

# THE BARIATRIC JOURNEY IN AUSTRALIA: HOSPITAL CASE STUDY



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**Australian Government**  
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## **The Bariatric Journey in Australia: Hospital Case Study**

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## The Bariatric Journey in Australia: Hospital Case Study

There is an increasing awareness of the risks carers of morbidly obese (bariatric) patients face during their transport and movement from home to the health care institution and then home again, or potentially to the mortuary and then to a funeral. This transport and movement has been termed "the bariatric journey" (Hignett et al 2007).

In Australia in 2004-05, some 41% of adult males and 25% of females were classified as overweight (Body Mass Index [BMI] of between 25 and 30) and 18% of males and 17% of females were classified as obese (Body Mass Index over 30). Increases have been recorded in both the overweight and obese groups across all age groups in recent years.

Morbidly obese patients are over represented in the use of healthcare. Further, there is a high mortality rate for these patients because of the patients' delay in accessing treatment. It is possible that this delay may be in part due to there being limited capacity within institutions to manage care.

The bariatric patient's journey within the health care system commences with transport from the patient's home by ambulance. On arrival at the hospital as an out-patient the journey continues through to specialist departments such as radiography, or through to a ward as an in-patient and subsequently to specialist departments, or potentially to theatre. On completion of treatment, the journey resumes with the transfer by ambulance to home or another institution. If treatment is unsuccessful, the deceased is transported via the mortuary to a funeral home and finally to the funeral service.

Bariatric patients generally have limited mobility and decreased lung capacity because of the weight of the chest wall. This reduces the patient's ability to assist during movement. Problems other than handling their weight arise because patient handling equipment, buildings and facilities are not designed for large body masses and shapes. Therefore, there are special demands placed upon carers throughout this journey with regard to patient lifting and movement.

The bariatric patient handling case studies aim to illustrate the problems that are encountered and the solutions that have been developed by

health care providers and others to assist the handling of bariatric people during their journey within the health care system in Australia.

This case study describes the particular problems that the Hospital Sector experiences and the limited options that are available to implement solutions.

This case study is part of a project funded by the Australian Safety and Compensation Council (ASCC) in 2008. The research consisted of a literature review and conduct of focus groups with personnel involved in the transport of bariatric patients. The full report of the work can be accessed via the ASCC web site at [www.ascc.gov.au](http://www.ascc.gov.au).

## **Hospital Sector Issues**

Despite the controlled nature of the hospital environment, staff consistently face constraints and limitations associated with the building. Commonwealth legislation guiding the design and feel of the environment are sometimes at odds with safe patient movement. An example of this is the laying of carpet in hospitals and nursing homes, which allows for a warm and 'home like' environment but can impede the ease of movement of patients on wheeled equipment.

Other building related issues include narrow fire doors and elevator openings which limit the movement of specialised bariatric equipment, and load limitations on roof trusses can preclude the installation of overhead hoists for bariatric patient movement. .

The availability of bariatric patient handling equipment is limited in health care institutions and access to equipment is particularly problematic in regional areas. Not only is there a limited number of suppliers in Australia, but also information about the range of equipment and the pros and cons of individual items is limited.

Much bariatric equipment typically accommodates a maximum load of around 230kg. Of concern is that equipment is designed in the USA, leading to limitations for use under Australian conditions, and while the design accommodates heavy patients, it ignores issues related to size and shape.

The appearance of equipment, its acceptability to patients and concern for patient dignity is also an issue. Bariatric equipment often has an “industrial appearance” which increases patient resistance to use.

The absence of a consistent definition of “bariatric” can limit the efficacy of procedures. The difficulties with definitions can also impact on the provision of appropriate staffing and financial resources and the employment of robust purchasing policies. The transmission of information about patients as they move on their journey through the health care system is at best, variable. A confounding problem is reportedly that bariatric patients will commonly misinform carers about their weight to avoid anticipated discrimination or because they have not been weighed for some time.

Problems can arise with staff being unfamiliar with equipment as a result of infrequency of use, high staff turnover or the employment of agency staff. Training to assess risk in a dynamic environment is also important such that appropriate decisions are made to control risk at the time of patient handling.

The range of issues arising in all aspects of work with bariatric patients has prompted one hospital to develop policies and procedures to deal with the bariatric patient journey through the institution.

This case study describes the ‘front door to back door’ policy for bariatric patient care that an institution that will be referred to as “Regional General Hospital”<sup>1</sup> (RGH) has implemented to manage the increasing demands for bariatric patient admission, care and discharge and to simultaneously reduce the risk of injury to hospital staff.

## **Regional General Hospital**

### **Introduction**

Regional General Hospital (RGH) is a large hospital in regional Australia. It employs over 3,000 staff and cares for more than



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<sup>1</sup> This pseudonym was chosen in response to a request for anonymity from the hospital in which the case study was gathered.

30,000 in-patients. There are 40,000 presentations to the emergency department and in excess of 72,000 bed days for their stays. The institution provides a range of services including surgery, and specialised care comprising medical imaging, pathology and so forth as well as psychiatric, respite and aged care services.

