ALTERNATE TRIAGE, TREATMENT AND TRANSPORT GUIDELINES
FOR PANDEMIC INFLUENZA

Bureau of Emergency Medical Services and Trauma System
Arizona Department of Health Services
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PURPOSE AND SCOPE

Arizona recognizes that emergency medical services (EMS) may be overwhelmed during an influenza pandemic and has developed, with the assistance of numerous clinical and operational experts, this Alternate Triage, Treatment and Transport Guideline (ATTTG) document as a resource for EMS providers during an influenza pandemic and/or a public health emergency declared by the Governor of Arizona. It is intended to provide a framework for Arizona’s statewide EMS system in order to optimize the delivery of emergency care and 9-1-1 services when resources are limited or overloaded during a public health emergency related to pandemic influenza.

DISCLAIMER

These guidelines are designed to be a resource document for use by physicians serving as Medical Direction Authorities for the administrative, organizational and on-line medical direction of pre-hospital EMS personnel during an influenza pandemic and a public health emergency declared by the Governor of Arizona. It is recognized that variations from the guidelines contained within are acceptable, depending on the individual circumstances of the involved areas and organizations.

By Arizona Statute and Rule, all advanced life support pre-hospital EMS personnel shall have administrative and on-line medical direction. These guidelines are not meant to act as a substitute, proxy or alternative to that medical direction. Any conflict between these guidelines and the individual EMS provider’s medical direction shall default to the Administrative or on-line medical direction.

This guidance document outlines optional triage, treatment and transport methods for consideration during a public health emergency due to pandemic influenza. It is specifically recognized that there are acceptable variations from these guidelines. This guidance does NOT define, limit, expand, or otherwise purport to establish the legal standard of care. Local protocols for Cardiocerebral Resuscitation (CCR) or Cardiopulmonary Resuscitation (CPR) shall remain in effect.
*Influenza-Like Illness (ILI) co-morbidities may include: Obesity (body mass index [BMI] ≥30), pregnancy, asthma, age (≥65, < 5, especially < 2 years old), People with medical conditions such as: Neurological and neurodevelopmental conditions [including disorders of the brain, spinal cord, peripheral nerve, & muscle such as cerebral palsy, epilepsy (seizure disorders), stroke, intellectual disability (mental retardation), moderate to severe developmental delay, muscular dystrophy, or spinal cord injury]; Chronic lung disease (chronic obstructive pulmonary disease [COPD] & cystic fibrosis); Heart disease (congenital heart disease, congestive heart failure & coronary artery disease); Blood disorders (e.g. sickle cell disease); Endocrine disorders (e.g. diabetes mellitus); Kidney disorders; Liver disorders; Metabolic disorders (e.g. inherited metabolic disorders and mitochondrial disorders); Weakened immune system due to disease or medication (e.g. people with HIV or AIDS, or cancer, or those on chronic steroids); People < 19 years of age receiving long-term aspirin therapy; Chronic Obstructive Pulmonary Disease (COPD)
Adult Chest Pain of Probable Cardiac Origin

Assess ABCs/VS/LOC

BLS

Support Airway Ventilation Oxygenation

Have AEDReady

Administer 324-325 mg Aspirin PO chew and swallow

If patient has own Nitroglycerin, in original container, is not expired, and patient’s systolic BP is greater than 100 mmHg assist patient with taking Nitroglycerin as necessary every 5 minutes to a total of 3 tablets/sprays or pain relief or drop in systolic BP to less than 100 mmHg

BLS transport to appropriate facility

ALS

Follow BLS Standard
Do not utilize patient assisted Nitroglycerin

Apply ECG monitor
If lethal or potentially lethal arrhythmias are present, proceed to appropriate cardiac treatment protocol

Perform 12 lead ECG, if available
Transmit ECG or pre-notify hospital if ST-elevation MI present

Administer 324-325 mg Aspirin PO chew and swallow

Initiate IV access

Administer Nitroglycerin 0.4 mg tablets or oral spray SL may repeat every 5 minutes to a total of 3 tablets to relieve pain if the patient’s systolic BP is greater than 100 mmHg

Administer Morphine sulfate 2-4 mg IV every 5 minutes to a total of 10 mg if pain not relieved with Nitroglycerin and patient systolic BP is greater than 100 mmHg

If ST-elevation MI present
ALS transport to appropriate facility
Adult Bradycardia, Symptomatic

Identify and treat contributing reversible causes
Assess ABCs/VS/LOC

BLS
Support Airway Ventilation Oxygenation
Have AED Ready
Monitor Vital Signs
BLS transport to appropriate facility

ALS
Follow BLS Standard
Monitor ECG rhythm
Perform 12 lead ECG, if available
Initiate IV access

- Prepare for transcutaneous pacing; use without delay for high-degree block (type II second degree or third degree AV blocks)
- Consider Atropine 0.5 mg every 3-5 mins. to a total dose of 3 mg while awaiting pacer, if ineffective begin pacing
- **Paramedic only**: Consider epinephrine 2-10 mcg/min or Dopamine 2-20 mcg/kg/min infusion while awaiting pacer or if pacer ineffective

ALS transport to appropriate facility
Adult Tachycardia with Pulses

Identify and treat contributing reversible causes
Assess ABCs/VS/LOC

BLS
Support Airway Ventilation Oxygenation
Have AED ready
Monitor vital signs
BLS or ATV transport to appropriate facility

ALS
Follow BLS Standard
Monitor ECG rhythm Identify rhythm
ALS transport to appropriate facility

Is patient unstable?
Altered mental status, hypotension, shock, shortness of breath, ongoing chest pain

Stable
Establish IV access Obtain 12-lead ECG
Is QRS wide or narrow?
Narrow QRS
Is rhythm regular?
Regular
• Attempt Vagal Maneuvers
  If no response:
  • Administer Adenosine 6 mg rapid IVP
  • If no conversion in 1-2 minutes give 12 mg rapid IVP may repeat x 1 Pm
Rhythm Converts?
Yes
No
Continue to monitor
BLS or ATV transport to appropriate facility

Irregular
Consider rate control- Paramedic Only:
Administer Verapamil 2.5-5 mg IV, if no response may repeat in 30 mins. with 5-10 mg IV
Or
Diltiazm, 0.25 mg/kg IV, if no response may repeat in 15 mins. with 0.35 mg/kg IV

ALS transport if rate uncontrolled or hypotensive, otherwise BLS transport to appropriate facility

