

Clinical Strong Practice (CSP)

Rapid Sequence Intubation (RSI) for Patients with COVID-19

Practice Purpose

To provide practical guidance to health care professionals about how to safely perform an RSI for patients with COVID-19. This document includes instructions about how to prepare to safely perform an RSI for a patient with COVID-19 and includes additional considerations when caring for these patients.

Documents Included

Out of Room Preparation (Page 2)

- Describes team members, personal protective equipment (PPE), supplies, and the location and timing needed for intubation of COVID patients.

Out of Room Pre-Check and Brief (Page 3)

- Describes procedure for patient pre-oxygenation plan, patient medication plan, and team pre-brief needed for intubation of COVID patients

In Room Preparation (Page 4)

- Describes actions nurses, RTs, and airway managers will perform during in room preparation for intubation of COVID patients

RSI Procedure (Page 5)

- Describes actions the primary and backup or rescue teams should take during RSI in COVID patients

Post-Intubation Procedure (Page 6)

- Describes process team should use post-intubation including proper safety precautions to exit room, return and cleaning of supplies, and team brief process after the intubation of COVID patients

Practice Origin: Southeast Louisiana VA Health Care System



This COVID Strong Practice was developed in response to the COVID-19 Pandemic to enable VHA to adapt quickly for the benefit of Veteran and employee health.

Last updated: April 13, 2020

OUT OF ROOM PREPARATION

SUGGESTED COVID PATIENT INTUBATION PROCEDURES

<u>Team and Location</u>	<u>In Room</u>	<u>Runners</u>	<u>Runner Responsibilities</u>
<u>PPE</u>	<p><u>Preparation</u></p> <ul style="list-style-type: none"> Consider pre-made PPE packs that can be easily grabbed with all essentials <p><u>Equipment and Use</u></p> <ul style="list-style-type: none"> N-95 with cover mask or Powered Air Purifying Respirator (PAPR), face shield or goggles, hair cover, impermeable gown or coverall, double glove Airway runner also wears full PPE as fully prepared back-up Runner's PPE can be reused if they remain outside the room 		
<u>Supplies and Equipment</u>	<ul style="list-style-type: none"> Have all necessary airway equipment available Consider pre-assembled airway bags/boxes that will be immediately restocked after procedure Only necessary supplies will enter room with anticipated backup supplies selected and held by airway runner Two-way communication device (if available) for primary team to communicate with exterior runners 		
<u>Location and Timing</u>	<p><u>Location</u></p> <ul style="list-style-type: none"> Perform intubation in negative pressure room whenever possible <p><u>Timing</u></p> <ul style="list-style-type: none"> Consider early intubation. Hypoxia with minimal reserves expected. Do not expect to see significantly increased work of breathing 		

OUT OF ROOM PRE-CHECK AND BRIEF SUGGESTED COVID PATIENT INTUBATION PROCEDURES

<p><u>Initial Airway Assessment</u></p>	<ul style="list-style-type: none"> • Height/weight • Allergies • Medical history (Hx), including Hx of difficult intubation
<p><u>Pre-Oxygenation Plan</u></p>	<ul style="list-style-type: none"> • Use 5L nasal canula (NC) and non-rebreather mask (NRB) with barrier. Do not use bag mask • Prepare pre-oxygenation supplies
<p><u>Medication Plan</u></p>	<ul style="list-style-type: none"> • RSI sedation drug of choice in upper end of dosage range • Consider push dose midazolam or propofol in peri-intubation period for rapid onset sedation if needed <p><u>Paralytics</u></p> <ul style="list-style-type: none"> • Rocuronium in larger dose 1.5-2.0 mg/kg as agent of choice for longer half-life • If succinylcholine is chosen out of necessity, use 2mg/kg succinylcholine <p><u>Post-intubation sedation</u></p> <ul style="list-style-type: none"> • Patient will likely need higher doses of sedatives. Medication choice dictated by local supply. Consider 2 agents for synergistic response • These patients are characteristically difficult to sedate. Anticipate this <p><u>Hemodynamic support</u></p> <ul style="list-style-type: none"> • Consider push dose phenylephrine 0.1-0.5 mg for peri-intubation hypotension • Promptly access norepinephrine drip for same
<p><u>Team Pre-Brief</u> (Includes Primaries and Runners)</p>	<ul style="list-style-type: none"> • Verbally run through of the procedure to facilitate shared mental model. Pre-brief should include anticipated sequence, do's and don'ts (i.e., no bag mask ventilations), back up plans, rescue plan • List the in room and out of room supplies, medications, etc. • Allow the team opportunity to ask questions

IN ROOM PREPARATION

SUGGESTED COVID PATIENT INTUBATION PROCEDURES

Primary team enters room. If any primary team member was already in the patient room during initial brief, a second team pre-brief is held to bring entire primary team up to speed.

