

IMPLEMENTING A SAFER PATIENT HANDLING PROGRAM

An Industry Guide for the
Health and Community Services Sector



ACKNOWLEDGEMENTS

Participating agencies

WorkCover would like to extend thanks to those agencies that assisted in the development of this Guide:

Maitland Hospital
Manning Base Hospital
Home Care Service of NSW (now part of the Department of Ageing, Disability and Home Care)
Nepean Hospital
Wentworth Hospital
John Hunter Hospital
Gillawarna Village (formerly Bankstown Nursing Village)
Don Geddes Catalina Memorial Aged Care Centre
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Implementing a Safer Patient Handling Program

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The adult form is an awkward burden to lift or carry. Weighing up to 100 kgs or more, it has no handles, it is not rigid, and it is liable to severe damage if mishandled or dropped. In bed a patient is inconveniently placed for lifting and the placing of a load in such a situation would be tolerated by few industrial workers.

The Lancet (1965)

1. The Health and Community Services Sector Industry Guide

1.1 How the project came about

WorkCover NSW, via its Health and Community Services Industry Reference Group (HACS IRG), funded this project to encourage and promote safer patient handling. The project involved visiting a number of organisations that had been identified as being active in implementing safer patient handling programs and sharing some of their successes.

1.2 What is this Guide about?

This Guide aims to assist organisations to implement a continuous improvement program and achieve better practice in the safe handling of patients. It also provides advice on how to assist compliance with the requirements of the occupational health and safety (OHS) legislation in NSW as it applies to the manual handling of patients. While the Guide provides some generic guidance, it focuses on case studies of organisations that have successfully addressed patient handling risks.

It also demonstrates practical examples of the minimal lift approach in a range of health care and community services environments. Forms and checklists that have been used in the development and implementation of safer patient handling programs are included.

The case studies, practical examples, forms and checklists referred to in this Guide are provided as examples only. They may be of assistance in developing safer patient handling programs for other workplaces. However, when developing or revising your own safer patient handling program you will need to take into account the particular circumstances of your own workplace. Your obligations as an employer under the occupational health and safety legislation will not be met by simply adopting the strategies referred to in this Guide.

1.3 Safer patient handling

The terms 'no lift' and 'no lifting' are frequently used in relation to manual handling in the health industry. The term conjures up many images for nurses and other health care staff, some positive and some negative, depending on their interpretation of the term and their experience with the implementation of injury prevention systems.

In the case studies in this Guide, a number of names have been chosen by facilities. These include 'minimal lifting', 'safe lifting', 'safer lifting', 'no lifting' and simply 'manual handling programs'. It is important to remember when selecting a name for your program, that manual handling is more than lifting – it involves pushing, pulling, lifting, lowering, holding, carrying and restraining. Manual handling affects more than just nursing staff – it can also affect kitchen, cleaning, maintenance, paramedical, medical and ward staff.

The term 'minimal lifting' is used in this Guide because it is a common term among the organisations visited and because it does not suggest that lifting never occurs.

Minimal lifting within the scope of this document refers to the application of the risk management process to activities involving the repositioning, transfer and lifting of patients so that employees are no longer required to manually move or lift all or most of a patient's body weight. This means that patient handling tasks are eliminated where possible and, where they can't be eliminated, equipment is used to reduce the risk of a manual handling injury to as low a level as possible – leading to safer patient handling.

1.4 Participants in this Guide

The Health and Community Services Industry Reference Group (HACS IRG) was established to enable industry representatives to work with WorkCover and the government to improve OHS, injury management and workers compensation performance in the health and community services industries. Despite significant reductions in the incidence of back injuries, manual handling still remains the single biggest cause of injury for the health and community services sector. The HACS IRG identified the need for specific industry guidance material on the implementation of safer patient handling programs, that resulted in the development of this Guide.

The project has benefited from the generous contribution of staff from Maitland Hospital, Manning Base Hospital, Home Care Service of NSW (now part of the Department of Ageing, Disability and Home Care), Nepean Hospital, Wentworth District Hospital, John Hunter Hospital, Gillawarna Nursing Village (formerly Bankstown Nursing Village), Don Geddes Catalina Memorial Aged Care Centre, Ambulance Service of NSW and Mount Wilga Hospital.

1.5 The extent of the manual handling problem in NSW

For the period 2002/03, there were a total of 4182 major workers compensation claims for the health and community services sector. This represented an incidence rate of 14.2 per cent. Of these injuries, 1871 (44.7 per cent) resulted in manual handling claims.

Over 50 per cent (951) of all manual handling claims in the health and community services sector involved human agencies which include the handling of another person.

2. The requirements of the Occupational Health and Safety Legislation

2.1 The Occupational Health and Safety Act 2000 – general duty

IMPORTANT

The OHS Act, OHS Regulation and the National Standard/National Code of Practice for Manual Handling are subject to review and amendment. You should be aware of the most recent versions of this material to ensure you meet your legal obligations.

Section 8 of the *Occupational Health and Safety Act 2000* (the OHS Act) places a general duty on employers to ensure the health, safety and welfare at work of their employees. That duty extends (without limitation) to the following:

- ensuring that any premises controlled by the employer where the employees work (and the means of access to or exit from the premises) are safe and without risks to health
- ensuring that any plant or substance provided for use by the employees at work is safe and without risks to health when properly used
- ensuring that systems of work and the working environment of the employees are safe and without risks to health
- providing such information, instruction, training and supervision as may be necessary to ensure the employees' health and safety at work
- providing adequate facilities for the welfare of the employees at work.

An employer must also ensure that people other than the employees of the employer are not exposed to risks to their health or safety arising from the conduct of the employer's undertaking while they are at the employer's place of work.

2.1.1 Duty to consult

Division 2 of the OHS Act requires employers to consult with their employees to enable the employees to contribute to the making of decisions affecting their health, safety and welfare at work. More information on consultation is available in Section 4 of this Guide.

2.2 The Occupational Health and Safety Regulation 2001

Chapter 2 of the *Occupational Health and Safety Regulation 2001* (the OHS Regulation) sets out specific responsibilities for risk management and other matters. Employers¹ are required to:

- identify hazards involved in the work that have the potential to harm the health or safety of an employee or any other person legally at the place of work
- assess the risk of harm to health and safety arising from the hazards identified that have the potential to harm the health or safety of an employee or any other person at the place of work
- eliminate or control any reasonably foreseeable risks
- review risk assessment and control measures
- provide instruction, training and information for employees and other persons

¹ For the purposes of Chapters 2, 4, 5, 6, 7 and 8 of the OHS Regulation, 'employer' includes self-employed persons

- provide reasonable supervision for employees
- provide personal protective equipment where required
- obtain all information needed to fulfil their obligations under the Regulation
- provide emergency procedures for the workplace, including emergency communications and appropriate medical treatment of injured persons
- provide and maintain amenities (such as facilities for toilets, drinking water and changing rooms)
- provide appropriate first aid facilities and trained personnel.

2.2.1 Specific manual handling provisions

Chapter 4 of the OHS Regulation covers work premises and working environments. Chapter 4 imposes particular risk control measures that need to be followed in certain circumstances. These obligations apply as well as the more general requirements contained in Chapter 2. Part 4.4 of Chapter 4 deals with manual handling. Clause 80 provides for the following:

An employer must ensure that:

- all objects are, where appropriate and as far as reasonably practicable, designed, constructed and maintained so as to eliminate risks arising from the manual handling of the objects
- work practices used in a place of work are designed so as to eliminate risks arising from manual handling
- the working environment is designed to be, as far as reasonably practicable and to the extent that it is within the employer's control, consistent with the safe handling of objects.

If it is not reasonably practicable to eliminate a risk arising from manual handling, an employer must design the work activity involving manual handling to control the risk and, if necessary, must:

- modify the design of the objects to be handled or the work environment (to the extent that it is under the employer's control), taking into account work design and work practices
- provide mechanical aids or, subject to clause 80(3), make arrangements for team lifting, or both
- ensure that the persons carrying out the activity are trained in manual handling techniques, correct use of mechanical aids and team lifting procedures appropriate to the activity.

The Regulation (clause 80(3)) stresses that an employer must, as far as reasonably practicable, achieve risk control by means other than team lifting.

3. The minimal lift approach

3.1 What does the minimal lifting approach involve?

The minimal lifting approach includes:

- providing adequate levels of appropriately skilled staff
- consulting with staff on risk assessment and the development of control strategies, not just on the selection of equipment
- the trial and purchase of handling equipment
- the assessment of patients to determine their specific manual handling needs and standardising the method of handling
- prohibiting manual lifting (including team lifting) except in emergencies
- educating and training staff in correct use of aids and equipment, patient handling techniques, patient assessment and risk assessment
- providing appropriate mechanical lifting aids and equipment to assist staff in moving/transferring patients
- encouraging appropriate patient mobility and independence
- enforcing the use of equipment, when required, through supervision and post-training support
- reviewing work systems and practices to identify risks, eliminate unnecessary manual handling and improve work practices on an ongoing basis
- designing facilities to support safe systems of work and safe handling of patients and equipment.

3.2 What are the benefits of the minimal lifting approach?

Adopting a minimal lift approach can generate benefits in many areas including:

- improving productivity
- reducing injury rates
- reducing workers compensation premiums
- eliminating skin tears
- enhanced staff morale
- better staff retention
- reduced need for replacement staff.

Adopting a minimal lift approach can be one way of meeting some of your obligations as an employer under the OHS legislation.

4. Implementing a minimal lift program

Whenever change to a system of work is proposed it is important to thoroughly plan and consult with employees to ensure acceptance and support of the change. Once implementation has been underway for a while, it is possible to begin to evaluate the success of the change.

The change process, as illustrated in the diagram titled *Implementing a Minimal Lift Program*, (Figure 1) can be broken into six distinct phases.

1. Planning
2. Development of policy and procedures
3. Allocation of responsibility
4. Training
5. Implementation of risk management
6. Evaluation and review.

There are many interrelated aspects to successful implementation of a minimal lifting program. However, *management commitment* and *consultation* are essential elements. Without these a minimal lift program will fail.

This Guide has been produced to help organisations plan and implement a minimal lift program. The case studies illustrate some of the ‘big picture’ requirements as well as the finer details that organisations have employed to assist the successful implementation of their programs.

4.1 Management commitment

A strong management commitment to the program, combined with an effective consultation mechanism with employees and others, will increase the likelihood of success in implementing a minimal lift program.

Many of us have had the experience of being given a job to do at work but of not being given the time, the training, the power or the resources to do it. If this is the case, management is either not really committed to the issue or does not understand what is required to get the job done. There are many reasons why management become committed to a minimal lift program and these can include cost of workers compensation claims to the organisation, interruption to service provision as a result of injury, discontented or demoralised staff, moral beliefs and personal performance measurement. Management also have a legal responsibility for the health and safety of their staff, which is clearly defined in the OHS Act.

One CEO stressed it was important to make financial resources available and that it was absolutely imperative that management commitment was ‘not just rhetoric’.

Generally, the focus when starting to implement a minimal lifting program is on patient assessment and identifying hazards, completing risk assessments and implementing control measures. However, completing these tasks will be unsuccessful if the necessary organisational structures and roles are not in place to support them. Sufficient structures and roles are required so that responsibility for the various activities of a minimal lift program can be allocated to the appropriate people. Only management can put these structures and roles in place.

These structures and roles can include the following or any combination of the following:

1. Manual handling steering committee that reports to the Board concerning minimal lift program implementation
2. Manual handling coordinator to champion the program
3. Project committee/s to oversee particular projects eg purchase of beds, purchase of vehicles, disposal of garbage, supply of linen
4. OHS Committee and OHS Representative(s) involvement
5. Director of nursing, deputy director of nursing, clinical educator or other appropriate person adopting the role of manual handling coordinator as well as their other role
6. Ward champions who are knowledgeable about manual handling issues.

The size of the organisation will determine what organisational structures and roles are required. A small organisation may work through the clinical educator, a medium organisation may rely on a manual handling coordinator and the OHS Committee while large organisations may involve all the roles and structures described above. In the case studies undertaken for this Guide, strong management commitment was identified as a common theme related to successful implementation. Providing management resources and organisational structures that allowed the implementation of the program as well as remaining well informed on the progress of the program usually demonstrated this commitment.

Management commitment may also mean enforcement of policies and procedures. A CEO stated that when the policy is in place, the education has been run, the equipment provided and all problems with the equipment ironed out and an employee still refuses to follow the agreed procedure, coaching is provided. Only if absolutely warranted, will the disciplinary policy then be used.

The issues most commonly addressed initially by a committed management team included:

- formal planning including goals, timeframes, responsibilities and budgeting for the implementation of the program
- allocation of responsibility for leadership of the program
- development of policy and procedures
- reference to the manual handling program progress in all management meetings
- development of appropriate effective formal and informal consultation mechanisms
- implementation of a process of coaching for employees
- obtaining baseline data including a system audit for monitoring the success of the program.

These were reported to be the building blocks for successful programs.

4.2 Consultation

The OHS legislation requires consultation with staff about occupational health and safety issues. Excellent consultation, both formal and informal, has been another of the common threads of success in organisations that are performing well in their minimal lift program. Effective informal channels are very important in winning staff over to the minimal lift program.

In general, smaller organisations can be successful in implementing their programs through effective informal communication channels. The larger and more geographically diverse an organisation is, the more dependent it becomes on formal mechanisms. However, these formal mechanisms are also more effective where they are backed by good informal consultation, for example at a ward or unit level.

See the case study for **Manning Base Hospital** for a further example of consultation with an external agency – the NSW Ambulance Service.

One of the keys to good consultation both formal and informal in many of the organisations in this Guide was the availability, credibility and communication skills of the manual handling coordinators. Another important area identified is consultation with external agencies that interact with the facility. For example, at Nepean Hospital, unloading the helicopter with intensive care patients was identified as a high risk manual handling task. A project involving the ambulance service and emergency department resulted in the purchase of a height adjustable trolley. This can be wheeled to the helicopter and adjusted to fit the loading area of the helicopter so that the stretcher can be slid into place easily. This co-operative project involved two separate health care services.

Because employees and volunteers are intimately involved in daily patient care they can often be more aware of hazards and possible ways of controlling them, than management.

More information on consultation, including informal consultation mechanisms is available in the WorkCover *Code of Practice – OHS Consultation*.

Employers **must** consult with their employees to enable the employees to contribute to the making of decisions affecting their health, safety and welfare at work. Specifically, section 14 of the OHS Act requires employers to:

- share relevant information about occupational health, safety and welfare with employees, and
- give employees the opportunity to express their views and to contribute in a timely fashion to the resolution of occupational health, safety and welfare issues at their place of work, and
- value and take into account the views of employees.

The purpose of the duty to consult is to ensure there is meaningful and effective consultation about matters that may affect employees' health, safety and welfare so there is reduced injury and disease.

Consultation should be incorporated into all stages of the risk management process so it is not overlooked.

Section 17 of the OHS Act provides three options for consultation:

1. An OHS committee comprised of employer and employee representatives
2. OHS representatives elected by employees
3. Other agreed arrangements between the employer and their employees.

Which option is appropriate for a workplace will depend on the number of persons employed at the workplace. The employer and employees together need to decide which consultation mechanism will work best for their organisation. The needs of shift workers, agency staff, part time staff, volunteers, remote workers and other variables, which influence the effectiveness of consultation, should be considered.

