PREHOSPITAL TREATMENT ALGORITHMS

Developed by Trinidad Ambulance District
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Executive Director: Brandon Chambers, NREMT-P
Flowcharting: Greg Williams, NREMT-P

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### Prehospital Treatment Algorithms

#### SECTION DESCRIPTIONS

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<th>Standing Orders</th>
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### Appendices

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Standing Orders
First Responders (FR)

Assessments
- BSI
- Scene Safety
- Scene Size-up
- General Impression
- Level of Consciousness (LOC) as suggested by AVPU
- ABCs
- Vital Signs (VS)
- Patient History as suggested by OPQRST
- Patient Physical Exam as suggested by DCAP/BTLS
- Communication with higher level of care
- Assisting with packaging and loading of patients

Treatments
- Basic Airway Maneuvers and use of Oral/Nasal Adjuncts
- Oxygen Administration using Face Masks, Nasal Cannulas, Non Re-Breathers and Bag-Valve-Masks
- CPR including AED Integration
- Spinal Immobilization
- Bleeding Control

Medications
- Oxygen

First Responders
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An EMT-Basic performs Assessments and Treatments as listed for First Responders. In addition EMT Basics also:

- **Assessments**
  - Confirm FR Initial and Focused Assessments
  - Transport Decisions based on MOI/NOI
  - Expanded Patient History as suggested by SAMPLE
  - Expanded Physical Exams Rapid Trauma/Medical Focused Trauma/Medical
  - Conducts Detailed and On-going Exams

- **Treatments See Note**
  - Advanced Airway including Suctioning, Pulse Oximetry, Capnography and KING multi-lumen airways
  - Non-Interpretive ECG Monitoring
  - Use of Tourniquets for Bleeding Control
  - Splinting including use of Traction, External Pelvic Compression
  - Blood Glucose Testing
  - Patient Transport
  - Administer Nebulized Medications

- **Medications See Note**
  - Albuterol - MDI
  - Albuterol - Nebulizer
  - Aspirin
  - Charcoal
  - EPI Pen
  - Nerve Agent Antidote
  - Nitroglycerin
  - Oral Glucose

  **Is Patient in Extremis or Arrest**
  - Yes
  - Administer any Medication under direct, on-scene supervision of an EMT Intermediate or Paramedic

**Note**: Many of the advanced practices listed above may have specific restrictions or may require additional training and/or orders from On-line Medical Control. Specific reference to appropriate local protocols should be made.
An EMT-Basic/Plus performs Assessments and Treatments as listed for EMT-Basics. In addition EMT Basics/Plus also:

### Assessments

- Establish IV Access
- Obtain Venous Blood Samples
- Administer IV Medications
- Administer Atomized Medications

### Treatments

- See Note

### Medications

- See Note

- Dextrose
- Naloxone

- Is Patient in Extremis or Arrest
  - Yes
    - Administer any Medication under direct, on-scene supervision of an EMT Intermediate or Paramedic

**Note:** Many of the advanced practices listed above may have specific restrictions or may require additional training and/or orders from On-line Medical Control. Specific reference to appropriate local protocols should be made.
Standing Orders
EMT-Intermediates (I)

An EMT-Intermediate performs Assessments and Treatments as listed for EMT-Basics and Basics/Plus. In addition EMT-Intermediates also:

**Assessments**
- Interprets Cardiac/ECG 3-Lead Rhythms
- Assess Patient Fluid Balance and Shock Status
- Expanded Physical Exams: Rapid Trauma/Medical, Focused Trauma/Medical
- Expanded Detailed and On-going Patient Exams

**Treatments See Note**
- Advanced Airway including Endotracheal Intubation
- Removal of FBAO Under Direct Laryngoscopy
- Cardiac Defibrillation
- Cardiac Transcutaneous Pacing
- Establish IO Access

**Medications See Note**
- Due to the number of allowed medications, EMT-Intermediates are referred to their local Medication Protocols

Is Patient in Extremis or Arrest
- Yes
  - Administer any Medication under direct, on-scene supervision of an EMT Paramedic

**Note:** Many of the advanced practices listed above may have specific restrictions or may require additional training and/or orders from On-line Medical Control. Specific reference to appropriate local protocols should be made.
EMT-Paramedics complete patient assessments, provide patient treatments and administer patient medications as listed for EMT Intermediates, with a more comprehensive view of patient care. The expanded Scope-of-Paramedic-Practice is outlined in the Protocols for each individual Service. EMT Paramedics must contact On-line Medical Control to administer many of the drugs; as well as perform many of the procedures, and provide many of the treatments included within these Protocols.

**EMT-Paramedics performing duties under these protocols are expected to know and observe the On-line Medical Control requirements.**

Due to the large number of allowed assessments, treatments, procedures and medications, EMT-Paramedics are referred to their local Protocols and/or On-line Medical Control.
Refusal of Care

Determine:
- Mental Status
- History of Illness
- Mechanism of Injury

1 Alert ?
   Yes
   Refuses Care ?
     Yes
     Comprehends Situation ?
       Yes
       Complete Pt Assessment
       Treat & Transport
       Consult with & Approval from On-line Medical Control is required to process refusal.
       Ensure the following information is provided:
       - The release is against medical advise
       - The release applies to this incident only
       - EMS should be requested again if needed
     No
     Complete Pt Assessment
     Treat and transport
   No
   Complete Pt Assessment
   Treat & Transport

2 Documemt:
   - Any statements made by the patient or responsible party indicating they understand your instructions and the potential consequences of refusing care.
   - LOC, awareness of self, others, time & place.
   - Completeprehospital chart.

3 Patient Instruction Sheets
   - Animal Bite
   - C-Spine Injury
   - Head Injury
   - Post Hypoglycemia
   - Post Seizure
   - Post Syncopy
   - Wound

1 "Alert" implies the patient is conscious, oriented to person, place, and time. Glasgow Coma Scale = 15.
2 Ensure patient understands these consequences.
3 Witnesses should not be EMS personnel, and must sign the release.
START Triage

Able to walk?
- Yes → Minor
- No → Breathing
  - No → Position airway
  - Yes → Patient maintains airway?
    - No → Deceased
    - Yes → Immediate

Breathing?
- No → Perfusion
  - Radial pulse present?
    - No → Capillary refill?
      - > 2 sec → Control Bleeding
      - < 2 sec → Mental Status
    - Yes → Immediate
- Yes → Immediate

Resp rate?
- over 30/min → Immediate
- under 30/min → Perfusion

Perfusion
- Control Bleeding
  - Immediate

Mental Status
- follows simple commands?
  - No → Immediate
  - Yes → Delayed

Adapted from START Triage, originally developed by:
Hoag Memorial Hospital Presbyterian and
Newport Beach Fire Department

BLS Care

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Airway Management

Document:
- Respiratory Effort
- Lung Sounds
- SpO2, EtCO2
- Response to Treatment
- Skin Color
- Glasgow Coma Scale

BLS Care

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ALS Care

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1 COPD patients often use their Hypoxic Drive. In these cases, expect and accept SpO2 readings >85% and <90%. Lower concentrations of oxygen may be indicated yet never deprive a patient in respiratory distress of Oxygen.

2 IF RESPIRATORY EFFORT OR LEVEL OF DISTRESS CHANGES MOVE TO THE APPROPRIATE ASPECT OR ARM OF THIS PROTOCOL.
Airway - Opening

- BSI
- Scene Safe
- Mechanism
- Resources

C-Spine Precautions

Use Head-Tilt Chin-Lift to open Airway

Use Jaw-Thrust to open Airway

Assess Ventilations
Assess Oxygenation

Based on...
- Level of Consciousness
- Gag Reflex
- Facial Trauma

Select Adjunct

Oropharyngeal Airway (OPA)

Size...
Corner of Mouth to Angle of Jaw

Insert UPSIDE down to back of tongue

Rotate to follow airway curve and complete insertion

Nasopharyngeal Airway (NPA)

Size...
Nose to Ear Lobe

Lubricate

Insert along base of right nostril up to phlange

Resistance?

Yes
STOP! Try left nostril

No

Assess breathing
Assist/Provide Ventilations

Continue Assessment

Monitor...
- ABCs
- Vital Signs
- LOC
- Breath Sounds
- Respirator Status

Be prepared to assist/provide ventilations with BVM
Initiate CPR if needed

Act Allowed

Standing Order

FR B B+ I P

Yes

No

Act Allowed

Standing Order

FR B B+ I P

3.10_Opening Airway
Airway – Assisting Ventilation

- BSI
- Scene safe
- Mechanism
- Resources
- C-Spine

Open Airway

Breathing ?

Give two effective breaths

Pulse ?

Initiate BLS/CPR Protocol

Provide Ventilations using BVM and O2 at 15 lpm

Watch for...
- Rate appropriate for age
- Chest rise
- Improved Color
- LOC

Breathing Adequately ?

Provide O2 at 15 lpm using NRB

Monitor...
- ABCs
- LOC
- Vital Signs
- Respiratory Status

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Airway - Clearing

- BSI
- Scene Safe
- Mechanism
- Resources
- C-Spine

Suctioning Needed

Yes

**Oropharynx**

- Turn patient on side
- Sweep large debris

Pre-ventilate Patient

- Insert Suction tip
- Activate suctioning

Withdraw suction tip using back and forth motion

Ventilate Patient

Rinse/Clear suction tubing

**Newborn**

- Squeeze bulb
- Insert in mouth
- Suction

- Squeeze bulb
- Insert in each nostril
- Suction

Baby Delivered

Yes

**ET Tube or Tracheostomy**

Use Sterile Technique if possible

- Pre-ventilate Patient
- Detach Bag or Ventilator

Insert suction catheter until resistance is felt or patient coughs

- Activate suctioning
- Withdraw catheter

Ventilate Patient

Rinse/Clear suction catheter

ET/Trach Clear

No

No

BLS Care

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**Airway Obstruction**

- BSI
- Scene Safe
- Mechanism
- C-Spine

1. **Patient Conscious?**
   - Yes: **Patient Signs Choking**
   - No: **Severity of Obstruction**

2. **Severity of Obstruction**
   - Complete Obstruction
     - Open Airway
     - Attempt Ventilation
     - Using Laryngoscope remove object
     - Obstruction Cleared
       - Yes: Perform 5 sub-diaphragmatic thrusts
       - No: Obstruction Cleared
         - Yes: Consider Cricothyrotomy
         - No: Obstruction Cleared
   - Partial Obstruction
     - Administer Oxygen
     - Suction as needed
     - Sweep if visible
     - Encourage coughing
     - Loss of Consciousness
       - Yes: Pt in position of comfort
       - No: Obstruction Cleared
         - Yes: Consider Cricothyrotomy
         - No: Obstruction Cleared

**Notes:**
1. Chest thrusts for pregnant, obese, infant patients
2. Be prepared for patient to Vomit
KING LTS-D Airway

Scope-of-Practice

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- BSI
- Scene Safety
- Resources
- C-Spine

