

**EHC Critical Care/ED
COVID19 Self-Prone and Repositioning Protocol for Non-Ventilator Patients (ICU)****Edited 4/28/2020****Version: 4/28/2020v8**

Background: Patients with novel coronavirus pneumonia (NCP) can present with hypoxemia and acute respiratory distress syndrome (ARDS). Prone is an evidence-based intervention recommended for intubated patients with severe ARDS. Prone improves ventilation-perfusion matching in the lung and increases the number of alveoli available to participate in gas exchange. Anecdotal evidence suggests that non-intubated patients with NCP may benefit from self-prone.

Purpose: To avoid intubation and improve oxygen saturation in COVID-19 patients and high risk PUIs on high flow nasal cannula.

Inclusion Criteria: (Must meet all criteria)

- Confirmed COVID-19 disease and High Risk PUIs
- Hypoxemia requiring high flow nasal cannula
- Increasing high flow nasal cannula requirement
- Able to understand their situation and communicate and cooperate with procedure
- Able to independently reposition

Exclusion Criteria: (TF)

- Trauma: unstable cervical, thoracic, lumbar, pelvic, skull, or facial fractures
- Neurologic: uncontrolled intracranial pressure, cerebral edema, frequent seizures, or altered mental status
- Hematologic: Active bleeding
- ENT: raised intraocular pressure or recent ophthalmic surgery, facial trauma, or recent oral maxillofacial surgery in last 15 days
- Cardiac: severe hemodynamic instability, SBP less than 90mm Hg, unstable cardiac rhythms, ventricular assist device, intra-aortic balloon pump, sternotomy on present admission, open chest, new pacemaker in last 48 hours
- Pulmonary: hemoptysis, unstable airway, new tracheostomy < 7 days or failure to tolerate finger occlusion, bronchopleural fistula, lung transplant
- Abdomen: second or third trimester pregnancy, grossly distended abdomen, ischemic bowel, abdominal compartment syndrome, extensive inguinal or abdominal soft tissue injury
- Musculoskeletal: chest wall abnormalities, kyphoscoliosis, or advanced arthritis
- Skin: Acute burns on more than 20% body surface
- Other: inability to independently turn

Self-proning protocol (SPP):

- Primary nurse will screen all NCP patients for self-proning eligibility once a shift. If a patient meets criteria, the primary nurse will notify the primary team for provider assessment.
- Primary team will assess the patient and determine the eligibility of patient for SPP and place a communication order.
- Notify Respiratory Therapist (RT) once order is placed.

Prior to Repositioning

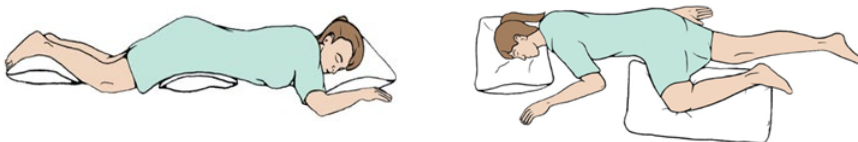
- Perform anterior body wound care and dressing changes, as needed.
- Patients should consider using the rest room prior to start of therapy
- Relocate ECG electrodes to avoid placement over any potential pressure points, or causing discomfort.
- Empty ileostomy or colostomy drainage bags, as needed
- Place draw sheet or pad under patient.
- Consider timing and size of last meal. If patient ate $\geq 75\%$ of a meal, consider delaying proning for 30 minutes to one hour.
- Engage side rails as safety mechanism or to assist with independent repositioning
- Ensure the bed brake is engaged
- Educate patient that they can readjust while in prone position to increase comfort.
- Gather supplies needed prior to entering the room

Supplies

- Personal protective equipment
- Pillow(s)
- Foam or gel positioning devices, foam dressings, or rolled towels to protect pressure points
- Supplemental Oxygen
- SpO₂ monitoring equipment
- Suction equipment set up
- Extra ECG electrodes
- Wound and ostomy care supplies, skin care supplies
- Draw sheet or pad

Repositioning

- Instruct the patient to switch between the following positions listed below every 2 hours. For each position change, be vigilant in monitoring patient vital signs and response to the intervention. Assess and document position change. **If tolerated, prone position should be maintained for at least 1- 2 hours twice daily.**
 - a) Left lateral recumbent
 - b) Right lateral recumbent
 - c) Sitting upright 60-90 degrees
 - d) Laying prone in bed (laying on the abdomen)
- Assess for oxygenation improvement with the position change. Document patient response as listed below.
- **If oxygen saturation deteriorates within 15 mins, perform the following:**
 - Try another position
 - Ensure oxygen connected to wall and patient.
 - Increase oxygen flow rate.
 - Change patient position and consider return to supine position with HOB 30-60 degrees.
 - Call primary team MD/APP and RT for consideration of intubation.
 - If patient rapidly deteriorates, follow the process for emergency response.
- Assist patient with repositioning into the prone position, support their arms, head, and chest with a pillow (swimmer's position).

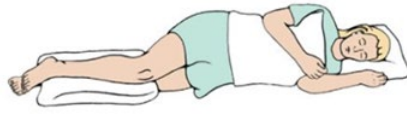


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- Position tubing and lines to prevent kinking or obstruction
- Place pillows under hips or legs, as needed, for comfort

Special Considerations:

- Patient must have the call light within reach.
- Have patient's phone or device within reach if patient requests.
- Utilize music or television as a distraction.
- Consider using reverse Trendelenburg bed position (helpful for patients with large abdomens, prevention of aspiration, continuation of tube feedings)



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- Consider lateral position if patient is unable to tolerate prone position
- Maintain positions for 1-2 hours in each position as tolerated
- When not prone, consider sitting upright at 60-90 degrees
- Do not titrate down oxygen requirements while in prone position. May titrate up if indicated according to oxygen saturations.

Self-proning protocol termination criteria:

- Cardiac arrest
 - AHA recommendations:
 - **“For Suspected or confirmed COVID-19 patients who are in prone position without an advanced airway, attempt to place patient in the supine position for continued resuscitation.”**
- Respiratory rate greater than 30 breaths/minute with increased work of breathing or accessory muscle use
- MAP \leq 65 mmHg on maximum dose of norepinephrine of 0.05 ug/kg/min
- Heart rate < 50 beats per minute or greater than 120
- SpO₂ < 90% or PaO₂ < 55 mm Hg despite increasing FiO₂
- Patient inability to tolerate prone position

Completion of therapy

- Patient can notify nursing staff and reposition out of prone position.
- Ensure tubing is not tangled.
- Change bed position out of the reverse Trendelenburg position if applicable.
- Complete VS as stated under monitoring.
- Instructions on how to properly use incentive spirometry q2 while awake per provider orders. Document education provided.

Documentation

- Document the following in electronic medical record. If electronic medical record not available, utilize downtime form.

- Primary nurse will ensure documentation of mobility, RASS, CAM-ICU, prior to each therapy.
- Document the following prior to repositioning, 15 minutes after each position change, hourly, and end of each position change:
 - a. Vital signs (including BP, HR, RR, SpO₂, oxygen device, L/min of supplemental O₂).
 - b. Range of motion.
 - c. Patient's response and tolerance under activity/mobility.
- End of each position change, document
 - a. Duration in activity section under medical record.
 - b. New onset pain or paresthesia.
 - c. Patient's response to the intervention in progress note once a shift.
- Document date and time of notification to provider for any adverse effects to interventions.

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