

## Improving Basic Airway Management

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### Today's Goal: Improve effectiveness of basic airway maneuvers

The two things the term "Oxygenation" describes are:

- \_\_\_\_\_
- \_\_\_\_\_

The two things the term "Ventilation" describes are:

- \_\_\_\_\_
- \_\_\_\_\_

How are oxygenation and ventilation linked together?

\_\_\_\_\_ ventilation = \_\_\_\_\_ oxygenation

In what conditions are they not linked together?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

How do we clinically assess oxygenation and ventilation?

Oxygenation	Ventilation
_____	_____
_____	_____
_____	_____
_____	_____

**What two questions do I ask to determine if I need to intervene?**

- Is the patient \_\_\_\_\_?
- Is the patient \_\_\_\_\_?

**What are five reasons to intervene? Please list examples for each reason.**

- \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
- \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
- \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ (examples) \_\_\_\_\_
- \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_
- \_\_\_\_\_
  - ❖ \_\_\_\_\_
  - ❖ \_\_\_\_\_

- ❖ \_\_\_\_\_
- ❖ \_\_\_\_\_

**How can I improve oxygenation?**

Non-Rebreather	Bag Valve Mask
True or False: NRB can / cannot deliver 100% FiO <sub>2</sub> ?	<input type="radio"/> _____ <input type="radio"/> _____
Tighten the Seal:	Flow Rate:
<input type="radio"/> _____ <input type="radio"/> _____	<input type="radio"/> _____
Flow Rate:	
<input type="radio"/> _____	

**How can I improve ventilation?**

- Positioning: \_\_\_\_\_
- Mask seal: \_\_\_\_\_
- Dentures: Stay or Go?
- Facial features: \_\_\_\_\_
- Facial size: \_\_\_\_\_
- Ventilation Volume: \_\_\_\_\_

**Assisting Ventilation: Time the squeeze to the patient's inhalation.**

**What are the pros and cons about suctioning?**

- Pros: \_\_\_\_\_
- Cons: \_\_\_\_\_

**The take home message about suctioning is:**

\_\_\_\_\_

**What are the key points when assisting an advanced provider?**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**Supraglottic Airways:**

Supraglottic airways are blindly placed into the middle portion of the airway and occlude the esophagus and the pharynx, indirectly ventilating the trachea. They are generally straightforward to use with less experience required to become proficient with these devices as compared with endotracheal intubation. It is important to note that they do not protect the airway from foreign material as good as an endotracheal tube. Three common devices currently in use include the King LTS-D airway ([www.kingsystems.com](http://www.kingsystems.com)), the laryngeal mask airway ([www.vitaid.com](http://www.vitaid.com)), and the combitube ([www.airwaycarnival.com/COM.htm](http://www.airwaycarnival.com/COM.htm)).

Below are a few articles that discuss the use of these devices by non-paramedics.

- Guyette FX, Rittenberger JC, Platt T, Suffoletto B, Hostler D, Wang HE. Feasibility of basic EMTs to perform selected advanced life support interventions. *Prehospital Emergency Care* 2006 10(4):518-521.
- Lefrancois DP, Dufor DG. Use of the esophageal tracheal combitube by basic EMTs. *Resuscitation* 2002 52(1):77-83.
- Ochs M, Vilke GM, Chan TC, Moats T, Buchanan J. Successful prehospital airway management by EMT-Ds using the combitube. *Prehospital Emergency Care* 200 4(4):333-337
- Rumball C, MacDonald D, Barber P, Wong H, Smecher C. Endotracheal intubation and esophageal tracheal combitube insertion by regular ambulance attendants: a comparative trial. *Prehospital Emergency Care* 2004 8(1):15-23.
- Rumball CJ, MacDonald D. The PTL, combitube, laryngeal mask, and oral airway: a randomized prehospital comparative study of ventilatory device efficiency and cost-effectiveness in 470 cases of cardiopulmonary arrest. *Prehospital Emergency Care* 1997 1(1):1-10.
- Russi C, Miller L. An out of hospital comparison of the King LT to endotracheal intubation and esophageal-tracheal combitube in a simulated difficult airway patient encounter. *Academic Emergency Medicine* May 2007 14(5 suppl):S22 (free at [http://www.aemj.org/cgi/reprint/14/5\\_Supplement\\_1/S22-a-a](http://www.aemj.org/cgi/reprint/14/5_Supplement_1/S22-a-a)).

## **Continuous Positive Airway Pressure:**

Continuous Positive Airway Pressure (CPAP) is a technique gaining popularity in use by paramedics to non-invasively support patients in severe respiratory distress. CPAP utilizes a tightly fitting mask on the patient's face to provide a constant pressure during both the inhalation and exhalation phases of the respiratory cycle. The pressure during inhalation helps move air into the lungs. The pressure against the patient's exhalation splints open the lower airways that typically close off during exhalation. In many respiratory diseases, the patient expends a significant amount of effort during inhalation just in opening up the lower airways, effort the patient cannot afford to waste! Many studies support the use of CPAP in many respiratory conditions, for example acute pulmonary edema, severe asthma or COPD exacerbations, and respiratory failure from pneumonia, both decreasing the need for intubation, but significantly decreasing length of stay in the ICU and hospital.

While there are currently no studies that examine non-paramedic EMS providers using CPAP for patients in respiratory distress, I predict that within the next several years we will see research supporting use of CPAP by non-paramedic EMS providers.

# One Minute Evaluation

Session: Improving Basic Airway Management

Date: \_\_\_\_\_

**Please complete and place face down on the table by the door.**

List 2 – 3 core ideas that have emerged for you as important during the session:

1.

2.

3.

List 2 – 3 questions that have surfaced for you relevant to the content presented. Were they answered during the session?

1.

2.

3.

List 2 – 3 things the presenter(s) did well during the session:

1.

2.

3.

List 2 – 3 things that could be improved about the session:

1.

2.

3.

**THANK YOU!**