1. REFERENCES.

2. PURPOSE. The purpose of this clinical practice guideline is to establish guidance for management of trauma airway emergencies. These recommendations are guidelines only and are not a substitute for clinical judgment.

3. APPLICABILITY. This memorandum applies to personnel assigned or attached to OIF intra-theatre medical facilities who are involved in the management of patients.

4. BACKGROUND.
   a. Airway management is often the first step in the resuscitation of the severely injured trauma patient. Recognition of “difficult airways, knowledge of airway management algorithms and rescue devices will allow for a pre-planned strategy for first pass success.

5. RESPONSIBILITIES.
   a. All Health Care Providers will:
      (1) Become familiar with the guidelines for performance of trauma airway management.
      (2) Become familiar with the guidelines for performance of rapid sequence intubation.
      (3) Become familiar with alternative airway devices mentioned in guidelines for trauma airway management.
      (4) Provide feedback on these guidelines and suggestions for changes to the CPG to the JTTS.
   b. The Chief, Emergency/Anesthesia/Surgery at each Level III facility will:
      (1) Coordinate with the Theatre Trauma Coordinator on the appropriateness of the guidelines being used and provide input for updates on an as needed basis.
   c. The Theater Trauma Director will:
      (1) Be the subject matter expert on the guidelines to be used in the entire OIF theatre for Management of trauma airway management.
      (2) Update the guidelines on an as-needed basis.

6. PROPOINTER. The proponent for these guidelines is the CENTCOM JTTS.
**AIRWAY ASSESSMENT**

- Evaluate patient for indicators of potentially difficult direct laryngoscopy and/or mask ventilation
- Consider an “awake” intubation technique (e.g., blind nasal) or maintenance of spontaneous breathing during intubation if difficulty anticipated
- Recall that the neutral position (“C-spine stabilization”) degrades the laryngoscopic view
- Remember that not all patients require medication administration in order to facilitate intubation

**RAPID SEQUENCE INDUCTION (RSI) AND INTUBATION PATHWAY**

1. Confirm equipment availability and function
   - IV, suction, self-inflating bag and mask, laryngoscope, ETT with stylet, oral & nasal airways, drugs, CO₂ detector, monitors backup plan equipment
2. Pre-Oxygenate (Denitrogenate) the lungs
   - Prolongs tolerance of apneic period
   - ≈ 3 minutes of tidal volume breathing best
   - Good mask seal is imperative
   - Order of efficacy: Jackson-Reese > resuscitation bag > non-rebreather mask
3. Initiate cervical spine stabilization
4. Remove front of cervical collar
5. Apply cricoid pressure simultaneous w/meds
   - No release until intubation is confirmed
6. Administer medications
   - True RSI requires simultaneous administration of sedative and paralytic
   - Sedative/hypnotic
     - Etomidate (First Line)
     - 0.3 - 0.4 mg/kg IV (“stable” patient)
     - 0.1 - 0.2 mg/kg IV (“unstable” patient)
   - Thiopental (Alternative) Will cause profound hypotension in pt’s in shock/“unstable” pt’s)
     - 3-5 mg/kg
   - Paralytic
     - Succinylcholine 1.5 mg/KG IV or Rocuronium 1.2 mg/kg (Will cause prolonged paralysis)
7. Perform skillful laryngoscopy following fasciculations seen with succinylcholine or 45-60 seconds after administration of rocuronium
8. If laryngoscopic view is poor:
   - Apply Backward, Upward, & Rightward laryngeal Pressure (“BURP” maneuver)
   - Consider use of Eshmann stylet
9. Confirm tracheal intubation
   - Easy chest rise, lack of gastric insufflation, equal axillary breath sounds, & “fog” in ETT
   - Consistent, exhaled CO₂ (Mandatory)
   - Esophageal detector bulb or fiberoptic confirmation during cardiac arrest

**Recommendations for Head Trauma Patients**

- Provide mild hyperventilation/hypocapnia prior to medication administration
- Consider administration of a defasiculating dose of non-depolarizing paralytic:
  - Vecuronium 0.01 mg/kg
- Administer medications that may blunt the response to laryngoscopy 1 – 3 minutes prior to induction
  - Lidocaine 1.5 mg/kg IV
  - Fentanyl up to 3 mcg/kg IV
- Aggressively avoid Hypotension and/or Hypoxemia in head trauma patients

### UNABLE TO INTUBATE...CAN YOU MASK VENTILATE?

<table>
<thead>
<tr>
<th>Mask Ventilation pearls</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Skilled operator</td>
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<tr>
<td>Good seal</td>
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<td>Jaw thrust</td>
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<td>Oral airway</td>
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<td>Nasal airway (s)</td>
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<tr>
<td>Two person mask ventilation</td>
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- Improve position, change blade/operator, “BURP” maneuver, Eshmann stylet
- Attempt alternate technique: Fiberoptic, Light wand, Intubating LMA
- Consider waking patient up (resumption of spontaneous breathing)
- More than ≈ 3 attempts at intubation may abolish your ability to mask ventilate due to edema caused by laryngoscopy
- Emergency pathway...seconds matter.
- Attempt laryngeal mask airway (LMA), surgical or percutaneous cricothyroidotomy, or Combitube
- Do not delay surgical airway if alternate methods are problematic
“Awake” and Breathing Patients

Can I Safely Perform A Rapid Sequence Induction & Intubation?
No  Yes

Unconscious and Apneic Patients

Rapid Sequence Induction
Best attempt(s) at direct laryngoscopy

Unable to Intubate

Mask Ventilation Possible?

Yes
No

Unable Emergency Pathway

Alternate Intubation Choices

Awaken if Possible
Respiratory Failure

Succeed
Fail

LMA Combitube Cricothyroidotomy

Alternate Intubation Choices
Succeed
Fail

CONFIRM

Two Person Mask Ventilation
Laryngeal Manipulation to Improve Laryngoscopic View

APPROVED:
Donald H Jenkins
Col USAF MC
Trauma Medical Director

GUIDELINE ONLY—NOT A SUBSTITUTE FOR CLINICAL JUDGEMENT
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