Chapter V. Safe Patient Handling Considerations in Bariatric Care

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Defining Bariatric Care & Obesity

*Bariatrics* refers to the treatment of obesity and its associated conditions within the healthcare system. This includes not only the provision of adequate care and mobility to promote health for the patient, but also the implications that administration of this care has for the healthcare workers.

Obesity is a state in which a person’s body weight is well above that which is considered ideal or healthy for his/her stature. Frequently, the medical profession determines obesity by calculating a patient’s Body Mass Index (BMI).

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\text{BMI} = \frac{\text{weight (kg)}}{\text{height squared (m}^2)} = \frac{\text{weight (pounds)}}{\text{height squared (inches}^2)} \times 703.07
\]

The BMI calculation gives a number, whose value corresponds with a weight classification. This value can also be referenced quickly in a table, such as the BMI Index Table provided by the National Institutes of Health (NIH). If the BMI is between 25 and 30, the patient is classified as “overweight,” and between 30 and 40, he or she is classified as “obese.” Higher BMI values reflect that the patient is exceeding their ideal weight to a greater extent.

Note that the BMI calculations are not always accurate for purposes of defining obesity. When an individual has a large proportion of muscle mass weight on a short frame, as is the case for many athletes, the calculation can lead to a high BMI and the false classification of the patient as overweight or obese.

Bariatric Care and Safe Patient Handling

The safe patient handling movement has made significant strides in Washington over the last few years. Many hospitals voluntarily structured safe patient-handling programs even before the legislative requirements began to be phased in. This growing attention to safe patient handling is due, in part, to the steady increase of bariatric patients in acute care hospitals. Risks associated with the movement and transport of bariatric patients within systems that lack the design and capacity to accommodate them will increase with the number of bariatric patients admitted. As this trend shows no signs of reversing, bariatric care will inevitably influence decision making in favor of safe patient handling equipment for hospitals across the state. There are many compelling reasons for improving patient handling, but the increasing size and acuity of patients make the need for safe patient handling practices inescapable.

Physical and institutional matters, such as doorway clearance and weight capacity of scales and lift equipment, are typical issues in bariatric care. Numerous examples can be found in the *Technology Resource Guide for Bariatric Patients*, available at the VA Center Safe Patient Handling and Movement. But in addition to physical issues and barriers, social environment concerns are also very important.

*Obese patients often feel unwelcome in medical settings, where they encounter negative attitudes, discriminatory behavior and a challenging physical environment.*

Sensitivity to a patient’s weight is critical in order to meet and exceed the patient’s expectation of receiving quality healthcare. Many healthcare facilities struggle with the challenges of managing bariatric patient care tasks including turning and repositioning the patient in bed, transferring the patient in and out of bed, or holding a limb while performing patient care tasks. However, there are many ways to turn such challenges into opportunities for success in delivering healthcare. Quality outcomes can be and are achieved. Most importantly, preserving patient dignity should be a primary goal across strategic initiatives for bariatric care.
A Real-World Story

The following story is a real case obtained from interviews with a bariatric patient, “Ricky,” and his caregivers. Although slight modifications have been made to preserve anonymity of both the patient and the hospital, this case illustrates the challenges that many bariatric patients experience in acute care settings.

Emily, RN, Emergency Department:

Ricky was brought to the hospital by a fire department ambulance specially equipped for transporting bariatric patients, with two EMT teams on hand. Ricky is in his 50s, he himself is an RN, and he presented lying on his stomach—a position that he readily tolerates, but not typical in healthcare because you could not see his face. We had him in RM 9 under a 625-lb fixed ceiling lift with an additional 1000-lb lift in the room, which fit but it was tight. The transport staff also had a 1000-lb bari bed with built-in scale next to the fire department’s 1000-lb capacity stretcher. We had to raise the 1000-lb lift by twisting the handle at the bottom and making sure each were equal on both sides.

Ricky:

The ER staff had a “fat-bias” and overreacted when they saw me. Firefighters put me in the ER bed with the 1000-lb ceiling lift and some manual help. We went from ER to CCU—I was still moving and using the urinal. PT did not see me or talk to me until the next day. I then went to the floor, where I was transferred to a bariatric bed that was too high, and the air mattress that made it very difficult to move. The staff didn’t know how to use the “rolypad,” but I had a sling on at all times. No one had to lift me and I assisted in all turns. I felt like the staff didn’t want to deal with me because of my size and they thought that they might get injured.

