

## Paynesville Area Health Care System

<b>Policy Name:</b>	<b>Patient Positioning // Prevention of Pressure Ulcers in Surgical Patients</b>	<b>Policy #</b>	36028
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### I. POLICY

- A. The requirement for positioning of the surgical patient is a key factor for the performance of a safe and efficient surgical procedure. The patient's position shall provide optimum exposure and access to the operative site, shall sustain circulatory and respiratory function, shall not compromise neuromuscular structures and shall afford as much comfort to the patient as possible.
- B. Factors to be taken into account during the preoperative interview before sedation and positioning occur include:
- Type of procedure
  - Skin condition
  - Nutritional status
  - Preexisting conditions
  - Decreased ranges of motion
  - Previous surgical procedure
  - Presence of joint prostheses
  - Fractures
  - The patient's age, height, and weight

In addition to the above factors, nursing should consider the below factors for risk assessment for pressure ulcers:

**Surgical Factors:**

Procedure > 2 hours, general anesthesia, lateral position, vascular surgery, neurological surgery, and total hip/knee replacement

**Physical Limitations:**

Obese > 300 lbs, severe emaciations, contractures, paraplegic, and quadriplegic

**Medical History:**

Arthritis, cardiac disease, COPD, diabetes, edema 2+, immunosuppressed, and peripheral vascular disease

**Vital Signs:**

Systolic blood pressure < 60 and temperature > 101 degrees F

**Abnormal Labs:**

Low albumin, anemia: hematocrit < 20, Anemia: hemoglobin < 9, and elevated white blood cell count

### **Additional Risk Factors:**

Braden scale < 18, fecal incontinence, urinary incontinence, nursing home resident, pre-existing skin condition, and smoker

- C. Maintaining optimal physiological conditions lessens the risk for complications both intraoperatively and postoperatively. AORN "Recommended practices for positioning the patient in the perioperative setting" suggests that a patient should be repositioned every two hours to prevent continuous pressure on pressure points and assist in decreasing the risk of adverse physiological responses.

For surgical cases lasting longer than 2 hours, the RN circulator will communicate length of case to the surgeon and CRNA to evaluate need for repositioning.

Rolled sheets and towels are not to be used beneath overlays (gel pads). This decreases the effectiveness of the overlay and causes pressure.

## II. PROCEDURE

- A. The perioperative assessment should include details of the patient's skin status along with a risk assessment noting whether the patient is a high-risk candidate for pressure ulcer development. Nursing will document a Braden Scale on admission and once the patient has returned to the post-operative setting.
- B. The perioperative nurse will communicate with the OR circulator the Braden Scale score and any risk factors the patient may have.
- C. The OR circulator will use the pressure redistribution support surface available (gel overlay) for all cases.
- D. Transfers will be done with a lateral transfer device with the appropriate number of personnel present.
- E. Proper positioning for a number of different procedures is outlined:
1. Supine position – this is the most common position used. Patients are usually anesthetized in this position and modifications are made after the induction of anesthesia.
    - a. The position of the head shall place the cervical, thoracic and lumbar vertebrae in a straight, horizontal line.
    - b. A small pad or pillow placed under the head allows the muscles to relax and prevent neck strain.
    - c. Hips shall be parallel.
    - d. Legs are placed parallel and uncrossed to prevent compromised circulation and nerve damage. The legs shall be slightly separated so that skin surfaces are not in contact.
    - e. The safety strap is placed across the thighs so that the patient is secured, but superficial venous return is not impaired.

- f. The heels may need to be padded with foam protectors, if the procedure will be extended or the patient's condition warrants it.
- g. Arms are usually placed on armboards, at less than a 90 degree angle to the body. The palms shall be turned upwards to diminish the pressure on the brachial and ulnar nerve. Gel protectors may be used to pad the elbows if necessary. Table pads and armboard pads must be of the same height.
- h. When the head is turned to one side, the bony prominences of the skull and the ears must be padded, to prevent pressure on nerves or blood vessels.
- i. The patient's eyes must be protected from pressure and corneal drying or abrasions. The CRNA, when present, cares for the patient's eyes.
- j. Variations of the supine position include Trendelenburg, Reverse Trendelenburg and Fowler's positions. In all of the variations, the principles remain the same. Bony prominences must be well padded and circulation must not be impeded.