4.2.1 What makes staff change the way they do things?

If staff are going to change the way they work it is imperative to provide an environment that encourages them to do so. Management commitment and consultation are the cornerstones of this change process. However, even when the environment is perfectly attuned to change it is important to remember that staff will change their behaviour at different rates. There will be some who will keep coming up with ideas of better ways of working while others will only begin to use the new equipment after they have seen others use the equipment efficiently. Still others may take longer and need some one-to-one coaching and encouragement. The key to achieving change is to stay committed and keep working with staff.

5. The six phases of change

The change process can be described in six distinct steps or phases (see Figure 1 – *Implementing a minimal lift program – the six phases of change*).

5.1 Planning

Achieving cultural change is the fundamental aim of the implementation of any manual handling program. It is important to remember that culture changes slowly. Usually, the larger the organisation, the slower the change occurs. It is only as the change strategies (documented in the management or business plans) are put in place within an organisation that the culture will change. Planning with allocation of responsibility is a critical part of the process.

See case study for **Maitland Hospital** as an example of planning to achieve cultural change within an organisation.

It is useful to take these steps prior to implementing a minimal lift program:

- review or record current work practices
- analyse injury statistics
- clarify objectives
- consultation – decide who needs to be involved through consultation
- devise a strategy – this would include allocation of resources such as people, equipment, funding and time
- develop performance indicators to measure achievements.

One of the key tools is the use of a hazard identification survey that is completed by all staff. It asks employees to list any workplace manual handling tasks that:

- they would like to change
- cause pain or fatigue
- encourage bending, stooping or maintaining a particular position for a period of time
- require awkward postures or movements.

5.1.1 Setting targets

While the detail for planning programs within an agency will vary depending on the facility's size and nature of risks it faces, there are certain steps that can be considered, in consultation with employees, during the development of a program.

Taking Safety Seriously (2002)² suggests the following minimum steps for successful planning:

- clearly defined objectives and measurable targets derived from the risk assessment process
- performance indicators that will allow the facility to measure progress in achieving objectives and targets
- specific actions to be taken to achieve the objectives and targets within a set time frame
- assigned responsibility for the achievement of the targets and objectives.

2 *Taking Safety Seriously – a systematic approach to managing workplace risks in the NSW public sector – policy and guidelines* 2nd Edition – NSW Premier's Department Review and Reform Division 2002

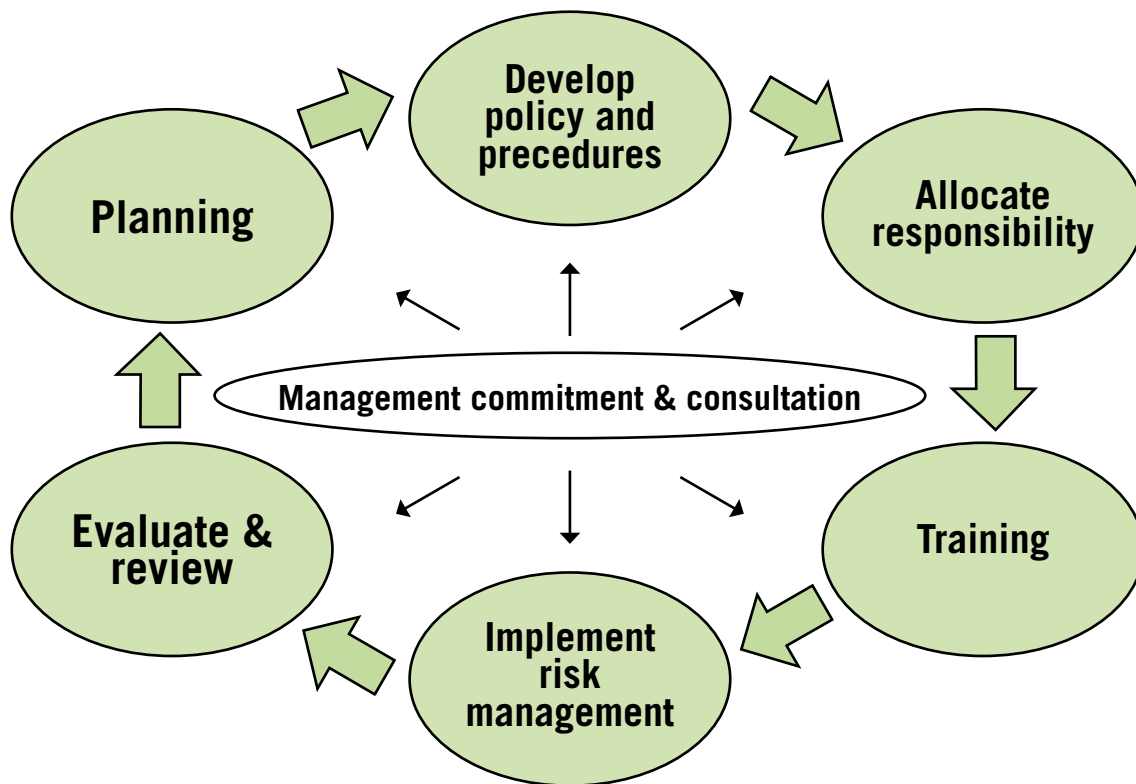


Fig. 1 Implementing a minimal lift program - the six phases of change

5.2 Development of policy and procedures

A manual handling policy is not an OHS legislative requirement. However, a manual handling policy is one way an organisation communicates its commitment to a safe and healthy workplace. The policy outlines the responsibilities of everyone in the workplace to achieve this end.

A manual handling policy needs to include the essential elements of an effective OHS system such as:

- a commitment by the employer to provide a workplace that is safe and without risks to health. The commitment is demonstrated by giving health and safety issues priority in all decisions affecting the workplace and the conduct of work
- the provision of adequate resources to ensure the workplace is safe and every effort has been taken to control risks. Adequate resources are those resources needed to ensure that things such as equipment are safe and properly maintained and that OHS issues can be promptly addressed and employees are trained to carry out their tasks in a safe manner
- clearly defined responsibilities for manual handling so that people are aware of their responsibilities, are competent to fulfil them and have sufficient resources to act.

- That a systematic manual handling program is in place consisting of:
 - hazard reporting
 - incident reporting
 - risk assessment and risk control
 - emergency procedures
 - safe job design
 - safe workplace and equipment design
 - induction training and supervision
 - purchasing procedures
 - commitment to consultation
 - monitoring and review.

5.2.1 How to develop manual handling procedures

Once an organisation has developed a policy, it needs to develop procedures to meet the policy's objectives and commitments.

Procedures need to be developed in consultation with employees to ensure that they work within the context of the organisation. Procedures document what activities will be undertaken including details of how these activities will be performed eg how to report incidents and how the forms are processed.

5.3 Allocation of responsibility

See **Manning Base Hospital, Maitland Hospital** and **Home Care Service of NSW** case studies for practical application.

It is impossible for one person in a health or community services organisation to be totally responsible for the success of a minimal lift program. While leadership is very important and choosing the right person is critical to any manual handling program's success, the program will fail if there is insufficient support from management and other staff at all levels of a facility. In short, responsibility for manual handling lies with all staff and management and it is necessary to document the performance requirements in both position descriptions and performance appraisals to ensure that program implementation can occur.

5.3.1 Appoint a program coordinator

Choosing a person with good leadership skills who can successfully implement and manage the program is critical to the success of any minimal lifting program.

Depending on the size of your organisation, a minimal lifting program can include any of the following combination of staff:

- manual handling steering committee which reports to the Board of Directors
- manual handling coordinator
- project committee/s to oversee particular projects eg purchase of beds, purchase of vehicles, disposal of garbage, supply of linen, training
- OHS committee and OHS representative involvement
- Director of Nursing, Deputy Director of Nursing, Clinical Educator or Return to Work Coordinator
- ward staff that are knowledgeable about manual handling issues.

Successful programs will be achieved when the coordinator has:

- motivation and commitment to the program
- sufficient influence to affect the operation of the health or community services organisation
- an appropriate background and experience
- sufficient budget to do what is required
- management support
- a sufficient amount of time to carry out the necessary activities
- the ability to champion the cause and influence the behaviour of peers and
- access to technical expertise.

The success of a program will be enhanced where OHS and manual handling have a high profile similar to initiatives such as infection control or quality control programs within the organisation.

5.4 Training

When implementing a minimal lifting program a large amount of training needs to be done. There are general and specific manual handling training requirements for managers, supervisors and staff, including contractors, temporary staff, agency staff, volunteers and trainers.

5.4.1 The reasons for training

Manual handling training is an important element of patient and staff safety. Training is also a requirement of OHS legislation. The objectives of the overall manual handling training program should be to:

- prevent manual handling injuries occurring by educating managers, supervisors and employees (including, where appropriate, contractors, temporary staff, agency staff, volunteers and trainees) in risk management principles
- teach safe manual handling techniques and safe use of equipment
- assist employees to understand the complex nature of manual handling and the many risk factors involved.

Internal or external providers may deliver training. In large organisations it may be appropriate to train a number of trainers and assessors and have them conduct the training within their organisation.

5.4.2 When to train

Appropriate training should be provided:

- as part of induction – preferably before the employee commences duties or within the first two weeks of employment
- as part of an ongoing manual handling training and refresher program
- at the time of procedural or equipment changes
- where manual handling performance evaluation indicates a need for further training.

5.4.3 Scope of training for managers, supervisors and members of OHS committees/ OHS representatives

The following topics should be included in detail for training those individuals involved in the implementation of manual handling legislation and policy in health care facilities:

- procedures for the identification of jobs, tasks, and systems likely to pose a risk and how to prioritise risks for assessment
- how to prepare for, undertake and record manual handling risk assessments including assessments of patients and patients' homes
- how to investigate injuries, incidents, hazard reports and complaints
- how to develop, implement and evaluate control options in consultation with employees
- communication methods including effective consultation and provision of information and training
- the organisation's risk management systems including procedures for record keeping
- analysis of training needs
- performance indicators.

5.4.4 Training for employees

Employers are required to provide training to their employees: see section 8(d) of the OHS Act and clause 13 of the OHS Regulation.

Employees in general need training in:

- problem-solving using risk management techniques
- their rights and responsibilities eg participation in the consultation process
- safe manual handling methods eg Safe Work Practices
- safe use of equipment
- the organisation's policies and procedures eg incident reporting.

It may also be necessary to provide some staff with advanced training in specific skills such as patient assessment.

Employers should also be aware of their obligations towards contractors, volunteers, students on placement, visitors and others at the workplace.

5.4.5 Training for new and inexperienced employees

See how **Home Care Service of NSW** has invested a great deal of time and effort to develop a training program suited to an organisation where work is carried out in premises which are not under its direct control.

New and inexperienced employees will need additional supervision until manual handling competence is demonstrated. For example, a 'buddy' system could be implemented. The practical component of training should include practice in an actual work situation or simulated work situation. The training should be task specific and should aim to ensure that the employee:

- understands the manual handling risks associated with the handling of people and demonstrates how to choose appropriate equipment, or techniques and to follow the care plan in relation to handling requirements

- demonstrates the ability to use manual handling equipment correctly
- knows how to report any problems or incidents associated with manual handling.

5.4.6 Training staff in patient assessment

Patients require a specific type of manual handling risk assessment. This should be carried out by staff that are trained in this task. Training should include:

- how to identify and assess risks associated with individual patient care needs
- how to communicate effectively with patients and their family on safe manual handling methods
- how to incorporate patient specific needs in the care plan
- principles of patient assessment, which address issues such as weight and medical condition, level of dependence, mental or emotional state and level of cooperation
- planning which methods and equipment to use for each required transfer in consultation with the patient where possible
- the various handling, repositioning, rolling and transferring methods that are available
- skills training in the use of available patient moving equipment
- skills development in deciding which method of handling is appropriate to the current circumstances and when reassessment of handling needs is required.

See **Nepean Hospital** and **Mount Wilga Private Hospital** for examples of facilities that have developed training programs for their staff.

Training needs may vary from one workplace to another depending on the nature of clients, type of service and skills and experience of employees.

5.4.7 Staff skills assessment

An assessment of manual handling skills should be carried out in the following situations:

- after training
- on commencement of work with the organisation
- after a long absence
- after an incident
- after non-compliance with procedures is observed/reported
- at regular intervals appropriate to the work environment.

Task related skills are best assessed on the job.

5.4.8 Patients and their relatives

Educating patients or clients can present different challenges depending on the culture of the organisation and where the services are being carried out. The opinions of the patient or client can easily influence the carer and their readiness to implement systems. Some long-stay institutions may encounter conflict regarding the use of mechanical equipment. There may be expectations regarding certain mobility methods to be used, often unrealistically. Anecdotal evidence suggests that when long-term relationships develop between patients and their carers, it is more difficult to influence changes in the way services are delivered. Carers who are physically remote from management may not be as easily influenced.

Nurses and other care staff have professional responsibilities towards patients. However, their professional responsibilities do not extend to putting themselves at risk of injury or death when carrying out nursing activities. Nursing and care staff are obliged by their professional duty of care to provide that care in the safest possible way. Whilst care workers have responsibilities, they also have rights under the OHS Act and Regulation to a safe and healthy workplace. They also have the right to refuse to carry out work that puts their health and safety at risk.

Health and community service providers have legal obligations to provide safe care to their patients. Employers in the health and community services sector are required to provide a safe and healthy workplace for their employees. In keeping with these legal obligations, facilities can insist that patients comply with procedures and protocols that are devised for their safety and that of employees.

Ensuring patient cooperation is largely dependent on community education, suitable policies and supportive management practices.

5.5 Implementing risk management

Success in implementing minimal lift programs will be enhanced by the planning and consultation that has been undertaken. The program will improve health and safety performance only if these processes translate into action at the workplace level.

Risk management is a practical way of finding and fixing workplace health and safety problems. It contains three key steps:

- hazard identification
- risk assessment
- risk elimination or control.

5.5.1 Hazard identification

The responsibility placed on an employer to take reasonable care to identify any foreseeable manual handling hazards is clearly outlined in the OHS Regulation (refer to Section 2.2 of this Guide). A good consultation mechanism is also a requirement and will assist with this process (refer to Section 4 of this Guide).

The Regulation also requires the employer to ensure that there are effective procedures in place to identify hazards. The process of identifying hazards can include information reviews, workplace inspections, task analysis and by consulting with employees. Clause 9(3) of the OHS Regulation states that hazard identification must be undertaken:

- “(a) immediately prior to using premises for the first time as a place of work, and
- (b) before and during the installation, erection, commissioning or alteration of plant in a place of work, and
- (c) before changes to work practices and systems of work are introduced, and
- (d) before hazardous substances are introduced into a place of work, and
- (e) while work is being carried out, and
- (f) when new or additional information from an authoritative source relevant to the health or safety of the employees of the employer becomes available.”

A major source of information on manual handling risks can be obtained by review of incident and hazard reports and complaints. All injuries and incidents should be investigated as soon as possible after they occur. The manager responsible for the work area involved is, in most cases, primarily responsible for the investigation. The aim of the investigation is to identify the underlying or root causes and systems breakdown that led to the event and not to apportion blame. The investigation process should include consultation with the staff involved in performing the actions, movements and/or tasks identified as the underlying causes of the event.

Following the investigation, the manager needs to take action to prevent similar incidents from happening again. The investigation outcomes and resulting risk controls should be documented and communicated clearly. This could include changes to policies, procedures, training and systems of work.

