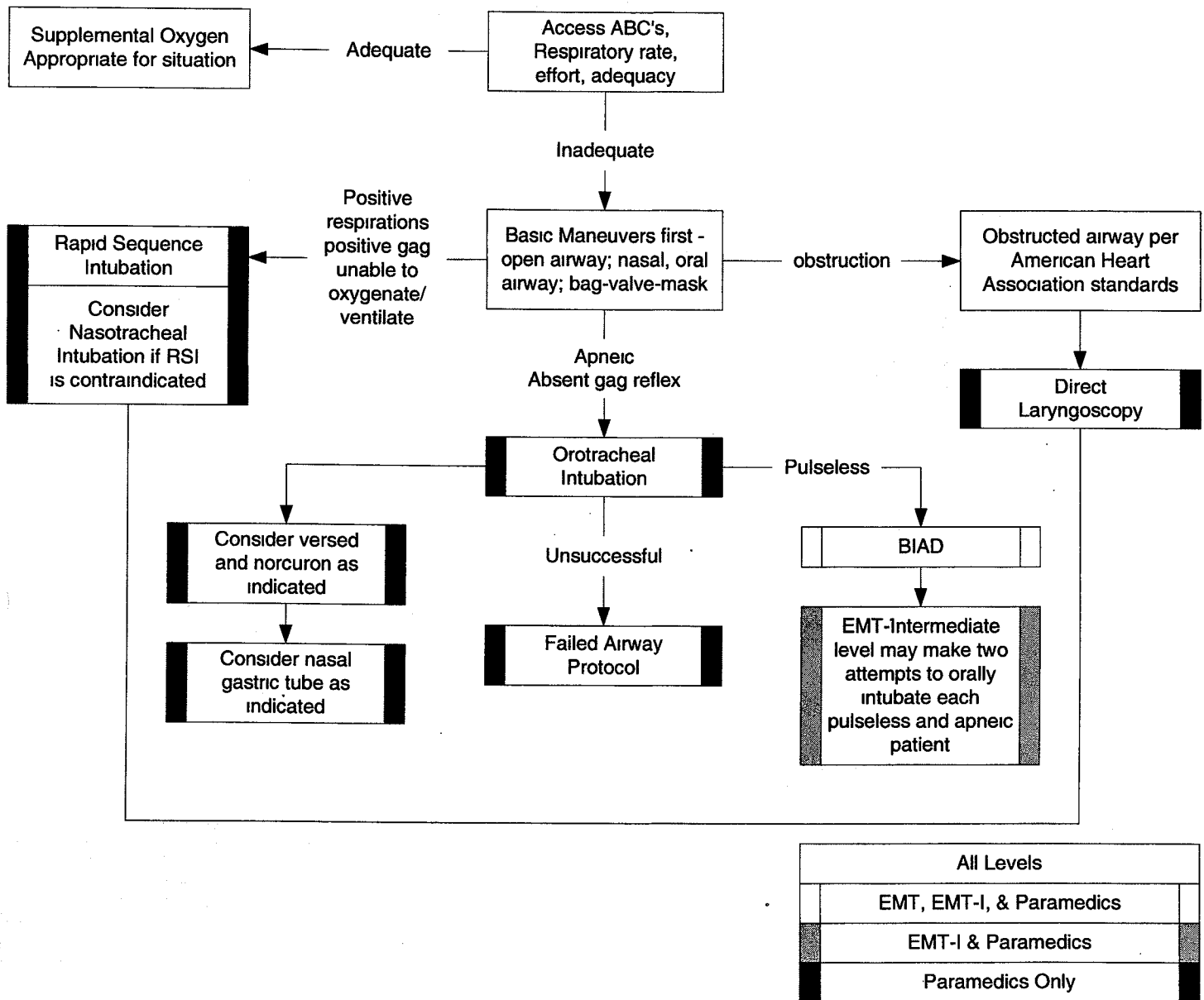


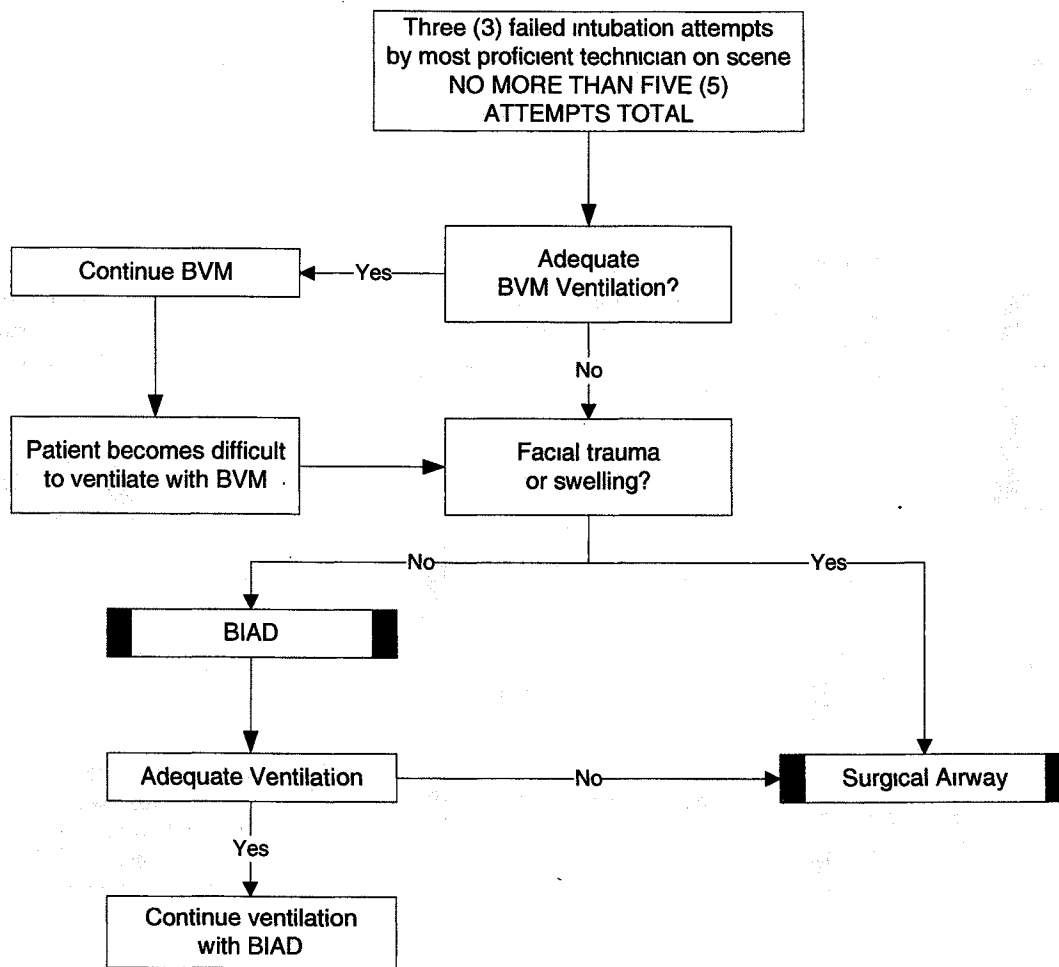
# General

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**Pearls:**

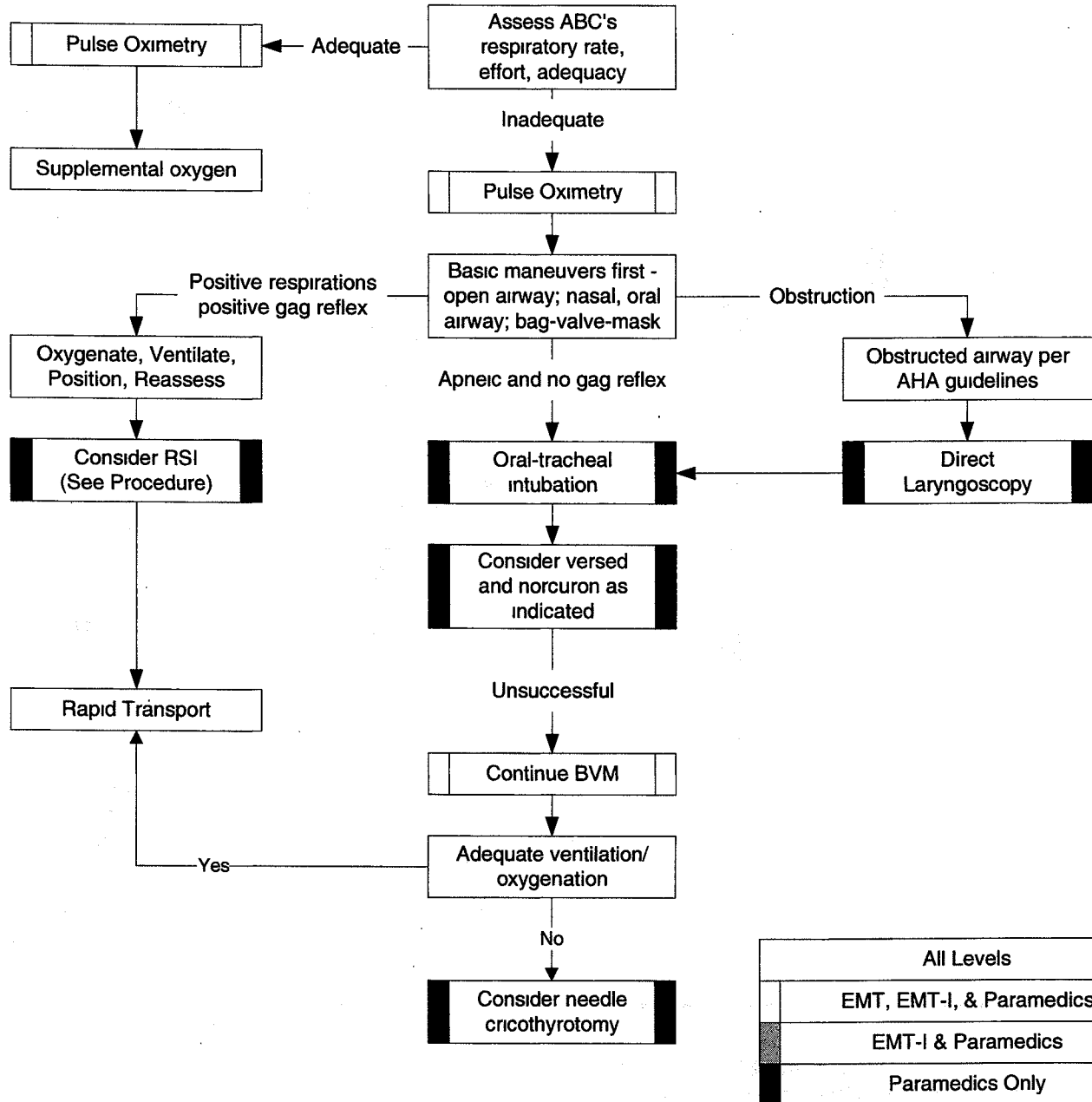
- CO<sub>2</sub> Detectors or continuous ETCO<sub>2</sub> monitoring is mandatory with all methods of intubation. The results must be documented.
- Maintain C-spine immobilization for patients with suspected spinal injury.
- Do not assume hyperventilation is psychogenic - use oxygen, not a paper bag.
- Hyperventilation in head trauma should only be done if evidence of herniation (i.e. blown pupil, decerebrate or decorticate posturing).
- Nasogastric tube placement should be considered in all intubated patients.
- BIAD should be used secondary to ETT by EMT-I and Paramedic personnel.
- BIAD use by EMT and EMT-I personnel requires patient to be apneic and pulseless.
- If ventilation is adequate with BIAD, orotracheal intubation is not necessary.