Of all the patients admitted to RGH for care, approximately fifteen percent (15%) are bariatric patients, in this case defined as having a body mass index (BMI) of greater than or equal to 30. Both the number of bariatric patients and the BMI they present with is rising. A significant number of admissions are at or close to 260kg which is the maximum limit for much of the patient movement equipment the hospital possesses.

The mounting number of bariatric patients presenting with increasing weights, a recognition of the risks that hospital staff face during bariatric patient care, and concern about the ad hoc approach to the issues associated with bariatric patient care, led RGH to investigate and develop a systems approach to bariatric patient care which they describe as a 'front door to back door' approach.

The following case study describes the evolution and constitution of this approach called the Bariatric Model of Care.

## **Regional General Hospital's 'Bariatric Model of Care'**

### **Manual handling issues and the need to implement the 'Bariatric Model of Care'**

Prior to the increase in bariatric patient admissions, committees that oversaw patient care and the health and safety function of the hospital dealt with bariatric care concerns in an ad hoc way. The hospital's manual handling committee, the Clever Movement committee<sup>2</sup>, received some reports of difficulties in moving patients that were addressed as each arose. The full picture of the number of issues and the range of

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<sup>2</sup> Clever movement committee is also a pseudonym to further protect the identity of the institution and its departments, working groups and committees

difficulties being experienced by people across the hospital were not apparent at that time.

“A patient whose weight was in excess of 300kg arrived at the hospital and with assistance was able to move to a bariatric wheelchair. The purchase of a bariatric bed was rapidly arranged.

The patient was 1220mm wide at the shoulders. There were limitations on the path that the patient could follow through the hospital to avoid narrow doorways. To preserve dignity, movement of the patient around the hospital was limited to times when few other patients or visitors were present.

The patient died in hospital and as with many bariatric patients, slept in a seated position in bed to prevent undue pressure on the lungs associated with chest weight. Post mortem rigidity of the hips made movement problematic. The bed was used to move the deceased towards the mortuary but progress was limited by the size of doorways. To progress the journey, two trolleys were strapped together and the deceased was positioned on these on his side. A tug was used to move the trolleys with 6 staff on each side. A large amount of manual lifting was required during transfers and to manage issues with the load limitations and stability of the trolleys during movement”.

A similar case prompted RGH to look at the overall model that was employed for bariatric patient care at the time and to consider every stage of the journey within the hospital from the time they arrived at the front door to the time they left to return home or to depart to a funeral home.

### **The evolution of the ‘Bariatric Model of Care’**

The Clever Movement committee (which consists of acute care nursing staff, the manual handling coordinator, an OHS management representative and three trainers in the Clever Movement manual handling training program) suggested that a Bariatric Working Group be set up to review the OHS and other issues related to bariatric patient



care. The Working Group comprised the coordinator that manages the Clever Movement programs, representatives from the OHS team, the senior supervisor of Environmental and Hospital Services staff, the Hospital mortician and a Hospital transport representative. The Bariatric Working Group developed the Bariatric Model of Care.

## The 'Bariatric Model of Care'

### Setting up RGH to care for Bariatric patients safely

One of the key concerns in setting up RGH for bariatric patient care was to equip the hospital for the period of patients' residence. Initially, it was planned that a cohorting approach, where bariatric patients stay in a single ward or area for treatment, would be the best approach to care. The hospital trialled this approach by furnishing four bed spaces with a full set of bariatric equipment.



**Front and rear views of a bariatric lifting machine which includes in-built scales. Inset: Indication of the safe working load label**

The trialling process indicated that a dedicated bariatric ward was not effective for departmental type care. Cohorting meant that equipment for bariatric patients would not always be available in one area where it might be needed.

RGH decided that an equipment pool would be more effective and would allow each department to treat the clinical conditions of the bariatric patients as well as manage the bedding and patient movement needs. RGH purchased five sets of bariatric equipment including items such as beds, power assisted bariatric wheel chairs, shower chairs and lifting machines of different load capacities.

The idea of cohorting bariatric patients has been explored by hospitals in Australia but it is reported that access to clinical care from specialised departments is limited by cohorting of a particular type of patient. It is more effective in Australia to cohort patients according to the type of care (i.e. surgical care, endocrinology, cardiology etc.) and level of care required. This also allows the issues relating to patient movement during care to be shared among different staff rather than being confined to a specific number of specialised staff.

The number bariatric equipment sets enables the care of multiple bariatric patients beyond the maximum number simultaneously cared for to date. In the event that the number of admissions exceeds the number of RGH sets, equipment is hired from a local medical equipment hire business.

### Managing equipment distribution from the equipment pool

With a number of departments having access to the equipment pool on a needs basis, the hospital set up a computerised tracking system for bariatric equipment loans. While the Manual Handling Coordinator for the hospital manages the system overall, any staff member with access to the hospital's computer network can access the equipment database. Staff can see what equipment is available for loan, what equipment is already on loan and what remains available. The required equipment is collected from the equipment pool lock-up area in the basement of the hospital and is transferred to the ward.