Serious incidents, and some other incidents, must be notified to WorkCover in accordance with the requirements of section 83 of the OHS Act and Part 12.1 of the OHS Regulation. WorkCover inspectors may investigate some workplace incidents. A Register of Injuries must be kept at all workplaces (section 63, *Workplace Injury Management and Workers Compensation Act 1998*).

5.5.2 Risk assessment

An employer must assess the risk of harm to the health or safety of their employees and/or other persons at the employer's place of work. After hazards have been identified it is important to determine how serious a risk they present to health and safety so that corrective action can be implemented.

Risk assessment involves analyzing the risk factors and deciding how likely it is that an accident will happen and how severe the impact of the accident could be. Some hazards may cause frequent accidents that only result in minor bumps or scratches, while other hazards may be less likely to cause accidents, but the result could be major injuries or a fatality. Also influencing severity are factors such as frequency of exposure, severity of potential injuries and illnesses, the number of people exposed and duration of exposure.

In assessing manual handling risks, Clause 81 of the OHS Regulation requires that a number of factors be considered by an employer, in consultation with employees. These factors are:

- actions and movements (including repetitive actions and movements)
- workplace and workstation layout
- working posture and position
- duration and frequency of manual handling
- location of loads and distances moved
- weights and forces
- characteristics of loads and equipment
- work organisation
- work environment
- skills and experience
- age
- clothing
- special needs (temporary or permanent)
- any other factors considered relevant by the employer, the employees or their representatives on health and safety issues.

If an organisation decides to adopt a risk rating process, then care should be taken to ensure that timeframes for response are agreed. Assigning a risk rating can be subjective and an organisation should determine risk ratings in consultation with staff.

This does not mean that a moderate or low risk rating can be ignored. The Regulation requires that all reasonably foreseeable risks be eliminated or controlled.

5.5.3 Risk elimination or control

An employer's primary obligation under the OHS Regulation is to **eliminate** any reasonably foreseeable risk to the health and safety of employees and any other person legally at the employer's place of work (Clause 11).

If it is not reasonably practicable to eliminate the risk, the employer must **control** the risk. The risk factors analysed in the risk assessment phase can provide clues to control strategies – the aim is to eliminate or reduce the impact of as many of the risk factors as possible. An employer should consider short, medium and long-term strategies, depending on the risks.

The Regulation stipulates that if it is not reasonably practicable to eliminate a manual handling risk, an employer must:

- Modify the design of the objects to be handled or the work environment (to the extent that it is under the employer's control), taking into account work design and work practices.
- Provide mechanical aids or make arrangement for team lifting or both. **Note:** an employer must, as far as reasonably practicable, achieve risk control by means other than team lifting.
- Ensure that the persons carrying out the activity are trained in manual handling techniques, correct use of mechanical aids and team lifting procedures appropriate to the activities being carried out.

It is unlikely that any single control measure will be sufficient to eliminate most risks completely. A combination of control measures used together often gives the optimal result such as:

1. design bathrooms for use of equipment; **and**
2. provide appropriate equipment; **and**
3. train employees.

A minimal lifting approach supports the Regulation by endorsing the use of patient handling equipment and encouraging patients to assist wherever it is safe for them to do so.

Risk assessment is very important at this stage to ensure that remedial action to control one risk does not introduce another.

5.5.4 What does it all mean in practice?

See the **Home Care Service of NSW** case study for an example of how one organisation combined all four risk assessments into the way they work.

Patient assessment

In most work environments where inanimate objects are handled the only risk assessment needed is a task risk assessment. However, in the health industry there are four main types of risk assessment that are required for handling people. These include:

1. manual handling task risk assessment
2. patient handling risk assessment
3. workplace risk assessment (including the home for community care nursing) and
4. equipment assessment.

A patient handling risk assessment is required because, unlike inanimate objects, patients are not rigid or stable nor are they the same shape every time they are handled. The patient attributes that have an influence on the assessment include physical function, mental status and cognition, medical condition and communication issues.

There are also many different ways patients need to be moved and an assessment of each handling episode needs to be done. For example:

- moving in bed
- moving in and out of bed or onto trolleys
- getting in and out of chairs
- moving to and from toilets and commode chairs
- walking.

A patient handling assessment should be carried out on admission and at regular intervals determined by the condition of the patient. It should be undertaken by the people who are doing the work or in consultation with them.

See the **Manning Base Hospital** case study for an example of patient assessment in an acute care setting – the Red Dot System.

During the patient assessment decisions are made as to what techniques are to be used, how many people and what equipment is to be used. These are the 'risk control' methods. The results are then documented in the nursing notes and may also be put in a format (a patient handling plan) to be communicated to all persons involved in handling the patient. This can be, for example, in the form of a card placed near a patient's bed.

Different types of organisations approach the patient assessment in different ways. In the acute setting, a patient can change rapidly. For example, a surgical patient may require daily assessment whereas a rehabilitation patient or aged care resident may change quite slowly. In the home setting, the patient assessment needs to include a home and task assessment. For example, for every new client referred to Home Care Service of NSW, a comprehensive and integrated initial assessment of the client, the task and the home environment is undertaken. Personal care services and manual handling of the client cannot be considered in isolation of the workplace (home) environment and the equipment and furniture. A comprehensive and accurate initial risk assessment is a crucial component of the overall manual handling strategy. Implementation of control strategies prior to service delivery ensures that care workers commence providing services in a safe working environment. The OHS Risk Assessment is repeated at least annually and at any time the service changes.

More information on patient assessment can be found in the *Manual Handling Guide for Nurses* publication.

Workplace design solutions

The OHS Regulation places a major emphasis on design or redesign of the workplace to eliminate manual handling problems. Unfortunately, the opportunity to design or redesign does not come around often and therefore it is important to get the design right when the opportunity arises.

The facility being designed or redesigned may be a bathroom, a ward or an entire residential care unit or group home. The functional requirements of these areas need to be identified in consultation with users (both staff and clients) if the resulting design is to be safe and user friendly.

See the **Gillawarna Village** case study for examples of the benefits of involvement in the design and equipment selection process.

Restricted spaces can lead to constrained and awkward postures during manual handling and poor layout may also lead to double handling. There are considerable amounts of pushing, pulling and manoeuvring of wheeled equipment such as trolleys, beds, hoists and wheelchairs in health care facilities. It is important to consider suitable access, space for manoeuvring, gradients and floor surfaces, in workplace design.

Layout, the inter-relationship and locations of the various facilities and rooms are important factors to consider. The bathrooms and toilet facilities need to be close to the patients' rooms to minimise the distance patients have to walk or be pushed.

Some of the design features that have contributed to manual handling problems in existing facilities include:

- bathrooms that have not been designed to allow access by hoists and bath trolleys
- lack of storage space for handling equipment such as lifters, trolleys and wheelchairs or location furthest from where they are required
- carpeted floor surfaces which increase the forces required to push and pull wheeled equipment
- ramps and outdoor areas that have not been designed for wheeled equipment eg beds or trolleys or the use of walking equipment
- group homes and hostels that have been designed for mobile clients and become unsuitable when client mobility deteriorates and they need hoists and wheelchairs.

Managing a project with user group consultation is not always easy and requires a high level of interpersonal skills on the part of the architects and designers. However, consultation with employees when 'changes that may affect health, safety or welfare are proposed to the premises where people work' are planned is a requirement of the OHS Act 2000 (section 15(e)). Consultation is essential if the resulting design is to be safe and user friendly.

Equipment solutions

See the case studies from **Nepean and Wentworth Hospitals** – examples of a large and a small organisation with very differing approaches to finding the best equipment solutions for their facilities.

Using lifting equipment rather than manual lifting is one way to control risks arising from patient handling. The purchasing of 'fit for purpose' manual handling equipment is one of the most important aspects of a minimal lifting program.

There is still an injury risk when using manual handling aids, albeit a much smaller one. In the case of patient handling it is preferable to minimise risk by getting the patient to move themselves or preventing the patient from getting into a position that requires handling eg repositioning in the bed or wheelchair after they have slid down.

It is essential to consult with staff, both formally and informally, when determining equipment needs. For example, at Wentworth Hospital, consultation with fellow employees revealed that the hospital's existing equipment was not being used for a number of reasons including poorly designed slings, wheels needing maintenance, regular battery failures and the unsuitability of the general hoist for partially incapacitated patients. The selection of a supplier who can service and maintain equipment in this more distant region was an important consideration. Once the new equipment was agreed on and purchased, training of staff and regular audits and maintenance of the equipment were implemented.

One of the added benefits of having fit for purpose equipment was the response of nurses returning to the profession – feedback from nursing staff included one nurse feeling confident in recommending nursing as a career choice for her daughter and another returning after a back injury without difficulty due to the dramatic reduction in lifting of patients.

5.6 Program evaluation and review

See the **Don Geddes Catalina** case study for an example of using statistical analysis to evaluate a control measure.

Evaluation of the success of a minimal lift program can be difficult because of the cumulative nature of many manual handling injuries. Particularly with an ageing workforce, it may seem there are injuries just waiting to happen no matter what you do. On the other hand, some organisations have found that the use of manual handling equipment such as hoists, walk belts and slip sheets facilitates the return to work of injured employees and has meant some staff members are able to continue to work while carrying an old injury. Using the right equipment can make the work lighter allowing staff to manage their injury.

Despite this, it is important to measure how well program implementation is progressing. This lets an organisation know if they are making progress and can give an idea of what to do next. Simply measuring negative indicators such as workers compensation costs or injury rates, in isolation does not necessarily give a true indication of the work being done to control manual handling hazards. In fact, it can encourage management and staff to hide injuries to provide a better result.

See the **Home Care Service NSW** and **Wentworth Hospital** case studies for examples of evaluation techniques used.

It is important to develop methods of evaluating the work being done within the program. The benefit of measuring positive indicators (such as the *NSW Health Numerical Profile*) is that it is possible to measure the changes over time. Using a mix of both positive and negative indicators is the best approach to evaluation.

Taking Safety Seriously (2002)³ observes that the implementation of a safer patient-handling program does not guarantee success. OHS performance must be measured to ensure that risks are effectively controlled, that is, to see what is working well and what is not. Two aspects to evaluation and review are outlined. These are active monitoring, which includes audits and inspections, and reactive monitoring, which includes the review and analysis of data after the event.

Both active and reactive monitoring involves two processes:

- observation and measurement
- comparison of measurements/observations against criteria or standards of performance established during the planning phase.

Note: It is important to remember that, in both active and reactive monitoring, consultation with employees is crucial as they are most likely to know whether risk control is effective.

5.6.1 Active monitoring – audits and inspections

Audits can be a good way of evaluating OHS performance by measuring an organisation's progress against performance indicators and targets and helping to identify 'gaps' in the OHS management system. Audits should be done systematically, using checklists and criteria to measure OHS performance against set benchmarks.

Examples of tools for measuring safety performance include the WorkCover NSW *BackWatch Scoreboard*, the NSW Health Department *Numerical Profile*, Victorian WorkCover Authority's *Safety Map* and *Australian Standard 4801:2001 Occupational health and safety management systems – specifications with guidance for use*.

Whichever tool is used, it is important that its focus is not just on having documents in place but also on examining the implementation of positive OHS practice. Audits should be performed objectively by competent staff that are not involved in the areas being audited or by an independent third party organisation. Senior management, the manual handling committee and the OHS Committee, should review results of audits so that any opportunities for improvement are identified. Actions identified should be incorporated into the corporate and OHS planning process and new measures developed where necessary.

As well as auditing, other active measuring could include:

- inspection (eg of wards)
- testing (eg of hoists)
- monitoring (eg periodic skills assessments of staff; walkabout inspections to check compliance with work practices).

An example of a system for the auditing of equipment and monitoring it for maintenance is in place at Gillawarna Village. Different members of staff are allocated responsibility for a different type of equipment. For example, the physiotherapy aide looks after wheelchairs and an enrolled nurse looks after commode chairs. Items of equipment are all numbered and there is an improvement log for maintenance requests.

3 *Taking Safety Seriously – a systematic approach to managing workplace risks in the NSW public sector – policy and guidelines* 2nd Edition – NSW Premier's Department Review and Reform Division 2002

5.6.2 Reactive monitoring – data collection and analysis

Evaluating system failures, or reactive monitoring, can include measuring and analysing injury and illness data, hazard and near miss reports and incident investigation outcomes.

Data analysis

Review and analysis of an organisation's OHS data can reveal both short and long-term trends in workplace accidents and illness and assist in identifying weaknesses in the control of workplace risks. Incident and hazard data, for example, is a good source of information on the nature and frequency of incidents and hazards in an organisation.

Information such as the lost-time injury frequency rate, the number of claims per 100 staff, the rate of return to work over a specified time period and projected workers compensation costs per employee can assist organisations to measure the effectiveness of their health and safety risk controls. An organisation's workers compensation insurer can be a useful source of information.

Reporting

Reporting systems are an essential part of any OHS management system and can include hazard, injury and claims reports. An organisation's system of reporting should be developed in consultation with staff and OHS representatives. Staff need to be trained on how to use the system and everyone encouraged to follow the procedures. Data collected should be provided to senior management on a regular basis.

Incident investigations

Incident investigation data can be a very useful indicator of OHS performance. All incidents should be investigated. It is important that the investigation be done as soon as possible after the event. Investigations should examine both the work site and the operational activities leading up to the incident. The investigation should involve the manager responsible for the work area involved as well as interviews with staff. Staff should be made aware that the purpose of the investigation is to determine corrective action rather than apportion blame. Involving OHS representatives or other employee representatives can assist in achieving this. The aim of the investigation is to determine the underlying cause rather than just the immediate reason for the incident. For example, a person may be injured moving some supplies. One of the underlying causes of the incident may be that the supplies are stored in a location that required an awkward posture to retrieve them. The more obvious factor might be the weight of the box of supplies.

Following an investigation, the manager needs to take action to prevent incidents of this type from recurring. The corrective action should be noted on the incident report, discussed with staff and communicated clearly.

It is important to ensure that accurate records are kept to support this process and provide meaningful and comparable results.

The implementation of a minimal lift program can bring immediate and ongoing cost savings as demonstrated by the facilities in this document. However, the maximum potential for savings may take many years to realise as a significant proportion of health, aged care and community services staff may be carrying an accumulation of minor injuries developed over a long period of time. Manual handling risk control is, therefore, not a short-term fix – it is a cultural change that needs to become permanent.

6 Practical application

Minimal lift programs encourage and promote the implementation and evaluation of systems of work that eliminate manual handling injuries associated with the handling of people. The programs are intended to encourage better practice in manual handling in a range of acute and sub-acute care, aged care and community settings.

The following case studies should provide your organisation with examples of minimal lift program implementation. Each provides a sound example of one or more of the essential elements of a minimal lift program.

Note about the case studies

The case studies are representative only. Their inclusion in this Guide does not indicate that WorkCover endorses the particular approaches taken.

Any forms, checklists or other documents included with the case studies are included as examples. Their inclusion does not indicate that they are official forms or that WorkCover requires or endorses their contents.

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7.1 Maitland Hospital

Maitland Hospital is part of the Hunter Area Health Service. It has 175 beds, employs around 274 nursing staff and has medical, surgical, high dependency/coronary care, rehabilitation unit, accident and emergency, theatres, children's and maternity wards. There are also support areas including catering, linen distribution, security, maintenance, pharmacy, centralised sterilising and supply department, community nursing and allied health. Maitland hospital has achieved cultural change around the way patient handling is performed.