All Levels	
EMT, EMT-I, & Paramedics	
EMT-I & Paramedics	
Paramedics Only	

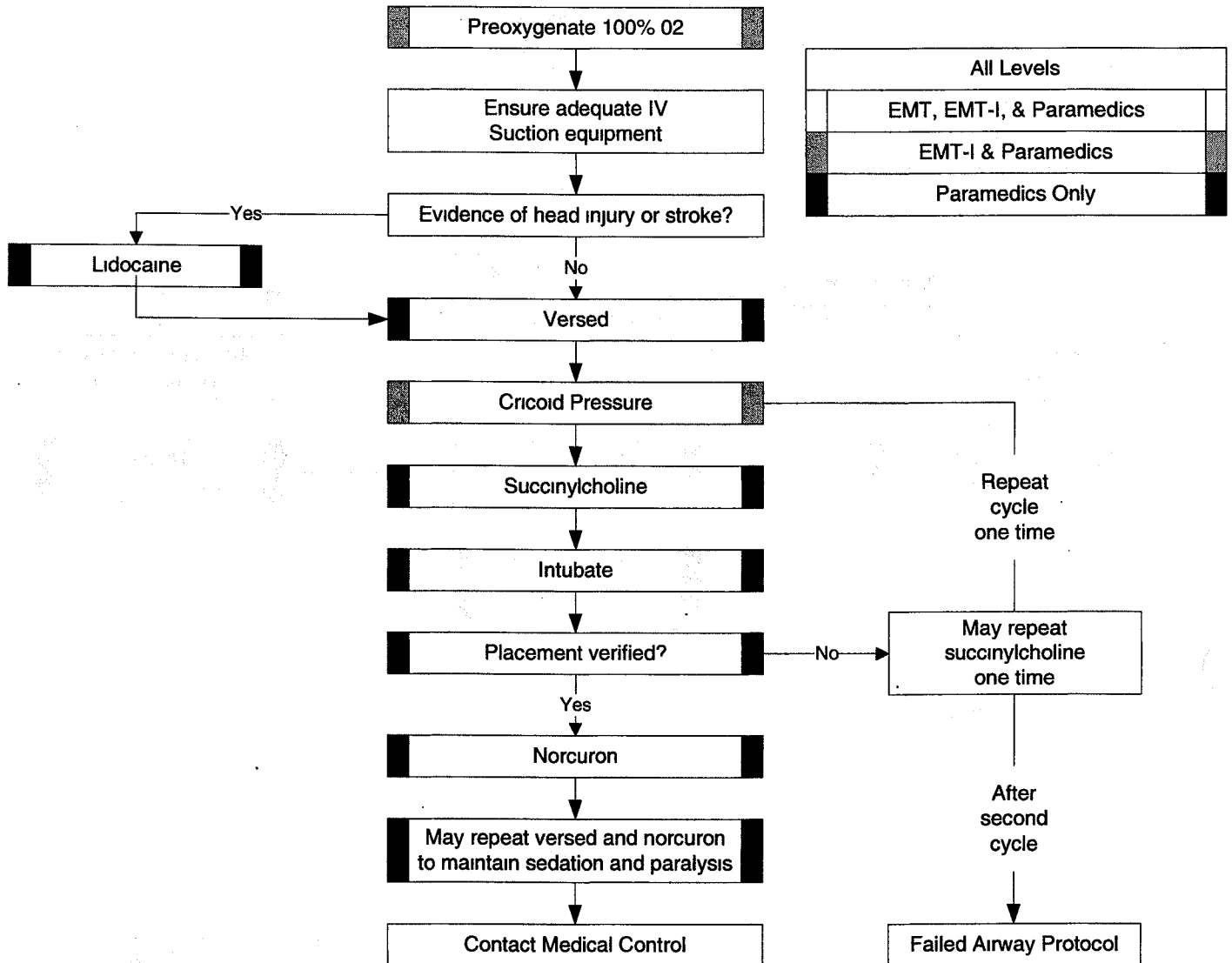
**Pearls:**

- If first intubation attempt fails, make an adjustment and then try again:
  - Different laryngoscope blade
  - Different ETT size
  - Change cricoid pressure
  - Apply BURP maneuver (Push trachea Back (posterior), Up, and to patient's Right)
  - Change head positioning
- Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- Notify Medical Control AS EARLY AS POSSIBLE about the patient's difficult/failed airway.
- If BIAD is utilized, use RSI medications/procedure to suppress gag reflex as needed.



