

	<p>POLICIES & PROCEDURES</p> <p>Title: ENDOTRACHEAL TUBE (ADULT, PEDIATRIC) – ASSISTING WITH INTUBATION</p> <p>I.D. Number: 1039</p>
<p>Authorization</p> <p>[X] SHR Nursing Practice Committee</p>	<p>Source: Nursing/Respiratory Therapy</p> <p>Date Revised: October, 2017</p> <p>Date Effective: March 2004</p> <p>Scope: SHR Acute Care</p>

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Definition

Health Care Professional (HCP) - Physician-Assistant, RN, RN (NP), LPN working in the OR with Perioperative Advanced Certification, RRT, student RT under direct supervision of RRT may assist with intubation. Two personnel must be present to perform intubation – one qualified in intubation and one to assist

1. PURPOSE

- 1.1 Endotracheal intubation usually requires two qualified Health Care Professionals (HCP), one to insert the endotracheal tube (ETT) into the trachea and another person to assist. This procedure outlines the responsibilities of the assistant who may prepare and monitor the patient, assemble the equipment required under direction of practitioner intubating, act as an extra set of hands (especially when the vocal cords are being visualized and immediately following tube placement), and ensure patient safety. A third HCP may be needed for medication administration or other tasks as directed.

2. POLICY

- 2.1 Who may assist: Health Care Professional
- 2.2 Physician order required: Yes
- 2.3 Special considerations
 - 2.3.1 At least two personnel must be present to perform intubation – one qualified in intubation and one to assist
 - 2.3.2 Ensure all equipment is in working order before beginning procedure

3. PROCEDURE

3.1 Supplies

- Airway Management Kit (SKU # 112737) / Tray (SKU # 111616) or
- Pediatric Intubation Tray (SKU # 535010)

- Suction equipment including Yankauer tip and straight suction catheter of appropriate size
 - Laryngoscope – handles curved & straight blades of appropriate sizes. Glidescope may also be requested.
 - 12 mL syringe
 - Appropriate size and style of endotracheal tube (ETT): cuffed for adults and cuffed or un-cuffed for children.
NOTE: for Pediatrics, assemble ETT 0.5mm larger and smaller than size anticipated.
 - ETT tapes, ties, or commercially available holder
 - Scissors
 - McGill forceps
 - Stylet – adult or child depending on size of ETT
 - Xylocaine spray and nozzle (optional)
 - Water-soluble lubricating jelly (optional)
 - Bag-valve-mask (BVM) device and appropriate size mask and PEEP valve as appropriate. NOTE: Neonatal BVM do not have a PEEP valve
 - Stethoscope
 - Personal Protective Equipment: mask with attached visor and sterile/non-sterile gloves as required by the situation ((based on a point-of-care risk assessment, the use of other appropriate PPE such as a gown may be considered).
 - Direct ECG rhythm, SpO₂, and ETCO₂ monitoring Refer to Cardiac(ECG) monitoring (Adults and Pediatrics) #1142
 - Medications (as ordered)
 - Vascular access supplies if medications being used
 - Oropharyngeal airway
 - Cuff pressure monitor for cuffed ETT (if available)
 - Gastric tube of appropriate size for decompression, if necessary
- 3.2 Perform hand hygiene and don appropriate PPE.
- 3.3 Ensure that equipment is in working order while maintaining cleanliness of equipment
- 3.3.1 Test endotracheal cuff for proper inflation with appropriate syringe
 - 3.3.2 Test for proper function of laryngoscope
 - 3.3.3 Test suction equipment
- 3.4 Explain procedure and risks to patient / family and obtain consent as appropriate for situation.
- 3.5 Obtain patient history and NPO status as appropriate.
- 3.6 Prepare for ETT insertion:
- 3.6.1 Ensure direct ECG rhythm and SpO₂ monitoring is in place and patient has patent IV access. In event of cardiorespiratory arrest, IV/IO access will be addressed as soon as possible.
 - 3.6.2 Perform hand hygiene. Prepare medication as ordered.
 - 3.6.3 Position patient so HCP that is intubating has access to the head of the patient. Remove headboard from bed or lower crib rail and position the bed/crib away from the wall to allow access for 2 HCPs and assembled equipment. The assistant should

be positioned ideally to the right of the person inserting the ETT and have ready access to appropriate intubating supplies

