BLS/ILS/ALS PROTOCOLS

CLARK COUNTY EMS SYSTEM

EFFECTIVE: OCTOBER 1, 2007

(Replaces July 1, 2006 Version)

P.O. BOX 3902 – SHADOW LANE – LAS VEGAS, NV 89127

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FOREWORD

EMERGENCY MEDICAL SERVICES PROTOCOL MANUAL FOR THE CLARK COUNTY EMS SYSTEM

Optimal prehospital care results from a combination of careful patient assessment, essential prehospital emergency medical services, and appropriate medical consultation. The purpose of this manual is to provide guidance for ***ALL*** prehospital care providers and Emergency Department Physicians within the Clark County EMS System.

The ***GOAL*** of the manual is to ***STANDARDIZE*** prehospital patient care in Clark County. It is to be understood that these protocols are guidelines. Nothing contained in these protocols shall be construed to expand the Scope of Practice of any Emergency Medical Technician beyond that which is identified in the Clark County Emergency Medical Services Regulations and these protocols.

NOTHING contained within these protocols is meant to delay rapid patient transport to a receiving facility. Patient care should be rendered while en-route to a definitive treatment facility.

The **General Patient Care** and the **Spinal Immobilization** protocols must be followed in the specific sequence noted. For all other treatment protocols, the letter and numerical outline format is strictly for rapid and uniform reference and does not imply or direct a mandatory sequence for patient care.

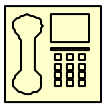
To maintain the life of a specific patient, it may be necessary, in rare instances, for the physician providing on-line medical consultation, as part of the EMS consultation system, to direct a prehospital provider in rendering care that is not explicitly listed within these protocols. To proceed with such an order both the telemetry physician and the provider must acknowledge and agree that the patient's condition and extraordinary care are not addressed elsewhere within these medical protocols, and that the order is in the best interest of patient care. Additionally, the provider must feel capable, based on the instructions given by the telemetry physician, of correctly performing the directed care. Whenever such care is provided, the telemetry physician and the provider must immediately notify the EMSTS Office of the extraordinary care situation. In addition, the provider must immediately, upon completion of the call, fax the prehospital care record to the EMSTS Office. All such incidents will be entered into the **Quality Improvement Review** process.

Occasionally a situation may arise in which a physician's order cannot be carried out; e.g., the provider feels the administration of an ordered medication would endanger the patient, a medication is not available, or a physician's order is outside of protocol. If this occurs, the provider must immediately notify the telemetry physician as to the reason the order cannot be carried out, and indicate on the prehospital care record what was ordered, the time, and the reason the order could not be carried out. In addition, the provider must immediately notify the EMSTS Office, and, upon completion of the call, fax the prehospital care record to the EMSTS Office. All such incidents will be entered into the **Quality Improvement Review** process.

Protocol Key:

Caution / Warning / Alert

Pediatric Treatment Consideration (for patients less than 12 years of age)



Telemetry contact required

Items in **BOLD and UNDERLINED** are hyperlinked to the corresponding protocol.

Items in ***BOLD and ITALICIZED*** are so marked for emphasis.

These protocols have been developed specifically for the Clark County EMS System and represent consensus among all of the Clark County EMS agency medical directors and the Chief Health Officer. The protocols demonstrate a commitment to a consistent approach to quality patient care.

From time to time, protocols may be added or revised by the Chief Health Officer upon recommendation by the Medical Advisory Board. Additional recommendations are welcome and appreciated at any time. They may be submitted to the EMSTS Office for consideration and referral to the Medical Advisory Board.

Southern Nevada Health District
Office of Emergency Medical Services & Trauma System
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Questions may also be telephoned to EMS Staff at (702) 759-1050, or visit our website at www.southernnevadahealthdistrict.org/ems/ems.htm.

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TERMS AND CONVENTIONS

AED .....means Automated External Defibrillator

ALS.....means Advanced Life Support

BLS.....means Basic Life Support

BP .....means Blood Pressure

BVM .....means Bag-Valve-Mask

CHF .....means Congestive Heart Failure

COPD .....means Chronic Obstructive Pulmonary Disease

CPR .....means Cardiopulmonary Resuscitation

DCAP-BTLS ..... means Deformities; Contusions; Abrasions; Punctures/Penetrations; Burns; Tenderness; Lacerations; Swelling

EKG.....means Electrocardiogram

ETA .....means Estimated Time of Arrival

ETT.....means Endotracheal Tube

GU.....means Genitourinary

HR.....means Heart Rate

ILS .....means Intermediate Life Support

IM .....means Intramuscular

IN .....means Intranasal

IO.....means Intraosseous

IV .....means Intravenous

JVD.....means Jugular Venous Distention

MAD.....means Mucosal Atomizer Device

MOI.....means Mechanism of Injury

NRB.....means Non-rebreather

NS .....means Normal Saline

OPQRST ..... means Onset; Provokes; Quality; Radiates; Severity; Time (used in evaluating localized pain)

PCR ..... means Patient Care Record/Report

RR.....means Respiratory Rate

SAMPLE ..... means Symptoms; Allergies; Medications; Prior history; Last meal eaten; Events leading up to injury/illness

SL.....means Sublingual

SQ .....means Subcutaneous

TREATMENT PROTOCOLS

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GENERAL PATIENT CARE

A. RESPONSE

Review the dispatch information and select appropriate response.

B. SCENE ARRIVAL AND SIZE-UP

1. Consider Body Substance Isolation (BSI).
2. Consider Personal Protective Equipment (PPE).
3. Evaluate the scene safety.
4. Determine the number of patients.
5. Consider the need for additional resources.

C. PATIENT APPROACH

1. Determine the Mechanism of Injury (MOI) / Nature of Illness (NOI).
2. If appropriate, begin triage and initiate Mass Casualty Incident (MCI) procedures.

D. INITIAL ASSESSMENT

ALERT

Correct life-threatening problems as identified.

1. Airway
   a. Open and establish airway.
      1) Head tilt – chin lift if no suspicion of cervical spine injury
      2) Jaw thrust if evidence of potential cervical spine injury
   b. Suction as necessary
   c. If necessary, insert airway adjunct
      1) Oral airway if gag reflex is absent
      2) Nasal airway if gag reflex is present
   d. Cervical Spine Immobilization
      If patient presents with a traumatic mechanism refer to **Spinal Immobilization Protocol**.

ALERT

If the ability to adequately ventilate the patient cannot be established, the patient *MUST* be transported to the nearest emergency department. The patient's need to continue on to the nearest trauma or pediatric center should be made after adequate ventilation has been established.

2. Breathing
   a. Determine if breathing is adequate.
      1) If patient's ventilations are not adequate, provide assistance with 100% oxygen using Bag-Valve-Mask (BVM).
      2) Administer oxygen as appropriate.
         a) 12-15 lpm NRB to all patients (including COPD) experiencing cardiovascular, respiratory, or neurological compromise.
         b) 2-6 lpm by nasal cannula or 6-15 lpm mask delivery device to ***ALL*** other patients with no history of prescribed home oxygen.
         c) Patients with a history of prescribed home oxygen for chronic conditions should receive their prescribed home dosage of oxygen.
      3) Consider pulse oximetry, if available.

ALERT **Never withhold oxygen from a patient in respiratory distress!**

3. Circulation
   a. Assess brachial, radial, or carotid pulse.
      1) Infants and children less than 12 years of age:
         a) If patient is symptomatic with poor perfusion (unresponsive or only responds to painful stimuli) and pulse is less than 60 bpm or absent begin CPR.
         b) If pulse is greater than 60 bpm, continue assessment.
      2) Patients 1 year of age or greater: If pulse is absent, begin CPR and attach AED.

   b. Assess for and manage profuse bleeding.
   c. Assess skin color, temperature, and capillary refill.
   d. All patients greater than 35 years of age complaining of chest pain or shortness of breath should have 12-lead EKG performed, if equipment is available, to search for cardiac ischemia.

4. Disability
   a. Assess mental status using AVPU Scale
      1) **A**lert
      2) Responds to **V**erbal stimuli
      3) Responds to **P**ainful stimuli
      4) **U**nresponsive
   b. Perform Mini-Neurologic Assessment (Pulse / Motor / Sensory).

5. Exposure
   To assess patient's injuries, remove clothing as necessary, considering condition and environment.

E. HISTORY AND PHYSICAL EXAMINATION

1. For ***UNSTABLE / UNRESPONSIVE*** trauma patients:
   a. Conduct Rapid Trauma Assessment, assessing for *DCAP-BTLS***:**
      1) Head
         a) Crepitation
      2) Neck
         a) JVD
         b) Tracheal Deviation
      3) Chest
         a) Crepitation
         b) Respiration
         c) Paradoxical Motion
         d) Breath Sounds
      4) Abdomen
         a) Rigidity
         b) Distention
      5) Pelvis / GU
         a) Pain on Motion
         b) Blood, Urine, Feces
      6) Extremities
         a) Pulse / Motor / Sensory
      7) Posterior
   b. Obtain Baseline Vital Signs
   c. Obtain *SAMPLE* History

2. For ***STABLE / RESPONSIVE*** trauma patients:
   a. Determine chief complaint
   b. Perform focused examination of the injured site and areas compatible with given MOI
   c. Obtain Baseline Vital Signs
   d. Obtain *SAMPLE* History

3. For ***UNSTABLE / UNRESPONSIVE*** medical patients:
   a. Perform Rapid Physical Examination
      1) Head and Neck
         a) JVD
         b) Medical Alert Device
      2) Chest
         a) Breath Sounds
      3) Abdomen
         a) Rigidity
         b) Distention
      4) Pelvis / GU
         a) Blood, Urine, Feces

5) Extremities
   a) Motor / Sensory / Pulse
   b) Medical Alert Device
6) Posterior

b. Obtain Baseline Vital Signs
c. If possible, obtain history of episode from family or bystanders *(OPQRST).*
d. If possible, obtain *SAMPLE* History from family or bystanders.

4. For ***STABLE / RESPONSIVE*** medical patients:
   a. Obtain history of episode *(OPQRST).*
   b. Obtain Baseline Vital Signs
   c. Obtain *SAMPLE* History
   d. Perform a Focused Physical Exam, checking areas suggested by NOI.

5. Perform Detailed and Ongoing Assessments as dictated by patient condition.
   a. Reassess unstable patients frequently (recommended every 5 minutes).
   b. Reassess stable patients at a minimum of every 15 minutes.

F. TREATMENT PROTOCOLS

1. Refer to ***ALL*** appropriate protocols.

2. For pediatric patients:

   a. Equipment and medications must be appropriate for the size and weight of the patient. Use of the Broselow Tape or equivalent is encouraged.
   b. The developmental age of the infant/child must be considered in the communication and evaluation for treatment.
   c. Treatment priorities are similar to the adult patient.
   d. When appropriate, family members should remain with pediatric patients.
   e. Infants and children must be properly restrained prior to and during transport.

G. COMMUNICATIONS

1. Telemetry contact shall be established:
   a. For any medical emergency in which the EMS provider's judgment suggests consultation with a telemetry physician is necessary.
   b. For all trauma patients going to a Trauma Center.
   c. When telemetry contact is required per protocol.

Telemetry contact should be established by radio. Telephone contact may only be used if the call is recorded via a phone patch through the FAO at 382-9007

2. For patients who meet **Trauma Field Triage Criteria**, telemetry reports shall include:
   a. Patient age
   b. Gender
   c. Mechanism of injury
   d. Ambulatory at scene
   e. Suspected injuries
   f. Vital signs
   g. Airway status
   h. Neurologic status
   i. ETA
   j. An incident identifier if multiple patients are involved (e.g. fire department command code “Main Street Command”)

3. For all other patients, telemetry reports shall include, at a minimum:
   a. Attendant / vehicle identification.
   b. Nature of call: INFORMATION ONLY or REQUEST FOR PHYSICIAN ORDERS.
   c. Patient information: i.e. number, age, sex.
   d. Patient condition: i.e. stable, full arrest.
   e. History
      1) Basic problem or chief complaint.
      2) Pertinent associated symptoms.
      3) Time since onset.
      4) Past history, if pertinent.
   f. Objective findings
      1) General status of patient.
      2) Level of responsiveness.
      3) Vital signs.
      4) Pertinent localized findings.
      5) Working impression of patients' problem.
   g. Treatment
      1) In progress.
      2) Requests for drugs or procedures.
   h. Estimated Time of Arrival, including any special circumstances that may cause a delay in transport.

4. Notification of transport shall be provided to the receiving hospital for ***ALL*** other calls.
   a. Notification can be completed via:
      1) Radio
      2) Telephone
      3) EMSystem
   b. Notification reports shall include:
      1) Patient age
      2) Chief complaint

3) Type of bed required (monitored / unmonitored)
4) Unit #
5) ETA

H. DISPOSITION

1. Patients sustaining traumatic injuries shall be transported in accordance with the **Trauma Field Triage Criteria Protocol**.

2. Patients sustaining burn injuries shall be transported in accordance with the **Burns Protocol.**

3. Pediatric patients (< 18 y/o for transport purposes ONLY) shall be transported in accordance with the **Pediatric Patient Destination Protocol.**

4. Sexual assault victims shall be transported as follows:
   a. Victims <13 years of age shall be transported to Sunrise Hospital and Medical Center.
   b. Victims 13 years of age and up to 18 years of age shall be transported to either Sunrise Hospital and Medical Center or University Medical Center.
   c. Victims 18 years of age and older shall be transported to University Medical Center.

5. All medical patients in cardiac arrest or in whom the ability to adequately ventilate cannot be established should be transported to the closest facility.

6. Stable patients should be transported to the hospital of their choice.
   a. If the patient does not have a preference, the patient should be transported to the closest facility.
   b. Patients transported to an emergency department in accordance with the **Chronic Public Inebriate Protocol** shall be transported to the closest facility.

7. Upon arrival in the emergency department, any patient, excluding patients placed on a legal psychiatric hold, meeting all the following criteria may be placed in the hospital waiting room or other appropriate location:
   a. Normal vital signs
      1) HR 60-100
      2) RR 10-20
      3) Systolic BP 100-180
      4) Diastolic BP 60-100
      5) Room air pulse oximetry >94%
      6) Alert and oriented x 4
   b. Did not receive any parenteral medications during EMS transport except a single dose of Morphine Sulfate and/or Zofran.

c. In the judgment of the Paramedic, does not require continuous cardiac monitoring. Note: Any EKG monitoring initiated by a transferring facility may not be discontinued by EMS personnel.
d. Does not require intravenous fluids (saline lock is permissible).
e. Can maintain a sitting position without adverse impact on their medical condition.
f. Is left with a completed Prehospital Care Record, Patient Information Sheet and verbal notification to hospital personnel.

