G15	Standard	Bariatric/ plus size moving and handling (M&H)

Systems are in place to cover all reasonably foreseeable handling situations in **bariatric management**.

Justification

Rationale

Whilst all patients and service users (persons) should be treated with due care and sensitivity to ensure that their treatment and management is safe and of a high quality – ensuring dignity, choice and optimal clinical outcomes – the larger person merits special attention. Assisting such people may impose greater risks to staff because of the person's weight and size. Standard equipment and furniture is not generally sufficiently robust or large enough. Space is an issue where heavy duty equipment is deployed. Specific training may also be required.

Authorising Evidence

HSWA (1974); Equality Act (2010); Health and Social Care Act (2008) Regulated Activities 2009; HRA (1998); LOLER (1998); MHSWR (2000); MHOR (2004); PUWER (1998)

Links to other published standards & guidance

CQC (2010); DLF(undated); HSE (2007) RR573; HOP6 (2011); Muir M (2008); NPSA (2008); Rush, A (2009); Ruszala et al (2010); WHO (1998)

Cross reference to other standards in this document

A; B; C; D ; G2-5,7-40; H; I; K; L4-10

Appendices

9-11,13-16,21,26

Verification Evidence

- requirements for compliance to achieve and maintain this standard

- Generic assessments specific to bariatrics, to identify in particular, equipment and space requirements, are carried out and developed into SOPs and protocols, with control measures which are implemented
- Individual assessments of the person's goals, care requirements, functionality and equipment needs are carried out. These include activities of daily living, airway, breathing, circulation, dignity and psychological needs
- A comprehensive list of types of equipment, their uses, location (if held within the organisation), or procurement arrangements (if sourced externally), is readily available to all who may need it
- All staff are trained to the level of competence required, developed from a training needs analysis, with suitable and sufficient local supervision
- Staff training and competencies are documented and reviewed as necessary
- Audits and incident reports are followed up and acted upon

G15 Protocol – Bariatric/ plus size moving and handling (M&H)

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1. Introduction and background

Global Definition

The term Bariatric comes from Baros (Greek) meaning large or heavy but the application of this term is used to include a wider population than the definition of obesity. A 'bariatric' person can be defined as anyone who has limitations in health and social care due to physical size, health, mobility and environmental access (Arjo Huntleigh, undated).

Individuals with a Body Mass Index (BMI) of greater than 30 are classified as obese, and greater than 40 as morbidly obese.

However Bushard S (2002) suggests that organisations need to take an holistic view and consider several factors in addition to weight, for example height.

Health and Safety Definition

A bariatric person can be defined as anyone whose weight

- impacts on their mobility, size and shape

- is a risk to care givers

- exceeds the safe working load (SWL) or dimensions of regular equipment

- impacts on space requirements

- impacts on staffing levels

Besides the weight, size and shape, the bariatric person can have a wide range of co-morbidities, such as an inability to lie flat (Corbyn and Rush, 2010) that may affect mobility and the way they need to be assisted. A bariatric person will also have reduced joint movement and will be at risk of joint injury as a result.

The NHS Information Centre for Health and Social Care (2009) highlighted that in 2008, 24% of adult men, and 25% of women (aged 16 or over) in England were classified as obese. This is an overall increase from 15% in 1993. Men and women were equally likely to be obese, however women were more likely than men to be morbidly obese (3% compared to 1%). The NHS Information Centre (2009a) estimate the annual cost of £4.2billion linked to treatment of co-morbidities which could double by 2050.

Globally, there are more than 1 billion overweight adults, with about 300 million classed as obese (WHO 1998, cited in Drinkwater and Foster, 2010). 6% of all deaths are due to obesity (WHO 1998, cited in Drinkwater and Foster, 2010).

Impact of Obesity

- The government has identified obesity as a priority area and set the target of halting the rise in childhood obesity by 2010 in the context of a broader strategy to tackle obesity in the population as a whole (NHS Information Centre, 2009a).

- Obesity decreases life expectancy by up to nine years and substantially increases the risk of many diseases, including heart disease, cancer and diabetes. Type II diabetes is almost 13 times more common in obese women than women of normal weight and 7 times more likely to develop in obese men. There are 30,000 deaths a year, 6% of these are obesity related (NHS Information Centre, 2009a).