**Above:  
Front and rear  
views of the power  
assisted bariatric  
wheel chairs**

**Left:  
Bariatric shower**

## **Understanding the manual handling requirements for the hospital and for bariatric patients**

RGH has a system for completing manual handling assessments for all primary patient care tasks. These primary tasks are those that are undertaken for all patients and are an essential part of the day-to-day routine for staff. These include moving patients on and off beds, assisting patients with showering and dressing, toileting of patients and so forth.

In the manual handling assessments RGH considered both normal weight patients as well as bariatric patients and as a result a number of equipment, procedural and environment changes were made to reduce the manual handling risks.

## **The operation of the 'Bariatric Model of Care'**

### **Patient Admission**

The 'Bariatric Model of Care' begins on arrival of the bariatric patient at RGH. Whether the admission is via ambulance or private vehicle, in most cases, the hospital has advanced warning of the patient's arrival. The impending arrival of patients with a body mass index (BMI) of greater than or equal to 30 triggers an assessment of the patient's weight, their equipment needs, their clinical needs and the staffing levels required. This trigger point has been found to be appropriate.

When a patient arrives at emergency and is assessed as needing to be admitted, a room is set up in the ward prior to transfer using equipment from the pool.

### **Issues arising during the patient's stay at hospital**

Transfer between the emergency department and the ward requires bed movement along corridors and into and out of lifts. Given that RGH comprises a mix of older, renovated, and new buildings, the interfaces between the buildings creates uneven and undulating conditions, including ramps and carpeted floors. The use of tugs on equipment helps, but often they are designed for older standard equipment and connection points do not always match those of bariatric equipment.

Where patients require other departmental services such as pathology or medical imaging, the service visits the patient rather than attempting to



**View of corridors showing the degree of and changes in rise along the floor where it is difficult**

manoeuvre the patient to the service. However, some services are fixed, for example, MRI equipment, and additionally some bariatric patients are too large for equipment.

### **Issues arising during the care of deceased patients prior to transfer to the funeral director's premises**

A particularly difficult part of the bariatric patient journey at RGH is the transfer of deceased to the mortuary. The bariatric deceased must be transferred to the service lift which leads to the mortuary entrance. On leaving the lift the trolley carrying the deceased must make a series of 90 degree turns at corners leading out of corridors and into rooms. Here the trolleys or the bariatric beds can get jammed, creating additional strain on equipment that has not been tested to withstand large weights under movement, further adding to the instability of both the equipment and the deceased.



**View of mortuary corridor where turning a bariatric bed or trolley carrying a bariatric patient in through the mortuary door is difficult**

In one transfer of a deceased patient to the mortuary, the severe difficulty in making the 90 degree turn resulted in damage to the wall and doors. Several attempts were made to manipulate the bed before successfully entering the mortuary arrival area.

### **A summary of key concerns and ongoing issues arising from the initial implementation of the 'Bariatric Model of Care'**

The 'Bariatric Model of Care' using a 'front door to back door' approach has enabled RGH to see their patient care process as a system. They are now able to identify issues associated with each part of the system, and with the transition points between parts of the system.

Some challenges have arisen during the implementation of the model which has led to refinements as well as a series of concerns or questions that still need to be addressed.

These include:

- Each time a new bariatric patient presents, some unique issues arise. This means that only a certain proportion of the bariatric care tasks are routine and some new problem solving is required to fully and safely accommodate each patient, whether it be in the form of equipment or patient transfer procedures.
- The definition of what constitutes a 'bariatric' patient is a point of contention for a number of services within the journey of bariatric patient care. While a BMI of at least 30 is seen as a useful trigger point to implement bariatric care procedures, its use is limited in informing other procedures such as purchasing.
- Bariatric equipment is often defined by its weight capacity and equal distribution of load across the equipment is assumed. What is found in practice is that the shape of the patient and the distribution of weight is variable. This places stress on components of the equipment such as wheels during movement.
- Hospitals such as RGH would prefer manufacturers to make more complex load and capacity assessments so that, as purchasers, they

can be confident that the equipment is going to safely support as well as transport the patient throughout the facility.

- Building design is a key concern for RGH, however it is one that is being gradually improved as new facilities are added and older areas are renovated. In doing so one issue arising is the linking of new buildings to older ones, limiting smooth transport of patients between sections.

### **Future directions for the 'Bariatric Model of Care' at Regional General Hospital**

Modifications to the bariatric model of care are being made continuously in response to the unique issues that each new bariatric patient brings to the hospital. The major changes are associated with building development plans which had just been approved at the time of writing the case study.

The development plans include excavation of the basement of the hospital which houses the equipment store, the laundry, the services and the mortuary. They also plan to build an enclosed ramp for travel between the floors and the mortuary in particular. The enclosed ramp will incorporate industrial hoists for transfer of the deceased. These will eliminate the need to use lifts which are generally too small. The enclosed ramp will also reduce the need to transfer bariatric deceased out-of-hours to maintain privacy.