**Pearls:**

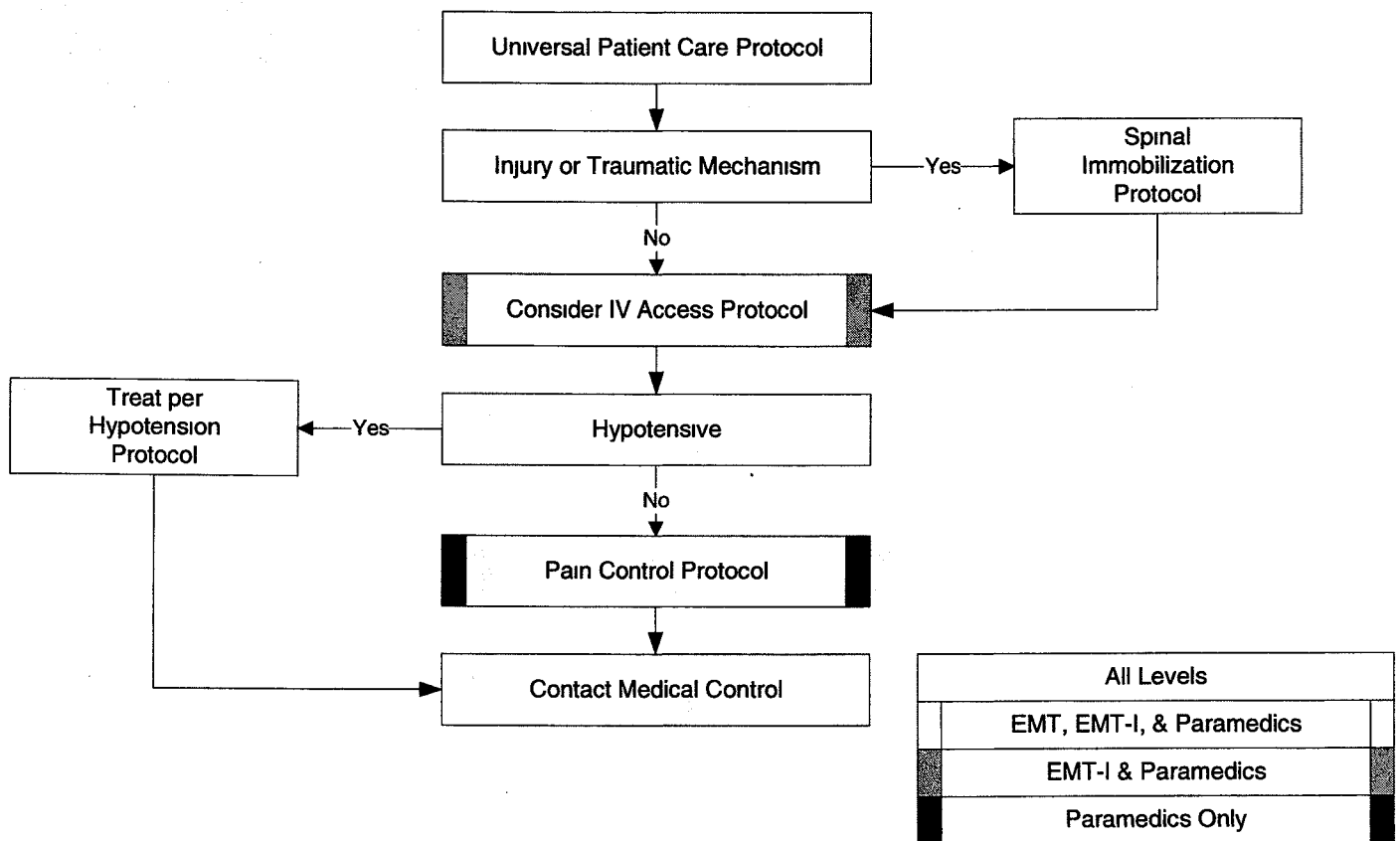
- For this protocol, pediatric is defined as less than 12 years.
- Capnometry or capnography is mandatory with all methods of intubation. Document results.
- Limit intubation attempts to 3 per patient.
- If unable to intubate, continue BVM ventilations, transport rapidly, and notify receiving hospital early.
- Maintain C-Spine immobilization for patients with suspected spinal injury.
- Do not assume hyperventilation is psychogenic - use oxygen, not a paper bag.
- Sellick's maneuver should be used to assist with difficult intubations.
- Nasogastric tube placement should be considered in all intubated patients.
- Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- Consider c-collar to maintain ETT placement for all intubated patients (REMOVE COLLAR upon patient TRANSFER).



**Pearls:**

- **PARALYZED PATIENTS MUST RECEIVE ADEQUATE SEDATION.**
- Do not interrupt ventilations longer than 30 seconds.
- Once a patient has been given a paralytic drug, you are responsible for ventilations!
- Before administering any paralytic drug, complete and document a thorough neuro exam.
- If first intubation attempt fails, make an adjustment and try again:
  - Different laryngoscope blade
  - Different ETT size
  - Change cricoid pressure
  - Change head positioning
- Continuous pulse oximetry should be utilized in all patients and monitor breath sounds at intervals.
- This is not a one-person procedure. Divide the workload - ventilate, suction, cricoid pressure, drugs, intubation.
- All equipment must be in place and ready for use prior to administering any RSI drugs.
- Protect the patient from self extubation when the drugs wear off. Restraints may be necessary.
- Document procedure on call report.
- EMT-Paramedics that have met the guidelines set forth by the Medical Director may perform RSI.

