## NORTH MEMORIAL AMBULATORY SURGERY CENTER AT MAPLE GROVE Safe Patient Handling, Movement & Ergonomic Best Practices

## PURPOSE

To develop, implement, and maintain an effective safe patient handling and movement (SPHM) program to reduce the incidence and minimize the severity of injuries to patients and health care workers related to SPHM tasks in the perioperative environment and to implement best use of ergonomic practices for all staff.

## POLICY

It is the policy of NMASCMG that:

- The health care organization and the perioperative team will collaborate to establish and sustain a culture of safety that incorporates the principles of SPHM.
- The health care organization and the perioperative team will
  - o create a non-punitive environment.
  - report hazards, near misses, incidents, and accidents related to patient and equipment handling as soon as possible.
  - provide the number of team members and assistive devices needed to safely move, position, or prep patients based on the algorithms in the AORN Ergonomic Tools
  - implement safety huddles (ie, Healthcare Utilizing Deliberate Discussion Linking Events [HUDDLE]) to evaluate incidents and near misses related to patient and equipment handling.
- The health care organization will provide a mechanism for the health care worker to refuse or object to performing any patient transfer or repositioning or equipment handling task that places the patient or worker at risk for injury.
- The health care organization and an interdisciplinary perioperative team with authority and responsibility will establish a formal, systemized SPHM program.
- The systemized perioperative SPHM program team will
  - include perioperative nurses, surgeons, anesthesia professionals, surgical technologists, an industrial hygienist, perianesthesia nurses, unlicensed assistive personnel, an SPHM program coordinator, a risk manager, a materials manager, an occupational health professional, and an ergonomist.
  - o understand the philosophy of ergonomics and ergonomic processes.
  - perform an initial comprehensive assessment of SPHM needs, current patient and equipment handling technology, and adverse events data to determine needs, priorities, and frequency for reassessment (biannually, annually);
  - comply with federal, state, and local laws and regulations and incorporate the ANA *Safe Patient Handling and Mobility: Interprofessional National Standards* into the program.
  - identify methods (eg, equipment, algorithms) to reduce the physical requirements of highrisk SPHM tasks (eg, positioning, transfers, static postures);
  - develop written short- and long-term goals, objectives, and a plan for ongoing evaluation, compliance, and quality improvement.
  - o develop a timeline to meet the goals and evaluation requirements.

- designate the individuals with the responsibility, authority, and accountability for implementing the plan.
- integrate the SPHM program across the three phases of perioperative care: preoperative, intraoperative, and postoperative.
- identify and allocate funding to implement and sustain the program based on business-case and return-on investment analytics.
- identify the essential physical functions and provide input for the written job descriptions of personnel who perform SPHM tasks in the perioperative setting; and
- use evidence-based processes to identify the tasks that place the perioperative team members at high risk for injury.
- The health care organization and the perioperative SPHM program team will incorporate ergonomic design principles during the planning and design phase of any construction or renovation of the surgical suite.
- The health care organization will seek input related to ergonomic principles from frontline team members and the perioperative SPHM program team at all stages and in all activities of new construction, rebuilding, or remodeling.
- The health care organization and the perioperative team will collaborate in the selection, installation, and maintenance of safe patient handling technology into the perioperative setting after performing an ergonomic analysis of the perioperative area by
  - reviewing injury data of the perioperative area, conducting surveys, and interviewing the perioperative team
  - collecting information on the physical environment, patient characteristics, and usage and condition of existing patient handling equipment; and
  - o conducting a walk-through of the perioperative area.
- Based on the ergonomic analysis, the perioperative SPHM program team will select types of patient handling equipment (eg, air-assisted transfer mattresses, mechanical lifting equipment) for use in the perioperative area.
- Prepurchase evaluation will include:
  - o efficiency and reliability,
  - o maintenance requirements,
  - o maneuverability,
  - o storage requirements,
  - workplace design
  - o ease of operations,
  - o functionality and versatility, and
  - o cleaning.
- The health care organization will determine and provide the necessary quantity of SPHM equipment to meet patient and perioperative team needs.
- The health care organization and the perioperative team will collaborate to establish education, training, and competency verification in safe patient handling techniques and equipment handling to include:
  - o processes for patient assessment (eg, falls, mobility, SPHM),
  - use of the AORN Ergonomic Tools and safe practices for safe patient and equipment handling,
  - o procedures for safe use of equipment and technology,
  - identification of factors that increase the risk for a patient and equipment handling injury in patients and personnel, and
  - procedures for identifying and reporting patient or personnel injury caused by patient and equipment handling.