8. If a hospital declares an ***Internal Disaster***, that facility is to be bypassed for ***ALL*** patients except medical patients in cardiac arrest or in whom the ability to adequately ventilate has not been established.

9. If the patient declines prehospital care and/or transport, the following procedures shall be followed:
   a. Talk with the patient: Attempt to convince patient of the need for treatment. Reinforce the gravity of the situation.
   b. Talk with family/friends: Establish their relationship to the patient. They may be able to convince the patient to accept care.
   c. If the patient agrees to treatment/transport at this time, initiate appropriate care and transport.
   d. If the patient continues to decline treatment/transport, answer questions posed by algorithm on the Release of Medical Assistance form (Appendix B), circling appropriate response.
   e. Ensure complete documentation on the trip report to include a minimum of mental status exam and complete vital signs.
   f. Complete waiver and have patient sign if patient continues to decline treatment/transport.
   g. If patient refuses to sign, document refusal on PCR and waiver.
   h. If possible, have patient's refusal witnessed by a third-party (friend, law enforcement, etc).
   i. Attach one copy of waiver to prehospital medical record, give one copy to patient, and give third copy to secondary provider (if applicable).

I. TRANSFER OF CARE / RENDEZVOUS

Providers will relay assessment findings and treatment provided to the individual(s) assuming responsibility for the patient(s).

J. DOCUMENTATION

A Patient Care Record (PCR) will be completed for each incident/patient encounter, in accordance with current EMS Regulations.

K. CONFIDENTIALITY

Patient confidentiality must be maintained at all times.

L. PROFESSIONAL CONDUCT

All patients should be treated with dignity and respect in a calm and reassuring manner.

ABDOMINAL PAIN, BACK PAIN FLANK PAIN (Non-Traumatic)

BLS:

1. Initiate **General Patient Care**.

ILS:

2. If patient is greater than 35 years of age, a female in her childbearing years, or suffering from nausea/vomiting, attempt **Vascular Access.**

3. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

ALS:

4. If patient is greater than 35 years of age or has a history of cardiac disease, place on cardiac monitor.

5. If patient complains of nausea/vomiting, consider **Ondansetron HCl (Zofran)** 4 mg slow IV/IM. May repeat dose one time as indicated.

Pediatric dose of Ondansetron HCl (Zofran) is 0.15mg/kg IV/IM, not to exceed 4 mg.
(Recommended for use in children 2 years of age or greater)

6. Consider **Morphine Sulfate** 0.1 mg/kg slow IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals until pain is relieved or respiratory/mental status depression occur.

Morphine not recommended for use in children for abdominal pain.

7. Continue **General Patient Care.**

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ACUTE CORONARY SYNDROME (SUSPECTED)

ALERT

Nitroglycerin is contraindicated for any patient having taken Viagra, or similar medication, in the last 24 hours.

BLS:

1. Initiate **General Patient Care**.

2. Assess and treat for shock if indicated.

3. If the patient has a known history of coronary artery disease, assist the patient in administering his or her own **Nitroglycerin** exactly as prescribed ***IF*** initial ***SYSTOLIC*** blood pressure is greater than 100 mmHg, and pulse is greater than 60 bpm. May be repeated every 5 minutes if ischemic discomfort persists, and blood pressure and pulse remain stable. Maximum three doses total (patient ***AND*** EMT-B assisted).

ILS:

4. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

5. Attempt **Vascular Access**.

6. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

7. Administer **Acetylsalicylic Acid (Aspirin)** 324 mg (four – 81 mg chewable tablets) PO, if not contraindicated.

ALS:

8. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

9. Place patient on cardiac monitor. Obtain 12-lead EKG if equipment is available. Notify receiving facility if there is evidence of an acute myocardial infarction.

10. Treat any underlying dysrhythmia according to the appropriate protocol.

11. Administer **Nitroglycerin** 0.4 mg SL. May be repeated every 5 minutes if ischemic discomfort persists, ***SYSTOLIC*** blood pressure is greater than 100 mmHg, and pulse is greater than 60 bpm. IV access should be obtained prior to administration of Nitroglycerin.

Nitroglycerin should be used with caution in any patient with evidence of a right ventricular infarction (Inferior injury: ST elevation in II, III, aVF).

12. Administer **Morphine Sulfate** 0.1 mg/kg slow IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals until pain is relieved or respiratory/mental status depression occur.

13. If patient complains of nausea/vomiting, consider **Ondansetron HCl (Zofran)** 4 mg slow IV/IM. May repeat dose one time as indicated.

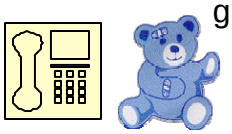
14. Complete **Fibrinolytic Eligibility Checklist** (Appendix A).

15. Continue **General Patient Care**.

ADVANCED AIRWAY MANAGEMENT

ALS:

1. Perform **Endotracheal Intubation.**
   a. Ensure patent **Vascular Access.**
   b. Hyperoxygenate the patient with 100% O_2 via BVM
   c. Maintain continuous pulse oximetry
   d. Maintain continuous cardiac monitoring
   e. For **Nasotracheal Intubation** prep the nostrils with **Phenylephrine (Neo-Synephrine)** 2-3 drops or 1-2 sprays in each nostril, and **Lidocaine 2% Lubricant**.
   f. If patient is 12 years of age or greater, administer **Etomidate (Amidate)** 0.3 mg/kg IV.
   g. If patient is less than 12 years of age, administer **Midazolam (Versed)** 0.1 mg/kg IV/IN titrated to effect. Maximum single dose: 5 mg**.** Must be given slowly over a period of 3-5 minutes. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg.



   h. Insert orotracheal or nasotracheal tube as appropriate.
   i. The following items ***MUST*** be documented on the Prehospital Care Record:

      Confirm tracheal placement:
      1) Visualization of the cords, if an orotracheal intubation
      2) Use of End-tidal CO_2 detector/capnography and results

      Confirm proper tube depth and adequacy of ventilation:
      4) Presence/absence of bilateral breath sounds
      5) Presence/absence of chest wall rise/fall
      6) Presence/absence of gastric sounds
      7) Reverification of tube position after ***EACH*** patient movement

   j. Secure tube with commercial tube holder or tape

2. Maintain patient sedation. Administer **Midazolam (Versed)** 0.1 mg/kg IV/IN. Maximum single dose: 5 mg. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg.

3. After successful intubation, insert nasogastric / orogastric tube for gastric distension that impairs adequate ventilation.

4. If there is evidence of complete airway obstruction unresolved by any other BLS or ALS procedures, or if a condition is present in which ventilation of a patient is not possible by any other BLS and ALS procedure, perform **Needle Cricothyroidotomy.**

5. If the patient has an obstructed or decannulated tracheostomy tube ***AND*** respiratory distress, perform **Tracheostomy Tube Replacement.**

6. Continue **General Patient Care.**

ALLERGY / ANAPHYLAXIS

BLS:

1. Initiate **General Patient Care**.

2. Assess degree of allergic reaction
   a. ***MILD***: generalized hives and pruritus
   b. ***MODERATE***: wheezing and/or mild respiratory distress
   c. ***SEVERE***: life-threatening respiratory compromise (angioedema/stridor) and/or hypotension

3. For moderate allergic reaction, assist the patient in administering their own **Bronchodilator Metered Dose Inhaler** exactly as prescribed.

4. For severe allergic reaction, assist the patient in administering their own **Epinephrine Auto-Injector** exactly as prescribed.

ILS:

5. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

6. Attempt **Vascular Access**.

7. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

8. For mild allergic reaction, administer **Diphenhydramine (Benadryl)** 50 mg IV/ IM.

Pediatric Benadryl dose is 1 mg/kg IV/IM, not to exceed 50 mg.

9. For moderate or severe allergic reaction, administer **Albuterol (Proventil)** 2.5 mg in 3.0 ml (0.083% solution) via nebulizer. Continue treatments until clinical condition improves.

10. For severe allergic reaction, administer **Epinephrine** 0.5 mg 1:10,000 IV or 1:1,000 SQ every 15 minutes as indicated by patient condition for a total maximum dose of 1.5 mg.

Pediatric **Epinephrine** dose is 0.01 mg/kg 1:10,000 IV or 1:1,000 SQ every 15 minutes as indicated by patient condition with a maximum single dose of 0.3 mg. May repeat x 2 for a total maximum dose of 0.9 mg.

ALS:

11. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

12. For moderate or severe allergic reaction, place patient on cardiac monitor.

13. Administer nebulized **Albuterol (Proventil)** 2.5 mg in 3.0 ml (0.083% solution) via endotracheal tube, if indicated. Continue treatments until clinical condition improves.

14. Continue **General Patient Care**.

ALTERED MENTAL STATUS

ALERT

Consider other causes of Altered Mental Status: e.g. Hypoxia or Thermoregulatory Dysfunction. Alcohol can cause altered mental status but is not commonly a cause of total unresponsiveness to pain.

BLS:

1. Initiate **General Patient Care**.

2. If the patient is seizing:
   a. ***DO NOT RESTRAIN***.
   b. Protect patient from further injury.

3. When seizure activity has stopped, identify and treat injuries.

4. If patient is a known diabetic, administer **Glucose** between the gum and cheek, if gag reflex is present.

ILS:

5. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

ALERT

If narcotic overdose/hypoglycemia is suspected, administer Narcan/Glucose prior to Combitube/intubation.

6. Consider **Vascular Access**.

7. If patient has respiratory depression **AND** is unresponsive, administer **Naloxone (Narcan)** 2 mg IN/IM/IV. If no change in patient's status or patient is slow to respond, administer Naloxone (Narcan) 2 mg IN/IM/IV, titrated to effect to a total maximum dose of 10 mg.

Pediatric Narcan dose is 0.1 mg/kg IN/IM/IV, not to exceed the adult dose.

8. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

9. Determine blood glucose using Chemstrip / Glucometer. If BS<80 mg/dl in the adult patient, administer:
   a. **Glucose 50% (D50)** 25 gm IV. If no response, repeat one additional 25 gm amp in 5 minutes to a total dose of 50 gm; ***OR***
   b. **Glucagon** 1 mg IM for patients in whom IV access cannot be achieved within ten minutes or three IV attempts.

If BS<60 mg/dl in the pediatric patient or <40 in the newborn patient, administer Glucose 0.5 gm/kg IV/IO.

< 5 kg Glucose 12.5% (D12.5) 4 ml/kg
5 – 15 kg Glucose 25% (D25) 2 ml/kg
>15 kg Glucose 50% (D50) 1 ml/kg

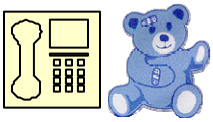
Pediatric Glucagon dose is 0.5 mg IM

ALS:

10. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

11. Place patient on cardiac monitor.

12. If patient is seizing, administer **Midazolam (Versed)** 0.1 mg/kg IN/IM/IV. Maximum single dose: 5 mg. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg.



Pediatric Versed dose is 0.1 mg/kg IN/IM/IV, to a single maximum dose of 5 mg.

13. Does the patient meet the criteria of the **Emergency Medical Services Procedure for the Chronic Public Inebriate** protocol?

14. Continue **General Patient Care**.

BEHAVIORAL EMERGENCIES

ALERT

Law enforcement assistance should be requested on all calls involving potentially violent patients.

BLS:

1. Initiate **General Patient Care**.

2. Consider medical causes of the patient's behavior
   a. Hypoxia
   b. Intoxication/overdose
   c. Hypoglycemia

3. Implement ***SAFER*** model.
   a. **S**tabilize the situation by containing and lowering the stimuli.
   b. **A**ssess and acknowledge the crisis.
   c. **F**acilitate the identification and activation of resources (chaplain, family, friends, or police).
   d. **E**ncourage patient to use resources and take actions in his/her best interest.
   e. **R**ecovery or referral - leave patient in care of responsible person or professional, or transport to appropriate facility.

4. If it is in the best interest of the patient and does not place EMS personnel in danger of physical harm, soft restraints may be applied to the wrists and ankles prior to transport. The reasons for restraint must be clearly documented on the patient care record.

ALERT

Under no circumstances are patients to be transported restrained in the prone position.

ALS:

5. If the patient continues to present a danger to himself or EMS personnel, consider chemical restraint. The reasons for chemical restraint must be clearly documented on the patient care record.
   a. Administer **Midazolam (Versed)** 0.1 mg/kg IM/IN/IV. Maximum single dose: 5 mg.

6. Consider **Vascular Access**.

7. If no change in patient's status or patient is slow to respond, administer **Midazolam (Versed)** 0.1 mg/kg IV/IN/IM. Maximum single dose: 5 mg. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg.

Midazolam not recommended for use in children for behavioral emergencies.

8. Continue **General Patient Care.**

BURNS

ALERT

Patients meeting the following criteria shall be transported to the Burn Center (UMC Adult or Pediatric E.D.):

(1) Second and/or third degree burns > 20% bsa
(2) Second and/or third degree burns > 10% bsa in patients under 10 or over 50 years of age
(3) Burns of the face, hands, feet, or perineum
(4) Electrical burns (including lightning)
(5) Chemical burns
(6) Suspected inhalation injury
(7) Circumferential burns

BLS:

1. Initiate **General Patient Care**.
2. Stop the burning process with water or saline.
3. Remove smoldering clothing and jewelry.
4. Continually monitor the airway for evidence of obstruction.
5. Cover the burned area with a dry sterile dressing. ***DO NOT*** use any type of ointment, lotion or antiseptic.
6. Estimate involved body surface area (BSA) using the "Rule of Nines."