Indications:
- Inability to intubate patient who is in need of airway protection
- Difficulty with intubation when rapid control of the airway is essential
- May be particularly useful for patients with facial or cervical spine abnormalities
- Designated supraglottic airway for EMT-Basics

Contraindications:
- KING devices are sized based on patient height. If your patient is less than 4 feet tall you need to use a KING pediatric sized device.
- Cannot be used in patients with an intact gag reflex
- Should not be used in patients who have ingested a caustic substance
- Should not be used in patients with a known esophageal disease
- Should be used with caution in patients with broken teeth or dental work that may tear the balloons

Technique:
1. Initiate airway control per BLS protocols.
2. Select proper size KING airway: size 3 for 4'-5', size 4 for 5'-6' and size 5 for >6' tall patient.
3. Assemble equipment, check cuffs for leaks, lubricate distal tip and posterior aspect ONLY.
4. Suction airway as needed and pre-oxygenate patient if possible.
5. For a trauma patient have assistant maintain head in neutral position. For a medical patient the “sniffing position” is appropriate or slight hyperextension may be used to ease insertion.
6. Hold the KING in dominant hand at the connector. With other hand open mouth and lift chin.
7. Rotate the KING laterally so the blue index line is facing the corner of the mouth.
8. Introduce the tip and advance the KING behind the base of the tongue.
9. As tube passes the tongue rotate the KING back to midline so the blue index line is facing the chin.
10. Without excessive force advance the KING until base is aligned with teeth or gums.
11. Using syringe inflate cuffs with correct volume of air: size 3 – 50mL, size 4 – 70mL, size 5 – 80mL.
12. Attach BVM to KING and begin bagging patient. Simultaneously withdraw KING SLOWLY until ventilation is easy and free flowing (adequate tidal volume with minimal airway pressure).
13. Confirm placement by auscultation, chest movement, and EtCO2 per capnography protocol.
14. Monitor patient carefully for vomiting and possible aspiration.

Monitor:
- ABC’s
- Vital Signs
- Return of spontaneous respiration
- Need to extubate patient
Bites and Stings
For Snakebite see 4.45_Snakebite

- BSI
- Scene safe
- Mechanism
- Resources

Monitor
- ABCs
- Vital Signs

Observe for
- Local reactions
- Systemic reactions

Identify Bite/Sting

Animal / Human
Page 2

Marine
Page 2

Wasp / Bee

Remove stingers without squeezing venom sacs. Scrape with straight-edge.

Observe patient for allergic or anaphylactic reaction

Yes

Treat Patient per Allergic Reaction / Anaphylaxis Protocol and Provider Scope-of-Practice

Symptomatic Reaction

No

Treat & Transport

Spider / Scorpion

Document...
- Time of Exposure
- History of Exposures
- History of Reactions

Use ice for comfort and inflammatory response

Observe patient for allergic or anaphylactic reaction

Yes

Symptomatic Reaction

No

Bring captured / dead Spider / Scorpion with Patient

Contact On-line Medical Control

BLS Care

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4.05_BitesStings
Bites and Stings

Animal / Human

1. Wash wound with warm, soapy water
2. Control bleeding
3. Apply sterile dressing
4. **Document**...
   - Time of Exposure
   - History of Exposures
   - History of Reactions
5. **Animal Bite**
   - Yes: Contact appropriate authorities if animal may be rabid
   - No: Proceed to next step
6. **Symptomatic Reaction**
   - Yes: Treat Patient per Allergic Reaction / Anaphylaxis Protocol and Provider Scope-of-Practice
   - No: Proceed to next step
7. **Nematocysts**
   - Yes: Wash with sea water
   - No: Irrigate with alcohol or vinegar
8. **Fish bites or stings**
   - Yes: Irrigate with hot water
9. **Treat & Transport**

Marine

1. Remove Patient from water
2. Treat for drowning prn
3. To remove nematocysts...
   - Dust with flour, baking soda, talcum, shaving cream
   - Scrape with straight-edge
4. If present, remove stingers
5. Observe patient for allergic or anaphylactic reaction
6. **Symptomatic Reaction**
   - Yes: Treat Patient per Allergic Reaction / Anaphylaxis Protocol and Provider Scope-of-Practice
   - No: Proceed to next step
7. **Nematocysts**
   - Yes: Wash with sea water
   - No: Irrigate with alcohol or vinegar
8. **Fish bites or stings**
   - Yes: Irrigate with hot water
9. **Treat & Transport**
Burns

- **Stop the burn process**
  - **Evaluate degree of burn and % body surface area involved**
  - **Transport to the most appropriate facility**
  - **Consider pain control**

**Types of Burns:**
- **Thermal**
  - Remove from environment and extinguish fire
- **Chemical**
  - Brush off and/or dilute chemical without exposing rescuer. Consider need for HAZMAT team.
- **Electrical**
  - Make sure victim is de-energized and suspect internal injuries

**Parkland Formula:**
- The IV fluid required for the first 24 hours = 4 ml of NS X the patient's weight in kg X % body surface area burned.
- Give half of the total fluid within the first 8 hours of the burn. Give the second half over the next 16 hours.

1. Remove clothes, flood with water ONLY if flames or smoldering is present.
2. Consider Carbon Monoxide poisoning if victim was within a confined space.
   - If potential for CO poisoning exists administer Oxygen 100%.
3. If shock is present consider underlying causes.
4. Note: the patient's palm represents 1% of their BSA. Use this or ‘rule-of-nines’ as a reference.
5. Critical burn = 2nd degree >30% BSA, 3rd degree >10%, respiratory injury, involvement of face, hands, feet, or genitalia, circumferential burns, associated injuries, electrical or deep chemical burns, underlying medical history (cardiac, diabetes), age < 10 or > 50 years.
6. Start IVs within unburned areas if possible. Burned areas may be used if needed.
Drowning

1. Backboard patient in water
2. Begin ventilation
3. Remove victim from water
4. Transport ASAP

• ABCs
• CPR prn
• Oxygen NRB 15 lpm
• Assist ventilations, prn
• Intubate as needed
• SpO2, EtCO2
• Vital signs

Fall or diving accident?

Yes

- Suspect head and spinal injuries
- Full-Spinal Immobilization

No

IV NS TKO

Consider Sodium Bicarbonate

Monitor Cardiac Rhythm

TEMP?

< 35 C

See 4.40_Hypothermia protocol

> 35 C

- Monitor: ABCs, VS, SpO2, EtCO2
- Keep Patient Warm, remove wet clothing
- Support respiratory effort
- Notify receiving hospital ASAP

1. To be performed by a trained rescuer with appropriate equipment.
2. Ventilation should be initiated while the patient is being rescued.
3. All near-drowning victims should be examined by a physician.
4. Observe for Pulmonary Edema.

Patient Care

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Sodium Bicarbonate

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Document:
- Time Submerged
- Seizure Activity
- Water temperature
- Pregnancy
- SpO2, EtCO2
- Cardiac Rhythm
- Vital Signs
Hazardous Materials

- BSI
- Scene Safe
- Resources

### Indications:
- Responding to reported and/or known hazardous material incident
- Vapor clouds, noxious odors, fire, smoke, leaking substances, frost lines on cylinders, sick personnel or bystanders, dead or distressed animals are present on or near scene

### Precautions:
- If you can smell a noxious odor you are too close
- Use a safe approach. DON’T become a victim of the incident
- Select a location that is uphill and upwind of the incident
- Observe from a distance (use binoculars). Use the “thumb” technique for estimating distance
- If you are first on scene assume incident command and request a hazardous material response, turn over command to fire when they arrive
- If fire is first on scene, report to the incident commander
- Realize that you may have to withdraw, leaving patients to be decontaminated
- Without proper training and equipment, do not become involved in decontamination activities.

### Procedure:
- Establish EMS operations in the COLD zone
- Report to the incident commander
- Be prepared to make a hasty retreat (park appropriately, don’t get blocked)
- After scene size-up, provide the receiving hospital with the information listed in the Document box shown above.
- Let the decontamination team carry out assessment, treatment and decontamination. Patients should only be brought to the EMS unit after decontamination.
- Use On-line Medical Control and Poison Control to direct your treatment plan.

### Document:
- Location of the incident
- Name of chemicals/material involved
- Number of injured/contaminated patients
- Triage information regarding injured patients
- Extent patients will be decontaminated in the field
- ETA for first arriving patient at hospital

### BLS Care

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High Altitude Illness

- BSI
- Scene Safe
- Resources

- ABCs
  - Oxygen NRB 15 lpm

- Position of Comfort
  - Vital signs
  - Suction prn
  - Assist ventilations prn

Monitor Cardiac Rhythm

Descend in Altitude

IV NS Saline Lock or TKO

- Monitor: ABCs, Vital signs, SpO2, Cardiac Rhythm, Respiratory Status
- Transport

Notes:
1 Be prepared to evacuate patient via stretcher

BLS Care

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Document:
- History of recent travel
- History of DVT
- Cardiac History
- Respiratory History
Hyperthermia

- ABCs
- Oxygen via NC 2-6 lpm
- Assist ventilations as needed

- Move patient to a cool environment
- Detailed Assessment - Vital Signs

If Pt temp >104°F/40°C:
- Begin active cooling…
  - Remove clothes
  - Use damp sheets
  - Use cold packs
  - Don’t block natural evaporation

IV NS Fluid challenge…
- 20 mL/KG
- Monitor BP

If BGL <60 mg/dl:
- Yes
  - Treat per 9.18_Dextrose protocol
- No

Monitor:
- ABCs
- Vital signs
- LOC
- Cardiac Rhythm
- Signs of Heat exhaustion/stroke
- Anticipate Potential Seizure Activity

BLS Care with IV Therapy

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Document:
- Detailed Assessment
- Neurological Status
- Glasgow Coma Scale
- Temperature
- Clinical Response to Treatment
- IV Fluid Amount
- Cardiac Rhythm
- SpO2, Vital Signs
Hypothermia/Frostbite

Frostbite see page 2

- BSI
- Scene Safe
- Mechanism
- Resources
- C-Spine

- ABCs
- Vital Signs

- O2 NC 4-6 lpm
- Cardiac Monitor

- Move patient to ambulance ASAP
- Remove wet clothing
- Wrap in warm blankets
- Avoid rough movement

In ambulance
- IV NS TKO
- Warm NS if possible

- BGL <60 mg/dl
- Narcotics suspected

Start CPR
- Defibrillate one time only
- One round of ACLS drugs per protocol
- Delay intubation if possible

Document:
- ABCs, LOC, VS
- Cardiac Rhythm
- Exposure conditions
- Duration of exposure
- Mechanism of Injury

Per protocol, neither Dextrose nor Naloxone are EMT-B/IV Standing Order meds

Note

**BLS Care**

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### Hypothermia/Frostbite

#### Hypothermia see page 1

- **BSI**
- **Scene Safe**
- **Mechanism**
- **Resources**
- **C-Spine**

- **ABCs**
- **Vital Signs**

- **O2 NC 4-6 lpm**
- **Cardiac Monitor**

- **Move patient to ambulance ASAP**
- **Remove wet clothing**
- **Wrap in warm blankets**
- **Avoid rough movement**

**In ambulance**
- **IV NS TKO**
- **Warm NS if possible**

- **Dress injured areas in dry, clean cloth**
- **Protect from pressure, trauma or friction**
- **Do NOT rub, do NOT break blisters**
- **Elevate injured limbs**

- **Consider pain medication**

- **Notify receiving hospital ASAP**
- **Monitor: ABCs, Cardiac Rhythm, VS, Rewarming progress**
- **Support Respiratory Effort**
- **Transport ASAP**

**Note:**
1. Do not allow active rewarming of injured areas if re-freezing is possible. Thawing is extremely painful and is best accomplished at the receiving hospital. Even long extrications are best accomplished with the injured area still frozen.