- It has been estimated that if childhood obesity continues to rise at the current rate, children could soon expect to die younger than their parents (NHS Information Centre, 2009a).

Aetiology

Obesity is a disease in which excess body fat has accumulated in the adipose tissue to such an extent that health may be adversely affected – 20% more than ideal weight.

This table show some of the factors (in no special order) to consider when caring for a bariatric person. It must be remembered that the person is treated holistically and all factors will impact on the way the person is moved and the way they move themselves.

Metabolic	Reduced physical activity
Genetic	Increased RISK perception
Behavioural	Medication
Mental well-being	Illness
Therapeutic	'Binge' eating disorders
Foetal factors	Environmental & social factors
Physiological factors	Tissue integrity
Food	Reduced joint range

2. Management, organisation, supervision and support

According to the MHSWR (2000) Reg 5 all specialist areas need to be assessed and managed appropriately in accordance with clinical need and recognition of best practice for that speciality. Organisations need to ensure sufficient resources and control measures are in place where bariatric individuals are cared for, including space, provision of appropriate equipment (hired or bought), staffing/carer levels and training.

Supervision and support for staff and carers working with bariatric people are essential as staff/carers may be concerned for their own health and safety whilst handling a bariatric individual and this could be reflected in the ways they interact and handle the bariatric person. It is necessary to consider a variety of interventions/ options that includes staff rotation and a flexible protocol which allows staff to borrow extra workers from other areas for certain tasks when required. Equipment must be accessible at all times, and staff must know how to access and use it.

3. Staffing levels

Sufficient numbers of suitably qualified staff/carers must be employed and rostered (CQC, 2010). These levels should be pre-determined, based on a risk assessment, with provision for peaks in demand.

Risk assessment is essential to determine the following: -

- What the person is able to do for him/herself - how much mobility and functional capacity the person has
- Number of staff required.

When considering staffing levels the capabilities of staff should be considered as well as staff body dynamics. Staff who are below average height for example may find difficulty in reaching across larger sized furniture with a person who is wider than average, potentially transferring risk to other staff. Family carers will need to be engaged with the process if they wish to assist the person and be working as part of the team.

Equipment provision that may enable staff numbers to be decreased, whilst maintaining quality and safety, would include: -

- Hoists and other mechanical aids
- Bariatric profiling beds. Determining the correct width of the bed will ensure that carers are able to work within their own body dynamics/ body zones to maintain good posture. Integrated weighing and turn assist facilities are an advantage

- Repo sheets, in situ slide sheet systems
- Hovermat.

4. Staffing competencies (after Benner as cited in Ruszala et al, 2010)

Extra sensitivity is required when moving a bariatric person who may be aware of needing more support and assistance in some situations. Staff must not unfairly discriminate in any way. It is essential to involve the person in the decision making process if they have mental capacity.

Novices are new or inexperienced handlers who have no experience in bariatric handling.

If staffing levels are low then novices may be asked to help, in which case the lead must ensure that appropriate risk reducing measures are in place to prevent the novice harming him/herself or the person.

The Advanced Beginner may be able assist in moving a bariatric person. They must be assessed to ensure that they are capable of using equipment correctly, and supported when choosing techniques to move the person or heavy equipment safely. (For example when using a mobile hoist and fitting a sling).

Competent Practitioners/carers should be able to assess the person, and use equipment to move the bariatric person safely without causing discomfort or fear for the person. The competent practitioner will be aware of the psychological, environmental and risk factors associated with moving a heavy person. The number of people required to help will depend on the capabilities of all those who are helping therefore an informal risk assessment should take place before any manoeuvre. The competent practitioner should be able to plan for the admission, care and discharge of the person, ensuring all equipment is available and risk assessments completed. Knowledge of equipment, how to access and use it are essential.

The Proficient practitioner will be experienced, have received additional training, therefore have enhanced knowledge and skills, and understand how to facilitate movement with minimal effort. S/he will also have an in depth understanding of how to empower the person, staff and carers in their decision making.

