PRONE POSITION FOR ARDS PATIENTS WITH CONFIRMED OR SUSPECTED COVID-19

CONTENTS

PATIENTS TO BE CONSIDERED

1. Severe ARDS (P:F ≤150, FiO2≥ 60%, PEEP ≥5), including those with suspected or confirmed COVID-19
2. No absolute contraindications
    a. Severe burns or large open wounds on face or ventral surface
    b. Facial trauma
    c. Elevated ICP *(due to jugular vein compression if neck turned/not in neutral position)*
    d. Spinal instability
    e. Unstable cardiac arrhythmia
    f. Pregnancy (due to IVC compression, fetus itself not necessarily at-risk)
    g. If patient weight >300 pounds, discuss with intensivist in huddle
3. Reasonable likelihood of survival as deemed by physicians (*given labor, PPE, exposure considerations at this time)*

RESPONSIBILITIES BY ROLE

Physician responsibility prior to prone positioning

1. Place order (prone positioning as tolerated)
2. Huddle with charge RN, bedside RNs, and RT's of plans to prone
3. Inform patient's family of plans to prone and risks/benefits
4. Consider labs (ABG); CXR prior to prone positioning for ETT position in select patients (not mandatory)
5. Ensure very deep sedation or paralytic ordered
6. Strongly consider invasive lines on the same side of the patient; lines on both sides is not a contraindication
7. Be present either immediately outside the room or in the room, ready to don PPE and enter room immediately if there are complications during proning maneuver

Charge and bedside RN responsibility prior to proning

1. Ensure adequate staff available for maneuver (minimum 5, 6 ideal – negotiate in huddle)
2. Stop tube feeding one hour prior to proning
3. Assemble all pillows/cushions needed for patient while prone
4. Obtain lift devices if appropriate
5. Place foam dressings to susceptible bony prominences
    a. Forehead
    b. Cheeks
    c. Chin
    d. Nose
    e. Shoulders
    f. Breasts
    g. Elbows
    h. Knees
    i. Iliac crest/hip
6. Evaluate all tubing for need for extensions during proning maneuver
7. Perform head to toe skin assessment
8. Assess neck mobility side to side
9. Perform baseline pupillary exam
10. Obtain steps for proning and proning checklist, mepilex dressings, etc. prior to entering the room

RT responsibility prior to proning

1. Be available for pre-proning huddle and for proning maneuver at the head of the bed
2. Increase FiO2 to 100% after huddle
3. Assess ventilator settings after patient is given additional sedation
4. Suction ETT
5. Mark ETT position
6. Perform thorough oral care
7. Check cuff pressure
8. Assess ETT holder be certain it is secure. Reassess thoroughly with every vent check (increased likelihood of becoming slimy and loose while prone)
9. Be certain enough slack is present with ventilator circuit and have ventilator positioned as close to the bed as possible.

10. Position hands so that one hand is used to stabilize the patient's occiput and neck; one hands holds ETT
11. Counts out loud "1,2,3" for team to proceed with patient movements

All Team Members

1. All parties involved in proning maneuver don PPE and enter room with all supplies not already given to bedside nurse
2. Follow proning checklist and proning instructions (separate document)
3. Evaluation of patient once proned
4. Typical scheduled is to prone patient for 16 hours/day (subject to change based on tolerance, patient response, and nursing routine)

PERFORM MANEUVER

Turning crew (minimum 5 in room, 6 ideal)

- 1-2 RNs on each side of bed
- 1 RT at head of bed
- Physician present to intervene as needed; may be inside or outside of room.
- I RN at foot of bed to give direction to the team

Checklist for Proning

Read out loud by RN at foot of bed

Step	Description	Check When Complete
1	Ensure physician order to prone (order for every occurrence	
2	Stop tube feeding one hour prior to pronation	
3	Assess patient's level of sedation and level of pain and administer medications as needed	
4	If patient on low air-loss surface, max inflate mattress	
5	Ensure all necessary lines and tubes have been inserted (i.e., central line, PIVs, NGTs, etc.)	
6	Perform eye care including lubricating eyes and horizontal taping of the closed eyelids	
7	Ensure tongue is in mouth. If swollen or protruding, consider inserting a bite-block.	
8	Change dressings that were due to be changed during pronation therapy	
9	Empty ileostomy or colostomy bags before positioning. Consider padding around stoma to prevent direct pressure.	
10	Pad boney prominences with mepilex dressings (Toes, knees, iliac crest/hip, shoulders, elbows, etc.)	
11	Pre-oxygenate with 100% oxygen for at least 5-10 minutes prior to prone positioning. Suction ETT.	
12	Assemble staff members (optimal 5-6). RT to monitor and maintain airway and ventilator; 2 members on each side of bed to turn patient; 2 additional members to monitor the airway, lines, tubes, and checklist	
13	Ensure lines lines/tubes from the waist up are positioned towards head of bed; lines/tubes from waist down are positioned toward foot of bed. (also, consider discontinuing unnecessary lines)	
14	Ensure enough slack is present in all lines, tubes, and monitoring equipment. Ensure all lines, tubes, and drains secured.	
15	Ensure appropriate lift/mobility devices are in place.	
16	Tuck patient's hand closest to the ventilator under the patient's buttock with palm facing up; ideally this is opposite side of patient's invasive lines.	
17	Place chucks on top of patient's chest and pelvis	

