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***EMERGENCY MEDICAL SERVICES POLICIES and PROCEDURES***

# SUPRAGLOTTIC AIRWAY DEVICE

**I. Purpose:** To define the prehospital indications and use of SBCEMSA-approved supraglottic airway device by paramedics accredited in Santa Barbara County.

**II. Authority:** California Health and Safety Code1798, 1798.2, 1798.160 and 1798.170, and California Code of Regulations, Title 22, 100145 and 100146.

**III. Definitions:**

A. *Attempt*: Insertion of the supraglottic airway device into the mouth.
B. *Bleeding/Trauma*: The presence of blood noted in the oropharynx or on the device during or after placement, or any abrasion, laceration, dental trauma or other trauma occurring during placement or repositioning of the device. This excludes bleeding or trauma present prior to attempted device placement.
C. *BVM*: Bag-Valve-Mask
D. *Dislodgement*: A loss of the ability to adequately ventilate the patient after successful placement was achieved.
E. *Hypoxia*: Defined as $O_2$ saturation ≤ 90% during or after placement in a patient previously normoxic prior to placement.
F. *Regurgitation/Emesis*: The presence of gastric contents noted in the oropharynx or on the device during or after placement.
G. *Rescue Device:* A device used for secondary airway management, ventilation and airway control after failure of a primary airway management device (i.e. endotracheal intubation) and unable to ventilate using bag-valve-mask (BVM) device.
H. *Successful Placement:* The ability to ventilate the patient with minimal or no air leak, confirmed primarily with $ETCO_2$ measurement with capnography. Secondary confirmation methods include visible chest rise during ventilation and air movement on pulmonary auscultation.
I. *Successful Replacement*: The ability to ventilate the patient with minimal or no air leak, after dislodgement and replacement of the same device, confirmed primarily with $ETCO_2$ measurement with capnography. Secondary confirmation methods include visible chest rise during ventilation and air movement on pulmonary auscultation.
J. *Attempt*: Insertion of the supraglottic airway device into the mouth.
K. *Time to Insertion*: The time from insertion of the supraglottic airway device into the mouth for the first attempt until the time of the first successful ventilation with minimal or no air leak.
L. *Successful Replacement*: The ability to ventilate the patient with minimal or no air leak, after dislodgement and replacement of the same device, confirmed primarily with $ETCO_2$ measurement with capnography. Secondary confirmation methods include visible chest rise during ventilation and air movement on pulmonary auscultation.

**IV. Policy:**

A. Paramedics may utilize SBCEMSA-approved supraglottic airway device according to this policy. The SBCEMSA-approved supraglottic airway device may be used as an alternative to

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Daniel Shepherd, MD, EMS Agency Medical Director

endotracheal intubation if unable to adequately ventilate the patient using bag-valve mask (BVM) device.

**V. Procedure:**

A. Indications:
1. Patients in cardiac arrest, respiratory arrest or severe respiratory compromise, when BVM ventilation is inadequate.

B. Contraindications:
1. Intact gag reflex

C. Precedure for Placement
1. Sizing: See Chart Below

| i-gel size | Patient size | Patient weight guidance (kg) |
|---|---|---|
| 1 | Neonate | 2-5 |
| 1.5 | Infant | 5-12 |
| 2 | Small paediatric | 10-25 |
| 2.5 | Large paediatric | 25-35 |
| 3 | Small adult | 30-60 |
| 4 | Medium adult | 50-90 |
| 5 | Large adult+ | 90+ |

2. There will be no more than 2 attempts, each no longer than 30 seconds in duration.
   a. For patients in cardiac arrest, chest compressions will not be interrupted.
3. Lubricate the bowl of the I-gel.
4. Tilt the patient's headback – unless there is suspected cervical spine injury.
5. Open the patient's mouth and insert the device along the hard palate until definitive resistance is met.
   a. The incisors should be resting on the bite block.
   b. A laryngoscope may be used if laryngoscopy is performed to inspect for foreign body.
6. Return head to neutral position and secure device.
7. Attach capnography airway adapter and bag-valve device and verify placement by capnography waveform.
8. If there is any question about the proper placement, remove the supraglottic airway device, ventilate with BVM for 30 seconds and repeat.
9. If 2 attempts at supraglottic airway device placement are unsuccesful, ventilate the patient with BVM.
10. Continue to monitor the patient for proper tube placement throughout treatment and transport.
11. If patient vomits, do not remove tube. May turn patient on side, suction both supraglottic airway device and orpharynx.

D. Documentation:
1. All uses will be identified in the patient's ePCR per SBCEMSA Policy 700 – Documentation of Prehospital Care will include all information specified in the supraglottic airway device training program.

E. Quality Improvement: The following are required metrics for every supraglottic airway device use:
1. Rescue device? - Yes / No

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2. Successful placement? - Yes / No
3. Number of attempts – Numeric in Integers
4. Complications:
   a. Regurgitation/emesis? - Yes / No
   b. Bleeding/trauma? - Yes / No
   c. Hypoxia? - Yes / No
   d. Dislodgement? - Yes / No
5. If dislodgement after placement, successful replacement? - Yes / No / Not applicable

F. System Metrics
1. Percent successful placement of supraglottic airway device:
   a. Numerator: Number of successful attempts = Yes
   b. Denominator: # of patients in whom supraglottic airway device placement was attempted
2. Percent first attempt success:
   a. Numerator: # successful attempts = Yes, with attempts =1
   b. Denominator: # of patients in whom supraglottic airway device placement was attempted
3. Percent of each complication (emesis, trauma, hypoxia, dislogement) and total number complications:
   a. Numerator: # with complication = Yes
   b. Denominator: # of patients in whom supraglottic airway device placement was attempted

**Use of the supraglottic airway device as a rescue device (e.g. for failed intubation) should also be reported separately from initial device use.

**VI. References:**

A. Policy 700 – Documentation of Prehospital Care

**VII. Attachments:**

A. None

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SIGNATURE ON FILE
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