The Expert: Expertise develops when the clinician tests and refines propositions, hypotheses, and principle-based expectations in actual practice situation. S/he may be called upon to give advice in complex handling situations and should be involved in the planning and implementation of strategies, policies and guidance used to care for this group throughout the organisation. Prejudice and media coverage tends to have negative effects on both the person and those who are caring for them, so it may be part of the role for an Expert to deal with these

issues by educating all concerned in order to ensure best practice, and thereby support equality and human rights.

5. Environment

High quality, reduced risk, and efficient and effective practice is rendered difficult or impossible in sub-standard working and clinical environments. This is often overlooked; therefore attention must be paid to: - space and layout (including storage), manoeuvrability of equipment with carers and individual involved, flooring, lifts, stairs, lighting, other ambient conditions, equipment and furniture, in order to ensure good ergonomics.

It is recognised that in the community the environment will seldom be ideal.

Environmental Hazards

Constraints to be considered when caring for a bariatric person

- Access and egress
- Safe working load of the floor
- Stair lifts
- Carpets and thresholds
- Furniture
- Door openings
- Corridors
- Ceiling heights
- Power supply (access, positioning)
- Work space.

Flooring

Each organisation/ local authority needs to ensure that staff who carry out assessments have access to a competent professional regarding weight limits of flooring.

Example: as a general rule of thumb, a ground floor can take 2000kilos based on a 3metre square room; first floor and above will have a reduced load tolerance. Equation has to take into account the joists, type of floor and size of room.

The maximum point load of most buildings for one square foot is 375kgs minimum. E.g. A person weighing 400kgs should not stand on one leg. 99% of ground floor buildings are adequate. Every effort should be made to manage the person on the ground floor to reduce the risk of staff injury particularly in a case of emergency evacuation.

If a person is situated above the ground floor expert advice should be sought (Rush, 2002).

6. Communication and information systems regarding initial referral and entry to the system

It is vital to have effective communication, so that the correct information is relayed between the various teams and individuals involved in the 'person's journey', before transfers, admissions and discharges. Notifying A&E departments of the imminent arrival of a seriously injured or ill person is of course routine, and this principle should also be applied to a non-ambulant bariatric person who needs X-rays, and other interventions.

In the case of an emergency admission, the A&E department should have access to bariatric weighing scales in order to record the person's current weight (provided the person's condition allows it), and a protocol as to when the receiving ward has to be informed of the person's weight/ body dynamics. For example the SWL of standard beds/ mattresses on the ward may be less than the weight of the person being admitted and the ward needs to have time to access an appropriate bed/ mattress before the person's arrival on the ward, to avoid unnecessary delay or an extra transfer, and embarrassment for the person.

A bariatric person may be admitted for surgery through an elective process. In this case it should be standard practice to alert theatres, wards and departments of the person's weight and body dynamics to ensure that the correct equipment and staffing levels are in place before the person arrives.

7. Treatment planning – goals, etc

At all stages of a person's journey through the system, treatment must be planned by the multidisciplinary team and goals agreed with all concerned. Forward planning for every reasonably foreseeable eventuality will minimise the occurrence of true emergency handling.

8. Moving and handling tasks - Methods, techniques and approaches

Discrimination should not be tolerated. A bariatric person should not be judged in a way which is degrading and/or upsetting.

To comply with legislation manual handling tasks should be avoided wherever possible and the person should be encouraged to move independently, or tasks which cannot be avoided should be mechanised.

The right equipment can facilitate: -

- Person's function
- Increase independence

- Eliminate some high-risk nursing tasks.

In essence, inappropriate equipment provision is hazardous and has the potential to cause harm to care givers, relatives and the individual. Regular heavy person handling increases the risk of cumulative damage (Pheasant, 1997).

Equipment may be bulky and unwieldy to move even before it has the person sitting on it, and availability of storage should be considered because larger furniture takes up more space. The safe working load of every piece of equipment should be compatible for individual use. It is important to ensure the compatibility of large pieces of equipment with other equipment.

Positioning

A bariatric person will stand with a similar stance to that of a pregnant woman (backward leaning with the abdomen sticking out). When lying, very large people cannot lie flat and will need to recline at 45^0 to be comfortable. Incorrect handling could cause obstructive apnoea. The diaphragm should be managed so that body weight does not press on it causing discomfort. Sitting upright will aid secretion drainage. The chair position with reverse Trendelenburg allows good respiration and minimises abdominal and thoracic pressures. Where possible, the bariatric bed should be an electric four section profiling bed.

