RANCHO LOS AMIGOS
NATIONAL REHABILITATION CENTER

ADMINISTRATIVE POLICY AND PROCEDURE

Subject: PHYSICIAN DRIVEN THERAPIST ASSISTED PROTOCOL – ENDOTRACHEAL INTUBATION **Policy No.:** B851

Supersedes:	July 22, 2020	Review Date:	July 19, 2023
Origin Date:	June 1, 2013	Revision Date:	July 19, 2023

PURPOSE:

To establish procedural guidelines for Respiratory Care Practitioners (RCP) to assist the physician during endotracheal (ET) intubation.

To properly assist the physician with assessment and ensure proper placement of the endotracheal tube post intubation.

PROCEDURE:

1. Perform hand hygiene.
2. Explain the procedure to the patient.
3. Attach patient to pulse oximeter and cardiac monitor.
4. Set up suction and connect rigid suction tube.
5. Prepare the equipment: Open the intubation tray. This tray should contain the items shown in Table 1.
6. Obtain a 10 mL syringe to test ET tube cuff.
7. Select the ET tube: Use Table 2 as a guideline.
8. Instill air into the cuff to make sure it holds and then deflate the cuff.
9. Insert a stylet to make the tube more rigid for easier insertion. Make sure the stylet does not extend past the end of the tube.
10. Lubricate the cuff with water soluble lubricating jelly.
11. Connect laryngoscope blade with handle to make sure the fiberoptic light working.
12. Provide high flow O2 via nasal cannula prior to and during the intubation process to prevent hypoxemia.
13. Obtain a manual bag mask resuscitator and attach to oxygen source. Test it to make sure it's working properly. Be ready to ventilate the patient if needed.
14. Preoxygenate for 3-5 minutes with 100% oxygen via nonrebreather mask or via bag mask resuscitator if patient ventilation is not adequate.
15. Pre-medicate as ordered (By RN).

16. Assist the physician to place the patient's head in the "sniffing position" if not contraindicated
17. Check mouth for dentures and remove if present, suction as needed.
18. Stand on the head side of the patient and provide physician with the laryngoscope blade, ET tube and other supplies as needed.
19. Apply cricoid pressure as ordered by the physician, to assist in visualization of the vocal cords while advancing the blade (Not recommended for pediatric patients; routine use of cricoid pressure in adult cardiac arrest is not recommended).
20. Once the physician inserts the ET tube into the trachea, the physician will read the marking point of the tube at lips or out of nose. The tube will be held firmly in place. The cuff is inflated and the physician, RCP, or RN will listen for equal breath sounds. If louder sounds are heard on the right side, the tube may be in the right main stem bronchus. The physician will deflate the cuff and withdraw the tube until equal breath sounds are heard.
21. Attach continuous End Tidal CO2 monitor and watch for detection of CO2.
22. Monitor oxygen saturation.
23. Once the physician confirms the placement of the ET tube, the RCP will secure the ET tube at nose or lips.

    Note: Taping the tube at 23-25 cm mark at the teeth will most likely place the tube between clavicles and carina.
24. The RCP will perform the following:
    a. Attach E-T Tube to the ventilator as ordered
    b. Wash your hands
    c. Document in the medical record
25. The physician will order an immediate chest x-ray to verify tube placement. The end of the tube should rest 2-7 cm above the carina. The carina is located on X-ray film at the 4^{th} rib or 4^{th} thoracic vertebra.
26. Follow the guidelines for ventilator management.

Table 1: Items in the Intubation Trays (Adult & Pediatric)

	ADULT		**PEDS**
1	E-T Tubes 1-Each (Size 6.0, 6.5, 7.0, 7.5, 8.0, 8.5)		E-T Tubes 1-Each (Size 2.5 through 5.5)
2	1-Yankauer Suction		1-Yankauer Suction
3	2-Lubricating Jelly (5g)		2- Lubricating Jelly (5g)
4	2- Tongue Depressor Blade		1- Tongue Depressor Blade
5	1- One inch Cloth Adhesive/surgical Tape or ET-Tube holder		1- One inch Cloth Tape or ET-Tube holder
6	1-Laryngoscope Handle		1-Laryngoscope Handle
7	1-O2 Tubing		1-O2 Tubing
8	1-each Fiberoptic Laryngoscope Blades:	1 each size 3 & 4 Curved (Macintosh) 1-Size 3 Straight Miller	1-Size 2 Curved (Macintosh) 1-Size 0,1,2 Straight (Miller)
9	1-Stylet (Adult)		1-Stylet (Peds)
10	1-each Oral Airways (Size Small, Medium, Large)		1-each Oral Airway (Size 0-3)
11	2-10 cc Syringe		1 Three way Stop cock 1 Argyle Salem Sump tube 1- 33 Extension set
12	Easy Cap II CO2 Detector		Pedi Cap II CO2 Detector

Table 2: Guidelines for selected E-T Tube

PATIENT'S AGE		**INTERNAL DIAMETER**
PEDIATRIC	18 MO	4.0
	3 YR	4.5
	4 YR	5.0
	5 YR	5.5
	6 YR	6.0
ADULT	16 YR	7.0
NORMAL SIZE WOMAN		7.5 TO 8.0
NORMAL SIZE MAN		8.0
LARGE ADULT		8.5

Table 3: Range, Color and Approximate CO2 guide

RANGE	COLOR	APPROXIMATE CO2 RANGE
A	PURPLE	< 4 mm Hg
B	TAN	4 to < 15 mm Hg
C	YELLOW	15 to 38 mm Hg

Table 4: Interpreting the Color Change

COLOR	CAUSE	ACTION
Purple	E-T Tube in esophagus	Re-intubate patient
	ETT in Trachea (Ineffective compression)	Reposition hands on & continue chest compression or change rescuer for more effective compression
Tan	ETT in esophagus	Re-intubate patient
	ETT in Trachea (Ineffective compression Blood flow or CO2 production decreased)	Reposition hands on & continue chest compression or change rescuer for more effective compression
Yellow	Proper intubation Adequate blood flow	Return of spontaneous circulation. Check the **carotid pulse**

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