ALS transport if rate uncontrolled or hypotensive, otherwise BLS transport to appropriate facility

Wide QRS
Is rhythm regular?
Regular
Irregular

If atrial fibrillation with aberrancy/ intraventricular conduction delays go to irregular narrow complex tachycardia. If Torsades de pointes consider Magnesium Sulfate 1-2 gm over 5 mins. Paramedic only

ALS transport to appropriate facility

If ventricular tachycardia or uncertain rhythm Administer Amiodorone 150 mg IV over 10 minutes may repeat every 10 minutes
Paramedic Only
Or
Lidocaine 1 mg/kg IVP, may repeat Lidocaine 0.5 mg/kg every 5-10 minutes to a total of 3 mg/kg. Prepare for synchronized cardioversion IF SVT or aberrancy continue consider Adenosine

BLS transport if stable/ALS transport if unstable to appropriate facility
Adult Pulseless Arrest-Cardiocerebral Resuscitation (CCR)

BLS

No AED available
- Do not Resuscitate
- Do not Transport

AED available
- Adequate bystander administered chest compressions or provider witnessed arrest
  - Analyze rhythm
  - Deliver one shock if indicated - 360 J monophasic or biphasic equivalent
  - Do not analyze pulse or rhythm after shock
  - Immediate 200 chest compressions
  - Assess airway, insert OPA, apply non-rebreather mask at 15 lpm or BVM if not previously performed
  - Analyze rhythm, check for pulse only if No Shock indicated
  - Deliver one shock if indicated
  - 360 J monophasic or biphasic equivalent
  - Do not analyze pulse or rhythm after shock
  - Immediate 200 chest compressions
  - Resume standard BCLS
  - BLS transport to appropriate facility

ALS

Follow BLS Standard
- Initiate IO access as soon as possible (tibial placement preferable over sternal)
- IV access may be utilized if rapidly available
- Administer Epinephrine (1:10,000) 1 mg IO/IV every 3-5 min. as soon as possible during compressions
  - At completion of CCR guideline, resume standard ACLS
  - Consider endotracheal intubation
  - ALS transport to appropriate facility
Adult Pulseless Arrest - Cardiopulmonary Resuscitation (CPR)

**BLS**

- **No AED available**
  - Do not Resuscitate
  - Do not Transport

- **AED available**
  - Adequate bystander administered chest compressions or provider witnessed arrest
    - Analyze rhythm
    - Deliver one shock if indicated
    - 360 J monophasic or biphasic equivalent
    - Perform CPR while defibrillator is charging
    - Do not analyze pulse or rhythm after shock

- Immediate 5 cycles of CPR
  - Analyze rhythm - only check for pulse only if No Shock indicated
  - Deliver one shock if indicated
  - 360 J monophasic or biphasic equivalent
  - Perform CPR while defibrillator is charging
  - Do not analyze pulse or rhythm after shock

- Immediate 5 cycles of CPR
  - Consider immediate BLS transport to appropriate facility

**ALS**

- **Follow BLS Standard**
- **Manual ECG monitor**
  - Only check pulse if organized rhythm is present at the end of each 5 cycles of CPR
- **Initiate IV/IO access as soon as possible**
- **If no IV available rapidly, use IO (tibial placement preferable over sternal)**
- **If advanced airway is placed perform chest compressions at 100 compressions/min without interruptions for ventilations**
  - Ventilations delivered at 8 breaths/min.
- **Administer vasopressors during compressions**
  - Epinephrine (1:10,000)
  - 1 mg IV/IO every 3-5 min as soon as possible during compressions or
  - Vasopressin 40 units IV/IO x 1 dose to replace first or second dose of Epinephrine - *Paramedic only*
- **Consider immediate BLS transport to appropriate facility**

**VF/VT**

- Consider antiarrhythmic for persistent /recurrent VF/VT - administer during compressions:
  - Lidocaine 1-1.5 mg/kg IV/IO then repeat every 3-5 min at 0.5-0.75 mg/kg IV/IO up to a total dose of 3 mg/kg
  - Paramedic Only
  - Amiodorone 300 mg IV/IO then consider additional 150 mg IV/IO once in 3-5 min.
  - Consider Magnesium Sulfate 1-2 Gm IV/IO for Torsades de pointes

- **Consider termination of efforts**
- **ALS transport to appropriate facility**

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**Adult Termination of Resuscitation Efforts**
[Environmental Hypothermia not Present]

**BLS**
- with AED with on-line medical direction available

- If all of the following occur, consider termination of resuscitation:
  - Arrest not witnessed
  - No bystander CPR
  - No shockable rhythm
  - No ROSC after three 2 minutes cycles of CPR

- Contact Medical Direction

- Resuscitation terminated?
  - Yes
    - Notify Law Enforcement
  - No
    - BLS transport to appropriate facility

**ALS**

- If any of the following occur, consider termination of resuscitation:
  - Presenting rhythm is asystole or if asystole/PEA occurs anytime during resuscitative efforts
  - More than 30 minutes of full ACLS without ROSC
  - Blunt traumatic cardiopulmonary arrest without organized ECG activity upon EMS arrival
  - Penetrating traumatic cardiopulmonary arrest lacking all of the following: pupillary reflexes, spontaneous movement or organized ECG activity upon EMS arrival.
  - Traumatic cardiopulmonary arrest witnessed by EMS provider with greater than 15 minutes of cardiopulmonary resuscitation without ROSC.

- Contact Medical Direction

- Resuscitation terminated?
  - Yes
    - Notify Law Enforcement
  - No
    - ALS transport to appropriate facility
Adult Dead On-Scene

Assess patient for:
- Decapitation
- Decomposition
- Burned beyond recognition
- Rigor mortis and/or dependent lividity with apnea, pulseless, asystole in more than 1 lead or No Shock indicated on AED

Are any of these indicated?

