RAPID SEQUENCE INTUBATION (RSI)

This protocol is ONLY for paramedics who have been specifically trained to perform this skill and have approval from the WVOEMS State Medical Director and corresponding Squad Medical Director.

Rapid Sequence Intubation (RSI) should only be performed if a rapid airway is indicated, and benefits outweigh potential risks. This guideline is for patients that require intubation but are awake, continue to have respiratory effort, and intact cough/gag reflex. Whenever possible, **RSI should be performed prior to transport**. This guideline is not intended for patients in cardiac arrest because they should be intubated without drugs per **Airway Management Protocol 4901**.

The EMS provider must have a backup/rescue airway plan (Supraglottic device *or OPITIONAL* Percutaneous Cricothyrotomy, etc.) in mind and immediately accessible for all patients under consideration for RSI prior to proceeding:

A. General Information:

1. Two (2) paramedics must be present, one (1) of which is an "RSI trained Paramedic."

2. Patient must be on a cardiac monitor and pulse oximeter. Maintain patient on high flow supplemental oxygen either by mask or bag-valve-mask. Confirm or initiate two (2) IVs, if possible, preferably large bore. Have suction hooked up, turned on, and within reach. Have bag-valve-mask attached to oxygen regulator and immediately available.

3. Pre-oxygenate the patient using 100% oxygen. Assure that you can assist ventilations with a bag-valve-mask prior to proceeding. **DO NOT** BAG VENTILATE the patient unless necessary—this only causes increased gastric distention and the increased risk of aspiration.

B. **Indications:** Patients ≥ 12 years old whose airway cannot be controlled by any other means as outlined in the **Airway Management Protocol 4901** and one (1) of the following:

1. Inability to maintain airway patency.

2. Inability to protect the airway against aspiration.

3. Ventilatory compromise.

4. Failure to adequately oxygenate pulmonary capillary blood.

5. Anticipation of a deteriorating course that will eventually lead to the inability to maintain airway patency or protection.

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C. **RSI Procedure:**

1. If suspected closed head injury or other reason for high ICP, administer **Lidocaine** - 1.0 mg/kg IV/IO at least three (3) minutes prior to intubation.

2. **Fentanyl (Sublimaze®)**: 1 microgram/kg IV/IO. Withhold if hypotensive.

3. Apply cricoid pressure (Sellick's Maneuver).

4. Sedative agent:

   a. **Etomidate* (Amidate®)**: 0.3 mg/kg IV/IO ***OR***

   b. **Midazolam (Versed®)**: 0.1 mg/kg IV/IO (max. dose 10 mg)
   Do not use Midazolam in hypotensive patients.

Note: ***Etomidate** is the preferred sedative, especially in patients with possible hemodynamic compromise. If Etomidate is used, Succinylcholine should already be drawn up and **immediately** follow Etomidate administration.

5. If not contraindicated, administer **Succinylcholine (Anectine®)**: 1.5 mg/kg IV push. When paralysis is achieved and muscle fasciculation have stopped (in about 30 - 45 seconds), orally intubate, inflate cuff, and confirm tube placement with bilateral breath sounds, appropriate end-tidal carbon dioxide waveform, etc.

Note: Contraindications include high intraocular pressure, high potassium (K > 5.5), burns and spinal cord injuries > 24 hours old, pseudocholinesterase deficiency.

6. If there is no jaw relaxation or decreased resistance to ventilation within two (2) minutes, or if the patient begins to resist, repeat **Succinylcholine (Anectine®)** 1.5 mg/kg IVP

7. If unable to intubate, consider suctioning, jaw thrust, changing operators, using a different blade, etc.; monitor oxygen saturations and use BVM to ventilate between attempts, if needed.

8. Use rescue airway plan (Supraglottic device, video laryngoscopy (required),

needle cricothyrotomy or OPTIONAL percutaneous cricothyrotomy, etc.) and/or bag-valve-mask if unable to intubate after three (3) attempts.

9. Once intubation is confirmed, if patient requires continued sedation, long term paralytics, or analgesics, consider the following drugs and repeat, as necessary, based upon patient response and drug duration of action:

   a. Sedation:

      i. **Midazolam (Versed®)**: 0.1 mg/kg IV/IO (if not hypotensive)

   b. Analgesia:

      i. **Fentanyl (Sublimaze®)**: 1 microgram/kg slow IV/IO push, ***OR***

      ii. **Morphine**: 0.1 mg/kg slow IV/IO push.

   c. Long-term paralytic:

      i. **Vecuronium (Norcuron®)**: 0.1 mg/kg IV/IO

      -OR-

      Rocuronium (Zemuron®): 1.0 mg/kg IV/IO *(OPTIONAL MEDICATION)*

Note: *An agent for long term paralysis MUST never be given until endotracheal tube placement is fully confirmed.*

10. All patients given a long-term paralytic agent ***must*** also periodically be given sedation while they remain paralyzed.

D. **Contact Medical Command** once en route to hospital with patient update for all patients requiring intubation.

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