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### BLS Care

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**Document:**
- **ABCs, LOC, VS**
- **Cardiac Rhythm**
- **Exposure conditions**
- **Duration of exposure**
- **Mechanism of Injury**
**Snakebite**

- **Intubation**
- **Snakebite**
  - **ABCs**
  - **Vital Signs**
  - **Transport ASAP**
  - **Detailed Assessment**

- **Resp distress?**
  - **Yes**
  - Oxygen 100% Assist Ventilations
  - **Consider Intubation**
  - **Remove rings, bracelets, bands**
  - **Splint wound as for a fracture**
  - **Consider a light constricting band**

- **No**
  - **Keep wound below level of heart**
  - **Keep patient calm and quiet**

- **NO Ice or Refrigerants**
  - **NO incisions or attempts to suck out poison**
  - **Treat associated injuries**

- **Notify receiving facility ASAP**
  - **Monitor:** ABCs, LOC, Vital signs, Cardiac Rhythm, SpO2, EtCO2, Respiratory Status, Neurological Status

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**BLS Care**

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**Standing Order**

- **BSI**
- **Scene Safe**
- **Resources**
- **C-Spine**

**Document:**
- Type of snake
- Time of bite
- Bystander first aid given
- Signs and Symptoms
Abdominal Pain
Not related to pregnancy or trauma

- General Impression
- ABCs
- Mental Status
- Vital Signs
- Oxygen NC 2-4 lpm

Detailed Assessment:
- Abdominal Exam
- Consider cardiac monitor

Allow patient to assume position of comfort

Nothing by Mouth (NPO)

If BP ≤ 90 mmHg:
- Establish IV NS
- 14-16 gauge
- 20 mL/kg bolus
- Titrate BP to 90 mmHg

If BP > 90 mmHg:
- Establish IV NS TKO

Monitor:
- ABCs
- Vital Signs
- LOC

Transport

1 Abdominal Exam: Note pain (nature, duration, intensity on 1-10 scale, radiation). Observe for palpable mass, always palpate with care. Auscultate prior to palpation. Note associated signs & symptoms; nausea, vomiting, bowel tones, guarding, rebound tenderness, distention. History: previous episodes, last meal, current medications, last menstrual period, possibility of pregnancy.

2 Be aware that ischemic cardiac pain can present as abdominal pain especially in older patients.

BLS Care

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Document:
- Abdominal Signs/SX
- Chest Pain?
- Cardiac Rhythm if Obtained
- Vital Signs
- Last Oral Intake
- Emesis/Stool
**Allergic Reaction/Anaphylaxis**

- **ABCs**
- O2 NRB 15 lpm
- Vital Signs
- Transport ASAP

- Position of Comfort
- Rapid Assessment: S/S Anaphylaxis vs. Anxiety Attack

**S/S Anaphylaxis BP<90**

- Yes
  - **Start IV NS**
  - 14-16 gauge
  - 20mL/kg bolus

- No

**S/S Respiratory Distress**

- Yes
  - Consider Albuterol
  - see 9.09_Albuterol protocol

- No

**Start IV NS TKO**

- **S/S Allergic Reaction**

- Yes
  - Consider Diphenhydramine
  - see 9.24_Diphenhydramine protocol

- No

**Monitor:**
- ABCs, Vital Signs
- LOC, SpO2, EtCO2
- Cardiac Rhythm
- S/S Reaction/Anaphylaxis
- Respiratory Status

**Transport ASAP**

**Signs & Symptoms of Anaphylaxis:**
- S.O.B., wheezing, hoarseness, hives, itching, flushing, chest tightness, nausea, abdominal cramps, generalized or local edema (especially common within oropharynx, lips, tongue, face).

**ALS/BLS Care**

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- **Administer Epinephrine**
  - per 9.30_Epinephrine protocol

- **Consider Diphenhydramine**
  - see 9.24_Diphenhydramine protocol

- **Consider Albuterol**
  - see 9.09_Albuterol protocol

- **Administer Epinephrine**
  - per 9.30_Epinephrine protocol

**Document:**
- S/S Allergic Reaction
- S/S Anaphylaxis
- History of exposures
- History this exposure

1 Two (2) dilution’s of epinephrine are available: 1:1,000 is appropriate for SQ or IM injections, 1:10,000 is for IV or ETT use. Be sure to give the correct dose and dilution.

2 Epinephrine: pediatric dose = 0.01 mg/kg 1:1,000 SQ/I

3 Scope-of-Practice limits EMT-Basics to the use of an Epinephrine Auto-injector

4 Diphenhydramine (Benadryl): pediatric dose = 2 mg/kg IM or slow IV.
Detailed Assessment: Glasgow Coma Scale. Check for: odor on breath, needle tracks, constricted pupils, and evidence of trauma.

Observe environment closely for signs of potential overdose.
Be prepared to restrain combative patient.

- O2 NRB 15 lpm
- Consider Intubation, prn
- Assist Ventilations, prn
- Consider Restraint, prn

Transport ASAP
Detailed Assessment
Monitor Cardiac Rhythm
Do NOT leave Pt unattended

Possible causes:
- Head Injury
- Hypoxia
- Diabetes
- Overdose
- Hypertension
- Hypothermia
- Shock

Document:
- Glasgow Coma Scale
- Clinical Response to Dextrose or Narcan
- Blood Glucose Level
- SpO2
- IV Fluid Totals
- Medical History
- Onset of S/S
- Time of onset

Glasgow Coma Scale

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1 Detailed Assessment: Glasgow Coma Scale. Check for: odor on breath, needle tracks, constricted pupils, and evidence of trauma.
2 Observe environment closely for signs of potential overdose.
3 Be prepared to restrain combative patient.
Cardiac Arrest

- BSI
- Scene Safety
- Resources
- Mechanism
- C-Spine

1. Apneic Unresponsive Pulseless
   - Yes
   - Transfer to firm surface
   - Initiate CPR per BLS protocol
     - 2
     - 3
   - Attach AED or Monitor/Defibrillator
   - Follow AED instructions or Treat presenting rhythm
     - Yes
     - See 5.35_Coma protocol
     - See 3.15_Airway protocol
     - See 5.70_Shock protocol
     - No
     - See 5.26_ST Elevation MI protocol or
     - See 5.45_Dysrhythmias protocol

   - Package for transport on backboard
   - Transport ASAP

BLS Care

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Document:
- Cardiac History
- History of this event
- Surroundings (drugs, etc.)
- Environment (temperature).

Notes:
1. Be sure to recheck patient status even if CPR is already in progress upon arrival.
2. Before initiating CPR consider 2.10_Death-in-the-Field protocol
3. Pediatric resuscitation is covered in 7.20_Neonatal and 7.25_Infant/Child Resuscitation
Chest Pain

- BSI
- Scene Safe
- Resources

- General Impression
- ABCs
- Vital signs
- Lung Sounds
- Related Signs & Symptoms

- Reassure Patient
- Position of Comfort
- Obtain Medical History

Obtain 3-lead ECG

Obtain 12-lead ECG

IV NS Saline Lock/TKO minimum 18 gauge

Consider Aspirin per (9.03) protocol
Consider Nitroglycerine per (9.72) protocol

Consider Morphine per (9.66) protocol

Consider Lidocaine per (9.51) protocol

BLS Care with IV Therapy

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ALS Care

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Acute Myocardial Infarction

Anteroseptal Wall:
- ST elevation in leads V1-V2

Anterior Wall:
- ST elevation in leads V3-V4

Inferior Wall:
- ST elevation in leads II, III, aVF

Lateral Wall:
- ST elevation in leads I, aVL, V5-6

Posterior Wall:
- ST depression and tall, broad (>0.04 sec) R wave in leads V1 and V2 (reciprocal changes)

Document:
- ABCs
- Medical History
- Signs & Symptoms
- ECG 3/12-lead
- SpO2, VS, EtCO2
- Color, Diaphoresis
- Lung Sounds

Yes

Treat per 5.26_STEMI protocol

No

Transport Monitor: ABCs, VS, ECG

Code 3 Return Monitor: ABCs, VS, ECG

1 With inferior wall MI rule-out Right Ventricular MI with V4R lead ECG
2 Nitroglycerin SL sublingual is contraindicated if systolic BP < 90 mmHg.
3 Morphine is indicated for continuing pain and acute pulmonary edema.
Childbirth – Page 1

**History & Exam:** due date, previous births, prenatal care, edema, multiple births, previous c-section, medical history, vital signs, contractions: duration & frequency, water broken, meconium, NO Digital Vaginal Exams

**BLS Care**

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- ABCs
- Vital Signs
- Transport ASAP

- O2 NC 2-4 lpm
- IV NS 18g TKO or Lock

- Active labor?
  - No
  - Yes: Bleeding or Abnormal Pain
    - Yes: Treat per 5.70 Shock protocol
    - No: Put patient in Left Lateral Recumbent position

- Crowning?
  - Yes: Prepare for delivery
  - No: Guide & control delivery

- Abnormal presentation?
  - Yes: Contact Medical Control
  - No: Guide & control delivery

- Cord around颈?
  - Yes: Slip cord over head & shoulder
  - No: Bulb suction mouth then nose

- Baby attempts to breathe?
  - Yes: Do NOT force delivery
  - No: Head delivers

- Breech (buttocks) Presentation
  - Support legs and trunk
  - Deliver arms before the head
  - Gently rotate baby to deliver shoulders vertically
  - Gently rotate baby to deliver head vertically

- Foot hand, cord, face?
  - Yes: Trendelenburg position with hips elevated
  - No: Prevent cord compression with gloved hand

- Bulb suction mouth then nose

- Guide head upward to deliver lower shoulder, then downward to deliver upper shoulder.

- Guide & control the delivery of the trunk and legs

- Head delivers

- Bulb suction mouth then nose
Keep infant at level of perineum

Thick meconium in airway

Yes

Using laryngoscope and ET tube suction trachea to remove meconium

No

• Completely dry infant
• Cover infant’s head
• Continue suctioning prn

Determine 1 min APGAR score

APGAR

< 8
See 7.20_Neonatal Resuscitation protocol

No

Clamp cord 4” from navel with 1st clamp, 2nd clamp at 6”, cut between clamps

Wrap baby in dry blanket and place infant on mother’s chest to conserve heat.

