability to mobilise themselves, or to assist with their own care and mobilisation.

Factors impacting on the ability of the patient to assist will include:⁵

- Age, physical condition (if the patient has been housebound for a considerable period of time muscle atrophy may have occurred) and low exercise tolerance
- Tolerance or intolerance to the movement of certain body parts and the ability to breathe in different positions and the ability to stand upright
- Effects of disease, injury, medication or transfusion
- After-effects of treatment (low haemoglobin following major surgery, elevated pain levels)
- Medical condition resulting in unpredictable behaviour eg hypoxia, substance use, cognitive impairment, brain injury, mental illness
- The patient's physical and mental attributes affecting willingness and/or capacity to comply with a care plan
- Psychological wellbeing, including fear and anxiety.

8.4 Patient Manual Handling Plan

Each patient is unique in terms of size, mobility, and medical conditions. A manual handling plan should be developed for each bariatric patient that takes all these issues into consideration. The plan should be based on risk assessments associated with the various activities referred to above, and be reviewed regularly, and modified as appropriate, particularly when the patient's health status changes, and, or there is an incident or injury associated with any of the activities governed by the plan.

⁵ Red Dot – Patient Mobility System, Mid North Coast AHS

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The plan should be developed in consultation with the patient, staff providing services to the patient including clinical and hospitality staff, wards persons, risk managers/manual handling coordinators and emergency coordinators (evacuation). It should also address patient transportation throughout the facility.

A patient management flowchart, checklist and patient risk assessment form should form part of the plan. Manning Base Hospital's Red Dot Mobility System (available from Manual Handling Coordinator, Manning Base Hospital, Hunter/New England Area Health Service) is an example of an effective way of developing and maintaining effective patient manual handling care plans.

To fully engage the patient in the development and implementation of the plan, they may be invited to sign the plan as an indication that they understand and agree with the plan, and the goals it aims to achieve.

The plan should be discussed at each shift handover and staff advised to communicate any problems encountered in implementing the plan, or in relation to the patient's willingness or ability to comply with the plan.

Records of consultation and risk assessments undertaken when developing the Plan should be maintained with the patient's medical records as a ready resource should the patient be admitted to the facility again (see Section 7.5 Patient Alert Systems).

8.5 Higher Risk Manual Handling Tasks

In order to aid the development of both facility Bariatric Plans and individual Manual Handling Care Plans, facilities should identify high-risk manual handling tasks associated with bariatric patients and develop safe manual handling procedures in consultation with a range of staff from the various clinical specialties, including Community Health. Once generic procedures are in place, they can be both readily activated and modified as necessary to meet individual needs.

When planning the best approach to any activity involving a bariatric patient, some key questions should always be asked:

- What is the patient's weight, size and shape?
- What is the patient's physical, emotional and psychological ability to assist with the activity?
- What equipment is necessary/available to assist the patient and/or staff with the activity (hovermatt, lifter, large capacity bed and/or wheelchair, electric bed mover etc)?
- Are the safe working loads of furniture and equipment to be used adequate to the particular task?
- How many staff will be needed?
- How much time should be set aside for the activity?
- How much room is necessary to conduct the activity, taking into consideration necessary equipment and staff numbers?
- Is the proposed approach to the activity appropriate to the particular circumstances and individual patient ie a particular planned approach that requires some assistance from the patient, would not be appropriate for someone with very restricted ability to contribute to the activity.

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It is extremely important for both the wellbeing of patients and staff that activity times are not underestimated, to avoid rushing the activity and the increased risk of injuries this may present. Similarly, adequate staff numbers need to be allocated to the particular task to ensure it can be done safely and effectively. In particular, there must be sufficient staff to ensure that the patient's body can be stabilised and maintained in the necessary position for the required length of time eg when delivering pressure care, attending dressings etc.

8.5.1 Bariatric Patient Transfers

Depending on the specific activity, additional factors will also need to be considered. Because patient transfers can be high risk activities, in developing generic procedures and individual plans a number of additional factors should be considered.