ILS:

7. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.
8. Attempt **Vascular Access**, if indicated by patient condition.
9. If vital signs and patient's condition indicate hypoperfusion, ***OR*** there is greater than 10% BSA involved, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

ALS:

10. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

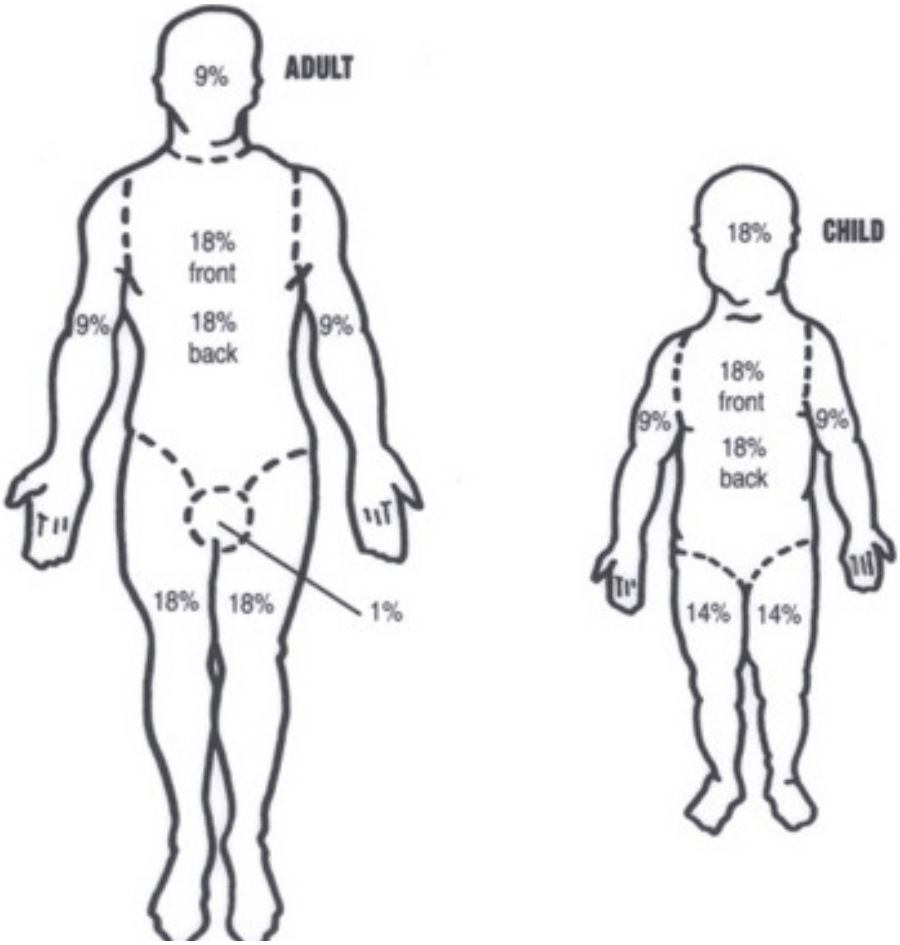
11. Place patient on cardiac monitor.

12. Consider **Morphine Sulfate** 0.1 mg/kg slow IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals until pain is relieved or respiratory/mental status depression occur.

Pediatric Morphine ***first*** dose is 0.1 mg/kg slow IV to a maximum single dose of 10 mg.

Additional pediatric Morphine doses by telemetry physician order only.

13. Continue **General Patient Care**.



CARDIAC ARREST

BLS:

1. Initiate **General Patient Care**.
2. Establish unresponsiveness, pulselessness, and apnea.
3. Does patient meet the criteria of the **Prehospital Death Determination** protocol?
4. Does the patient meet the criteria of the **Do Not Resuscitate (DNR)** protocol?
5. ***WITNESSED ARREST***, place patient on Automatic External Defibrillator (AED) and follow prompts.
6. ***UNWITNESSED ARREST***, provide two (2) minutes of uninterrupted CPR prior to AED analysis and follow prompts.
7. If patient has return of spontaneous circulation ensure adequate oxygenation and ventilation.

ILS:

8. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA.**
9. Attempt **Vascular Access.**
10. If patient has return of spontaneous circulation and vital signs indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, check lung fields. If clear, administer an additional 500 ml NS.

ALS:

11. Place patient on cardiac monitor.
12. Treat underlying dysrhythmia per appropriate protocol.
13. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

14. If patient has return of spontaneous circulation and vital signs indicate hypoperfusion unresponsive to fluid challenge administer **Dopamine (Intropin)** starting at 5 mcg/kg/min via continuous IV infusion. Titrate to a **SYSTOLIC** blood pressure of 100 mmHg not to exceed 20 mcg/kg/min.

15. If patient remains unresponsive to resuscitation efforts, consider **Termination of Resuscitation**.

16. Continue **General Patient Care**.

CARDIAC DYSRHYTHMIA: ASYSTOLE

ALS:

1. Administer **Epinephrine** 1.0 mg every 3-5 minutes IV/ETT until desired effect is achieved. (ETT administration requires 2-2 ½ times IV dose).

Pediatric Epinephrine dose is 0.01 mg/kg 1:10,000 IV or 0.1 mg/kg 1:1,000 ETT every 3-5 minutes, not to exceed adult dose.

In neonatal resuscitation (0-30 days), 1:10,000 is to be used. The ETT dose remains unchanged at 0.01 mg/kg repeated every 3-5 minutes, if necessary.

2. Administer **Atropine** 1.0 mg IV/ETT every 3-5 minutes until heart rate of 60 bpm or clinical condition improves or total dose of 3 mg (ETT administration requires 2-2½ times IV dose).

Atropine not recommended for use in children.

3. If prolonged arrest, identify and treat potential underlying causes:

a. Hypovolemia	Volume Infusion
b. Hypoxia	**Oxygenation & Ventilation**
c. Hydrogen ion (Acidosis)	**Sodium Bicarbonate**
d. Hyperkalemia	**Calcium Chloride**, **Glucose**, **Sodium Bicarbonate**; **Albuterol**
e. Hypothermia	Warming
f. Tablets (Overdose)	
TCA's	**Sodium Bicarbonate**
Beta Blockers	**Glucagon**
Ca Channel Blockers	**Calcium Chloride**
Opiates	**Narcan**
g. Tamponade (Cardiac)	Volume Infusion
h. Tension Pneumothorax	**Needle Decompression**
i. Thrombosis, Heart (AMI)	Dysrhythmia Focused Therapy
j. Thrombosis, Pulmonary	Volume Infusion

4. If patient remains unresponsive to resuscitation efforts, consider **Termination of Resuscitation**.

5. Continue **General Patient Care**.

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CARDIAC DYSRHYTHMIA: BRADYCARDIA

ALS:

1. Place patient on cardiac monitor.

2. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

For the ***HEMODYNAMICALLY UNSTABLE*** patient

3. Initiate **Transcutaneous Pacing**. Do not delay Pacing while awaiting IV access. In the conscious patient, administer:

   Sedation:

   a. **Midazolam (Versed)** 0.1 mg/kg IN/IV/IM. Maximum single dose: 5 mg. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg; ***AND***

   Analgesia:

   b. **Morphine Sulfate** 0.1 mg/kg IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals until pain is relieved or respiratory/mental status depression occur.


Pediatric Pacing is by Telemetry Physician order only.

For the ***HEMODYNAMICALLY STABLE*** but symptomatic bradycardia patient

7. Consider **Atropine** 0.5 mg IV/ETT every 3-5 minutes until heart rate of 60 bpm or clinical condition improves or total dose of 3 mg (ETT administration requires 2-2 ½ times IV dose).

ALERT

Atropine should be used with caution in patients with Suspected Acute MI, Type II - Second Degree (Mobitz II) or Third Degree Heart Block with wide complex ventricular escape beats.

ALERT

Denervated transplanted hearts will not respond to atropine. Go directly to pacing and/or Dopamine.

ALERT

Bradycardia in the pediatric patient is most commonly due to hypoxia. Ensure adequate oxygenation prior to administration of Epinephrine or Atropine.

8. In the pediatric patient Epinephrine is the initial drug of choice. Administer **Epinephrine** 0.01 mg/kg 1:10,000 IV or 0.1 mg/kg 1:1,000 ETT every 3-5 minutes, not to exceed adult dose.

   The pediatric **Atropine** dose is 0.02 mg/kg IV/ETT with a minimum dose of 0.1 mg. May repeat once in 5 minutes with a total maximum dose of 1 mg.

9. If patient is refractory to maximum dose of Atropine, administer **Dopamine (Intropin)** starting at 5 mcg/kg/min via continuous IV infusion. Titrate to a **SYSTOLIC** blood pressure of 100 mmHg not to exceed 20 mcg/kg/min.

10. Continue **General Patient Care**.

CARDIAC DYSRHYTHMIA: MONOMORPHIC VENTRICULAR TACHYCARDIA

ALS:

1. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

2. Place patient on cardiac monitor.

For the ***HEMODYNAMICALLY UNSTABLE*** patient

3. Perform **Synchronized Cardioversion**.

4. If there is any doubt whether an unstable patient has monomorphic or polymorphic ventricular tachycardia, do not delay treatment for further rhythm analysis. Perform **Defibrillation**.

5. Consider sedation prior to **Synchronized Cardioversion** or **Defibrillation**; administer **Etomidate (Amidate)** 0.15 mg/kg IV.

Pediatric cardioversion should begin at 0.5 to 1 J/kg and may increase to 2 J/kg if initial dose is unsuccessful. Pediatric defibrillation shall be at 2 J/kg. If unsuccessful, defibrillation should be attempted at 4 J/kg and continue at 4 J/kg until conversion occurs. Consider sedation prior to cardioversion or defibrillation; administer Etomidate 0.15 mg/kg IV.

6. If cardioversion is unsuccessful, administer **Amiodarone (Cordarone)** 150 mg in 50 ml NS IV to run over 10 minutes.

Pediatric Amiodarone dose is 5 mg/kg in 50 ml NS IV to run over 20 minutes.

7. Repeat **Synchronized Cardioversion** or **Defibrillation** if ventricular tachycardia not resolved. Reassess need for additional sedation. Repeat Etomidate, if necessary.

8. If unsuccessful, repeat **Amiodarone (Cordarone)** 150 mg in 50 ml NS IV to run over 10 minutes.

Pediatric Amiodarone dose is 5 mg/kg in 50 NS IV to run over 20 minutes.

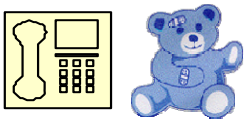
9. Repeat **Synchronized Cardioversion** or **Defibrillation** if ventricular tachycardia not resolved.

For the ***HEMODYNAMICALLY STABLE*** patient

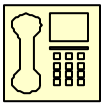
10. Perform a 12 Lead EKG in an attempt to establish specific rhythm.

    Confirmed Torsades de Pointes: See Torsades de Pointes Protocol.

11. Administer **Amiodarone (Cordarone)** 150 mg in 50 ml NS IV to run over 10 minutes.

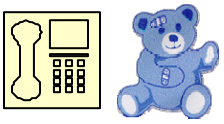


Pediatric Amiodarone dose is 5 mg/kg in 50 ml NS IV to run over 20 minutes.



12. If refractory to drug therapy and the patient remains ***HEMODYNAMICALLY STABLE***, consider **Synchronized Cardioversion**.

13. Consider sedation prior to cardioversion; administer **Etomidate (Amidate)** 0.15 mg/kg IV.



Pediatric cardioversion should begin at 0.5 to 1 J/kg and may increase to 2 J/kg if initial dose is unsuccessful. Consider sedation prior to cardioversion; administer Etomidate 0.15 mg/kg IV.

14. Continue **General Patient Care**.

CARDIAC DYSRHYTHMIA: PULSELESS ELECTRICAL ACTIVITY

ALS:

1. Administer **Epinephrine** 1.0 mg every 3-5 minutes IV/ETT until desired effect is achieved. (ETT administration requires 2-2 ½ times IV dose).

Pediatric Epinephrine dose is 0.01 mg/kg 1:10,000 IV or 0.1 mg/kg 1:1,000 ETT every 3-5 minutes, not to exceed adult dose.

In neonatal resuscitation (0-30 days), 1:10,000 is to be used. The ETT dose remains unchanged at 0.01 mg/kg repeated every 3-5 minutes, if necessary.

2. If underlying rhythm is bradycardic, administer **Atropine** 1.0 mg IV/ETT every 3-5 minutes until heart rate of 60 bpm or clinical condition improves or total dose of 3 mg (ETT administration requires 2-2 ½ times IV dose).

Atropine not recommended for use in children.

Bradycardia in the pediatric patient is most commonly due to hypoxia. Ensure adequate oxygenation.

3. Identify and treat potential underlying causes:

a. Hypovolemia	Volume Infusion
b. Hypoxia	**Oxygenation & Ventilation**
c. Hydrogen ion (Acidosis)	**Sodium Bicarbonate**
d. Hyperkalemia	**Calcium Chloride**, **Glucose**, **Sodium Bicarbonate**; **Albuterol**
e. Hypothermia	Warming
f. Tablets (Overdose)	
TCA's	**Sodium Bicarbonate**
Beta Blockers	**Glucagon**
Ca Channel Blockers	**Calcium Chloride**
Opiates	**Narcan**
g. Tamponade (Cardiac)	Volume Infusion
h. Tension Pneumothorax	**Needle Decompression**
i. Thrombosis, Heart (AMI)	Dysrhythmia Focused Therapy
j. Thrombosis, Pulmonary	Volume Infusion

4. If patient remains unresponsive to resuscitation efforts, consider **Termination of Resuscitation**.
5. Continue **General Patient Care**.

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CARDIAC DYSRHYTHMIA: SUPRAVENTRICULAR TACHYCARDIA (NARROW COMPLEX)

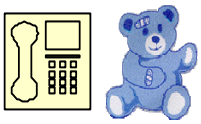
ALS:

1. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

2. Place patient on cardiac monitor. Obtain 12 Lead EKG, if equipment available.

For the ***HEMODYNAMICALLY UNSTABLE*** patient

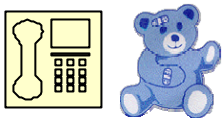
3. Administer **Adenosine (Adenocard)**, if IV is already established, 12 mg fast IV.



Pediatric Adenosine dose is 0.2 mg/kg fast IV, not to exceed 12 mg.

4. If unsuccessful, or IV not established, perform **Synchronized Cardioversion**.

5. Consider sedation prior to cardioversion; administer **Etomidate (Amidate)** 0.15 mg/kg IV.



Pediatric cardioversion should begin at 0.5 to 1 J/kg and may increase to 2 J/kg if initial dose is unsuccessful. Consider sedation prior to cardioversion; administer Etomidate 0.15 mg/kg IV.

