Capital Health

INTERDISCIPLINARY CLINICAL MANUAL

Policy and Procedure

TITLE:	Prone Positioning/Proning	**NUMBER:**	CC 45-075
Effective Date:	September 2013	Page	1 of 10
Applies To:	Holders of Interdisciplinary Policy - Respiratory Therapy and Nursing (Critical Care)		

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POLICY

1. Physician orders are required for the initiation and discontinuing of Proning therapy
2. Rotational Therapy cannot be used in conjunction with Proning.
3. Health Care Professionals with the ability/training to intubate are to be present when placing the patient in the prone position and when returning to supine position.
4. The Proning Checklist (CD0598MR) is to be completed on an hourly basis when the patient is in the prone position.
5. CPR is to be administered with the patient in the supine position.

DEFINITIONS

Swimmers Position: Position of the patient with one arm up and one arm along the side of the body

GUIDING PRINCIPLES

1. There are two major components in lung function:

   1.1. Ventilation (V)

   1.2. Perfusion (Q)

   For successful gas exchange, V and Q must closely match. Both ventilation and perfusion are greater in dependant portions of the lung.

2. There are four suggestions as to why prone positioning helps patients with ARDS.

   2.1. Douglas et al proposed that while prone, a shift downward of the diaphragm takes abdominal contents away from the dependant lung zones. This equals greater lung expansion and increased functional residual capacity.

   2.2. Langer et al proposed a shift of water and exudates from dependant to non-dependant regions. Drainage of secretions is enhanced.

   2.3. Lamm et al proposed that a transpulmonary pressure was created sufficient to exceed airway pressures in dorsal lung regions.

   2.4. Several articles refer to proning as an alveolar recruitment strategy.

3. Usually the most benefit of proning is seen with the first proning session; however, subsequent sessions are decided at the discretion of the attending physician.

4. Continuous proning sessions have been used safely between 12 to 20 hours.

PROCEDURE

Equipment

- Proning Pillow for head
- Pillows for positioning under patients chest and pelvis and lower legs
- Eye drops/lubricating gel and protective eye pads.
- Proning Checklist - CD0598MR

1. Patient Assessment

1.1. Assess the patient for the following indications, relative exclusions and cautions:

Indications

- ARDS (Adult Respiratory Distress Syndrome) with a PaO_2/FiO_2 less than 150
- Nursing related issues: eg. large sacral ulcer

Relative Exclusions and Cautions

- Elevated ICP
- Intestinal ischemia
- Known difficult airway
- Obesity

- Recent abdominal incision
- Breast Implants
- Penile prosthesis
- Peritoneal dialysis

1.2. Obtain an authorized prescriber's order.

2. Patient Preparation

2.1. Explain the procedure to patient and family

2.2. Obtain a Proning Checklist (CD0598MR)

2.3. Provide eye care by inserting drops/lubricating gel; tape shut and pad with eye patches to decrease the likelihood of corneal abrasions.

2.4. Secure feeding tube if present.

2.5. Remove all ECG pads

2.6. Secure the endotracheal tube using an endotracheal tube holder. If a tracheotomy is in place, ensure that it is secured; sutured if possible.

2.7. Ensure the lines (central, pulmonary or arterial catheters) are secured and sutured into place.

2.8. Ensure all drains/tubing/catheters are secured.

2.9. If possible have the patient NPO for 45 minutes to 1 hour prior to turn.

3. Placing the Patient in the Prone Position:

3.1. Consider sedation to prevent agitation during the positioning.

3.2. Place lines in the midline position, either running to the head or to the feet. Cap off as many lines as possible.

3.3. Have the respiratory therapist (RRT) present and preoxygenate the patient on 100% oxygen prior to proning. Ensure that the physician/resident (capable of intubation) is available in the unit.

3.4. Turn the patient's face away from ventilator. Position the endotracheal tube (ETT) on the side of the mouth furthest from ventilator.

Note: The person managing the airway must say "All Ready" when initiating moving the patient.

3.5. Slide the patient over to the edge of the mattress away from the ventilator. (Appendix – Photo #2)

3.6. Tilt the patient fully on to their side and insert pillows under lower legs, chest and pelvis to maintain an unrestricted abdomen.

3.7. The patient is then TURNED to the PRONE position TOWARDS VENTILATOR.

4. Care Following Placement in Prone Position

4.1. Auscultate breath sounds bilaterally to ensure there has been no ETT displacement.

4.2. Place EKG electrode pads on the back of the patient.

4.3. If using the KCI™ air bed deflate the head cushion on air bed using manual inflation controls **do not** use head deflate option buttons on main menu of air bed.

4.4. Place a proning pillow under the head with head in a neutral position. Ensure the eyes are in a free space and the head is supported evenly with the neck in a neutral position. Check that the ears are not compressed or folded and the nose is free from pressure.

4.5. Place the bed in a slight reverse Trendelenburg so the eyes are slightly above the right atrium to provide for venous drainage and to decrease the amount of edema.

4.6. While turning the patient, place the patient's arms either at their sides with palms up or in the swimmers position. (See Appendix - Photos #3, #4, #5, and #6)

4.6.1. Alternate the arm position every 2 hours.

4.6.2. When the arm is up, be careful to keep shoulders in a neutral position and the elbow at 90 degrees

4.7. Follow the Critical Care Proning Checklist (CD0598MR).

4.8. Do a general sweep q2h checking under the patient for caps, wrinkles in sheets/pads, twists in tubing etc.

4.9. Do not use rotation mode on air flow bed when in prone position.

5. Discontinuation of Proning

5.1. Assess the patient for the following indications for discontinuation of proning:

5.1.1. Length of time (for safety reasons, normally limited to between 12 to 20 hours per session.)

5.1.2. The patient becomes hemodynamically unstable

5.1.3. The patient has a worsening respiratory status

5.2. Obtain an order from an authorized prescriber to discontinue proning.

6. Return to Supine Position

6.1. Have the RRT present and preoxygenate the patient on 100% oxygen.

6.2. Ensure that the physician/resident (capable of intubation) is available on the unit.

Note: The person managing the airway must say "All Ready" when initiating moving the patient.

6.3. Slide the patient over to the edge of the mattress closest to the ventilator.

6.4. Tilt the patient fully on to their side and remove pillows under their chest and pelvis.

6.5. The patient is then TURNED to the SUPINE position AWAY FROM THE VENTILATOR

6.6. Auscultate breath sounds bilaterally to ensure there has been no ETT displacement.

6.7. Check for any pressure areas and document on the proning form and the Nursing Care Flow sheets. (See Related Documents)

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RELATED DOCUMENTS

Policies

CC 45-070 Mechanical Ventilation Initiation Maintenance and Weaning

Forms

CD0598MR Critical Care Proning Checklist
CD0267 MR ICU Flow sheet- Days
CD0268 MR ICU Flow sheet-Nights
CD2185 MR 3 MSIMSU Flow sheet-Days
CD2202 MR 3 MSINCU Flow sheet-Nights

Appendices

Appendix A Proning position photos

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Appendix A

Photo 1: Pillow configuration

Photo 2: Side Roll

Photo 3: Arm Position

Photo 4: Swimmers position

Photo 5: Prone Positions

Photo 6: Abdomen Position