- Yes
  - Notify Law Enforcement

- No
  - Resuscitate per Pulseless Arrest guidelines
Adult Transport to Designated Cardiac Arrest Center/Cardiac Arrest Post-Resuscitation (CRC)

**Inclusion Criteria:**
- Non-traumatic OHCA with return of palpable central pulses or other evidence of spontaneous circulation
- GCS less than 8 after ROSC
- Transport to CRC when feasible, resources available, and will add less than 15 minutes to transport time compared to transport to non-CRC
- Less than 30 minutes CPR/CCR prior to arrival of EMS
- Patient not pregnant
- No uncontrolled hemorrhage
- No persistent unstable arrhythmia
- Patient does not appear to have severe environmental hypothermia related arrhythmia
- No DNR paperwork identified during resuscitation

<table>
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<th>Yes</th>
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<td>Notify receiving facility as soon as possible</td>
<td>ALS transport to appropriate facility</td>
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<td>Control airway as necessary</td>
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<td>Maintain ventilation rate of 8 breaths per min.</td>
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<td>Consider anti-arrhythmic medication</td>
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<td>Perform 12-lead EKG, if available</td>
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<td>Pre-notify receiving facility of ST-elevation MI</td>
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<td>If available, administer 2000 mL cold (4°C/39.2°F) NS IV fluid bolus to the adult patient</td>
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<td>Apply cold/ice packs to groin/axillae/neck</td>
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<td>Consider dopamine for persistent hypotension – Paramedic only</td>
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Adult Respiratory Difficulty

Assess ABCs/VS/LOC
Oxygen 15 lpm via Non-rebreather Mask (NRM)

BLS

Support Airway Ventilation
Oxygenation

Maintain position of comfort

BLS transport to appropriate facility

ALS

Follow BLS Standard
with Capnography if available

Pulmonary Edema

- IV NS TKO SBP above 100 mmHg give 1 NTG
  0.4 mg SL q 5 minutes x 3.
- Give Morphine Sulfate
  and/or diuretics per local protocol

If no improvement or patient deteriorates, contact medical direction.
Consider CPAP (Paramedics only), BVM or intubation if respiratory rate less than 8,
SPO2 less than 80% with oxygen or pt has decreased LOC

ALS transport to appropriate facility

COPD/Asthma

- Albuterol 2.5 mg +Atrovent/NS unit dose
  SVN q 5 min PRN IV
  NS TKO
- Methylprednisolone 125 mg IV if no improvement after 1st SVN
- ASTHMA: Consider epinephrine (1:1000) 0.3 mg SQ if less than 30 y/o

ALS transport to appropriate facility
Adult Unconscious/Unresponsive
[Non-Traumatic Adult ≥ 15 Y/O]

Assess ABCs, VS, LOC, Cardiac monitor, O2 Sat, FSBS
And Initiate immediate supportive care

BLS

O2 to keep Sat >90%

BLS transport to appropriate facility

ALS

O2 to keep Sat >90%

- Establish IV NS @ TKO rate
- Consider Naloxone per local protocol
- If FSBS < 60mg/dl = Consider
  - Dextrose
  - Glucagon
  - Thiamine

If patient condition improves may transport to closest appropriate facility

Consider Treat and Release, BLS or Alternate Response Vehicle transport if available to appropriate facility

Consider intubation if:
- Patient condition does not improve
- Respiratory rate <8 or
- Patient unable to protect airway

If patients condition deteriorates, contact medical direction per local protocol

ALS transport to appropriate facility
**Adult Behavioral Emergency – Violent or Combative Patient**

If patient is an immediate threat to the crew or bystanders, step away from scene and call for police assistance.

If able, assess ABCs, VS, LOC

**BLS**

- Apply physical restraints as necessary per local protocol. Restraint use requires constant monitoring of ABCs and VS.

- If able: Check FSBG. If <60 mg/dl, administer 1-2 tubes of oral glucose

- BLS or Alternate Response Vehicle transport to appropriate facility

**ALS**

- Follow BLS standards

- Consider: Establish IV/IO infusion of NS @ 30 mL/hr

- Consider: Sedation per local protocol

- ALS transport to appropriate facility
Adult Poison - Ingestion/Inhalation

Protect medical personnel PRN
Assess ABCs, VS, LOC

BLS
Support airway, ventilation, and oxygenation
If FSBG < 60 mg/dl give 1-2 tubes oral glucose if patient is alert
Attempt to identify poison. Inspect scene. Check pockets. Retrieve and transport pill containers
BLS transport to appropriate facility or consider treat and release to alternate response vehicle. Consider contacting poison control center for guidance.

ALS
Follow BLS standards
IV NS or LR
If respiration < 12/min consider:
• Naloxone 0.5-2.0 mg IVP, IM or nasal; titrate to effect
• If FSBG < 60 dl/mg give 100 mg Thiamine IVP and 25g D50 IVP
Cardiac monitor and treat arrhythmias
ALS transport to appropriate facility. Consider BLS, Alternate Response Vehicle
Adult Poison - Bites and Stings

Assess ABCs, VS, LOC

BLS
- Support airway, ventilation, and oxygenation
- Identify source of bite or sting, circumstances and time
- If possible, keep bitten extremity at heart level. Keep extremity motion to a minimum.
- Observe for anaphylaxis
- Administer Epi-pen if indicated: use pediatric auto-injector if patient is ≤ 30 kg
- Transport insect/bee/scorpion if it can be done safely.
- Consider treat and release, BLS or alternate response vehicle transport to appropriate facility. Consider contacting poison control center for guidance.

ALS
- Follow BLS standards
- Initiate IV NS @ 30 mL/hr
  - Administer Epinephrine if indicated (1:1000) IM 0.01 mg/kg up to 0.5 mg total.
  - If wheezing: give Albuterol, one unit dose and Atrovent, one unit dose via SVN.
  - Administer Diphenhydramine IVP 1mg/kg up to 25 mg total.
  - Administer Solumedrol 2 mg/kg IVP up to 125 mg.
- Contact Medical Direction for severe uncoordination, hypertension, tachycardia, or hypersalivation
- ALS or BLS transport to appropriate facility
Adult Poison – Snakebite

Protect medical personnel PRN
Assess ABCs, VS, LOC

BLS
Support airway, ventilation, and oxygenation

• Remove any constricting jewelry or clothing.
• DO NOT apply ice to bite area.
• DO NOT apply or remove tourniquet. If tourniquet is in place, contact Medical Direction.
• Discourage ambulation.

