

# Lost Airway and Ventilation Management<sup>©</sup>

During intended moderate to deep sedation, open airway, spontaneous ventilation

**NOTE TIME!**

**Silent airway / Flat EtCO<sub>2</sub> / ↓ SpO<sub>2</sub>**

**PERFORM**

**EVALUATE**

**1**

**Pack site, Suction, Jaw Thrust, Chin Lift**  
**Pull Tongue Forward**  
**KEEP MOUTH OPEN**  
Consider attempts to awaken patient

## ASSESS – RECHECK – CONFIRM

- Assess** your patient – Look, Listen
  - Responsiveness / Color / Rash
  - Breathing noise – cough, snore, stridor, wheeze
  - Ventilatory Effort?
    - Sternal Retraction
    - Chest rise / abdominal wall movement
  - Airway Patency – lightly press on chest and feel/hear air movement – differentiate airway patency from ventilatory depression
- Re-check** your monitors
  - SpO<sub>2</sub>, oximetry probe in place
  - EtCO<sub>2</sub> sampling line in place
  - Pre-tracheal stethoscope working
- Confirm** O<sub>2</sub> delivery to patient
  - Verify O<sub>2</sub> flow, delivery, connections

## PATIENT CONDITION\*\*:

- Depth of sedation
- Muscle tone: rigid / flaccid / breath-holding
- Duration of apnea prior to ↓SpO<sub>2</sub>
- Ability to tolerate hypoxemia

## POSSIBILITIES :

**Tongue – Larynx – Lungs – Brain**

- Oversedation**
  - Airway Obstruction - Tongue
  - Hypoventilation, apnea
- Laryngeal Obstruction**
  - Laryngospasm – crowing
  - Laryngeal edema
    - Anaphylaxis
    - ACE Inhibitor angioedema
    - Trauma from repeated instrumentation
  - Foreign body – tooth, emesis
  - Clot, mucous plug
  - Undiagnosed pathology
- Bronchospasm**
  - Asthma, allergy, aspiration
  - Negative pressure pulmonary edema
  - Fire
- Opioid-Induced Rigidity**
- Seizure / Hypoglycemia / Stroke**

## Positive Pressure BMV

**2** Bag-Mask Ventilation with supplemental O<sub>2</sub>  
~ in line CO<sub>2</sub> sampling connector ~  
**2-MAN ± NPA, OPA**  
Naso/Oropharyngeal airways

Indications to advance to and be successful with steps 3 or 4 are limited to failure of best effort PPV ± airways and/or airflow obstruction at or below the level of the glottis. If unwilling or unable to deepen the level of anesthesia necessary to facilitate these advanced maneuvers, attempts to awaken the patient should be considered. The current depth of sedation, muscle tone, severity and duration of hypoxemia should guide this decision. \*\*

**3** King LTS-D™ airway / i-gel™

Supraglottic airway insertion success is greater in obtunded patients without a gag reflex. Direct laryngoscopy success and first pass intubation success is greater in patients who are obtunded AND paralyzed.

**4** Visualize larynx (DL, VL) ± intubate  
3 attempts  
2mg/kg succinylcholine

## MANAGEMENT PROMPTS

- Laryngospasm** – crowing, retraction
  - Suction, PPV, 20-40mg succinylcholine IV
  - + /or 0.5mg/kg propofol
- Asthmatic bronchospasm** – wheeze, silence
  - β<sub>2</sub> agonist, inhale early, often
    - inline canister connector with mask ventilation
  - Epinephrine 1:1000, 0.3mg IM q5-10min prn

- PAINFUL STIMULI**
- NALOXONE (Narcan™) – 2.0mg IV, q5min prn**

- Aspiration** (emesis, FB) – wheeze, silence, ↓SpO<sub>2</sub>
  - Suction, Trendelenburg, R side ↓
- Laryngeal Edema**
  - Anaphylaxis** – wheeze, rash, hypotension
    - Epinephrine 1:1,000, 0.3mg IM q5-10min prn
  - ACEI angioedema** – maintain airway
- Foreign Body (FB)**, clot, mucous plug, tooth
  - Heimlich maneuver
  - Suction/retrieval attempt DL
  - Magill forceps / suction tube without tip

## FONA (front of neck access)

To be considered when all other airway attempts have failed

## CANNOT INTUBATE, CANNOT OXYGENATE

Laryngeal edema, foreign body above cords

**911 – 911 – call for in office help**

This resource / teaching tool is for teams that administer and monitor open airway sedation outside of the hospital setting. Appropriate and disciplined patient selection is paramount, as the depth of sedation is continuously variable and unpredictable, regardless of dose or route of sedative medication administration. Adverse patient responses, including loss of upper airway patency and/or ventilatory depression are similarly unpredictable and may not be dose-related. Patients will vary in their ability to tolerate hypoxemia as well as the rapidity in which hypoxemia develops after apnea or lost airway patency. Immediate availability of oxygen, suction and appropriately sized and functioning airway devices, attachment, connectors, monitors and dose-ready succinylcholine should be verified prior to the start of sedation. Prompt recognition of completion of best effort without improvement should trigger progression to next intervention. Intubation and surgical neck entry should not be considered a go-to endpoint, especially by those clinicians untrained or inexperienced in these procedures.