6. If unsuccessful, repeat **Synchronized Cardioversion**. Reassess need for additional sedation. Repeat Etomidate, if necessary.

For the ***HEMODYNAMICALLY STABLE*** patient

7. Attempt **Vagal Maneuvers**.

8. If unsuccessful, administer **Adenosine (Adenocard)** 6 mg fast IV. If first dose is unsuccessful in 1-2 minutes, may repeat at 12 mg fast IV.


Pediatric Adenosine dose is 0.1 mg/kg fast IV, not to exceed 6 mg. If first dose is unsuccessful in 1-2 minutes, may repeat at 0.2 mg/kg fast IV, not to exceed 12 mg.

9. Continue **General Patient Care**.

Adenosine (Adenocard) should be used with caution in patients taking Digoxin or carbamazepine (Tegretol).
Patient's who develop high-level A-V block with the first dose of Adenosine should not receive additional doses.

CARDIAC DYSRHYTHMIA: TORSADES DE POINTES

ALS:

1. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

2. Place patient on cardiac monitor.

For the ***HEMODYNAMICALLY UNSTABLE*** patient

3. Perform **Synchronized Cardioversion**.

4. If there is any doubt whether an unstable patient has monomorphic or polymorphic ventricular tachycardia, do not delay treatment for further rhythm analysis. Perform **Defibrillation**.

6. Consider sedation prior to **Synchronized Cardioversion** or **Defibrillation**; administer **Etomidate (Amidate)** 0.15 mg/kg IV.

Pediatric cardioversion should begin at 0.5 to 1 J/kg and may increase to 2 J/kg if initial dose is unsuccessful. Pediatric defibrillation shall be at 2 J/kg. If unsuccessful, defibrillation should be attempted at 4 J/kg and continue at 4 J/kg until conversion occurs. Consider sedation prior to cardioversion or defibrillation; administer Etomidate 0.15 mg/kg IV.

7. If **Synchronized Cardioversion** or **Defibrillation** is unsuccessful, administer **Magnesium Sulfate** 2 gm slow IV.

Pediatric Magnesium dose is 25 mg/kg slow IV/IO.

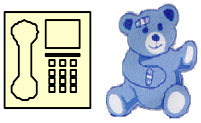
8. Repeat **Synchronized Cardioversion** or **Defibrillation** if Torsades de Pointes not resolved. Reassess need for additional sedation. Repeat **Etomidate (Amidate)**, if necessary.

For the ***HEMODYNAMICALLY STABLE*** patient

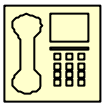
8. Perform a 12 Lead EKG in an attempt to establish specific rhythm.

   ***Confirmed Monomorphic: See* Monomorphic VT Protocol.**

9. Administer **Magnesium Sulfate** 2 gm slow IV.



Pediatric Magnesium dose is 25 mg/kg slow IV.



10. If refractory to drug therapy and the patient remains ***HEMODYNAMICALLY STABLE***, consider **Synchronized Cardioversion**.

11. Consider sedation prior to cardioversion; administer **Etomidate (Amidate)** 0.15 mg/kg IV.

12. Continue **General Patient Care**.

CARDIAC DYSRHYTHMIA: VENTRICULAR FIBRILLATION OR PULSELESS VENTRICULAR TACHYCARDIA

ALS:

1. ***WITNESSED ARREST***, initiate immediate **Defibrillation.**

   UNWITNESSED ARREST, provide two (2) minutes of uninterrupted CPR prior to **Defibrillation**.

   Initial pediatric defibrillation dose is 2 J/kg. Additional shocks should be delivered at 4 J/kg.

2. If unsuccessful, administer **Epinephrine** 1.0 mg every 3-5 minutes IV/ETT until desired effect is achieved. (ETT administration requires 2-2 ½ times IV dose).

   Pediatric Epinephrine dose is 0.01 mg/kg 1:10,000 IV or 0.1 mg/kg 1:1,000 ETT every 3-5 minutes, not to exceed adult dose.

   In neonatal resuscitation (0-30 days), 1:10,000 is to be used. The ETT dose remains unchanged at 0.01 mg/kg repeated every 3-5 minutes, if necessary.

3. Defibrillate.

4. If unsuccessful, Administer **Amiodarone (Cordarone)** 300 mg IV.

   Pediatric Amiodarone dose is 5 mg/kg IV.

5. Defibrillate.

6. If unsuccessful, administer **Amiodarone (Cordarone)**150 mg IV.

   Repeat pediatric Amiodarone dose is 5 mg/kg IV.

7. Defibrillate.

8. If Torsades de Pointes is suspected, administer **Magnesium Sulfate** 2 gm slow IV.


   Pediatric Magnesium dose is 25 mg/kg slow IV.

9. If prolonged arrest, identify and treat potential underlying causes:

a. Hypovolemia	Volume Infusion
b. Hypoxia	**Oxygenation & Ventilation**
c. Hydrogen ion (Acidosis)	**Sodium Bicarbonate**
d. Hyperkalemia	**Calcium Chloride, Glucose, Sodium Bicarbonate; Albuterol**
e. Hypothermia	Warming
f. Tablets (Overdose)	
TCA's	**Sodium Bicarbonate**
Beta Blockers	**Glucagon**
Ca Channel Blockers	**Calcium Chloride**
Opiates	**Narcan**
g. Tamponade (Cardiac)	Volume Infusion
h. Tension Pneumothorax	**Needle Decompression**
i. Thrombosis, Heart (AMI)	Dysrhythmia Focused Therapy
j. Thrombosis, Pulmonary	Volume Infusion

10. Continue **General Patient Care.**

HYPERKALEMIA (ADULT)

ALERT

Patients must have suspected hyperkalemia (crush syndrome, chronic renal failure), AND electrocardiographic findings consistent with hyperkalemia (bradycardia with widened QRS complexes) AND hemodynamic instability BEFORE initiating treatment.

ALS:

1. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

2. Place patient on cardiac monitor.

3. Administer **Calcium Chloride** 1 gm slow IV.

ALERT

Calcium Chloride is contraindicated in patients taking digitalis products.

4. Administer **Glucose 50% (D50)** 25 gm IV.

5. Administer **Sodium Bicarbonate** 50 mEq IV.

6. Administer **Albuterol (Proventil)** 2.5 mg in 3.0 ml normal (0.083% solution) via nebulizer.

7. May repeat **Calcium Chloride**, **Sodium Bicarbonate** and **Albuterol (Proventil)** if patient condition deteriorates after period of improvement.

8. Continue **General Patient Care**.

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OBSTETRICAL / GYNECOLOGICAL EMERGENCIES

BLS:

1. Initiate **General Patient Care**.

2. If patient presents with vaginal bleeding, determine pregnancy status
   a. Any passed tissue or products of conception should be transported with the patient.

3. If patient presents pregnant, with contractions and/or pain, accompanied by bleeding or discharge, crowning during contraction, the feeling of an impending bowel movement, and/or a rock-hard abdomen, prepare for imminent delivery.

   a. Normal (head first) presentation
      1) Puncture amniotic sac if not already broken
      2) Deliver and support the head
      3) Suction mouth then nose. If meconium is present, repeat several times
      4) Deliver upper shoulder then lower shoulder
      5) Deliver remainder of baby
      6) Clamp and cut umbilical cord
      7) If multiple births, return to step 2 and repeat
      8) Deliver placenta

   b. Limb presentation
      1) Place mother in left lateral recumbent position

   c. Breech presentation
      1) Deliver body, supporting baby's weight

   d. Cord presentation
      1) Position mother on elbows and knees, with hips elevated
      2) Wrap cord and keep it moist
      3) Insert gloved hand to lift baby off the cord
      4) Obtain and document cord pulse

ILS:

4. Attempt **Vascular Access.**

5. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. If patient's condition does not improve, administer additional challenges as needed, not to exceed 2,000 ml.

ALS:

6. If patient is pregnant and seizing, assume eclampsia and administer **Magnesium Sulfate** 4 gm slow IV over 5 minutes.

7. If patient is pregnant and manifesting symptoms of pre-eclampsia (significant hypertension, generalized edema, headache, photophobia), administer **Magnesium Sulfate** 2 gm slow IV over 5 minutes.

8. Continue **General Patient Care.**

OVERDOSE / POISONING

BLS:

1. Initiate **General Patient Care**.

4. If possible, identify substance and amount ingested or otherwise exposed to. Collect any empty bottles/containers and transport with the patient.

ALERT

If the ingested / exposed substance poses a hazard or potential risk of contaminating EMS personnel, vehicles, or the receiving facility DO NOT transport the material with the patient.

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3. If the ingestion occurred within ***ONE HOUR OF EMS ARRIVAL***, administer **Activated Charcoal** 50 gm PO.

Pediatric Charcoal dose is 1 gm/kg PO. Minimum dose is 10 gm. Maximum dose is 50 gm.

ILS:

4. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

ALERT

If patient is suspected to have narcotic overdose/hypoglycemia administer Narcan/Glucose prior to Combitube/intubation.

5. Consider **Vascular Access.**

6. If patient has respiratory depression **AND** is unresponsive, administer **Naloxone (Narcan)** 2 mg IN/IM/IV. If no change in patient's status or patient is slow to respond, administer Naloxone (Narcan) 2 mg IN/IMIV, titrated to effect to a total maximum dose of 10 mg.

Pediatric Narcan dose is 0.1 mg/kg IN/IM/IV, not to exceed the adult dose.

7. If patient is experiencing a dystonic reaction, administer **Diphenhydramine (Benadryl)** 50 mg IV/IM.

Pediatric Benadryl dose is 1 mg/kg IV/IM, not to exceed 50 mg.

ALS:

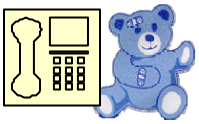
8. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

9. Place patient on cardiac monitor.

10. If Tricyclic Antidepressant or Aspirin overdose is suspected ***AND*** the patient has QRS widening on EKG, administer **Sodium Bicarbonate** 1 mEq/kg 50 mEq/50 ml (8.4% solution) IV.

Pediatric Sodium Bicarbonate dose is 1 ml/kg 50 mEq/50 ml (8.4% solution) IV/IO (Use 4.2% solution for neonatal patients).

11. If Calcium Channel Blocker overdose is suspected ***AND*** the patient is bradycardic and hypotensive, administer **Calcium Chloride** 10 ml (1.0 gram) of 10% solution slow IVP.



Pediatric Calcium Chloride dose is 20 mg/kg (0.2 ml/kg of 10% solution) slow IV/IO.

Calcium Chloride is contraindicated for calcium channel blocker toxicity in patients taking digitalis products.

12. If Beta Blocker overdose is suspected ***AND*** the patient is bradycardic and hypotensive, administer **Glucagon** 1 mg IV/IM. May repeat dose in 3-5 minutes if no improvement.

Pediatric Glucagon dose is 0.5 mg IV/IM.

13. If Organophosphate toxicity is suspected, administer **Atropine** 2 mg IV every 15 minutes as necessary to decrease secretions and ventilatory resistance.

Pediatric Atropine is 0.02 mg/kg IV every 15 minutes as necessary to decrease secretions and ventilatory resistance. Minimum dose: 0.1 mg.

14. Continue **General Patient Care**.

PULMONARY EDEMA / CHF (ADULT)

BLS:

1. Initiate **General Patient Care**.

2. Place patient in position of comfort.

ILS:

3. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

4. Attempt **Vascular Access**.

ALS:

5. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol, as indicated by patient's condition.

6. Place patient on cardiac monitor.

7. Treat any underlying dysrhythmia according to the appropriate protocol.

8. Administer **Nitroglycerin** 0.4 mg SL. May be repeated every 5 minutes if ***SYSTOLIC*** blood pressure is greater than 100 mmHg, and pulse is greater than 60 bpm.

9. Administer **High Dose Nitroglycerin** 1.6 mg SL if ***DIASTOLIC*** blood pressure is greater than 100 mmHg. May be repeated every 5 minutes as long as ***DIASTOLIC*** blood pressure is greater than 100 mmHg.

Nitroglycerin is contraindicated for any patient having taken Viagra, or similar medication, in the last 24 hours.

10. If wheezing is present, administer **Albuterol (Proventil)** 2.5 mg in 3.0 ml NS (0.083% solution) for nebulizer. Continue treatments until clinical condition improves.

11. Consider **Furosemide (Lasix)** 0.5 mg/kg slow IV, to a total maximum dose of 40 mg.

12. If patient is in cardiogenic shock, administer **Dopamine (Intropin)** starting at 5 mcg/kg/min via continuous IV infusion. Titrate to a **SYSTOLIC** blood pressure of 100 mmHg not to exceed 20 mcg/kg/min.

13. Continue **General Patient Care**.

RESPIRATORY DISTRESS WITH BRONCHOSPASM

BLS:

1. Initiate **General Patient Care**.

2. Assist the patient in administering his or her own **Bronchodilator Metered Dose Inhaler** exactly as prescribed.

ILS:

3. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

4. For severe distress, attempt **Vascular Access**.

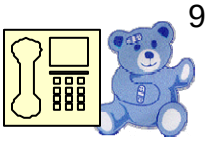
5. Administer **Albuterol (Proventil)** 2.5 mg in 3.0 ml NS (0.083% solution) for nebulizer. Continue treatments until clinical condition improves.

ALS:

6. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

7. For severe distress, place patient on cardiac monitor.

8. Administer nebulized **Albuterol (Proventil)** 2.5 mg in 3.0 ml NS (0.083% solution) via endotracheal tube, if indicated. Continue treatments until clinical condition improves.



9. For suspected Croup in the pediatric patient with stridor, increased work of breathing, poor air movement, SpO_2 < 94%, or altered mental status, administer **Epinephrine** 1:1,000 3-5 mg (3-5 ml) via nebulizer.

10. Continue **General Patient Care**.

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SHOCK (NON-TRAUMATIC)

BLS:

1. Initiate **General Patient Care.**

ILS:

2. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

3. Attempt **Vascular Access.**

4. If lung fields are clear, administer initial fluid challenge of 500 ml NS. Administer additional challenges as needed, to maintain cerebral perfusion, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

ALS:

5. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

6. Place patient on cardiac monitor.

7. Administer **Dopamine (Intropin)** starting at 5 mcg/kg/min via continuous IV infusion. Titrate to a **SYSTOLIC** blood pressure of 100 mmHg not to exceed 20 mcg/kg/min.

