Centre for Prehospital Care
Health Sciences North

ESOPHAGEAL INTUBATION DETECTOR

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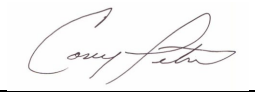
Signature:					

Purpose: To ensure a consistent standardized practice for the utilization of an esophageal intubation detector

	Content	Details / Visual Component
1.	Once the patient has been intubated via endotracheal (ET) route, ensure distal cuff is sufficiently inflated.	
2.	Prior to ventilation, compress the bulb of the tube device; place it over the proximal end of the airway adjunct and release.	Use care if storage temperature is near freezing. The bulb will not function properly due to loss of self-inflating properties.
3.	Allow bulb to self-inflate.	
4.	If air returns and fills the bulb rapidly (less than 5 seconds), the ET/NT tube is likely in the trachea.	Confirm clinically and secure the tube.
5.	If air slowly fills the bulb (5 to 30 seconds), carefully assess ET/NT tube location clinically.	Use direct laryngoscopic visualization if placement is still questioned. If location is still in doubt, confirm placement via other methods, re-intubate or support ventilation by alternate means.
6.	If air does not fill the bulb or vomit returns, the ET/NT tube is likely in the esophagus. Deflate the ETT cuff, and either remove or replace the ETT appropriately.	
7.	Document the use of the esophageal intubation detector as a verification method 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.	Although the tube device works in cardiac arrest as well as non-cardiac arrest situations, there are situations that make it's mechanism of action less reliable: • **Morbid obesity:** When very obese patients suffer cardiac arrest or paralysis the weight of their chest wall compresses their thoracic cavity including the trachea and bronchus. This can lead to situations where insufficient air is available for aspiration and

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		the tube device will not completely fill with air, or will fill very slowly. • **Drowning and florid pulmonary edema:** When a patient's airway is completely filled with fluid there is little or no air available for aspiration. This may result in either failure of the tube device to fill or a frothy pink fluid being aspirated into the tube device. • **Main stem bronchus intubation:** If the endotracheal tube (ETT) is pushed too far into the patient and the end is snugly against the wall of a bronchus, insufficient air may be available for aspiration. Always check ETT depth to be sure it is appropriate for the patient's age and size to avoid this problem. If in doubt rotate the tube and pull back ½ cm then repeat the tube device aspiration. • **Pharyngeal intubations:** If the ETT folds inside the hypopharynx, air can be aspirated by the tube device and give the user the false sense of tracheal intubation. In this situation, there is usually an obvious "air leak" when ventilation is occurring which may be the only clinical clue that the tube is misplaced. • **Third trimester pregnancy:** In obviously pregnant women, the contents of the abdomen are pushed upward and the sphincter of the esophagus is more relaxed. This can result in reflux of stomach contents into the esophagus and mouth. This situation may result in aspiration of air and stomach contents into the tube device and cause confusion as to where the ETT is located. Therefore, the tube device should not be used in pregnant women. • **Hyperinflation of the stomach:** In situations where the stomach is massively distended with air due to excessive bagging, air may regurgitate out of the stomach following inadvertent esophageal intubation. It is preferable to use the tube device before prolonged ventilation of the ETT. • **Children less than 5 years old or less than 20kg:** Insufficient clinical data exists for this age group to determine accuracy of the tube device. For this reason it is not FDA cleared for patients less than 5 years of age.

Expected Outcome: Successfully utilization of an esophageal intubation detector.