Centre for Prehospital Care
Health Sciences North

STANDARD WORK

OROTRACHEAL INTUBATION

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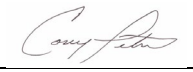
Approval: Chair, CPC Program Council : Corey Petrie **Frequency:** As Required, in accordance with the Endotracheal Intubation Medical Directive

Signature: 

Purpose: To ensure a consistent standardized practice for all orotracheal intubations.

	Content (Task / Activity)	Details / Visual Component
1.	Ensure that the patient qualifies for orotracheal intubation, or contact a Base Hospital Physician (BHP) for further direction.	
2.	Communicate the need for intubation, and its effects to the patient and family members whenever possible.	
	If a difficult airway is anticipated consider the use of airway adjuncts.	Video laryngoscopes or device aids should be considered for first pass intubation and has been shown to decrease the incidence of difficult intubations when compared to the traditional direct visualization technique.
3.	Assemble the laryngoscope, check the ETT cuff for leaks and insert the stylet into the ETT.	Ensure the tip of the stylet is 1-2 inches proximal from the tip of the ETT. Bend the other end of the stylet around the hub of the ETT to ensure it doesn't slip into the ETT during the intubation process.
4.	Attempt basic maneuvers as needed: positioning, suctioning, pharyngeal airway insertion, and intermittent positive pressure ventilation (IPPV) with a BVM in addition to application of 100% oxygen. Initiate cardiac monitoring and pulse oximetry.	The maximum number of intubation attempts is two (2) Alternative rescue airways should be readily available in the event of failed intubation.
5.	Consider topical Lidocaine administration (to the hypopharynx) for orotracheal intubation when GCS is ≥4..	

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	• Dose of lidocaine spray for topical anesthesia: lidocaine spray (10mg/spray). Maximum dose is 5mg/kg. Do not exceed 20 sprays total.	
6.	**ADULT:** Place the patient in the sniffing position if possible, open their mouth and insert the entire laryngoscope blade sweeping from right to left displacing the tongue to the left. When using a curved blade, advance the tip of the blade into the vallecula. If using a straight blade, insert the tip under the epiglottis.	In a pulseless patient, avoid interrupting chest compression for longer than 10 seconds.
7.	**PEDIATRIC:** Elevate the patient's body or shoulders, allowing proper alignment with their head. Place the child in the sniffing position if possible, open their mouth and insert the entire laryngoscope blade sweeping from right to left, pinning the tongue and epiglottis against the hypopharynx.	The formula that is recommended for sizing a cuffed pediatric endotracheal tube is 3.5+(Age/4). This formula allows for a slightly smaller tube as the cuff will create the seal versus the tube only.
8.	Following the line of the laryngoscope handle, pull upward to reveal the vocal cords. Never use a prying motion with the handle. If a difficult airway is visualized consider the use of airway adjuncts.	Video laryngoscopes or device aids should be considered for first pass intubation and has been shown to decrease the incidence of difficult intubations when compared to the traditional direct visualization technique
9.	Insert the ETT along the right side of the mouth and follow the curve of the laryngoscope blade, eventually visualizing the distal end of the tube and the cuff passing through the vocal cords. Advance the tube past the cords approximately 1 to 2.5cm (0.5 to 1 inch). In the average adult, tube placement at the teeth is typically between19-23 cm	
10.	Remove the laryngoscope. While holding the ETT firmly in place, remove the stylet.	The measurement of the ETT at the teeth is generally three (3) times that of the ETT size.
11.	Inflate the cuff with 8-10 cc of air and carefully auscultate while a qualified health professional ventilates the patient with the BVM.	Auscultate over the epigastric area first so as to quickly rule out an esophageal intubation. Auscultating over the neck will detect cuff leakages.

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12.	Assuming no air is heard over the epigastric area and air movement is heard over all lung fields, note the depth of the ETT, insert an oropharyngeal airway or bite block, and secure the ETT in place.	Auscultation may reveal a right main stem intubation, in which case, withdraw the ETT slightly after deflating the tube, then proceed back to procedure #11.
13.	Attach the end tidal CO_2 detector to formulate a reading and continue ventilating the patient accordingly.	Confirmation of the orotracheal intubation must use ETCO2 (waveform capnography). If waveform capnography is not available or not working then at least 3 secondary methods must be used. Secondary methods: -ETCO2 (non-waveform device) – Visualization – Auscultation –Chest rise – Esophageal detection device.
14.	Discontinue the intubation attempt if complications occur, or as directed by the BHP. Potential complications include: • vomiting • dysrhythmias • c-spine injury • soft tissue injuries i.e. damage to teeth, lips, pharynx or larynx • vocal cord injury • inadvertent esophageal intubation • intubation of a bronchus	If intubation fails, the patient should receive adequate ventilation/oxygenation for 15-30 seconds before a re-attempt is made.
15.	Document the intubation on the patient care record as per the Ministry of Health and Long Term Care Emergency Health Services Branch Ambulance Call Report Documentation Standards and your Service Provider policy which includes: • successful or unsuccessful attempt • size of ETT used • depth of the ETT • ETT confirmation • resulting end tidal CO_2 reading • time of attempt • the remarks section on the patient care record.	-ETT placement must be reconfirmed immediately after every patient movement. -Consider using a cervical collar to stabilize the neck in non-trauma patients as this will decrease movement and subsequent involuntary extubation. -Document the patient condition before and after intubation.

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16.	Document tube confirmation upon transfer of care to the receiving hospital staff. Note: only an MD or RT can confirm tube placement.	In the procedure section of the ePCR enter code 337 “ETT confirmation,” in the results section include the method used to confirm placement and name of the confirming MD or RT. In the crew member number field, enter MD or RT as applicable.

Expected Outcome: Successfully perform orotracheal intubations