



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Bag-Valve-Mask (BVM) Ventilation – BLS/ALS

Section: Airway/Ventilatory Management

Approved: EMS Medical Directors Consortium

Effective Date: December 15, 2021

BAG-VALVE MASK (BVM) VENTILATION – BLS/ALS

INDICATIONS

- Respiratory failure with inadequate ventilation and/or oxygenation

CONTRAINDICATIONS

- None

EQUIPMENT

- Bag-valve mask with correct size for adult, pediatric, infant, neonatal patient
- Airway adjuncts (OPA) – sizes 00, 0, 1, 2, 3, 4, 5
- Airway adjuncts (NPA) – sizes 12F-34F
- Rigid suction catheter
- Suction tubing, canister, device or portable unit
- Oxygen tank with regulator and adapter
- Pulse oximeter

PROCEDURE

1. Apply personal protective equipment: gloves, facemask, eye protection.
2. Attach pulse oximeter and evaluate reading.
3. Manually open airway with head tilt-chin lift or jaw thrust if concern for spinal injury.
4. Prepare rigid suction catheter and connect to tubing, canister and suction device.
5. Turn on power to suction device or retrieve manual suction device.
6. Insert rigid suction catheter without applying suction.
7. Suction the mouth and oropharynx.
8. Select airway adjunct – either OPA or NPA.
9. Insert oropharyngeal airway (OPA).
 - a. Check for contraindications including gag reflex.
 - b. Measure size from the corner of the mouth to the tip of the earlobe.
 - c. Open mouth and insert airway along curvature of tongue to posterior oropharynx.
 - d. Advance gently until flange is against lips.
10. Insert nasopharyngeal airway (NPA)



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- a. Check for contraindications including midface trauma.
 - b. Measure size from the tip of the nose to the earlobe.
 - c. Lubricate airway with water based jelly.
 - d. Gently insert tube into largest unobstructed nostril with bevel to the septum.
 - e. Advance gently until flange is against nostril.
 - f. If resistance is met, withdraw airway and attempt on the other side.
11. Apply an appropriately sized bag-valve mask that completely covers the nose and mouth and maintain an effective seal around the cheeks and chin.
 12. Attach supplemental oxygen to the bag-valve mask device.
 13. Provide ventilation using a two-hand technique when possible using the two-thumbs down position and lifting the chin to the mask.
 14. Ventilate patient with sufficient volume to make the chest rise
 - a. Adults with spontaneous circulation: 1 breath every 6 seconds or 10 breaths per minute.
 - b. Adults during CPR: 1 breath every 6 seconds or 10 breaths per minute.
 - c. Infants and children with spontaneous circulation: 1 breath every 2-3 sec or 20-30 breaths per minute.
 - d. Infants and children with CPR: Compression to ventilation ratio of 15:2
 15. If ventilation is unsuccessful or inadequate, reposition the head and jaw and check mask seal.
 16. Continually reassess patient condition.