Implementation of the Banner Mobility Assessment Tool for Bariatric Patients

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Process Description

Over the last twenty years, obesity has become even more prevalent in the United States and across the globe. The World Health Organization describes obesity as one of the world's most significant health problems (WHO, 2012)**.** According to Finkelstein, Trogdon, Cohen, & Dietz, "There is an undeniable link between rising rates of obesity and rising medical spending." A study by Fusco, Galindo, Hakendorf, and Thompson found that "diabetes, with or without complications, deep venous thrombosis, and septicemia were at least three times more prevalent in the severely obese admitted inpatients than the non-severely obese." This link suggests not only an increase in the cost of care but the amount of time and number of admissions to the hospital. In fact, in the United States alone, 31% of citizens 60 years and older identified as obese (Mitchell et al., 2014).

Throughout the hospital, statistics reveal that patients with a BMI greater than 35 are associated with nearly 30 percent of patient handling injuries (Drake, 2009). Unfortunately, this risk applies to more than 15 million Americans who are considered morbidly obese with a Body Mass Index of 40 or greater. This data indicates a need for specific standards of care for patients meeting these criteria. The ANA has taken a stand on Safe Patient Handling and Mobility stating "Safe Patient Handling and Mobility (SPHM) programs, if properly implemented, can drastically reduce healthcare worker injuries" related to societal trends such as an aging population and obesity of patients and healthcare workers alike (ANA, 2017). Although these standards are voluntary, it does not negate the pressing need for specific policies pertaining to this particular patient group.

In a 2007 study by Dr. Thomas Waters, he concluded the maximum weight any person should manually lift is 35 pounds. This type of implication was made considering that the object was lifted in an optimal condition, at waist level, next to the person's core and with no twisting required (Waters, 2007). Although these implications were made, in reality, it is difficult for nurses to abide by this rule because of limited staff to assist with moves, knowledge deficit and minimal equipment. Theoretically, a person's leg equates to 16% of their body weight which is over the 35 pound limit for any patient who weighs more than 250lbs, which would put healthcare worker at risk of a musculoskeletal injury just by shifting one leg (Waters, 2007).

This need is also apparent in our area. As stated by a Hospital Nurse supervisor, there is not a plan in place for this target group in the case of a hospital emergency such as evacuation plans during a fire. It is also noted that certain hospitals are only equipped with two bariatric beds which are not always fully functional, thus hospitals must outsource in order to meet patient needs. These areas of concern suggest there is a continuing need for specific standards of patient handling of this group of patients within the hospital.

Theoretical Framework

“Faye Abdellah’s 21 nursing problems” identify multiple aspects of what we consider in today's nursing world. Her theory essentially defines the need for patient safety and infection control. In fact, her theory specifically states, "To promote safety through the prevention of accidents, injury, or other traumas and through the prevention of the spread of infection" and “To maintain good body mechanics and prevent and correct deformity” (AIPPG, 2011). Both of these aspects of the 21 Nursing Problems theory are entwined throughout this entire policy. Her theory

places strong emphasis on problem-solving within the nursing realm. Within this research, prevention of injury and developing a policy in order to do so are the foundations of this practice.

Evidence

According to data collected by the World Health Organization, obesity has an increasingly high prevalence worldwide (WHO, 2018). The Global BMI Mortality Collaboration (2016) conducted a meta-analysis that evaluated approximately 4 million nonsmokers in 4 countries. The data collected involved over 239 studies which identified similar factors between the information. It concluded that people with a BMI of 25 or greater showed a "positive relationship to coronary artery disease, stroke, respiratory disease, and moderately positively related to cancer mortality" (Global BMI Mortality Collaboration, 2016, p. 781). The range of comorbidities related to patients' weight predisposes them to increased frequency in admissions and longer stays within healthcare facilities.

With the increase in admission, the risk for nurse bias towards these patients can have a negative effect on individual care. A cross-sectional study by Tanneberger and Ciupitu-Plath found that within a 73 sample size, 50.7% of participants felt that nurse discrimination towards obese patients was based on their ability to control their own weight, equipment within the unit, staff ratio, and risk for injury (Tanneberger & Ciupitu-Plath, 2017). This perceived risk of injury is even more apparent when 30% of nurse injuries occur from transferring obese patient (Drake, 2009). Thus providing adequate equipment and proper nurse ratio to care for these patients will not only prevent injury, but also improve nursing care and decrease discrimination.