8. Continue **General Patient Care**.

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TRAUMA

BLS:

1. Initiate **General Patient Care.**

2. Control hemorrhage

3. Immobilize suspected fractures and dislocations. In the case of severe deformity with distal cyanosis or pulselessness, apply gentle in-line traction before splinting. Document presence/absence of pulse before and after immobilization.

4. If a sucking chest wound is suspected, seal the wound with an occlusive dressing taped down on three sides. If the patient's breathing becomes worse, lift one corner of the dressing to release pressure, and then re-seal.

5. Impaled objects must be left in place, and should be stabilized by building up around object with multi-trauma dressings, etc., taking care that the penetrating object is not allowed to do further damage.

ILS:

6. If airway is not manageable by BLS methods, consider use of the **Combitube/Combitube SA** as indicated by patient condition.

7. Attempt **Vascular Access.**

8. If vital signs and patient's condition indicate hypoperfusion, administer initial fluid challenge of 500 ml NS. Administer additional challenges as needed, to maintain cerebral perfusion, not to exceed 2,000 ml.

Pediatric fluid bolus is 20 ml/kg. May repeat as clinically indicated to a maximum of 80 ml/kg.

ALS:

9. If airway is not manageable by BLS methods, follow **Advanced Airway Management** protocol**,** as indicated by patient's condition.

10. Place patient on cardiac monitor.

11. Perform **Needle Thoracentesis** if there is evidence of a tension pneumothorax, demonstrated by the presence of:

a. Progressive respiratory distress and/or increased resistance to bagging, ***AND***
b. Unilateral diminished/absent breath sounds, associated with
    1) Tracheal deviation, or
    2) Jugular venous distension, or
    3) Signs of shock, low BP with chest trauma present

12. For isolated extremity trauma, consider **Morphine Sulfate** 0.1 mg/kg slow IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals until pain is relieved or respiratory/mental status depression occur.

Pediatric Morphine ***first*** dose is 0.1 mg/kg slow IV to a maximum single dose of 10 mg.

Additional pediatric Morphine doses by telemetry physician order only.

13. Continue **General Patient Care**.

OPERATIONS PROTOCOLS

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CHRONIC PUBLIC INEBRIATE

1. A person who is suspected to be under the influence of alcohol and has no other emergent medical need may be transported to an approved alcohol and drug abuse facility rather than a hospital's emergency department ***IF*** the patient meets ***ALL*** of the following criteria:

   a. Patient is able to stand with minimal assistance of one or two people
   b. Vitals as follows:
      1) Blood Pressure: Systolic: 90 – 180
         Diastolic: 60 – 100
      2) Pulse rate of 60 – 120
      3) Respiratory rate of 16 – 28
      4) Glucose between 50 – 250
      5) Glascow Coma Score $\geq$14
   c. No acute medical complications
   d. No signs of trauma
   e. No suspected head injury
   f. Approval of the physician or medical staff upon assessment of the patient after he/she arrives at the alternative facility.

All of the above parameters must be met and the patient must be clinically stable other than signs and symptoms of withdrawal from alcohol and/or substance abuse.

2. If there is ***ANY*** doubt whether the person is in need of emergency medical care, they should be transported to the closest hospital's emergency department.

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DO NOT RESUSCITATE

1. All patients with absent vital signs who do not have conclusive signs of death (refer to **Prehospital Death Determination Protocol**) shall be treated with life-resuscitating measures unless EMS personnel are presented with a valid Do-Not Resuscitate (DNR) Identification or Order.

ALERT

- **A valid do-not-resuscitate identification is a form, wallet card or medallion issued by the Southern Nevada Health District, Nevada State Health Division or an identification issued by another state indicating a person's desire and qualification to have life resuscitating treatment withheld.**
- **A valid do-not-resuscitate order is a written directive issued by a physician licensed in this state that life-resuscitating treatment is not to be administered to a qualified patient.**
- **Verbal instructions from friends or family members do not constitute a valid DNR.**

2. During an inter-facility transfer or while the patient is being prepared for such a transfer, a written directive to withhold life-resuscitating treatment issued by a physician in the qualified patient's medical record shall be honored in accordance with this protocol.

3. If the EMS provider is presented with a DNR Order or Identification, he shall make efforts to verify the validity of the Order or Identification. Such efforts should include patient's name, age, condition of identification, etc. to withhold life-resuscitating treatment.

4. The DNR Order or Identification shall be determined invalid if at any time the patient states or otherwise indicates that he/she wishes to receive life-resuscitating treatment. The EMS provider shall document the presence of the DNR Order or Identification and how the patient indicated that he/she wanted the Order or Identification to be revoked. EMS personnel shall relay this information to any subsequent medical providers including but not limited to flight crews and staff at the receiving medical facility.

5. Once the DNR Order or Identification is determined to be valid and has not been revoked by the patient, the emergency care provider shall provide ONLY supportive care and withhold life-resuscitating measures.

6. EMS personnel will document on the prehospital Patient Care Record the presence of the DNR Order or Identification. Documentation should include the

patient's name, physician's name and identification number, which are found on the DNR Order or Identification.

7. An EMS provider who is unwilling or unable to comply with the DNR protocol shall take all reasonable measures to transfer a patient with a DNR Order or Identification to another provider or facility in which the DNR protocol may be followed.

INTER-FACILITY TRANSFER OF PATIENTS BY AMBULANCE

1. Ambulance attendants should be aware that whenever a patient is to be transferred from one medical facility to another by EMS, the transferring physician is responsible for notifying, in advance, the receiving physician of the following:

    a. Reason for transfer
    b. Patient condition
    c. Estimated time of arrival

2. Ambulance attendants should expect that the transferring physician will provide to them the name of the receiving facility and receiving physician, a copy of any available diagnostic tests, X-rays and patient medical records prior to releasing the patient.

3. Ambulance attendants should only transfer a patient whose therapy required during the transfer lies within the ambulance attendant's capabilities, or that appropriate personnel (registered nurse, respiratory therapist, etc.) accompanies the patient.

    a. Ambulance attendants are authorized to administer or monitor all medications listed on the Official Drug Inventory as appropriate for their level of licensure and as per protocol. Appropriate personnel must accompany any patient requiring medications not listed on the current BLS, ILS, ALS inventories during transport.
    b. ILS and ALS ambulance attendants are authorized to administer or monitor any crystalloid IV solution during transport.
    c. Arterial lines should be discontinued prior to transport unless appropriate personnel from the initiating facility accompany the patient.
    d. Heparin locks/implantable catheters with/without reservoirs may be closed off and left in place. If they are to be used during transport, then an IV drip should be established.
    e. IV pump systems should be discontinued prior to transport unless appropriate personnel from the initiating facility accompany the patient.
    f. Orogastric or nasogastric tubes may be left in place and should either be closed off or left to suction per order of transferring physician.
    g. Orthopedic devices may be left in place at the ambulance attendant's discretion as to ability to properly transport the patient with existing device(s) in place.
    h. Trained personnel authorized to operate the apparatus should accompany any patient requiring mechanical ventilation during

transport. If the patient will require manual ventilatory assistance, then at least two persons shall be available to attend to the patient.

i. In certain situations, it may be necessary that a patient receive, just prior to transport, a medication which ambulance attendants are not authorized to use. If this medication will exert its effect during the transport, then appropriate personnel from the initiating facility must accompany the patient.

4. If during the transfer the patient becomes unstable, the patient may be transported to the closest facility, at the ambulance attendant's discretion, regardless of the pre-arranged destination.

PEDIATRIC PATIENT DESTINATION

Pediatric patients (age <18 years of age) shall be transported in accordance with the following criteria:

1. Pediatric patients (including psychiatric patients) shall be transported, based on the preference of the parent or legal guardian, to the one of the following facilities:
   a. St. Rose Hospital – Siena Campus
   b. Summerlin Hospital
   c. Sunrise Hospital and Medical Center
   d. University Medical Center

2. If the parent or legal guardian does not have a preference, the patient shall be transported to the closest of the above facilities.

3. If, in the judgment of prehospital personnel, the transport time to one of the above facilities would be detrimental to a critically ill / unstable pediatric patient, the patient should be transported to the closest Emergency Department.

4. The patient may be transported to a non-designated facility:
   a) At the request of the parent or legal guardian and if the child is deemed stable by the EMS provider; or
   b) The incident is greater than 50 miles from the closest pediatric facility; and
   c) The receiving facility and physician are contacted and agree to accept the patient.

5. Pediatric trauma patients are to be transported in accordance with the **Trauma Field Triage Criteria Protocol**.

6. Pediatric sexual assault victims are to be transported in accordance with Section H of the **General Patient Care Protocol**.

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PREHOSPITAL DEATH DETERMINATION

1. Patients encountered by EMS personnel in Clark County that appear to have expired will not be resuscitated or transported if any of the following obvious signs of death are present:
    a) Body decomposition
    b) Decapitation
    c) Transection of thorax (hemicorpectomy)
    d) Incineration
    e) Massive blunt, open or penetrating trauma to the head, neck or chest with obvious organ destruction

OR if ***ALL*** four (4) presumptive signs of death ***AND AT LEAST*** one (1) conclusive sign of death are identified.

The four (4) presumptive signs of death that ***MUST*** be present are:

1) Unresponsiveness
2) Apnea
3) Pulselessness
4) Fixed dilated pupils

Conclusive signs of death include:

1) Dependent lividity of any degree
2) Rigor mortis

2. If there is any question regarding patient viability, to include potential hypothermia, resuscitation will be initiated.

3. Once it has been determined that the patient has expired and resuscitation will not be attempted, cover the body with a clean sheet or other suitable item. Immediately notify the appropriate authority. ***DO NOT*** remove any property from the body or the scene for any purpose.

If the scene is a potential crime scene, e.g. possible homicide and the body is in an area that can be isolated from public view *DO NOT* cover the body. If the body cannot be isolated from public view, *ONLY* cover the body with a clean sheet obtained from the EMS vehicle.

4. If possible, do not leave a body unattended. Once a responsible person (i.e. coroner's investigator, police, security, or family member) is present at the scene, you may be excused.

5. ***NEVER*** transport/move a body without permission from the coroner's office, except for assessment or its protection.

QUALITY IMPROVEMENT REVIEW

When EMS or hospital personnel wish to have an incident involving patient care reviewed within the Clark County Emergency Medical Services System, the following steps shall be taken:

1. The person requesting a review of an incident should contact the designated representative of the agency/hospital involved to initiate the process. If after gathering appropriate information and discussing the incident, both parties are satisfied a problem does not exist, nothing further needs to be done.

2. If either party would like to pursue an investigation of the incident, the "Southern Nevada Health District EMS Incident Report" should be completed and a copy should be forwarded to the EMSTS Office.

3. Upon receipt of the "Southern Nevada Health District EMS Incident Report" EMSTS Office staff will review the case, gather information from the agencies/hospitals involved and evaluate the need for further investigation. The agency/hospital may be asked to conduct an internal investigation, involving their medical director when appropriate, and provide a summary of their findings to the EMSTS Office.

4. The personnel involved in the incident may be interviewed by the EMS Medical Director or his designee and their agency/hospital medical director to gather additional information.

5. Upon completion of the investigation, a report will be prepared and given to the agency/hospital representatives involved. Direct communication between the agency/hospital and complainant is recommended with a brief written summary of actions taken provided to the EMSTS Office.

6. A quarterly aggregate summary of the incidents reviewed by the EMSTS Office will be prepared and reported at the Quality Improvement Directors' meeting.

7. All documentation and correspondence regarding this quality improvement activity; to monitor, review, evaluate and report on the necessity, quality, and level of care provided a patient is confidential pursuant to NRS 49.117 – 49.123, NRS 49.265, NRS 450B.810 and NRS 629.061.

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TERMINATION OF RESUSCITATION

1. Resuscitation that is started in the field by Licensed EMS personnel ***CANNOT*** be discontinued without a physician order. Licensed EMS personnel are not obligated to continue resuscitation efforts that have been started by other persons at the scene if the patient meets the criteria listed in the **Prehospital Death Determination** protocol. This includes telephone CPR initiated by Emergency Medical Dispatchers.

2. Resuscitation started in the field may be discontinued only by physician order when the following conditions have been met:

   a. For Medical Arrest:
      1) The patient remains in persistent asystole or agonal rhythm after twenty (20) minutes of appropriate ALS resuscitation, to include:
         1. CPR
         2. Effective ventilation with 100% oxygenation
         3. Administration of appropriate ACLS medications

   b. For Traumatic Arrest:
      1) Open airway with basic life support measures
      2) Provide effective ventilation with 100% oxygenation for two minutes
      3) Perform bilateral needle thoracentesis if tension pneumothorax suspected

   c. The patient develops, or is found to have one of the following conclusive signs of death at any point during the resuscitative effort:
      1) Lividity of any degree
      2) Rigor mortis of any degree

3. When resuscitation has been terminated in the field, all medical interventions shall be left in place.

4. If possible, do not leave a body unattended. Once a responsible person (i.e. coroner's investigator, police, security, or family member) is present at the scene, you may be excused.

5. ***NEVER*** transport/move a body without permission from the coroner's office, except for assessment or its protection.

If the scene is a potential crime scene, e.g. possible homicide and the body is in an area that can be isolated from public view *DO NOT* cover the body. If the body cannot be isolated from public view, *ONLY* cover the body with a clean sheet obtained from the EMS vehicle.

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TRAUMA FIELD TRIAGE CRITERIA

A licensee providing emergency medical care to a patient at the scene of an injury shall use the following procedures to identify and care for patients with traumas:

1. Step 1: If the patient's:
   (a) Score on the Glasgow Coma Scale or, if the patient is a pediatric patient, his score on the modified Glasgow Coma Scale is not more than 13;
   (b) Systolic blood pressure is less than 90;
   (c) Respiratory rate is less than 10 or greater than 29; or
   (d) Revised trauma score is less than 11,

   the patient ***MUST*** be transported to a center for the treatment of trauma. If the patient is not required to be transported, the licensee providing emergency medical care shall assess the patient's condition based upon the degree of injury to the anatomy and the mode of injury.

