PURPOSE: To assure correct endotracheal tube placement is confirmed so that optimal ventilation and oxygenation can take place.

POLICY:

1. Primary and secondary confirmation of endotracheal tube (ETT) placement will be performed:
   
   a) Immediately after patient intubation
   
   b) Upon arrival from the field or another facility
   
   c) Any time correct endotracheal tube placement is in question, based on patient assessment: color, chest expansion, lung sounds, oxygen saturation, change in tube position after patient transport, turning, or movement.

PROCEDURE:

1. Immediately after insertion of an endotracheal tube, primary and secondary confirmation of correct placement must take place:

   a) PRIMARY CONFIRMATION of correct endotracheal tube placement is achieved through clinical assessment:

   i. With ventilation, observe for bilateral chest rise & fall, bilateral breath sounds, absence of gastric intubation, and any signs that there is a right mainstem intubation.

   b) SECONDARY CONFIRMATION of correct endotracheal tube placement is achieved with the use of a colorimetric exhaled CO₂ detector or by the use of an end tidal CO₂ detector

   c) If there are questions regarding tube placement, direct visualization that the tube has passed through the vocal cords, or the use of fiberoptic bronchoscopy is recommended.

2. Once endotracheal tube placement as been confirmed, note and record the depth of the tube (cm at the teeth or lip-line), and secure the tube with tape, or a commercial device, if available.
3. Once the endotracheal tube is secured, obtain a chest x-ray, at earliest convenience, to confirm actual tube location and proper position (approximately 2-3 cm above the carina in an average size adult). Exception: if ETT location if verified intra-procedurally via bronchoscopy or fluoroscopy, a chest x-ray is not required.

4. Waveform capnography, where available, is an excellent adjunct to continuously monitor correct tube placement.

5. In a procedural setting, an endotracheal tube placed by an anesthesiologist or CRNA for a procedure is verified according to American Society of Anesthesiologists (ASA) guidelines.

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