Bleeding

> 250mL

Yes

• 2nd IV NS 14-16g
• 20 mL/kg fluid bolus
• Massage uterus gently

See 5.70_Shock protocol

No

• Transport ASAP
• Monitor: ABCs, VS, LOC, ECG
• Keep Baby Warm
• Do 5 and 10 min APGAR prn
• Don’t wait for or force delivery of placenta

1 Crowning may first appear during a contraction. Look for crowning between and during contractions.
2 Deliver baby on the scene ONLY if delivery is eminent. Sterile procedures if possible.
3 If the baby’s head does not deliver and the baby begins to breath with its face pressed against the vaginal wall, place a gloved hand in the vagina with the palm toward the baby’s face. Form a "V" with the index and middle finger on either side of the infant's nose and push the vaginal wall away from the infant’s face to allow unrestricted respiration.
4 Note exact time of birth.

Apgar Score

<table>
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<tr>
<th>Appearance</th>
<th>Pulse</th>
<th>Grimace</th>
<th>Activity</th>
<th>Respiration</th>
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<tr>
<td>Blue, pale</td>
<td>Absent</td>
<td>No response</td>
<td>Limp</td>
<td>Absent</td>
</tr>
<tr>
<td>&lt;100</td>
<td>&gt;100</td>
<td>Grimace</td>
<td>Some flexion</td>
<td>Slow, irregular</td>
</tr>
<tr>
<td>Body pink</td>
<td>Cough, sneeze</td>
<td>Completely pink</td>
<td>Active</td>
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Document:
- Time of Birth
- APGAR at 1 Min and 5 Min
- Time of Placental Delivery
- Estimated Fluid and Blood Loss
- Complications if any
- Care and Supportive Measures
- Total IV Fluids Infused
- Oxygen and Other Medications
- Communication with Medical Control
- Clinical Assessment and VS

5.30_Childbirth
Finding out when the patient first experienced signs and symptoms of a stroke is critical in determining if the patient is a candidate for thrombolytic therapy. Also, a stroke patient may be aphasic (unable to speak) but still be completely alert and aware of what is happening—talk to your patient.
Hypertension
Not related to Pregnancy or Head Injury

**Monitor:**
- ABCs, VS, SpO2
- LOC, ECG
- Transport ASAP

**IV Saline Lock or NS TKO**

**Oxygen NC 2-4 lpm**

**Confirm HTN:**
- Correct cuff size
- Different provider
- Multiple readings

**BP Diastolic >120**

**Administer Nitroglycerine per 9.72_Nitro protocol**

**Consider Morphine per 9.66_Morphine protocol**

**Consider Furosemide per 9.33_Furosemide protocol**

**Document:**
- ABCs, VS, LOC, ECG
- Associated S/S
- Other issues/causes

**Hypertensive Crisis:**
- Confirmed Diastolic BP > 120 mmHg

**With Associated Symptoms:**
- History of HTN, medication errors
- Headache, dizziness, nausea, confusion
- Visual impairment

**Other possible causes or issues:**
- Chest Pain, pulmonary edema, head injury
- Neck stiffness, pre-eclampsia
- Drug use: amphetamines, cocaine

**Scope-of-Practice**

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Poison and Overdose
General Management

1. Observe environment closely for signs of potential overdose or accidental ingestion.

2. Water is contraindicated for these contaminants: phosphorous, sodium metal, phenol, hydrochloric acid, sulfuric acid, dry lime. Contact HAZMAT or On-line Medical Control.

- General Impression
- ABCs
- Vital Signs
- Protect airway, assist breathing if necessary

- Type of ingestion, poisoning
- Quantity ingested, when
- Treatment
- Response to Treatment
- ABCs, Vital Signs, SpO2
- Cardiac Rhythm
- Conversations with: On-line Medical Control and/or Poison Control Center

- O2 NC 2-4 lpm or NRB 15 lpm
- Watch for LOC changes
- Watch for vomiting

- IV Saline lock or NS TKO
- Determine BGL, treat per protocol

- Monitor cardiac rhythm

- Consider Naloxone per 9.69_Naloxone
- Consider Sodium Bicarb per 9.87_SodiumBicarb

- BSI
- Scene Safety
- Mechanism
- Resources

- Protect Rescuers
- Remove Clothing
- Remove any Dry chemical
- Remove rings, bracelets, bands

- Decontaminate with running water
- Check eyes and flush with water
- Assess/treat any other injuries
- Dry dressings on burns
- Protect from hypothermia

- Evaluate for systemic response
- Consult On-line Medical Control
- Consult Poison Control Center

- Monitor: ABCs, VS, LOC, ECG
- Watch for: seizure, vomiting, respiratory/cardiac arrest
- Transport ASAP

1. Consider HAZMAT

Scope-of-Practice

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Contact On-line Medical Control

1. Observe environment closely for signs of potential overdose or accidental ingestion.
2. Water is contraindicated for these contaminants: phosphorous, sodium metal, phenol, hydrochloric acid, sulfuric acid, dry lime. Contact HAZMAT or On-line Medical Control.
Respiratory Distress

**Scope-of-Practice**

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**Document:**
- Respiratory Effort/Fatigue
- Lung Sounds
- S/S of Allergic Reaction
- Presence of FBAO
- Evidence of Trauma
- Recent Travel/Surgery/Confinement

**Documents:**
- Respiratory Effort/Fatigue
- Lung Sounds
- S/S of Allergic Reaction
- Presence of FBAO
- Evidence of Trauma
- Recent Travel/Surgery/Confinement

**Signs and Symptoms of**
- Asthma
- Pulmonary Edema
- COPD
- Pneumothorax

- BSI
- Scene Safety
- Mechanism
- Resources

- General Impression
- ABCs, LOC
- O2 based on condition
- Vital Signs
- Position of Comfort
- Transport ASAP

**Asthma**

- IV Saline Lock or NS TKO
  - Monitor ECG if Pt > 40 y/o
  - Albuterol Neb see 9.09 protocol
  - Consider Epinephrine see 9.30 protocol
  - Consider Methylprednisolone see 9.60 protocol

**Pulmonary Edema**

- IV Saline Lock or NS TKO
  - Monitor ECG if Pt > 40 y/o
  - Nitroglycerin see 9.72 protocol
  - Consider Furosemide see 9.33 protocol
  - Consider Morphine see 9.66 protocol

**COPD**

- IV Saline Lock or NS TKO
  - Monitor ECG if Pt > 40 y/o
  - Albuterol Neb see 9.09 protocol
  - Consider Methylprednisolone see 9.60 protocol

**Pneumothorax**

- Observe for Signs of Tension
  - Consider Decompression

**Notes:**

1. EMT-Basics may assist patient with their EpiPen under direct verbal orders from On-line Medical Control.
2. EMT-Intermediates may administer these meds under direct verbal orders from On-line Medical Control.

5.60_RespDistress
Seizures

- ABCs
- Consider Nasopharyngeal Airway
- Oxygen NC 2-4 lpm
- C-Spine precautions as needed
- Vital Signs at first opportunity
- Suction as needed

- Protect patient from injury during and after seizure.
- Place in lateral recumbent position if trauma absent.
- Don’t force anything into patient’s mouth.

Blood Sugar

- < 60 mg/dl
  - Start IV NS TKO or Saline Lock
  - Treat per 9.18_Dextrose protocol

- > 60 mg/dl

Status seizure

- Yes
  - Start IV NS TKO or Saline Lock
  - Treat per 9.21_Diazepam protocol

- No

Narcotic toxicity

- Yes
  - Start IV NS TKO or Saline Lock
  - Treat per 9.69_Naloxone protocol

- No

Pregnant

- Yes
  - BP >160 Systolic
  - Treat per 9.54_MagSulfate protocol

- No
  - BP <160 Systolic

Monitor Cardiac Rhythm

- Monitor: ABCs, VS, ECG, LOC
- Seizure and Respiratory Status
- Transport ASAP

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Document:
- ABCs, VS, ECG
- Seizure history
- Activity During Seizure
- Duration of Seizure
- Duration of Postictal Phase
- Incontinence
- Oral Trauma
- Air/patient temperature
- ETOH use/withdrawal
- Drug use/abuse
Shock – Medical

- BSI
- Scene Safety
- Mechanism
- Resources

- General Impression
- ABCs, LOC
- O2 NRB 15 lpm
- Vital Signs
- Rule-out/Treat Trauma prn
- Protect from Heat Loss

Signs & Symptoms of Shock:
- Pulse > 120, Systolic BP < 90
- Skin moist/cool, Pale color
- Confusion, Dizziness, Syncope
- Thirst, Bloody stool/emesis
- Chest pain, Edema, JVD
- Itching, Rash, Fever, Diarrhea

Scope-of-Practice

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Contact On-line Medical Control

Document:
- ABCs, Vital Signs, LOC
- Quality of Pulses
- Respiratory Effort, Lung Sounds
- Signs & Symptoms of Shock
- Cardiac Rhythm

5.70_ShockMedical
Vaginal Bleeding

- BSI
- Scene Safety
- Mechanism
- Resources

- General Impression
  - ABCs, LOC
  - Oxygen NC 2-4 lpm
  - Vital Signs

- Estimate blood loss
  - Vaginal exam is NEVER indicated
  - Consider appropriate destination

BP <90 mmHg

- Yes
  - IV NS 14-16 gauge 20 mL/kg fluid bolus
  - Patient supine
  - Legs elevated
  - Keep patient warm

- No

Pregnancy

- Yes
  - IV NS 14-16 gauge 20 mL/kg fluid bolus
  - Left Lateral Recumbent position
  - Keep patient warm
  - Code 3 Return if bleeding severe

- No

Postpartum

- Yes
  - IV NS 14-16 gauge 20 mL/kg fluid bolus
  - Patient supine
  - Legs elevated
  - Keep patient warm
  - Provide fundal massage

- No

- Keep Patient Warm
- Monitor ABCs, VS, LOC
- Transport ASAP

Possible causes:
- Miscarriage
- Trauma
- Infection
- Postpartum
- Placenta previa
- Abruptio placentae
- Ectopic pregnancy
- Elective Abortion

Document:
- Estimated Blood Loss
- Presence of Tissue
- Last Menstrual Period
- Possibility of Pregnancy
- Possibility of Assault
- Gravida/Para

1 Collect tissue fragments if present.
2 If possibility of assault exists maintain chain of evidence and, if possible, have a female attendant in the patient care area.
3 Gravida/Para: If pregnant, record the number of times the patient states she has been pregnant (Gravida), including this pregnancy and the number of viable births (Para) she has delivered.
Vomiting and Diarrhea

- Keep Patient Warm
- Monitor ABCs, VS, LOC
- Transport ASAP

General Impression
- ABCs, LOC
- Oxygen NC 2-4 lpm
- Vital Signs

Position on side if vomiting otherwise position of comfort
- Nothing by mouth

BP <90 mmHg
- IV NS 14-16 gauge 20 mL/kg fluid bolus
- Patient supine
- Legs elevated
- Keep patient warm

Consider Approved Antiemetic
- Keep Patient Warm
- Monitor ABCs, VS, LOC
- Transport ASAP

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Document:
- Onset of symptoms
- Presence of blood in emesis or stool
- Abdominal tenderness, rigidity, guarding
- Cardiac history
- History of illness

1 of 15.85_VomitingDiarrhea
Abdominal Injury

- BSI
- Scene Safety
- Mechanism
- Resources
- C-Spine

- General Impression
  - ABC’s, LOC
  - Oxygen NC 2-4 lpm
  - Frequent Vital Signs
  - Prepare for immediate transport

Control any life threatening airway, breathing, bleeding problems first

Establish IV access, NS TKO 14-16 gauge, 2nd line if MOI significant

Penetrating Trauma
- Yes
  - Cover wounds and viscera with saline moistened gauze dressings
  - Do Not attempt to repack exposed viscera
  - Code-3-Return is indicated

- No

BP <90mmHg
- Yes
  - Administer fluid bolus 20 mL/kg
  - Repeat as needed
  - Code-3-Return is indicated

- No

• Monitor: ABCs, LOC, VS, Distal PMS
• Transport ASAP

Scope-of-Practice

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Standing Order

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Document:
- Mechanism of Injury
- Time of Injury
- Last Meal

Penetrating Trauma
- Weapon / Projectile
- Trajectory

Blunt Trauma
- Condition of Vehicle
- Speed / Ejection
- Airbag Deployment
- Restraints / Helmets Used
Amputation

- ABC's
  - Oxygen via NRB (SpO2 > 90%)
  - Prepare for immediate transport
  - Frequent Vital Signs

Active Bleeding?

