MANUAL PRONE POSITIONING

SOP ACUTE 100

James A. Haley VA Hospital and Clinics (JAHVH)]
Tampa, FL 33612

Service Line(s):
Acute Care Nursing

Effective Date:
April 1, 2020

Signatory Authority:
Chief Nurse Acute Care

Recertification Date:
April 1, 2025

Responsible Owner:
Chief Nurse Acute Care

1. PURPOSE AND AUTHORITY

a. The purpose of this standard operating procedure (SOP) is to establish nursing procedures for manual prone positioning. This procedure will be led by RNs who have been trained in techniques for prone positioning.

b. Following multidisciplinary discussion of contraindications, a physician's order is required to initiate prone positioning therapy.

2. PROCEDURES

a. **Target patient population:** Patients diagnosed with Acute Respiratory Distress Syndrome (ARDS) or similar pathology (ventilator induced lung injury) deemed to benefit from pronation. Positive responders are those whose PaO2 improves >10mmHg without hemodynamic instability. Pronation is recommended for approximately 18 hours as tolerated in patients meeting criteria for therapy.

b. **Contraindications:**

Unstable spine (absolute contraindication)
Patients unable to tolerate a head down position
Facial/neck trauma/eye trauma or surgery
Recent sternotomy or large ventral surface burn
Open abdomen
Elevated intracranial pressure
Massive hemoptysis
High risk for cardiac arrest
Pacemaker insertion within 2 days
Anterior chest tube with active air leak
Tracheostomy or tracheal surgery
ECMO
MAP<65
DVT < 2 days
Femur or pelvic fracture
Pregnancy

c. **Complications**: Potential complications include temporary increase in oral/tracheal secretions, ETT migration or kinking, catheter kinking, elevated intraabdominal pressure, increased gastric residuals, facial pressure ulcers and edema, brachial plexus injury.

d. **Prepare patient for pronation**

1. Verify order. Notify charge nurse and nurse manager.
2. Gather supplies: Facial support pillow ("prone view" pillow, available from anesthesia service), 3 pillows, 3 flat sheets, intubation kit, ETT replacement, manual resuscitation bag, ECG electrodes.
3. Document ETT depth to teeth.
4. Ensure sedation and adequate NMB if applied
5. Bathe patient, perform oral care, suctioning as required
6. Pause tube feeding (approximately one hour prior to turn)
7. Discontinue nonessential tubing and lines temporarily (e.g. SCDs) and ensure essential tubing has adequate length to turn.
8. Ensure chest tube and foley tubing is free of obstructions, kinks
9. If a drain is to suction, obtain appropriate physician order for clamping if needed.
10. Empty urimeter.
11. Lubricate and tape eyes. If tongue swollen or protruding, insert bite block.
12. Move ECG electrodes to back, readjust BP cuff tubing
13. Assess for patient specific pressure points.

3. ASSIGNMENT OF RESPONSIBILITIES

a. Assemble team of at least 4-5 staff and 1 airway capable physician, anesthesiologist or respiratory therapist.

b. Brief team: assign team leader (usually airway manager, determines start and stop points) and safety check.

c. Ensure all team members have applied appropriate PPE.

d. Patient is placed on 1 sheet and one slide sheet. Lower side rails, lock bed wheels.

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e. Remove headboard. Raise patient head position to top of bed, chin level to end of mattress. Team leader to support head.

f. Align all lines, tubes and drains above the waist: UP

g. Align all lines, tubes and drains below the waist: DOWN

h. Place patient hands under buttocks

i. Place pillows: chest, pelvis, knees (if face pillow used, ensure airway is visible)

j. 1 sheet over patient, one slide (e.g. pink slip) sheet above. Lower side rails.

k. Roll sheets together along the length of each side.

l. Pause to check vitals, suction oropharynx and ETT

m. Set bed to “autofirm.” Slide patient to edge of bed AWAY from the ventilator and IV pumps

n. Direction of the rotation should minimize the excursion of the central line

o. Roll patient to side, turning TOWARD ventilator. Consider use of “turn assist” bed option.

p. Pause to check vitals, verify each person has control of their designated lines, drains and tubing

q. Continue to roll to prone position

r. Remove slide sheet. Tighten sheet under patient to avoid wrinkles.

s. Position arms (e.g. swimmer’s position), feet and head (face toward ventilator)

t. Check and document ETT position at teeth

u. Check all lines and drains and reconnect tubing if needed. Resume suction to drains if needed. Reattach SCDs. Remove pillows as deemed necessary.

v. Place bed in 15-30-degree incline. Support feet and ankles in neutral position.

w. Resume tube feeds as ordered.

