


## INTROES POCKET BOUGIE OROTRACHEAL INTUBATION

<b>Document Owner:</b>	L. Simard	<b>Program/Service Area:</b>	Centre for Prehospital Care	<b>Issue Date:</b>	May 2019
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<b>Approval:</b>	Corey Petrie, Interim Regional Manager, Centre for Prehospital Care & Trauma Services	<b>Frequency:</b>	As Required, in accordance with the Endotracheal Intubation Medical Directive		
<b>Signature:</b>					

**Purpose:** To ensure a consistent standardized practice when using the Pocket Bougie during orotracheal intubations and there is an inability to visualize the vocal cords after laryngoscope insertion.

	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.	
3.	If a difficult airway is anticipated, consider the use of airway adjuncts and preparing a secondary airway adjunct.	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.
4.	Attempt basic maneuvers as needed: positioning, suctioning, pharyngeal airway insertion, and intermittent positive pressure ventilation (IPPV) with a filtered BVM in addition to application of 100% oxygen. Initiate cardiac monitoring, ETCO <sub>2</sub> 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.	Assemble the laryngoscope; Check the ETT cuff for leaks. Remove introducer from package and ensure coude tip is to desired angle. Check the introducer diameter to ensure the size will accommodate the ETT.	Ensure the introducer is free from defects. <ul style="list-style-type: none"> <li>- Packaging is still sealed</li> <li>- Ends are rounded</li> <li>- Markings are clear</li> <li>- No loose material is present</li> </ul>

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		<b>The Introes Pocket Bougie is designed to accommodate ETT's <math>\geq 5.0\text{mm}</math></b>
6.	<b>ADULT:</b> 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.	<b>PEDIATRIC:</b> 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 $3.5 + (\text{Age}/4)$ . 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.	
9.	Insert introducer into the patient's oral cavity and then into tracheal opening.	At the 20cm (double band) begin to feel for tracheal clicking (Indication that the distal tip is contacting the tracheal rings)  Presence of tracheal clicking is indication that the introducer has been properly placed into the trachea.  <b>Do not advance introducer beyond 30cm</b>
10.	Hold both the Introducer and Laryngoscope blade firmly in place.	<b>Do Not Remove the laryngoscope.</b>
11.	Request the Paramedic partner to place the ETT over the bougie while attempting to maintain an aseptic technique.	Advance the ETT along the right side of the mouth, 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 between 19-23 cm.  The measurement of the ETT at the teeth is generally three (3) times that of the ETT size

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		<b>There may be resistance from the vocal cords against the deflated ETT balloon. To prevent this, once at the vocal cords, rotate the ETT 90 degrees counter clockwise and continue insertion.</b>
12.	Introducer removal	Request the partner to take over holding introducer, while you hold the ETT in place. Have the partner remove the introducer. Remove the laryngoscope blade from the oral cavity.
13.	Tracheal ETT placement.	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.
14.	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.
15.	Attach the end tidal CO <sub>2</sub> detector to formulate a reading and continue ventilating the patient accordingly.	Confirmation of the orotracheal intubation must use ETCO <sub>2</sub> (waveform capnography). If waveform capnography is not available or not working then at least 3 secondary methods must be used.  Secondary methods: <ul style="list-style-type: none"> <li>- ETCO<sub>2</sub> (non-waveform device) – Visualization – Auscultation, Chest rise – Esophageal detection device.</li> </ul>
16.	Discontinue the intubation attempt if complications occur, or as directed by the BHP. Potential complications include: <ul style="list-style-type: none"> <li>• vomiting</li> <li>• dysrhythmias</li> <li>• c-spine injury</li> <li>• soft tissue injuries i.e. damage to teeth, lips, pharynx or larynx</li> <li>• vocal cord injury</li> </ul>	If intubation fails, the patient should receive adequate ventilation/oxygenation for 15-30 seconds before a re-attempt is made.

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17.	<ul style="list-style-type: none"> <li>• inadvertent esophageal intubation</li> <li>• intubation of a bronchus</li> </ul> <p>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:</p> <ul style="list-style-type: none"> <li>• successful or unsuccessful attempt</li> <li>• size of ETT used</li> <li>• depth of the ETT</li> <li>• ETT confirmation</li> <li>• resulting end tidal CO<sub>2</sub> reading</li> <li>• time of attempt</li> </ul>	<ul style="list-style-type: none"> <li>- ETT placement must be reconfirmed immediately after every patient movement.</li> <li>- Consider using a cervical collar to stabilize the neck in non-trauma patients, as this will decrease movement and subsequent involuntary extubation.</li> <li>- Document the patient condition before and after intubation.</li> </ul>
18.	<p>Document tube confirmation upon transfer of care to the receiving hospital staff. Note: only an MD or RT can confirm tube placement.</p>	<p>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.</p>

**Expected Outcome:** Successfully perform orotracheal intubations while using the introes pocket bougie.