ALS or BLS transport to appropriate facility

Follow BLS standards

IV NS or LR
Cardiac monitor and treat arrhythmias

ALS transport to appropriate facility
Consider contacting poison control center for guidance.
Adult Seizures

Assess ABCs, VS, LOC
Oxygen 15 lpm via NRM - Consider underlying cause - Check blood glucose

BLS

If pregnant, place in left lateral recumbent position

BLS or ALS transport to appropriate facility

ALS

Initiate IV NS @ 30 mL/hr

Administer Benzodiazepines per local protocol

If pregnant go to high risk OB protocol

ALS or BLS transport to appropriate facility

ALS transport to appropriate facility
Adult Hyperthermia

Assess ABCs, VS, LOC
Check temperature

Temperature < 104°F

Signs & symptoms of heat exhaustion/dehydration

Elicit history to rule out hyponatremia due to over-hydration

Remove to cool environment. Sponge with lukewarm fluids

Position patient to left lateral recumbent if vomiting

Check blood glucose if altered LOC

Consider oral hydration if patient is not nauseated/altered LOC

If patient has a seizure, follow seizure protocol

BLS

BLS or Alternate Response Vehicle transport to appropriate facility

Temperature > 104°F

Signs & symptoms of heat stroke

Position patient to left lateral recumbent

Immediate cooling: Remove clothing, move to cool environment; begin external cooling. Apply cold packs to major pulse points

Monitor rectal temp if available

Check blood glucose

If patient has a seizure, follow seizure protocol

ALS

Establish IV NS. Consider fluid challenge if signs/symptoms of hypovolemia

Establish IV NS. Consider fluid challenge if signs/symptoms of hypovolemia

ALS, BLS or Alternate Response Vehicle transport to appropriate facility
**Adult Hypothermia**

**Gentle Handling!**

Assess for signs of life for 30-60 seconds. Prevent further cooling, remove wet clothes; move to warm environment

**Signs of life?**

- **No**
  - BLS
    - Begin CPR; use AED
    - Humidified/warmed oxygen if possible. DO NOT hyperventilate
    - Check FSBG
    - BLS transport to appropriate facility
  - ALS
    - Cardiac monitor shows organized rhythm
    - Begin CPR
    - Treat VT/VT per protocol
    - Humidified/warmed oxygen if possible. Consider intubation. DO NOT hyperventilate
    - Check FSBG
    - IV NS warmed to 104-108°F if possible FSBG
    - ALS transport to appropriate facility

- **Yes**
  - BLS
    - Cardiac monitor shows organized rhythm
    - Check rectal temp. with hypothermia thermometer
    - Temp<90°F
      - Start central warming only: heat packs to neck and groin
      - Humidified/warmed oxygen if possible. DO NOT hyperventilate
      - BLS transport to appropriate facility
    - Temp>90°F
      - Start external rewarming. Consider warm PO fluids of pt. condition permits
      - IV NS warmed to 104-108°F if possible FSBG
      - ALS transport to appropriate facility
  - ALS
    - Cardiac monitor shows organized rhythm
    - Check rectal temp. with hypothermia thermometer
    - Temp<90°F
      - Start central warming only: heat packs to neck and groin
      - Humidified/warmed oxygen if possible. Consider intubation. DO NOT hyperventilate
      - BLS transport to appropriate facility
    - Temp>90°F
      - Start external rewarming. Consider warm PO fluids of pt. condition permits
      - IV NS warmed to 104-108°F if possible FSBG
      - ALS transport to appropriate facility
Adult Stroke

Assess ABCs, VS, LOC

ALS, BLS, or Alternate Response Vehicle transport to appropriate facility.

ALS

Support airway, ventilation and oxygenation

Apply ECG monitor: if lethal or potentially lethal arrhythmias are present, proceed to appropriate cardiac treatment protocol

Obtain FAST score [Facial droop, Arm drift, Slurred speech]

Initiate IV NS @ 30 mL/hr

Check blood glucose

Determine time of onset

Positive FAST score
Time of onset ≤ 3 hours

Initiate STROKE ALERT

ALS transport to appropriate facility.

Negative FAST score
Time of onset > 3 hours

Check blood glucose

Obtain FAST score [Facial droop, Arm drift, Slurred speech]

Determine time of onset

ALS, BLS, or Alternate Response Vehicle transport to appropriate facility.

BLS

Support airway, ventilation and oxygenation

Check blood glucose
Assess ABCs/VS/LOC
Determine Gestational Age

Pregnancy Induced Hypertension

BLS
Position patient left lateral recumbent
Transport calmly as lights and sirens may induce seizures
BLS transport to appropriate facility
Consider non-L3 Perinatal

ALS
Follow BLS standards
Apply ECG monitor and establish IV LR @ 30 mL/hr
If patient is actively seizing, follow seizure protocol
Consider non-L3 Perinatal

Premature Labor

BLS
Position patient left lateral recumbent
Encourage calm attitude
BLS transport to appropriate facility
Consider non-L3 Perinatal

ALS
Follow BLS standards
Consider 1 L fluid bolus of LR
Consider very mild sedation per medical direction
ALS transport to appropriate facility
Consider non-L3 Perinatal

Acute Abdominal Pain

BLS
Assess for signs of shock
Position patient left lateral recumbent if >20 weeks
Establish IV LR with large bore catheter
BLS transport to appropriate facility
Consider non-L3 Perinatal

ALS
Follow BLS standards
Observe for labor or rising fundus if >20 weeks
Assess fetal status for heart tones and movement
ALS transport to appropriate facility
Consider non-L3 Perinatal
Adult and Pediatric Trauma - General Management

Determine and evaluate mechanism of injury

Initial assessment of ABCs with consideration of need for spinal stabilization. Continually reassess the patient.

Pulse

No Pulse

Do not resuscitate
Do not transport

Determine Level of Consciousness
A=Alert, V=Responsive to verbal stimuli, P=Responsive to painful stimuli, U=Unresponsive

Assess vital signs and correct evidence of:

Adult evidence of shock:
SBP < 90 mmHg
Weak or absent peripheral pulse

Pediatric evidence of shock:
Signs of external hemorrhage
Altered mental status
Weak or absent peripheral pulse
SBP>70+2 x age up to 8 years

Prevent heat loss

BLS
Control external bleeding with direct pressure or tourniquet

ALS
IV/IO access of NS bolus to maintain perfusion

Complete appropriate secondary physical exam and treat life threatening injuries as found

Assess CSM function, perform spinal immobilization and reassess circulation, sensation and motor function (CSM)

Complete history of event and past medical history using SAMPLE & OPQRST

Treat all non-life threatening injuries as time allows

BLS or ALS transport to appropriate facility
Control external bleeding via direct pressure or tourniquet.

Transport amputated part wrapped in a dry, sterile dressing. Place in a water tight container or plastic bag. Keep cool but do not place directly on ice.

Partially severed: Clean with NS, splint extremity, apply NS soaked dressing. Cover with bulky dressing and elevate.

