Approved 9/2/26, Effective 1/15/27, replaces all prior versions

2A – AIRWAY ASSESSMENT ADULT & PEDIATRIC

EMERGENCY MEDICAL RESPONDER

EMT

EMT-INTERMEDIATE 85

ADVANCED EMT

PARAMEDIC

The following principles should be followed to allow optimum assessment and care of the airway without unnecessary intervention.

1. Use the least invasive method of airway management appropriate to the patient.
2. Use a method of airway management with which you are procedurally comfortable.
3. Use meticulous suctioning to keep the airway clear of debris.
4. Monitor continuously to be sure that oxygenation/ventilation is as effective as intended and as needed.
5. Understand the difference between these various aspects of airway management:

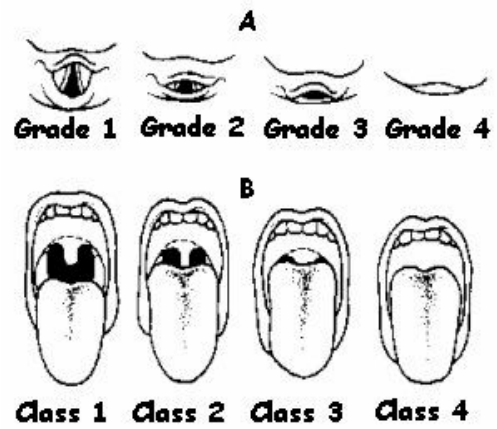
    A. Patency: how open and clear is the airway, free of foreign substances, blood, vomitus, and tongue obstruction?
    B. Ventilation: the amount of air the patient is able to inhale and exhale in a given time, promoting exhalation of carbon dioxide. Use waveform capnography if equipped.
    C. Oxygenation: the amount of oxygen the patient is able to convey to the circulation for tissue/organ perfusion. Use pulse oximetry when available.

Although the dynamics of EMS care often dictate rapid decisions in critical skill performance, assessment for difficult airway characteristics should precede intubation attempt(s). Several methods of evaluating airway-related anatomy exist. One commonly used mnemonic in emergency airway care is “LEMON”, which stands for:

Look externally (Heavy perioral facial hair? Mis-shaped or missing dentition?)
Evaluate 3-3-2 (Can at least three fingers be placed in the vertical axis of the mouth? Can at least three fingers be placed in the space between the chin apex and the top of the neck? Can at least 2 fingers fit between the top of thyroid cartilage and the top of the neck? Three “yes” answers predicts lesser anatomical difficulty in establishing intubation.)
Mallampati scoring – see Images A and B (View of posterior pharyngeal structures correlated to anticipated laryngeal view.)
Obstructions (Oral or upper neck masses? Large tongue?)
Neck mobility (Unable to assess if concerns of cervical spine injury.)

Protocol 2A - Airway Assessment - Adult & Pediatric, cont.

Mallampati Scoring:



The LEMON criteria, including Mallampati scoring, is easiest to apply to compliant patients without acute respiratory distress and without need for emergent intubation. By nature, these are NOT the patients that EMS professionals are tasked with managing. However, the concepts expressed in these criteria can help in predicting more difficult invasive airway management. EMS professionals should always work in developing "Plan B" approaches in airway management to anticipate and be capable of effective care when facing obstacles to usually successful airway management methods.

The following directives guide the approach to typical medical and trauma-related airway problems. They assume the treating EMS professional is skilled in the various procedures appropriate for their scope of practice. Advanced procedures should only be attempted if clinically indicated after less invasive measures fail or are futile to attempt. Individual cases may require modification of these protocols. Airway management decisions and actions should always be thoroughly documented in the patient care report.

Medical Respiratory Arrest:

1. Open airway using head tilt-chin lift.
2. Oxygenate/ventilate with Bag-Valve-Mask (BVM) with supplemental O_2 near 100% FiO_2.
3. Insert nasopharyngeal airway(s) and/or oropharyngeal airway as needed for patency.
4. Suction as needed.
5. Intubate per applicable protocols. If unable to successfully intubate or intubation is not within the scope of practice of available EMS professionals, place supraglottic airway per Protocol 2E – Supraglottic Airways.

Protocol 2A - Airway Assessment - Adult & Pediatric, cont.

Trauma Respiratory Arrest:

1. Open airway using jaw thrust maneuver with another EMS professional applying in-line stabilization of cervical spine.
2. Oxygenate/ventilate with Bag-Valve-Mask (BVM) with supplemental O_2 near 100% FiO_2.
3. Insert nasopharyngeal airway(s) only if no head/facial trauma and/or oropharyngeal airway as needed for patency.
4. Suction as needed.
5. Intubate per applicable protocols. If unable to successfully intubate or intubation is not within the scope of practice of available EMS professionals, place supraglottic airway per Protocol 2E – Supraglottic Airways.

Medical Respiratory Insufficiency (Oxygenation, Ventilation, or Both):

1. Establish patency – either spontaneously by patient, patient positioning, or with nasopharyngeal airway(s).
2. Suction as needed.
3. Apply supplemental O_2 by nasal cannula, non-rebreather mask, BVM, or if EMT license or higher, NIPPV if patient condition indicates need for oxygenation assist.
4. Assist ventilations by BVM, or if EMT license or higher, NIPPV if patient condition indicates need for ventilation assist.
5. If actions in steps 1-4 do not achieve needed oxygenation/ventilation AND if licensed as EMT-I85 or higher, intubate.

Trauma Respiratory Insufficiency (Oxygenation, Ventilation, or Both):

1. Establish patency – either spontaneously by patient, patient positioning, or if no head/facial trauma with nasopharyngeal airway(s).
2. Suction as needed.
3. Apply supplemental O_2 by nasal cannula, non-rebreather mask, BVM as patient condition indicates need for oxygenation assist.
4. Assist ventilations by BVM as patient condition indicates need for ventilation assist.
5. If actions in steps 1-4 do not achieve needed oxygenation/ventilation AND if licensed as EMT-I85 or higher, intubate.