<u>Nurse</u>	<ul style="list-style-type: none"> • Prepares and confirms all RSI meds • Prepares and primes post-intubation sedation • Ensures working intravenous catheter (IV) is in the room • Communicates with runner for any immediate or backup needs not discussed in team pre-brief
<u>RT</u>	<ul style="list-style-type: none"> • Initiates pre-oxygenation if not already in place with 5L NC and NRB mask • Prepares ventilator and ensures oxygen supply • Ensures viral filter placed between patient and in-line end-tidal CO₂ (ETCO₂) detector • Suction ready • Communicates with runner for any immediate or backup needs not discussed in team pre-brief
<u>Airway Manager</u>	<ul style="list-style-type: none"> • Performs in room airway assessment to confirm primary and backup plan and supplies needed in the room. Modified 3-3-2 to facilitate best blade selection. This assessment is likely limited to gross visualization of mouth opening. Hyoid-mental distance measurement, and base of mandible to thyroid cartilage measurement • Initiates pre-oxygenation if not already in place with 5L NC and NRB mask. Do not use bag mask • Communicates with runner airway manager for primary airway supplies (Selected blade and tube size, 10mL syringe) • Communicates back up supplies (different blade and/or tube size, correct LMA size and 60cc Luer lock syringe, cricothyrotomy kit) • Optimizes patient positioning with assistance of team. Allow patient to remain with head of bed (HOB) elevated until time for laryngoscopy and tube placement

RSI PROCEDURE

SUGGESTED COVID PATIENT INTUBATION PROCEDURES

<p><u>Primary</u></p>	<ul style="list-style-type: none"> • Push Sedative and paralytic • Await apnea/paralysis • Turn off oxygen source to NRB and gently remove mask, utilizing barrier drape to minimize droplet spread • Do Not Bag/mask ventilate • Perform video laryngoscopy and immediate intubation • Inflate cuff. Do not ventilate until cuff is inflated • Gently remove stylet using extreme caution in removing rigid stylet • Immediate connection of endotracheal tube to ventilator and begin ventilations. Do not check placement with CO₂ colorimetry device • Verify tube placement with chest rise, expected volumes/pressures, and inline ETCO₂ monitoring if available • Secure tube
<p><u>Backup or Rescue</u></p>	<ul style="list-style-type: none"> • If unable to immediately place the tube, discontinue laryngoscopy and immediate placement of a laryngeal mask airway (LMA). (I-gel preferred due to ability to intubate through I-gel) • Connect to ventilator and begin ventilations • Coordinate and plan second attempt only after discussion/assistance of runner airway manager and/or backup airway staff for additional collaboration • If the decision is to remove LMA for second laryngoscopy attempt, very gently remove the LMA. High risk of contamination during removal. Consider using barrier cover sheet to minimize risk • Well-coordinated second attempt at laryngoscopy after oxygenation maximized and backup equipment/tube ready • Secure tube or LMA

POST-INTUBATION PROCEDURE
SUGGESTED COVID PATIENT INTUBATION PROCEDURES

<p><u>Post-Intubation</u></p>	<ul style="list-style-type: none"> • Start continuous sedation and titrate to effect. May need additional bolus dosing or addition of second agent • Return HOB to 30 degrees. • Use lung protective strategy ventilator settings in conjunction with intensivist • Insert an orogastric tube
<p><u>Prepare to Exit Room</u></p>	<ul style="list-style-type: none"> • Conduct initial wipe down of CMAC video wand and cord and return to upper tray of CMAC cart • Doffing of PPE in appropriate sequence • Please review widely available guidance for proper sequence of doffing procedures and contaminated equipment handling
<p><u>Team Debrief</u></p>	<ul style="list-style-type: none"> • Gather team outside of room to debrief procedure, address safety concerns, and discuss if there is room for improvement
<p><u>Supplies and Equipment</u></p>	<ul style="list-style-type: none"> • Return any unused and uncontaminated supplies to appropriate locations • Restock used supplies in airway kit • RT follows through with cleaning and preparation of Video Laryngoscope and cart