2. Lithotomy position

- a. With the patient in the supine position, the legs are raised simultaneously and abducted to expose the perineal area. Each leg is raised by grasping the sole of the foot in one hand and supporting the leg near the knee in the other hand. The leg is raised and the knee flexed slowly.
- b. When using the boot stirrups, the entire boot should be padded with the patient's heels fitting snugly in the heel of the boot and the calf should be supported in the leg of the boot. Apply Velcro straps to secure the patient's legs in the stirrups.
- c. The leg stirrups must be level and the height adjusted to the length of the patient's legs. By placing the patient's anterior iliac spine on a line with the leg holder and the buttocks level and on a line with the edge of the table pad, a good position can be achieved with a minimum of effort.
- d. The patient's position must be symmetrical. The perineum is in line with the longitudinal axis of the table. The pelvis is level and the head and trunk are in a straight line.
- e. The arms are placed on the armboards, using the previously described precautions.
- f. The patient is released from the lithotomy position slowly to allow gradual adjustment to the change. The legs are brought down simultaneously to prevent strain on the lumbosacral muscles.

3. Prone position – patient is lying with abdomen on the surface of the operating table.

- a. In preparation for placing a patient in prone position, two (2) chest rolls must be made by rolling two (2) bath blankets lengthwise together to form a firm roll. Two pillows must be available for placement under the patient's feet.
  - b. Four (4) people are required to safely place a patient in prone position. The CRNA supports the head and neck. One person stands at the side of the bed, with hands at the patient's shoulders and buttocks, to initiate the roll of the patient. A second person stands opposite, at the side of the operating table, with arms extended to support the chest and lower abdomen on outstretched arms, as the patient is rolled forward and over. The third person stands at the foot of the stretcher to support and turn the legs. At the completion of the turn, the bed is removed.
  - c. All movements must be coordinated by the CRNA to ensure maintenance of the airway.
  - d. An armboard is provided on each side of the table and the patient's arms are brought down and forward to rest with elbows flexed and hands pronated at either side of the head.
  - e. The head is positioned on a foam pillow or doughnut, keeping the neck in alignment with the spinal column. The eyes are protected from the pillow and the drapes.
  - f. Chest rolls should extend from the acromioclavicular joint to the iliac crests to allow movement of the chest for respiration.
  - g. One or two pillows are placed under the ankles to prevent pressure on the toes and feet.
  - h. Breasts and male genitalia are to be positioned in a way that frees them from torsion or pressure.
  - i. The restraint is placed across the thighs to secure the patient and allow unimpaired venous return.
  - j. While a patient is in prone position, a firm bed is readily available outside of the room in event of an emergency.
  - k. The patient is returned to the supine position by reversing the four-man roll described above.
4. Lateral position – the patient is lying on the unaffected side with the operative site (chest, kidney or upper uretic) exposed
- a. The patient is induced in supine position. Three-inch cloth adhesive tape, pillows (2 or 3), a supply of blankets, 1 or 2 towels and an empty Mayo stand or overhead armboard are also required prior to placing the patient in a lateral position.
  - b. Four (4) people are required to safely place a patient in a lateral position. The anesthesiologist supports the head and neck. One person stands at the shoulders of the operative side facing the patient's head; this person's arm and hand nearer the patient cross the chest and grasp the patient's shoulder; the other hand is placed under the nearer shoulder. The second person stands at the hips of the

- operative side, facing the patient's head; this person's arm and hand nearer the patient cross the hips and grasp the patient's opposite buttock; the other hand is placed under the nearer buttock. The third person stands at the foot of the table to turn and support the legs.
- c. At a signal from the CRNA, the first and second persons lift and bring the patient to his/her side at their edge of the operating table; the patient is then placed in the center of the table. A pillow is placed under the patient's head to maintain good alignment of the vertebrae.
  - d. One assistant remains at the patient's back to steady and support the torso during the remainder of the positioning.
  - e. The upper arm is flexed slightly at the elbow and raised above the head. The Mayo stand is placed over the patient's head from the opposite side. Several towels or blankets are used to pad the Mayo stand and the patient's upper arm is placed on the Mayo stand. An overhead armboard that is padded may also be used.
  - f. The lower shoulder is brought slightly forward to prevent pressure on the brachial plexus and the arm is flexed at the elbow. A rolled towel may be placed under the axilla to reduce pressure and improve respiratory efforts.
  - g. The patient may be maintained in proper position with sandbags or adhesive tape. The patient's legs may also be positioned in one of the following manners:
    - 1. Both legs may be flexed at 90 degree angles the hips and knees, with a pillow placed between the legs.
    - 2. The lower leg may be extended straight on the table, the upper hip and knee flexed at 90 degree angles with one pillow between the knees and another pillow supporting the upper leg from the knee to the foot.
  - h. The operating room table is flexed to bring the patient's chest and legs down and flex the patient's flank.

#### REFERENCE:

1. AORN Perioperative Standards and Recommended Practices 2010 EDITION
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3. Prevention of Pressure Ulcers in the Surgical Patient. AORN Journal. March 2009, Vol. 89, No. 3.
4. Perioperative Skin Assessment Tool. Outpatient Surgery Magazine. Kennedy, C. April 2009