BLS, Alternate Response Vehicle or POV transport to appropriate facility.
Adult and Pediatric Trauma - Extremity Fractures, Dislocation and Sprains

**BLS**

- Assess CSM function
- Dress open wounds
- Apply splinting devices, reassess CSM. Correct anatomical alignment once only if nerve or vascular impairment present
- Elevate injury. Apply ice/cold packs
- Initial assessment of ABCs with consideration of need for spinal stabilization. Continually reassess the patient

BLS, Alternate Response Vehicle or POV transport to appropriate facility

**ALS**

- Follow BLS standards
- Adult: IV NS to maintain SBP>90mmHg
  Pediatric: IV/IO access of NS bolus to maintain perfusion
- Titrate analgesic for pain per local protocol
- BLS or ALS transport to appropriate facility

Adult and Pediatric Trauma

- Extremity Fractures, Dislocation and Sprains

BLS or ALS transport to appropriate facility

- Initial assessment of ABCs with consideration of need for spinal stabilization. Continually reassess the patient.
Adult and Pediatric Trauma – Head Injury

Assess ABCs, VS, LOC
Spinal immobilization

BLS

Do not delay transport to trauma center while performing the following procedures:
• Airway support and oxygen 15 lpm via NRM
• Manage ventilation at 10 breaths/min (or at an age appropriate rate for pediatrics)
• Treat injuries as indicated
• Do not remove any impaled object

BLS transport to appropriate facility

ALS

Follow BLS standards

Secure airway
• Manage ventilation to maintain SPO2≥95% (or at an age appropriate rate for pediatrics)
• Monitor and maintain EtCO2 between 35-45 mmHg if available (or at an age appropriate rate for pediatrics)

Adult: Administer IV NS to SBP >100 mmHg
Ped: IV/IO access NS bolus age appropriate

ALS transport to appropriate facility
Adult and Pediatric Trauma – Patient Identification and Field Triage Decision Scheme

**STEP ONE**
Measure vital signs and level of consciousness

<table>
<thead>
<tr>
<th>Glasgow Coma Scale</th>
<th>&lt;14 or</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic blood pressure</td>
<td>&lt;90 or mmHg</td>
</tr>
</tbody>
</table>
| Respiratory rate | <10 or >29 breaths per minute (<20 in infant < one year)

**Yes**

Transport to a Trauma Center. Steps 1 & 2 attempt to identify the most seriously injured patients. These patients should be transported preferentially to the highest level of care within the trauma system.

**No**
Assess anatomy of injury.

**STEP TWO**

- All penetrating injuries to head, neck, torso, and extremities proximal to elbow & knee
- Flail chest
- Two or more proximal long-bone fractures
- Crush, de-gloved or mangle extremity
- Amputation proximal to wrist and ankle
- Pelvic fractures
- Open or depressed skull fracture
- Paralysis

**Yes**

Assess mechanism of injury & evidence of high-energy impact.

**No**

**STEP THREE**

- Falls
  - Adults > 20ft. (one story is equal to 10 ft.)
  - Children > 10 ft. or 2-3 times the height of the child
- High-risk auto crash
  - Intrusion >12 in. occupant site; > 18 in. any site
  - Ejection (partial or complete) from automobile
  - Death in same passenger compartment
  - Vehicle telemetry data consistent with high risk of injury
- Auto v. pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
- Motorcycle crash > 20 mph

**Yes**

Assess special patient or system considerations.

**No**

**STEP FOUR**

- Age
  - Older Adults: Risk of injury/death increases after age 55 years
  - Children: Should be triaged preferentially to pediatric-capable trauma centers
- Anticoagulation and bleeding disorders
- Burns
  - Without other trauma mechanism: Triage to burn facility
  - With trauma mechanism: Triage to trauma center
- Time sensitive extremity injury
- End-stage renal disease requiring dialysis
- Pregnancy > 20 weeks
- EMS provider judgment

**Yes**

Contact medical control and consider transport to trauma center or specific resource hospital.

**No**

Transport according to protocol.

WHEN IN DOUBT, TRANSPORT TO A TRAUMA CENTER.

Adopted by the Arizona State Trauma Advisory Board, January 21, 2010
FIELD TRIAGE SCHEME FOOTNOTES

1. The upper limit of respiratory rate in infants is >29 breathe per minute to maintain a higher level of over-triage for infants.
2. Trauma centers are designated Level I-IV, with Level I representing the highest level of trauma care available.
3. Any injury noted in Step Two or Step Three triggers a “YES” response.
4. Age <15 years
5. Intrusion refers to interior compartment intrusion, as opposed to deformation which refers to exterior damage.
6. Includes pedestrians or bicyclists thrown or run over by a motor vehicle or those with estimated impact >20 mph with a motor vehicle.
7. Local or regional protocols should be used to determine the most appropriate level of trauma center; appropriate center need not be Level I.
8. Age >55 years.
9. Patients with both burns and concomitant trauma for whom the burn injury poses the greatest risk for morbidity and mortality should be transferred to a burn center. If the non-burn trauma presents a greater immediate risk, the patient may be stabilized in a trauma center and then transferred to a burn center.
10. Injuries such as an open fracture or fracture with neurovascular compromise.
11. Emergency medical services.
12. Patients who do not meet any of the triage criteria in Steps One through Four should be transported to the most appropriate medical facility as outlined in local EMS protocols.
13. In most circumstances patients undergoing CPR should not be transported by Air Ambulance.

ARIZONA TRAUMA MODE OF TRANSPORT GUIDELINE

The decision for mode of transport for both field and inter-facility trauma patients is based on the premise that the time to definitive care and quality of care are critical to achieving optimal outcomes. Factors of distance, injury severity, road conditions, and traffic patterns must be considered when choosing between air or ground transport. The skill level of the transport team must also be considered.

When considering air transport, the amount of time saved should be significant enough to allow a potentially beneficial intervention to take place at the receiving facility. Time considerations should take into account arranging for air transport, patient packaging, transport to the aircraft and transport of the patient from the helipad or airport to the trauma bay. The referring physician will collaborate with the receiving physician and transport service providers to determine the appropriate mode of transport, based on the patient’s condition, and the above mentioned factors.

The potential benefit to the patient should outweigh the risk associated with Air Ambulance transport.

INTER-FACILITY TRAUMA TRANSPORTS

Background: Trauma transports from one hospital to another for a higher level of care typically fall into one of two broad types:
1. Those in which a quicker form of transport may make a difference in treatment/outcome.
2. Those in which a quicker form of transport may not make a difference in treatment/outcome.