In 1998, there was a push for a different way of doing things because a review of the workers' compensation statistics for the Division of Nursing in 1997/1998 showed:

- an increase of 71.4 per cent in overall incident reports compared to previous years
- that manual handling injuries accounted for 62 per cent of all lost time injuries
- an increase in major/long term injuries
- several lost time injuries sustained by casual registered nursing staff, a category where there had previously been no reported injuries.

Prior to 1998 it was common to hear comments from nursing staff such as 'if you are a nurse you will have a bad back'. Now comments are more like 'get the patient to move themselves if they can – don't put your back at risk'.

Work has been underway to implement a safer patient handling program at the hospital since late 1998. The program is comprehensive with an emphasis on:

- hazard identification
- risk assessment and control of manual handling hazards
- patient manual handling assessment
- competency based manual handling training
- compliance checks
- Considerable evaluation of the program is also undertaken.

1 Implementing manual handling

1.1 Planning

The Manual Handling Management Committee included the Nurse Unit Managers (NUM), the trainer and the Manual Handling Coordinator. Initially it played a large role in implementation but now is largely advisory. There is also a sub-committee, which is responsible for the support services area.

The first thing the manual handling management committee did was to write an implementation plan targeting the 40 bed medical and surgical wards, which had the highest number of injuries. Implementation was to be completed in these areas within 12 months.

The program was then implemented in other clinical areas and non-clinical departments. Risk management principles were used and the following tasks, which were documented in the plan, were undertaken:

- A coordinator was appointed.
The Manual Handling Coordinator was nominated in 1998. Initially this was the Deputy Director of Nursing, and is now an Enrolled Nurse. The Deputy Director of Nursing reported to the Director of Nursing and had functional access to the Health Services Manager. The Enrolled Nurse now reports directly to the Health Services Manager.

- All staff were involved in hazard audits to identify manual handling problems in their areas.
- Risk assessments were completed for those work procedures identified as posing a high risk.
- A full equipment audit was undertaken in each area to determine the current status of equipment and to identify equipment needs.
- An in-depth evaluation was completed on new equipment to select the most appropriate items.
- A budget for implementation was determined including cost of equipment required and education expenses as well as the costs involved in a bed replacement program.
- The committee developed policies and procedures and a draft patient risk assessment tool was modified for use (see section 8 Tools Section).
- An extensive publicity program was implemented hospital wide and within the local community. This involved the development of a patient handout and radio and newspaper interviews. Regular meetings were held within the individual units of the hospital.

The first things staff did in the medical and surgical wards were to complete a one-day train-the-trainer program for manual handling trainers and run training sessions for all nursing staff and wardspersons rostered to the areas. Casual staff were included in the training.

Manual handling trainers were selected from staff actively involved in clinical work. People were selected as trainers on the basis of enthusiasm, credibility with other hospital staff and ability to commit to being involved for a minimum of 12 months. Trainers performed competency assessments on the staff within a predetermined time frame. Problems with changes in practice were identified within three months after program implementation.

Compliance monitoring is the responsibility of the NUM. The NUM may devolve some responsibility for the work, but is ultimately responsible to see that it occurs every three months. Evaluation and selection of new equipment requirements is also the responsibility of the NUM.

A post implementation audit was completed six months after program implementation, to identify and address outstanding problems with implementation.

1.2 Manual handling skills training

Maitland Hospital has devoted a great deal of time and effort to training staff in manual handling skills and the use of equipment. Initially eight trainers were trained. There were representatives from clinical nursing and ward staff.

There is one competency-based course for nursing staff and wardspersons. All staff (including casual staff) must attend a three hour course prior to working on the ward which includes:

- legislation
- roles and responsibilities
- employees workplace rights
- what the program involves and why it was introduced
- equipment and how to use it – covering hoists, walk belt and slip-sheets. Attendees practice being a patient as well as using the equipment
- patient assessment and the criteria for use of each piece of equipment.

This training has had a significant impact on behaviour in both nursing staff and wardspersons. It is practical, 'hands on' training. People are given the experience of being the patient and introduced to a new way of working. The training feedback indicated that the equipment, the slide sheets in particular, were well received. At the beginning of the training session comments like 'where do we find the time to use a hoist?' were common. During the training sessions the scepticism appeared to recede with comments like 'the red slip sheet is great' and 'there is no effort in moving patients' being made.

There is also an induction program for medical residents and registrars, which covers the requirements of the manual handling program. This means that all are working with the same understanding of the manual handling program requirements. Training records are kept of all the training initiatives.



Walk belts are readily available at Maitland Hospital. They are shown here hanging on the wall of the Rehabilitation Ward.

One of the key tools used by the manual handling coordinators in every ward and unit at the beginning of the implementation process was a hazard identification audit (completed by all nursing staff). It asked the following questions:

- identify any manual handling tasks in your workplace that you would like to change
- identify any manual handling tasks in your workplace that cause you pain or fatigue
- identify any manual handling tasks in your workplace that encourage you to bend, stoop or maintain a particular position for a period of time.

This led to a list of hazards, which were assessed and controlled in order of priority, determined by staff. It is interesting to note that the most hazardous issues identified were not always patient handling. Maintaining awkward posture through assisting nursing mothers to feed came up as a major problem in the maternity ward.

This same process was used in the non-nursing areas when the program was implemented across the whole hospital.

1.3 Competency assessment

Staff have one month in which to achieve competency following the training. Casual staff have two months. Annually, each staff member also has a competency review. It is the responsibility of each staff member to ensure that this occurs. The trained trainers assess competency.

A manual handling resource person is nominated for each ward and becomes the competency assessor in the long term. They are responsible for coordinating manual handling activities on the ward, including maintenance of equipment.

1.4 Compliance monitoring and disciplinary measures

Initially staff were given six months to ease into the new methods of manual handling. After this time compliance monitoring was introduced. This is now undertaken every two months with one staff member identified to monitor other staff. Monitoring was used to find out why the new methods were not being used. In one instance it was reported that there were insufficient batteries for the hoist. This led to the purchase of more batteries.

Compliance monitoring helped to iron out the structural and process issues which were blocking implementation. Only when all the issues had been resolved could compliance monitoring be used for disciplinary purposes. All managers have key safety goals for their area of responsibility and are assessed against them.

2 The results

The requirement to achieve competency for full time and casual staff, the compliance checks and the absolute 'last resort' use of the disciplinary measures have all contributed to culture change. This, coupled with the care taken to listen to problems and difficulties of staff and solve any equipment or procedural problems such as supplying extra batteries for the lifters, has given a very clear message that the hospital intends to pursue this change in the way work is done. It was not going to go away. Today the use of hoists, walk belts and slip-sheets etc is commonplace. It is 'the way things are done around here', according to one staff member.

The change in the way work was done also had a major impact on injury rates after one year of implementation. In 1998, 27 lost time injuries had been reported by all staff at the hospital. In 1999 there were only seven lost time injuries, only two of which occurred in nursing staff. Workers compensation costs have also reduced. In the financial year 1996/7 the workers compensation bill was \$1.8 million and in the financial year 2000/1 it was down to \$60,000. Another unexpected result has been that some of the older nursing staff have found that using the equipment to handle patients has reduced the physical load of their job and they are deciding to stay in the work force longer than they otherwise might have done. Nursing staff undertaking rehabilitation find that the equipment assists them to resume their normal duties faster.

2.1 Induction video

At Maitland, theatre staff have produced their own induction video for new employees. It covers all the procedures completed in theatres and the optimum transfer methods for patients for each procedure. It is readily available to staff and can be watched at any time. It is also used to induct new staff to theatres. It is based on the patient transfer procedures that were developed through the leadership of the theatre wardsperson (who is also a manual handling trainer).

Some of the patient transfer procedures covered in the video include:

- general or local anaesthetic with patient supine
- spinal/epidural with patient supine
- spinal/epidural (Caesars) with patient supine
- general anaesthetic (spinal surgery) with patient prone
- general anaesthetic with patient prone
- general anaesthetic with patient in lithotomy position.

2.2 Equipment

Examples of relatively simple but highly effective equipment solutions used at Maitland include using solid rubber wheels on wheelchairs – this is very useful as pneumatic tyres can deflate.

Kitchen staff reported some difficulty pulling the meal trolleys around Maitland Hospital. As a result tugs were purchased. These take the effort out of pulling meal trolleys.



Wheel chair with solid rubber tyres that don't require inflation



Tow tugs parked in the bay where their batteries are charged

7.2 Manning Base Hospital

The Manning Base Hospital is part of the Hunter New England Area Health Service. It has 174 beds and employs around 400 nursing staff. It has medical, surgical, acute care/coronary care, emergency, theatres, children's and maternity wards. There are also support areas including catering, laundry, maintenance, pharmacy, CSSD, community nursing and allied health.

1 Background

The safe manual handling program (as it is known at Manning Base Hospital) has been in place for seven and a half years. The General Manager shows commitment by providing organisational structures and resources, which allow the implementation of the program, and is well informed on the progress of the program.

After 68 manual handling injuries were recorded at the hospital in the year ending June 1997, it was decided to appoint a manual handling coordinator and to undertake a baseline manual handling system audit. The system audit revealed a high degree of non-compliance with the *NSW Manual Handling Regulation 1991* and the *Code of Practice for Manual Handling*.

An evaluation of the weights handled by nurses and wardspersons was also undertaken in the high dependency medical ward in which 12 nurses and two wardspersons were injured the previous year. Nurses were lifting 1224 kg per eight hour morning shift and wardspersons on the same ward were lifting 1904 kg in an eight hour morning shift. In summary the total weight lifted by a nurse was 8568 kg in a seven day shift pattern. Wardspersons, comparatively, were lifting 9250 kg in a five day period. Basic equipment including a blue strap and a hydraulic lifter were available, but staff were reluctant to use it as they had not been trained in its use.

2 What they did

Following a review of the system audit and the evaluation of weights lifted, these strategies were developed:

- formation of a manual handling committee with terms of reference
- nomination of a manual handling coordinator
- development of a manual handling policy
- adoption of a patient mobility assessment system – the Red Dot Mobility System
- development of a comprehensive ongoing manual handling education program
- trial of equipment for identified specific manual handling needs in consultation with staff, patients and families. The equipment included walk belts, slide sheets, double slide sheets, blue assist straps, slide boards, an electric lifter and a variety of slings
- development of task specific competency based training program for clinical and non clinical staff
- development of a bariatric protocol to cover the Emergency Department, ambulance officers, theatre, pre-admission and for the deceased bariatric patient
- monitoring yearly statistics for bariatric patients.

Following the trial period equipment was purchased for all departments and wards over a six month period at a total cost of around \$40,000 or about \$33 per employee. This was at a time when \$997 was being spent per full time equivalent (FTE) for workers compensation insurance. Workers' compensation now costs \$334 per FTE – representing a 66 per cent reduction. In the first year alone, the workers compensation costs were reduced by \$1.1 million.

Equipment was also purchased to meet the particular needs of community health staff. An electric lifter, which can be carried in two separate parts weighing 20 kg and 20.5 kg respectively, was purchased for each community health centre. It is taken to client's homes by courier. It has proved successful for both community health and palliative care staff. Part of the kit for the community health nurses is also a walk belt and a slide sheet.

2.1 Appointing a coordinator

The importance of an influential person in the role of manual handling coordinator was acknowledged. Employee relations considered very carefully what attributes were required in a manual handling coordinator to lead change in the culture and procedural system within the hospital. It was decided that the appropriate person should have:

- personal commitment to improving manual handling
- drive
- respect within the hospital
- an appropriate background ie clinical experience and experience handling patients
- good communication skills.

The person appointed as manual handling coordinator has a nursing background. He is known personally throughout the hospital and is frequently telephoned by staff and other facilities to discuss manual handling issues. One of the tasks he undertook recently was to trial a bath trolley with the staff of one ward where they were nursing a patient who was unable to sit. The staff did not have the time to organise the bath trolley themselves but were quick to see its usefulness when they were involved in a trial on their ward.

The manual handling coordinator was nominated to oversee the program in 1997. The coordinator is now responsible for 13 facilities in the southern region. The coordinator runs the training sessions, assesses competency, assists with sourcing and the trial of new equipment, facilitates complex care risk assessments of patients, facilitates task risk assessments, sits on the manual handling committees, develops manual handling materials such as the patient brochure and performs numerical profile self audits etc.

2.2 Nursing staff responsibilities

Nursing staff are responsible for ensuring that alterations to the patient's mobility category are recorded on the patient's mobility slide plate (at the head of the bed), the patient's care plan and the progress notes. This starts with the triage nurse and is done on a shift-to-shift basis in the ward or when the patient status changes in the wards.

2.3 Responsibilities of nurse unit managers

Nurse unit managers are responsible for:

- ensuring that manual handling equipment is used on the wards
- ensuring that staff are trained
- ensuring that lifting equipment is inspected monthly
- keeping training records
- undertaking task risk assessments according to a priority list.

2.4 Responsibilities of wardspersons

One important area of change has been the involvement of the wardspersons in the program. At the beginning of the program wardspersons were unsure of the role of lifting equipment in their job. In the past there was little consultation regarding mobility requirements of patients and the wardspersons were lifting vast amounts of weight per week. The first step to change the way things were done was to train the nurses and wardspersons alongside each other.

The introduction of the patient mobility assessment system (known as the Red Dot Mobility System) and the use of a communication chart above the bed meant that everyone knew what the handling requirements were for each patient. The patient mobility assessment is covered in the training courses so all can assess mobility requirements and all are expected to advise when they notice any change in mobility. The wardspersons have become more integrated into the clinical team as a result. Wardspersons have completed a minimum of one full day training.

2.5 Patient mobility system – the red dot system

The Red Dot Mobility System – a highly successful patient mobility system, was designed and implemented by Eddie Wood, a registered nurse. The Red Dot Mobility System is now used nationally and internationally including both public and private facilities in NSW, Canada, South Africa, England and Zimbabwe.

The system places the patient in one of four mobility categories and this is represented above the bed by a number of red dots. The more red dots the more dependent the patient. One red dot means that the patient is ambulant and 4 red dots means that the patient is non-weight bearing and completely dependent on nursing care. Each category of dots has a strategy for patient handling and the type of equipment that is needed.

The initial assessment is done by the triage nurse and the admitting doctor who document the physical condition of the patient but do not make any handling decisions. The patient is then allocated a red dot category by the nurse on the ward. If there is any doubt about the patient's assessment they are assessed with caution and given a higher dependency level.

A record is kept in the patient's notes and a wall plate can be placed above the bed to allow communication to all handlers. The simple red dot system ensures patient privacy is maintained and any changes to status can be easily adjusted on the display board.

Each shift the patient is reassessed and the Patient Care Plan is changed if necessary. Everyone has input into the handling of the patient including wardspersons, allied health staff, and the admitting doctor. However, the nurse makes the final decision and is responsible for the recording and the maintenance of the system.

One of the benefits of the red dot system is that all staff who come into contact with the patient are aware of the level of dependency. There has been a dramatic reduction in falling out of bed incidents and this has been found to be due to the domestic and cleaning staff putting up the cot sides for category 3 and 4 patients when they have been inadvertently left down. The catering staff do not leave hot meals within easy reach of category 3 or 4 patients. Ward persons report that they can now carry out their tasks more safely.