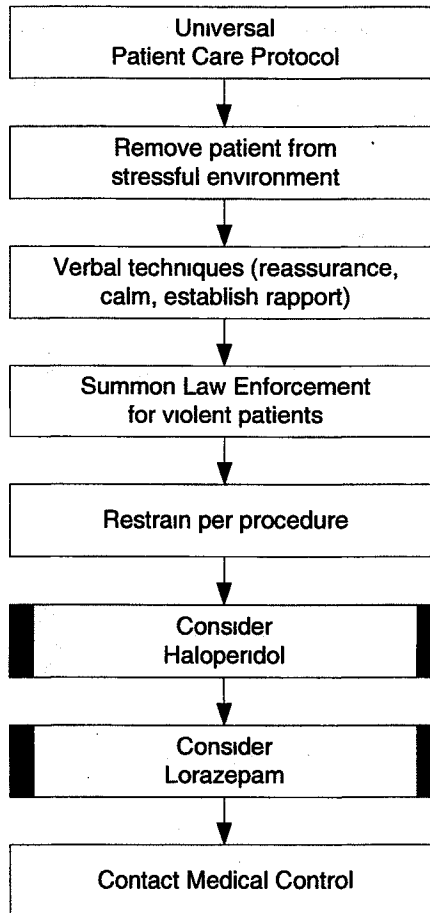
<b>History:</b> <ul style="list-style-type: none"> <li>▪ Age</li> <li>▪ Past Medical History</li> <li>▪ Past Surgical History</li> <li>▪ Medications</li> <li>▪ Onset of Pain/Injury</li> <li>▪ Previous Back Injury</li> <li>▪ Traumatic Mechanism</li> <li>▪ Location of Pain</li> <li>▪ Fever</li> <li>▪ Improvement or worsening with activity</li> </ul>	<b>Signs / Symptoms:</b> <ul style="list-style-type: none"> <li>▪ Pain (paraspinous, spinous process)</li> <li>▪ Swelling</li> <li>▪ Pain with Range of Motion</li> <li>▪ Extremity Weakness</li> <li>▪ Extremity Numbness</li> <li>▪ Shooting Pain into an extremity</li> <li>▪ Bowel/Bladder dysfunction</li> </ul>	<b>Differential:</b> <ul style="list-style-type: none"> <li>▪ Muscle Spasm/Strain</li> <li>▪ Herniated Disc with Nerve Compression</li> <li>▪ Sciatica</li> <li>▪ Spine Fracture</li> <li>▪ Renal Stone</li> <li>▪ Pyelonephritis</li> <li>▪ Aneurysm</li> <li>▪ Pneumonia</li> </ul>
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**Pearls:**

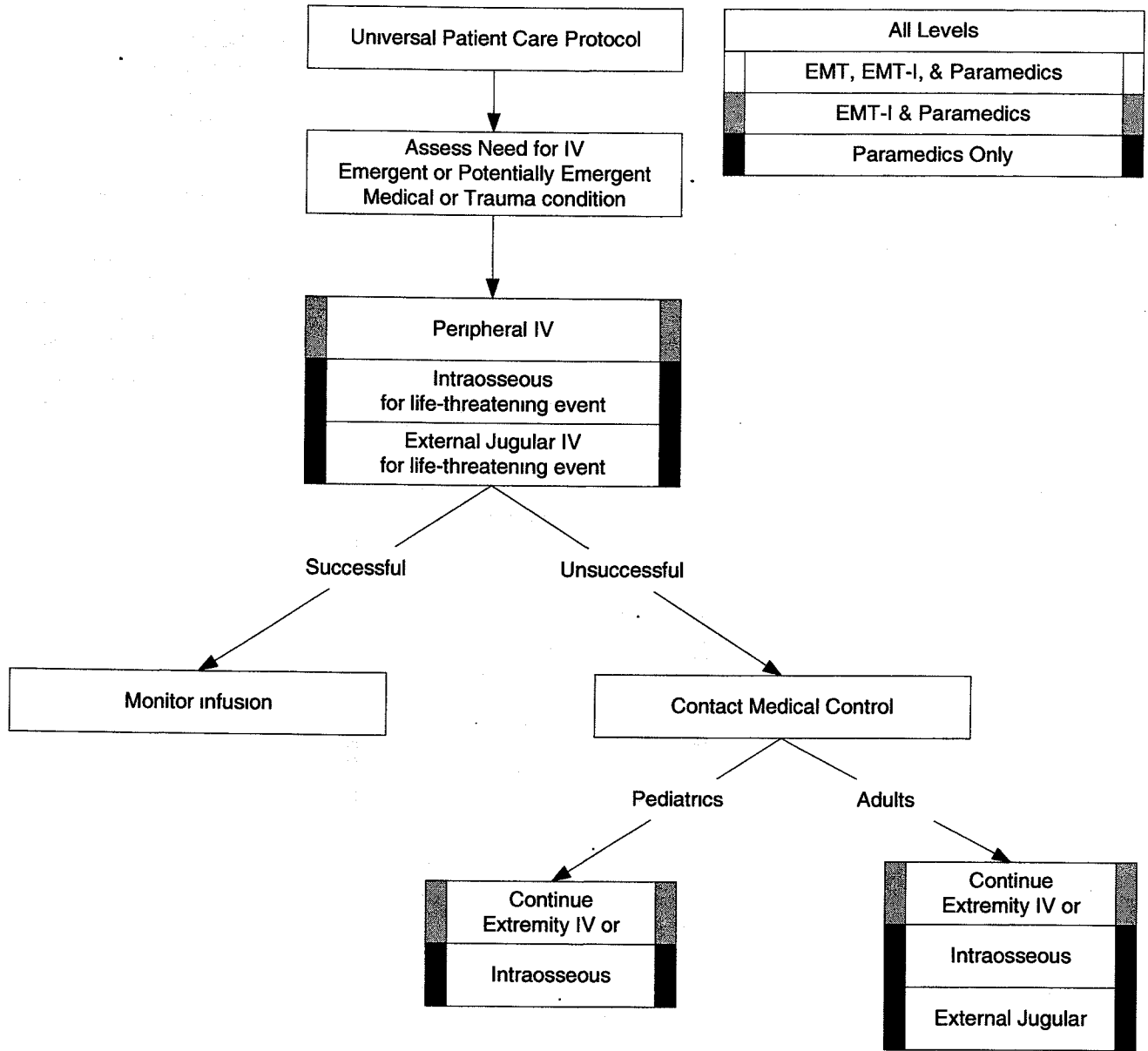
- Exam: ABC's, Vital Signs, Mental Status, HEENT, Neck, Chest, Lungs, Abdomen, Back, Extremities, Neuro
- Abdominal Aneurysms are a concern in patients over the age of 50.
- Renal Stones typically present with an acute onset of flank pain which radiates around to the groin area.
- Patients with midline pain over the spinous processes should be spinally immobilized.
- Any bowel or bladder incontinence is a significant finding which requires immediate medical evaluation.