Such factors will include:

- Is the transfer, or this step in the transfer process, necessary?
- What distance has to be covered?
- If the procedure stalls, or the patient falls during a mobilisation activity, will any doorways/access be blocked?
- If the patient does fall in mobilisation, is there sufficient room to utilise any necessary lifting equipment, and/or provide any emergency care to the patient if necessary?

When implementing any procedure, as much related information as possible should be communicated to the patient to allay their fears and gain maximum assistance. If the patient is to be mobilised, clear, simple, step by step instructions should be given in how to reach the upright position, and move forward.

Care must always be taken to ensure that the patient is adequately supported during the lowering of a bariatric bed's foot bracket, as the patient may become unstable.

8.5.2 Repositioning the Bariatric Patient in Bed

Other issues to consider when planning patient repositioning in bed will include:

- Can the patient bend at the knees?
- Can the patient roll?
- Is the bed large enough to safely roll the patient?

Consideration of these issues will inform the action to be taken. For example, if the patient's knees cannot bend due to excessive tissue they may not be able to assist with their feet in a slide sheet repositioning in bed. Providing bed rope ladders, bed rails and monkey bars with the appropriate safe working load may be of more assistance.

When rolling bariatric patients in bariatric beds, staff should be aware that patient weight can give added momentum, and appropriate staff numbers should be on both sides of the bed. It is particularly important that the abdominal apron is not allowed to roll over the edge of the bed as it can pull the patient off the bed.

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While bariatric beds should be available for bariatric patients, staff should be aware that such beds, because of their width, may involve more stretching and reaching by staff than when providing care in a standard bed.

8.5.3 Personal Care

When planning and delivering personal care to bariatric patients, the following questions will need consideration:

- Is the safe working load of the toilet/commode appropriate to the circumstances?
- What is the best way to stabilise the patient's body mass?
- Is it safer for patient and staff to sponge the patient in bed if they are highly dependent and/or there is limited space in the bathing area and/or there is limited access to safe lifting equipment?

Staff should take particular care to ensure that:

- The bed is lowered and raised as appropriate to minimise bending, stretching and reaching
- Manual handling activities associated with patient care focus on using their own body weight and pushing actions, rather than pulling
- They are positioned so as not to place unnecessary strain on their body
- Extreme forward bending is avoided
- Forces and exertions are avoided, especially to the shoulder and wrist
- Bariatric patient activities are shared across the shifts ie avoid the bulk of care activities falling to a single shift.

8.5.4 Transferring Bariatric Patients Between Bed and Operating Table

When planning the management of bariatric patients undergoing surgery, in addition to the standard considerations referred to earlier, the following needs consideration:

- Does the patient's weight exceed the safe working load of a standard operating table?
- Is the table long/wide enough to safely accommodate the patient and the procedure?
- Is there a large capacity bed that can transport the patient to theatre, then be used as the recovery bed
- Are Hovermatts or other appropriate equipment with adequate safe working loads available for patient transfers?

Where feasible, the facility should consider hiring an electrically height and length adjustable operating table with an increased safe working load (eg 300kg), if the patient's weight is greater than the standard operating table.

8.5.5 Moving Bariatric Patients from the Floor after a Fall

In the event that, despite all planning and risk management activities, a bariatric patient falls to the floor, the facility must have a prompt and appropriate response in place to manage the situation. This response should be documented, and clearly outline the procedures to be followed, including who is responsible for what. Necessary staff numbers will need to be trained in the response to ensure that appropriate and timely care is provided to the patient.

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The facility response should include procedures to ensure that:

- The patient is assessed to determine any necessary medical response
- The method of raising the patient is consistent with their medical condition
- The procedure is explained to the patient prior to commencement
- Appropriate lifting equipment is provided (ensure safe working load)
- There is adequate room for the proposed lifting procedure
- Adequate number of appropriately trained staff are available for any necessary repositioning of the patient on the floor, and to position and operate the lifting equipment and steady the patient
- The patient remains stable throughout the procedure, and is protected from any further injury during the lifting procedure
- The patient is constantly monitored and reassured throughout the procedure to ensure that they remain as calm as possible.

8.6 Information, Instruction and Training

A range of information, instruction and training issues may arise from the bariatric risk management process, and facility Bariatric Plans, particularly in relation to patient handling.