The number of injuries has reduced following the implementation of a minimal lifting approach. There has also been a trend towards less severe injuries occurring.

Financial year	Workers compensation injuries
1997/98	68
1998/99	14
1999/00	16
2000/01*	32
2001/02	16
2002/03	20
2003/04	13
Total	179

*The increase in injuries in 2000/01 has been attributed in part to the upgrading of the hospital during that period. Despite the redevelopment, no manual handling injuries were directly related to the redevelopment of buildings. Out of the 32 injuries in 2000/01, nine were bed related injuries involving 20-year-old beds, which are now being replaced with an ongoing funding commitment of \$68,400 per year.

Numerical profile audit results for the manual handling standards have also improved, as the following table shows.

	1998/99	1999/00	2001/02	2003/04
Manning Base Hospital	21% C ranking	68% A ranking	Not profiled due to hospital redevelopment	100%

There has also been a reduction in the number of slips and falls by patients. This is attributed in part to all staff understanding a mobile patient's mobility (using the patient mobility assessment communication system) and not taking unnecessary risks with mobilisation. However, there has also been an active slips, trips and falls committee in progress for 18 months.

Nursing homes undertake resident assessments as this is a requirement of their funding. However it has been relatively difficult to implement patient assessment systems in the acute care setting due to the complexity of the issues and human resource allocation.

3 New initiatives

3.1 Ambulance Service

Manning Base Hospital consulted with the local Ambulance Service of NSW who were invited to attend a training session in the manual handling equipment they come in contact with at the hospital. Ambulance Service officers were receptive to the training and valued the handling equipment in reducing the physical load when transferring patients from the ambulance trolley to the hospital trolley or bed. Ambulance Service officers now advise the accident and emergency department when an obese patient is about to arrive. This allows hospital staff the time to prepare the appropriate bed and hoist in line with their procedure for handling obese patients ie bariatric protocols (see section 8).

3.2 Hospital beds

A review of the incident reports identified that the hospital beds, which were 20 years old, were a significant cause of the manual handling injuries. Analysis showed that out of 32 injuries, 9 injuries were related to the design of the beds. The results of the review led to an audit of all the hospital beds to see if they could be upgraded with maintenance. A contractor was employed to repair some beds over a three-month period and an adjustable height platform was also purchased to ensure that bed maintenance was safe for maintenance staff. An electric bed replacement program is now in place. Data gathered from the audit of old beds was used to obtain a committed budget for a graduated replacement of all old beds with new electric beds. Monitoring of incident reports will give an ongoing indication of the success of the bed replacement program.

3.3 Equipment

Equipment has been designed to meet patient needs. For example, a special transfer board to assist removing unconscious patients from vehicles was developed as this was identified as a significant manual handling hazard for nursing staff.

An orthopaedic transfer board which is shorter than a pat slide has been designed for use in theatres. This is useful for surgery where a full-length board cannot be used such as with a fractured neck or femur repair.



Manning Base Evacuation Board



Orthopaedic transfer board and slide sheet

3.4 Oncology, day only renal dialysis units

Rhesus board for performing CPR in reclining chairs – this is a high-risk task if a patient requires any sort of resuscitation, eg cardiac arrest, respiratory arrest, and anaphylactic shock reaction. This board is successful in assisting staff to safely perform the above tasks.

3.5 Bariatric patients

NSW Health is finalising a policy on the management of bariatric patients from a staff safety viewpoint. More information at www.health.nsw.gov.au.

Some hospitals have special procedures for the admission of bariatric patients. Admission personnel are responsible for identifying the actual or approximate weight of the patient. The NUM is informed in advance so that appropriate equipment can be obtained. The product purchasing officer and the manual handling coordinator are informed. Special heavy duty beds were purchased and the heavy duty lifting equipment is located and transported to the ward.

At Manning Base Hospital they have a special management plan for all patients over 100 kgs:

Weight of patient	Number of patients	
	2001	2004
100 – 130 kgs	15	101
131 – 160 kgs	11	47
161 – 180 kgs	9	32
Over 181 kgs	2	14

The figures for 2004 represent a dramatic rise in the number of bariatric patients. Bariatric protocols in place include:

- pre-admission clinic/wards
- theatre/wards
- Emergency Department /Ambulance Service.

Special procedures were put in place to assist the Ambulance Service to cope with bariatric patients when bringing them into the hospital. A height adjustable bed is taken out to the ambulance when they are informed of the imminent arrival of a bariatric patient and a pat slide is used to slide the patient directly out of the ambulance onto the hospital bed.

7.3 Home Care Service of NSW

1 Introduction

This case study reports on the Manual Handling Program for the Home Care Service of NSW, which was commenced in 1998. In 2003, Home Care Service of NSW became part of the Department of Ageing, Disability and Home Care (DADHC). The Home Care Service of NSW manual handling strategy has continued to operate during this period of organisational change and in 2004/5 is being integrated into the manual handling strategy for DADHC. Due to the success of the Home Care program many aspects are being adopted across DADHC.

Some of the improvements and changes for DADHC are outlined at the end of the Home Care Service of NSW case study.

2 Background

The Home Care Service of NSW (HCS) is a state-wide service with 43 branches. The service employs approximately 4000 care workers with varying skill levels (the majority without formally recognised qualifications). A variety of tasks are undertaken by care workers including housework, domestic assistance and personal care of clients in over 55,000 unsupervised and uncontrolled workplaces (client homes).

Every time a new client is referred to the service a comprehensive assessment of the client, the tasks and the home environment is undertaken. Personal care services and manual handling of the client cannot be considered in isolation of the workplace (home) environment and the equipment and furniture. These assessments are conducted by HCS assessors prior to service delivery for high need clients and by Care Workers on their first visit for domestic assistance and basic personal care services.

A variety of tasks are undertaken by care workers including:

- housework or domestic assistance tasks including shopping, mopping, vacuuming, bed making, cleaning bathrooms, cleaning kitchens, washing up, doing laundry and removing garbage
- personal care tasks including moving clients in bed, standing and transferring people, assisting clients to walk, assisting with showering, toileting and feeding.

Manual handling injuries had traditionally been the most common form of injury for the Home Care Service. In 1997/98 there were 330 manual handling injuries reported. This was 65.5 per cent of all injuries and 78 per cent of the workers compensation claim costs for the year.

The need for a proactive approach was obvious and in 1998 Home Care Service of NSW began developing and implementing a manual handling program. The program was designed to prevent manual handling injuries amongst care workers whilst working in clients' homes. The strategy incorporates a number of OHS systems and procedures.

3 Key elements of the program

3.1 Manual handling policy and procedures

The Home Care Service of NSW manual handling policy was reviewed in 2004 with the development of a DADHC wide policy. Within DADHC there is a three-tiered consultation framework that includes operational staff and OHS personnel. It includes a State OHS committee, Regional OHS committees and Branch OHS committees. There is communication flow between all these committees. This consultation framework as well as the regional management framework was used when the draft manual handling policy was being considered.

The policy was distributed to all committees and regions and went through four reviews. When it had been agreed internally it was then given to the peak disability organisations for their consideration and input. After this extensive consultation the policy was endorsed by senior management.

Risk management strategies including:

- initial OHS assessment of each new client to ensure that control strategies are in place before service begins
- ongoing hazard reporting and management which addresses the residence, the client and their family, the tasks done, the equipment used, staff factors
- specialised risk assessment by occupational therapists for clients with complex care needs requiring manual handling as part of their personal care service
- manual handling training.

3.2 Initial client OHS assessment

A client manual handling risk assessment is required because unlike inanimate objects clients are not rigid or stable, nor are they the same shape every time they are handled. Client attributes that have an influence on the assessment include physical function, mental status and cognition, medical condition and communication issues.

There are also many different ways that clients need to be moved and an assessment of each handling episode needs to be done. For example:

- moving in bed
- moving in and out of bed
- getting into and out of chairs
- moving to and from toilets and commode chairs
- walking.

A client handling assessment should be carried out on initial assessment as part of the overall OHS assessment and at regular intervals determined by the condition of the client and standard review processes. The client handling assessment should be undertaken in consultation with or by the people who are doing the work.

HCS assessors have been specifically trained in applying the risk management approach to the assessment of the client. A comprehensive and accurate initial risk assessment is a crucial component of the manual handling strategy. Implementation of control strategies prior to service delivery ensures that care workers commence providing services in a safe working environment.

The OHS risk assessment covers:

- client's ability to mobilise and perform certain tasks
- safety of the tasks that will be undertaken by the care worker
- environmental factors such as access, floor, bathroom, ventilation
- equipment that is available for cleaning and patient handling
- staff related risks such the number of staff, level of knowledge/skill required etc.

3.3 Ongoing hazard reporting and management

The care worker who is allocated to the client is required to conduct a workplace review and to report any hazards identified during the first service to the supervisor. In addition, an OHS risk assessment is repeated annually and/or any time the service type changes or a different care worker conducts the service. Care workers are required to report hazards immediately upon identification.

3.4 Specialised manual handling risk assessments

A manual handling risk assessment is conducted by an occupational therapist (OT) where the client has high needs and a manual handling risk to the staff has been identified. The need for assessment may be identified as part of the initial OHS assessment, or for existing clients, during the course of service provision. There are specific criteria for OT assessments. The subsequent risk control strategies can include home modifications, prescription of equipment, documentation of manual handling procedures and training of the staff in such procedures.

At the initial assessment or at the occupational therapy manual handling risk assessment, clients are advised of any particular handling requirements such as equipment or home modifications. If equipment is required this is the time when the issues are talked through with the client. Cost can be a factor in providing equipment with some clients, the Program of Appliances for Disabled People (PADP) Scheme and community service options are investigated if this is the case.

The application of this suite of risk assessments and the implementation of subsequent control strategies ensures that the client's home is established as a safe work environment for care workers. Safe work/manual handling procedures are documented for each client and provided to each care worker.

3.5 Manual handling training

Orientation in practical manual handling is undertaken as soon as possible after commencing employment and is delivered as part of the orientation program. The orientation program has to be completed before staff begin to see clients independently.

Advanced manual handling is completed by those staff providing complex personal care within three months of commencing duties.

The training covers legislation, risk management, skills for manual handling including: basic anatomy and biomechanics, stretches and exercise. Subsequent modules include the principles of manual handling and applying them to domestic assistance tasks, the principles of handling people, basic people handling and advanced people handling.

Both of these packages focus on the work practices of the worker rather than specific client issues. They include segments that focus on applying principles to the work tasks that care workers will be required to perform and the manual handling equipment that they may use. The training has a very practical approach and has been aligned to competency standards from the *National Community Services Training Package (CHC99) Certificate III level* and the *National Code of Practice for Manual Handling*.

Staff are encouraged to apply to be assessed on the job for competence within three months of completing training. The three month period allows time for practice and self-assessment. Care workers are then assessed against specific criteria by workplace assessors (who are competent in manual handling) whilst performing manual handling tasks in clients' homes.

4 Program evaluation

4.1 Organisational planning and evaluation

A systematic approach has been taken to the implementation of the entire manual handling program. It is integrated into the organisational planning and evaluation. The corporate plan for 2000/03 contains four objectives, which address:

- customer service
- people
- financial performance
- internal business processes.

There is a strategy embedded in the 'people' objective devoted to the improvement of health, safety and well being of staff. The key outcomes indicating the success of this strategy are improvement in staff satisfaction and well being, along with a reduction of staff injuries. These are measured by:

- staff satisfaction survey
- *Australian Quality Guided Self-Assessment* which includes a review of OHS
- percentage of staff orientations completed within one month of commencing employment
- percentage of staff appointments confirmed within three months of interview
- injury frequency rate
- average cost per workers compensation claim.

4.2 Manual handling program evaluation

There is also extensive evaluation of the manual handling program itself. Performance is tracked in the areas of training, risk management, cultural and overall change. At the beginning of a measurement period decisions are made to determine what is acceptable performance over a specified period of time and the actual performance achieved is then measured.

Training and risk management are measured because they are key strategies to achieving improved work methods and reduction in injury. Cultural and overall change only occurs when the training and risk management are in place and working.

Following is a description of the positive and negative performance indicators measured and some of the results to date.

4.2.1 Risk management

- There has been an increase in hazard reporting. In particular there has been an increase in manual handling hazard reporting, customer related hazard reporting, hazard form completion and team resolution of hazards, between July 2000 and June 2001.
- The number of manual handling risks identified, assessed and controlled by the occupational therapists was 1930 between 1 July 1999 and 20 June 2001.
- There has been a 15 per cent reduction in the number of manual handling procedures undertaken between February 1999 and June 2001 across 625 households.

4.2.2 Training

The Home Care Service of NSW has invested a great deal of time and effort to develop a training program suited to an organisation where work is carried out in premises which are not under its direct control. There are two training programs:

- Orientation training, *Practical Manual Handling*. This training forms the fifth day in the five day induction program run by the Home Care Service of NSW for its care workers.
- Risk management and manual handling for field staff. This training consists of five four hour sessions.

Rates of training

- 1730 care workers were trained between 1 July 1999 and 30 June 2001. This represents 31 per cent of staff.
- 209 staff had achieved competency in risk management and manual handling by June 2001. This represents 13 per cent of those trained.

4.2.3 Cultural change

- An increase in manual handling hazard reporting has occurred.
- A number of staff have attained competency in manual handling.
- Qualitative data from training providers, participants and administrative staff has been obtained through written reports from providers, participant feedback forms and feedback forums. This has shown that staff that have attended the risk management and manual handling training have an increased awareness in a variety of ways. These have included identifying risks, which previously went unnoticed and problem solving solutions for them, controlling risks by changing their own work practices, developing assertiveness, and working in teams. Overall there has been an increased awareness, greater commitment and increased support for implementing a risk management approach at the branch level.

New clients do not present a problem regarding the manual handling initiatives, however the long term clients who were used to the old methods of handling were sometimes resistant to a change in procedures. The Home Care Service of NSW takes time to work through any issues with these clients on a one-on-one basis using the principles of informed consent, active participation, advocacy and review mechanisms. There is a procedure for escalating unresolved issues to involve senior management and the customer service manager if required.

4.2.4 Overall change

- Monthly records from branches on the nature of injury, body part injured and incident description of all manual handling injuries are monitored.
- Post-training injuries are reviewed to determine body part injured, whether they were pre-existing or new injuries and if there was time lost.
- Reduction in the number of manual handling injuries from 65 per cent to 47 per cent of total injuries between 1997/98 until 2000/01.
- Reduction in manual handling claims costs from 78 per cent to 54 per cent of the total in the period 1997/98 until 2000/01.

Overall the service has achieved a consistent reduction in their manual handling injuries and costs associated with those injuries since 1997/98. The following table describes this in more detail.

Reduction in the number of manual handling injuries

	97/98	98/99	99/00	00/01
Number of manual handling claims	330	255	201	171
Percentage of all claims due to manual handling	65	49	47	43
Percentage of claims costs due to manual handling	78	51	55	54

Measuring the right things has helped to make this occur. Measuring the number of people trained encourages training to occur. Measuring the number of staff who are assessed competent in manual handling following the training ensures that the training is put into practice. Similarly, measuring the number of hazards reported encourages hazard reporting and prioritises action.