- 3.5.1 Place patient supine unless otherwise directed or contraindicated.
 - 3.5.2 Perform hand hygiene. Don clean gloves. Remove any false teeth, bridges or foreign objects, such as body piercings, from the mouth and perform hand hygiene.
 - 3.5.3 Slightly extend head and flex neck ("sniff position"), unless contraindicated (e.g. C-spine precaution). To assist in maintaining sniff position, a small roll under shoulders in pediatrics or under the head in adults, maybe useful. NOTE: if the sniff position is contraindicated, HCP assisting will provide jaw thrust maneuver.
- 3.6 Assist with procedure.
- 3.6.1 Perform hand hygiene. Hyper-oxygenate as directed by supplying 100% oxygen (2 – 3 minutes for adults and 3 – 5 minutes for pediatrics) if spontaneously breathing. If not spontaneously breathing, provide 3 – 4 hyperoxygenation, hyperinflation breaths using BVM device and oral airway (if necessary) or head tilt/jaw thrust maneuvers to optimize SpO₂ as much as possible.
 - 3.6.2 Pre-medicate patient as directed.
 - 3.6.3 Suction oropharynx as requested by HCP intubating. After suctioning is complete, remove gloves and perform hand hygiene and don a new pair of clean gloves
 - 3.6.4 Apply cricoid pressure as requested by HCP intubating. This is done by applying and maintaining firm pressure downward on cricoid cartilage / thyroid to assist in visualizing the vocal cords. Do not remove cricoid pressure until directed to do so by HCP intubating or the ETT placement is confirmed in trachea and cuff is inflated (if cuffed ETT utilized). Release of pressure prematurely may result in emesis / aspiration.
 - 3.6.5 Intubation attempts
 - Adults: should be limited to 30 seconds.
 - Pediatrics: should be limited to 20 seconds depending on patient's stability.
 - The patient is manually ventilated with BVM device using 100% oxygen between attempts.
 - 3.6.6 Monitor SpO₂ and/or ECG for deterioration during attempts. Notify HCP intubating if SpO₂ drops to below 90% or ordered levels, heart rate is below age appropriate norm or rhythm changes.
 - 3.6.7 Once the ETT has been inserted into the trachea, it will be held in place by the HCP who intubated. The assistant, upon direction from the HCP intubating, will then take a firm hold of the proximal part of the ETT and remove the stylet, or other insertion device used (i.e. Bougies) being careful not to move the tube itself. The assistant will then remove gloves, perform hand hygiene and don a new pair of gloves.

NOTE: if patient is biting on the ETT, a bite block may be inserted
 - 3.6.8 The ETCO₂ adapter is placed onto the ETT, positive pressure breaths are provided, and the cuff is quickly inflated using the minimal occlusive volume technique by

slowly injecting air into the cuff and listening with a stethoscope over the trachea until no air leak can be heard.

3.7 Immediately assesses ETT placement following intubation.

3.7.1 ETCO₂ device (Capnography) with CO₂ levels and waveform, or by color change on color-metric device

3.7.2 Person inserting ETT reports sees the tube pass through vocal cords

- Auscultate over right and left lung apices and epigastrium. Breath sounds should be heard over both lungs and no sounds from epigastrium. ADULTS: Bilateral, equal breath sounds should be heard. If air is heard entering stomach and there is no ETCO₂ confirmation and or breath sounds in peripheral lung fields, the ETT should be removed immediately and BVM ventilation provided until patient is stabilized prior to next intubation attempt.
- PEDIATRICS: Auscultate peripheral lung fields (under axilla) for equal breath sounds. If air is heard entering stomach and there is no ETCO₂ confirmation and or breath sounds in peripheral lung fields, the ETT should be removed immediately and BVM ventilation provided until patient is stabilized prior to next intubation attempt.

NOTE: *air entry to one lung only may be indicative of ETT placement into a main stem bronchus. Notify intubating HCP for readjustment of ETT depth and reassess.*

3.7.3 Observe for clinical improvement (heart rate, SpO₂, color). Inspect for bilateral, symmetrical chest expansion.

NOTE: *observation for condensation on the inside of the tube during exhalation is not a primary confirmation technique.*

3.8 Firmly secure ETT with tape, twill ties or commercially available ETT securement device. See Policy: Endotracheal Tubes – Care Of #1176. Secure across, unless contraindicated. Once ETT is secured, auscultate lung fields to ensure bilateral air entry. Remove gloves and perform hand hygiene.

3.9 Connect patient to humidified oxygen source or mechanical ventilator. Pediatrics; continue to manually ventilate until connected to mechanical ventilator.

3.10 Perform hand hygiene and remove PPE.

3.11 Ensure that chest x-ray is ordered and obtained (optional in PACU and OR for short-term intubations).

- Adults: ETT tip should lie at least 2 cm above carina.
- Pediatrics: ETT tip should be 1-2 cm above carina.

NOTE: *May not be done in a rural setting where portable chest x-ray may not be an option. If placement has been verified clinically and patient stability has improved, then transfer maybe undertaken.*

3.12 Document on appropriate record:

3.12.1 Name of HCP performing intubation.

- 3.12.2 ETT size, type, level of insertion in "cm" (to gums / teeth in adults, and upper lip in pediatrics), route of insertion, person performing intubation, volume or pressure used to inflate ETT cuff, presence of air leak.
- 3.12.3 Methods used to confirm tube placement, including capnography reading, waveform or color changes.
- 3.12.4 Patient's tolerance before, during, and after procedure including vital signs (heart rate, BP, SpO₂, ETCO₂)
- 3.12.5 Assess patient's respiratory status (i.e. rate, rhythm, lung sounds, need for suctioning / presence of secretions,)
- 3.12.6 If CXR done
- 3.12.7 On medication record, medications used, including double signatures for checking high alert medications. SHR Policy; High Alert Medications – Identification, Double Check and Labeling # 7311-60-020.
- 3.12.8 Oxygen percentage and ventilator parameters if patient mechanically ventilated following intubation on appropriate record
- 3.12.9 If patient was a difficult intubation:

NOTE: *An Assessment of Patient Airway Alert (form # 102713) should be completed by the HCP that performed the intubation and placed in the patient's chart. Post an Airway Alert sign (form # 102714) at head of bed. Place an Airway Alert sticker (form # 102714 01/06) on front of patient's chart.*

4. REFERENCES

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