Such issues will include ensuring that relevant staff know and understand
Their roles in relation to facility Bariatric Plans

How to access and safely operate relevant equipment including lifters, weighing devices and specialised bariatric equipment

Limitations of such equipment

How to safely manage manual handling activities ie wound care, limb movement etc

Potential physical aspects of management such as mobility and balance issues

Psychological aspects such as embarrassment and anxiety

How to maintain patient dignity and respect when delivering care.

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9.0 Equipment Needs

9.1 Safe Working Loads and Dimensions

To maintain the safety of bariatric patients and staff delivering their care, and to avoid equipment breakage, the safe working load/limit (SWL) of equipment, furniture, manual handling aids and lifting devices should be known. The SWL is specified by the supplier or manufacturer and denotes the maximum safe load bearing capacity of the equipment. Usually the equipment will have the SWL marked on it when purchased, though this may not be the case with older equipment.

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The girth of the patient should also be considered when allocating furniture and equipment such as trolleys, shower chairs, wheelchairs and beds to bariatric patients. Therefore, knowing the dimensions of equipment may be equally necessary eg to determine whether imaging machines can accommodate a particular patient.

9.2 Equipment Audit and Register

Facilities managing bariatric patients should conduct an audit of all relevant equipment to identify its SWL and dimensions. Such equipment will include furniture, mobility aids (pick-up frames, wheelie walkers etc), manual handling aids, beds, commodes and hoists, as well as medical and diagnostic equipment such as operating tables and X-ray tables, likely to be used by bariatric patients. SWLs should be clearly marked on the equipment, along with any other information that is relevant to its use.

Furniture and equipment identified for use by bariatric patients should be entered in a register, along with their SWL, dimensions, location and any associated special instructions. The register should also identify whoever is responsible for maintaining the register, and their contact details.

The register will form a crucial part of any facility Bariatric Patient Management Plan, and needs to be readily accessible to staff, including those involved in the development and activation of the Plan (see XXX for further information on the Plan). The register can be paper based or placed on computer systems for ease and promptness of access.

9.3 Additional Equipment Needs

Based on the audit findings, the facility can identify any need for additional equipment with an increased SWL or dimensions. A range of bariatric equipment is available both within Australia and overseas.

For example, dynamic beds are available that are specifically designed to manage pressure care and avoid manual handling injuries. Such beds alleviate the need for additional staff to manage pressure care, reduce injury risks and can reduce the patient's stay in hospital.

Those facilities that have a high incidence, or high likelihood of, bariatric patient admissions should build up a 'kit' of appropriately located bariatric equipment.

Examples of 'bariatric kit' equipment include:

- Bed with increased safe working load plus pressure reduction mattress
- Lifter/hoist with increased weight capacity eg 300 kilos (check the capacity of accompanying slings)

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- Rollator and pick up frames
- Bed ladder
- Hovermatt with increased capacity
- Bariatric scales – may be attached to a large capacity hoist or bed
- Extra large mobile commode that can be converted to a shower chair, wheelchair or bedside chair
- Bed extensions if applicable
- Walking aids
- Turning frame
- Forearm support frame
- Greater capacity furniture and equipment eg lounge chair, hip chair
- Heavy duty monkey bar.

Additional clinical equipment may also be necessary.

A sample list of equipment can be found on the National Centre for Patient Safety, Department of Veteran Affairs (USA) website:

<http://www.patientsafetycenter.com/TechResGuide/summary-02new.htm>

9.4 Register of Bariatric Equipment Suppliers

Relevant facilities should identify and liaise with local suppliers of bariatric equipment to determine the range and numbers of available equipment, and other services they may provide eg maintenance, hiring arrangements, out of hours urgent delivery etc. The facility can then enter into appropriate arrangements with the supplier/s, and develop a register of bariatric equipment suppliers/hirers, and include in the register procedures for accessing the equipment.

This register can be combined with the facility equipment register, particularly where hiring may be an appropriate option for equipment that is necessary for bariatric patients, though not necessary at other times.