Measuring the number of hazards controlled or eliminated means that there are less hazards likely to cause injury in the workplace. These measures are actually driving the implementation of the program. The reduction in injury supports this assumption. Also the analysis of the type and nature of injury will assist in making decisions in the future when different strategies for change may be required to encourage continuing improvements in program effectiveness.

5 DADHC manual handling program

As mentioned, DADHC has developed a manual handling policy. The policy is supported by *Guidelines for the Prevention of Manual Handling Injuries*, which provide additional information on implementing key elements of the policy. There are manual handling risk management procedures, which provide practical tools, and resources to ensure consistency in documentation and implementation of risk management processes which also meet legislative requirements.

The procedures include:

- manual handling risk identification and assessment checklist
- safe work procedures template
- standard safe work procedures for manual handling tasks such as vacuuming, laundry etc
- safe work procedure – client manual handling plan
- high risk client handling tasks

The Home Care Service of NSW manual handling training programs have been reviewed in order to meet the needs of all DADHC service streams. The new package is *Essential Manual Handling*, which is presented in modules depending on the nature of the participants work. The underlying principles of the training remain the same as the Home Care Service of NSW package.

Occupational therapy manual handling advisors are being utilised across DADHC service streams to conduct expert manual handling risk assessments with a priority of eliminating high-risk tasks from staff routines.

The program commenced implementation in January 2005 on a targeted basis across sites with high exposure to manual handling risk and a history of manual handling incidents and injuries.

6 Sample form – hazard identification part of the risk management process

This form is provided as an example only. It may help as a guide in developing manual handling programs for other workplaces. When developing or revising your own manual handling program you will need to take into account the particular circumstances of your own workplace to make sure you meet your obligations under the legislation. This is not an official form. You are not legally required to complete it or to use it as part of your manual handling program.

(Courtesy of Home Care Service of NSW, Department of Ageing, Disability and Home Care)

Hazard identification

Please answer 'YES', 'NO' or 'Not Applicable' to the questions below.

A. Client – are there any risks to employees related to the clients:	YES/NO/NA	Comments
Size/weight		
Behaviour		
Communication		
Unpredictable movement		
Disability		
Health Status		
Mobility		
• walking		
• wheelchair use		
• transfers		
• bed mobility		
Personal Care		
• showering/drying		
• dressing		
• toileting		
• feeding		
• grooming/personal hygiene		
Is there adequate information on medication being administered?		
Have all maintenance exercise programs been prescribed professionally?		
Is adequate information on bowel/bladder care being provided?		

B. Tasks – Are service tasks safe in relation to:	YES/NO/NA	Comments
Postures and positions		
Lifting, pushing, pulling		
Carrying, holding		
Repetitive action		
Duration		
Type of load eg heavy/awkward		
Task organisation/procedure		
Time for completion		

C. Workplace/Residence - Please assess all areas employees will work in, including outdoors	YES/NO/NA	Comments
Entry to residence		
1. Is parking safely accessible to staff?		
2. Gates <ul style="list-style-type: none"> • safely opened/closed 		
3. Paths/driveway <ul style="list-style-type: none"> • slippery 		
• uneven		
• steep		
1. Veranda <ul style="list-style-type: none"> • slippery 		
• tripping		
2. Steps and stairs <ul style="list-style-type: none"> • broken 		
• without rails		
• slippery		
3. Lighting <ul style="list-style-type: none"> • Poorly lit 		
• faulty		

C. Workplace/Residence - Please assess all areas employees will work in, including outdoors	YES/NO/NA	Comments
Inside residence		
1. Floors • slippery		
• uneven		
• damaged		
• tripping hazards etc.		
2. Steps and stairs • broken		
• without rails		
• slippery		
3. Lighting • poorly lit		
• faulty		
4. Ventilation • adequate in work areas		
5. Power points/electric cords • easily accessed		
• faulty or overloaded		
• cords out of the way		
6. Is the work space unsafe • too confined		
• Awkward – over-reaching, twisting or other unsafe postures		
7. Are the work (bed, bath, benches etc) surfaces safe? • wide/narrow		
• too high or low		
• unstable		
• otherwise unsuitable		
8. Are any risks related to animals (pets, vermin) controlled by the owner (ie entry/exit to residence is safe)?		
9. Are smoke detectors present?		If no, advise client to install
10. Does anyone in the household smoke?		

C. Workplace/Residence - Please assess all areas employees will work in, including outdoors	YES/NO/NA	Comments
Outdoor areas		
Are the following outdoor areas safe?		
• paths		
• steps/stairs		
• lighting		
• clothes line		

D. Equipment	Available and safe	Available not safe	Not available	Not applicable	Comments
Domestic assistance					
Vacuum cleaner					
Mop bucket or bucket					
Mop					
Broom					
Dust pan					
Washing machine					
Clothes dryer					
Clothes line					
Clothes basket					
Laundry trolley					
Iron					
Ironing board					
Food preparation equip					
Storage of equipment					
Hot water system					
Clearly labelled taps					
Cleaning fluids					
Labelled, original container and safe storage					

D. Equipment	Available and safe	Available not safe	Not available	Not applicable	Comments
Personal care					
Shower chair/stool					
Bathboard					
Hand held shower					
Non slip mat					
Wheeled shower commode					
Bedside commode					
Toilet aid					
Rails					
Bed rail/pole					
Bed					
Sliding board					
Hoist					
Sling					
Slide sheet					
Wheelchair					
Walking aid					
Transfer aid (belt, disc etc)					

E. Staff	YES/NO/NA	Comments
1. Can one employee safely manage tasks?		
2. Is there any special knowledge/skill required to safely conduct the service?		
3. Are safe work procedures documented?		
4. Is personal protective equipment (PPE) required?		
5. Are there any other issues which impact the health, safety and wellbeing of our employees?		

7.4 Nepean Hospital

Nepean is a 400 bed hospital, which launched its patient handling policy in 2000. All facilities/services were invited to do an equipment audit and to ask for funding for additional equipment purchases.

1 Consultation

All consultation about patient handling occurs through the Patient Handling Equipment Working Party (PHEWP) that includes representatives from the mortuary, medical imaging, wardspersons, patient transport, allied health and nursing.

Initial assessments of identified 'at risk' tasks were conducted across the hospital by members of the working party. Those assessed as high risk and requiring equipment as part of the control measures were targeted.

Lateral transfers to beds, trolleys, operating tables, medical imaging and water chairs were thought to be one of the high risk tasks and a major cause of injury.

2 Determining equipment needs

The working party audited types of patients in their hospital and found that up to 100 patients were immobile at any one time. In bed activities and bed to trolley activities needed to be addressed. Detailed manual handling assessments were conducted on various tasks related to the lateral transferring and repositioning of patients.

Procedural changes were implemented to minimise risks. Various slides and slip sheets were also investigated, including an air assisted transfer and repositioning system (ATR system). The ATR system is placed underneath the sheet and the patient, and a compressor pumps air underneath. The transfer can be completed by a gentle push or pull and then the pump is turned off.

3 User trials

The PHEWP trialed the ATR system in the work areas and agreed that it was significantly better in reducing the risk of injury over other available equipment. It was decided that removing and inserting the ATR system underneath the patient for each transfer was not realistic considering the amount of time and handling required. An investigation was conducted to determine how many compressors would be needed if the mat was to stay underneath the patient at all times.

It was determined that approximately 100 ATR systems in use and 50 in the laundry would be required if the ATR system was going to stay with the patient throughout their total time of dependency.

Although the original proposal asked for these to be purchased over three years, after using cost benefit justification, executive management approved the purchase of the entire consignment in year one at a total cost of \$300,000.

4 Training

Having purchased 150 ATR systems there was a need to implement training rapidly over a period of weeks to ensure the effective implementation of the use of the system.

Intensive training of the PHEWP was carried out to achieve competency in the ATR system use. As trainers and assessors these people became responsible for ensuring that 2000 employees became competent over a three week period. Once an employee is assessed as competent, that person then became a trainer and assessor.

It was up to every employee to ensure that they were assessed during the implementation period. Because assessment of competency is done during a real task, it did not require a substantial commitment of time.

5 Implementation

An entire package has been developed to support the introduction of the ATR system. This contains information about when and how to use it, when it can be removed, laundering and a competency checklist for training purposes.

As the ATR system is a new tool it has been relatively easy to train people in its use because no bad habits have developed. Staff who were initially apprehensive about the benefits of using the ATR system were pleased with the introductions as it made the task of moving patients much easier.

6 Added benefits

The process of choosing and introducing a new piece of equipment has been successful. This same process will be used in the next project – the selection of hoists and the training of people in their use.

7 Nepean Hospital helicopter trolley

Unloading the helicopter with intensive care patients was also identified as a high risk manual handling task. A project involving the ambulance service and emergency department resulted in the purchase of a height adjustable trolley. This can be wheeled to the helicopter and adjusted to fit the loading area of the helicopter so that the stretcher can be slid easily into place.

7.5 Wentworth Hospital

Wentworth Hospital is a small community hospital located near the Victorian border that opened in 1878 when the riverboats were the main transport methods for goods. It has had an ongoing relationship with Mildura Hospital over the last 100 years and is part of the Greater Western Area Health Service.

Wentworth Hospital has three services under its administration: the 22 bed hospital and emergency room, Dareton Community Health Centre and Aboriginal Health Service and Pooncarie Outpatient Centre (123 km from Wentworth and also used by the Flying Doctor Service).

The patient handling policy (see section 8 Tools) and program was initiated in June 2000 following the attendance of a staff member, an enrolled nurse, at the NSW Nurses Association two day manual handling course.

Two new lifters and five slings have been the main items of expenditure. Replacement beds are top of the list of priorities.

Management have funded a nurse for one day a month to train employees, induct new employees and undertake risk assessments in nursing and non-nursing areas. She also works night duty and is able to allocate some of her time to administration work for the manual handling program.

1 Goals of the manual handling program

The goals of the program are:

- progressively implementing a manual handling program
- reducing staff manual handling injuries and
- reducing skin tears in residents.

2 Manual handling program evaluation

The program goals are evaluated using the NSW Department of Health numerical profile audit to evaluate the program as well as patient care outcomes such as skin tears and falls. There have been no staff injuries since the program's implementation.

The numerical profile audit system was developed for use within NSW Health in line with the philosophy of safety system auditing. It includes a segment on manual handling program implementation and involves asking a series of questions concerned with the manual handling policy and program and its supporting standards, procedures and training and the implementation of control measures.

Sample questions from a typical manual handling audit include:

- Is there a copy of the manual handling procedures in the occupational health and safety manual?
- Have responsibilities for programs been included in position descriptions and performance review of staff including Director of Nursing, CEO, ward/unit managers, nurses etc?
- Have realistic written objectives been set for the ward/unit to implement manual handling procedures?
- Have the following types of control measures been applied to identified manual handling hazards:
 - Elimination?
 - Design controls?
 - Purchasing controls?
- Are advanced handling skills included in annual training of staff exposed to manual handling hazards?

All questions are given a numeric value. Higher weighting is given to activities that address management systems and encourage the designing out of manual handling hazards. Refer to Section 8.8 for an audit checklist for implementing a No Lifting Policy.

3 Outcomes of the program

Following are the results of the manual handling program evaluation for Wentworth Hospital. Since 2000 when the program was implemented, there has been a noticeable reduction in the number of skin tears in residents and according to the numerical profile score, an increase in the level of program implementation. There has also been a reduction in patient falls. There have been no injuries to staff during this period.

Year	Incidents (skin tears and falls)	% Numerical profile for manual handling
1999	64	56
2000	36	63
2001	32	80
2002	7 at March 2002	90

Wentworth Hospital is conducting their evaluation using both positive outcomes – (the numerical profile) and negative outcomes – (the number of incidents to staff and residents).

4 Manual handling program evaluation results/outcomes

The results of the evaluation indicate that by transferring residents using the appropriate equipment there are not only benefits to staff safety but also increased comfort and improved care of the residents. During transfers residents are not falling as much or damaging their skin.

One of the residents at Wentworth Hospital also stated that she loved being able to stand in the hoist because she could now check her appearance in the mirror – something she had not been able to do for some time.

Taking deceased patients to the morgue and lifting them into the refrigeration unit was identified as the highest risk manual handling task at Wentworth Hospital. Manual handling of deceased persons was eliminated completely by arranging for the funeral directors to come directly to the ward. These people have fit for purpose equipment.



Wentworth Hospital Mortuary Trolley

7.6 John Hunter Hospital

This case study illustrates how specific manual handling problems can be solved and result in improved patient care.

John Hunter is a large hospital with around 550 beds. It is part of the Hunter Area Health Service. One of the wards at John Hunter included four separate self care rooms for patients – two showers and two toilets. These rooms were hazardous to staff and patients as they provided insufficient room for staff assistance, large patients or patients who had mobility problems. They also did not provide room for emergency situations.

Space was under utilised in the narrow entryway and was hazardous for staff wheeling shower chairs. Staff had to make several sharp turns with the chair and use unsafe manual handling techniques to enter the shower or toilet. The toilet was positioned so that many patients were unable to use it, since the commode chair could not be positioned correctly over the toilet bowl due to the lack of space.

A risk assessment was conducted about patient care in the showers and toilets. It was recommended that the toilet and shower be combined and that the under – utilised space be incorporated into the bathroom area. The result is two bathrooms, each with a shower and toilet where staff can easily assist a patient. This has now been rolled out into three wards and a commitment by management has been made to complete one bathroom each financial year.

There is an excellent system in place for the auditing of equipment and monitoring it for maintenance. This system is further enhanced by the use of posters in each patient care area detailing specific manual handling equipment and where it is located. The posters are updated as necessary and have proven to be a valuable resource for staff. These posters include the bariatric equipment within the facility.

An initiative of the staff has been the management of the bariatric equipment. Staff within the OHS office maintain a database on the whereabouts of the equipment, and can provide assistance with the management of the larger patients. Education about the safe working loads of equipment has increased the awareness of nursing staff about the need to care for bariatric patients without injury to patient or staff.

There are processes in place to ensure that patients have the appropriate 'pressure relieving device' on the beds as well.

7.7 Gillawarna Village (formerly Bankstown City Nursing Village)

Gillawarna Village (formerly Bankstown City Nursing Village) is one of four (formerly five) residential aged care facilities administered by Bankstown City Aged Care Limited. This organisation is a registered charitable organisation originally established by Bankstown City Council to care for aged people living in the local government area. The original Nursing Village had 50 high care beds and was purpose built in 1994/95. An additional 100 beds have now been completed. 50 high care beds opened in July 2004, 50 dementia specific opened in January 2005 with the original 50 bed high care buildings being refurbished to accommodate 50 low care residents. The whole facility is now able to meet the government requirements of 'ageing in place'.

The original facility was the first nursing home to be built by the organisation. When the original building was about to commence in 1994, the Board of Directors appointed a Director of Nursing for the new village. Prior to this, the organisation had built four hostel type facilities over a period of about 20 years.

During the building works the Director of Nursing appointed a physiotherapist as OHS coordinator for the nursing village. There were some noticeable problems with the design of the buildings but only a few alterations could be made at that late stage.

The OHS coordinator was therefore mainly involved in the selection of furniture and equipment for the new building. She consulted with suppliers, and some alterations were able to be made to equipment such as lifters to make them compatible with the building design.

This experience made management and staff more aware of the importance of staff input at the design stage of a new building project. The new facility has been purpose designed and built with manual handling considerations in mind. The CEOs network recommended several architects and the senior management of the organisation visited various sites designed by these recommended architects before one was appointed.