Medical examinations of the cardiac system, gastro-intestinal and respiratory systems may require movement of skin folds and specific positioning to allow access for medical instruments such as sonic aids. If turning a person with a large pannus, it will be necessary to place a pillow under the pannus to assist with supporting the pannus to prevent damage. Some bariatric individuals (for example pear abducted body shaped individuals) may find rolling difficult (Rush, 2002) and have to be assisted to turn.

9. Moving & handling assessment

When assisting bariatric persons to move all moving & handling tasks must be assessed (MHOR, 2004). This can be done generically in connection with the drawing-up of SOPs, or individually. An awareness of where the weight is held will be advantageous due to potential balance problems (Benmor Medical, 2012). In emergency situations assessments will need to be made rapidly, but not so fast that safety is compromised, possibly recording after the event.

The assessment needs to include rehabilitation, possible action in the case of a fall and emergency situations e.g. fire evacuation and cardiac arrest. Tissue viability needs must not be overlooked (see G 40 – tissue viability).

A multidisciplinary approach needs to be considered and the person should be referred to therapists who can help identify equipment which will enable the person to maintain independence wherever possible. Hygiene facilities must allow space for the carer to manoeuvre around the person and equipment when handling.

Assessment should clearly state what the person can do for themselves, the number of carers and the equipment required for each task. There must be adequate space for safe practice.

10. Methods, techniques and approaches

Evidence-based approaches should be used, following thorough assessment. These approaches need to be implemented and embedded, with the requisite equipment, training, supervision, etc. Procedure and protocols should identify hazards, evaluate risks, set goals, describe in sufficient detail the precise methods, point out special precautions and give clear clinical reasoning.

11. Handling equipment

Before equipment is ordered an accurate weight of the person should be obtained. There are several ways of determining a person's weight and appropriate scales should be part of all organisations' equipment provision.

Renting of equipment should be considered if space for storage is an issue.

There may be cost benefits in purchasing equipment and it is important to consider the implications of the company from whom the equipment is hired running out of a product or not being available 24/7. This should be a part of the contractual agreement. The SWL of the equipment should not be the only thing to be considered. The width, height and depth of equipment are important as is a consideration of the body dynamics of the person who will use the equipment. Equally the compatibility of the equipment is an important factor, if the hoist and bed do not work together; you will increase the risk of injury to both the carer and person.

It is essential that a bariatric bed/ chair/ hoist/ commode/ wheelchair are provided for all situations. Beds with integral weighing scales are usually sourced for hospital, however in the community it may be necessary to commission equipment suppliers to provide a weighing service.

Ideally a bariatric hoisting system should be one with a facility to enable persons to carry out 'hoist assisted' walking/ gait training with therapists or a back care adviser. An overhead hoisting/ gantry system (with appropriate SWL) may be safer for this task than a mobile hoist but in a person's home this may not be possible, and a bariatric walking frame may be more suitable for this task.

If the bed is too narrow for the person the bedrails could rub on the external surface of the skin causing pressure injury. The risk of pressure damage can be compounded from the armrest or inappropriate pressure cushion in chairs (Corbyn and Rush, 2010).

See http://www.independentliving.co.uk/bariatric.html for a list of stockists of bariatric equipment and advice.

NB: The inclusion in this document of a specific manufacturer or supplier does not represent an endorsement by the authors. Other companies may provide similar or better products.

12. Other equipment & furniture

When a multidisciplinary approach is used, the therapists or manual handling practitioner/ back care advisor would help to identify equipment to enable the person to maintain independence wherever possible.

A 'bariatric' chair needs to be appropriate to the person in terms of size, pressure reduction and function, with the correct height seat to allow feet to be flat on the floor; seat width and depth appropriate to support correct sitting position and prevent pressure ulcer development; the arms of the chair should be height adjustable if possible or at the correct height and not pressing the person's sides when they sit on the chair. To create a 'safer system of work' the armchair should have 'housekeeping' wheels on the back legs that can be utilized when the chair needs to be moved around if in the hospital environment. If in the community it is more likely that a bariatric riser recliner chair will be provided. In this case, due to the length of time a bariatric person spends seated, consideration should be given to high dependency seating specific to the person's needs.