9.5 Purchasing Bariatric Equipment

When planning and purchasing any facility equipment, the potential for the admission of a bariatric patient should be kept in mind. For example, when existing equipment needs to be replaced, wherever possible consideration should be given to whether the replacement equipment needs to have a capacity to manage larger patients and a greater SWL.

This allows for the gradual build up of equipment for bariatric patient management, within existing budgets. However, depending on the frequency and likelihood of bariatric patient admission, if the facility is designated to receive such patients, some up front purchasing of key items may be necessary eg transportation and lifting equipment.

While purchasing and/or hiring bariatric equipment is costly, the expense is far outweighed by the risk of patient and staff injury and associated social, workers compensation, public liability and litigation costs to the public health system.

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Having appropriate equipment readily available enables the facility to function more efficiently, with less staff being required to manage the unique needs of the bariatric patient. The patient will also benefit from the use of specialist equipment, as it will assist in facilitating their early recovery and discharge. The shortened stay in a facility will also offset the cost of the equipment.

Staff and other stakeholders must be consulted when determining what equipment to purchase, and whenever possible, equipment should be trialled by staff prior to purchase. This enables a risk assessment to be done on the equipment under the conditions in which it will actually be used.

Things to consider regarding the particular item will include:

- Is it fit for the desired purpose?
- Does it have an adequate SWL?
- Can it be safely used in the desired physical locations?
- Does it pose any risks to staff or patients when being used eg manual handling, electrical, pinch, crush, shear or entrapment risk?
- Do safe operating procedures need to be developed?
- Is there adequate access/egress space for the equipment?
- Can it be readily transported and stored?
- Can it be readily cleaned/disinfected?
- Is it easy to operate and maintain?
- Is it ergonomically sound?

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9.6 Equipment Loan Pools

The establishment of bariatric equipment loan pools at major and/or base hospitals may be one option to manage costs, particularly for those facilities that might only require such equipment infrequently, or as an interim measure until the appropriate equipment is acquired.

Loan pools may be particularly useful in rural areas where it is difficult to hire/rent equipment due to shortage of suppliers and distances. While there would be some delay in getting the equipment to the particular facility, good planning may be able to minimise delays. Pools can also be advantageous when more than one bariatric patient presents at the one time.

Factors to consider when developing loan pool procedures include:

- Identifying a co-ordinator of the loan pool eg existing equipment manager
- Identifying where the equipment will be stored when not in use
- Maintaining an up to date register of the equipment, record of users, maintenance records etc
- Developing a risk assessment (patient weight, mobility, condition etc) and bariatric equipment loan form with anticipated return date, to ensure that the equipment is relevant to the situation, and to assist when prioritisation of requests is necessary
- Developing out of office hours procedures for the risk assessment and accessing the equipment
- Planning protocols for acceptable equipment transportation methods between facilities eg hospital vehicle, maintenance truck, local transportation company, linen service truck etc, and who will incur the costs
- Identifying staff training needs
- Developing maintenance protocols, including frequency, who is responsible, who pays, who assesses operation of the equipment on arrival at the facility and on return to the pool
- Determining agreement on who pays for repair/replacement of damaged parts etc.

9.7 Equipment Storage, Infection Control and Maintenance

Equipment should be stored in readily accessible areas, as close as possible to areas of regular need, and relevant staff, including agency staff, made aware of the locations. All equipment must be cleaned as per the requirements of PD2005_247 Infection Control Policy.

Equipment fatigue, age and functionality will need to be monitored. Preventive maintenance should be regularly undertaken to ensure all equipment remains functional and safe for both patients and staff to use. This is particularly important in relation to equipment with batteries, wheels, brakes, hydraulics, slings, and other weight bearing equipment.

Battery chargers should be in accessible areas and a protocol in place to ensure charged batteries for hoists are always available. Batteries should be serially numbered so that their usage can be tracked and they can be easily identified at the end of their service life.

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9.8 When Several Bariatric Patients Present

The facility should have a contingency plan for the situation where multiple bariatric patients present at a similar time. For example, the facility may have equipment based on the number of bariatric patients that typically or regularly present, and hire additional equipment as needed, or tap into a loan pool.