## **PROCEDUCRE INTERVENTIONS:**

## PATIENT ASSESSMENT AND PLAN OF CARE

#### Use AORN Ergonomic Tool #1 for a lateral transfer of the patient to and from the OR bed.

- Lock the wheels of the OR bed, stretcher, or patient bed.
- Allow the patient to self-transfer if able.
- Move the patient with a sufficient number of perioperative team members to maintain the patient's body alignment, support extremities, and maintain the patient's airway.
- When laterally transferring the patient from the stretcher to and from the OR bed:
  - If the patient's weight is less than 53 lb (24 kg), one perioperative team member and the anesthesia professional should be able to transfer the patient using a draw sheet.
  - If the patient's weight is between 53 lb (24 kg) and 105 lb (48 kg) two perioperative team members and the anesthesia professional should be able to transfer the patient using a draw sheet.
  - If the patient's weight is between 105 lb (48 kg) and 157 lb (71 kg), four perioperative team members should move the patient using a lateral transfer device (eg, friction-reducing sheet).
  - If the patient's weight exceeds 157 lb (71 kg), the perioperative team should use assistive technology (eg, air-assisted transfer systems, a mechanical patient lift with a supine sling) to move the patient. The number of team members needed to perform the move is dependent on the type of technology used.
- Use a lateral transfer device that extends the length of the patient.
- Use assistive technology if any team member is required to lift more than 35 lb (16 kg) of the patient's weight.
- Ensure the destination surface is slightly lower than the starting surface for all lateral moves.
- When transferring the patient from the supine to prone position:
  - If the patient's weight is 48.5 lb (22 kg) or less, two perioperative team members and the anesthesia professional supporting the head should be able to position the patient.
  - If the patient's weight is between 48.5 (22 kg) and 73 lb (33 kg), three perioperative team members and the anesthesia professional should be able to position the patient.
  - If the patient's weight exceeds 73 lb (22 kg), three or four perioperative team members should use assistive technology to position the patient.

## Use AORN Ergonomic Tool #2 for positioning or repositioning the supine patient on the OR bed.

- Into or from a semi-Fowler (eg, beach chair) position:
  - If the patient's weight is less than 68 lb (30.5 kg), a minimum of three perioperative team members should be able to manually position the patient.
  - If the patient's weight exceeds 68 lb (30.5 kg), a minimum of three perioperative team members should position the patient using the automatic semi-Fowler positioning feature of the powered OR bed.
- Into or from a lateral position:
  - If the patient's weight is less than 76 lb (34.5 kg), two perioperative team members and an anesthesia professional maintaining the patient's airway should be able to position the patient.
  - If the patient weight is between 76 lb (34.5 kg) and 115 lb (53 kg), three perioperative team members and an anesthesia professional should be able to position the patient.

- If the patient's weight exceeds 115 lb (53 kg), a lateral positioning device should be used. The number of team members needed to transfer the patient is dependent on the type of technology used.
- To or from lithotomy position:
  - If the patient's weight is less than 141 lb (54 kg), two perioperative team members should each hold a leg with a two-handed lift to place the legs in the leg holder.
  - If the patient's weight is 141 lb (64 kg) or more, four perioperative team members (ie, two for each leg) should place the legs in the leg holders or use assistive technology.
  - A mechanical device, such as a support sling, may be used to lift the legs to and from the lithotomy position.