2. Step 2: If the patient:
   (a) Has a penetrating injury to the head, neck, torso or the extremities proximal to the elbow or knee;
   (b) Has at least two proximal long bone fractures;
   (c) Has a fracture of the pelvis;
   (d) Has a combination of trauma with burns;
   (e) Has a flail chest;
   (f) Has an amputation proximal to the wrist or ankle;
   (g) Has acute paralysis;
   (h) Has an open and depressed fracture of the skull; or
   (i) Has major burns,

   the patient ***MUST*** be transported to a center for the treatment of trauma. If the patient is not required to be transported, the licensee providing emergency medical care shall evaluate the patient to determine the method of injury and the existence of any high-energy impact.

3. Step 3: If the patient has experienced a high-impact blow to the body which may include:
   (a) A fall from a height of at least 20 feet;
   (b) A motor vehicle accident in which:
      (1) The motor vehicle was traveling at a speed of at least 40 miles per hour immediately before the accident occurred;
      (2) There was at least 20 inches of severe damage to the body of the motor vehicle;
      (3) There was a 12-inch intrusion into the passenger's compartment;
      (4) The patient was ejected from the motor vehicle;
      (5) The period required to extricate the patient from the motor vehicle was more than 20 minutes;
      (6) The motor vehicle rolled over;

(7) A person riding in the motor vehicle with the patient died as a result of the accident;
(8) The patient was riding on a motorcycle that was traveling at a speed of at least 20 miles per hour when the accident occurred; or
(9) The patient was thrown from a motorcycle driven by him;

(c) As a pedestrian, being run over by a vehicle or thrown any distance by the impact of a vehicle, regardless of the rate of speed of the vehicle; or

(d) Being struck as a pedestrian or bicyclist by a vehicle traveling at a speed of at least 6 miles per hour,

the patient ***MUST*** be transported to a center for the treatment of trauma. For patients who are injured outside a 50 mile radius from a trauma center, the licensee providing emergency medical care shall call and consider transport to the nearest receiving facility.

The person licensed to provide emergency medical care at the scene of an injury shall transport a patient to a designated center for the treatment of trauma based on the following guidelines:

Sunrise Hospital Catchment Area

Trauma calls that meet Trauma Field Triage Criteria Protocol and occur within the geographical area bordered by Paradise Road to the west, Sahara Avenue to the north, Sunset Road to the south and the county line to the east are to be transported to Sunrise Hospital and Medical Center and the medical directions for the treatment of the patient must originate at that center;

In addition, trauma calls that meet Step 1 or 2 of the Trauma Field Triage Criteria Protocol and occur within the City of Henderson or the geographical area bordered by Paradise Road to the west continuing along that portion where it becomes Maryland Parkway, Sunset Road to the north, and the county line to the east are to be transported to Sunrise Hospital and Medical Center and the medical directions for the treatment of the patient must originate at that center.

St. Rose Siena Hospital Catchment Area

Trauma calls that meet Step 3 only of the Trauma Field Triage Criteria Protocol and occur within the City of Henderson or the geographical area bordered by I-15 to the west and Sunset Road to the north and the county line to the east are to be transported to St. Rose Siena Hospital and the medical directions for the treatment of the patient must originate at that center;

University Medical Center Catchment Area

Trauma calls that meet Trauma Field Triage Criteria Protocol and occur within any other area of Clark County are to be transported to University Medical Center/Trauma and the medical directions for the treatment of the patient must originate at that center.

All trauma calls that meet Trauma Field Triage Criteria Protocol, regardless of location, that are transported by Air Ambulance are to be transported to

University Medical Center/Trauma and the medical directions for the treatment of the patient must originate at that center.

Trauma calls that meet both the Trauma Field Triage Criteria Protocol and Burn Criteria Protocol should be transported to UMC Trauma Center.

EXCEPTIONS:

1. Nothing contained within these guidelines precludes transport to any trauma facility if, in the provider's judgment, time to transport to the designated center would be unduly prolonged due to traffic and / or weather conditions and might jeopardize the patient's condition.

2. Additionally, nothing contained within these guidelines precludes transport to the closest facility if, in the provider's judgment, an inability to adequately ventilate the patient might result in increased patient mortality.

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PROCEDURE PROTOCOLS

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COMBITUBE / COMBITUBE SA

1. Determine if patient is a candidate for Combitube/Combitube SA:

    a. Patient requires ventilatory assistance
    b. Patient does not have a gag reflex
    c. Patient has no history of esophageal trauma, recent ingestion of a caustic substance, or known esophageal disease
    d. Patient does not have a tracheostomy or laryngectomy
    e. Patient does not have a suspected foreign body obstruction
    f. Patient is not suspected of a narcotic overdose / hypoglycemia prior to administration of Narcan / Glucose 50%
    g. Patient is over 5 feet tall for Combitube or between 4 – 5 feet tall for Combitube SA

2. Gather and prepare necessary equipment:

    a. Combitube
    b. 150 cc syringe
    c. 20 cc syringe
    d. Water soluble lubricant
    e. Inflate and check both the distal cuff (10 – 15 cc of air) and the pharyngeal balloon (100 cc of air) for proper functioning. Lubricate the distal end of the tube with water-soluble lubricant.

3. Position the patient's head in a neutral or slightly flexed position if no suspected spinal injury (if a spine injury is suspected, maintain a neutral, in-line head position). Position yourself at the head of the patient.

4. Grasp the patient's lower jaw with the thumb and index finger of your non-dominant hand, lifting slightly upward. Holding the Combitube in your dominant hand blindly insert the Combitube into the midline of the mouth and pharynx following the normal curvature. Advance tube until the black measurement rings are aligned with the patient's teeth or the alveolar ridges. Never force the device; if it does not advance, simply readjust the insertion.

5. Using the larger syringe, inject 100 cc of air into the pharyngeal balloon or blue pilot valve. The device may move slightly as the Combitube seats itself within the posterior pharynx. Using the 20 cc syringe, inject 15 cc of air into the distal cuff (white pilot valve) or until resistance is felt.

6. Ventilate the patient using the #1 external tube. The external tube marked #1 will be longer than tube #2. In most cases the Combitube will be inserted into the esophagus. Always listen for breath sounds in the lung apices and bases, as

well as over the epigastrium. If the tube is placed properly, there should be breath sounds in the lungs and no sound over the epigastrium.

7. If there is an absence of breath sounds and positive sounds over the epigastrium, ventilate using the smaller #2 external tube. This will mean the tube is in the trachea. Once switched, again listen for breath sounds in the apices and bases of the lungs and over the epigastrium.
8. Secure the tube with a commercial device or tape.
9. Attach End-Tidal CO_2 detector.
10. Ventilate with 100 percent oxygen and bag-valve.
11. Continually reassess tube placement.

DEFIBRILLATION

1. Defibrillation involves the delivery of non-synchronized direct electric current to the myocardium of a patient exhibiting ventricular fibrillation or ventricular tachycardia without palpable pulses/blood pressure. The objective of defibrillation is to depolarize the entire myocardium, which, it is hoped, will result in allowing a single reliable pacemaker site to assume pacemaker control at a rate capable of producing an adequate cardiac output.

2. Indications for defibrillation include patients with:
   a. Ventricular fibrillation
   b. Ventricular tachycardia who are pulseless, and nonbreathing
   c. Ventricular tachycardia who have inadequate perfusion, and for whom effective and rapid synchronized cardioversion is impossible.

3. In the hemodynamically unstable, conscious patient, consider sedation prior to defibrillation, administer **Etomidate (Amidate)** 0.15 mg/kg IV.

4. Defibrillation should be immediately provided in an arrest ***WITNESSED*** by EMS personnel. In an arrest that is ***UNWITNESSED*** by EMS personnel, two (2) minutes of CPR should be provided prior to defibrillation.

5. When using an AED, defibrillation should be provided in accordance with the device prompts.

6. When using a monophasic device all attempts should be at 360 joules.

7. When using a biphasic device, the initial and subsequent attempts shall be at the energy level(s) provided by the device.

Initial attempt at pediatric defibrillation shall be at 2 J/kg. If unsuccessful, defibrillation should be attempted at 4 J/kg and continue at 4 J/kg until conversion occurs. Adult paddles / pads may be used in children weighing more than 15 kg.

8. Patients with automatic implantable cardioverter-defibrillators (AICD) will need external defibrillation if the AICD is ineffective.

9. If defibrillation is needed on a patient with a permanent implanted pacemaker, the defibrillator paddles or self adhesive electrodes should be placed at least 1 inch from the pulse generator of the pacemaker.

9. If conversion occurs and then the patient refibrillates, patient should be defibrillated at the same joule setting of the last shock.

ENDOTRACHEAL INTUBATION

NASOTRACHEAL:

1. Nasotracheal intubation is the technique of passing an endotracheal tube through the nose and pharynx into the trachea. This is done without using a laryngoscope to visualize the vocal cords (blind technique).

2. This procedure may be attempted in any breathing patient with a need to secure a functioning respiratory system or with inadequate respirations and in whom attempts at oral intubation are unsuccessful.

3. Nasotracheal intubation ***SHOULD NOT*** be attempted in any patient with suspected narcotic overdose / hypoglycemia prior to administration of Narcan / Glucose 50%, suspected basilar skull fracture, nasal and midface fractures, evidence of tracheal or laryngeal injury, Coumadin anticoagulation therapy or hemostatic disorders.

4. **Phenylephrine (Neosynephrine)** and **Lidocaine 2% Lubricant** should be used to facilitate the procedure and reduce the discomfort for the patient.

5. All intubations must have an End-Tidal CO_2 detector attached.

6. All intubation attempts MUST be documented on the prehospital care record.

Nasotracheal intubation should not be attempted in children.

OROTRACHEAL:

1. Orotracheal intubation is the technique of passing an endotracheal tube into the trachea with direct visualization or digital manipulation.

2. This procedure may be attempted in any patient with a need to secure a functioning respiratory system or with inadequate respirations ***AND IN WHOM ATTEMPTS AT BASIC AIRWAY AND VENTILATORY SUPPORT ARE UNSUCCESSFUL***.

3. Orotracheal intubation ***SHOULD NOT*** be attempted in any patient suspected of a narcotic overdose / hypoglycemia prior to administration of Narcan / Glucose 50%.

4. Use caution when intubating any patient with a suspected tracheal or laryngeal injury.

5. All intubations must have an End-Tidal CO_2 detector attached.

6. All intubation attempts ***MUST*** be documented on the Prehospital Care Record.

NEEDLE CRICOTHYROIDOTOMY

1. Stabilize the patient's head in the neutral position.
2. Identify the cricothyroid membrane and prepare the skin.
3. Stabilize the cricoid and thyroid cartilages with the nondominant hand.
4. Once the cricothyroid membrane has been identified, insert a 14 gauge over-the needle catheter attached to a 10 cc syringe or commercial cricothyrotomy device just below the midpoint of the cricothyroid membrane with the needle angled 45 degrees caudally.
5. Aspirate while advancing the device until free air is encountered
6. Withdraw the needle carefully while advancing the plastic catheter caudally into the trachea.
7. Secure the catheter or device.
8. Attach the hub of the catheter or commercial device to a BVM or jet insufflator and ventilate.


Pediatric Needle Cricothyroidotomy is by Telemetry Physician order only.

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NEEDLE THORACENTESIS

1. Expose and cleanse anterior chest at level of the 2nd intercostal space on the affected side.

2. Find 2nd intercostal space midclavicular line with gloved finger (alternate location is the 4^{th} – 5^{th} intercostal space in the mid-axillary line).

3. Insert a 14 gauge over-the needle catheter attached to a 10 cc syringe just over the third rib into the 2nd intercostal space maintaining the needle perpendicular (90 degrees) to the chest.

4. Aspirate while advancing the device until free air is encountered.

5. Withdraw the needle carefully while advancing the plastic catheter into the pleural space.

6. Secure the catheter with tape.

7. Assess patient for improvement in status.

Needle Thoracentesis is permitted in pediatric patients.

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SPINAL IMMOBILIZATION

ALS:

1. Assess patient for the presence of the following (***ANY*** positives ***REQUIRE*** spinal immobilization):

   a. Evidence of blunt trauma and meets Trauma Field Triage criteria;
   b. Numbness or weakness on neurological exam;
   c. Any alteration in mental status;
   d. Any evidence of drug and/or alcohol intoxication;
   e. Any painful injury that might distract the patient from the pain of a C-spine injury;
   f. Any point tenderness on palpation of the spine;
   g. Any pain or numbness with cervical spine range of motion.

2. If a through g, above, are ***ALL NEGATIVE***, spinal immobilization is not required.

3. The above steps in the evaluation to determine the necessity of spinal immobilization shall be done in the order listed.

ALERT

If a trauma patient is unable to communicate or appropriately respond to the above questions, perform a complete spinal immobilization.

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SYNCHRONIZED CARDIOVERSION

1. Synchronized cardioversion involves the delivery of an electric current to the myocardium of a patient who is exhibiting supraventricular or ventricular tachydysrhythmias that result in hemodynamic compromise. Cardioversion is appropriate in the field only in those patients where there is hemodynamic compromise or where it is evident that the patient's condition may further deteriorate.

2. Indications for synchronized cardioversion include patients with:
   a. Ventricular tachycardia with inadequate perfusion
   b. Supraventricular tachycardia with inadequate perfusion
   c. Ventricular tachycardia with adequate perfusion, but refractory to drug therapy.

3. The patient ***MUST*** be on a cardiac monitor and ***SHOULD*** have **Vascular Access**.

4. Consider sedation prior to cardioversion, administer **Etomidate (Amidate)** 0.15 mg/kg IV.

5. Ventricular dysrhythmias:
   a. When using a monophasic device, the initial attempt at cardioversion shall be at 100 joules, and subsequent attempts should escalate to 200, 300 and 360 joules.
   b. When using a biphasic device, the initial and subsequent attempts shall be at the energy level(s) provided by the device.

6. Supraventricular dysrhythmias:
   a. When using a monophasic device, the initial attempt at cardioversion shall be at 50 joules, and subsequent attempts shall be at 100 joules.
   b. When using a biphasic device, the initial and subsequent attempts shall be at the energy level(s) provided by the device.

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TRACHEOSTOMY TUBE REPLACEMENT

1. If the patient or family has a replacement tube available, it may be used. If a replacement tube is not available, an endotracheal tube of a similar outer diameter may be used.

2. Premoisten the tube with water soluble lubricant.

3. Extend the neck and, if necessary, place a roll between the patient's shoulder blades to aid in visualizing the stoma.

4. Place the tube with an arcing motion. Gentle traction on the skin above or below the stoma may help in placing the tube.