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10.0 Emergency Evacuation of Bariatric Patients

10.1 Introduction

If an emergency evacuation is required eg bomb threat or fire, the evacuation of bariatric patients may pose particular challenges. The facility's evacuation plan should be reviewed in consultation with relevant staff, particularly fire safety officers, to ensure that it incorporates appropriate protocols to address these challenges.

10.2 Emergency Evacuation Planning

Issues to consider will include:

- As far as possible, locating designated bariatric accommodation on the ground floor and close to appropriate exits
- Ensuring that appropriate evacuation routes have been identified and tested eg no obstacles, there is adequate space in corridors and access and egress points to accommodate the size of the patient, transportation equipment and staff, floor surfaces minimise drag, are level etc (see Chapter 5). Such an exercise may advise as to where bariatric patients are routinely accommodated on admission to the facility, particularly if it is unable to be on the ground floor
- Ensuring that a mechanism is in place to keep emergency evacuation pathways free of obstacles
- Transporting the patient in the bed, if necessary, to move them out of immediate danger. Staff will be responding to the demands placed on them in an evacuation, consequently less staff will be available to assist with transfers to, for example, a bariatric wheelchair. A motorised transportation assistance device (eg Gzunda) may be necessary in emergency evacuations to move the bed
- Knowing the safe working load of evacuation equipment, and have appropriate protocols in place where there may be patients that exceed this limit
- Providing relevant staff with ongoing training in the safe emergency evacuation of bariatric patients

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11.0 Hospital Discharge Protocols

11.1 Discharge Planning

Discharge planning for bariatric patients should form part of any facility Bariatric Plan. A range of issues associated with discharge should be considered up front, as part of the overall management of the patient.

Depending on the individual circumstances, the following may need consideration:

- Transportation home - if the multipurpose ambulance is necessary, as much notice as possible should be given when making the booking (see Chapter 6)
- Early notification and liaison with community health where follow up care is needed, to ensure they have as much information as possible regarding the patient so that appropriate arrangements can be made (see Chapter 12)
- Assessment of the home environment by an occupational therapist so any modifications and equipment needs can be identified and arranged (modifications may take some time)
- Early collaboration with other relevant community services, so that a coordinated approach is taken to follow up care and support is taken.

The patient should be weighed, and weight documented, prior to discharge.

11.2 When the Patient Dies

Facility Bariatric Patient Management Plans will need to address issues associated with the death of a patient.

The Plan will need to consider the following issues:

- Washing the deceased – ensure adequate staff and equipment to do the task safely
- How the body will be transported to the morgue, and most appropriate route – need for lifting equipment for transfer to the mortuary trolley, adequate staff to assist, may need a modified mortuary trolley to accommodate the body (ensure it has an appropriate SWL), and mechanical assistance to transport the trolley (Gzunda)
- Management of the body in the morgue, including storage, adequate staff and equipment to do so safely
- Autopsy arrangements – if the patient is to be autopsied, manual handling and equipment issues will need to be considered (body will be higher on the table), and the most appropriate methods for conducting the autopsy and reconstituting the body identified
- Provision of appropriately sized body bags, with handles and markings to indicate the top of the bag (body bag should be marked with the deceased patient's weight)
- Protocols with local funeral directors – how will the patient be transferred to funeral service vehicles, are they big enough, is their storage facility able to accommodate the body.

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12.0 Management of Bariatric Patients in a Community Setting

12.1 Planning for Community Care of Bariatric Patients

The care of bariatric clients in their home can present a significant risk to the safety of staff, particularly in relation to manual handling, so it is crucial that as much information about the patient as possible is provided to those arranging and/or providing the care. Of particular importance will be the patient's weight, degree of mobility and psychological state. The patient's home should also be inspected, so that risk identification and assessment activities can be undertaken, and arrangements made to ensure the safety of patient and staff during the delivery of care.

As far as possible, the activities identified below should be undertaken in collaboration with other service providers and community groups, and occur prior to patient discharge, to reduce delays in provision of ongoing care. This is particularly important in relation to equipment, as there may be delays in getting all the equipment needed to provide adequate and safe care to the patient.