Yes → Control bleeding with direct pressure and/or pressure points

No → Start large-bore IV NS TKO or as needed

Bleeding controlled?

No → Consider Tourniquet

BP? ≤ 90 mmHg → Treat per 6.35_Shock Trauma protocol

> 90 mmHg → Stump: cover with a moist sterile dressing, covered by a dry dressing.

Severed portion: wrap in moist, sterile dressing and place in plastic bag. Place plastic bag on ice.

Yes → Consider approved Narcotic Analgesic

No → Obtain History

Transport ASAP Keep Patient Warm

1. Administer higher concentrations if needed. Use a nonrebreather mask if active bleeding is present or if the original blood loss was significant.
2. Use pressure point proximal to site if direct pressure does not control the bleeding.
3. A tourniquet may be indicated.
4. Keep severed part moist. Do not allow to soak in a solution.
5. If transport delayed or otherwise extensive (entrapped patient, etc.), consider air transport and/or transporting severed part before patient, to allow early examination and surgical preparation for reimplantation.
7. Do not delay transport at any time in this protocol.
Chest Injury

- BSI
- Scene Safety
- Mechanism
- Resources
- C-Spine

- General Impression
- C-Spine Precautions, prn
- ABC’s, LOC, VS
- Oxygen NRB 15 ipm
- Support Respiration prn
- Control exsanguinating hemorrhage
- Prepare for immediate transport

- Neurological Assessment
- Rapid Trauma Assessment
- Highest priority injuries first

Penetrating Trauma

Yes

- Code-3-Return
- Stabilize enroute

No

IV NS 14-16g TKO 2nd Line prn

Flail Chest

Yes

- Splint with bulky dressings
- Sternal pressure may help

No

P2

Note:
1 Scene times in cases of traumatic injury should be 10 minutes or less if possible.
Chest Injury

- Monitor: ABCs, LOC, VS, Respiratory Effort
- Notify Receiving ED
- Transport ASAP

P2

BP?

- < 90 mmHg
- Yes: Tension Pneumo
  - Yes: Open occlusive dressings
  - Consider Chest Decompression
  - No: Pericardial Tamponade
    - Yes: Consider Cautious Fluid Bolus 10 mL/kg
    - No: Cardiac Contusion
      - Yes: Administer Fluid Bolus 20 mL/kg
      - No: Administer Fluid Bolus 20 mL/kg

JVD?

- No: Monitor Cardiac/ECG Rhythm
- Yes: Treat Dysrhythmias per protocol

Administer Fluid Bolus 20 mL/kg

Impaled Objects

- Immobilize
- Monitor: ABCs, LOC, VS, Respiratory Effort
- Notify Receiving ED
- Transport ASAP

Note:
2 S/S of Tension Pneumothorax: diminished breath sounds, diminished compliance, severe dyspnea.
3 S/S of Pericardial Tamponade: decreasing BP, narrowing pulse pressure, muffled heart sounds.
4 S/S of Cardiac Contusion: chest pain, associated injuries, sinus tachycardia, atria fibrillation and/or flutter, premature atrial contractions.
Extremity Injury

- BSI
- Scene Safety
- Mechanism
- Resources
- C-Spine
  - General Impression
  - ABC's, LOC
  - Oxygen NC 2-4 lpm
  - Frequent Vital Signs
  - Prepare for immediate transport

- C-Spine precautions prn
- Rapid Trauma Assessment
- Highest priority injuries first

Unstable Patient

Yes --> Splint injuries by securing patient to long spine board

Consider Code-3-Return

No --> Observe for:
  - DCAP-BTLS
  - Distal PMS

Consider IV Access and pain management

Apply sterile dressings to open wounds

- Splint/Apply traction as appropriate
- Immobilize joints above and below injury

Loss of distal PMS

Yes --> If possible reduce fracture to regain distal pulses

No --> Confirm distal PMS
  - Elevate simple fractures
  - Apply padded ice packs

- Monitor: ABCs, LOC, VS, Distal PMS
- Transport ASAP

1 Don’t be distracted by a “gory” extremity injury and miss a life threatening problem—respiratory failure or pneumothorax.
Face / Neck Injury

- BSI
- Scene Safety
- Mechanism
- Resources
- C-Spine

- General Impression
- ABC's, LOC
- Oxygen NRB 15 lpm if possible
- Frequent Vital Signs
- Prepare for immediate transport

- Manual C-Spine precautions
- Rapid Trauma Assessment
- Highest priority injuries first

1. Laryngeal Trauma
   - Yes: Code-3-Return Treat enroute
   - Intubation indicated for arrest only
   - No

2. Airway Mask Seals
   - No: Consider Intubation or Needle Cricothyrotomy
   - Yes

   • Open airway
   • Clear large debris
   • Suction, prn

3. Severe Bleeding
   - Yes: Consider Intubation
   - No

   • Oxygen 100%
   • Support respirations
   • Keep airway clear

1. Don’t be distracted by a “gory” scalp or facial injury and miss a life threatening problem—respiratory failure or pneumothorax.
2. Use appropriate technique—jaw thrust, mandible/chin lift with appropriate adjunct.
   • Airway obstruction is the number one cause of death with facial trauma—meticulous airway management is mandatory.
   • Don’t be distracted by contact lenses in the field—leave them in place.
Face / Neck Injury

- Monitor: ABCs, LOC, VS, Respiratory status
- Transport ASAP

P1

IV NS TKO
14-16 gauge
x2 if injuries severe

Immobilize Cervical Spine

- Complete Neuro exam
- Cover/protect eyes

Don’t block drainage from ears or nose

Preserve avulsed teeth in saline soaked gauze

Treat other injuries as appropriate

- Monitor: ABCs, LOC, VS, Respiratory status
- Transport ASAP
Head Injury

Monitor:
- ABCs, VS, GCS, LOC
- Respiratory Status, EtCO2
- Transport ASAP

6.30_HeadInjury 1 of 1

Document:
- Signs & Symptoms
- Glasgow Coma Scale
- SpO2, ETCO2, VS
- Cardiac Rhythm
- Pulse/Motor/Sensation X 4
- Lung Sounds
- Respiratory Effort/Pattern
- Mechanism of Injury
- Onset & Duration of LOC

Glasgow Coma Scale

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Immobilize/
Package
Patient

GCS ? < 9

Consider Intubation

- Support Respirations
- Maintain EtCO2 at 35-45 mmHg

≥ 10

Systolic BP ? < 90

< 90

Treat Enroute

≥ 90

Treat per 6.35_Shock Trauma

- Support Respirations
- Rapid Trauma Assessment
- Treat other Injuries
- Watch for Status Changes

Monitor:
- ABCs, VS, GCS, LOC
- Respiratory Status, EtCO2
- Transport ASAP

Scope-of-Practice

- BSI
- Scene Safety
- Mechanism
- Resources
- Manual C-Spine

6.35_Shock Trauma

- Support Respirations
- Rapid Trauma Assessment
- Treat other Injuries
- Watch for Status Changes

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Shock - Trauma

- BSI
- Scene Safety
- Mechanism
- Resources

- General Impression
  - C-Spine Precautions, PRN
  - ABC’s, LOC, VS
  - Oxygen NRB 15 ipm
  - Support Respiration, PRN
  - Control exsanguinating hemorrhage
  - Prepare for immediate transport

- Neurological Assessment
- Rapid Trauma Assessment
- Highest priority injuries first

IV NS 14-16g
TKO 2nd Line prn

BP ?
≥ 90

JVD ?
Yes
P1

- Treat Enroute
- Locate Possible Bleeding
- Keep Pt Warm
- Elevate Legs

- NS Bolus 20mL/kg
- Consider 2nd IV

Monitor ECG Rhythm

P2

Note:
1 Scene times in cases of traumatic injury should be 10 minutes or less if possible.

Scope-of-Practice

Act Allowed
Standing Order

Contact On-line Medical Control
• Monitor: ABCs, LOC, VS, Respiratory Effort
• Notify Receiving ED
• Transport ASAP

Complete Detailed Assessment

Treat/Stabilize Other Injuries

Maintain IV at Established Rate

• Monitor: ABCs, LOC, VS, Respiratory Effort
• Notify Receiving ED
• Transport ASAP

Note:
2 S/S of Tension Pneumothorax: diminished breath sounds, diminished compliance, severe dyspnea.
3 S/S of Pericardial Tamponade: decreasing BP, narrowing pulse pressure, muffled heart sounds.
4 S/S of Cardiac Contusion: chest pain, associated injuries, sinus tachycardia, atria fibrillation and/or flutter, premature atrial contractions
Special Trauma

- BSI
- Scene Safety
- Mechanism
- Resources
- C-Spine

- General Impression
- ABC's, LOC
- Frequent Vital Signs
- Prepare for immediate transport

- BSI

Sexual Assault

- Confine history to pertinent medical needs

- Protect patients emotional needs
- Provide a same-sex provider if possible

- Keep inappropriate traffic off the public airways

- Protect evidence: no washing or changing clothes

- Transport for treatment

Abuse/Neglect

- Observe victim's behavior around caregivers

- Watch out for:
  - Injury without MOI
  - Injury not = to story
  - Delayed treatment
  - Spreading blame
  - Different stories
  - History of injury

- Don't judge, accuse, confront. Protect victim.

- Transport victim with minimal injury to prevent more serious injury

Pregnant Trauma

- Avoid supine positioning

- Blunt trauma is often hidden. ED exam is critical.