<b>History:</b> <ul style="list-style-type: none"> <li>Situational crisis</li> <li>Psychiatric illness/medications</li> <li>Injury to self or threats to others</li> <li>Medic alert tag</li> <li>Substance abuse/overdose</li> <li>Diabetes</li> </ul>	<b>Signs / Symptoms:</b> <ul style="list-style-type: none"> <li>Anxiety, agitation, confusion</li> <li>Affect change, hallucinations</li> <li>Delusional thoughts, bizarre behavior</li> <li>Combative, violent</li> <li>Expression of suicidal/homicidal thoughts</li> </ul>	<b>Differential:</b> <ul style="list-style-type: none"> <li>See Altered Mental Status Differential</li> <li>Alcohol Intoxication</li> <li>Toxin/Substance Abuse</li> <li>Medication effect/overdose</li> <li>Withdrawal syndromes</li> <li>Depression</li> <li>Bipolar (manic-depressive)</li> <li>Schizophrenia</li> <li>Anxiety Disorders</li> </ul>
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All Levels	
	EMT, EMT-I, & Paramedics
	EMT-I & Paramedics
	Paramedics Only

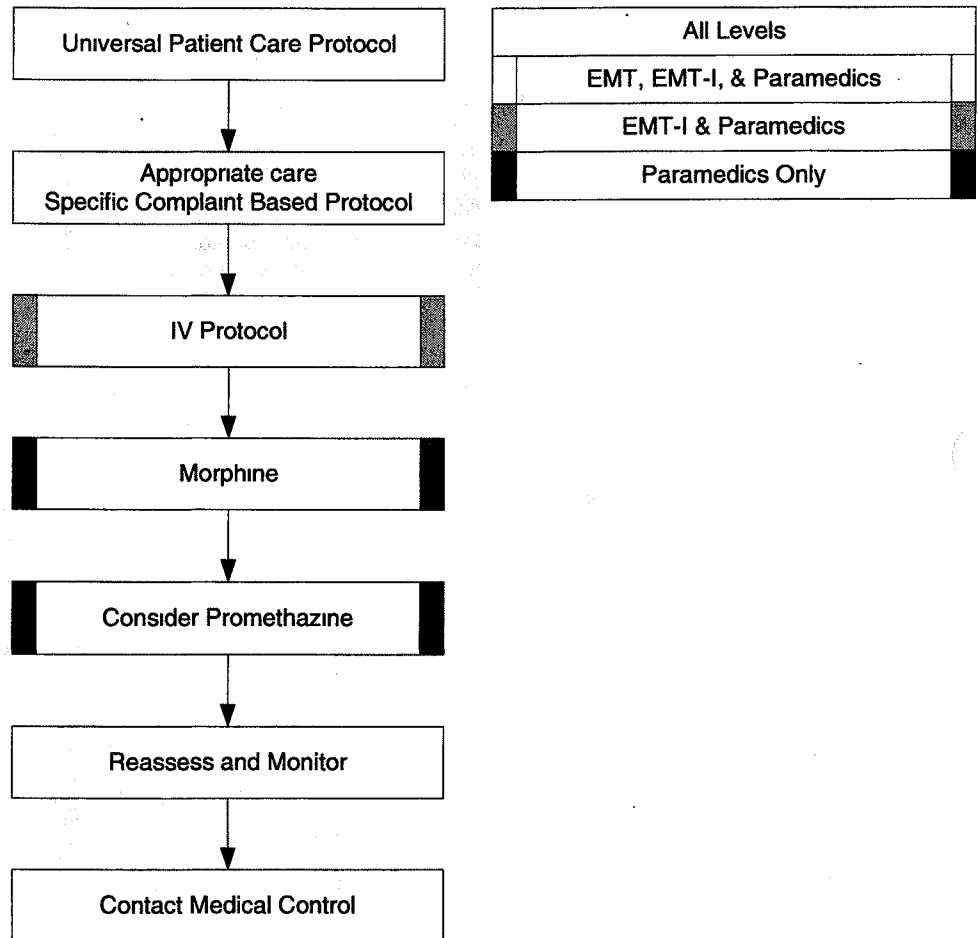
<b>Pearls:</b> <ul style="list-style-type: none"> <li>Exam: ABC's, Vital Signs, Mental Status, Skin, Heart, Lungs, Neuro</li> <li>Your safety first!!</li> <li>Be sure to consider all possible medical/trauma causes for behavior and treat appropriately (hypoglycemia, overdose, substance abuse, hypoxia, head injury, etc.)</li> <li>Do not irritate the patient with a prolonged exam.</li> </ul>
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**Pearls:**