<u>During Prone position:</u>

1. Change position every 2 hours

2. Monitor for tolerance, which should be evident in 5 minutes (although transient desaturations up to 5 minutes can be tolerated)

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3. Criteria for stopping:

   a. Oxygenation improvement defined as PaO_2/FiO_2 >/= 150 mmHg with PEEP </= 10 cm H20 and FiO_2 </= 0.6 after at least 4 hours after the last prone session

   b. PaO_2/FiO_2 ratio deterioration by more than 20% relative to supine before two consecutive prone sessions

   c. Complications occurring during a prone session and leading to its immediate interruption (non-scheduled extubation, mainstem bronchus intubation, endotracheal tube obstruction, hemoptysis, SpO_2 <85%, PaO_2 <55mmHg for more than 5 minutes despite FiO_2 of 100%, cardiac arrest, heart rate <30 bpm for 1 minute, systolic blood pressure <60 mmHg or other life threatening complication.

4. Monitor for complications including pressure points, lines and ETT position after every position change.

5. Anticipate and collaborate with MD and RT for ABG and PPlat measurements 1 hour after proning, just before supination and 4 hours after supination.

6. Patient and family education: Include family members in decision to prone. Prepare them by explaining rationale for prone position and safety measures to return to supine position in an emergency and the development of facial edema.

4. DEFINITIONS: None.

5. REFERENCES

Hudack, M. (2012). Prone positioning for the patient with ARDS. Nursing Critical Care. March. 20-24.

Drahnak, D. and Custer, N. (2025). Prone positioning of patients with acute respiratory distress syndrome. Critical Care Nurse. 35(6): 29-37.

Secnecal, P. (2015). Ask the experts: Prone positioning for acute respiratory distress syndrome. Critical Care Nurse 35(4): 72-74.

Bein, T. et al (2016). The standard of care of patients with ARDS: ventilatory settings and rescue therapies for refractory hypoxemia. Intensive Care Medicine. 42: 699-711.

Guerin, C. et al (2013). Prone positioning in severe acute respiratory distress syndrome. New England Journal of Medicine. 368(23): 2159-2168.

Scholten, EL et al (2017). Treatment of ARDS with Prone Positioning. Chest. 151(1): 215-224.

Wiegand, DL (ed.) (2017). AACN Procedure manual for high acuity, progressive and critical care. (7th ed.). St. Louis. Elselvier.

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7. RECERTIFICATION

This SOP is scheduled for recertification on or before the last working day of April 2025. In the event of contradiction with national policy, the national policy supersedes and controls.

8. SIGNATORY AUTHORITY

Chief Nurse, Acute Care

NOTE: *The signature remains valid until rescinded by an appropriate administrative action.*

DISTRIBUTION: Critical Care Nursing section, unit directors

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MANUAL PRONE POSITIONING CHECKLIST

	Done	Date/Time
1. Ensure supplies are in the room. "Prone view" head support (anesthesia service), 3 pillows, 3 flat sheets, intubation kit, ETT replacement, manual resuscitation bag, ETT securement device, ECG electrodes		
2. ASSEMBLE team of at least 4-5 staff and 1 airway capable physician, anesthesiologist or respiratory therapist.		
3. BRIEF team: assign team leader (usually airway manager, determines start and stop points) and safety check.		
4. Ensure all team members have applied appropriate PPE		
5. Patient is placed on 1 sheet and one slide sheet. LOWER side rails, LOCK bed wheels.		
6. Remove headboard. Raise patient head position to top of bed, chin level to end of mattress. Team leader to support head.		
7. ALIGN all lines, tubes and drains above the waist: UP		
8. ALIGN all lines, tubes and drains below the waist: DOWN		
9. PLACE patient hands under buttocks.		
10. PLACE pillows: chest, pelvis, knees (if face pillow used, ensure airway is visible).		
11. PLACE one sheet over patient, one slide sheet (e.g. pink slip) above.		
12. ROLL sheets together along the length of each side		
13. PAUSE to check vitals, suction oropharynx and ETT		
14. SET bed to "AUTOFIRM," SLIDE patient to edge of bed AWAY from the ventilator and IV pumps.		
15. ROLL patient to side, turning TOWARD ventilator and IV pump. Consider use of "TURN ASSIST" bed option.		

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16. PAUSE to check vitals, verify each person has control of their designated lines, drains and tubing		
17. Continue to roll to prone position		
18. Remove slide sheet. Tighten bottom sheet to avoid wrinkles.		
19. Position arms (e.g. swimmer's position), feet and head (face toward ventilator)		
20. Check and document ETT position at teeth		
21. Check all lines and drains and reconnect tubing if needed. Resume suction to drains if needed. Reattach SCDs. Remove pillows as necessary.		
22. Place bed in 15-30-degree incline. Support feet and ankles in neutral position.		
23. Resume tube feeds as ordered.		

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