Assumptions: Assumption for the purposes of these examples:
1. Helicopter transport will be quicker, but more expensive.
2. There are no weather or road issues that would make air transport preferable to ground transport or ground transport preferable to air transport.

Examples: Not intended to cover all potential circumstances.

<table>
<thead>
<tr>
<th>Quicker Form of Transport (Helicopter) - May Make a Difference in Outcome</th>
<th>Quicker Form of Transport (Helicopter) - May Not Make a Difference in Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient with suspected aortic injury as seen on chest X-ray or CT scan.</td>
<td>1. Patient with 2 broken ribs, no pneumothorax and who is breathing fine.</td>
</tr>
<tr>
<td>3. Patient with a Glasgow Coma Scale (GCS) less than 12 and the GCS is decreasing.</td>
<td>3. Patient with a concussion and normal CT scan of the brain; or if no CT, then a GCS of 15 and mentating appropriately.</td>
</tr>
<tr>
<td>4. Patient with a stab wound to the abdomen near the upper right abdomen.</td>
<td>4. Stab wound to the arm with decreased sensation but normal pulses, no “tightness”, and no significant on-going blood loss.</td>
</tr>
<tr>
<td>5. Patient with a gun-shot wound to the thigh with decreased pulses.</td>
<td>5. Patient with gun-shot wound to the thigh with excellent pulses, no expanding thigh, and no significant on-going blood loss.</td>
</tr>
<tr>
<td>6. Patient with blunt trauma and signs of shock.</td>
<td></td>
</tr>
</tbody>
</table>
Pediatric Shortness of Breath

Abbreviations:
- BLS: Basic Life Support
- ALS: Advanced Life Support

**ABCDE Assessment**

**BLS**
- Establish airway support
- Maintain position of comfort
- High flow oxygen
- Assist ventilation as needed

Assess ventilation
- BVM for inadequate ventilation/altered MS
- Concern for obstruction follow pre-hospital guidelines for airway

BLS transport to appropriate facility

**ALS**
- Follow BLS Standards

Assess for causation
- Asthma
- Pulmonary edema
- Obstruction
- Anaphylaxis

Consider
- Albuterol (0.15 mg/kg nebulized) may repeat x2
- Atrovent (Ipratropium bromide 0.02%) (2.5 cc SVN)
- Epinephrine (0.01 mg/kg IM)

IV Fluids
- NS 20 mL/kg bolus: may repeat x2 (hypotension=SBP<70+2x age in years)

Cardiac monitor

ALS transport to appropriate facility
Pediatric Heat Exposure

ABCDE Assessment

BLS

- Establish airway support
- High flow oxygen
- Assist ventilation as needed

ALS

Follow BLS Standards

- IV fluids
  - NS 20 mL/kg bolus (may repeat x2)

Cardiac monitor

T>38°C (100.4°F)

- Check temperature
- Assess for trauma

Cooling techniques
- Loosen clothing
- Ambient air flow
- Cool water sponging

Altered mental status?
- Aggressive cooling
- Ice packs to groin/neck/axilla

BLS or ATV transport to appropriate facility

ALS transport to appropriate facility (if off monitor, consider BLS or ATV transport)
Pediatric *Anaphylaxis/**Allergic Reaction

ABCDE Assessment

BLS

Anaphylaxis (respiratory distress or shock)

- Maintain airway
- High flow oxygenation
- Assist ventilation as necessary
- Check glucose (treat if <40 mg/dl)

- Assist patient with or administer Epi-pen if available
- Assist patient with Albuterol inhaler if available

BLS or ATV transport to appropriate facility

ALS

Anaphylaxis (respiratory distress or shock)

Follow BLS standards

Consider:
- Diphenhydramine 1 mg/kg IV/IM up to 25 mg
- Methylprednisolone 2 mg/kg IV
- Albuterol SVN prn
- Epinephrine 0.01 mg/kg up to 0.3 mg (0.01-0.03 mL/kg) of 1:1000

ALS transport to appropriate facility

Anaphylaxis (respiratory distress or shock)

Follow BLS standards

Apply monitor

Epinephrine SC or IM 1:1000
0.01 mg/kg up to 0.3 mg (0.01-0.03 mL/kg)

Establish IV/IO of NS

For hypotension, Epinephrine IV/IO infusion:
0.1 mcg - 1.0 mcg/kg/min

If signs & symptoms of hypoperfusion fluid bolus of 20 mL/kg. May repeat PRN.

- BVN if respiratory failure or apnea
- SVN Albuterol 2.5 mg/3 mL NS via mask/mouth-piece/in-line if wheezing
- May repeat PRN

Diphenhydramine 1 mg/kg IV/IM (max. 25 mg)

Consider Methylprednisolone 2 mg/kg IV

ALS transport to appropriate facility

**Anaphylaxis: stridor, bronchospasm, severe abdominal pain, respiratory distress, shock, edema of the lips/face/tongue

**Allergic reaction: itching, urticaria, nausea
Newborn Resuscitation

ABCDE Assessment

BLS

Delivery of newborn

Clear of meconium? Breathing or crying? Good muscle tone? Color pink? Term gestation?

NO

Clear airway, position, provide airway support and 100% oxygen

Dry & stimulate infant; wrap infant in dry blanket, cover head, provide warmth

Evaluate respirations, heart rate and color

Apnea or HR<100

Provide positive pressure ventilations

HR<60

Provide positive pressure ventilations & chest compressions

HR>100

Stop positive pressure ventilations & chest compressions

BLS transport to NICU ER or appropriate facility

ALS

Follow BLS standards

HR<60

Consider endotracheal intubation & suctioning

HR<60

Initiate IV, umbilical access, or IO. Administer Epinephrine 0.01-0.03 mg/kg (0.1-0.3 mL/kg) 1:10,000 IV, IO, ETT q 3-5 minutes

HR<60

Fluid bolus NS 10 mL/kg bolus. Consider Naloxone 0.1 mg/kg IV/ET/SC/IO. Check blood glucose (if <40, administer D10 2 mL/kg IV/IO)

HR>100

Stop positive pressure ventilations & chest compressions

ALS transport to NICU ER or appropriate facility
**Pediatric Pulseless Electrical Activity (PEA)/Asystole**

**ABCDE Assessment**

**BLS**

Begin assisted ventilation & compressions

Attach AED (age >1 year unless pediatric approved AED is available)

If No Shock indicated and no pulse, continue CPR for 2 minutes.
- 5 cycles of 30 compressions to 2 ventilations for single rescuer, or
- 15 compressions to 2 ventilations for 2 rescuers
Reassess with AED and continue cycle. Repeat cycle