If the bariatric person has mobility problems then it is vital to have access to a bariatric commode - on wheels for easier moving and of appropriate width and depth to allow the person to sit on it rather than perch on the edge. The bariatric person also needs access to a wheelchair with drop down or removable arms to facilitate seated transfers if necessary.

Other equipment for hygiene and personal care purposes should include a suitable toilet frame that is capable of supporting a bariatric person, and access to a shower facility with a suitable shower chair.

As regular and accurate weighing is required, bariatric scales are a necessity (Benmor Medical, 2012).

If the person is destined for theatre, the table and any other equipment used by the person must have a suitable bariatric SWL.

13. Risk rating for each task

To carry out a 'suitable and sufficient' assessment, each task should be evaluated as part of the assessment process, so that the level of risk is quantified. Such assessments should be used, wherever possible, in the design of a safe system of work, and in highlighting any residual risks.

Various systems exist, but it is suggested that the NHS risk management 5x5 matrix, with 0-25 scale, is used for an overall evaluation of risk (NPSA, 2008) (see CD1, appendix 9 in folder 5). It is in common use, simple to use with 5 levels of risk, determined by a calculation of the likelihood or probability of an adverse event occurring multiplied by the severity of consequences or impact should it occur.

Likelihood/Probability (0-5) x Severity of Consequences or Impact (0-5) = 0-25

The values below are based on this system. Calculations lead to the following possible scores or ratings: -

1 – 6 = Low; 8 – 12 = Medium; 15 – 16 = High; 20 = Very High; 25 = Extreme

Each task should be evaluated as part of the assessment process, so that the level of risk is quantified. Such assessments should be used, wherever possible, in the design of a safe system of work, and in highlighting any residual risks. Any residual risks should be escalated to higher management for inclusion in the organisation's risk register.

These ratings can also be used to alert staff and to justify any necessary expenditure to make the situation safer, on the basis of reasonably practicability. Actions to reduce the level of risk to the lowest level that is reasonably practicable can be demonstrated.

It will often be necessary to assess the postural risks to the handlers. Various systems are appropriate to use, including OWAS (Karhu et al, 1977), REBA (Hignett S & McAtamney L, 2000) and RULA (Hignett S & McAtamney L, 2006).

14. Alerting the moving & handling team

If the safe working load and width of all equipment used is known there is no need to alert the manual handling team regarding whether or not beds/ mattresses/ trolleys etc. are suitable. However, the expertise of the M&H team in ergonomics should be utilised, and therefore the input of the team to the planning of care in various settings may prove essential.

The M&H team may be involved in the monitoring and auditing of equipment provision and this should include equipment provision for bariatric people. Under the Lifting Operations and Lifting Equipment Regulations (LOLER, 1998) all equipment used to lift people should be serviced and properly maintained.

Similarly, because of the Provision and Use of Work Equipment Regulations (PUWER, 1998), work equipment must be maintained in good working order and repair. Equipment is usually larger than standard so storage may be a problem, in this case the M&H team may be involved in ensuring that staff know where to get the required equipment.

If the person is residing in the community, then the local Social Services team will need to be contacted and their moving and handling advisor informed. If the person is being discharged back into the community, all necessary equipment and environmental changes must be in place. Any equipment supplied must fit, and work, in the home (Benmor Medical, 2012).

Bariatric people with complex handling needs will be treated like anyone else with a complex handling problem and the manual handling team could be involved in training and educating staff in how to cope with specific problems. At all times the person should be involved with all decisions made regarding their care plan and how the M&H assessment will affect them.

15. Referral to and involvement of other specialists

Involving relevant teams at the appropriate time will minimise the chances of harm occurring in a specific situation, and will also promote the provision of suitable measures for any future occurrences. M&H in these specialist, unusual or emergency situations will sometimes require the input of such specialist advisors as those representing: - tissue viability, infection control, fire, prevention & management of violence & aggression (PMVA), security, general H&S, estates, facilities and so on.

Financial implications must be considered as part of the bariatric pathway. Staffing levels and equipment provision are very expensive, and may be required over a long period of time.

Where relevant, mortuary staff should also be informed as 6% of all deaths are due to obesity globally (Foster and Drinkwater, 2010), and 54% of deaths in England and Wales occur in acute hospital beds, whilst 22% of people die at home (Office of National Statistics as cited in Higgins, 2008). (See also G33 – handling of the deceased).