David, Employee Health Director:

On the floor he went into respiratory distress, but the nursing staff was not able to get the bed out of the room. The door was 44 inches wide, the bed was 52 inches, and the transporters and nursing staff didn’t know the bed could be reduced to 39 inches. We finally got him out of there, but no one told his wife where we were taking him. She found him in the CCU, and overheard a nurse saying, “I’m not going in there and hurting myself.” We had equipment for his size and he had a sling on the whole time, although the slings were placed wrong and the small bumps on the straps were rubbing against his skin.

Jackie, Ricky’s wife:

Even though he was having trouble breathing, the pulmonary physician told us “we’re not going to do anything.” We were shocked at first because we thought he meant they were going to let him die. It was only later that the employee health director told us they were going to wait and see how well he could breathe on his own rather than risking putting in a trach. What a relief. Unfortunately, we heard staff multiple times outside the room saying “I don’t want to get hurt.”
David:

This was insensitive for sure, and I apologize for that. The upside was that it did motivate the staff to use equipment to move Ricky.

In the CCU, it was OK. They put him on Lasix & he lost 50 lb in three days. Because of his “physiology,” a Foley catheter was not practical, so they let him wet the bed; he voided about every 5 minutes. They had to use lots of padding. It took a while before they realized they could use the sling to lift his legs so they could get a fracture urinal in place.

Ricky:

During my 17 days in the hospital, I only had the same nurse twice. I think this was due to “weight bias.” Nursing staff didn’t know what to do and what I could do for myself. I think it’s very important to have continuity of staff, as very little information was transmitted about how to successfully handle me. They needed to pass on in report how to handle me rather than everyone going in blindly to care for me. Handoffs between shifts were not happening well. And they never asked me either.

Why don’t they ask the family how to do different kinds of moves or care tasks? They end up doing silly things too. When I first went to the ER, they brought 9 or 10 people to handle me but in actuality, with the equipment, they never needed more than 2. What a waste, not to mention an embarrassment. And then they did it again when I was discharged to the nursing home.

There also seems to be an expectation that when a fat person walks and begins to fall, people will save you and hurt themselves… One day a PT even refused to deliver rehab treatment saying it “was unsafe”…But a bariatric person knows what they can and cannot do. If they can roll, they know they can and will do it in the way they need to. I can roll into the bed and can roll into a position with my short legs so that my feet are on the floor and then I can push myself up with no assistance.

David:

One idea I got from Ricky is that in private rooms you could put pictures on the wall demonstrating how to handle Ricky during different activities and what he could do himself. In 2-bed rooms, the pictures could be in a folder by the bed. That way everyone would know how to use slings to lift legs and no one would get hurt.

Ricky:

First I was taken to a different hospital, which refused to see me because of my size. Then, the ambulance took me here and I was told by a physician in the ER that they have a policy not to admit >500 pound patients… and they’d have to transfer me to yet another hospital up north that does. That didn’t end up happening, but do these sorts of policies exist?

David:

There was no such written policy. I don’t know where he got that and besides those other hospitals didn’t have any different equipment from ours.
Ricky:

I hate to say it but I saw the prejudice at all levels. Apparently, society still thinks it’s acceptable to make fun of fat people. It’s taboo to make fun of gender or race but not fat people. In healthcare too there’s a prevalent “Fat person=no hope” attitude, like just because we are overweight, we will be trouble. I’m not sure if this is because people think that it’s going to be too much work or that it takes too many people to provide care, but it makes me feel like I’m unwanted and a burden on the system, while I am just seeking care like anyone else.

When I was at a different hospital, they had similar equipment but actually knew how to use it, and it definitely showed. I know that it’s not the same everywhere, but it should be—care providers should treat all patients equally regardless of how much they weigh. An obese patient should be given the same chance to live as a skinny person. It’s wrong to think that we are doomed just because we are obese because skinny people could and do have the same outcomes. Who gave them the right to play God; what crystal ball do they have to know who is or is not going to have a bad outcome?