With that being said a study by Mitchell, Lord, Harvey & Close found that older obese adults have a higher incidence of falls and perception of injury from falls compared to non-obese

elderly patients (2014). Their randomized controlled qualitative study obtained subjective weight and fall prevalence from 5,689 residents over a 12 month period. Although self-reported information may have skewed the results, there was still a 32% increase in fall prevalence in the obese versus residents of a healthy weight. Along with that, those with a BMI greater than 30 included in the study reported a greater fear of falling and increased sedentary lifestyle and medications which could contribute to injury and decreased balance (Mitchell, Lord, Harvey, & Close, 2014). Health care workers should evaluate a patient's ability to mobilize independently and need for transfer equipment prior to actively moving them. This not only provides preventative care but also increases nurse and patient confidence in managing care.

A qualitative study conducted by Kanaskie and Snyde evaluated how healthcare workers weigh the use of SPHM equipment and personal safety versus convince. Their qualitative analysis determined that barriers to care included the availability of lift equipment, education on the use of SPHM equipment, and ample time to complete assigned tasks (Kanaskie & Snyde, 2018). The study analyzed a 550-bed unit in which a descriptive questionnaire was used with four in-person focus groups over a four-month period to ensure saturation. Although the study was conducted at an academic hospital where policies and continuous education are essential, the information obtained may create a generalized understanding of the complex issues related to patient handling in all healthcare facilities.

Since SPHM are multifaceted programs with various policies implemented, it can be difficult for staff to fully understand the extent of this problem. A study conducted on the Banner Mobility Assessment Tool assessed the validity of the program through a 342 acute care setting. The study found a "93% agreement ($\kappa = 0.91$) between multiple observers and identifying mobility"(Boynton, Kelly, Perez, Miller, Young, & Trudgen, 2014). The study provides initial

evidence to support the BMAT as a resourceful instrument in assessing a patient's mobility status at the bedside. Further studies could add knowledge in determining patients' mobility status and its effectiveness as a factor used to assign safe patient handling equipment and prevent patient falls" (Boynton et al., 2014).

Proposed Policy/Procedure

With the increasing admission of bariatric/morbidly obese patients at rural hospitals in western Kentucky, including Baptist Health, the need for safe patient handling programs is even more evident with the obesity rate continuing to rise. The proposed policy is to design a program within the hospital charting that automatically calculates the Banner Mobility Assessment Tool score (Table 1) and link it to the seven bariatric transfer algorithms created by the Veterans Health Administration (VHA, 2015). This new policy would suggest a no lift protocol since evidence suggests even smaller patients can cause injury to the healthcare staff. In doing so, the hospital can use a systematic design that removes the uncertainty of determining the right equipment necessary for safe patient handling and the level of mobility each patient can do individually. Between the Banner Mobility Assessment Tool and bariatric transfer algorithms, nurses can easily determine a patient's ability to mobilize through quick assessment activities such as sitting up on their own and how well they cooperate with healthcare staff size, which will then determine the proper equipment to use based on the activity level of the patient.

At this time, Baptist already utilizes a computerized equation with their charting to determine a patient's MEWS score for stability, this is especially so on the cardiopulmonary floor. Since similar technology has been used within the hospital, it would be much easier to implement a similar charting calculation throughout the rest of the hospital based on mobility

level and Body Mass Index. The BMAT easily asked four questions which are pass/fail and grades a patient on a scale of one to four, four being completely independent. This scoring guide comes with equipment recommendations for each level of mobility. It is suggested on admission to evaluate a patient with the BMAT in conjunction with their original assessment and again if serious physical changes occur during their stay. Not only can this be seen in a patient's chart but a color coding system that identifies a patient's mobility level can be posted beside their door. Color coding and markers are already used within the hospital for identifying fall risk.

Implementation into Professional Practice

Although this policy exudes an air of simplicity, healthcare personnel still need to be educated on it. After introducing the new policy to the hospital's safety committee, a subcommittee would be created to determine the viability of the new policy and determine limitations to it. From there, one unit would be used to test the new policy to see whether it would be beneficial to the hospital.

There needs to be a culture of safety within the hospital setting, workers should not be held punitively in situations of noncompliance with the policy, but this informs administration that a review of the policy is necessary and possible alternations to improve it (Kanaskie et al, 2018). Similar programs have been implemented in other hospitals such as Englewood Hospital and Medical Center in New Jersey. The results of this type of environment lead to “57.1 percent reduction in workplace injuries and an 80.5 percent reduction in lost work days” (OSHA, 2012). The healthcare staff, including nurses and unlicensed personnel, should be included in making decisions and providing input on improving the policy. Individual unit education classes would be provided as well as advertising for hospital-wide education for those who cannot make the

initial classes. Continuing education, as well as competency tests, should be held regularly in order for this information to be retained and adhered to. The success of this policy relies on hospital staffs' continual exposure to it; one class given at orientation is not enough (Kanaskie et al, 2018, p. 146). There are multiple sources online in which a hospital can utilize for educating staff on the Banner Mobility and Assessment Tool as well as multifaceted Safe Patient Handling and Mobilities Programs.