5. If the tube cannot be placed easily, withdraw the tube; administer oxygen and positive pressure ventilation. ***NEVER*** force the tube.

6. If the tube cannot be easily placed, a suction catheter may be used as a guide.

    a. Without applying suction, insert the catheter first through the new tube, then through the stoma.
    b. Slide the tube along the catheter and into the stoma.
    c. Remove the catheter.

7. After replacing the tube, check for proper placement by assessing breathing.

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TRANSCUTANEOUS PACING

1. Transcutaneous pacing is the application of externally applied electrodes to deliver an adjustable electrical impulse directly across an intact chest wall for the purpose of rhythmically stimulating the myocardium to increase the mechanical heart rate.

2. After attaching the electrodes, begin pacing at 80 beats per minute and the minimum available current.

3. Increase current in 20 milliamp increments until electrical capture occurs.

4. In the event of electrical capture and no pulses, leave pacing pads on, pacer turned on, and continue CPR.

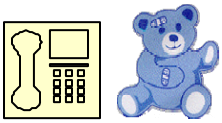
5. In the conscious patient with, consider:

   Sedation:

   a. **Midazolam (Versed)** 0.1 mg/kg IN/IM/IV. Maximum single dose: 5 mg. Allow at least 5 minutes before repeating dose to fully evaluate sedative effect. Maximum total dose: 10 mg.; **AND**

   Analgesia:

   b. **Morphine Sulfate** 0.1 mg/kg slow IV to a maximum single dose of 10 mg. May repeat at 5 minute intervals or until pain is relieved or respiratory/mental status depression occurs.



Pediatric Pacing is by Telemetry Physician order only.

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VAGAL MANEUVERS

1. Vagal maneuvers involve the application of a stimulus to the vagus nerve to increase parasympathetic tone. They are most commonly used as a first line treatment for **Supraventricular Tachycardia** in a symptomatic patient with adequate perfusion.

2. The patient ***MUST*** be attached to a cardiac monitor and must have **Vascular Access**.

3. Approved methods include:
   a. Valsalva maneuver
   b. Head-down tilt with deep inspiration
   c. Activation of the "diving reflex" by facial immersion in ice water (unless ischemic heart disease is suspected)
   d. Carotid massage (only on patients under 40 years of age).

4. Potential complications include possible ventricular asystole and bradydysrhythmias.

In infants and young children, the most effective vagal maneuver is the application of ice to the face. IV access is not mandatory prior to vagal maneuvers in children.

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VASCULAR ACCESS

ALERT

Vascular access attempts should not unnecessarily delay transport: attempts should be completed en route. All attempts are to be documented on the prehospital care record.

Vascular access should be obtained whenever there is a potential need for intravenous drug administration or when there is a need to administer IV fluids for volume expansion.

1. Peripheral Vascular Access

   a. The EMS provider should select a vein of sufficient caliber and location to maximize success. If possible, avoid veins proximate to arterial pulsations, veins in or near an injury (except burns) and veins over joints (stabilize appropriately, if used). Veins in the lower extremities should be used only after all other IV attempts have been unsuccessful and when an IV line is essential to patient care.

   b. The external jugular site should be used only after other peripheral IV attempts have been unsuccessful and when an IV line is essential to patient care. (The external jugular site may be used ***INITIALLY*** if the patient has a critical need for IV therapy.

   c. ***DO NOT*** start IV's distal to a fracture site or into a surgical anastomosis, except in the critically unstable patient.

   d. Saline locks may be used when appropriate and flushed with a 3 cc bolus of NS, as needed.

   e. Extension tubing should be utilized on ***ALL*** IV lines.

ALERT

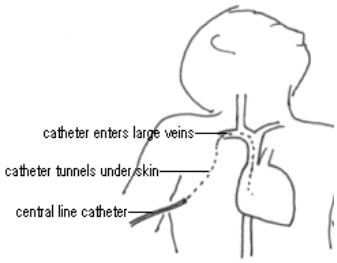
Intraosseous Access is to be reserved for life-threatening conditions in the unconscious and unresponsive patient. Once placed, all medications contained within the formulary may be administered via the intraosseous route.

2. Intraosseous Access (ALS Only)

   a. Intraosseous access is permitted when there is a need for drug or fluid resuscitation in an ***unconscious, unresponsive*** patient, and in whom a peripheral line cannot be established within 90 seconds.

   b. **DO NOT** place an intraosseous line in, or distal to, a fractured bone.

   c. ***ONLY ONE (1) IO ATTEMPT PER EXTREMITY IS PERMITTED.***



3. <u>Previously established Central Line Access (ALS Only)</u> -

PICC Line (Peripherally Inserted Central Catheter)

a. PICC lines may be accessed when there is a need for drug or fluid resuscitation of a critically ill or injured patient, and in whom a peripheral line cannot be established.

b. Prepare an IV set up with 1000 ml NS which will be attached to the cap at the distal end of the catheter.

   NOTE: All medications will be administered through the IV ports on the IV tubing.

c. If there is a cap with a needleless port on the distal end of the catheter, perform the following procedure.

   i. Aggressively cleanse the port with an alcohol pad.
   ii. Attach a 10 ml syringe (without saline) to the port and attempt to aspirate about 5 ml of blood. Blood should aspirate freely. If it does not, remove the syringe and **DO NOT** use the catheter for access. **DO NOT attempt to flush catheter at any time.**
   iii. If blood is aspirated freely, remove the 10 ml syringe and attach the end of the IV tubing and begin IV infusion of NS. Adjust rate according to condition and needs of the patient.

d. If the cap on the distal end of the catheter has the needle-type port, perform the following procedure.

   i. Aggressively cleanse the cap with an alcohol pad.
   ii. Clamp the catheter tubing (using **only** the existing clamp on the catheter), and then remove the cap. **NOTE: A central line should never be open to air.**
   iii. Place the 10 ml syringe to the catheter end.
   iv. Unclamp the catheter and attempt to aspirate about 5 ml of blood. Blood should aspirate freely. If it does not, clamp the tube again, remove the syringe and attach a sterile cap to the end of the catheter and finally unclamp the catheter. **DO NOT** use the catheter for access. **DO NOT attempt to flush catheter at any time.**
   v. If blood is aspirated freely, clamp the catheter again.
   vi. Remove the 10 ml syringe and attach the end of the IV tubing to the catheter.
   vii. Unclamp the catheter and begin IV infusion of NS. Adjust rate according to condition and needs of the patient.

e. The rate for IV infusion using a central line needs to be closely monitored. Make sure all connections are secured.

4. Central Line Access (Implantable Ports, Port-A-Caths, Mediports) may only be used if **the device has already been accessed and IV fluid set-up has been established and is running.** If an IV has been established, all medications should be administered through ports on the IV tubing.

   NOTE: These devices require special needles (non-coring type) for access. The device may be irreparably damaged if standard jumper (conventional) needles are used to access the ports.

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FORMULARY

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ACETYLSALICYLIC ACID (Aspirin)

FORM: 81 mg chewable tablet
CLASS: Nonsteroidal anti-inflammatory (NSAID)
ACTION: Platelet inhibition
PROTOCOL(S): Acute Coronary Syndrome (Suspected)
ROUTE: **Adults:** PO (chew and swallow)
Pediatrics: Not recommended for use
SIDE EFFECTS: None
CONTRAINDICATIONS: Allergy to Aspirin

ACTIVATED CHARCOAL

FORM: 25 grams in 4 ounces
CLASS: Adsorbent
ACTION: Inhibits gastrointestinal absorption of toxic substances
PROTOCOL(S): Overdose / Poisoning
ROUTE: **Adults:** PO (swallow with water)
Pediatrics: PO (swallow with water)
SIDE EFFECTS: May cause nausea and vomiting
CONTRAINDICATIONS: Altered mental status; ingestion of acids, alkalis or petroleum distillates; inability to swallow; previous administration of an emetic

ADENOSINE (Adenocard)

FORM: 6 mg/2 ml
CLASS: Antiarrhythmic
ACTION: Slows conduction through the AV Node and can interrupt re-entry pathways
PROTOCOL(S): Cardiac Dysrhthymia: Supraventricular Tachycardia (Narrow Complex)
ROUTE: **Adult:** Rapid IVP
Pediatric: Rapid IVP
SIDE EFFECTS: Facial flushing, headache, sweating, palpitations, and chest pain.
CONTRAINDICATIONS: Second or third-degree AV block or sick sinus syndrome unless patient with a functional artificial pacemaker. Atrial flutter and atrial fibrillation. Repeat doses of Adenosine are not indicated if the dysrhythmia reoccurs after conversion. Alternate pharmacological therapy may be necessary.

ALBUTEROL (Proventil)

FORM: 2.5 mg/3 ml unit dose
CLASS: Sympathomimetic
ACTION: Bronchodilator
PROTOCOL(S): Allergy / Anaphylaxis

Hyperkalemia (Adult)
Pulmonary Edema / CHF (PulmEdemaAdult)
Respiratory Distress with Bronchospasm

ROUTE: **Adult:** Inhalation by oxygen nebulization
Pediatric: Inhalation by oxygen nebulization
SIDE EFFECTS: Tachycardia, palpitations, anxiousness, and headache
CONTRAINDICATIONS: Hypersensitivity to this drug

AMIODARONE (Cordarone)

FORM: 150 mg/3 ml
CLASS: Antiarrhythmic
ACTION: Suppresses ventricular ectopy; Increases ventricular fibrillation threshold
PROTOCOL(S): Cardiac Dysrhythmia: Monomorphic Ventricular Tachycardia
Cardiac Dysrhythmia: Ventricular Fibrillation or Pulseless Ventricular Tachycardia
ROUTE: **Adult:** IV
Pediatric: IV
SIDE EFFECTS: Seizures, respiratory depression, dizziness, restlessness, confusion, tinnitus, blurred vision, numbness, muscle twitching, hypotension, bradycardia, heart block, nausea and vomiting.
CONTRAINDICATIONS: Hypersensitivity to the drug, Cardiogenic shock, High grade AV block, Marked sinus bradycardia, or bradycardia with ventricular escape beats.

ATROPINE SULFATE

FORM: 1 mg/10 ml
CLASS: Parasympathetic blocker
ACTION: Cholingeric blocking agent; Increases rate of SA node discharge; Increases conduction through AV node
PROTOCOL(S): Cardiac Dysrhythmia: Asystole
Cardiac Dysrhythmia: Bradycardia
Cardiac Dysrhythmia: Pulseless Electrical Activity
Overdose / Poisoning
ROUTE: **Adult:** IV or ETT
Pediatric: IV or ETT
SIDE EFFECTS: None
CONTRAINDICATIONS: None

BRONCHODILATOR METERED DOSE INHALER

FORM: Dependent upon medication (e.g. Proventil, Alupent, Ventolin)
CLASS: Sympathomimetic
ACTION: Bronchodilator
PROTOCOL(S): **Allergy / Anaphylaxis**
Respiratory Distress with Bronchospasm
ROUTE: **Adult:** Inhalation
Pediatric: Inhalation
SIDE EFFECTS: Tachycardia, palpitations, anxiousness, and headache
CONTRAINDICATIONS: Hypersensitivity to this drug

CALCIUM CHLORIDE

FORM: 1 gm/10 ml
CLASS: Electrolyte
ACTION: Increases myocardial contractility; Increases myocardial excitability; Decreases heart rate
PROTOCOL(S): **Hyperkalemia (Adult)**
Overdose / Poisoning
ROUTE: **Adult:** Slow IVP
Pediatric: Slow IVP
SIDE EFFECTS: None
CONTRAINDICATIONS: Patients receiving digitalis

DIPHENHYDRAMINE HYDROCHLORIDE (Benadryl)

FORM: 50 mg/ml
CLASS: Antihistamine
ACTION: Blocks histamine receptors; Has some sedative effects; Anticholinergic
PROTOCOL(S): **Allergy / Anaphylaxis**
Overdose / Poisoning
ROUTE: **Adult:** IV or deep IM
Pediatric: IV or deep IM
SIDE EFFECTS: Sedation, palpitations, decreased blood pressure, headache, dries (thickens) bronchial secretions, blurred vision
CONTRAINDICATIONS: Hypersensitivity to the drug

DOPAMINE HYDROCHLORIDE (Intropin)

FORM: 400 mg/5 ml (400 mg/250 ml Pre-mix bag)
CLASS: Sympathomimetic
ACTION: Positive inotrope with dose-related vascular effects
PROTOCOL(S): Cardiac Arrest
Cardiac Dysrhythmia: Bradycardia
Pulmonary Edema / CHF (Adult)
Shock (Non-Traumatic)
ROUTE: **Adult:** IV by continuous infusion
Pediatric: IV by continuous infusion
SIDE EFFECTS: Ventricular tachycardia, ectopic beats, nausea and vomiting, dyspnea, hypertension and extreme vasoconstriction may occur with high infusion rates, and hypotension may occur with low infusion rates.
CONTRAINDICATIONS: Hypovolemic shock

EPINEPHRINE

FORM: 1 mg/1 ml (1:1,000); 1 mg/10 ml (1:10,000)
CLASS: Sympathomimetic
ACTION: Bronchodilation; Positive chronotrope; Positive inotrope
PROTOCOL(S): Allergy / Anaphylaxis
Cardiac Dysrhythmia: Asystole
Cardiac Dysrhythmia: Bradycardia
Cardiac Dysrhythmia: Pulseless Electrical Activity
Cardiac Dysrhythmia: Ventricular Fibrillation or Pulseless Ventricular Tachycardia
Respiratory Distress with Bronchospasm
ROUTE: **Adult:** IV, IM, SQ or ETT
Pediatric: IV, IM, SQ, Nebulized or ETT, not to exceed adult dose
SIDE EFFECTS: Palpitation due to tachycardia or ectopic beats, may produce arrhythmia if cardiac disease present, elevation of blood pressure, headache, anxiousness
RELATIVE CONTRAINDICATIONS: Underlying cardiovascular disease / angina, hypertension, pregnancy, patient over 40 years of age, hyperthyroidism

EPINEPHRINE AUTO-INJECTOR

FORM: 0.3 mg (0.3 ml) 1:1,000 Adult OR 0.15 mg (0.3 ml) 1:2,000 Pediatric
CLASS: Sympathomimetic
ACTION: Bronchodilation; Positive chronotrope; Positive inotrope
PROTOCOL(S): Allergy / Anaphylaxis
ROUTE: **Adult:** IM ONLY
Pediatric: IM ONLY