# Use AORN Ergonomic Tool #3 for lifting and holding the patient's legs, arms, or head while prepping.

- Assess the need for additional team member assistance or assistive devices to lift and/or hold the leg, arm or head based on the amount of time required for lifting and holding and a one-or two-handed hold.
  - If the patient's weight is less than 40 lb (18 kg), one perioperative team member should be able to perform the skin antisepsis and hold the limb.
  - If the patient's weight exceeds 40 lb (18 kg), one perioperative member should perform the skin antisepsis while another team member holds the limb, or the limb is suspended by a holding device.
  - Assess the need for additional team member assistance or assistant devices to lift and/or hold a panniculus during skin antisepsis or the surgical procedure.

## Use AORN Ergonomic Tool #4 for prolonged standing.

- Cover hard flooring materials and standing stools with anti-fatigue mats.
- Use anti-fatigue mats with tapered edges, anti-skid coating on the upper surface, and a slip-resistant undersurface.
- Work at an ergonomically correct height in relation to the height of the work surface.
- Position video display monitors in a neutral position relative to the viewers' eyes.
- During minimally invasive procedures, use at least two separate video display monitors to allow each team member to have an unobstructed line of vision without requiring neck torsion.
- Do not work with the neck flexed more than 30 degrees or rotated for more than 1 minute uninterrupted.
- Wear supportive footwear that does not change the shape of the foot, has enough space to move toes, is closed toed, is shock absorbing with cushioned insoles, and has a heel height that is in proportion to the shoe.
- Set the level of the stool at the level of the sterile field when using a sit-stand stool.
- Wear lightweight, two-piece radiation protective devices when wearing protective devices is required and you will be standing for longer than 1 hour.
- Alternate propping of one foot on a footstool.

## Use AORN Ergonomic Tool #5 for tissue retraction.

- Hold the retractor as close to the body as possible while maintaining good posture.
- Hold the retractor with the palm facing down when retracting toward your body.
- Hold the retractor with the palm facing up and arm flexed at the elbow when retracting laterally.
- Grip the retractor only as firmly as necessary for surgical exposure.

#### Use AORN Ergonomic Tool #6 for lifting and carrying supplies and equipment.

• Total weight of an instrument tray should not exceed 25 lb (11.3 kg)

### Use AORN Ergonomic Tool #7 for pushing, pulling, and moving equipment on wheels.

- Push wheeled equipment.
- Push an OR bed or an occupied standard hospital bed with at least one other team member or use a powered transport device.

#### COMPETENCY

Perioperative personnel with responsibility for safe patient handling and movement will receive initial and ongoing education and complete competency verification activities related to SPHM.

#### QUALITY

Perioperative personnel with responsibility for safe patient handling and movement will participate in quality assurance and performance improvement activities related to SPHM

#### GLOSSARY

*Air-assisted lateral transfer device:* A mattress that inflated with air by a portable air supply, thus facilitating a smoother lateral transfer.

*Algorithm:* An evidence-based clinical tool used to make health care decisions. Algorithms standardize practice based on evidence rather than requiring the health care worker to rely on his or her education and experience to make decisions.

Anti-fatigue mat: A special mat designed with friction-reducing properties for use by workers who stand for long periods of time.

Assistive devices/technology: Equipment that can be used to take all or a portion of a load, such as the weight of a body part, off of the person performing a high-risk task.

*Ergonomics:* The science of fitting the job to the worker. The practice of designing equipment and work tasks to conform to the capability of the worker, providing a means for adjusting the work environment and work practices to prevent injuries. Emphasizes work practices, biomechanics, work environment, and tool use.

#### REFERENCES

Guideline for safe patient handling and movement. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc.

Safe Patient Handling and Mobility: Interprofessional National Standards Across the Care Continuum. Silver Spring, MD: American Nurses Association; 2013.