Indications:

- Unable to maintain or protect an airway
- Impending respiratory failure

Precautions:

- Major facial or laryngeal trauma
- Upper airway obstruction
- Distorted facial or airway anatomy

Procedure:

- Plan
  - Ensure a supervisor is on scene or enroute
  - Two, preferably three, authorized providers
  - Utilize DSI Checklist
    - SpO2 >94% for 3 minutes prior to intubation attempt
    - Epinephrine Push-dose mixed/ready
    - Vitals: BGL, CO2, 3-lead
    - Verbalize back-up plan
    - Positioning – HOB elevated 15 degrees, ear to sternal notch
    - Review plans/roles
  - Evaluate Airway
  - Consult
- Preoxygenate
  - Apneic Patient – NC 15LPM, BVM 15LPM, PEEP up to 15cmH20
  - Spontaneously Breathing – NC 15LPM and NRB 15LPM; or NIV
- Prepare Equipment
  - Suction, BVM, Intubation equipment, SGA, Monitor, Epinephrine Push-dose
- Induction
  - **Ketamine** 2 mg/kg IV/IO
  - Consider **Epinephrine** Push-Dose 10mcg q 2 minutes if SBP < [(Age in years x 2) +70]
- Paralysis – CONTRAINDICATED IN PEDIATRICS –
- Intubate
  - Continuously monitor SpO2 and HR. Stop attempts if SpO2 falls below 90%
  - BVM ventilation may be necessary in between attempts to prevent desaturation
  - 2 attempts per provider (max 4 attempts) are allowed at intubation; use SGA if unsuccessful
  - Consider cricothyroidotomy if unable to intubate and unable to ventilate
- ET Tube Confirmation with WAVEFORM CAPNOGRAPHY
- Post Intubation Sedation
  - **Ketamine** 2 mg/kg IV/IO. Repeat q 5 minutes PRN
- Post Intubation Paralysis (if needed)
  - **Rocuronium** 1 mg/kg IV/IO PRN
    - Not for routine administration
    - Ensure adequate sedation prior to administration

Considerations:

- Anatomic and Physiologic Features Unique to Children:
  - Large tongues which may occlude the airway and are difficult to sweep away during intubation.
  - Small airway diameter. Minimal edema and swelling may obstruct the airway.
  - Short trachea that predisposes for extubation during transport or head extension.
  - Bimanual manipulation should aid in visualization.
  - May require ramping to achieve ear to sternal notch.
  - The epiglottis is soft and “U” or omega shaped.
  - The pediatric airway approaches the size of an adult airway at age 8 or 9 years of age.
  - Infants are obligate nose breathers until 2 – 6 months of age.