- Seizure due to eclampsia can cause injury

- Pregnant Pt has:
  - ↑ Blood volume
  - ↓ Blood pressure
  - ↑ Pulse rate

- Protect fetus: Oxygen and Fluids are critical interventions

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Document:
- Mechanism of Injury
- Time of Injury
- Last Meal
- Areas of pain/immobility
- Treatment Prior to Arrival
- Estimated Blood Loss

6.40_SpecialTrauma 1 of 1
Spinal Injury

Monitor:
- ABCs, VS, GCS, LOC
- Respiratory Status, EtCO2
- Transport ASAP

Immobilize/Package Patient

IV NS 14-16 gauge TKO
- 2nd Line if MOI Significant

Systolic BP ?
- < 90: Treat Enroute
- ≥ 90: Treat per 6.35_Shock Trauma

Support Respirations
- Rapid Trauma Assessment
- Treat other Injuries
- Watch for Status Changes

Glasgow Coma Scale

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Pediatric Patients are not just “Small People”

- Airways are smaller, easier to obstruct or collapse
- Respiratory reserve is smaller, minor insults lead to major problems.
- Circulatory reserve is smaller, a 500mL loss can lead to death.
- VS, LOC can be hard to assess. Talk to parents, get a good history.
- The proper size of equipment can be critical: BVMs, Collars, IVs, etc
- Pediatric meds and supplies should be stored separately.
- Practice pediatric skills often to remain sharp.
Pediatric Respiratory Distress

- BSI
- Scene Safety
- MOI/NOI
- Resources

Position Airway
- Attempt to Ventilate

Respiratory Arrest
- Yes: Rule-Out Cardiac Arrest per 7.25_Peds Resus
- No

Airway Obstructed
- Yes: Following each maneuver:
  - Reposition Airway
  - Attempt Ventilation
- No

O2 NRB 15lpm

Adequate Ventilations
- Yes
- No: Assist Ventilations, PRN
  - Consider Intubation

Continuous Distress
- Yes: Croup / Epiglottitis
- No: Asthma

Monitor:
- ABCs, VS, LOC
- Respiratory Effort
- Transport ASAP

Scope-of-Practice

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Document:
- Onset – gradual or sudden
- S/S – Fever, cough, drooling, runny nose, sore throat, hoarseness, airway sounds/effort
- Medications, history

In Listed Order:
- Encourage Coughing
- Child: 5 abdominal thrusts
- Infant: 5 back blows, 5 chest thrusts

If Unsuccessful:
- Visualize with Laryngoscope/Remove
- Consider Needle Cricothyrotomy
  see 3.50_QuickTrach

If Unsuccessful:
- Consider Saline NEB

Prepare to Assist Ventilations
- Upright or Position of Comfort
- Suction, PRN

Administer Albuterol per 9.09 protocol
- Consider Epinephrine per 9.30 protocol

Administer Albuterol per 9.09 protocol

Consider Saline NEB

Administer Albuterol per 9.09 protocol

Consider Epinephrine per 9.30 protocol
Pediatric Seizures

• BSI
• Scene Safety
• MOI/NOI
• Resources
• C-Spine

• Ensure Airway
• Suction, PRN
• O2 NC 2-4lpm

Remove excess clothing if patient febrile.

• Keep patient on side
• Protect from injury

Seizure persists

Yes

IV NS TKO BGL Test

BGL <60mg/dL

Administer Dextrose per 9.18 protocol

No

Be prepared to intubate

Administer Diazepam per 9.21 protocol

Monitor:
• ABCs, VS, LOC
• Respiratory Effort
• Transport ASAP

Scope-of-Practice

Act Allowed
Standing Order

Contact On-line Medical Control

Document:
• Onset, duration, type of activity, trauma
• S/S – Fever, LOC, rash, illness
• History, medications, immunizations

FR | B | B+ | I | P
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X | X | X | X | X
Neonatal Resuscitation

- BSI
- Scene Safety
- Resources

- ABCs
- Vital Signs
- Transport ASAP

Head Delivered?

- No
  - Treat Patient per protocol 5.30 Childbirth

- Yes
  - Use palm to prevent explosive delivery
  - Bulb suction Mouth (not throat) then Nose

APGAR Score?

- APGAR 8 to 10
  - Infant color pink, Strong cry, Active movement

- APGAR 7 or Less
  - Infant color poor, Weak, tired cry, Limp, weak activity

Meconium blocking airway

- Yes
  - Use laryngoscope
  - Suction with ET tube or french catheter
  - Remove meconium from trachea

- No
  - Repeat Suctioning
  - Give blow-by O2
  - Stimulate/dry with towel
  - KEEP baby warm

Monitor Mom/Baby:
- ABCs, VS, LOC
- Hemorrhaging
- APGAR/Warmth
- Placental delivery
- Transport ASAP

Document:
- Mom’s age, due date, prenatal care
- Previous pregnancies/problems
- Duration of labor, ruptured membranes?
- Bleeding?, meconium?, twins?
- Time of delivery, APGAR 1, 5 minute

Apgar Score

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Pulse</th>
<th>Grimace</th>
<th>Activity</th>
<th>Respiration</th>
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<tr>
<td>Blue, pale</td>
<td>Absent</td>
<td>No response</td>
<td>Limp</td>
<td>Absent</td>
</tr>
<tr>
<td>Body pink</td>
<td>&lt;100</td>
<td>Grimace</td>
<td>Some flexion</td>
<td>Slow, irregular</td>
</tr>
<tr>
<td>Completely pink</td>
<td>&gt;100</td>
<td>Cough, sneeze</td>
<td>Active</td>
<td>Good, crying</td>
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**Neonatal Resuscitation**

- Assist respirations w/ BVM
- O2 at 15lpm
- Rate: 40-60bpm

**Heart rate**
- <100 or Cyanosis
  - Check babies blood sugar
    - Keep level with perineum
    - Clamp 8-10in from baby
    - Cut cord between clamps

**Heart Rate**
- <60
  - Initiate CPR per AHA guidelines
  - Consider Code-3-Return

**Monitor Mom/Baby:**
- ABCs, VS, LOC
- Hemorrhaging
- APGAR/Warmth
- Placental delivery
- Transport ASAP

**Notes:**
1. When suctioning don’t over stimulate the back of the mouth due to vagal response. Minimize suctioning time and use a lower setting with in-line suctioning.
2. Babies have poorly developed temperature control—KEEP them warm.
3. This is not the time for field heroics. Airway support, CPR, temperature support and “pedal therapy” may be your best options.
4. Grimace to suctioning; Activity to stimulation, drying, holding.
Infant/Child Resuscitation

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**Steps:**

1. **Apneic Unresponsive Pulseless**
   - **Yes**
     - Transfer to firm surface
   - **No**
     - See 5.35_Coma protocol
     - See 7.10_Pediatric Respiratory Distress protocol
     - See 5.70_Shock protocol

2. **Initiate CPR per BLS protocol**
   - **Yes**
     - See Airway Obstruction in 7.10_Pediatric Respiratory Distress
   - **No**
     - Attach AED or Monitor/Defibrillator
     - Follow AED instructions or Treat per ALS protocol
     - See Ventricular Fibrillation or Bradycardia or Asystole and PEA in 7.25_PedsResus
     - **Package for transport on backboard**
     - **Transport ASAP**

**Notes:**

1. Be sure to recheck patient status even if CPR is already in progress upon arrival.
2. Before initiating CPR consider 2.10_Death-in-the-Field protocol
**Indications:**
- Patient unable to self-administer MDI medication
- Patient S/S indicate need for medication
- For indicated Scope-of-Practice ONLY
- For patient assistance in the use of an MDI ONLY

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Technique:**
1. Insert medication canister into plastic shell, PRN
2. Remove cap from mouthpiece, PRN
3. Shake the MDI for 3-5 seconds.
4. Instruct patient to fully exhale.
5. Place mouthpiece in patient’s mouth
6. As patient inhales—press canister’s top, downward release to dispense medication
7. Have patient hold his/her breath for several seconds
8. Remove MDI from patient’s mouth

**Monitor:**
- ABC’s
- Vital Signs
- Medication effect

For EMT-B and EMT-B+
Albuterol is the only medication that can be administered via an MDI
Medication Administration – IN

Indications:
• Patient requires IntraNasal (IN) medication administration
• Provider has access to a Mucosal Atomization Device
• Per these protocols the only medication authorized to be administered via the IN route is Naloxone
• For indicated Scope-of-Practice ONLY

Confirm:
• Right Patient
• Right Medication
• Right Dose
• Right Time
• Right Route

Technique:
1. Prepare a syringe and a Mucosal Atomization Device (MAD)
2. Draw-up medication into the syringe
3. Eject air from the syringe
4. Attach the MAD by threading it onto the luer end of the syringe
5. Insert the MAD tip into the selected nostril
6. Briskly inject (to ensure atomization) medication into the nasal cavity
7. Record medication given, dose, amount and time

Monitor:
• ABC’s
• Vital Signs
• Medication effect
**Medication Administration – IV**

**Indications:**
- Patient requires IV medication administration
- Per these protocols the only medication authorized to be administered via the IV route is Dextrose
- For indicated Scope-of-Practice ONLY

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Technique:**
1. Prepare Dextrose by removing the end caps from the ampule of D50 and the syringe
2. Holding the syringe vertically with the luer end up, thread the ampule into the syringe body until all of the air is expelled from within the ampule or D50 begins to flow from the luer end of the syringe
3. Clean the IV injection port with an alcohol prep
4. Pinch IV tubing closed between IV bag and injection port
5. Inject at a rate which is appropriate for the medication
6. With IV Dextrose periodically aspirate blood back into the syringe to confirm IV patency
7. Withdraw or un-thread syringe and discard appropriately.
8. Flush Saline Lock or restore IV flow
9. Record medication given, dose, amount and time.

**Monitor:**
- ABC’s
- Vital Signs
- Medication effect

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Medication Administration Nebulizer

**Indications:**
- Patient requires Nebulized medication administration
- Provider has access to a Nebulizer Device and an adequate oxygen supply
- Per these protocols the only medication authorized to be administered via the Nebulizer route is Albuterol
- For indicated Scope-of-Practice ONLY

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Technique:**
1. Assemble the Nebulizer Device
2. Empty the medication ampule into the nebulizer chamber
3. Attach oxygen supply tubing to the nebulizer and the oxygen supply
4. Set oxygen regulator to flow at 6-8 lpm
5. Instruct patient to breathe through the nebulizer mouth piece
6. Encourage patient to inhale as deeply as possible
7. Continue treatment until medication is completely nebulized
8. Record medication given, dose, amount and time

**Monitor:**
- ABC’s
- Vital Signs
- Medication effect

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Contact On-line Medical Control
Spinal Immobilization

Indications:
- Pain, swelling or deformity of the spine that may be due to fracture, dislocation or ligament instability
- Neurological deficit possibly due to spinal injury
- Prevention of neurological deficit in patients with suspected spinal injury
- All trauma patients who are unconscious or have altered mentation where spinal injury can’t be ruled out
- Patients with significant MOI: MVC, fall, GSW, stabbing or assault; even if the patient denies injury
- Failure of any of the NEXUS criteria

Precautions:
- All patients with significant head trauma should be immobilized due to the potential for hidden or unrecognized neck trauma
- Document a complete neuro exam before and after spinal immobilization

Technique:
1. Splint cervical spine with C-collar after primary survey
2. Complete secondary survey and splint fractures before moving patient if possible
3. Document neurological and pulse, motor, sensation (PMS) findings
4. Sitting patient, KED device:
   a. Slide KED behind patient
   b. Apply torso straps snugly
   c. Apply thigh straps snugly as close to groin as possible
   d. Use padding as needed to ensure neck stays in neutral position
   e. Secure head to KED using straps, tape or cloths
5. Supine/prone patient, Long Spine Board:
   a. With continuous cervical stabilization, logroll or lift patient as unit, examine posterior of patient, place board under patient, place patient in supine position on board
   b. Pad voids under knees, lower back, neck (torso for pediatric patients)
   c. Secure patient’s torso to board
   d. Using commercial blocks or rolled towels and tape, secure head to board
   e. Secure patient’s extremities to board
6. Document neurological, PMS findings
7. Assign assistant to monitor airway and cervical spine immobilization.

