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Owner: *Kirsten Tomaschefskey: MC Sr
Clinical Nurse II*
Area: *Hospital Guidelines*
Policy Types: *Medical Care*
Applicability: *UMMC Downtown Campus*

Proning Patients for Respiratory Indications

I. GUIDELINES

A. OBJECTIVES

1. To recruit alveoli in an attempt to improve respiratory gas exchange

B. INDICATION FOR USE

1. Patients who meet inclusion criteria

C. DEFINITIONS

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| Prone | Position in which the ventral surface faces downward |
| Manubrium | Broad portion of bone at the upper part of the sternum |

II. RESPONSIBILITY

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| Provider Team | <ul style="list-style-type: none"> • Determine risk/benefit to pronation for the patient considering: • Availability of recruitable lung, PaO₂, absence of exclusion criteria • Place order for proning in electronic medical record • Be present on unit/pt room during proning to respond to any adverse events, if indicated. • Evaluate success or failure of pronation to improve patient condition |
| Registered Nurse | <ul style="list-style-type: none"> • Prepare supplies and ensure availability of equipment and staff to assist with process • Follow safety recommendations as listed in this guideline • Document effect of pronation |
| Respiratory Therapist | <ul style="list-style-type: none"> • Be present during proning to manage airway, ventilator and all associated equipment during and following the proning activity |
| Rehab Services | <ul style="list-style-type: none"> • Provide consultation as appropriate to facilitate patient and staff safety during proning – Recommend assistive devices if indicated • Participate in proning if available; provide feedback to team regarding procedure |

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|----------------------|---|
| | and positioning if indicated |
| All staff who assist | <ul style="list-style-type: none"> • Maintenance of invasive tubes and lines • Close monitoring of patient condition and timely notification to provider • Use of proper body mechanics as to prevent patient and staff injury |

III. GUIDELINES FOR PATIENT SELECTION

A. Inclusion Criteria

1. Moderate to severe ARDS
2. Marginal PaO2 despite optimal ventilation
3. Availability of recruitable lung as indicated by provider assessment

B. Relative Exclusion Criteria

1. Weight > 200 kg (consider body habitus)
2. Ongoing seizures
3. Uncontrolled bleeding
4. Open chest/abdomen
5. Pregnancy
6. Unstable head injury/spinal fractures
7. Elevated intracranial pressure
8. Maxillofacial injuries or surgery

IV. PATIENT CARE GUIDELINES

A. Equipment List

1. Patient should be placed on a low air loss surface
2. Flat sheet and underpads
3. From central supply obtain the following ZFlo positioner as per Rehab Services and /or WOCN recommendations
 - A. 1. Large Zflo positioner for pelvic: SUN Z3-S; 6144SUNZ3S; size 25x36
 - B. 2 Medium Zflo positioners for chest SUNZ4-ZAP-M; 6144UNZAZAPM, size 11.5x19.5
 - C. 2 Pediatric ZFlo positioner for head and face: SUN NDCP7010; 6144NDCP7010; size 7-10
4. Lift sheets if available and applicable
5. For bony prominences that cannot be off-loaded, apply adhesive foam dressing for pressure ulcer prevention. (ie. Knees, pelvic region, thoracic region).
6. Emergency equipment available (EKG leads, defibrillator pads)

B. PROCEDURE

1. **Prior to Initial Turning**

- a. Obtain an order to prone the patient
- b. If not already available, obtain a baseline ABG and 12 – lead ECG
- c. If feeding is gastric, discontinue while prone. If feeding is post-pyloric, ensure patency for turn.
- d. Disconnect any unnecessary IVs
- e. Route all tubes/lines above the waist towards head of bed
- f. Route all tubes/lines below waist towards foot of bed
- g. Ensure the ETT is securely taped
- h. Ensure all central line dressings are secured
- i. Change any dressings on the anterior aspect of the patient
- j. Place monitor electrodes on bilateral upper shoulders and bilateral lower lateral thorax; Remove V lead
- k. Ensure prescribed RASS, and if applicable Train of Four goals are achieved
- l. Empty drainage bags
- m. Provide mouth care