16. Transport

Persons with reduced mobility living at home may require transport to hospital. The ambulance service will need to know the person's weight and mobility level. When this is known, a decision can then be made as to the equipment that will be needed and number of ambulance crew members required.

If specialist help is required to help a person it may be necessary for the Fire and Rescue service to be involved in moving the person from the property.

If the trolley is not wide enough it may be necessary to transport the person on a bed. The bed/trolley must be stabilised in the back of the ambulance and secured to prevent it from shooting forwards if the vehicle has to stop suddenly. The individual will also need safety restraints.

The ambulance should have an electronic tailgate and the safe working load of the tailgate must be known. Ambulance transportation for bariatric persons is now available across the UK for planned admissions/ appointments. However, for emergency response transportation is limited.

17. Discharge and transfer planning

It is essential that all such movements of people from one care organisation to another are planned. This is of course particularly important when there are clinical complexities or complications, H&S issues, and where people are in the bariatric category.

On transfer to another organisation or to the community, a 'bariatric' chair, as mentioned in section 12, or a bariatric riser recliner chair will need to be provided appropriate to the person in terms of size, pressure reduction and function, with the correct height seat to allow feet to be flat on the floor; seat width and depth appropriate to support correct sitting position and prevent pressure ulcer development; the arms of the chair should be height adjustable if possible or at the correct height and not pressing the person's sides when they sit on the chair. In the community, due to the length of time a bariatric person spends seated, consideration should be given to high dependency seating specific to the person's needs.

Similarly, if the bariatric person has mobility problems then it is vital to have access to a bariatric commode - on wheels for easier moving and of appropriate width and depth to allow the person to sit on it rather than perch on the edge. The bariatric person also needs access to a wheelchair with drop down or removable arms to facilitate seated transfers if necessary.

Other equipment for hygiene and personal care purposes should include a suitable toilet and toilet frame that is capable of supporting a bariatric person, and access to a shower facility with a suitable shower chair.

As regular and accurate weighing is required, bariatric scales are a necessity (Benmor Medical, 2012).

In the case of the death of a bariatric person in hospital, the mortuary team will need to be contacted before the person is moved. If the person has died at

home it may be necessary to contact the coroner's office initially. They will oversee removal of the body by appropriately equipped undertakers. A large concealment trolley will be required and suitable refrigerator/ cold storage. There may be excess loss of body fluids so that appropriate methods of handling of the body should be implemented. Consideration of involvement with external agencies such as Housing Associations, Local Authorities and emergency services if removal of the person requires windows/ door frames etc to be removed. (See also G33 – handling the deceased).

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Some equipment providers (of bariatric equipment)

NB: The inclusion of a specific manufacturer or supplier does not represent an endorsement by the authors. Other companies may provide similar or better products.

Benmor Medical	www.benmormedical.co.uk
1st Call Mobility	www.1stcallmobility.co.uk

Summary/ Key Messages

- **The intention of the entire strategy and standards document is to contribute to the improvement of: -**
  - The quality of care - 'patient experience' (dignity, privacy and choice)
    - clinical outcomes
  - Patient/ person safety
  - Staff health, safety and wellbeing
  - Organisational performance – cost effectiveness and reputation, etc.

- **The standard for G15 is:**

Systems are in place to cover all reasonably foreseeable handling situations in bariatric/ plus size management.

- **Skilful M&H is key**

- **Special points for G15 are: -**
  - **Moving and handling people who are heavier creates additional risks to staff and family; weight distribution is an important factor as well as the total weight of the person**
  - **Sensitivity and maintenance of dignity is essential**
  - **Generic M&H risk assessments are carried out, SOPs/ protocols formulated and available for all staff**
  - **Sufficient and suitable MH equipment must be provided to minimise risk of injury to the person, staff and family**
  - **Staffing levels must be sufficient to meet the needs of the bariatric person without placing staff at risk**
  - **Consideration needs to be given to the space required for larger pieces of equipment and for emergency evacuation of the bariatric person who is unable to self-assist**
  - **Adverse events must be thoroughly investigated and learning outcomes and action plans relayed to all staff**