SIDE EFFECTS: Palpitations due to tachycardia or ectopic beats, may produce arrhythmia if cardiac disease present, elevation of blood pressure, headache, anxiousness
RELATIVE CONTRAINDICATIONS: Underlying cardiovascular disease / angina, hypertension, pregnancy, patient over 40 years of age, hyperthyroidism

ETOMIDATE (Amidate)

FORM: 2 mg / 1 ml (10 ml)
CLASS: Sedative / Hypnotic
ACTION: CNS depressant
PROTOCOL(S): Advanced Airway Management
Cardiac Dysrhythmia: Monomorphic Ventricular Tachycardia
Cardiac Dysrhythmia: Torsades de Pointes
CardiacSVT Dysrhythmia: Supraventricular Tachycardia (Narrow Complex)
Defibrillation
Synchronized Cardioversion
ROUTE: **Adult:** IV
Pediatric: IV
SIDE EFFECTS: Pain, transient skeletal movements, nausea, vomiting, hypoventilation, hypotension
CONTRAINDICATIONS: Known hypersensitivity to the drug

FUROSEMIDE (Lasix)

FORM: 10 mg/ml
CLASS: Loop diuretic
ACTION: Inhibits sodium and chloride reabsorption in the kidneys; Causes venous dilation and reduces preload
PROTOCOL(S): Pulmonary Edema / CHF (Adult)
ROUTE: **Adult:** Slow IV
Pediatric: Not recommended for use
SIDE EFFECTS: None
CONTRAINDICATIONS: Hypersensitivity to the drug or sulfonamides

GLUCAGON

FORM: 1 mg/ml
CLASS: Insulin antagonist
ACTION: Reverses the effects of hypoglycemia
PROTOCOL(S): Altered Mental Status

Overdose / Poisoning
ROUTE: **Adult:** IM or IV
Pediatric: IM
SIDE EFFECTS: May cause nausea and vomiting
CONTRAINDICATIONS: None

GLUCOSE

FORM: 2.5 gm/10 ml (25%); 25 gm/50 ml (50%); 25 gm in oral suspension
CLASS: Carbohydrate
ACTION: Quick infusion of sugar into blood for metabolism
PROTOCOL(S): Altered Mental Status
Hyperkalemia (Adult)
ROUTE: **Adult:** Slow IVP or PO
Pediatric: Slow lVP or PO
SIDE EFFECTS: None
CONTRAINDICATIONS: None

LIDOCAINE (Xylocaine) 2% LUBRICANT

FORM: Jelly: 2%
CLASS: Topical Anesthetic
ACTION: Produces anesthesia by interfering with nervous system transmission
PROTOCOL(S): Advanced Airway Management
Endotracheal Intubation
ROUTE: **Adult:** Topical Use Only
Pediatric: Topical Use Only
SIDE EFFECTS: Seizures, respiratory depression, dizziness, restlessness, confusion, tinnitus, blurred vision, numbness, muscle twitching, hypotension, bradycardia, heart block, nausea and vomiting
CONTRAINDICATIONS: Hypersensitivity to the drug

MAGNESIUM SULFATE

FORM: 1 gm vial or 5 gm/10 ml. multidose vial
CLASS: Electrolyte
ACTION: Membrane stabilization; Raises seizure threshold
PROTOCOL(S): Cardiac Dysrhythmia: Torsades de Pointes
Obstetrical / Gynecological Emergencies
ROUTE: **Adult:** Slow IVP
Pediatric: Slow IVP
SIDE EFFECTS: Hypotension, asystole, respiratory depression, weakness

CONTRAINDICATIONS: Hypersensitivity to the drug, high degree heart block, renal failure

MIDAZOLAM (Versed)

FORM: 5 mg/1 ml
CLASS: Anxiolytic
ACTION: CNS Depressant
PROTOCOL(S): **Advanced Airway Management**
Altered Mental Status
Behavioral Emergencies
Cardiac Dysrhythmia: Bradycardia
Transcutaneous Pacing
ROUTE: **Adult:** Slow IVP, IM or IN
Pediatric: Slow IVP, IM or IN
SIDE EFFECTS: CNS depression, hypotension, respiratory depression
CONTRAINDICATIONS: Hypersensitivity to the drug, hypotension, clinical signs of shock

MORPHINE SULFATE

FORM: 10 mg/ml
CLASS: Narcotic
ACTION: CNS depressant
PROTOCOL(S): **Abdominal Pain, Back Pain, Flank Pain (Non-Traumatic)**
Acute Coronary Syndrome (Suspected)
Burns
Cardiac Dysrhythmia: Bradycardia
Trauma
Transcutaneous Pacing
ROUTE: **Adult:** Slow IVP
Pediatric: Slow IVP
SIDE EFFECTS: Respiratory depression, nausea, vomiting, bradycardia, orthostatic hypotension, altered level of consciousness
CONTRAINDICATIONS: Hypersensitivity to opiates, head injuries, chest or abdominal injury, clinical signs of shock

NALOXONE HYDROCHLORIDE (Narcan)

FORM: 2 mg/2 ml
CLASS: Narcotic antagonist
ACTION: Reverses effects of narcotics
PROTOCOL(S): **Altered Mental Status**
Overdose / Poisoning
ROUTE: **Adult:** IV, IM or IN

Pediatric: IV, IM, IN
SIDE EFFECTS: Rapid administration causes projectile vomiting
CONTRAINDICATIONS: Patients with a history of hypersensitivity to this drug; intubated patients

NITROGLYCERIN

FORM: Sublingual spray or tablet
CLASS: Vasodilator
ACTION: Dilates systemic arteries and veins; Reduces both preload and afterload
PROTOCOL(S): **Acute Coronary Syndrome (Suspected)**
Pulmonary Edema / CHF (Adult)
ROUTE: **Adult:** Sublingual
Pediatric: Not recommended for use
SIDE EFFECTS: Hypotension
CONTRAINDICATIONS: Hypotension (do not administer if systolic pressure below 100 mmHg unless ordered by a physician). Use of Viagra (Sildenafil) or similar medication within the past 24 hours. Patients with demonstrated hypersensitivity to nitrates or nitrites

ONDANSETRON HYDROCHLORIDE (Zofran)

FORM: 4mg/2 ml
CLASS: Selective serotonin blocking agent
ACTION: Antiemetic
PROTOCOL(S): **Abdominal Pain, Back Pain, Flank Pain (Non-Traumatic)**
Acute Coronary Syndrome (Suspected)
ROUTE: **Adult:** Slow IVP or IM
Pediatric: Slow IVP or IM (Recommended for use in children greater than 2 years of age)
SIDE EFFECTS: Headache, chest pain, dizziness, hypotension
CONTRAINDICATIONS: Patients with a known hypersensitivity to Zofran

PHENYLEPHRINE (Neo-Synephrine)

FORM: 0.25 – 0.5% Solution
CLASS: Sympathomimetic
ACTION: Direct local vasoconstriction
PROTOCOL(S): **Advanced Airway Management**
Endotracheal Intubation
ROUTE: **Adult:** Intranasal
Pediatric: Intranasal
SIDE EFFECTS: None

CONTRAINDICATIONS: Ventricular tachycardia, severe coronary artery disease
RELATIVE CONTRAINDICATIONS: Head injured patients with altered mental status

SODIUM BICARBONATE

FORM: 50 mEq/50 ml (8.4% solution)
CLASS: Alkalinizing agent
ACTION: Increases blood pH
PROTOCOL(S): **Cardiac Dysrhythmia: Asystole**
Cardiac Dysrhythmia: Pulseless Electrical Activity
Cardiac Dysrhythmia: Ventricular Fibrillation or Pulseless Ventricular Tachycardia
Hyperkalemia (Adult) – Dosing variant (50 mEq dose – NOT per kg)
Overdose / Poisoning
ROUTE: **Adult:** IV
Pediatric: IV
SIDE EFFECTS: None
CONTRAINDICATIONS: Alkalotic states, respiratory acidosis

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APPENDICES

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Southern Nevada Health District

Fibrinolytic Eligibility Checklist

Patient Name: _____

Provider: _____

Symptom Onset: _____/_____
(Date/Time)

Blood Pressure: _____/_____

Yes	(☒ meets criteria)	No
☐	Oriented, can cooperate	___
☐	Chest pain consistent with AMI	___
☐	< 12 hours since onset	___
☐	Age < 75 years	___
☐	Systolic < 180 mmHg	___
☐	Diastolic < 110 mmHg	___
___	History of stroke, head trauma or brain surgery	☐
___	Recent surgery or trauma within last 2 months (including dental)	☐
___	Takes Coumadin / warfarin sodium	☐
___	Known bleeding problems	☐
___	History of GI bleed/peptic ulcer	☐
___	History of cancer	☐
___	History of kidney/liver problems	☐
___	Pregnant	☐

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SAMPLE
RELEASE OF MEDICAL ASSISTANCE

1. I (or my guardian) have been informed of the reason I should go to the hospital for further emergency care.

2. I (or my guardian) have been informed that only an initial evaluation has been rendered to me and have been advised that I seek the advice of a physician as soon as possible.

3. I (or my guardian) have been informed of the potential consequences and/or complications that may result in my (or my guardian's) refusal to go to the hospital for further emergency care.

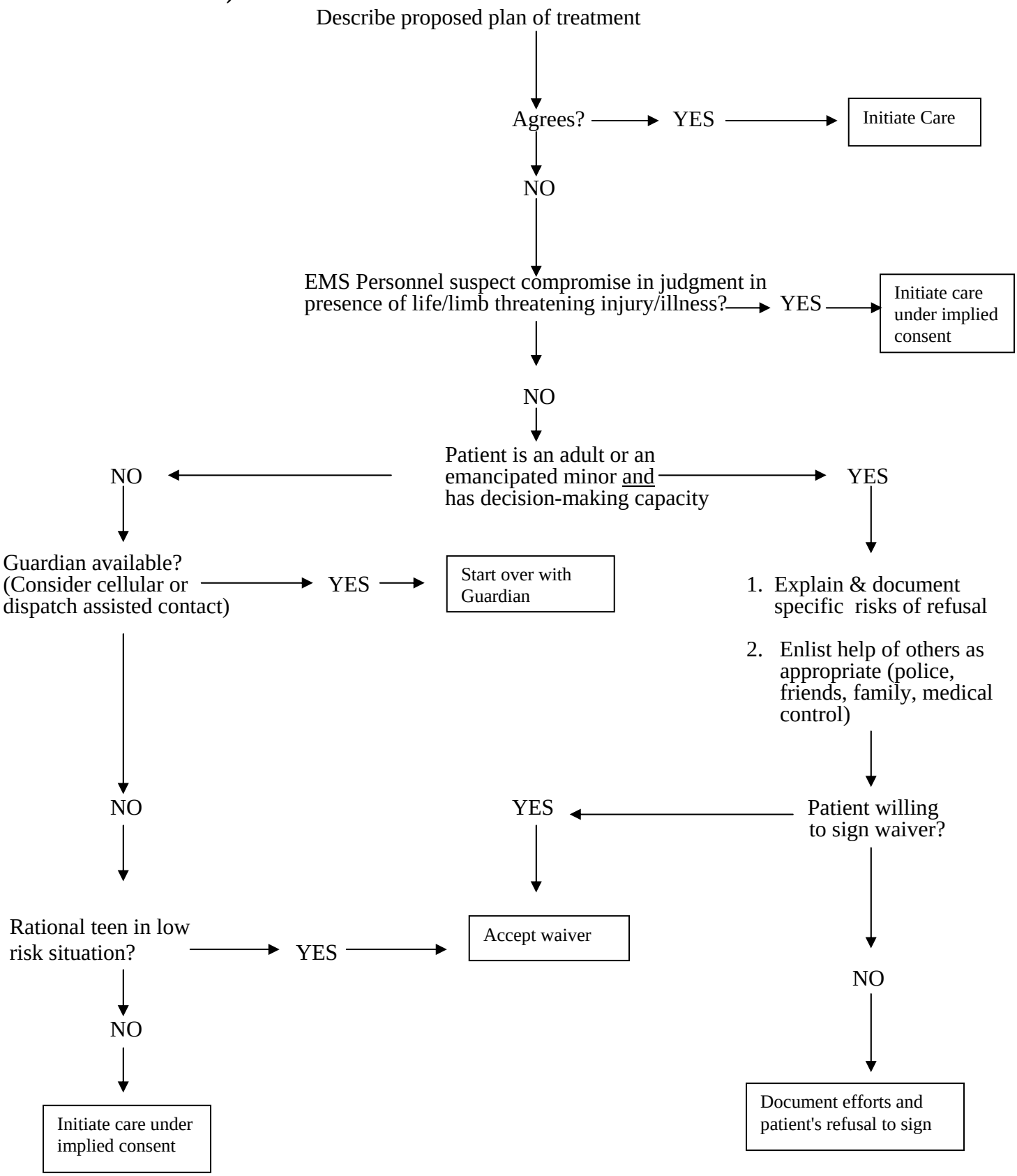
4. I (or my guardian), the undersigned, have been advised that emergency medical care on my/the patient's behalf is necessary, and that refusal of recommended care and transport to a hospital facility may result in death, or imperil my/the patient's health by increasing the opportunity for consequences or complications. Nevertheless, and understanding all of the above, I (or my guardian), refuse to accept emergency medical care or transport to a hospital facility, assume all risks and consequences resulting from my (or my guardian's) decision, and release Clark County provider agencies, and all personnel directly or indirectly involved in my care from any and all liability resulting from my (or my guardian's) refusal. I have had the opportunity to ask all of the questions I feel necessary to provide this informed refusal.

5. The reason for this refusal is as follows: (to be completed by patient/guardian) _____

   _____

Patient's Name:		DOB:
Patient's Address:		
Patient's Phone Number:		
Signature (Patient/Guardian):		
Witness:		
Witness:		
Date:	Time:	Incident #:
Refused to Sign (Patient/Guardian):		
Telemetry Physician:		Hospital:

(**SAMPLE ALGORITHM)**



NOTE:

1. For all patients refusing transport who meet TRAUMA FIELD TRIAGE CRITERIA Protocol, contact a Trauma Center.
2. EMS personnel may make telemetry contact for further guidance at any time.