David:

This was both a sobering and an inspirational experience for me. It taught me that staff must be trained and retrained in the use of equipment, not only for obese patients but for all patients. Even if they aren’t regularly utilized, healthcare facilities always have slings and lifts. It just needs to be integrated into the culture to use them, and use them properly.

It’s interesting because even though there seems to be a sort of taboo to work with obese patients, I’m convinced that healthcare workers more often get hurt with combative and small people because they don’t have that increased awareness and they don’t take the time to use proper equipment.

Ricky:

I agree. It’s actually less likely that staff will get hurt handling an obese person because they know they can’t do it without equipment. With a 120-pound patient they get hurt because they think they can just lift the weight. I know because I’ve seen it.

Summary of Lessons from Ricky

Ricky’s scenario illustrates the following take-home lessons:

Patient concerns:
⇒ Deal with the bariatric patient as a person, not just with their obesity
⇒ Learn from the patient and family members about the patient’s capabilities and how he or she typically does certain things
⇒ Encourage staff to seek methods of care to protect patient dignity and prevent patients from needlessly feeling like a burden or unwanted.

Equipment concerns:
⇒ Use bariatric care as an opening to train staff on the many uses of proper equipment and reinforce the need to use appropriate equipment with all patients that cannot bear weight
⇒ Ensure that proper bariatric equipment is available, accessible and utilized when needed
⇒ Adjust equipment to fit each patient’s needs.

Communication concerns:
⇒ To the patient: Adequately explain processes of care and reasons for potential delays to the patient and family members
⇒ To the staff: Take steps to transmit pertinent information to all those who will provide care to the patient.

System concerns:
⇒ Bring injury concerns to the attention of a supervisor instead of casually discussing them in public spaces
⇒ Prepare to address bariatric patient needs instead of passing them on to another institution
⇒ Develop a special emergency page code to notify and prepare transporters for the bariatric patient and train transporters to know what they have the capacity for handling.

Bariatric Assessment

A complete and accurate assessment of a bariatric patient’s psychological state and physical capacity is essential to providing appropriate care while maintaining a safe environment for both patient and healthcare worker. From the assessment, factors can be identified that would indicate mechanical assistance or additional social support is necessary. The Veteran’s Administration has developed a sample assessment found within this document as Appendix E, or as part of its Bariatric Handling Toolkit.

While institutions will incorporate different questions and prompts into their assessments, the major recurring themes include:

1. **Limitations in safe functional mobility**: Limited weight-bearing capacity, distribution of adipose tissue, balance, endurance capacity (such as the Egress test for leg strength and endurance developed by Mike Dionne of Bariatric Rehab), perceived exertion or pain levels, lethargy or prolonged bed rest, ability to lift trunk, head or extremities against gravity, range of motion, orthostatic intolerance, changes in medical or orthopedic stability.

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**Egress Test**

1. Patient sits at edge of bed*
2. Sit to stand (3x), with only partial clearing/weight bearing for first repetition
3. Marching in place (3 steps), compared against any baseline assistive device i.e. walker
4. One step forward then back with each foot
If patient is able to accomplish tasks, then they are safe to ambulate with close monitoring and with a wheelchair and sling available.
*May require specific safe patient handling techniques to accomplish
2. **Complexity of injury, past history, and daily activities**: Co-morbidities, strategies or adaptations to successfully engage in bathing, toileting, grooming, dressing, leisure, work/productive activities, nutritional status

3. **Poor respiratory status**: Decreased lung capacity, amount of oxygen attached to hemoglobin cells, influence of co-morbidities or their corresponding medications

4. **Impaired skin condition**: Cellulite, excessive perspiration due to surface area to volume ratio of skin, integrity of skin under skin folds and at contact points on with the bed, friction, shearing, ulcers, infections

5. **Discomfort or pain**: Musculoskeletal pain, physical sensation capacity

6. **Social history**: Support systems, expectations, professional or community role, hobbies and recreational activities

7. **Mental health issues**: Cognitive capacity, depression, psychological withdrawal or intolerance, fear, anxiety, coping capacity

8. **Barriers to discharge planning**: Inadequate access to housing or social support, personal or significant other’s knowledge for disease process, home care, and requirements for psychosocial, emotional and spiritual support.