2. Steps of Proning

1. Assure the patient has sufficient rotation of the cervical spine
2. Assure the patient has sufficient shoulder range of motion and the joint is stable in a position of abduction and external rotation.
3. Have minimum of 5 staff available (RT, primary RN, and additional trained staff)
4. Pull patient to head of bed, place chucks and flat sheet over patient from shoulder to foot and tuck securely underneath either side of patient
 1. If using a mechanical lift, place lift sheet over patient with second strap positioned at or below manubrium and fold the top of the sheet over so that the first strap is also at the manubrium for extra support then tuck securely underneath either side of patient
5. Pull patient as far as possible away from the side of the bed they are being turned towards
6. Hike up shoulder and tuck the hand, palm down, under the patient's pelvis/ thigh on the side that the patient is turning over.
7. Turn patient onto side using bottom sheet, stopping in sidelying position
8. Pull patient (still on side) further towards the edge of the bed to allow room for proning
9. Complete the turn, placing the patient into the prone position
10. Position 3 ZFlo positioners under patient into an "A" frame: If you are using the lift positioning the ZFlo positioners can be placed after the patient is in prone. If a lift is not available the ZFlo positioners will need to be positioned in the side lying position and held in place while the patient is lowered into prone.
 1. One ZFlo positioner horizontally under the pelvic to align the lumbar spine: SUN Z3-S; 6144SUNZ3S; size 25x36
 2. ZFlo positioned on either side of the thorax, diagonally with cephalic portion of the blanket roll at sternum and the caudal end angled laterally along anterior rib cage. SUNZ4-ZAP-M;

6144UNZAZAPM, size 11.5x19.5

- i. Keep distal sternum and epigastric region free from compression.
3. Rotate the head to the side and position a ZFlo positioner under the head and face if the head and face are not lying flat on the bed surface or to avoid having the patient lay on any lines or tubes. SUN NDCP7010; 6144NDCP7010; size 7-10
11. Place an underpad underneath the patient's head and face and change as indicated
12. Adjust patient's arms into swimmers position for optimal comfort
13. Attach the V lead to the patient's back
14. Unless contraindicated place the patient in reverse Trendelenburg position
15. It is recommended to de-weight or repositioned reposition the patient every 2-4 hours for skin care

C. PATIENT CARE PROVIDED FOR PRONED PATIENTS

1. Patient Care While Prone

1. Maintain patency of tubes and lines
2. Assess the posterior aspect of the patient
3. Change any dressings on the posterior aspect of the patient
4. Ensure that fecal management system is intact and patent (as appropriate)
5. Oral care per unit policy
6. Baseline posterior 12-Lead EKG
7. Alternate swimmers position left and right every 2-4 hours,
8. Inspect the face hourly and change underpads to keep skin dry and intact
9. It is recommended to de-weight or reposition the patient every 2-4 hours for skin care

2. Patient Care Provided While Supine

1. Maintain patency of tubes and lines
2. Reduce sedation if able
3. Full assessment of the anterior aspect of the patient and the neurological status
4. Obtain X-rays if ordered
5. Provide passive ROM
6. Change any dressings on the anterior aspect of the patient
7. Re-secure lines and change IV tubing per unit protocol
8. Oral care per protocol

D. Ongoing Monitoring For Prone Patients

1. Vital signs and assessments per unit protocol
2. ABG per prescriber orders
3. RASS and TOF goals maintained per prescriber order

4. If feeding, keep GI access patent
5. Maintain IV drips and other monitoring per prescriber orders

E. Considerations for Discontinuation of Treatment

1. Achievement of desired improvement of oxygenation per prescriber while supine
2. Significant decline in oxygenation in prone position
3. Unscheduled extubation or dislodgement of ET Tube
4. ET Tube obstruction
5. Cardiac arrest or unstable cardiovascular status
6. Family wishes to discontinue treatment
7. Provider discontinues the proning intervention

V. REPORTABLE CONDITIONS

- A. Development of new wounds/ skin breakdown
- B. Increasing oxygen requirements or worsening of ventilation parameters
- C. Unscheduled dislocation of invasive tubes and lines

VI. DOCUMENTATION

- A. Vital signs and other assessments per unit protocol
- B. Positioning and skin assessment
- C. Nursing note following procedure

REFERENCES

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COMMUNICATION AND EDUCATION

1. This policy will be communicated to the appropriate UMMC personnel via the following channels:
 - a. The policy will be placed in the Hospital Manual on the UMMC Intranet
 - b. Education will be communicated via nursing and other departmental staff meetings and publications as necessary.

DEVELOPER(S)

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Attachments

No Attachments

Applicability

UMMC Downtown Campus

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