Monitor:
- ABC’s
- Vital Signs
- Mental Status, Level of Consciousness

NEXUS Criteria:
- No posterior, midline cervical tenderness
- No evidence of intoxication
- Normal level of consciousness
- No focal neurological deficits
- No painful, distracting injuries
- Not < 5 y/o or > 65 y/o
**Aspirin**

**Indications:**
- Angina/Chest Pain
- Chest Pain of possible cardiac origin
- Acute Myocardial Infarction

**Contraindications:**
- Known allergy to Aspirin
- Gastrointestinal bleeding disorders
- Patient unconscious or can’t swallow
- Pediatric patients

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**How Supplied:**
- 81 mg chewable tablet

**Administration:**
- Adult: 4ea  81mg tablets (324mg) PO, chewed then swallowed
- Child: **NOT INDICATED**

**Monitor:**
- ABC’s
- Vital Signs
- Medication effect
**Indications:**
- Wheezing due to bronchospasm
- Bronchospasm due to Asthma, COPD, Bronchitis, Anaphylaxis

**Contraindications:**
- Symptomatic tachycardia

**Precautions:**
- Use caution in patients with Hx of HTN, CAD, CHF, hypothyroidism
- May lower seizure threshold in susceptible patients
- Place patient > 40 y/o on cardiac monitor
- Side effects include: tachycardia, tremors, nervousness and nausea

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Administration:**
**Metered Dose Inhaler:**
See 8.50.1_MD1 for administration technique

**Nebulizer:**
See 8.50.4_MedAdminNEB for administration technique
- Adult: One unit dose vial of premixed solution
  - May be repeated as necessary
- Child (< 2 y/o): Use one-half adult dosage

**Monitor:**
- ABC’s
- Vital Signs
- Watch for side effects: hypotension, headache
Activated Charcoal

Indications:
• Toxic ingestion of chemicals other than acids, alkalis or hydrocarbons
• Overdose of medications other than iron or lithium

Contraindications:
• Don’t administer to a patient who has taken ipecac. Charcoal is very difficult to clean.
• Don’t administer to a comatose patient. Patient must be able to swallow.

Confirm:
• Right Patient
• Right Medication
• Right Dose
• Right Time
• Right Route

Administration:
• Adult
  1 Gm/kg PO
• Pediatric
  1 Gm/kg PO

Monitor:
• ABC’s
• Vital Signs
• Medication effect

Document:
• What was ingested
• How much was ingested
• When was it ingested

Poison Control:
• 800.222.1222
Dextrose

**Indications:**
- Blood Glucose Level (BGL) < 60 mg/dl
- Illness or Altered Mental Status (AMS) in known diabetic patient
- Unconscious patient with unknown etiology and hypoglycemia can’t be ruled out
- Seizure or Cardiac Arrest in patient with diabetic history
- Children < 3 years old with signs of shock
- Hypothermic patients

**Precautions:**
- If possible, always obtain a BGL before giving dextrose
- Ensure a patent vein before giving IV dextrose
- Older CVA patients may be made worse with IV dextrose – contact On-line Medical Control

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**How Supplied:**
- D50: 25 gm/50mL
- D25: (D50, waste 25mL, fill to 50mL with NS)
- D10: (D50, waste 40mL, fill to 50mL with NS)

**Administration:**
- Adult: 25 gm – D50 via patent IV
- Child: 2mL/kg – D25 via patent IV
- Neonate: 5mL/kg – D10 via patent IV

**Monitor:**
- ABC’s
- Vital Signs
- Medication effect
Oral Glucose

Indications:
- Blood Glucose Level (BGL) < 60 mg/dl
- Illness or Altered Mental Status (AMS) in known diabetic patient
- Conscious patient with the ability to swallow
- Hypothermic patients

Precautions:
- If possible, always obtain a BGL before giving oral glucose
- Ensure patient can swallow oral glucose

Confirm:
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

How Supplied:
- Oral Glucose: 15 gm/tube

Administration:
- Oral Glucose: entire tube PO, may also consider: juice, honey, molasses, syrup or D50

Monitor:
- ABC’s
- Vital Signs
- Medication effect
Epinephrine – EpiPen

Indications:
• Severe systemic allergic reactions or anaphylaxis
• Patient unable to self-administer EpiPen
• For indicated Scope-of-Practice ONLY

Precautions:
• Increased cardiac effort can cause susceptible (elderly) patients to experience chest pain, angina or acute myocardial infarction

Confirm:
• Right Patient
• Right Medication
• Right Dose
• Right Time
• Right Route

How Supplied:
• Adult: 0.3mg auto-injector
• Child: 0.15mg auto-injector

Administration:
• Unscrew the yellow or green cap off of the EpiPen carrying case and remove the EpiPen auto-injector from its storage tube.
• Grasp the EpiPen with the black tip pointing down in your dominant hand.
• Form a fist around the EpiPen.
• With your other hand, pull off the grey safety release.
• Jab EpiPen at a 90 degree angle, firmly into outer thigh until it clicks. EpiPen is designed to penetrate clothing.
• Hold unit firmly against thigh for 10 seconds.
• Remove unit and massage injection site for 10 seconds.
• Carefully place the EpiPen back into its storage tube.
• Patient MUST be transported for follow-up care ASAP.

Monitor:
• ABC’s
• Vital Signs
• Watch for side effects: anxiety, tremor, palpitations, headache
Naloxone – Narcan

- BSI
- Scene Safety
- Resources

**Indications:**
- Reversal of narcotic effects

**Precautions:**
- Sudden withdrawal may cause violent reactions – be prepared to restrain, or have enough people, to secure patient; consider incremental doses.

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Administration:**
- Adult: up to 2 mg Slow IV or IN, May be repeated after 5 minutes, prn
- Child: 0.04 mg/kg Slow IV or IN, May be repeated after 5 minutes, prn

**Monitor:**
- ABC’s
- Vital Signs, Respiratory status
- Medication effect – reversal of narcotic effects

**Common Narcotics:**
- Codeine
- Darvon (propoxyphene)
- Demerol (meperidine)
- Dilaudid (hydromorphone)
- Fentanyl (sublimaze)
- Heroin
- Methadone
- Morphine
- Oxycontin (oxycodone)
- Talwin (pentazocine)

**Scope-of-Practice**

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Contact On-line Medical Control
Nerve Agent Antidote
Mark I Antidote Kit

Indications:
Mild Exposure:
• Difficulty seeing (miosis)
• Difficulty breathing
• Headache, Runny Nose, Drooling
• Localized muscle twitching (exposure site)
Severe Exposure:
• Nausea and vomiting
• Severe muscle twitching
• Altered mental status
• Loss of bowel and bladder control
• Respiratory distress leading to respiratory failure
• Convulsions leading to Coma and Death

How Supplied:
Each Mark I Antidote Kit contains:
• 1 auto-injector with Atropine 2mg (smaller tube)
• 1 auto-injector with Pralidoxime Chloride (2-PAM) 600mg

Administration:
• Confirm Right medication and expiration dates.
• Remove Mark I kit from its case
• Grasp the kit in non-dominant hand with larger tube on top (2-PAM)
• Remove the bottom, smaller (Atropine) tube from it’s cap/holder. The injector is now activated.
• Holding firmly, place the injector end (end removed from cap) against the injection site. Mid-lateral thigh (preferred) or upper lateral quadrant of buttock (thin patients)
• Press injector into site with firm pressure until spring releases ejecting needle. Hold for 10 seconds
• Repeat procedure for top, larger (2-PAM) injector
• For Mild s/s 1 or 2 Mark I’s should be used spaced 10 minutes apart
• For Severe s/s use a maximum of 3 Mark I’s in succession.

Monitor:
• ABC’s
• Vital Signs
• Watch for tachycardia, dry mouth – the antidote is working

Administration:
• ALS Provider only
• Diazepam 10mg IV/IM
• May be repeated to control convulsions

Patient
Convulsing

Yes
Nitroglycerin

**Indications:**
- Chest pain believed to be of cardiac origin
- Patient unable to self-administer Nitroglycerin
- For indicated Scope-of-Practice ONLY
- For EMT-B/B+ for patient assistance in the use of prescribed Nitroglycerin ONLY

**Contraindications:**
- Systolic blood pressure < 90 mmHg
- Patient using erectile dysfunction medications (eg, Viagra, Cialis, Levitra) within last 24 hours

**Precautions:**
- Generalized vasodilatation may cause profound hypotension and reflex tachycardia

**Confirm:**
- Right Patient
- Right Medication
- Right Dose
- Right Time
- Right Route

**Administration:**
- Adult: Tablet – 1 tablet, 0.4mg, sublingual
  - Spray – 1 spray, 0.4mg, sublingual
  - May be repeated every 5 minutes for pain if BP > 90 mmHg, MAXIMUM 3 doses
- Child: NOT Indicated

**Monitor:**
- ABC’s
- Vital Signs
- Watch for side effects: hypotension, headache

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**Scope-of-Practice**

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**Contact On-line Medical Control**
Oxygen

- BSI
- Scene Safety
- Resources

**Indications:**
- Respiratory distress, Shortness-of-breath (SOB)
- Chest Pain, Seizure, Stroke (CVA), Altered Mental Status
- Trauma, CO poisoning, Gas/fume/ exposure, Smoke inhalation
- High Altitude Sickness

**Administration:**
- Low flow: Nasal Cannula, 2 lpm: COPD, Seizure, SOB, Minor distress
- Moderate flow: Nasal Cannula, 2-6 lpm: Trauma, SOB, Moderate distress
- High flow: Non-Rebreather, 12-15 lpm: Chest pain, CVA, CO poisoning, Shock, High Altitude Sickness, Severe distress