This information was compiled from several resources. For more detailed information on what to include in an assessment or other tools for evaluating a patient’s status, please reference one or more of the following tools:

“Preventing injuries when taking care of special needs patients” in *Safe Patient Handling and Movement: a guide for nurses and other health care providers* by Audrey Nelson (2005)

“Standard of Care: Bariatric”, Brigham and Women’s Hospital (2007), Boston, Massachusetts

Protocol for *Health and behavioral assessment*, Bariatric Care unit at HealthEast Care System, St. Paul, Minnesota

*Bariatric Nursing and Surgical Patient Care Journal*.
**Bariatric Approaches and Interventions**

Based on information gathered and established through the assessment, steps can be taken to increase worker sensitivity to patient needs, and create a safe environment while maintaining efficiency and quality of care.

*Address weight concerns directly with sensitivity and honesty*

It is important to focus on the patient as an individual, not a population, and to praise efforts and accomplishments while reinforcing goals and goal-directed behavior. Caring for a bariatric patient can be more time-consuming and stressful due to the acuity of the patient. Ensuring proper staff levels and avoiding displays of anger or frustration at the patient should be emphasized. Referrals can also be made to other services, specifically, to social services, pastoral care, or behavioral health as appropriate. Throughout the care process, terms like fat, heaviness, unhealthy, large, obese, weight problem and big-boy stretcher/commode/wheelchair should be avoided and replaced with terms such as extended capacity, BMI values, bariatric, and soft tissue.

*Promote functional mobility and activities of daily living*

Physical and occupational therapy referrals should be utilized when appropriate, as should appropriate and properly sized lift equipment when necessary. These can include a Moderate Assist for a powered sit-to-stand, or a Maximum Assist, which might be necessary for a total body lift. Strategies for assisting a patient to scoot up in bed, reposition, or turn and bathe are as follows:

**Scoot up in bed:**
1. Trendelenberg position (laying supine with head lower than the feet), if patient tolerates
2. Patient assists with arms on bed rails/trapeze, knees bent, pushing with feet, “walking” with hips and shoulders
3. If patient lacks strength, or risks skin shear, then the process should be aided by the use of a ceiling lift with stretcher type sling, a powered lateral transfer device, a portable lift boost, or a friction reducing device. The use of two, adjacent friction reducing slider tubes may be necessary as a single tube may be too narrow, and is not recommended for bariatric patients or those weighing more than 200 pounds. In this latter case, the use of a mechanical device and two caregivers is suggested.

**Repositioning / turning:***
1. Attach stretcher-type sling to only one side of stretcher or ceiling lift
2. Position pillows/bolsters under sling.

**Bathing:**
Dignity is a key issue with bathing and personal hygiene. Patients often report not needing assistance, but frequently they are unable to adequately reach all surface areas.
1. Offer help with sensitivity towards patient dignity
2. Encourage as much participation as possible, while being thorough
3. Facilitate drying by using air mattress overlay or hair dryer on cool setting
4. Move folds and panniculus using gait belt and/or draw sheet.

Due to differential weight distribution, patients may have developed unique strategies to accomplish certain tasks. With this said, one should have appropriate equipment available and accessible in case it is needed. The bed itself can be a tool or a barrier to SPH. Knowing how long it will take to collapse the bed, the type of training necessary to successfully operate the bed, and the structural limits of the bed, i.e. how low it can go, will allow one to use the equipment to its fullest capacity. Don’t expect normal movement patterns from bariatric patients.

**Adapted from the policy and program of an Oregon hospital, reproduced with permission.**
**Maintain respiratory safety**

Referral to respiratory therapy is always an option. Useful information can also be derived from measuring the oxygen (oximetry) and carbon dioxide (capnography) saturation in blood and the use of technologies that are effective for those with co-morbidities, such as the Vision Bipap/Cpap ventilation machine for those with breathing issues. Specific airway considerations should also be taken into account. For example, bariatric patients have an increased aspiration rate, a low chance of successful mask ventilation, and frequently difficult intubations due to partial airway obstruction from fatty pads in the oral pharynx, lack of cervical neck mobility, and the fact that the vocal cords can be difficult to see. These characteristics can be accommodated through the use of specialized equipment. One can use special trach tubes that are designed for larger necks (such as the Shiley XLT both proximal and distal, bivona adjustable flange trachs in sizes 6, 7 & 8), and a glide scope or portable bronchoscope to aid in visualization of the cords.