Check blood glucose

BLS transport to PICU ER or appropriate facility

**ALS**

Follow BLS standards

BVM ventilation with high flow 10-15 L oxygen

Consider:
- Endotracheal intubation
- Establish IV/IO of NS
- 20 mL/kg bolus over 10-20 mins
- Treat glucose if <40 mg/dl

Epinephrine:
- IV/IO 0.01 mg/kg (0.1 mL/kg) (1:10,000)
- ETT 0.1 mg/kg (0.1 mL/kg) (1:1000)

Consider possible causes and treat: severe hypoxemia, hypovolemia, hypothermia, hyperkalemia, severe acidosis, tension pneumothorax, cardiac tamponade, or overdose

**Change in rhythm**

**YES**

- If pulses present, continue supportive care, or
- Proceed to appropriate dysrhythmia treatment guideline

ALS transport to PICU ER or appropriate facility

**NO**

Continue CPR

ALS transport to PICU ER or appropriate facility
Pediatric Bradycardia, Unstable

**ABCDE Assessment**

- **BLS**
  - Support ABCs/Oxygenate
  - High flow oxygen
  - Support ventilations with BVM if necessary
  - Consider hypoxia a primary cause of bradycardia in pediatrics

- Chest compression if after oxygenation & ventilation HR < 60/min in infant or child with poor systemic perfusion

- **BLS transport to PICU ER or appropriate facility**

- **ALS**
  - Follow BLS standards
  - Establish IV/IO of NS
  - Epinephrine:
    - IV/IO - 0.01 mg/kg (1:10,000)
    - ETT - 0.1 mg/kg (1:1000)
    - Repeat same dose q 3-5 min PRN

  - Consider Atropine 0.02 mg/kg IV/IO (min dose 0.1 mg all ages)
    - Max single dose:
      - Child – 0.5 mg
      - Adolescent 1 mg
    - May repeat once in 5 minutes

  - Administer fluid bolus of 10-20 mL/kg of NS

  - Determine blood glucose. Administer Dextrose per pediatric Altered Mental Status guideline

  - Consider external pacing. Start at 200 milliamps for a HR of 100 & rapidly adjust downward to slightly above the minimal level that produces capture.

  - Consider administration of Epinephrine IV continuous infusion at a rate of 0.1 – 1 mcg/kg/min

  - **ALS transport to PICU ER or appropriate facility**
Pediatric Supraventricular Tachycardia

**ABCDE Assessment**

- **BLS**
  - Establish airway
  - High flow oxygen
  - Assisted ventilation as needed
  - Check glucose – oral glucose if no airway compromise and glucose < 40 mg/dl

- **ALS**
  - Follow BLS standards

**UNSTABLE**

- **IV access readily attainable?**
  - **YES**
  - **STABLE**
    - Attempt IV access
    - Consider IO
    - 10 mL/kg NS bolus
    - Glucose if <40 mg/dl
  - **UNSTABLE**

- **NO**
  - Synchronized Cardioversion:
    - Attempt at escalating doses
      - 0.5 J/kg
      - 1 J/kg
      - 2 J/kg
    - Consider sedation:
      - Diazepam (0.1 mg/kg) max 2 mg/dose IV/IO
      - Midazolam (0.1 mg/kg) max 2 mg/dose IV/IO
  - ALS transport to PICU ER or appropriate facility

**STABLE**

- Administer Adenosine via rapid infusion:
  - IV/IO: 0.1 mg/kg (max 1st dose: 6 mg)
  - Repeat doses: 0.2 mg/kg (max dose: 12 mg)

- Monitor

- Consider BLS or ATV transport to appropriate facility if conversion. Otherwise, ALS transport to appropriate facility

*Monitor rate in children < 2 years is >220 BPM
Biphasic energy settings may be different*
Pediatric Ventricular Fibrillation/Pulseless Ventricular Tachycardia

**ABCDE Assessment**

- Establish airway
- High flow oxygen
- Assisted ventilation as needed
- Start age-appropriate CPR
- Apply AED (age >1). Shock if advised
- Resume CPR immediately after shock for 2 minutes, then reassess. If No Shock advised, continue CPR and go to PEA/Asystole algorithm
- Check glucose – treat if < 40 mg/dl per hypoglycemia protocol

**BLS**

- Follow BLS standards

**ALS**

- Perform complete sets of CPR
  - 5 cycles of 30 compressions to 2 ventilations for single rescuer, or
  - 15 compressions to 2 ventilations for 2 rescuers
- Defibrillate once between each set of escalating doses:
  - 2 J/kg
  - 4 J/kg
  - 4 J/kg

- Endotracheal intubation
- Establish IV/IO
- NS bolus 20 mL/kg over 10-20 minutes

**Epinephrine:**
- IV/IO - 0.01 mg/kg (1:10,000)
- ETT - 0.1 mg/kg (1:1000)
- Repeat same dose q 3-5 min PRN

Continue defibrillation at 4 J/kg between each set of CPR cycles

**Consider Lidocaine**
- IV/IO 1 mg/kg; ETT 2 mg/kg
- Or
- Magnesium
  - IV/IO 25-50 mg/kg (for torsades de pointes or hypomagnesemia) max. 2 grams

**ALS transport to PICU ER or appropriate facility**
Pediatric Seizures

**ABCDE Assessment**

- **BLS**
  - Protect patient
  - Airway support
  - High flow oxygen
  - 10-15 L by NRB

- **ALS**
  - Follow BLS standards
  - IV NS/LR
  - 20 mL/kg over 30 minutes

**Consider Hyperthermia:**
Temp > 40°C or 104°F rectally.
If present, cooling measures

**Consider Hypoglycemia:**
Check blood glucose
Oral glucose if < 40 mg/dl and no airway compromise

Treat injuries PRN

BLS transport to appropriate facility

**Consider Hypoglycemia:**
Check blood glucose
Administer dextrose if hypoglycemic:
- D10-5 mL/kg (<2 years) IV/IO
- D25-2 mL/kg (2-8 years) IV/IO
- D50-1 mL/kg (>8 years) IV/IO
Diazepam 0.1 mg/kg-max 2 mg/dose IV/IO
Midazolam 0.1 mg/kg-max 2 mg/dose IV/IO
Naloxone 0.1 mg/kg-max 2 mg/dose IV/IO

If no IV access, consider:
Rectal Diazepam (0.5 mg/kg)
or
IM Midazolam (0.2 mg/kg)

