

Medical Procedure**Date: 07/01/2021****Supraglottic Airway Insertion****Policy #7030****I. Purpose:**

- A. To establish indications, guidelines, and the standard procedure for supraglottic airways in the pre-hospital setting.

II. Authority:

- A. Health and Safety Code, Section 1797.220, 1798. Title 22, Section 100170.

III. Policy:

- A. The use of supraglottic airway devices are limited to EMT-P, Advanced EMTs, and EMT-Bs who maintain their optional scope skill certification for rescue airways.
- B. King airways are the approved rescue airway device for adults for Imperial County.
- C. Supraglottic devices may be utilized under the following indications:
 1. Cardiac arrest (of any cause)
 2. Inability to ventilate non-arrest patient (with BLS airway maneuvers) in a setting in which endotracheal intubation is not successful or unable to be done.
- D. Contraindications include:
 1. Presence of gag reflex
 2. Caustic ingestion
 3. Known esophageal disease (e.g. cancer, varices, stricture, others)
 4. Laryngectomy with stoma
 5. **Pediatric patient – defined as any patient who falls onto the pediatric length-based resuscitation tape, or its equivalent**
- E. Two attempts with the supraglottic airway are permissible. Ventilations should be interrupted no more than 10 seconds per attempt
 1. Patient should be ventilated for two minutes prior to intubation attempt to improve oxygenation and ventilation between attempts if BLS maneuvers are providing breathing support, and pre-oxygenation is possible
 - a. Patient should be connected to continuous monitoring including: pulse oximetry, ECG leads, end tidal CO₂ monitoring (ALS present), and blood pressure throughout procedure
 - b. Maintain c-spine if traumatic injury suspected
 - c. All patients should be pre-oxygenated with 100% BVM (or NRB if patient ventilating well) and 6 L nasal cannula prior to intubation attempt as possible. Do not hyperventilate the patient
 - d. Nasal cannula oxygenation should continue through intubation attempt
 - e. End tidal CO₂ should be placed prior to intubation or supraglottic airway placement attempt (ALS providers)
- F. If a supraglottic device is to be placed, or is anticipated for potential placement, ALS should be contacted as early as possible to facilitate EtCO₂ monitoring and prepare for other needed ALS interventions.
- G. Documentation should include:
 1. Indication for use of supraglottic airway device
 2. Pre-insertion vital signs including EtCO₂ (ALS present)

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3. Number of attempts
4. Positioning and securement of device
5. Complications
6. Response to treatment

IV. Procedure:

- A. EtCO₂ should be placed when airway or ventilation interventions begin, and should be maintained throughout intervention, when ALS present
- B. Preoxygenate and ventilate the patient as described above
- C. Insertion
 1. Select the appropriate device size for the patient based on patient height.
 - a. Have a spare AIRWAY DEVICE ready and pre-pped for immediate use.
 2. Test cuff inflation system by injecting the maximum recommended volume of air into the cuffs (refer to King LT-D Sizing Information chart or see below). Remove all air from cuffs prior to insertion.
 - a. Yellow - #3 – Height 4-5 feet (122-155 cm) - Cuff Volume 45-60 ml
 - b. Red - #4 – Height 5-6 ft (155-180 cm) - Cuff Volume 60-80 ml
 - c. Purple - #5 – Height > 6 ft (> 180 cm) - Cuff Volume 70-90 ml
 3. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of lubricant in or near the ventilator openings.
 4. Ensure gag reflex is not intact.
 5. Position the head. The ideal head position for insertion of the AIRWAY DEVICE is the “sniffing position”. However, the angle and shortness of the tube also allows it to be inserted with the head in a neutral position.
 6. Hold the AIRWAY DEVICE at the connector with dominant hand. With non-dominant hand, hold mouth open and apply chin lift unless contraindicated by C-spine precautions or patient position.
 7. With the AIRWAY DEVICE Rotated laterally 45-90° such that the blue orientation line is touching the corner of the mouth, introduce tip into mouth and advance behind base of tongue. Never force the tube into position.
 8. As tube tip passes under tongue, rotate tube back to midline (blue orientation line faces chin).
 9. Without exerting excessive force, advance AIRWAY DEVICE until base of connector aligns with teeth or gums.
 10. Inflate cuffs using the maximum volume of the syringe provided.
 11. Attach BVM.
 12. While gently bagging, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
 13. Depth markings are provided at the proximal end of the AIRWAY DEVICE which refer to the distance from the distal ventilatory openings. When properly placed with the distal tip and cuff in the upper esophagus and the ventilatory openings aligned with the opening to the larynx, the depth markings give an indication of the distance, in cm, to the vocal cords. Document this in the PCR.
 14. Auscultate for breath sounds and sounds over the epigastrium and look for the chest to rise and fall.
 15. Confirm device placement using end-tidal CO₂ detector, and continuous EtCO₂, when ALS present.

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16. Readjust cuff inflation to 60 cm H₂O (or to just seal volume).
17. Once placement is confirmed, secure tube prior to movement/transport.
18. It is required that the airway be monitored continuously through waveform capnography (with ALS present) and pulse oximetry.
19. If unable to ventilate, remove and ventilate with 100% oxygen.
 - a. One troubleshooting attempt, taking < 1 minute is acceptable. If time exceeds one minute, remove the airway device, and restart with BVM management.

V. Certification Requirements:

- A. Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.
- B. Assessment of this knowledge may be accomplished via quality assurance mechanisms, classroom demonstrations, skills stations, or other mechanisms as deemed appropriate by the Imperial EMS System.
- C. Assessment should include direct observation at least once per certification cycle.

VI. Troubleshooting:

- A. If placement is unsuccessful, remove device, ventilate with BVM at 100% oxygen and repeat sequence of steps.
- B. If unsuccessful on second attempt, BLS airway management should be resumed.

APPROVED:

Signature on FileKatherine Staats, M.D.
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