Decisions were been made about the following.

1 Room types

There are wide corridors and a central large open space area to accommodate the whole village for multipurpose activities. There are also specific rooms for particular activities including the physiotherapist and hairdresser.

All of the residents' rooms are single rooms with ensuites. Lack of storage space for toiletries in the original buildings' ensuites has been corrected by providing adequate storage space in each of the ensuites of the new buildings. The cabinets in the dementia specific unit have all been fitted with 'kid safe' locks to ensure residents' safety. The height of the cabinets allows easy access by the majority of staff.

The toilets are located far enough away from the wall so that a staff member can fit either side of the resident but not so far that the resident cannot reach the handrail. There is a fold down handrail on the other side. An extra toilet roll holder was added to improve staff access.

2 Floors and walkways

A number of problems with the walkways of the original building were identified. As well as creating manual handling problems for staff, they also prevented residents from taking part in some activities and being able to walk to or be wheeled between cottages and day care. Therefore, wheeled equipment and resident mobility was a major focus of the floors and walkways.

There are no pavers used outdoors as they have been found to sink and create crevices. This affected the residents' use of their walking equipment when outdoors as well as increasing the pushing and pulling forces required when using wheeled equipment.

The gardens are laid out differently to enhance resident mobility and use of walking equipment and wheeled equipment. A garden designer specialising in designs for dementia residents was consulted for the task. There are raised garden beds in the dementia unit, curved paths and no rough edges to cause skin tears. There are only non-toxic plants in the garden and a scented garden with coloured concrete paths is a feature. There is also a red telephone box, a post box and a bus stop.

When selecting the floors and walkways the Director of Nursing in consultation with a working party considered the following:

- range of users
- forces needed to travel on floor
- equipment used on the floor
- wet, dry or slippery conditions
- cleanliness and hygiene requirements
- sound proofing
- flammability requirements.

Although the floor of the original facility is completely vinyl a decision was made to have carpet in the lounge rooms and corridors of the high care unit in the new facility to provide a more homely appearance.

The dining areas and bedrooms would still be covered in vinyl. The carpet had been selected to be serviceable, hardwearing and easy to clean. Vinyl areas are not polished to ensure there will be a minimum of falls.

However, the carpeted hallways have created a manual handling hazard for staff pushing chairs, trolleys etc and for residents self – mobilizing in wheelchairs and with rollator frames. There are plans in place to remove the carpet and replace with vinyl.

3 Equipment

Future needs were taken into consideration when purchasing equipment. All beds are electronic to enhance resident mobility as well as staff's manual handling. The majority of beds go to within 25 cm off the floor at their lowest level and have an extension built in to accommodate the taller resident.

The people lifters were not selected until the type of bed had been selected to ensure compatibility. All lifters are of the same type and brand to ensure that staff going from unit to unit have familiar equipment to use. This also reduces training needs. The equipment was all purchased with a maintenance contract. This has previously proved very cost effective, as none of the original people lifters have had to be replaced in the last 10 years.

The mobile shower chairs were chosen to take into consideration their fit over the cistern as well as the pushing forces required. A tilt-in-space high low shower chair was also purchased. This chair is electronic and can be tilted backwards to maintain the resident in the chair safely as well as being able to be raised to the appropriate height for the staff.

Tilt-in-space wheelchairs/water chairs, which can be tilted backwards to stop residents sliding downwards, thereby eliminating the need to reposition them frequently, are also used.

A shower trolley was purchased for the bathroom in high care and a special bath was purchased for the dementia specific unit.

Bed poles and monkey rings are provided where appropriate to enable residents to turn themselves at night.

Some residents in the dementia unit become agitated in the evenings looking for the bus stop. A bus stop with a seat has been installed and this has reduced the level of agitation/aggression for some residents.

4 Equipment consultation

When equipment was being considered during the design or redesign of the work environment, a consultative process was used. Representatives of users of the equipment including the maintenance man and cleaning staff have been involved in the selection process. The group has then proceeded using the following steps:

- consult with other users
- develop evaluation criteria (features) – mandatory and desirable
- consult with suppliers of the equipment
- conduct user trials
- consider if improvement modifications can be made
- consider the location of the storage area
- consider what training may be required.

As the equipment was selected, its specifications were provided to the architect.

5 Equipment maintenance and monitoring

There is an excellent system in place for the auditing of equipment and maintenance monitoring. Different members of staff are allocated responsibility for different types of equipment. For example, the physiotherapy assistant looks after wheelchairs and specific care staff look after commode chairs. Items of equipment are all numbered and there is an improvement log for maintenance requests.

6 Seating

Selection of seating presented a challenge to the working party. They worked with an industrial designer to develop a chair that met their criteria. The working party wanted a chair that was easy for the older person to get out of but also kept the resident well supported whilst seated. It had to be comfortable and look like a comfortable chair. They also designed and purchased recliner assist chairs.

Wheeled armchairs of the type currently in use were also purchased as these have been found to eliminate the need for transfers to wheelchairs when residents are relocated.

7 Clothing

Adaptive clothing is used to minimise manual handling. Cape style nighties are used to facilitate changing at night and men wear nightshirts rather than pyjamas. Men's pants with velcro at the front are available and both men and women make use of hip fracture prevention garments.

8 Footwear

Adaptive footwear that can be adjusted to allow for the shoe to be opened wider is used for residents who walk.

7.8 Don Geddes Catalina Memorial Aged Care Centre

1 Using statistical analysis to evaluate a control measure

The centre is a nursing home that consists of two units with a total of 63 beds. All of the residents require high levels of care and the majority are bed and chair fast. Many have dementia. There is a total staff of 72, all of whom, except the Director of Nursing, are part time or casual.

A trial was undertaken to assess the use of incontinence pads (underpants) for residents requiring them. The underpants are an alternative to absorbent sheets placed in the bed and have resulted in a 74 per cent reduction in the number of times patients wake and require attention during the night.

This has also had a positive impact on manual handling because there has been a 50 per cent reduction in the use of linen. This means that there has been a significant reduction in the number of times the beds are changed, residents are assisted out of bed and residents have their clothes changed by nursing staff. The elimination of this handling has significantly reduced the risk of injury from manual handling and has saved on laundry and workers compensation costs.

7.9 Mt Wilga Private Hospital

Mt Wilga Private Hospital is part of Ramsay Health Care. The hospital has 80 beds and is a dedicated rehabilitation facility. It accepts patients with a range of conditions including orthopaedic, neurological and lymph oedema as well as medical patients. All patients must have good rehabilitation prospects and the average length of stay is 3–4 weeks.

Manual handling training is provided through an annual in-service program. Originally the in-services covered non-specific manual handling education such as anatomy, biomechanics and the principles of safe lifting. It was determined that it was not having a great deal of effect because there were still a number of incidents occurring. The in-service program was then upgraded to cover both general education and job specific training thereby targeting high risk groups such as nursing and kitchen staff.

Four senior registered nurses were trained as manual handling competency assessors. These staff have responsibility for administering competencies for wardspersons, porters and nursing staff.

Currently the manual handling training program consists of:

- An orientation of 45 minutes for all staff including casuals involved in manual handling. This training is provided by an occupational therapist or physiotherapist.
- Continuous learning documented in an annual training plan.
- Training opportunities on a daily basis with competencies developed and assessors in place.
- The competency assessors received one day of training covering:
 - adult education principles
 - competency based assessment
 - introduction to the competency tool
 - review of manual handling techniques.
- The manual handling competency assessments are to be completed annually along with other competencies that require annual review. Each staff member has their own competency record and is responsible for ensuring that they are assessed during the year.

Staff training and competency assessment are considered the most important aspects of the manual handling program at Mt Wilga. It is considered that skill acquisition is the key to the program's success.

Tilt-in-space wheel chairs and commodes have been purchased. These are considered very useful for clients with extensor spasm and poor sitting balance. These clients would otherwise have to be bathed and transported lying down.

8. Tools

The following forms and checklists are provided as examples only. They may help as a guide in developing manual handling programs for other workplaces. When developing or revising your own manual handling program you will need to take into account the particular circumstances of your own workplace to make sure you meet your obligations under the legislation.

These are not official forms. You are not legally required to complete or use them as part of your manual handling program.

8.2 Patient Handling Policy

(example courtesy of Wentworth Hospital)

Desired outcomes

This policy aims to ensure that injuries associated with patient manual handling are minimised by providing guidance for managers and staff in the use of equipment and safe work practices involving lifting, positioning and transferring patients.

Scope

This policy applies to all staff and relies upon cooperation from all employees.

Policy

1. All patients (includes clients and residents) will be assessed regarding the need for manual handling assistance incorporating lifting, positioning and transferring on admission/referral and on any change in the patient's circumstances or at the discretion of the supervising practitioner.
2. Results of the assessment will be defined and documented in the care plan and all carers notified.
3. When doubt exists regarding the amount of assistance a patient can provide for transferring or positioning himself or herself, the patient must be considered as one who is unable to provide any assistance and a lifting device used, whilst wider consultation is undertaken.
4. When an appropriate manual handling device is required but not available, a manual handling risk assessment is to be completed and only a 'safe option' is to be adopted until the appropriate equipment is made available.
5. Competency based training in the use of mechanical handling devices and techniques will be provided for all staff involved in patient handling.
6. Employees are not to place their own safety at risk at any time, including in crisis situations.
7. Responsibility for ensuring this patient handling policy is implemented and adhered to in accordance with the Manual Handling Policy.
8. If a patient handling injury occurs, it is to be reported as per the Manual Handling Policy.
9. If there is any difficulty experienced in complying with this policy, management is to be notified.

Examples of three other high level policies include:

- (a) NSW Health Department Circular 2001/111 *Policy and Best Practice Guidelines for the Presentation and Management of Manual Handling Incidents in the NSW Public Health Services*;
- (b) Manual Handling Policy, NSW Nurses Association, 2001
- (c) Australian Nursing Federation (ANF), Victoria Branch, *No Lifting Implementation Guide and Checklist*.

8.3 Patient Manual Handling Compliance Monitoring Form

(example courtesy of Maitland Hospital)

<p>PATIENT MANUAL HANDLING</p> <p>COMPLIANCE MONITORING FORM</p>
--

WARD/UNIT _____

DATE _____

Please record any episodes of non-compliance and reasons for it as well as any manual handling problems in your area. Do not record staff names.

NON COMPLIANCE INCIDENT/MANUAL HANDLING PROBLEM	EXPLANATION

8.4 A typical summary of critical tasks and accountabilities in a minimal lift program in a large organisation.

This is an example of how tasks might be allocated in a large organisation

Critical tasks	Activities and elements	Person accountable	Target date
Appoint manual handling coordinator	Issue notice describing appointment Include manual handling coordinator responsibilities in position description	eg DON/CEO	01 October 2005
Risk identification	Review injury statistics, hazard reports and accident investigations Survey staff every one – two years to obtain subjective feedback on manual handling hazards Compile and prioritise list of manual handling hazards (manual handling register) Identify handling equipment available throughout facility		
Risk assessment	Determine task risk assessment staff Determine patient risk assessment staff Determine home risk assessment staff Determine equipment needs assessment staff Document the assessment process (risk assessment, patient assessment, home assessment and equipment needs assessment forms)		
Risk control	Prepare strategy to address assessed unacceptable risks (manual handling register) Submit written implementation plan to DON/CEO (manual handling register) Formally accept plan (manual handling register)		

Critical tasks	Activities and elements	Person accountable	Target date
Implementation	Oversee risk control implementation plan Alert DON/CEO of any changes in plan Submit milestone report (minimum quarterly) Purchase ergonomically appropriate furniture and equipment Ensure job/roster design integrates manual handling requirements Ensure design changes to facility integrate ergonomic improvements Ensure that risk assessments occur		
Training requirements	Manual handling training needs analysis Manual handling coordinator trained Assessment staff trained (task, patient, home, equipment) Induction training all manual handling staff (hoists, belts, slip sheets etc) Annual competency review of all manual handling staff (hoists, belts, slip sheets etc)		
Record keeping	Establish facility filing system		
Evaluate and review	Complete audit (eg numerical profile) Review training files Review injury statistics, hazard and accident/ incident investigation reports		

8.5 Air assisted transfer and repositioning (ATR) system

(examples courtesy of Nepean Hospital)

Risk assessment

Desired outcome

- To relieve pressure on pressure points and reposition patient.
- To move a patient to and from a bed, trolley and a water chair.
- To minimise the risk of staff injury.

Purpose

- To minimise staff injury whilst moving more dependent patients.

Authorisation

- Staff who have been assessed as competent may perform this task.
- Assessments must be documented by the Nurse Unit Manager.

Indications and Contra-Indications

Indications

- Patient unable to reposition self independently.

Contra-Indications

- Confused patient unable to comply with safety instructions.

Risks and precautions

Risk	Precaution
Patients: rolling off ATR if strap not secure	Strap patient loosely when inflating an ATR system
Staff: manual handling injuries	Adhere to procedures

Moving patient from bed/trolley to bed/trolley using an Air Assisted Transfer & Repositioning System (ATR System) – safe work practices

This operation requires a minimum of two people, pat slide and motor.

Procedure	Rationale
1. Explain to patient that they are being moved to another bed/trolley on an ATR system and that the system's motor will make a substantial noise.	Explanation reduces anxiety of patient
2. Remove any pillows under patient. Lock trolley/bed wheels. Flatten the bed/trolley.	Safety requirement
3. Centre patient in middle of bed and ATR system. Move their arms to their side. Uncross patient's legs.	Safety requirement
4. Move any tubes, wires or equipment that may get caught or may hinder the move.	Safety requirement
5. Secure strap over patient. Strap should be loose – two hands should easily fit between patient and strap.	Safety requirement
6. Connect motor to power point and hose to foot end of mat. Ensure mattress press-stud and velcro firmly attached to hose connection.	
7. Place ATR system motor and hose in a location where it will not get caught during the move.	Facilitates ease of transfer
8. Adjust beds/trolleys so that the receiving bed is between 25 and 50 millimetres lower. If this is not possible bring them as close as possible. Use a Pat Slide as a bridge between the beds if the gap exceeds 150 millimetres or the receiving bed is higher.	Safety requirement
9. Tell patient you are turning on ATR system and they will be lifted off the bed.	Explanation reduces anxiety for patient
10. A person on each side of the ATR System will take hold of the straps.	Safety requirement
11. Beware, ATR system will quickly inflate when started. Start the motor.	
12. Stop motor if patient not centred or appears to be rolling off. Reposition.	Safety requirement
13. Wait until fully inflated.	
14. When the ATR system is fully inflated move the mat gently across to the other bed. Feet first then torso down hill. Head first if uphill.	
15. Let go of the ATR system straps when deflated.	
16. Remove the motor and hose. Remove the first bed/trolley.	
17. Raise the bed back rest if required.	
18. Readjust tubes, cables and equipment	
19. Make patient comfortable	

Sample Air Assisted Transfer & Repositioning System (ATR System) competencies

Name of staff member being assessed:	
Name of assessor:	

Staff must have read and understood the procedures before being assessed.

Any staff member who has already been assessed competent can do the assessment. Assessment can be done at any time to fit in with ward routine. The assessor can be one of the team assisting with the task.