12.2 Ensuring Client and Staff Safety

In order to adequately plan the care, the following activities will need to be undertaken:

- Review referral papers and any hospital risk assessment if the patient has been recently discharged
- Collect any other relevant patient information
- Arrange inspection of accommodation, explaining the purpose of the exercise to client and relatives as necessary, including reference to NSW Health manual handling policies
- Confirm client's dependency level, ability to assist, ability to mobilise etc
- Conduct a rigorous inspection, preferably utilising manual handling and occupational therapy staff, paying particular attention to areas used by staff eg bathroom, toilet, bedroom etc
- Identify whether the client already has aids and specialist equipment that will assist in their care
- Consider other equipment needs, access and egress issues for staff and equipment, storage space for equipment, adequate space to provide care, clutter/obstacles within the home, lighting etc – seek expert manual handling advice if necessary
- Negotiate changes in the home environment with the patient prior to commencing care eg the removal of some pieces of furniture from the room, additional lighting, mobility aids etc
- Determine means of acquiring any additional necessary equipment (see Chapter 9). Government provision of equipment through, for example, the PAPD system or Community Options may also be an option
- Ensure staff are trained and competent in using the equipment.

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13.0 Monitoring, Review and Continuous Improvement of the Plan

13.1 Cycle of Continuous Improvement

As part of the risk management cycle of continuous improvement, the Bariatric Plan should be monitored for ongoing effectiveness, and regularly reviewed to ensure that it is successful in achieving a safe working environment for both patient and staff. There should be formal allocation of responsibility for ongoing oversight of the Plan, and as suggested elsewhere in this document, a multi-disciplinary steering group may be appropriate.

Key monitoring activities will include:

- Ensuring equipment registers are up to date and accurate
- Reviewing local protocols and procedures for continued relevance and effectiveness, including communication protocols with the ambulance service
- Reviewing investigation findings for incidents and near misses to determine whether any Plan modifications are required
- Updating the Plan to reflect provision of additional bariatric equipment and/or furniture, or changes to the working environment, including refurbishments
- Refining the Plan as the facility becomes more experienced in managing bariatric patients
- Identifying and regularly reviewing performance indicators
- Ensuring that staff maintain competence in the safe management of bariatric patients
- Monitoring the number of bariatric patients admitted, and their weights, to ensure that the Plan remains relevant
- Talking to those involved in implementing the various aspects of the Plan.

Useful information can also be gleaned by interviewing staff who manage bariatric patients, sensitively seeking feedback from patients themselves, and encouraging debriefs after each bariatric patient is discharged. Consider if anything went wrong, and how the Plan could be modified and improved for future patient admissions.

13.2 Performance Indicators

Performance indicators should be identified when developing the initial facility Bariatric Patient Management Plan to assist in the evaluation process. The performance indicators may change with the ongoing improvement of the Plan.

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Examples of performance indicators include:

- Time lag between ambulance arrival in emergency and transfer of patient from the ambulance to an appropriate bed
- Time between notification of a bariatric patient arrival and the provision of appropriate equipment
- Number of incidents or manual handling injuries across the Area Health Service compared to the number of admissions of bariatric patients over a specific period of time
- Interviews with staff managing the clinical care of bariatric patients, to obtain qualitative information.

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APPENDIX 1: Examples of risks in various areas of a facility with methods of eliminating the risk or suggested controls.

Ward/Area	Risk	Eliminate or Control the Risk
Medical Imaging	<ul style="list-style-type: none"> Weight and size limitations on X-ray beds and MRI tunnels. Difficulty transferring the patient onto the diagnostic machine. 	<ul style="list-style-type: none"> Use of portable X-ray. Use a bariatric bed that is x-ray compatible. Refer to private provider for diagnostic test on equipment with appropriate safe working load. Use inflatable transfer mats (Hovermatts). Coordinate transfers between wards and Medical Imaging, so they can prepare, arrange suitable equipment and adequate staff. Schedule tests early in the day when the largest number of staff are available to assist. Training and competency for Medical Imaging staff in patient handling techniques.
Peri-operative Environment	<ul style="list-style-type: none"> Weight limitations on operating tables. Inadequate equipment to move the patient to the operating table. 	<ul style="list-style-type: none"> Hire/purchase operating tables/beds that have an increased safe working load. Consider whether the table has a safe working load that can manage the patient if the electrical mechanisms are not used (would depend on the procedure). Patient risk assessment as heavier patient may be able to move themselves onto the operating table. Implement a procedure to facilitate transfer of patients from the ward to the operating theatre and alert staff of special needs. Extra staff maybe required to assist. Equipment may come with the patient from the ward eg larger slide sheets, Hovermatt Transport the patient in their bed rather than a trolley to avoid two lateral transfers.
Peri-operative Environment		<ul style="list-style-type: none"> Training of staff in appropriate patient handling techniques and use of equipment including large patient slide boards and inflatable transfer mats.