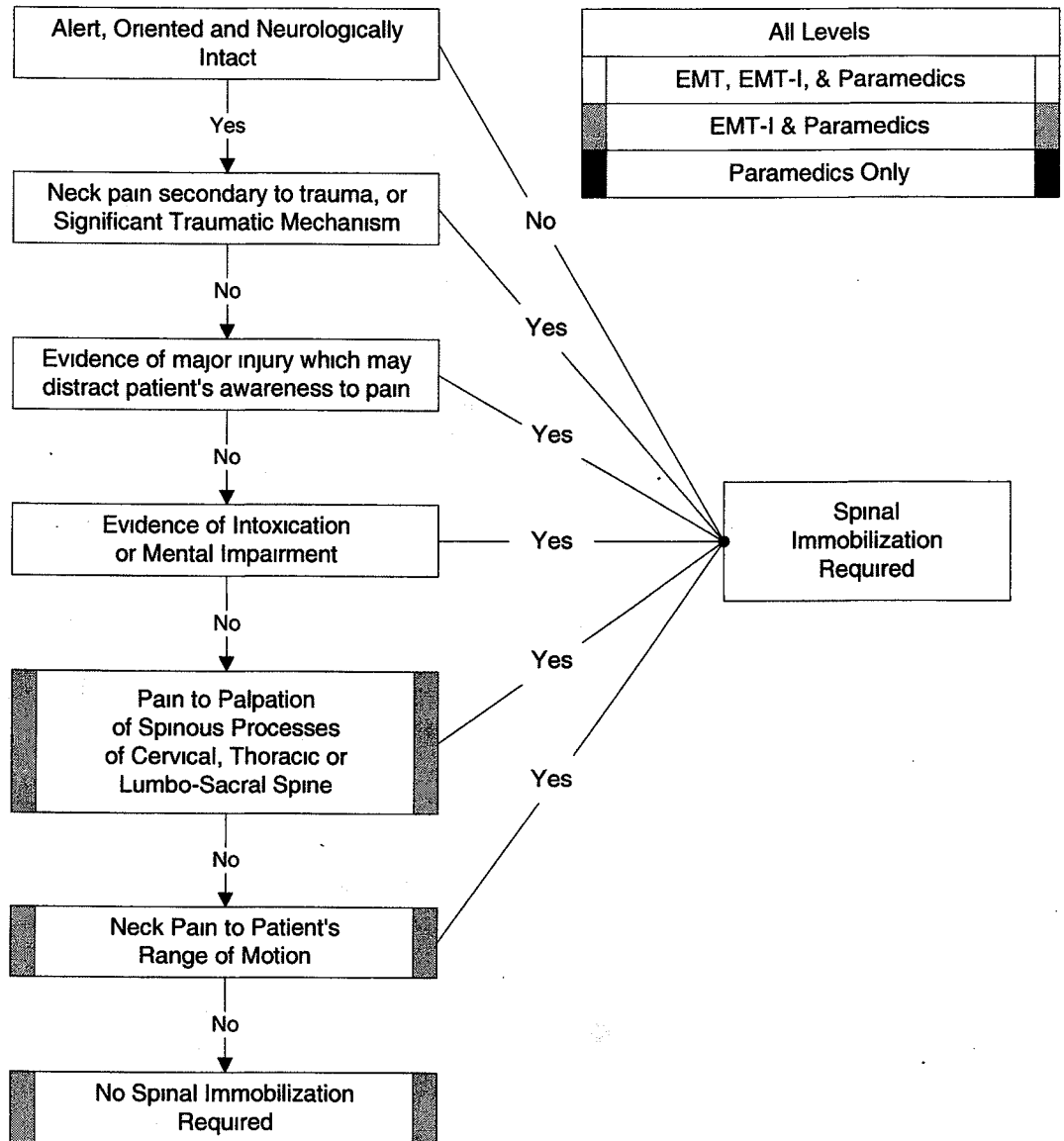
- Peripheral (up to 3 attempts).
- Intraosseous manual device ( $\leq 8$  years of age, up to 2 attempts).
- EZ-IO device for patients  $>3$ kg.
- External Jugular ( $\geq 12$  years of age, up to 2 attempts).
- Any prehospital fluids or medications approved for IV use may be given through an intraosseous IV
- All IV rates should be at KVO (minimal rate to keep vein open) unless administering fluid bolus.
- Fluid bolus amounts are 500 cc for adult and 20 cc/kg for peds and may be repeated as the situation indicates.
- External Jugular and Intraosseous lines can be attempted initially in life-threatening events where no obvious peripheral site is noted.
- Any central venous catheter may be accessed for emergency situations by Paramedic personnel. See Venous Access existing catheter protocol.