TASK: Placing ATR system under patient	Tick
Patient understands procedure	
Sufficient staff	
Wheels locked	
Bed/trolley correct height	
Patient centred on bed	
Equipment clear	
Staff positioned correctly	
ATR system located correctly	
Patient comfortable	

TASK:	Pressure care	Bed to bed	Up bed	Bed to chair
Patient understands procedure				
Sufficient staff				
Wheels locked				
Bed/chair at correct height				
Patient centred on bed				
Equipment clear				
Strap secured				
Motor and hose not obstructed				
Hose connection secure				
Bed level				
Pat slide used as bridge (to chair or moving up)				
Patient told of motor noise				
Straps held firmly until deflation				

TASK:	Pressure care	Bed to bed	Up bed	Bed to chair
Feet first then torso if down hill, head first if uphill				
Smooth movement				
Equipment checked				
Patient comfortable				

Assessed as competent:		Date:	
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The manager must keep this record until another assessment is performed within 12 months⁴.

⁴ Legislation may require retention of all training records for longer periods

8.6 Sample protocol for risk management of bariatric patients admitted through the emergency department

(example courtesy of Manning Base Hospital)

Sample protocol

If patient admitted through the Emergency Department in excess of 150 kg the following procedures to be followed:

1. Ambulance officers notify the Emergency Department of the patient's approximate size, weight and condition prior to arrival of the ambulance at the Emergency Department.
2. Nurse Unit Manager (NUM) Emergency Department to contact ward of destination for an electric bed ie 200 kgs or 250 kgs. This will be brought down to the department by the wardsperson.
3. When the ambulance arrives the electric bed will be taken to the ambulance where the patient will be transferred directly onto the electric bed.
4. The transfer of the patient from ambulance to electric bed will be performed with the appropriate number of staff identified by the NUM and staff.
5. Patient transferred from Emergency Department to the ward/Acute Care Area with adequate staff as identified by the Emergency Department NUM.
6. Ward staff on arrival of patient to assess the patient's requirements using the *red dot mobility system*, document level of mobility and change the red dot plate to required dots ie 4 red dots – bed rest and document in the nursing care plan.
7. If the patient has many clinical factors as well as their weight problem a *special mobility plan* will be put in place.
8. The plan will be conducted by the manual handling coordinator, nurses, doctors and the wardspersons and will be reviewed shift by shift as the patient's mobility requirements change.
9. All manual handling equipment to be used with *no physical lifting* of the bariatric patients; team patient movements only using the appropriate manual handling equipment, ie:
 - electric patient lifter capacity 300 kgs
 - electric 250 kgs patient bed
 - electric 200 kgs patient bed
10. If a bariatric patient has fallen onto the floor a 300 kg electric lifter/sling will be used for returning the patient to their bed, using an appropriate number of staff.
11. Day supervisor, evening supervisor and night supervisor to liaise with relevant staff in passing on relevant information regarding the patient's mobility status.

Summary

Bariatric equipment in place at Manning Base Hospital

- 300 kgs capacity or SWL electric lifter
- 300 kgs capacity or SWL patient lift sling
- 400 kgs capacity or SWL commode chair
- 300 kgs capacity or SWL wheelchair
- 250 kgs capacity or SWL electric bed

SWL – safe working limit

All bariatric patients' mobility requirements must be managed using a risk management approach using the available equipment listed above.

8.7 Checklist for evaluating patient handling hoists prior to purchase (WorkCover NSW)

Workplaces in NSW are required to comply with the provisions of the *Occupational Health and Safety Act 2000* and the *Occupational Health and Safety Regulation 2001*. This legislative framework requires employers (and others with responsibility in the workplace) to adopt a systematic risk management approach – that is, to identify foreseeable hazards that have the potential to harm people at the workplace, assess the risk of harm, eliminate those risks which are reasonably foreseeable and where it is not practicable to eliminate risks, the employer must control them.

This risk management approach must be done in consultation with staff – this allows employees to contribute to the making of decisions affecting their health, safety and welfare at work.

When considering how to control risks, the legislation provides a preferred hierarchy of control. Good design of equipment, work practices and the working environment is the preferred way to eliminate manual handling risks in the workplace.

This checklist will help you to select a floor or ceiling mounted hoist for your facility. First you should think about **why** you need a hoist. The first question will help you do this. You may decide that you need more than one type of hoist. Next you should go through the rest of the questions on each hoist you are evaluating. The checklist will help you to **choose between the different hoists**. Make sure that the purchasing officer or an appropriate person answers question 10. Try to answer every question. Make plenty of comments on the form.

FULL NAME OF HOIST	
Capacity _____kg	<input type="checkbox"/> ceiling mounted <input type="checkbox"/> floor mounted

Where will you be using the hoist? (home, bathroom, ward, operating theatre, car, acute or rehab)

1. What do you want to do with it?	TICK
Bed to commode or shower chair and back	
Bed to chair and back	
Bed to bath or shower trolley and back	
Bed to toilet and back	
Chair to chair	
Positioning or repositioning in the bed/wheelchair	
Changing continence pads or clothing	
Into and out of water chairs	
Lifting patients off the floor	
To and from the ambulance stretcher	
To and from the X-ray table/operating theatre table	
Into and out of cars	

Consider what **features** the hoist should have (pivot head, weighing scales, toileting/bathing attachment, Jordan frame)

Consider what **type** of hoist you need (ceiling hoist, standing, full body, toileting or other special hoist)

2. Adjustment mechanism	YES	NO
Can the hoist be lowered to the floor with patient in sling?		
Can the hoist be raised to go over the highest point required for your needs eg bath, whirlpool bath, ambulance stretcher, etc?		
Is the height adjustment mechanism easy to operate with someone in it?		
Is the mechanism conveniently located for staff of different heights?		
Can you operate the mechanism without bending?		
Are the control box and battery located in a position to prevent breakage?		
Are the controls easy to understand?		
Does your ceiling hoist have both vertical and horizontal powered functions?		
Does your ceiling hoist have a distance memory function?		
Can the controls be operated out of the patient's reach (if the patient becomes aggressive/agitated while in the hoist)?		

Comments

3. Slings	YES	NO
Are there instructions on how to apply the sling?		
Is it easy to understand how to apply it?		
Can the sling be applied/removed without lifting the patient?		
Are there handles at the back of the sling to assist with positioning?		
Do the sling and clips/hooks stay in place securely after the hoist is activated?		
Is the sling acceptable to the patient's dignity?		
Can one person put the sling on and take it off?		
Does it come in different sizes and types (eg head support, mesh for showering)?		
Are there a variety of slings available, eg full body or toileting?		
Are slings/attachments clearly labeled with their size/weight capacity?		
Does the sling or other attachments restrain the patient safely eg violent or disorientated?		
Is it easily washable and dryable?		
Is it impossible to put the sling on incorrectly?		
Is the sling comfortable for the patient?		
Is it possible for the patient to slip out of the sling?		
Do the clips/loops attach easily with minimum force?		
Is it obvious how the slings attach?		
Does the sling accommodate the individual patient needs, eg bilateral amputee?		

Comments

4. Brakes	YES	NO
Are the brakes applied with one action?		
Are the brakes easy to engage and disengage?		
Is it easy to tell when the brakes are on?		
Is the brake pedal location convenient (accessible and visible)?		
Is the hoist steady when the brakes are on?		

Note: Brakes are not required on a ceiling mounted hoist.

Comments

5. Usability	YES	NO
Is it easy to widen the legs for stability/access?		
Can it be easily folded up for storage (if necessary)?		
Is the hoist easy to use and requiring only minimal training?		
Can the operators position themselves close to the patient while operating the controls?		
Is there signage on the frame of the hoist for capacity and sling sizes?		

Note: Ceiling mounted hoists are easier to push and pull and steer than floor hoists.

Comments

6. Safety	YES	NO
Is the hoist tested to the Australian Standard AS3581-88 or equivalent?		
Is the hoist free of protruding parts/sharp edges that could cause injury to patients and others?		
Is the hoist free of trapping hazards for the fingers, hands and other body parts?		
Are all the parts involved in supporting the patient firmly attached so that they do not fall off accidentally?		
Is there an emergency stop (electric)?		
Is there a risk of the patient accidentally hitting their head on the boom?		
Can the patient hold somewhere on the hoist, for security?		

Comments

7. Cleaning and maintenance	YES	NO
Is the hoist easy to clean, including the castors, with no potential dirt traps?		
Are the spare parts readily available locally?		
Can the hoist be maintained on site for routine and breakdown maintenance? (if not, is a replacement hoist provided?)		
Is there a separate battery charging unit with two batteries (one in use, one being charged)?		

Comments

8. Transportation	YES	NO
Is the hoist easy to move over different floor surfaces when loaded?		
Does the hoist fit into the bathroom?		
Does the hoist fit into the toilet?		
Does the hoist fit under the bed?		
Does the hoist fit around the chair/recliner?		
Does it steer easily with one person when loaded?		
Is the hoist easy to store (does not require large amounts of storage space)?		
Is there enough circulation space in the area it will be used (door width)?		
Is the handle height suitable for staff of different heights?		

Comments

9. Compatibility of components	YES	NO
Does the hoist come with attachments eg commode chair, Jordan frame or weighing scales?		

10. Purchasing (purchasing officer, in consultation with other relevant staff)
Cost of hoist, slings and battery
Discounts available
Warranty/replacement/repair policy
Conditions of service agreement
Availability of spare parts
Number of lifts before battery requires recharge
Life of battery
Maintenance requirements
Education/training provided
Accessories available eg slings, different castors, commode chairs

	YES	NO
If new model introduced, will service continue to be provided to the old model?		
Replacement of the hoist if needed to be taken away for repairs?		
Available for trial or hire prior to purchase?		
Storage space required?		

11. Trial period

It is important that staff trial the hoist/s prior to purchase. Make sure that the hoist is demonstrated to staff at the beginning of the trial period. Ask staff to use it as much as possible. A trial period of at least 2 weeks is suggested. The hoist should be used on all shifts during this time. Attach a comment book to the hoist asking for staff opinions and comments. You may wish to seek the advice of a physiotherapist or an occupational therapist if you are trialing the hoist for a particular patient.

	YES	NO
Has the hoist/s been trialed?		
Does the hoist meet the needs of users?		

12. Outcome of trial

The hoist/s will be purchased

	YES	NO
The hoist/s will be purchased		

Reasons for decision

Name			
Position			
Signature		Date	

8.8 Checklist for the Implementation of a no lifting policy

(Adapted from ANF Victorian Branch)

Consultation	YES	NO
1. Have nurses and other relevant staff been consulted about the program?		
Senior management commitment		
2. Has senior management commitment been obtained to establish a proper program?		
3. Has budgetary commitment to the policy and program been obtained for equipment, training etc?		
4. Has an audit to establish the injury rates and related workers compensation costs been completed?		
External advice/expertise		
5. Is it necessary to engage an OHS consultant or expert to assist in establishing/ implementing the program or providing expert advice?		
Workplace structures, roles and responsibilities		
6. Has someone been nominated to coordinate the program and have roles of staff members been defined?		
7. Has a committee consisting of management and staff representatives been established to develop policies and procedures and to oversee the implementation of the program?		
Equipment		
8. Has an audit of manual handling equipment been conducted to determine equipment needs?		
9. Have suppliers been contacted to provide advice and to arrange demonstrations of equipment?		
10. Has equipment been trialed?		
11. Has equipment been selected and purchased in consultation with staff?		
12. Is there a maintenance program for equipment?		
13. Is there adequate appropriate storage space for equipment?		
14. Is equipment easily accessible to staff?		
Staff training		
15. Have staff been educated in the policy and procedures of the no lifting policy?		
16. Have staff been trained in the correct use of equipment and manual handling techniques based on the no lifting policy? Has training been provided to all staff including casual and agency staff?		
17. Does an expert/consultant need to be engaged to provide the training and is the training based on the no lifting approach?		

Patient/resident information and education	YES	NO
18. Have residents and their families been informed of the program and their cooperation gained?		
Worksite assessment		
19. Has a worksite assessment of the work areas and the physical environment been conducted to determine whether workplace modifications are required?		
Staffing levels		
20. Is there an adequate number of appropriately skilled staff to enable the no lifting policy to be properly implemented?		
Risk Assessment of manual handling tasks		
21. Have risk assessments of manual handling tasks been conducted and control measures implemented?		
22. Are the manual handling needs of residents assessed and are they incorporated into individual resident care plans?		
Cultural change		
23. Have policies and procedures been established to ensure full compliance and cooperation by staff with the no lifting procedures and manual handling methods taught in training?		
Program monitoring and evaluation		
24. Have procedures been established for the evaluation of the policy?		

Adapted from: ANF (Vic Branch) *No Lifting Implementation Guide & Checklist 1998*.

9. Resources

Core Training Elements for the National Standard for Manual Handling, National Occupational Health and Safety Commission (1995) www.nohsc.gov.au

Designing Workplaces for Safer Handling of Patients Residents – Guidelines for the design of health and aged care facilities. WorkCover Victoria 2002 www.workcover.vic.gov.au

Guidance on the assessment of the OHS competencies within industry competency standards, National Occupational Health and Safety Commission (1999) www.nohsc.gov.au

Occupational Health and Safety: A Practical Guide to Implementing Occupational Health and Safety in Residential Aged Care, Commonwealth Department of Health and Family Services (1996) www.ageing.health.gov.au

Guidelines for planning, design and building of facilities (various) Queensland Health, Capital Works Branch 1998 www.health.qld.gov.au

Manual Handling Guide for Nurses (2005) WorkCover NSW www.workcover.nsw.gov.au

Manual Handling in Aged Care – A program for carers (2002) WorkCover NSW – only available through the Australian Nursing Home and Extended Care Association (ANHECA) and Aged and Community Services Association of NSW and ACT (ACS).

Manual Handling for Nurses – Training Package (2005) WorkCover NSW www.workcover.nsw.gov.au

Manual Handling Competencies for Nurses, NSW Nurses' Association (1998). Also available at www.workcover.nsw.gov.au

Occupational Health and Safety Essentials for Nurses (2004) New South Wales Nurses Association

OHS Essentials (2004) NSW Nurses Association www.nswnurses.asn.au

Guidelines for Safer Patient Handling (2001) Queensland Health www.health.qld.gov.au

Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Public Health Services (2001) Circular 2001/111, NSW Health Department www.health.nsw.gov.au

Transferring People Safely – A Practical Guide to Managing Risk (2002) Worksafe Victoria www.workcover.vic.gov.au

Taking Safety Seriously – A Systemtrix Approach to Managing Workplace Risks in the NSW Public Sector, NSW Premier's Department (2002) www.premiers.nsw.gov.au

Organisations

For further information on OHS and workers compensation matters in NSW, contact:

WorkCover NSW
Ph: 13 10 50
www.workcover.nsw.gov.au

For information on the professional, educational and industrial welfare of nurses and the nursing profession contact:

NSW Nurses' Association
PO Box 40
CAMPERDOWN NSW 1450
Phone: 1300 367 962
Fax: 02 9550 3667
www.nswnurses.asn.au

For national standards, national codes of practice and guidance material, contact:

Office of Australian Safety and Compensation Commission
(formerly the National Occupational Health and Safety Commission)
GPO Box 1577
Canberra
ACT 2601
www.nohsc.gov.au

For policies and guidelines relating to different aspects of health including workplace health and safety, contact:

NSW Health
Locked Bag 961
NORTH SYDNEY NSW 2059
Phone: 02 9816 0425
www.health.nsw.gov.au