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Ward/Area	Risk	Eliminate or Control the Risk
General or Surgical Wards	<ul style="list-style-type: none"> Manual handling/strain injuries that might occur from inappropriate postures. Difficulty managing the patient with standard toilet fixtures /shower recess. Cluttered room – trip risk. Sprain and strain issues associate with surgery. 	<p>(Staff should be assessed as competent in the use of equipment).</p> <ul style="list-style-type: none"> Hire/purchase a bariatric bed (prophylactic measures to ensure skin integrity of the patient), appropriate lifters, slings and other bariatric equipment. Increase staff numbers and rotate staff. Work organisation. Mobile bariatric commode/shower chair of adequate size and safe working load. Manage in larger bathroom. Place in larger room or on ward where beds can be removed for extra space. A team approach to the management of the patient commencing at the pre-assessment by the Surgeon and Anaesthetist.
Maternity	<ul style="list-style-type: none"> Managing body habitus during a caesarean section – added effort in retracting and in repair. 	<ul style="list-style-type: none"> Increase the number of staff to manage a patient during a caesarean section - consider rotating staff during repair. Ensure adequate number of stools in theatre.
Morgue	<ul style="list-style-type: none"> Weight and size limitations on trolleys, lifters and racking systems, refrigerators. Door widths being adequate. Manual handling issues associated with autopsies and the reconstruction of bodies. 	<ul style="list-style-type: none"> New equipment purchased to have an increased safe working load. Review building design and safe working load of equipment on refurbishment/ upgrade. Additional staff may be required to assist. Liaise with nearest large capacity morgue.
Community Care in patient's home	<ul style="list-style-type: none"> Manual handling injuries to staff Potential handling injuries to patient Unsuitable/unobtainable equipment 	<ul style="list-style-type: none"> Obtain appropriate equipment Increase the number of staff managing the patient Negotiate the patient arranging for the removal of furniture pieces. <p>NB The type of care provided will reflect the availability/implementation of these controls. If care remains unsafe to perform, and the care and environment has been modified as</p>

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Ward/Area	Risk	Eliminate or Control the Risk
	<ul style="list-style-type: none"><li data-bbox="571 416 871 488">• Lack of space for manoeuvring	much as possible, the ability to sustain ongoing care for this patient in the home may not be viable.

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APPENDIX 2: Tools developed by Area Health Services and Contacts: August 2005

• Red Dot Mobility System	Manual Handling Coordinator, Manning Base Hospital, Hunter and New England AHS.
• Draft Rapid Response Guidelines for Management of the Extra Large Patient	Manual Handling coordinator, John Hunter Hospital, Hunter and New England AHS
• Bariatric Patient Program	Manual Handling Coordinator, Maitland Dungog Health Service Hunter and New England AHS
• Large Patient Policy/ Procedures and	OHS Coordinator, Prince Henry and Prince of Wales Hospital, South East Sydney and Illawarra AHS
• Risk Assessment for Large Patients	
• Big System	Occupational Health & Safety Unit, Coffs Harbour Health Campus, North Coast AHS
• Obese Equipment Loan Pool Policy and Procedures	Risk Management Dubbo, Greater Western AHS
• Large Patient Management Risk Assessment Checklist	Manual Handling Advisor, Central Coast AHS
• Generic Risk Assessment for Care of the Large Patient	As above
• Safe Management of the Large Patient	As above

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