**Support healthy skin and moisture management**

Drying of the skin should be facilitated by allowing the patient to rest on an air mattress overlay, with mattress deflated, or using a hair dryer on the cool setting. Additionally, Hovermatt and Stryker Glides are made of same material as the overlay, and can be left under the patient, as can stretcher type slings. This will promote turning and repositioning and aid in lifting the patient to periodically change the absorbent materials. Pillow cases or towels between layers of panniculus, or sheets between the patient and the friction-reducing device can also help control moisture.

**Access for successful catheter, pericare, and wound care**

Access to the peri area can be restricted due to excessive soft tissue. A mechanical lift with seated sling, sling leg loops uncrossed, can be used to assist with holding legs and soft tissue up out of peri area. This assistance should only be used to move soft tissue out of the way while accessing the peri area, and not to lift patient fully from support surface.

**Other important considerations**

A nutrition consult undertaken during the assessment can provide guidelines for a specific dietary plan as well as for the necessary education a patient needs for adequate nutritional intake and safe weight loss. Education regarding the diagnosis and home care to both the patient and their significant partner, when applicable, may also be necessary. The assessment will also determine whether it is appropriate to refer the patient to social services or pastoral care for additional psychosocial and spiritual needs.
Bariatric Patient Handling Algorithms

Algorithms are developed from current evidence and provide a standard guideline for performing high-risk or complicated procedures. By following a path of questions that target critical aspects of patient care and ability, difficult decisions can be made and quality of care can be maintained with limited variation between patients.

Figure 6 is an example of a simple algorithm taken from the VISN 8 Patient Safety Center of Inquiry, that guides through bariatric lateral transfer to and from bed to stretcher or trolley.

Figure 6: Bariatric Lateral Transfer to and from: Bed / Stretcher / Trolley.

- The destination surface should be ½ inch lower for all lateral patient moves
- Avoid shearing force
- Ensure bed is the right width so excessive reaching by caregiver is not required
- Use a bariatric ceiling lift with supine sling if transfer involves specialty beds that may interfere with the transfer
- Ensure bed or stretcher doesn’t move with the weight of the patient transferring
- If patient has partial weight-bearing capability, transfer toward stronger side
- Use an abdominal binder if the patient’s abdomen impairs a patient-handling task
- Identify a leader when performing tasks with multiple caregivers to assure synchronization and increased safety of the health care provider and the patient
- If any caregiver is required to lift more than 35 lbs of a patient weight, then patient should be considered ‘fully dependent’ and assistive devices should be used.

Note that in both scenarios in which the patient cannot fully assist with the movement, the use of a friction reducing device is recommended. SPH experts are not unanimous in their recommendation. Some advocate use of a mechanical lift in all situations without regard to a weight cutoff, as an extra margin of safety.
Other bariatric algorithms are available for free online, and include:

- Transfer to and from: bed to chair, chair to toilet, chair to chair, or car to chair
- Lateral transfer to and from: bed to stretcher, trolley
- Transfer to and from: chair to stretcher, or chair to exam table
- Reposition in bed: side to side, up in bed
- Reposition in chair: wheelchair and dependency chair
- Transfer patient up from floor
- Patient handling tasks requiring access to body parts (limb, abdominal mass, gluteal area)
- Transporting (stretcher)
- Toileting tasks for the bariatric patient.

Throughout patient handling and regardless of task, bariatric considerations include, but are not limited to the following:

- Specialized clinical needs e.g. skin and wound care; respiratory, etc.
- Ceiling lifts
- Floor lifts
- Sling design
- Bariatric beds
- Bariatric trapeze frames
- Bariatric furniture & room design
- Develop SPH and special clinical care documents for care of the bariatric patient.

**Summary**

In summary, the bariatric patient population will continue to influence how hospitals strategize to ameliorate safe patient handling and movement challenges. In order to be effective in caring for our bariatric patients, we must be cognizant of their concerns in a direct and respectful manner.