18	Place pillows on top of chucks in the horizontal position: on the patient's chest and pelvis	
19	Place a flat sheet on top of everything, covering patient except for head.	
20	Roll the top sheets and bottom sheets tightly together wrapping the patient like a "burrito"	
21	RT removes pillow from under head and positions hands on neck/occiput and ETT	
22	RT counts "1,2,3" and team boosts patient to top of bed	
23	RT counts "1,2,3" and team moves patient to edge of bed, farthest away from ventilator (opposite the direction of the turn) to prevent dislodging of the ETT	
24	RT counts "1,2,3" and team rolls patient to patient's side; 90 degrees, side lying; ETT facing ventilator	
25	RT counts "1,2,3" and team moves patient to side of bed	
26	Prepare the patient for the turn:	
	a) Turn patient's head so it is facing away from the direction of the turn (in this position, it will end up facing the ventilator)	
	b) Loop ventilator tubing above patient's head	
	c) Cross leg closer to the edge of the bed over the opposite leg at the ankle	
	d) Remove EKG electrodes from chest	
	e) Tuck arms slightly under the buttocks	
	f) Secure urinary catheter securement device to the side/back of leg, monitoring for kinking, pulling, and pressure	
	g) Ensure all lines and tubes are secured	
27	RT counts "1,2,3" and RN on opposite side of ventilator will pull rolled up sheets from beneath the patient while the other RN turns patient to prone position. Patient now in swimmers position with pillows under head, chest, and pelvic region	
28	Pull and center the patient in the bed. Discard the sheet that is the top part of the "burrito"	
29	Place EKG leads on back. Straighten and secure all lines, tubes, and drains.	
30	Rotate the patient's arms parallel to the body and then place them in a position of comfort. The arms may be positioned by the head, aligned with the body, or one up and one down (Swimmer position – preferred)	
31	Adjust forehead and chin protection to provide full facial support in face-down or side-lying position without interfering with the ET tube.	
32	If the patient was on a low air-loss surface, adjust the inflation as appropriate (bed seat position may be slightly deflated to prevent pressure on foley or other devices)	
33	Place in slight reverse Trendelenburg to reduce facial swelling	
34	Resume tube feedings	
35	Return Fi02 to previous settings if needed	

36	Document in patient's record	
37	Reposition every two hours alternating head and arms in Swimmer's position and shifting of pressure areas	

CHECKLISTS FOR CARE OF PRONED PATIENTS

RN Care Checklist

Step	Description	Check when Complete
1	Place ECG electrodes on patient's back and connect	
2	Place pillow under patient's shins so that toes are off of bed	
3	Place bed into reverse trendelenburg (-10—20 degrees) if appropriate level and zero invasive monitoring equipment	
4	Position head so that neck is in neutral position	
5	Be certain ear is not folded; consider foam dressing under ear	
6	Place a new gown on patient	
7	Check genitals of male patient to be certain they are not compressed between legs	
8	Ensure eyes are closed; place foam under any additional pressure points	

RT Care Checklist

Step	Description	Check When Completed
1	Auscultate breath sounds	
2	Check for pressure points around ETT	
3	Check ventilator for changes in returned tidal volumes and/or peak inspiratory pressures	
4	If changes are present, troubleshoot: ETT kinked? Suctioning? Cuff leak? Chest tube malfunction?	
5	Consider ventilator adjustments if no issues are found	
6	Turn head side to side every 2 hours; arm opposite ETT is positioned up in swimmer's position	

CHECKLISTS FOR SUPINING (*from prone to supine position)*

Read out loud by RN at foot of bed

Step	Description	Check when complete
1	Stop enteral feeding one hour prior to turning	
2	Ensure that all lines, tubes, and drains are secure	
3	Pre-oxygenate the patient with 100% oxygen for 5-10 minutes prior to turning. Suction the ETT.	
4	Place/Return bed in flat position	
5	If patient is on a low air-loss surface, max inflate mattress	
6	Assemble staff members (six optimal)	
7	Remove head support	
8	Place arms down on patient's side	
9	Tuck the arm that is on the opposite side of the ventilator under the hip/thigh with the palm facing up. Ideally this arm should be opposite of invasive lines	
10	Place a chuck on patient's buttocks	
11	Ensure patient's head/ETT facing the ventilator	
12	RT counts "1,2,3" and team moves patient to edge of bed closest to ventilator (opposite the direction of the turn). It is ideal eventually turn *toward* the ventilator.	
13	Prepare the patient for the turn: a) Turn patient's head so it is facing away from the direction of the turn b) Loop vent tubing above patient's head c) Cross leg closer to edge of the bed over the opposite leg at ankle d) Remove EKG leads from patient's back e) Tuck patient's arms slightly under abdomen f) Secure urinary catheter securement device to the side/front of the leg, monitoring for kinking, pulling, and pressure	
14	Ensure all lines and tubes are secured	
15	RT counts "1,2,3" and patient is rolled to side lying position; ETT facing ventilator	
16	RT counts "1,2,3" and patient is slid towards ventilator; side lying position	
17	RT counts "1,2,3" and RN on ventilator side will pull sheets from beneath patient while the other RN turns patient into supine position. Pull and center the patient in the bed.	
18	Place EKG leads on chest	
19	Straighten and secure all lines, tubes, and drains	
20	If the patient was on a low-air loss surface, adjust the inflation as appropriate	
21	Resume tube feeding	
22	Return FiO2 to previous setting	
23	Document in patient's record	