ALS transport to appropriate facility. Consider BLS transport if seizure broken and no airway problems.
**Pediatric Altered Mental Status**

**ABCDE Assessment**

**BLS**
- High flow oxygen
- Assist ventilation as needed

Consider:
- Pulse oximetry
- C-spine
- Check blood glucose
- Warming maneuvers

Oral glucose if pt hypoglycemic (<40 mg/dl) and airway uncompromised

**ALS**
- Follow BLS standards
- Apply monitor

Consider:
- Intubation to control airway NG/OG tube
- Intravascular access with NS or LR bolus

Fluid bolus 20 mL/kg over 10-20 minutes
Administer dextrose if hypoglycemic (<40 mg/dl)
- D10-5 mL/kg (<2 years) IV/IO
- D25-2 mL/kg (2-8 years) IV/IO
- D50-1 mL/kg (>8 years) IV/IO

Naloxone 0.1 mg/kg-max 2 mg/dose IV/IO/IM

**BLS transport to appropriate facility**

**ALS transport to appropriate facility. Consider BLS or ATV if improved.**
Pediatric Shock

ABCDE Assessment

BLS

- Establish airway
- High flow oxygen
- Assisted ventilation as needed
- Compression to area of active bleeding
- “Head Down” positioning
- Maintain temperature

Check glucose & treat if glucose <40 mg/dl as per hypoglycemia protocol

BLS or ATV transport to appropriate facility

ALS

Follow BLS standards

Establish IV or IO (if hypotensive or no pulse) and bolus with 20 mL/kg or NS over 10-20 minutes

Check glucose & treat if glucose <40 mg/dl as per hypoglycemia protocol

Reassess

Normal saline boluses in 20 mL/kg increments up to 60-80 mL/kg total

Reassess

Consider Pressors IV:
- Epinephrine (0.1-1 mcg/kg/min)
- Dopamine (5-20 mcg/kg/min)

ALS transport to appropriate facility. Consider BLS or ATV transport if no pressors needed.
Pediatric Submersion Injury

**ABCDE Assessment**

**BLS**
- Establish/maintain airway
- Consider C-spine immobilization
- High flow oxygen
- Assisted ventilation as needed
- Start CPR if no pulse
- Remove wet clothing
- Keep warm
- Consider glucose check

**ALS**
- Follow BLS standards
- Consider endotracheal intubation if effort to ventilate/oxygenate via BVM is inadequate. Use positive end-expiratory pressure (5 cm H₂O) if available.
- Continue CPR if no pulse present
  - 5 cycles of 30 compressions to 2 ventilations for single rescuer, or
  - 15 compressions to 2 ventilations for 2 rescuers
  - Reassess, repeat.
- Consider IV/IO access
- Administer 20 mL/kg NS over 10-20 minutes if IV/IO present
- Administer Dextrose if <40mg/dl
  - D10-5 mL/kg (<2 years) IV/IO
  - D25-2 mL/kg (2-8 years) IV/IO
  - D50-1 mL/kg (>8 years) IV/IO
- Consider nasogastric or orogastric tube for gastric decompression

**BLS transport to appropriate facility**

**ALS transport to appropriate facility. Consider PICU if available**
## GLOSSARY

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCDE</td>
<td>Airway, Breathing, Circulation, Disability and Exposure</td>
</tr>
<tr>
<td>ACLS</td>
<td>Advanced Cardiac Life Support</td>
</tr>
<tr>
<td>AED</td>
<td>Automated External Defibrillator</td>
</tr>
<tr>
<td>ALOC</td>
<td>Altered level of consciousness</td>
</tr>
<tr>
<td>ALS</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>ATV</td>
<td>Alternate Transport Vehicle</td>
</tr>
<tr>
<td>BCLS</td>
<td>Basic Cardiac Life Support</td>
</tr>
<tr>
<td>BLS</td>
<td>Basic Life Support</td>
</tr>
<tr>
<td>BVM</td>
<td>Bag Valve Mask</td>
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<tr>
<td>CCR</td>
<td>Cardiocerebral Resuscitation</td>
</tr>
<tr>
<td>CPAP</td>
<td>Continuous Positive Airway Pressure</td>
</tr>
<tr>
<td>CPR</td>
<td>Cardiopulmonary Resuscitation</td>
</tr>
<tr>
<td>CRC</td>
<td>Cardiac Receiving/Referral Center</td>
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<tr>
<td>DNR</td>
<td>Do Not Resuscitate</td>
</tr>
<tr>
<td>ECG</td>
<td>Electrocardiogram</td>
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<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>FSBS</td>
<td>Fingerstick Blood Sugar</td>
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<tr>
<td>GCS</td>
<td>Glasgow Coma Scale</td>
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<tr>
<td>IO</td>
<td>Intraosseous</td>
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<tr>
<td>IV</td>
<td>Intravenous</td>
</tr>
<tr>
<td>IVP</td>
<td>Intravenous Push</td>
</tr>
<tr>
<td>LOC</td>
<td>Level of Consciousness</td>
</tr>
<tr>
<td>LR</td>
<td>Lactated Ringers</td>
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<tr>
<td>NS</td>
<td>Normal Saline</td>
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<tr>
<td>NTG</td>
<td>Nitroglycerin</td>
</tr>
<tr>
<td>OHCA</td>
<td>Out of Hospital Cardiac Arrest</td>
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<tr>
<td>OPA</td>
<td>Oropharyngeal Airway</td>
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<tr>
<td>PEA</td>
<td>Pulseless Electric Activity</td>
</tr>
<tr>
<td>PICU ER</td>
<td>Pediatric ICU with Emergency Room</td>
</tr>
<tr>
<td>PO</td>
<td>By Mouth</td>
</tr>
<tr>
<td>PRN</td>
<td>As Needed</td>
</tr>
<tr>
<td>ROSC</td>
<td>Restoration of Spontaneous Circulation</td>
</tr>
<tr>
<td>SL</td>
<td>Sublingual</td>
</tr>
<tr>
<td>SVT</td>
<td>Supraventricular Tachycardia</td>
</tr>
<tr>
<td>TKO</td>
<td>To Keep (Venous Infusion Line) Open</td>
</tr>
<tr>
<td>VF</td>
<td>Ventricular Fibrillation</td>
</tr>
<tr>
<td>VT</td>
<td>Ventricular Tachycardia</td>
</tr>
<tr>
<td>VS</td>
<td>Vital Signs</td>
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</tbody>
</table>