Currently, the ANA supports the use of Interprofessional Standards of Safe Patient Handling and Mobility within hospitals and has pushed for a nationwide utilization of it (ANA, 2018). Although research suggests that SPHM programs decreases nurse injuries, other studies indicate "46% of study participants were not informed or aware of national SPHM standards or guidelines" (Vendittelli et al, 2016). This indicates additionally that a culture of safety within the hospital is the best factor to indicate whether healthcare workers will comply with the new policy. Another important aspect to point out is the need for nonpunitive actions in situations where this policy is not used (Kanaskie et al, 2018, p. 146). Negative reactions would only cause further disdain to the new policy by workers.

Summary/Conclusion

Implementing these processes into the hospital setting would not only decrease a substantial amount of nurse related musculoskeletal injuries but it would also decrease the overall cost to the hospital from workman's comp, missed days of work, nurse retention and overall hospital satisfaction. Although there research evidence to suggest that the Banner Mobility Assessment Tool has a validity of .93 across multiple hospital professions including nursing homes (Boynton et. al, 2014), a written policy is not enough to prevent injuries

(Kanaskie et al, 2018). Hospitals must actively include their hospital personnel including nurses and UAPs into creating these policies as well as consider current hospital resources that may be utilized instead of fabricating a policy that is not relevant to their hospital. Continuous education and review of safe patient policies are necessary to keep injury prevention protocols current.

Since the creation of the BMAT, multiple forms of published literature supporting mobility protocols have been published. Suggesting safe patient handling and mobility in conjunction with the BMAT may be beneficial for future prevention of nurse injury throughout all forms of healthcare facilities (Boynton et al., 2014)

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TABLE 1

BANNER MOBILITY ASSESSMENT TOOL FOR NURSES
Note: Always default to the safest lifting/transfer method (eg, total lift) if there is any doubt in the patient's ability to perform the task.
• Assessment Level 1 – **Sit and Shake** Task: From a semireclined position, ask patient to sit upright and rotate to a seated position at the side of the bed; may use the bed rail. Note patient's ability to maintain bedside position. Ask patient to reach out and grab your hand and shake, making sure patient reaches across his/her midline. Pass = complete Assessment Level 2 Fail = Patient is Mobility Level 1; use total lift with sling and/or positioning sheet and/or straps, and/or use lateral transfer devices such as rollboard, friction-reducing (slide sheets/tube) or air-assisted device. If patient has "strict bed rest" or "bilateral non-weight-bearing" restrictions, do not proceed with the assessment; patient is Mobility Level 1.
• Assessment Level 2 – **Stretch and Point** Task: With patient in seated position at the side of the bed, have patient place both feet on the floor (or stool) with knees no higher than hips. Ask patient to stretch one leg and straighten the knee, then bend the ankle/flex and point the toes. If appropriate, repeat with the other leg. Pass = complete Assessment Level 3 Fail = Patient is Mobility Level 2; use total lift for patient unable to weight-bear on at least one leg; use sit-to-stand lift for patient who can weight-bear on at least one leg.
• Assessment Level 3 – **Stand** Task: Ask patient to elevate off the bed or chair (seated to standing) using an assistive device (cane, bed rail). Patient should be able to raise buttocks off bed and hold for a count of five. May repeat once. Pass = complete Assessment Level 4 Fail = Patient is Mobility Level 3; use nonpowered raising/stand aid (default to powered sit-to-stand lift if no stand aid available) or use total lift with ambulation accessories or use assistive device (cane, walker, crutches). If patient passes Assessment Level 3 but requires assistive device to ambulate or cognitive assessment indicates poor safety awareness, patient is Mobility Level 3.
• Assessment Level 4 – **Walk** (march in place and advance step) Task: Ask patient to march in place at bedside, then ask patient to advance step and return each foot. Patient should display stability while performing tasks. Assess for stability and safety awareness. Pass = Patient is Mobility Level 4/modified independence = no assistance is needed to ambulate; use your best clinical judgment to determine need for supervision during ambulation. Fail = Patient is Mobility Level 3

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Table 1- Adapted from the Banner Mobility Assessment Tool (2013)