**Monitor:**
- ABC's
- Vital Signs, Respiratory status
- Medication effect
Abbreviations

† = increased or upper
↓ = decreased or lower
≈ = approximately
≤ = less than or equal to
≥ = greater than or equal to
Δ = change
@ = at
ø = no, none
µ = micro
µg = microgram
1 = primary exam
2 = secondary exam
ā = before
AA0x3 = Awake, Alert, Oriented person, place, time
ABC = airway, breathing, circulation
Abd = abdomen
AC = ante-cubital fossa
AICD = automated internal cardiac defibrillator
AKA = above knee amputation
ALS = Advanced Life Support
Amb = ambulatory
Ant = anterior
AOB = alcohol on breath
A/P = anterior/posterior
APAP = acetaminophen
ASA = aspirin
AV = atrioventricular or arteriovenous
AVPU = alert, verbal, pain, unresponsive?
BDZ = Benzodiazepine
BKA = below knee amputation
BG = blood glucose
BGL = blood glucose level
Bilat = bilaterally
BLS = Basic Life Support
B/P = blood pressure
bpm = beats per minute
BSA = Body Surface Area (burns)
BVM = bag-valve-mask
c = with
C = Centigrade
cc = cubic centimeter
C2 = code 2 (non-emergent)
C3 = code 3 (emergent)
CA = cancer
CABG = coronary artery bypass graft
CaCl = calcium chloride
CAD = coronary artery disease
CAO = conscious, alert and oriented
CC = chief complaint
CCT = critical care transport
CHB = complete heart block
CHF = congestive heart failure
CHI = closed head injury
Clr = clear
cm = centimeter
CMS = circulation, movement, sensation
CNS = central nervous system
c/o = complains of
CO = carbon monoxide
CO2 = carbon dioxide
COPD = chronic obstructive pulmonary disease
CP = chest pain
CPR = cardiopulmonary resuscitation
CSF = cerebrospinal fluid
CSM = carotid sinus massage
CSP = Colorado State Patrol
C-spine = cervical spine
CT = computerized tomography (CAT scan)
CTLS = cervical, thoracic, lumbar, sacral spine
CVA = cerebrovascular accident (stroke)
Cx = chest
D50 = dextrose 50%
D5W = dextrose 5% in water
Defib = defibrillation
Dig = Digoxin, Lanoxin
DKA = diabetic ketoacidosis
DOA = dead on arrival
DOTS = Deformity, Open wound, Tenderness, Swelling
Dx = diagnosis
ED = Emergency Department
EDC = Estimated Date of Confinement
ER = Emergency Room
ECG = electrocardiogram
EKG = electrocardiogram
EMS = Emergency Medical Services
ETA = estimated time of arrival
EtCO2 = End-tidal CO2
ETI = Endotracheal Intubation
ETT = endotracheal tube
ETOH = beverage alcohol
Exp = expansion
F = Fahrenheit
FA = forearm
FBAO = Foreign Body Airway Obstruction
Fx = fracture
g = gauge (diameter)
GCS = Glasgow Coma Scale or Score
GERD = gastro-esophageal reflux disease
GI = gastrointestinal
Gm = gram
GSW = gunshot wound
gtts = drops
GU = genitourinary
H = hour
HB = head block (1, 2, 3 HB)
HEENT = head, ears, eyes, nose, throat
HI = head injury
Hosp = Hospital
H/P = history and physical
HR = heart rate
HTN = hypertension
Hx = history
ICP = intracranial pressure
ICS = intercostal space
ICU = Intensive care unit
IFT = Inter Facility Transfer
IM = intramuscular
IN = intranasal
IO = intraosseous
IV = intravenous
IVP = intravenous push
J = Joule
JVD = jugular venous distention
KCl = potassium chloride
KED = Kendrick extrication device
Kg = kilogram
L = left
l = liter
lb = pound
LAC = Las Animas County
LACSO = Las Animas County Sheriff’s Office
LAD = left axis deviation or left anterior descending
LAH = left anterior hemiblock
LBB = left bundle branch block
LGL = Lown-Ganong-Levine Syndrome
LLQ = left lower quadrant
lpm = liters per minute
LMP = last menstrual period
LS = lung sounds
LSB = long spine board
LOC = loss of consciousness
LPH = left posterior hemiblock
LUQ = left upper quadrant
Abbreviations

mA = milliamps
MAST = medical anti-shock trouser
MCA = motorcycle accident
MCL = mid-clavicular line
mcg = microgram
meds = medications
mEq = milli-equivalent
mg = milligram
mg/dL = milligrams per deciliter
MgSO4 = Magnesium Sulfate
MI = myocardial infarction
min = minute
ml = milliliter
mmHG = millimeters of mercury
MOE = Movement of Extremities
MOI = mechanism of injury
MRI = magnetic resonance imaging
MS = Morphine Sulfate
MSO4 = Morphine Sulfate
MSRH = Mount San Rafael Hospital
MVA = motor vehicle accident
NaHCO3 = Sodium Bicarbonate
NAD = no acute distress
NARD = no apparent respiratory distress
NATO = not able to obtain
NC = nasal cannula
NP = nasopharyngeal
NEB = nebulizer
NETT = nasal endotracheal tube
NG tube = nasogastric tube
NKDA = no known drug allergies
NL = non labored
NOI = Nature of Illness
NPA = nasal pharyngeal airway
NPO = nothing by mouth
NRB = non re-breather mask
NS = normal saline
NSR = normal sinus rhythm
NTG = nitroglycerin
N/V = nausea/vomiting
N/V/D = nausea/vomiting/diarrhea
O2 = oxygen
OB = obstetrical
Occ = occipital
OD = overdose
OETT = oral endotracheal tube
OLMC = On-Line Medical Control
OM = otitis media
OP = oropharyngeal
OPA = oral pharyngeal airway
oz = ounce
p = after (with macron)
PA = physician advisor
PAC = premature atrial contraction
Palm = palpation
PALS = Pediatric Advanced Life Support
PASG = pneumatic anti-shock garment
PE = pulmonary embolus
PEA = pulseless electrical activity
PG = pregnant
P#G# = para # / gravida # (P1G1)
PJC = premature junctional contraction
PMC = Parkview Medical Center
PMS = pulse, movement, sensation
pn = pain
PN = Pneumonia
PO = by mouth
POP = pain on palpation
Post = posterior
PPD = Pueblo Police Department
PR = per rectum; rectally
PRI = P-R interval relating to ECG
PRFD = Pueblo Rural Fire Department
PRN = as needed
PSI = pounds per square inch
PSVT = paroxysmal supraventricular tachycardia
Pt = patient
PTA = Prior to arrival
PTSD = post traumatic stress disorder
PVC = premature ventricular contraction
PWFD = Pueblo West Fire Department
Pn = pain
q = every
QRT = Quick Response Team (member)
R = right
RAD = right axis deviation
Rad = radial pulse
RBB = right bundle branch block
RCA = right circumflex artery
Resp = respiration
RL = ringer's lactate
RLQ = right lower quadrant
RR = respiratory rate
RSI = rapid sequence induction or intubation
RUQ = right upper quadrant
Rx = prescribed for
s = without (with macron)
s/p = status post
s/s = signs and symptoms
sec = second
SL = sublingual
SMC = St. Mary Corwin
SMOE = sensory, movement of extremity
SOB = shortness of breath
Sp02 = Oxygen Saturation Percentage
SQ = subcutaneous
ST = S-T segment relative to ECG
STEMI – ST-Elevation Myocardial Infarction
Sux - Succinylcholine
synch = synchronous (switch on defibrillator)
Sz = seizure
TA = traffic accident
TAD = Trinidad Ambulance District
TFD = Trinidad Fire Department
TPD = Trinidad Police Department
TB = tuberculosis
TCP = transcutaneous pacemaker
Temp = temperature
TIA = transient ischemic attack
TKO = to keep open (minimum IV rate)
TTC = Transportation Technology Center
Trans = transport
Tx = treatment
UA = upon arrival
UGI = upper gastrointestinal
URI = upper respiratory infection
UTI = urinary tract infection
V = volt
VF = ventricular fibrillation
V. Fib. = ventricular fibrillation
VT = ventricular tachycardia
V. Tach. = ventricular tachycardia
VS = vital signs
WNL = within normal limits
W/D/G = warm, dry, good skin
WPW = Wolff-Parkinson-White syndrome
yo = years old
Patient Assessment

Scope-of-Practice

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Scene Size-up
- BSI
- Scene Safety
- Mechanism of Illness (MOI) or Nature of Illness (NOI)
- Resources Needed
- C-Spine Precautions

Initial Assessment (IA)
- Chief Complaint (CC)
- General Impression
- Mental Status (AVPU)
- Airway/Breathing/Circulation (ABC)
- Transport Status

Patient History
- Onset, Provocation, Quality [of pain], Relief/Radiate/ [of pain], Severity, Time (OPQRST)
- Signs and Symptoms [of CC], Allergies, Medications, Pertinent Past History, Last Oral Intake, Events (SAMPLE)
- Associated Symptoms, Pertinent Negatives

Physical Exam (PE)
- Focused or Rapid Overall
- Vitals: Blood Pressure (BP), Heart Rate (HR), Respiratory Rate (RR), Pupils, Skin
- Head, Neck, Chest, Abdomen, Back, Pelvis, Extremities (DCAP-BTLS)

Treatment/Interventions
- Oxygen, C-Spine, Spinal Immobilization, Bleeding, Shock, Splinting…
- Oxygen, CPR, AED, Airway Obstruction…

Ongoing Assessment
- Repeat IA, Repeat PE or Detailed PE, Vitals, Reassess Treatment/Interventions

Report/Handoff
- Age, Sex, Chief Complaint, AVPU, ABC, Vitals, OPQRST, SAMPLE, PE/Detailed PE, Interventions, ETA, Questions
Subjective

- Document how you were dispatched and your response to the scene (Emergent, Immediate, or Non-emergent)
- Document EVERYTHING you are told by Dispatch, your Patient(s), Family, Bystanders, Police/Sheriff/State Patrol, Fire, and First Responders

Regarding:

- Chief Complaint, OPQRST, SAMPLE, Treatment/Interventions prior to your arrival, Associated Symptoms and Pertinent Negatives

Objective

- Document EVERYTHING you see, feel, hear, measure during assessment and examination

Regarding:

- General Impression
- AVPU (AAOx #, person, place, event)
- ABCs: Airway (open, maintained), Breathing (rate, quality, effort) Circulation (pulse, quality, rhythm), Blood Pressure
- SKIN (color, temperature, dry/sweaty)
- HEEN: Eyes (PEARL), Neurological, DCAP-BTLS
- CHEST: Breath Sounds (equal, clear, diminished, wheezes, rales, etc.), DCAP-BTLS
- ABD: soft, hard, tender, non-tender, guarding, DCAP-BTLS
- BACK/PELVIS: intact, DCAP-BTLS
- EXTREMITIES: intact, range-of-motion, pulse/motor/sensation (PMS), DCAP-BTLS

Assessment

- Field Diagnosis, Treatment Protocol(s)

Plan

- Document EVERYTHING you do for your patient(s)

Regarding:

- Response to scene
- Assessments, Examinations
- Treatments, Interventions, Standing Orders/Protocols followed, ALS/Medical Control Orders followed
- Patient response
- ALS/Medical Control/Dispatch updates
- Transport
- Report/Handoff, Transfer-of-care

Remember… If it isn’t documented it didn’t happen!