<b>History:</b> <ul style="list-style-type: none"> <li>▪ Age</li> <li>▪ Location</li> <li>▪ Duration</li> <li>▪ Severity (1 - 10)</li> <li>▪ Past Medical History</li> <li>▪ Medications</li> <li>▪ Drug Allergies</li> </ul>	<b>Signs / Symptoms:</b> <ul style="list-style-type: none"> <li>▪ Severity (pain scale)</li> <li>▪ Quality (sharp, dull, etc.)</li> <li>▪ Radiation</li> <li>▪ Relation to movement, respiration</li> <li>▪ Increased with palpation of area</li> </ul>	<b>Differential:</b> <ul style="list-style-type: none"> <li>▪ Per the specific protocol</li> <li>▪ Musculoskeletal</li> <li>▪ Visceral (abdominal)</li> <li>▪ Cardiac</li> <li>▪ Pleural/Respiratory</li> <li>▪ Neurogenic</li> <li>▪ Renal (colic)</li> </ul>
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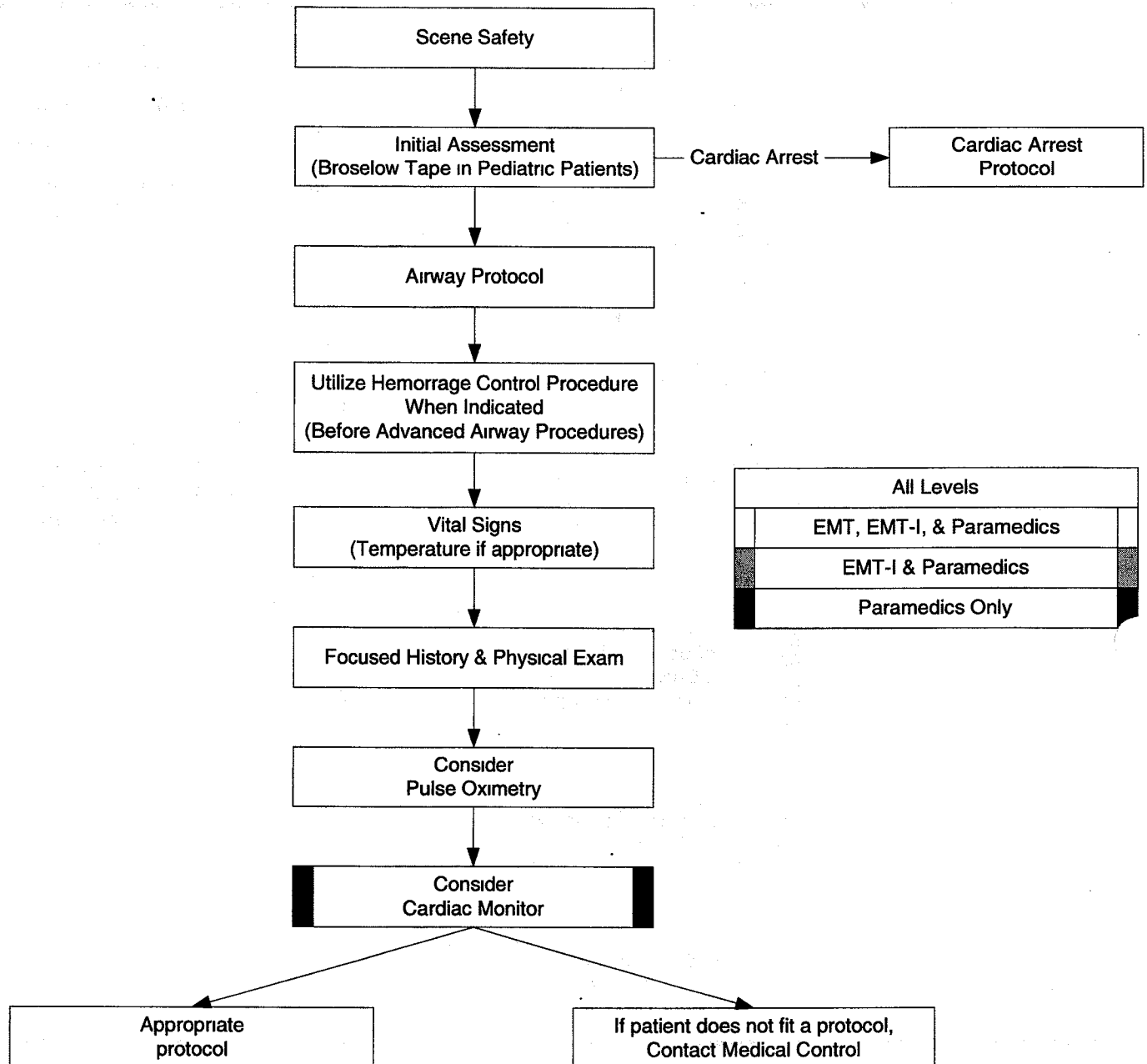
**Pearls:**

- Exam: VS, Mental Status, Area of Pain, Neuro
- Vital Signs should be obtained pre, 15 minutes post, with all pain medications.
- Contraindications to Morphine use include hypotension, head injury, respiratory depression or severe COPD.
- All patients should have drug allergies documented prior to administering pain medications.
- Pain severity (0-10) should be recorded pre and post IV or IM medication delivery.



**Pearls:**

- Exam: ABC's, Vital Signs, Mental Status, Skin, Neck, Heart, Lungs, Abdomen, Back, Extremities, Neuro
- Patient should be alert and oriented to person, place, situation, and time.
- Significant mechanism of trauma includes windshield spider, dash deformity, ejection, rollover, and space invasion of > 1 foot.
- Patient's range of motion should not be assisted. The patient should touch their chin to their chest, extend their neck (look up), and turn their head from side to side (shoulder to shoulder) without pain.
- Major injuries which may distract a patient's awareness to pain include pelvic fracture, femur fracture, extensive burns or soft tissue injury, acute abdomen, or significant chest injury.
- If unsure, IMMOBILIZE!



**Pearls:**

- Exam: Minimal exam if not noted on the specific protocol is Vital Signs, Mental Status, and location of injury or complaint.
- Required Vital Signs on every patient include Blood Pressure, Pulse, and Respirations.
- Pulse Oximetry and Temperature documentation is dependent on the specific complaint.
- Timing of transport should be based on patient's clinical condition.
- Cardiac Monitoring and Pulse Oximetry is required on all cardiac and multisystem trauma patients. These procedures should be used as appropriate in all other patient encounters.